



**Pacific Gas and
Electric Company**

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July 29, 2005

PG&E Letter DCL-05-080

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

Docket No. 50-275, OL-DPR-80
Docket No. 50-323, OL-DPR-82
Diablo Canyon Units 1 and 2
License Amendment Request 05-02
Revision to Technical Specification 3.7.5, "Auxiliary Feedwater (AFW) System"

Dear Commissions and Staff:

In accordance with 10 CFR 50.90, enclosed is an application for amendment to Facility Operating License Nos. DPR-80 and DPR-82 for Units 1 and 2 of the Diablo Canyon Power Plant, respectively. The enclosed License Amendment Request (LAR) proposes to revise Technical Specification (TS) 3.7.5, "Auxiliary Feedwater (AFW) System."

The proposed change would revise the frequency of Surveillance Requirement (SR) 3.7.5.6 from 92 days to 24 months. SR 3.7.5.6 requires verifying that the fire water storage tank (FWST) is capable of being aligned to the AFW system by cycling each FWST valve in the flow path necessary for realignment through at least one full cycle. Extending the frequency of SR 3.7.5.6 from 92 days to 24 months meets the guidance of the ASME Code for Operation and Maintenance of Nuclear Power Plants 2001 Edition with the 2002 and 2003 Addenda, and 10 CFR 50.55a(b)(3)(vi).

Enclosure 1 contains a description of the proposed change, the supporting technical analyses, and the no significant hazards consideration determination. Enclosures 2 and 3 contain marked-up and retyped (clean) TS pages, respectively. Enclosure 4 contains TS Bases changes, for information only, that will be implemented pursuant to TS 5.5.14, "Technical Specifications (TS) Bases Control Program," at the time this amendment is implemented.

Pacific Gas and Electric Company (PG&E) has determined that this LAR does not involve a significant hazards consideration as determined per 10 CFR 50.92. Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with the issuance of this

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amendment. The change proposed in this LAR is not required to address an immediate safety concern. Approval is requested by July 31, 2006. PG&E requests the license amendment be made effective upon NRC issuance, to be implemented within 90 days from the date of issuance.

If you have any questions or require additional information, please contact Stan Ketelsen at (805) 545-4720.

Sincerely,

James R. Becker
Vice President Diablo Canyon Operations and Station Director

jer1/3664

Enclosures

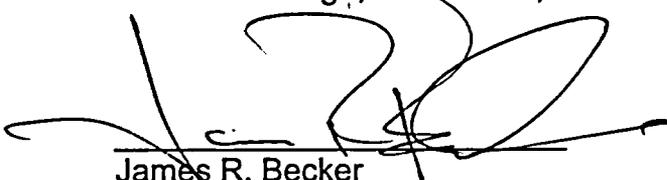
cc: Edgar Bailey, DHS
Terry W. Jackson
Bruce S. Mallett
Diablo Distribution
cc/enc: Girija S. Shukla

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of PACIFIC GAS AND ELECTRIC COMPANY) Docket No. 50-275) Facility Operating License) No. DPR-80
Diablo Canyon Power Plant Units 1 and 2) Docket No. 50-323) Facility Operating License) No. DPR-82

AFFIDAVIT

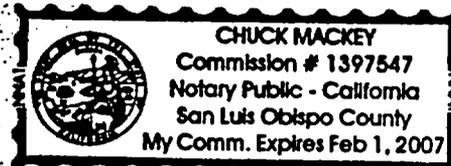
James R. Becker, of lawful age, first being duly sworn upon oath says that he is Vice President Diablo Canyon Operations and Station Director of Pacific Gas and Electric Company; that he has executed License Amendment Request 05-02 on behalf of said company with full power and authority to do so; that he is familiar with the content thereof; and that the facts stated therein are true and correct to the best of his knowledge, information, and belief.



James R. Becker
Vice President Diablo Canyon Operations and Station Director

Subscribed and sworn to (or affirmed) before me on this 29th day of July, 2005, by James R. Becker, personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.


Notary
State of California
County of San Luis Obispo



EVALUATION

1.0 DESCRIPTION

This letter is a request to amend Operating Licenses DPR-80 and DPR-82 for Units 1 and 2 of the Diablo Canyon Power Plant (DCPP), respectively.

This License Amendment Request (LAR) proposes to revise Technical Specification (TS) 3.7.5, "Auxiliary Feedwater (AFW) System." The proposed change would revise the frequency of Surveillance Requirement (SR) 3.7.5.6 from 92 days to 24 months. SR 3.7.5.6 requires verifying that the fire water storage tank (FWST) is capable of being aligned to the AFW system by cycling each FWST valve in the flow path necessary for realignment through at least one full cycle.

2.0 PROPOSED CHANGE

The proposed change would revise TS 3.7.5 as follows:

SR 3.7.5.6 frequency of 92 days is revised to 24 months.

SR 3.7.5.6 Bases will be revised accordingly.

Enclosures 2 and 3 contain marked-up and retyped (clean) TS pages, respectively. Enclosure 4 contains TS Bases changes, for information only, that will be implemented pursuant to TS 5.5.14, "Technical Specifications (TS) Bases Control Program," at the time this amendment is implemented.

3.0 BACKGROUND

3.1 System Description

The AFW system automatically supplies feedwater to the steam generators to remove decay heat from the reactor coolant system on loss of normal feedwater supply. The AFW pumps take normal suction from the condensate storage tank (CST) and are capable of being aligned to the FWST as an alternate supply.

SR 3.7.5.6 verifies that the FWST is capable of being aligned to the AFW pump suctions. This assures that this additional supply of required AFW is available from the seismically qualified FWST should it be needed for a natural circulation cooldown.

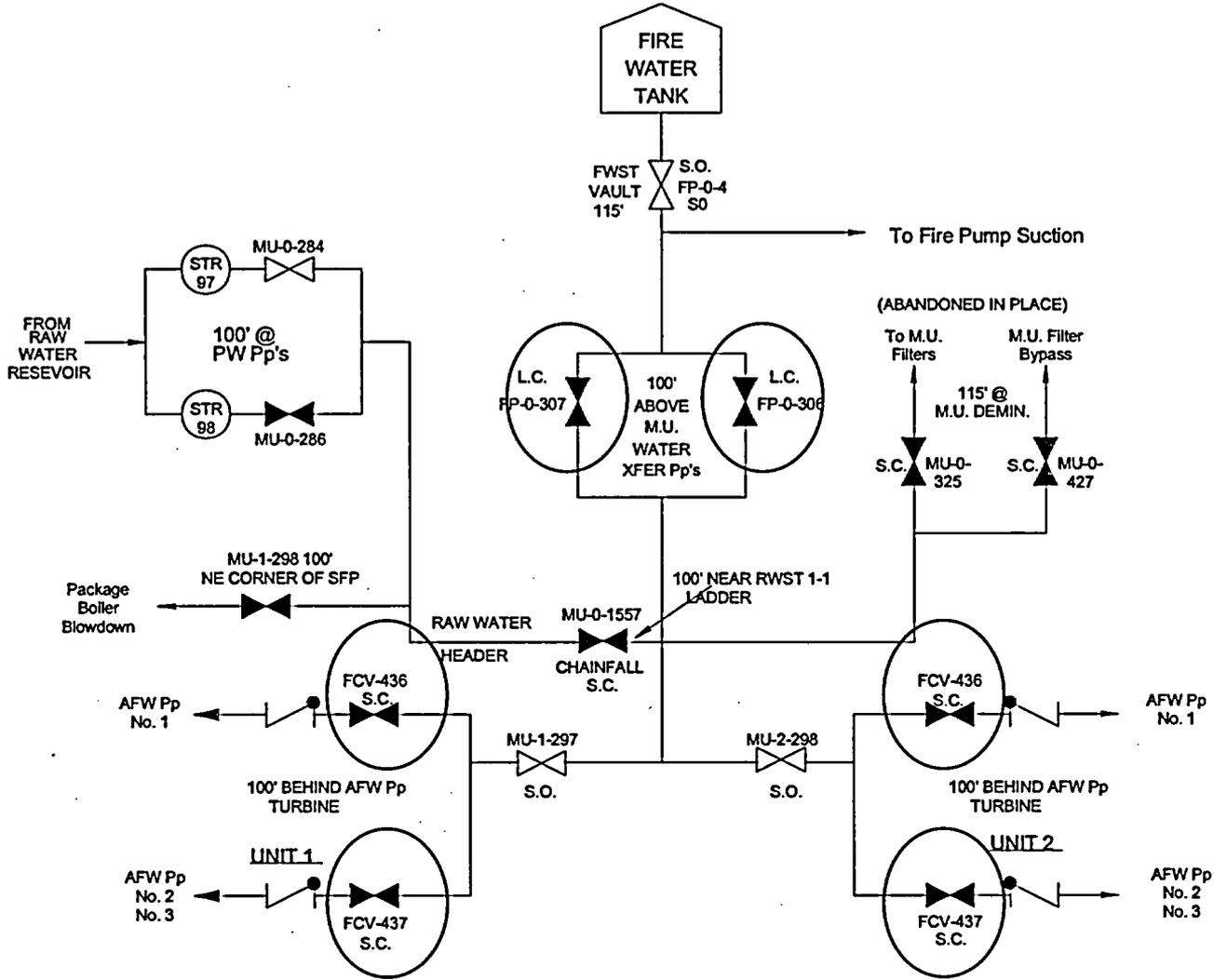
The FWST supply valves controlled by SR 3.7.5.6 are:

FP-0-306
FP-0-307
FW-1-FCV-436
FW-1-FCV-437
FW-2-FCV-436
FW-2-FCV-437

These valves are shown circled on Figure 1 (next page).

3.2 Purpose of Proposed Amendments

On June 17, 2003, Nonconformance Report (NCR) N0002167, "Continued Contamination of Auxiliary Feedwater," was initiated by Pacific Gas and Electric Company (PG&E). The purpose of the NCR was to investigate continued contamination of the AFW system with impurities from the raw water storage system due to valve leakage, and to investigate the adequacy of previous NCR corrective actions. The raw water storage system and FWST share a common header that is used as the backup supply for the AFW system (see Figure 1). The NCR review resulted in several changes to maintenance and operating procedures for the affected valves. While procedure revisions have been made to minimize contamination of the AFW system when cycling the FWST supply header valves for testing, PG&E determined a prudent action should be pursued to reduce the frequency of cycling these valves for surveillance, thereby reducing the challenges to the AFW system of contamination from impurities from the raw water storage system.



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Figure 1
 Alternate Sources for AFW
 (circled valves are controlled by SR 3.7.5.6)

4.0 TECHNICAL ANALYSIS

4.1 System Design Basis

TS 3.7.6, "Condensate Storage Tank (CST) and Fire Water Storage Tank (FWST)," requires that "the FWST level shall be $\geq 22.2\%$ for one unit operation and $\geq 41.7\%$ for two unit operation."

TS 3.7.6, Bases, Limiting Condition for Operation (LCO) requires that "To satisfy Hosgri analysis assumptions, the CST and FWST must contain sufficient cooling water to remove decay heat following a reactor trip from 102% rated thermal power (RTP), and then to cool down the reactor coolant system (RCS) to residual heat removal (RHR) entry conditions, assuming a coincident loss of offsite power and the most adverse single failure."

Supplemental Safety Evaluation Report (SSER) 8, dated November 15, 1978, discusses the NRC's concerns with using the raw water reservoirs as a backup source for AFW due to potential slope instability during a seismic event. SSER 8 discusses the acceptability of using the seismic Category I FWST instead of the raw water reservoirs as a backup AFW source and "... require(d) that redundant flow paths be provided to bypass any assumed single valve failure (valve jammed shut)," between the FWST and AFW Pumps suction as a result of a seismic event.

4.2 System Safety Analysis Basis

The CST supplemented by the FWST provides a safety grade source of water to the steam generators (SG) for removing decay and sensible heat from the RCS. The CST and FWST provide a passive flow of water, by gravity, to the AFW System. The AFW System provides water to the SGs to accomplish the heat removal function. The steam produced is released to the atmosphere by the main steam safety valves or atmospheric dump valves if the main steam isolation valves are closed.

The CST and FWST provide cooling water to remove decay heat and to cool down the unit following all events in the accident analyses as discussed in the Final Safety Analysis Report (FSAR) Update, Chapters 6 and 15. The limiting event for AFW inventory, i.e., CST and FWST minimum volumes, is based on a loss of offsite power, which assumes a reduced RCS cooldown rate on natural circulation and requires seismically qualified water sources. The lower RCS cooldown rate increases the cooldown period until the RHR system can be used to remove further decay heat. The extended cooldown time thus requires more AFW supply than can be provided by the seismically qualified portion of the CST.

Because the CST and FWST are the principal components for removing residual heat from the RCS, they are designed to withstand earthquakes and other natural phenomena, including missiles that might be generated by natural phenomena. The CST and FWST are designed Seismic Category I to ensure availability of the AFW inventory. The operability of the AFW cooling water supply is assured by verifying the CST and FWST inventories meet TS 3.7.6 requirements, by verifying the CST is properly aligned, and by verifying the FWST is capable of being aligned to the AFW Pumps suction.

Since there was insufficient volume in the CST alone for long-term cooling needs, the NRC required in SSER 8 that the FWST have a seismically qualified flowpath to the AFW Pumps suction capable of withstanding an assumed seismic failure of any single valve (including a valve jammed shut).

4.3 ASME Code Requirements

In PG&E Letter DCL-05-023, "Inservice Testing (IST) Program - Third Ten Year Interval and IST Relief Requests," dated March 14, 2005, PG&E submitted the DCPD IST Program for the third ten-year interval. The IST Program incorporates the 2001 Edition with the 2002 and 2003 Addenda of the ASME Code for Operation and Maintenance of Nuclear Power Plants (OM Code) with 10 CFR 50.55a(b) approved Code Cases as applicable. The third ten year interval will begin January 1, 2006, and June 1, 2006, for Units 1 and 2, respectively.

OM Code paragraph ISTC-3540, "Manual Valves," updated in the 1999 Addenda to the code, specifies that manual valves shall be full-stroke cycled at least once every five years, except where adverse conditions may require the valve to be tested more frequently to ensure operational readiness. The DCPD FWST supply valves controlled by SR 3.7.5.6 are all located indoors and are not exposed to adverse conditions.

10 CFR 50.55a(b)(3)(vi) requires that manual valves be exercised on a two year interval rather than the five-year interval specified in paragraph ISTC-3540 of the 1999 Addenda through the latest edition and addenda incorporated by reference in paragraph (b)(3), provided that adverse conditions do not require more frequent testing.

4.4 Maintenance and Operating History

The FWST supply valves controlled by SR 3.7.5.6 were originally equipped with motor operators. However, due to performance problems, the motor operators were removed in the early 1990s. Maintenance records since the motor operators were removed show no instances of a valve being found in an inoperable condition or incapable of being repositioned. Maintenance records show that corrective action has been required on several occasions to correct

problems such as seat leakage, stem leakage, position stop adjustments and on two of the valves, chainfall repairs. None of these problems would have prevented the valve from performing its design function to be opened in an emergency to provide FWST water to the AFW system. Operating and maintenance histories of the FWST supply valves show that these valves have been capable of full-stroke cycling each time they were tested. There is no evidence of any time-related degradation mechanism that would prevent the valves from passing SR 3.7.5.6 or performing their design function in the future.

4.5 Conclusion

Increasing the frequency interval for SR 3.7.5.6 from 92 days to 24 months is acceptable because the change meets the requirements of both the OM Code and 10 CFR 50.55a(b)(3)(vi). The change is justified by review of the maintenance and operating histories of the FWST supply valves that show no instances of failures that would have prevented the valves from performing their design function. The proposed change will reduce the number of challenges to the AFW system by reducing the opportunity for contamination from the raw water system.

5.0 REGULATORY ANALYSIS

5.1 No Significant Hazards Consideration

Pacific Gas and Electric Company (PG&E) has evaluated whether or not a significant hazards consideration is involved with the proposed amendment 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 change to increase frequency interval for Surveillance Requirement (SR) 3.7.5.6 from 92 days to 24 months has no impact on the probability of accidents previously evaluated. The valves controlled by SR 3.7.5.6 are used to provide an alternate supply of water to the auxiliary feedwater (AFW) system from the fire water storage tank (FWST) and are only operated after an accident has occurred. They are not accident initiators.

Misoperation, or failure of a FWST supply to be correctly positioned following an accident, could result in an inadequate supply of water to the AFW system. Failure to provide adequate core cooling could increase the radiological consequences of an accident. However, operating and maintenance histories

of the FWST supply valves show that these valves have been capable of full stroke cycling each time they have been tested. There is no evidence of any time-related degradation mechanism that would prevent the valves from performing their design function. Thus the proposed change has no impact on the consequences of an accident.

Therefore, the proposed change 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 accident from any accident previously evaluated?

Response: No.

The proposed change to increase frequency interval for SR 3.7.5.6 from 92 days to 24 months has no impact on the probability of accidents of the type evaluated in the Final Safety Analysis Report, as updated. The valves are used to provide an alternate supply of water to the AFW system from the FWST, and are only operated after an accident has occurred. They are not accident initiators. Review of the operating and maintenance histories of the FWST supply valves show that they are highly reliable in maintaining their capability to perform their design function.

Therefore, the proposed change does not create the possibility of a new or different accident from any accident previously evaluated.

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

Response: No.

The proposed change to SR 3.7.5.6 involves only an increase in the frequency interval. No physical changes are required to the facility or to the plant operating or emergency procedures as a result of the change. Based on review of the operating and maintenance histories of the FWST supply valves, they have been capable of full stroke cycling each time they have been tested. There is no evidence of any time-related degradation mechanism that would prevent the valves from performing their design function. This evidence supports the conclusion that there will be no impact in the operation of these valves following an accident.

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

Based on the above evaluation, PG&E concludes that the proposed change presents no significant hazards consideration under the standards set forth in

10 CFR 50.92(c), and accordingly, a finding of "no significant hazards consideration" is justified.

5.2 Applicable Regulatory Requirements/Criteria

General Design Criterion 2, "Design Bases for Protection Against Natural Phenomena," of Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," requires that nuclear power plant structures, systems, and components important to safety be designed to withstand the effects of earthquakes without loss of capability to perform their safety functions.

Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50 establishes quality assurance requirements for the design, construction, and operation of nuclear power plant structures, systems, and components that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public. The pertinent requirements of Appendix B apply to all activities effecting the safety-related functions of those structures, systems, and components.

Appendix A, "Seismic and Geologic Siting Criteria for Nuclear Power Plants," to 10 CFR Part 100, "Reactor Site Criteria," requires that all nuclear power plants be designed so that, if the Safe Shutdown Earthquake occurs, certain structures, systems, and components remain functional. These plant features are those necessary to ensure (1) the integrity of the reactor coolant pressure boundary, (2) the capability to shut down the reactor and maintain it in a safe shutdown condition, or (3) the capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposures comparable to the guideline exposures of 10 CFR Part 100.

TS 3.7.5 requires three AFW trains to be operable in Modes 1, 2, and 3, and in Mode 4 when a steam generator is relied upon for heat removal. SR 3.7.5.6 verifies that the FWST is capable of being aligned to the AFW pump suction. SR 3.7.5.6 assures that this additional supply of required AFW is available from the seismically qualified FWST should it be needed following an accident.

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

PG&E has evaluated the proposed amendment and has determined that the proposed amendment does not involve (1) a significant hazards consideration, (2) a significant change in the types, or significant increase in the amounts, of any effluent that may be released offsite, or (3) 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 REFERENCES

1. PG&E Letter DCL-05-023, "Inservice Testing (IST) Program - Third Ten-Year Interval and IST Relief Requests," dated March 14, 2005
2. ASME Code for Operation and Maintenance of Nuclear Power Plants 2001 Edition, dated November 2, 2001, with the 2002 and 2003 Addenda dated September 30, 2002 and August 29, 2003, respectively
3. 10 CFR 50.55a(b)(3)(vi), "Exercise Interval for Manual Valves"
4. General Design Criterion 2, "Design Bases for Protection Against Natural Phenomena," of Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities"
5. Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50
6. Appendix A, "Seismic and Geologic Siting Criteria for Nuclear Power Plants," to 10 CFR Part 100, "Reactor Site Criteria"

Proposed Technical Specification Page (Mark-up)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.5.1	Verify each AFW manual, power operated, and automatic valve in each water flow path, and in both steam supply flow paths to the steam turbine driven pump, that is not locked, sealed, or otherwise secured in position, is in the correct position.	31 days
SR 3.7.5.2	<p>-----NOTE-----</p> <p>Not required to be performed for the turbine driven AFW pump until 24 hours after ≥ 650 psig in the steam generator.</p> <p>-----</p> <p>Verify the developed head of each AFW pump at the flow test point is greater than or equal to the required developed head.</p>	In accordance with the Inservice Test Program.
SR 3.7.5.3	<p>-----NOTE-----</p> <p>Not applicable in MODE 4 when steam generator is relied upon for heat removal.</p> <p>-----</p> <p>Verify each AFW automatic valve that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.</p>	24 months
SR 3.7.5.4	<p>-----NOTES-----</p> <ol style="list-style-type: none"> Not required to be performed for the turbine driven AFW pump until 24 hours after ≥ 650 psig in the steam generator. Not applicable in MODE 4 when generator is relied upon for heat removal. <p>-----</p> <p>Verify each AFW pump starts automatically on an actual or simulated actuation signal.</p>	24 months
SR 3.7.5.5	Not used.	
SR 3.7.5.6	Verify the FWST is capable of being aligned to the AFW system by cycling each FWST valve in the flow path necessary for realignment through at least one full cycle.	92 days

24 months

Proposed Technical Specification Changes (Retyped)

Remove Page

3.7-12

Insert Page

3.7-12

SURVEILLANCE REQUIREMENTS

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<p>SR 3.7.5.2 -----NOTE----- Not required to be performed for the turbine driven AFW pump until 24 hours after ≥ 650 psig in the steam generator.</p> <p>-----</p> <p>Verify the developed head of each AFW pump at the flow test point is greater than or equal to the required developed head.</p>	<p>In accordance with the Inservice Test Program.</p>
<p>SR 3.7.5.3 -----NOTE----- Not applicable in MODE 4 when steam generator is relied upon for heat removal.</p> <p>-----</p> <p>Verify each AFW automatic valve that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.</p>	<p>24 months</p>
<p>SR 3.7.5.4 -----NOTES----- 1. Not required to be performed for the turbine driven AFW pump until 24 hours after ≥ 650 psig in the steam generator. 2. Not applicable in MODE 4 when generator is relied upon for heat removal.</p> <p>-----</p> <p>Verify each AFW pump starts automatically on an actual or simulated actuation signal.</p>	<p>24 months</p>
<p>SR 3.7.5.5 Not used.</p>	
<p>SR 3.7.5.6 Verify the FWST is capable of being aligned to the AFW system by cycling each FWST valve in the flow path necessary for realignment through at least one full cycle.</p>	<p>24 months</p>

Changes to Technical Specification Bases Pages
(For information only)

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.7.5.6

This SR verifies that the FWST is capable of being aligned to the AFW pump suction. This assures that this additional supply of required AFW is available from the seismically qualified FWST should it be needed for a natural circulation cooldown.

Since there is insufficient volume in the CST alone for long-term cooling needs, the NRC required in SSER 8 that the FWST have a seismically-qualified flow path to the AFW Pumps suction to withstand an assumed seismic failure of any single valve (valve jammed shut). This means that valves MU-0-1557 and MU-1-297 and MU-2-298 should be maintained in their normal positions. If these valves are required to be out of position due to maintenance activities, then these activities should be treated as if entering the LCO action for TS 3.7.6.

~~The 92 day frequency, based on engineering judgement, is consistent with procedural controls governing valve operation, and ensures correct valve positions.~~

A similar SR is not required for the CST alignment since the AFW system is used for startup and an AFW pump is tested each month. This operation and the pump tests assure proper valve alignment.

REFERENCES

1. FSAR, Section 6.5 and Section 15.2.8.
2. ANSI/ASME OM-1-1987, (including OM-a-1988 ADDENDA).
3. DCM S-3B.

4. ASME OM-2001 (including 2002 and 2003 ADDENDA).
 5. 10 CFR 50.55a(b)(3)(vi).

The 24 month frequency, based on engineering judgment, is consistent with References 4 and 5.