

August 10, 2009

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Subject: **Docket Nos. 50-361 and 50-362**
Amendment Application Numbers 256 and 242
Proposed Change Number NPF-10/15-590
Auxiliary Feedwater System
San Onofre Nuclear Generating Station, Units 2 and 3

Dear Sir or Madam:

Pursuant to 10 CFR 50.90, Southern California Edison (SCE) hereby requests the following amendments to Operating licenses NPF-10 and NPF-15 for the San Onofre Nuclear Generating Station (SONGS) Units 2 and 3, respectively.

The proposed change consists of Proposed Change Number 590 (PCN-590), which is a change to Technical Specification 3.7.5, Auxiliary Feedwater (AFW) System to allow a 7 day Completion Time for the turbine-driven AFW pump if the inoperability occurs in MODE 3, following a refueling outage and if MODE 2 had not been entered. This change is based on the approved Technical Specification Task Force (TSTF) Traveler Number 340, Revision 3.

Enclosure (1) to this letter provides the description and No Significant Hazards Analysis for the proposed amendment.

SCE has determined that there are no significant hazards considerations associated with the proposed change and that the change is exempt from environmental review pursuant to the provisions of 10 CFR 51.22(c)(9).

This TSTF-340 License Amendment Request reflects similar requests made by Arizona Public Service (APS) for Palo Verde Units 1, 2, and 3 on December 5, 2000 that was approved by NRC letter of March 29, 2001 (TAC NOS. MB0709, MB0710, and MB0711) and also Dominion Nuclear Connecticut for Millstone Power Station, Unit No. 3 on February 7, 2006 that was approved by NRC letter dated February 28, 2007 (TAC NO. MD0029).

It is requested that these proposed amendments become effective within 60 days of issuance by the NRC for SONGS Units 2, and 3.

No commitments are being made to the NRC by this letter.

If you have any questions or require additional information, please contact Ms. Linda T. Conklin at 949-368-9443.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 08/10/09
Date

A handwritten signature in black ink, appearing to read "A. E. Collins", is centered on the page.

Enclosure: As Stated

cc: E. E Collins, Regional Administrator, NRC Region IV
R. Hall, NRC Project Manager, San Onofre Units 2 and 3
G. G. Warnick, NRC Senior Resident Inspector, San Onofre Units 2 and 3
S. Y. Hsu, California Department of Public Health, Radiologic Health

ENCLOSURE

**Description and No Significant Hazards Analysis
for Proposed Change NPF-10/15-590
Technical Specification 3.7.5 Auxiliary Feedwater (AFW) System**

San Onofre Nuclear Generating Station Units 2 and 3

Description and No Significant Hazards Analysis
for Proposed Change NPF-10/15-590
Technical Specification 3.7.5 Auxiliary Feedwater (AFW) System

San Onofre Nuclear Generating Station Units 2 and 3

EXISTING TECHNICAL SPECIFICATIONS

Unit 2: See Attachment A
Unit 3: See Attachment B

PROPOSED TECHNICAL SPECIFICATIONS

(additions circled, strikeout for deletions)

Unit 2: See Attachment C
Unit 3: See Attachment D

PROPOSED TECHNICAL SPECIFICATIONS

(with changes)

Unit 2: See Attachment E
Unit 3: See Attachment F

PROPOSED TECHNICAL SPECIFICATION BASES CHANGES (for information)

(additions circled, strikeout for deletions)

Unit 2: See Attachment G (typical for Units 2 and 3)

1.0 INTRODUCTION

Southern California Edison (SCE) requests NRC approval to incorporate these proposed amendments into San Onofre Nuclear Generating Station (SONGS).

The proposed amendments would allow a 7 day Completion Time for Condition A for the turbine-driven Auxiliary Feedwater (AFW) pump if the inoperability occurs in MODE 3 following a refueling outage and if MODE 2 had not been entered. This change is based on the approved Technical Specification Task Force (TSTF) Traveler Number 340, Revision 3 and is proposed as a permanent change to the SONGS Technical Specifications.

2.0 PROPOSED CHANGE

The current Technical Specification 3.7.5, Auxiliary Feedwater (AFW) System, requires that three AFW trains be operable in MODES 1, 2, and 3, and contains a 72 hour Completion Time for Condition A for one inoperable steam supply to the turbine driven AFW Pump. The Action is to be in MODE 3 within 6 hours and to be in MODE 4 within 12 hours if the 72 hour Completion Time is not met.

In MODES 1, 2, and 3, the AFW system is required to function in the event that the Main Feedwater system is lost. It must also supply enough makeup water to replace steam generator secondary inventory lost as the unit cools to MODE 4 conditions during plant shutdown. One essential AFW pump provides sufficient flow to remove decay heat and cool the unit to Shutdown Cooling System entry conditions.

3. BACKGROUND

The proposed amendment to Technical Specification 3.7.5 would allow a 7 day Completion Time for Condition A for the turbine-driven AFW pump, if the inoperability occurs in MODE 3 following a refueling outage, if MODE 2 had not been entered. This proposed amendment would prevent unnecessary MODE changes and requests for enforcement discretion in that the additional Completion Time in MODE 3 would provide time to repair and retest the turbine-driven AFW pump following a refueling outage if the required surveillance requirements could not be met and inoperability occurs.

4.0 TECHNICAL ANALYSIS

This change is based on the approved Technical Specification Task Force Traveler Number 340, Revision 3.

In MODES 1, 2, and 3, the Auxiliary Feedwater (AFW) system is required to function in the event that the Main Feedwater system is lost. It must also supply enough makeup water to replace steam generator secondary inventory lost as the unit cools to MODE 4 conditions during plant shutdown. One AFW pump provides sufficient flow to remove decay heat and cool the unit to Shutdown Cooling System entry conditions. The specification, however, requires 3 trains to be operable.

During unit start-up after a refueling outage, decay heat removal requirements are minimal. The additional Completion Time proposed by this amendment to Technical Specification 3.7.5, provides time to repair and retest the turbine-driven AFW pump following a refueling outage if the required surveillance requirements could not be met and inoperability occurs without the additional burden of unnecessary MODE changes or requests for enforcement discretion. The AFW system design affords adequate redundancy to allow the turbine-driven AFW pump to remain inoperable for the proposed extended Completion Time. The restriction of the Completion Time to MODE 3 after a refueling outage without having entered MODE 2 assures the decay heat load is at a minimal level.

This proposed amendment does not change, degrade, or prevent actions described or assumed in any accident. It will not alter any assumptions previously made in evaluating radiological consequences or affect any fission product barriers. It does not increase any challenges to safety systems. Therefore, this proposed amendment would not increase or have any impact on the consequences of events described and evaluated in Chapter 10.4.9 of the SONGS UFSAR.

5.0 REGULATORY SAFETY ANALYSIS

5.1 No Significant Hazards Consideration

Southern California Edison (SCE) has evaluated whether or not a significant hazards consideration is involved with the proposed amendments by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of Amendment," as discussed below.

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

Response: No

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

The proposed amendment to Technical Specification 3.7.5 would allow a seven day Completion Time for Condition A for the turbine-driven Auxiliary Feedwater (AFW) pump if the inoperability occurs in MODE 3 following a refueling outage, if MODE 2 had not been entered. Extending the Completion 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 system from being performed, since the other fully redundant essential 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 San Onofre Nuclear Generating Station (SONGS) Updated Final Safety Analysis Report (UFSAR) 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.

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

Response: No.

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

The proposed amendment to Technical Specification 3.7.5 would allow a seven day Completion Time for Condition A for 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 Completion 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.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No.

The proposed changes do not involve a significant reduction in a margin of safety.

The SONGS safety analysis credits AFW pump delivery of 500 gpm at a steam generator pressure of 1097 psia and 700 gpm at a steam generator pressure of 890 psia to meet Accident Analysis flow requirements.

The proposed amendment to Technical Specification 3.7.5 would allow a seven day Completion Time for Condition A for 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 Completion 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 other AFW trains are required to be OPERABLE when MODE 3 is entered, 3) the motor-driven AFW train can provide sufficient flow to remove decay heat and cool the unit to Shutdown Cooling System entry conditions from power operations.

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

Based on the above, SCE concludes that the proposed amendments present no significant hazards considerations under the standards set forth in 10 CFR 50.92(c).

6.0 ENVIRONMENTAL EVALUATION

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 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 occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for 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.

7.0 PRECEDENTS

- 1) Letter from Jack N. Donahew (NRC) to Gregg R Overbeck (PVNGS) dated March 29, 2001; Subject "Palo Verde Nuclear Generating Station, Units 1, 2, and 3 – Issuance of Amendments on 7-Day Completion Time for Turbine-Driven Auxiliary Feedwater System (TAC Nos. MB0709, MB0710, and MB0711)"

- 2) Letter from Victor Nerses (NRC) to David A. Christian (Dominion Nuclear Connecticut) dated February 28, 2007; Subject: "Millstone Power Station, Unit No. 3 – Issuance of Amendment Re: Auxiliary Feedwater System Allowed Outage Time (TAC No. MD0029)"

Attachment A
(Existing Page)
SONGS Unit 2

3.7 PLANT SYSTEMS

3.7.5 Auxiliary Feedwater (AFW) System

LCO 3.7.5 Three AFW trains shall be OPERABLE.

- NOTES-----
1. Only one AFW train, which includes a motor driven pump, is required to be OPERABLE in MODE 4.
 2. The steam driven AFW pump is OPERABLE when running and controlled manually to support plant start-ups, plant shut-downs, and AFW pump and valve testing.
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APPLICABILITY: MODES 1, 2, and 3,
MODE 4 when steam generator is relied upon for heat removal.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One steam supply to turbine driven AFW pump inoperable.	A.1 Restore steam supply to OPERABLE status.	7 days <u>AND</u> 10 days from discovery of failure to meet the LCO
B. One AFW train inoperable for reasons other than Condition A in MODE 1, 2, or 3.	B.1 Restore AFW train to OPERABLE status.	72 hours <u>AND</u> 10 days from discovery of failure to meet the LCO
C. Two AFW trains with two motor driven pumps inoperable in MODES 1, 2, or 3.	C.1 Restore one AFW train to OPERABLE status.	48 hours

(continued)

Attachment B
(Existing Page)
SONGS Unit 3

3.7 PLANT SYSTEMS

3.7.5 Auxiliary Feedwater (AFW) System

LCO 3.7.5 Three AFW trains shall be OPERABLE.

- NOTES-----
1. Only one AFW train, which includes a motor driven pump, is required to be OPERABLE in MODE 4.
 2. The steam driven AFW pump is OPERABLE when running and controlled manually to support plant start-ups, plant shut-downs, and AFW pump and valve testing.
-

APPLICABILITY: MODES 1, 2, and 3,
MODE 4 when steam generator is relied upon for heat removal.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One steam supply to turbine driven AFW pump inoperable.	A.1 Restore steam supply to OPERABLE status.	7 days <u>AND</u> 10 days from discovery of failure to meet the LCO
B. One AFW train inoperable for reasons other than Condition A in MODE 1, 2, or 3.	B.1 Restore AFW train to OPERABLE status.	72 hours <u>AND</u> 10 days from discovery of failure to meet the LCO
C. Two AFW trains with two motor driven pumps inoperable in MODES 1, 2, or 3.	C.1 Restore one AFW train to OPERABLE status.	48 hours

(continued)

Attachment C
(Proposed Page)
(Redline and Strikeout)
SONGS Unit 2

3.7 PLANT SYSTEMS

3.7.5 Auxiliary Feedwater (AFW) System

LCO 3.7.5 Three AFW trains shall be OPERABLE.

- NOTES-----
1. Only one AFW train, which includes a motor driven pump, is required to be OPERABLE in MODE 4.
 2. The steam driven AFW pump is OPERABLE when running and controlled manually to support plant start-ups, plant shut-downs, and AFW pump and valve testing.
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APPLICABILITY: MODES 1, 2, and 3,
MODE 4 when steam generator is relied upon for heat removal.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One steam supply to turbine driven AFW pump inoperable.</p> <p>OR</p> <p>-----NOTE----- Only applicable if MODE 2 has not been entered following refueling</p> <p>One turbine driven AFW pump inoperable in MODE 3 following refueling</p>	<p>A.1 Restore affected equipment steam supply to OPERABLE status.</p>	<p>7 days</p> <p>AND</p> <p>10 days from discovery of failure to meet the LCO</p>
<p>B. One AFW train inoperable for reasons other than Condition A in MODE 1, 2, or 3.</p>	<p>B.1 Restore AFW train to OPERABLE status.</p>	<p>72 hours</p> <p>AND</p> <p>10 days from discovery of failure to meet the LCO</p>
<p>C. Two AFW trains with two motor driven pumps inoperable in MODES 1, 2, or 3.</p>	<p>C.1 Restore one AFW train to OPERABLE status.</p>	<p>48 hours</p>

(continued)

Attachment D
(Proposed Page)
(Redline and Strikeout)
SONGS Unit 3

3.7 PLANT SYSTEMS

3.7.5 Auxiliary Feedwater (AFW) System

LCO 3.7.5 Three AFW trains shall be OPERABLE.

- NOTES-----
1. Only one AFW train, which includes a motor driven pump, is required to be OPERABLE in MODE 4.
 2. The steam driven AFW pump is OPERABLE when running and controlled manually to support plant start-ups, plant shut-downs, and AFW pump and valve testing.
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APPLICABILITY: MODES 1, 2, and 3,
MODE 4 when steam generator is relied upon for heat removal.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One steam supply to turbine driven AFW pump inoperable.</p> <p><u>OR</u></p> <p>-----NOTE----- Only applicable if MODE 2 has not been entered following refueling</p> <p>----- One turbine driven AFW pump inoperable in MODE 3 following refueling</p>	<p>A.1 Restore <u>affected equipment</u> steam supply to OPERABLE status.</p>	<p>7 days</p> <p><u>AND</u></p> <p>10 days from discovery of failure to meet the LCO</p>
<p>B. One AFW train inoperable for reasons other than Condition A in MODE 1, 2, or 3.</p>	<p>B.1 Restore AFW train to OPERABLE status.</p>	<p>72 hours</p> <p><u>AND</u></p> <p>10 days from discovery of failure to meet the LCO</p>
<p>C. Two AFW trains with two motor driven pumps inoperable in MODES 1, 2, or 3.</p>	<p>C.1 Restore one AFW train to OPERABLE status.</p>	<p>48 hours</p>

(continued)

Attachment E
(Proposed Page)
SONGS Unit 2

3.7 PLANT SYSTEMS

3.7.5 Auxiliary Feedwater (AFW) System

LCO 3.7.5 Three AFW trains shall be OPERABLE.

-----NOTES-----

1. Only one AFW train, which includes a motor driven pump, is required to be OPERABLE in MODE 4.
 2. The steam driven AFW pump is OPERABLE when running and controlled manually to support plant start-ups, plant shut-downs, and AFW pump and valve testing.
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APPLICABILITY: MODES 1, 2, and 3,
MODE 4 when steam generator is relied upon for heat removal.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One steam supply to turbine driven AFW pump inoperable.</p> <p><u>OR</u></p> <p>-----NOTE----- Only applicable if MODE 2 has not been entered following refueling</p> <p>----- One turbine driven AFW pump inoperable in MODE 3 following refueling</p>	<p>A.1 Restore affected equipment to OPERABLE status.</p>	<p>7 days</p> <p><u>AND</u></p> <p>10 days from discovery of failure to meet the LCO</p>
<p>B. One AFW train inoperable for reasons other than Condition A in MODE 1, 2, or 3.</p>	<p>B.1 Restore AFW train to OPERABLE status.</p>	<p>72 hours</p> <p><u>AND</u></p> <p>10 days from discovery of failure to meet the LCO</p>
<p>C. Two AFW trains with two motor driven pumps inoperable in MODES 1, 2, or 3.</p>	<p>C.1 Restore one AFW train to OPERABLE status.</p>	<p>48 hours</p>

(continued)

Attachment F
(Proposed Page.)
SONGS Unit 3

3.7 PLANT SYSTEMS

3.7.5 Auxiliary Feedwater (AFW) System

LCO 3.7.5 Three AFW trains shall be OPERABLE.

- NOTES-----
1. Only one AFW train, which includes a motor driven pump, is required to be OPERABLE in MODE 4.
 2. The steam driven AFW pump is OPERABLE when running and controlled manually to support plant start-ups, plant shut-downs, and AFW pump and valve testing.
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APPLICABILITY: MODES 1, 2, and 3,
MODE 4 when steam generator is relied upon for heat removal.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One steam supply to turbine driven AFW pump inoperable.</p> <p style="text-align: center;"><u>OR</u></p> <p style="text-align: center;">-----NOTE----- Only applicable if MODE 2 has not been entered following refueling -----</p> <p>One turbine driven AFW pump inoperable in MODE 3 following refueling</p>	<p>A.1 Restore affected equipment to OPERABLE status.</p>	<p>7 days</p> <p><u>AND</u></p> <p>10 days from discovery of failure to meet the LCO</p>
<p>B. One AFW train inoperable for reasons other than Condition A in MODE 1, 2, or 3.</p>	<p>B.1 Restore AFW train to OPERABLE status.</p>	<p>72 hours</p> <p><u>AND</u></p> <p>10 days from discovery of failure to meet the LCO</p>
<p>C. Two AFW trains with two motor driven pumps inoperable in MODES 1, 2, or 3.</p>	<p>C.1 Restore one AFW train to OPERABLE status.</p>	<p>48 hours</p>

(continued)

Attachment G

(TS Bases Pages)

(Redline and Strikeout)

SONGS Unit 2 (Typical for Units 2 and 3)

BASES (continued)

LCO (continued) (MSLB) occurs, causing MSIS initiation followed by EFAS initiation, while the turbine driven AFW pump is operating, the steam driven AFW pump turbine can trip on overspeed. However, the best estimate is that by operating the steam driven AFW Pump in manual, the cumulative core damage frequency CDF decreases by approximately $2E-10/yr$. The value of $2E-10/yr$ is based on the assumption that the steam driven AFW pump is operated in the manual mode approximately 500 minutes per year. This decrease in CDF is a result of the steam driven AFW Pump being available for all other required uses while operating in manual.

APPLICABILITY In MODES 1, 2, and 3, the AFW System is required to be OPERABLE and to function in the event that the MFW is lost. In addition, the AFW System is required to supply enough makeup water to replace steam generator secondary inventory, lost as the unit cools to MODE 4 conditions.

In MODE 4, the AFW System may be used for heat removal via the steam generator.

In MODES 5 and 6, the steam generators are not normally used for decay heat removal, and the AFW System is not required.

ACTIONS

A.1

If one of the two steam supplies to the turbine driven AFW pumps is inoperable, or if a turbine driven 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 Completion Time is reasonable based on the following reasons:

- a. For the inoperability of a steam supply to the turbine driven AFW pump, the 7 day Completion Time is reasonable since there is a redundant steam supply line for the turbine driven pump. The redundant OPERABLE steam supply to the turbine driven AFW pump;
- b. For the inoperability of a turbine driven AFW pump while in MODE 3 immediately subsequent to a refueling, the 7 day Completion Time is reasonable due to the minimal decay heat levels in this situation. The availability of redundant OPERABLE motor driven AFW pumps; and
- c. For both the inoperability of a steam supply line to the turbine driven pump and an inoperable turbine driven AFW pump while in MODE 3 immediately following a refueling, the 7 day Completion 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. The low probability of an event requiring the inoperable steam supply to the turbine driven AFW pump.

BASES (continued)

ACTIONS

A.1 (continued)

The second Completion Time for Required Action A.1 establishes a limit on the maximum time allowed for any combination of Conditions to be inoperable during any continuous failure to meet this LCO.

The 10 day Completion Time provides a limitation time allowed in this specified Condition after discovery of failure to meet the LCO. This limit is considered reasonable for situations in which Conditions A and B are entered concurrently. The AND connector between 7 days and 10 days dictates that both Completion Times apply simultaneously, and the more restrictive must be met.

Condition A is modified by a Note which limits the applicability of the Condition to when the unit has not entered MODE 2 following a refueling. Condition A allows one turbine driven AFW train to be inoperable for 7 days vice the 72 hour Completion Time in Condition B. This longer Completion Time is based on the reduced decay heat following refueling and prior to the reactor being critical.

B.1

With one of the required AFW trains (pump or flow path) inoperable, action must be taken to restore OPERABLE status within 72 hours. This Condition includes the loss of two steam supply lines to the turbine driven AFW pump. The 72 hour Completion Time is reasonable, based on the redundant capabilities afforded by the AFW System, the time needed for repairs, and the low probability of a DBA event occurring during this period. Two AFW pumps and flow paths remain to supply feedwater to the steam generators.

The second Completion Time for Required Action B.1 establishes a limit on the maximum time allowed for any combinations of Conditions to be inoperable during any continuous failure to meet this LCO.

The 10 day Completion Time provides a limitation time allowed in this specified Condition after discovery of failure to meet the LCO. This limit is considered reasonable for situations in which conditions A and B are entered concurrently. The AND connector between 72 hours and 10 days dictates that both Completion Times apply simultaneously, and the more restrictive must be met.

C.1

With two AFW trains with two motor driven pumps inoperable in MODES 1, 2, or 3, action must be taken to restore OPERABLE status within 48 hours. This Condition assumes that two steam supplies to AFW steam driven pump are