



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

October 30, 2008

Mr. John Conway
Senior Vice President - Station
Generation and Chief Nuclear Officer
Pacific Gas and Electric Company
Diablo Canyon Power Plant
P.O. Box 770000
San Francisco, CA 94177-0001

SUBJECT: DIABLO CANYON POWER PLANT, UNIT NOS. 1 AND 2 - ISSUANCE OF
AMENDMENTS RE: TECHNICAL SPECIFICATIONS CHANGE TO RELOCATE
SURVEILLANCE TEST INTERVALS TO A LICENSEE-CONTROLLED PROGRAM
(RISK-INFORMED INITIATIVE 5B) (TAC NOS. MD8911 AND MD8912)

Dear Mr. Conway:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 200 to Facility Operating License No. DPR-80 and Amendment No. 201 to Facility Operating License No. DPR-82 for the Diablo Canyon Power Plant, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated October 15, 2007, and as supplemented by letter dated July 8, 2008.

The amendments relocate surveillance frequencies of most surveillance tests from the TSs to a licensee-controlled document, the Surveillance Frequency Control Program. Once relocated, changes to the surveillance frequencies may be made using a risk-informed methodology, Nuclear Energy Institute (NEI) document NEI 04-10 Rev. 1, as specified in the Administrative Controls of the TS. The NRC staff has previously approved NEI 04-10 Rev. 1, as acceptable for referencing in licensing applications.

A copy of the related Safety Evaluation is enclosed. The Notice of Issuance will be included in the Commission's next regular biweekly *Federal Register* notice.

Sincerely,

A handwritten signature in cursive script that reads "Alan Wang".

Alan B. Wang, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-275 and 50-323

Enclosures:

1. Amendment No. 200 to DPR-80
2. Amendment No. 201 to DPR-82
3. Safety Evaluation

cc w/encls: See next page

Diablo Canyon Power Plant, Units 1 and 2

(6/2008)

cc:

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

PACIFIC GAS AND ELECTRIC COMPANY

DOCKET NO. 50-275

DIABLO CANYON NUCLEAR POWER PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 200
License No. DPR-80

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Pacific Gas and Electric Company (the licensee), dated October 15, 2007, and as supplemented by letter dated July 8, 2008, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

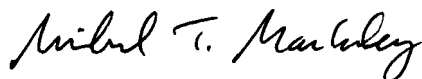
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. DPR-80 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 200, are hereby incorporated in the license. Pacific Gas & Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

3. This license amendment is effective as of its date of issuance and shall be implemented within 360 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael T. Markley, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Facility
Operating License No. DPR-80
and Technical Specifications

Date of Issuance: October 30, 2008



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

PACIFIC GAS AND ELECTRIC COMPANY

DOCKET NO. 50-323

DIABLO CANYON NUCLEAR POWER PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 201
License No. DPR-82

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Pacific Gas and Electric Company (the licensee), dated October 15, 2007, and as supplemented by letter dated July 8, 2008, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

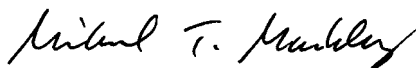
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. DPR-82 is hereby amended to read as follows:

(2) Technical Specifications (SSER 32, Section 8)* and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 201, are hereby incorporated in the license. Pacific Gas & Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

3. This license amendment is effective as of its date of issuance and shall be implemented within 360 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael T. Markley, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Facility
Operating License No. DPR-82
and Technical Specifications

Date of Issuance: October 30, 2008

ATTACHMENT TO LICENSE AMENDMENT NO. 200

TO FACILITY OPERATING LICENSE NO. DPR-80

AND AMENDMENT NO. 201 TO FACILITY OPERATING LICENSE NO. DPR-82

DOCKET NOS. 50-275 AND 50-323

Replace the following pages of the Facility Operating License Nos. DPR-80 and DPR-82, and Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Facility Operating License Nos. DPR-80 and DPR-82

REMOVE INSERT

-3- -3-

Technical Specifications

<u>REMOVE</u>	<u>INSERT</u>	<u>REMOVE</u>	<u>INSERT</u>	<u>REMOVE</u>	<u>INSERT</u>
1.1-6	1.1-6	3.4-9	3.4-9	3.7-16	3.7-16
3.1-1	3.1-1	3.4-11	3.4-11	3.7-19	3.7-19
3.1-3	3.1-3	3.4-13	3.4-13	3.7-21	3.7-21
3.1-9	3.1-9	3.4-15	3.4-15	3.7-22	3.7-22
3.1-10	3.1-10	3.4-17	3.4-17	3.7-24	3.7-24
3.1-12	3.1-12	3.4-22	3.4-22	3.7-26	3.7-26
3.1-17	3.1-17	3.4-25	3.4-25	3.7-27	3.7-27
3.2-2	3.2-2	3.4-26	3.4-26	3.7-33	3.7-33
3.2-4	3.2-4	3.4-28	3.4-28	3.8-4	3.8-4
3.2-7	3.2-7	3.4-30	3.4-30	3.8-5	3.8-5
3.2-8	3.2-8	3.4-31	3.4-31	3.8-6	3.8-6
3.2-11	3.2-11	3.4-34	3.4-34	3.8-7	3.8-7
3.3-8	3.3-8	3.4-36	3.4-36	3.8-8	3.8-8
3.3-9	3.3-9	3.5-1	3.5-1	3.8-9	3.8-9
3.3-10	3.3-10	3.5-2	3.5-2	3.8-10	3.8-10
3.3-11	3.3-11	3.5-4	3.5-4	3.8-17	3.8-17
--	3.3-11a	3.5-5	3.5-5	3.8-19	3.8-19
3.3-25	3.3-25	3.5-7	3.5-7	3.8-24	3.8-24
--	3.3-25a	3.5-8	3.5-8	--	3.8-24a
3.3-26	3.3-26	3.6-4	3.6-4	3.8-26	3.8-26
3.3-36	3.3-36	3.6-9	3.6-9	3.8-28	3.8-28
3.3-39	3.3-39	3.6-10	3.6-10	3.8-30	3.8-30
3.3-41	3.3-41	3.6-11	3.6-11	3.8-32	3.8-32
3.3-42	3.3-42	3.6-12	3.6-12	3.9-1	3.9-1
3.3-45	3.3-45	3.6-15	3.6-15	3.9-2	3.9-2
3.3-48	3.3-48	3.6-16	3.6-16	--	3.9-2a
--	3.3-48a	3.7-5	3.7-5	3.9-3	3.9-3
3.3-51	3.3-51	3.7-7a	3.7-7a	3.9-4	* 3.9-3a
3.4-1	3.4-1	3.7-9	3.7-9	3.9-5	3.9-5
--	3.4-1a	3.7-12	3.7-12	3.9-7	3.9-7
3.4-4	3.4-4	3.7-13	3.7-13	3.9-8	3.9-8
3.4-6	3.4-6	3.7-14	3.7-14	5.0-17	5.0-17
3.4-7	3.4-7	3.7-15	3.7-15		

* The current technical specifications in ADAMS contain two pages numbered 3.9-4. The first instance is entitled "Containment Penetrations" for SRs 3.9.4.1 and 3.9.4.2; the second is entitled "RHR and Coolant Circulation - High Water Level" for LCO 3.9.5. Please replace page 3.9-4 for SRs 3.9.4.1 and 3.9.4.2 with page 3.9-3a for SRs 3.9.4.1 and 3.9.4.2.

- (4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
 - (5) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.
- C. This License shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:
- (1) Maximum Power Level

The Pacific Gas and Electric Company is authorized to operate the facility at reactor core power levels not in excess of 3411 megawatts thermal (100% rated power) in accordance with the conditions specified herein.
 - (2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 200 , are hereby incorporated in the license. Pacific Gas & Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.
 - (3) Initial Test Program

The Pacific Gas and Electric Company shall conduct the post-fuel-loading initial test program (set forth in Section 14 of Pacific Gas and Electric Company's Final Safety Analysis Report, as amended), without making any major modifications of this program unless modifications have been identified and have received prior NRC approval. Major modifications are defined as:

 - a. Elimination of any test identified in Section 14 of PG&E's Final Safety Analysis Report as amended as being essential;

- (4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
- (5) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This License shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The Pacific Gas and Electric Company is authorized to operate the facility at reactor core power levels not in excess of 3411 megawatts thermal (100% rated power) in accordance with the conditions specified herein.

(2) Technical Specifications (SSER 32, Section 8)* and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 201 , are hereby incorporated in the license. Pacific Gas & Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

(3) Initial Test Program (SSER 31, Section 4.4.1)

Any changes to the Initial Test Program described in Section 14 of the FSAR made in accordance with the provisions of 10 CFR 50.59 shall be reported in accordance with 50.59(b) within one month of such change.

*The parenthetical notation following the title of many license conditions denotes the section of the Safety Evaluation Report and/or its supplements wherein the license condition is discussed.

1.1 Definitions (continued)

SLAVE RELAY TEST	A SLAVE RELAY TEST shall consist of energizing all slave relays and verifying the OPERABILITY of each required slave relay. The SLAVE RELAY TEST shall include a continuity check of associated required testable actuation devices. The SLAVE RELAY TEST may be performed by means of any series of sequential, overlapping, or total steps.
THERMAL POWER	THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.
TRIP ACTUATING DEVICE OPERATIONAL TEST (TADOT)	A TADOT shall consist of operating the trip actuating device and verifying the OPERABILITY of all devices in the channel required for trip actuating device OPERABILITY. The TADOT shall include adjustment, as necessary, of the trip actuating device so that it actuates at the required setpoint within the necessary accuracy. The TADOT may be performed by means of any series of sequential, overlapping or total channel steps.

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3.1 REACTIVITY CONTROL SYSTEMS

3.1.1 SHUTDOWN MARGIN (SDM)

LCO 3.1.1 SDM shall be within the limits provided in the COLR.

APPLICABILITY: MODE 2 with $k_{eff} < 1.0$, MODES 3, 4, and 5.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. SDM not within limit.	A.1. Initiate boration to restore SDM to within limit.	15 minutes

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.1.1.1 Verify SDM to be within limits.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.1.2.1 -----NOTE----- The predicted reactivity values may be adjusted (normalized) to correspond to the measured core reactivity prior to exceeding a fuel burnup of 60 effective full power days (EFPD) after each fuel loading. ----- Verify measured core reactivity is within $\pm 1\% \Delta k/k$ of predicted values.</p>	<p>Once prior to entering MODE 1 after each refueling AND -----NOTE----- Only required after 60 EFPD ----- In accordance with the Surveillance Frequency Control Program</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.4.1	Verify individual rod positions within alignment limit.	In accordance with the Surveillance Frequency Control Program
SR 3.1.4.2	Verify rod freedom of movement (trippability) by moving each rod not fully inserted in the core ≥ 10 steps in either direction.	In accordance with the Surveillance Frequency Control Program
SR 3.1.4.3	Verify rod drop time of each rod, from the fully withdrawn position, is ≤ 2.7 seconds from the beginning of decay of stationary gripper coil voltage to dashpot entry, with: <ul style="list-style-type: none"> a. $T_{avg} \geq 500$ °F; and b. All reactor coolant pumps operating. 	Prior to reactor criticality after each removal of the reactor head

3.1 REACTIVITY CONTROL SYSTEMS

3.1.5 Shutdown Bank Insertion Limits

LCO 3.1.5 Each shutdown bank shall be within insertion limits specified in the COLR.

APPLICABILITY: MODE 1, MODE 2 with any control bank not fully inserted.

-----NOTE-----
This LCO is not applicable while performing SR 3.1.4.2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more shutdown banks not within limits.	A.1.1 Verify SDM to be within the limits provided in the COLR.	1 hour
	<u>OR</u>	
	A.1.2 Initiate boration to restore SDM to within limit.	1 hour
	<u>AND</u>	
	A.2 Restore shutdown banks to within limits.	2 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.1.5.1 Verify each shutdown bank is within the limits specified in the COLR.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.6.1	Verify estimated critical control bank position is within the limits specified in the COLR.	Within 4 hours prior to achieving criticality
SR 3.1.6.2	Verify each control bank insertion is within the limits specified in the COLR.	In accordance with the Surveillance Frequency Control Program
SR 3.1.6.3	Verify sequence and overlap limits specified in the COLR are met for control banks not fully withdrawn from the core.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.8.1	Perform a CHANNEL OPERATIONAL TEST on power range and intermediate range channels per SR 3.3.1.7, SR 3.3.1.8, and Table 3.3.1-1.	Prior to initiation of PHYSICS TESTS
SR 3.1.8.2	Verify the RCS lowest operating loop average temperature is $\geq 531^{\circ}$ F.	In accordance with the Surveillance Frequency Control Program
SR 3.1.8.3	Verify THERMAL POWER is $\leq 5\%$ RTP.	In accordance with the Surveillance Frequency Control Program
SR 3.1.8.4	Verify SDM is within the limits provided in the COLR.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

-----NOTE-----

During power escalation following shutdown, THERMAL POWER may be increased until an equilibrium power level has been achieved, at which a power distribution map is obtained.

SURVEILLANCE		FREQUENCY
SR 3.2.1.1	Verify F _Q ^C (Z) is within limit.	Once after each refueling prior to THERMAL POWER exceeding 75% RTP <u>AND</u> Once within 24 hours after achieving equilibrium conditions after exceeding, by ≥ 20% RTP, the THERMAL POWER at which F _Q ^C (Z) was last verified <u>AND</u> In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.2.1.2 (continued)	<p>Once within 24 hours after achieving equilibrium conditions after exceeding, by \geq 20% RTP, the THERMAL POWER at which $F_q^w(Z)$ was last verified</p> <p><u>AND</u></p> <p>In accordance with the Surveillance Frequency Control Program</p>

SURVEILLANCE REQUIREMENTS

-----NOTE-----

During power escalation following shutdown, THERMAL POWER may be increased until an equilibrium power level has been achieved, at which a power distribution map is obtained.

SURVEILLANCE	FREQUENCY
SR 3.2.2.1 Verify $F_{\Delta H}^N$ is within limits specified in the COLR.	Once after each refueling prior to THERMAL POWER exceeding 75% RTP <u>AND</u> In accordance with the Surveillance Frequency Control Program

3.2 POWER DISTRIBUTION LIMITS

3.2.3 AXIAL FLUX DIFFERENCE (AFD)

LCO 3.2.3 The AFD in % flux difference units shall be maintained within the limits specified in the COLR.

-----NOTE-----
The AFD shall be considered outside limits when two or more OPERABLE excore channels indicate AFD to be outside limits.

APPLICABILITY: MODE 1 with THERMAL POWER \geq 50% RTP.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. AFD not within limits.	A.1 Reduce THERMAL POWER to < 50% RTP.	30 minutes

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.2.3.1 Verify AFD within limits for each OPERABLE excore channel.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.2.4.1 -----NOTES-----</p> <ol style="list-style-type: none"> 1. With input from one Power Range Neutron Flux channel inoperable and THERMAL POWER \leq 75% RTP, the remaining three power range channels can be used for calculating QPTR. 2. SR 3.2.4.2 may be performed in lieu of this Surveillance. <p>-----</p> <p>Verify QPTR is within limit by calculation.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.2.4.2 -----NOTE-----</p> <p>Not required to be performed until 12 hours after the input from one or more Power Range Neutron Flux channels is inoperable with THERMAL POWER > 75% RTP.</p> <p>-----</p> <p>Verify QPTR is within limit using core power distribution measurement information.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

SURVEILLANCE REQUIREMENTS

-----NOTE-----
Refer to Table 3.3.1-1 to determine which SRs apply for each RTS Function.

SURVEILLANCE		FREQUENCY
SR 3.3.1.1	Perform CHANNEL CHECK.	In accordance with the Surveillance Frequency Control Program
SR 3.3.1.2	<p>-----NOTE----- Not required to be performed until 24 hours after THERMAL POWER is \geq 15% RTP, but prior to exceeding 30% RTP.</p> <p>-----</p> <p>Compare results of calorimetric heat balance calculation to power range channel output. Adjust power range channel output if calorimetric heat balance calculation results exceed power range channel output by more than + 2% RTP.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.3.1.3	<p>-----NOTE----- Not required to be performed until 24 hours after THERMAL POWER is \geq 50% RTP.</p> <p>-----</p> <p>Compare results of incore power distribution measurements to Nuclear Instrumentation System (NIS) AFD. Adjust NIS channel if absolute difference is \geq 3%.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.3.1.4	<p>-----NOTE----- This Surveillance must be performed on the reactor trip bypass breaker, for the local manual shunt trip only, prior to placing the bypass breaker in service.</p> <p>-----</p> <p>Perform TADOT.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.3.1.5	Perform ACTUATION LOGIC TEST.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.3.1.6 -----NOTE----- Not required to be performed until 72 hours after THERMAL POWER \geq 75% RTP. ----- Calibrate excore channels to agree with incore power distribution measurements.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.3.1.7 -----NOTE----- 1. Not required to be performed for source range instrumentation prior to entering MODE 3 from MODE 2 until 4 hours after entry into MODE 3. 2. For source range instrumentation, this Surveillance shall include verification that interlocks P-6 and P-10 are in their required state for existing unit conditions. ----- Perform COT.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.3.1.8 -----NOTE----- This Surveillance shall include verification that interlocks P-6 and P-10 are in their required state for existing unit conditions. ----- Perform COT.</p>	<p>-----NOTE----- Only required when not performed within previous 184 days ----- Prior to reactor startup <u>AND</u> 12 hours after reducing power below P-10 for power and intermediate instrumentation <u>AND</u> Four hours after reducing power below P-6 for source range instrumentation <u>AND</u> In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.3.1.9 -----NOTE----- Verification of setpoint is not required. ----- Perform TADOT.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.3.1.10 -----NOTE----- This Surveillance shall include verification that the time constants are adjusted to the prescribed values. ----- Perform CHANNEL CALIBRATION.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.1.11	<p>-----NOTE-----</p> <ol style="list-style-type: none"> 1. Neutron detectors are excluded from CHANNEL CALIBRATION. 2. This Surveillance shall include verification that the time constants are adjusted to the prescribed values. 3. Power and Intermediate Range detector plateau voltage verification is not required to be performed until 72 hours after achieving equilibrium Conditions with Thermal Power \geq 95% RTP. <p>-----</p> <p>Perform CHANNEL CALIBRATION.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.3.1.12	Perform CHANNEL CALIBRATION.	In accordance with the Surveillance Frequency Control Program
SR 3.3.1.13	Perform COT.	In accordance with the Surveillance Frequency Control Program
SR 3.3.1.14	<p>-----NOTE-----</p> <p>Verification of setpoint is not required.</p> <p>-----</p> <p>Perform TADOT.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.3.1.15	<p>-----NOTE-----</p> <p>Verification of setpoint is not required.</p> <p>-----</p> <p>Perform TADOT</p>	Prior to exceeding the P-9 interlock whenever the unit has been in MODE 3, if not performed in the previous 31 days.

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.3.1.16 -----NOTE----- Neutron detectors are excluded from response time testing. ----- Verify RTS RESPONSE TIMES are within limits.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

SURVEILLANCE REQUIREMENTS

-----NOTE-----
 Refer to Table 3.3.2-1 to determine which SRs apply for each ESFAS Function.

SURVEILLANCE		FREQUENCY
SR 3.3.2.1	Perform CHANNEL CHECK.	In accordance with the Surveillance Frequency Control Program
SR 3.3.2.2	Perform ACTUATION LOGIC TEST.	In accordance with the Surveillance Frequency Control Program
SR 3.3.2.3	Not used.	
SR 3.3.2.4	Perform MASTER RELAY TEST.	In accordance with the Surveillance Frequency Control Program
SR 3.3.2.5	Perform COT.	In accordance with the Surveillance Frequency Control Program
SR 3.3.2.6	Perform SLAVE RELAY TEST.	In accordance with the Surveillance Frequency Control Program
SR 3.3.2.7	Not used.	
SR 3.3.2.8	-----NOTE----- Verification of setpoint not required for manual initiation functions. ----- Perform TADOT.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.2.9	<p>-----NOTE-----</p> <p>This Surveillance shall include verification that the time constants are adjusted to the prescribed values.</p> <p>-----</p> <p>Perform CHANNEL CALIBRATION.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.3.2.10	<p>-----NOTE-----</p> <p>Not required to be performed for the turbine driven AFW pump until 24 hours after SG pressure is \geq 650 psig.</p> <p>-----</p> <p>Verify ESF RESPONSE TIMES are within limits.</p>	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.2.11	<p>-----NOTE----- Verification of setpoint not required. ----- Perform TADOT.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.3.2.12	Perform ACTUATION LOGIC TEST	In accordance with the Surveillance Frequency Control Program
SR 3.3.2.13	<p>-----NOTE----- Verification of setpoint not required for manual initiation functions. ----- Perform TADOT</p>	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

-----NOTE-----

SR 3.3.3.1 and SR 3.3.3.2 apply to each PAM instrumentation Function in Table 3.3.3-1.

SURVEILLANCE		FREQUENCY
SR 3.3.3.1	Perform CHANNEL CHECK for each required instrumentation channel that is normally energized.	In accordance with the Surveillance Frequency Control Program
SR 3.3.3.2	<p>-----NOTE-----</p> <p>Neutron detectors are excluded from CHANNEL CALIBRATION.</p> <p>-----</p> <p>Perform CHANNEL CALIBRATION.</p>	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.4.1	Perform CHANNEL CHECK for each required instrumentation channel.	In accordance with the Surveillance Frequency Control Program
SR 3.3.4.2	Verify each required control circuit and transfer switch is capable of performing the intended function.	In accordance with the Surveillance Frequency Control Program
SR 3.3.4.3	<p>-----NOTE-----</p> <p>Reactor Trip Breaker position is excluded from CHANNEL CALIBRATION.</p> <p>-----</p> <p>Perform CHANNEL CALIBRATION for each required instrumentation channel.</p>	In accordance with the Surveillance Frequency Control Program

3.3 INSTRUMENTATION

3.3.5 Loss of Power (LOP) Diesel Generator (DG) Start Instrumentation

LCO 3.3.5 One channel per bus of loss of voltage DG start Function; and two channels per bus of degraded voltage Function shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4,
When associated DG is required to be OPERABLE by LCO 3.8.2, "AC Sources-Shutdown."

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one or more channels per bus inoperable.	A.1 -----NOTE----- One channel may be bypassed for up to 2 hours for surveillance testing. ----- Enter applicable Condition(s) and Required Action(s) for the associated DG made inoperable by LOP DG start instrumentation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.5.1	Not used	
SR 3.3.5.2	Perform TADOT.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.3.5.3 Perform CHANNEL CALIBRATION with Allowable Value setpoints as follows:</p> <p>a. Loss of voltage Diesel Start Allowable Value ≥ 0 V with a time delay of ≤ 0.8 seconds and ≥ 2583 V with a ≤ 10 second time delay.</p> <p>Loss of voltage initiation of load shed with one relay Allowable Value ≥ 0 V with a time delay of ≤ 4 seconds and ≥ 2583 V with a time delay ≤ 25 seconds and with one relay Allowable Value ≥ 2870 V, instantaneous.</p> <p>b. Degraded voltage Diesel Start Allowable Value ≥ 3785 V with a time delay of ≤ 10 seconds.</p> <p>Degraded voltage initiation of Load Shed Allowable Value ≥ 3785 V with a time delay of ≤ 20 seconds.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

SURVEILLANCE REQUIREMENTS

-----NOTE-----
Refer to Table 3.3.6-1 to determine which SRs apply for each Containment Ventilation Isolation Function.

SURVEILLANCE		FREQUENCY
SR 3.3.6.1	Perform CHANNEL CHECK.	In accordance with the Surveillance Frequency Control Program
SR 3.3.6.2	-----NOTE----- This surveillance is only applicable to the actuation logic of the ESFAS Instrumentation. ----- Perform ACTUATION LOGIC TEST.	In accordance with the Surveillance Frequency Control Program
SR 3.3.6.3	-----NOTE----- This surveillance is only applicable to the master relays of the ESFAS Instrumentation. ----- Perform MASTER RELAY TEST.	In accordance with the Surveillance Frequency Control Program
SR 3.3.6.4	Perform CFT.	In accordance with the Surveillance Frequency Control Program
SR 3.3.6.5	Perform SLAVE RELAY TEST.	In accordance with the Surveillance Frequency Control Program
SR 3.3.6.6	Not used	
SR 3.3.6.7	Perform CHANNEL CALIBRATION.	In accordance with the Surveillance Frequency Control Program
SR 3.3.6.8	Verify ESF Containment Ventilation Isolation RESPONSE TIME is within limits.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time for Condition A or B not met during movement of recently irradiated fuel assemblies.	D.1 Suspend movement of recently irradiated fuel assemblies.	Immediately
E. Required Action and associated Completion Time for Condition A or B not met in MODE 5 or 6.	E.1 Initiate action to restore one CRVS train to OPERABLE status.	Immediately

SURVEILLANCE REQUIREMENTS

-----NOTE-----
Refer to Table 3.3.7-1 to determine which SRs apply for each CRVS Actuation Function.

SURVEILLANCE		FREQUENCY
SR 3.3.7.1	Perform CHANNEL CHECK.	In accordance with the Surveillance Frequency Control Program
SR 3.3.7.2	Perform CFT.	In accordance with the Surveillance Frequency Control Program
SR 3.3.7.3	Perform ACTUATION LOGIC TEST.	In accordance with the Surveillance Frequency Control Program
SR 3.3.7.4	Perform MASTER RELAY TEST.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.7.5	Perform SLAVE RELAY TEST.	In accordance with the Surveillance Frequency Control Program
SR 3.3.7.6	-----NOTE----- Verification of setpoint is not required. ----- Perform TADOT.	In accordance with the Surveillance Frequency Control Program
SR 3.3.7.7	Perform CHANNEL CALIBRATION	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

-----NOTE-----
Refer to Table 3.3.8-1 to determine which SRs apply for each FBVS Actuation Function.

SURVEILLANCE		FREQUENCY
SR 3.3.8.1	Perform CHANNEL CHECK.	In accordance with the Surveillance Frequency Control Program
SR 3.3.8.2	Perform CFT.	In accordance with the Surveillance Frequency Control Program
SR 3.3.8.3	Not used	
SR 3.3.8.4	-----NOTE----- Verification of setpoint is not required. ----- Perform TADOT.	In accordance with the Surveillance Frequency Control Program
SR 3.3.8.5	Perform CHANNEL CALIBRATION.	In accordance with the Surveillance Frequency Control Program

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.1 RCS Pressure, Temperature, and Flow Departure from Nucleate Boiling (DNB) Limits

LCO 3.4.1 RCS DNB parameters for pressurizer pressure, RCS average temperature, and RCS total flow rate shall be within the limits specified below:

- a. Pressurizer pressure is greater than or equal to the limit specified in the COLR;
- b. RCS average temperature is less than or equal to the limit specified in the COLR; and
- c. RCS total flow rate within limits shown on Table 3.4.1-1 for Unit 1 and Table 3.4.1-2 for Unit 2.

APPLICABILITY: MODES 1.

-----NOTE-----
Pressurizer pressure limit does not apply during:

- a. THERMAL POWER ramp > 5% RTP per minute; or
- b. THERMAL POWER step > 10% RTP.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more RCS DNB parameters not within limits.	A.1 Restore RCS DNB parameter(s) to within limit.	2 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 2.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.1.1	Verify pressurizer pressure is greater than or equal to the limit specified in the COLR.	In accordance with the Surveillance Frequency Control Program
SR 3.4.1.2	Verify RCS average temperature is less than or equal to the limit specified in the COLR.	In accordance with the Surveillance Frequency Control Program

(continued)

RCS Pressure, Temperature, and Flow DNB Limits
3.4.1

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.1.3	Verify RCS total flow rate is within limits.	In accordance with the Surveillance Frequency Control Program
SR 3.4.1.4	Verify measured RCS total flow rate is within limits.	In accordance with the Surveillance Frequency Control Program

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.2 RCS Minimum Temperature for Criticality

LCO 3.4.2 Each operating RCS loop average temperature (T_{avg}) shall be $\geq 541^{\circ}\text{F}$.

APPLICABILITY: MODES 1,
MODE 2 with $k_{eff} \geq 1.0$.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. T_{avg} in one or more operating RCS loops not within limit.	A.1 Be in MODE 2, with $K_{eff} < 1.0$	30 minutes

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.2.1 Verify RCS T_{avg} in each operating loop $\geq 541^{\circ}\text{F}$.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.4.3.1</p> <p>-----NOTE----- Only required to be performed during RCS heatup and cooldown operations and RCS inservice leak and hydrostatic testing.</p> <p>-----</p> <p>Verify RCS pressure, RCS temperature, and RCS heatup and cooldown rates are within the limits specified in the PTLR.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.4 RCS Loops-MODES 1 and 2

LCO 3.4.4 Four RCS loops shall be OPERABLE and in operation.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Requirements of LCO not met.	A.1 Be in MODE 3.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.4.1 Verify each RCS loop is in operation.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Four RCS loops inoperable. <u>OR</u> No RCS loop in operation.	D.1 Place the Rod Control System in a condition incapable of rod withdrawal.	Immediately
	<u>AND</u> D.2 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet SDM of LCO 3.1.1.	Immediately
	<u>AND</u> D.3 Initiate action to restore one RCS loop to OPERABLE status and operation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.5.1	Verify required RCS loops are in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.5.2	Verify steam generator secondary side water levels are $\geq 15\%$ for required RCS loops.	In accordance with the Surveillance Frequency Control Program
SR 3.4.5.3	Verify correct breaker alignment and indicated power are available to the required pump that is not in operation.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Two required loops inoperable. <u>OR</u>	B.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet SDM of LCO 3.1.1.	Immediately
No RCS or RHR loop in operation.	<u>AND</u> B.2 Initiate action to restore one loop to OPERABLE status and operation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.6.1 Verify one RHR or RCS loop is in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.6.2 Verify SG secondary side water levels are $\geq 15\%$ for required RCS loops.	In accordance with the Surveillance Frequency Control Program
SR 3.4.6.3 Verify correct breaker alignment and indicated power are available to the required pump that is not in operation.	In accordance with the Surveillance Frequency Control Program

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One RHR loop inoperable. <u>AND</u> Required SGs secondary side water levels not within limits.	A.1 Initiate action to restore a second RHR loop to OPERABLE status.	Immediately
	<u>OR</u> A.2 Initiate action to restore required SG secondary side water levels to within limits.	Immediately
B. Required RHR loops inoperable. <u>OR</u> No RHR loop in operation.	B.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet SDM of LCO 3.1.1.	Immediately
	<u>AND</u> B.2 Initiate action to restore one RHR loop to OPERABLE status and operation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.7.1 Verify one RHR loop is in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.7.2 Verify SG secondary side water level is \geq 15% in required SGs.	In accordance with the Surveillance Frequency Control Program
SR 3.4.7.3 Verify correct breaker alignment and indicated power are available to the required RHR pump that is not in operation.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.8.1	Verify one RHR loop is in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.8.2	Verify correct breaker alignment and indicated power are available to the required RHR pump that is not in operation.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.9.1	Verify pressurizer water level is $\leq 90\%$.	In accordance with the Surveillance Frequency Control Program
SR 3.4.9.2	Verify capacity of each required group of pressurizer heaters is ≥ 150 kW.	In accordance with the Surveillance Frequency Control Program
SR 3.4.9.3	Verify by transferring power, that required pressurizer heaters can be powered from an emergency power supply.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.11.1	<p>-----NOTE-----</p> <p>Not required to be performed with block valve closed in accordance with the Required Actions of this LCO.</p> <p>-----</p> <p>Perform a complete cycle of each block valve.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.4.11.2	<p>-----NOTE-----</p> <p>Required to be performed during MODES 3 or 4.</p> <p>-----</p> <p>Perform a complete cycle of each PORV.</p>	In accordance with the IST Plan.
SR 3.4.11.3	Demonstrate OPERABILITY of the safety related nitrogen supply for the Class I PORVs.	In accordance with the Surveillance Frequency Control Program
SR 3.4.11.4	Perform a COT on each required Class 1 PORV, excluding actuation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.11.5	Perform CHANNEL CALIBRATION for each required Class 1 PORV actuation channel.	In accordance with the Surveillance Frequency Control Program

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
G. (continued) LTOP System inoperable for any reason other than Condition A, B, C, D, E, or F.		

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.12.1	Verify a maximum of zero safety injection pumps are capable of injecting into the RCS.	In accordance with the Surveillance Frequency Control Program
SR 3.4.12.2	Verify a maximum of one centrifugal charging pump is capable of injecting into the RCS.	In accordance with the Surveillance Frequency Control Program
SR 3.4.12.3	Verify each accumulator is isolated when accumulator pressure is greater than or equal to the maximum RCS pressure for the existing RCS cold leg temperature allowed by the P/T limit curves provided in the PTLR.	In accordance with the Surveillance Frequency Control Program
SR 3.4.12.4	Not used	
SR 3.4.12.5	Verify required RCS vent ≥ 2.07 square inches open.	In accordance with the Surveillance Frequency Control Program
SR 3.4.12.6	Verify PORV block valve is open for each required Class I PORV.	In accordance with the Surveillance Frequency Control Program
SR 3.4.12.7	Not used	

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.12.8	<p>-----NOTE-----</p> <p>Not required to be performed until 12 hours after decreasing any RCS cold leg temperature to \leq LTOP arming temperature specified in the PTLR.</p> <p>-----</p> <p>Perform a COT on each required Class 1 PORV, excluding actuation.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.4.12.9	Perform CHANNEL CALIBRATION for each required Class I PORV actuation channel.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.4.13.1 -----NOTES-----</p> <ol style="list-style-type: none"> 1. Not required to be performed until 12 hours after establishment of steady state operation. 2. Not applicable to primary to secondary LEAKAGE. <p>-----</p> <p>Verify RCS operational LEAKAGE is within limits by performance of RCS water inventory balance.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.4.13.2 -----NOTE-----</p> <p>Not required to be performed until 12 hours after establishment of steady state operation.</p> <p>-----</p> <p>Verify primary to secondary LEAKAGE is \leq 150 gallons per day through any one SG.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.2.1 Isolate the high pressure portion of the affected system from the low pressure portion by use of a second closed manual, deactivated automatic, or check valve. <u>OR</u>	72 hours
	A.2.2 Restore RCS PIV to within limits.	72 hours
B. Required Action and associated Completion Time for Condition A not met.	B.1 Be in MODE 3. <u>AND</u>	6 hours
	B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.14.1 -----NOTES----- 1. Not required to be performed in MODES 3 and 4. 2. Not required to be performed on the RCS PIVs located in the RHR flow path when in the shutdown cooling mode of operation. 3. RCS PIVs actuated during the performance of this Surveillance are not required to be tested more than once if a repetitive testing loop cannot be avoided. -----	(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.4.14.1 (continued)</p> <p>Verify leakage from each RCS PIV is equivalent to ≤ 0.5 gpm per nominal inch of valve size up to a maximum of 5 gpm at an RCS pressure ≥ 2215 psig and ≤ 2255 psig.</p>	<p>In accordance with the Inservice Testing Program, <u>AND</u> In accordance with the Surveillance Frequency Control Program <u>AND</u></p>
	<p>Within 24 hours following valve actuation due to automatic or manual action or flow through the valve except for valves 8701, 8702, 8802A, 8802B, and 8703</p>
<p>SR 3.4.14.2 Not used</p>	
<p>SR 3.4.14.3 Not used</p>	

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3. <u>AND</u>	6 hours
	D.2 Be in MODE 5.	36 hours
E. All required monitors inoperable.	E.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.15.1	Perform CHANNEL CHECK of the required containment atmosphere particulate and gaseous radioactivity monitors.	In accordance with the Surveillance Frequency Control Program
SR 3.4.15.2	Perform CHANNEL FUNCTIONAL TEST of the required containment atmosphere particulate and gaseous radioactivity monitors.	In accordance with the Surveillance Frequency Control Program
SR 3.4.15.3	Perform CHANNEL CALIBRATION of the required containment sump monitors.	In accordance with the Surveillance Frequency Control Program
SR 3.4.15.4	Perform CHANNEL CALIBRATION of the required containment atmosphere particulate and gaseous radioactivity monitors.	In accordance with the Surveillance Frequency Control Program
SR 3.4.15.5	Perform CHANNEL CALIBRATION of the required CFCU condensate collection monitors.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.4.16.1 -----NOTE----- Only required to be performed in MODE 1. ----- Verify reactor coolant DOSE EQUIVALENT XE-133 specific activity \leq 600.0 μCi/gm.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.4.16.2 -----NOTE----- Only required to be performed in MODE 1. ----- Verify reactor coolant DOSE EQUIVALENT I-131 specific activity \leq 1.0 μCi/gm.</p>	<p>In accordance with the Surveillance Frequency Control Program <u>AND</u> Between 2 and 6 hours after a THERMAL POWER change of \geq 15% RTP within a 1 hour period.</p>

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.1 Accumulators

LCO 3.5.1 Four ECCS accumulators shall be OPERABLE.

APPLICABILITY: MODES 1 and 2, MODE 3 with RCS pressure > 1000 psig.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One accumulator inoperable due to boron concentration not within limits.	A.1 Restore boron concentration to within limits.	72 hours
B. One accumulator inoperable for reasons other than Condition A.	B.1 Restore accumulator to OPERABLE status.	24 hour
C. Required Action and associated Completion Time of Condition A or B not met.	C.1 Be in MODE 3. <u>AND</u>	6 hours
	C.2 Reduce RCS pressure to \leq 1000 psig.	12 hours
D. Two or more accumulators inoperable.	D.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.1.1	Verify each accumulator isolation valve is fully open.	In accordance with the Surveillance Frequency Control Program
SR 3.5.1.2	Verify borated water volume in each accumulator is \geq 814 ft ³ and \leq 886 ft ³ .	In accordance with the Surveillance Frequency Control Program
SR 3.5.1.3	Verify nitrogen cover pressure in each accumulator is \geq 579 psig and \leq 664 psig.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.5.1.4	Verify boron concentration in each accumulator is ≥ 2200 ppm and ≤ 2500 ppm.	<p>In accordance with the Surveillance Frequency Control Program</p> <p><u>AND</u></p> <p>-----NOTE----- Only required to be performed for affected accumulators. -----</p> <p>Once within 6 hours after each solution volume increase of $\geq 5.6\%$ of narrow range indicated level that is not the result of addition from the refueling water storage tank.</p>
SR 3.5.1.5	Verify power is removed from each accumulator isolation valve operator when RCS pressure is > 1000 psig.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY																																																
SR 3.5.2.1	Verify the following valves are in the listed position with power to the valve operator removed. <table border="1"> <thead> <tr> <th>Number</th> <th>Position</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>8703</td> <td>Closed</td> <td>RHR to RCS Hot Legs</td> </tr> <tr> <td>8802A</td> <td>Closed</td> <td>Safety Injection to RCS Hot Legs</td> </tr> <tr> <td>8802B</td> <td>Closed</td> <td>Safety Injection to RCS Hot Legs</td> </tr> <tr> <td>8809A</td> <td>Open</td> <td>RHR to RCS Cold Legs</td> </tr> <tr> <td>8809B</td> <td>Open</td> <td>RHR to RCS Cold Legs</td> </tr> <tr> <td>8835</td> <td>Open</td> <td>Safety Injection to RCS Cold Legs</td> </tr> <tr> <td>8974A</td> <td>Open</td> <td>Safety Injection Pump Recirc. to RWST</td> </tr> <tr> <td>8974B</td> <td>Open</td> <td>Safety Injection Pump Recirc. to RWST</td> </tr> <tr> <td>8976</td> <td>Open</td> <td>RWST to Safety Injection Pumps</td> </tr> <tr> <td>8980</td> <td>Open</td> <td>RWST to RHR Pumps</td> </tr> <tr> <td>8982A</td> <td>Closed</td> <td>Containment Sump to RHR Pumps</td> </tr> <tr> <td>8982B</td> <td>Closed</td> <td>Containment Sump to RHR Pumps</td> </tr> <tr> <td>8992</td> <td>Open</td> <td>Spray Additive Tank to Educator</td> </tr> <tr> <td>8701</td> <td>Closed</td> <td>RHR Suction</td> </tr> <tr> <td>8702</td> <td>Closed</td> <td>RHR Suction</td> </tr> </tbody> </table>	Number	Position	Function	8703	Closed	RHR to RCS Hot Legs	8802A	Closed	Safety Injection to RCS Hot Legs	8802B	Closed	Safety Injection to RCS Hot Legs	8809A	Open	RHR to RCS Cold Legs	8809B	Open	RHR to RCS Cold Legs	8835	Open	Safety Injection to RCS Cold Legs	8974A	Open	Safety Injection Pump Recirc. to RWST	8974B	Open	Safety Injection Pump Recirc. to RWST	8976	Open	RWST to Safety Injection Pumps	8980	Open	RWST to RHR Pumps	8982A	Closed	Containment Sump to RHR Pumps	8982B	Closed	Containment Sump to RHR Pumps	8992	Open	Spray Additive Tank to Educator	8701	Closed	RHR Suction	8702	Closed	RHR Suction	In accordance with the Surveillance Frequency Control Program
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SR 3.5.2.2	Verify each ECCS manual, power operated, and automatic valve in the flow path, that is not locked, sealed, or otherwise secured in position, is in the correct position.	In accordance with the Surveillance Frequency Control Program																																																
SR 3.5.2.3	Verify ECCS piping is full of water.	In accordance with the Surveillance Frequency Control Program																																																

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY										
SR 3.5.2.4	Verify each ECCS pump's developed head at the test flow point is greater than or equal to the required developed head.	In accordance with the Inservice Testing Program.										
SR 3.5.2.5	Verify each ECCS automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program										
SR 3.5.2.6	Verify each ECCS pump starts automatically on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program										
SR 3.5.2.7	<p>Verify, for each ECCS throttle valve listed below, each mechanical position stop is in the correct position.</p> <table border="0" style="margin-left: 40px;"> <tr> <td style="text-align: center;"><u>Charging Injection</u> <u>Throttle Valves</u></td> <td style="text-align: center;"><u>Safety Injection</u> <u>Throttle Valves</u></td> </tr> <tr> <td style="text-align: center;">8810A</td> <td style="text-align: center;">8822A</td> </tr> <tr> <td style="text-align: center;">8810B</td> <td style="text-align: center;">8822B</td> </tr> <tr> <td style="text-align: center;">8810C</td> <td style="text-align: center;">8822C</td> </tr> <tr> <td style="text-align: center;">8810D</td> <td style="text-align: center;">8822D</td> </tr> </table>	<u>Charging Injection</u> <u>Throttle Valves</u>	<u>Safety Injection</u> <u>Throttle Valves</u>	8810A	8822A	8810B	8822B	8810C	8822C	8810D	8822D	In accordance with the Surveillance Frequency Control Program
<u>Charging Injection</u> <u>Throttle Valves</u>	<u>Safety Injection</u> <u>Throttle Valves</u>											
8810A	8822A											
8810B	8822B											
8810C	8822C											
8810D	8822D											
SR 3.5.2.8	Verify, by visual inspection, each ECCS train containment recirculation sump suction inlet is not restricted by debris and the suction inlet trash racks and screens show no evidence of structural distress or abnormal corrosion.	In accordance with the Surveillance Frequency Control Program										

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.4 Refueling Water Storage Tank (RWST)

LCO 3.5.4 The RWST shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. RWST boron concentration not within limits. <u>OR</u> RWST borated water temperature not within limits.	A.1 Restore RWST to OPERABLE status.	8 hours
B. RWST inoperable for reasons other than Condition A.	B.1 Restore RWST to OPERABLE status.	1 hour
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3.	6 hours
	<u>AND</u> C.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.5.4.1 -----NOTE----- Only required to be performed when ambient air temperature is < 35°F. ----- Verify RWST borated water temperature is ≥ 35°F.	In accordance with the Surveillance Frequency Control Program
SR 3.5.4.2 Verify RWST borated water volume is ≥ 455,300 gallons.	In accordance with the Surveillance Frequency Control Program
SR 3.5.4.3 Verify RWST boron concentration is ≥ 2300 ppm and ≤ 2500 ppm.	In accordance with the Surveillance Frequency Control Program

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.5 Seal Injection Flow

LCO 3.5.5 Reactor coolant pump seal injection flow resistance shall be $\geq 0.2117 \text{ ft/gpm}^2$.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Seal injection flow resistance not within limit.	A.1 Adjust manual seal injection throttle valves to give a flow resistance within limit.	4 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 4.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.5.5.1 -----NOTE----- Not required to be performed until 4 hours after the Reactor Coolant System pressure stabilizes at $\geq 2215 \text{ psig}$ and $\leq 2255 \text{ psig}$. ----- Verify manual seal injection throttle valves are adjusted to give a flow resistance $\geq 0.2117 \text{ ft/gpm}^2$.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One or more containment air locks inoperable for reasons other than Condition A or B.	C.1 Initiate action to evaluate overall containment leakage rate per LCO 3.6.1.	Immediately
	<u>AND</u>	
	C.2 Verify a door is closed in the affected air lock.	1 hour
D. Required Action and associated Completion Time not met.	<u>AND</u>	
	C.3 Restore air lock to OPERABLE status.	24 hours
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3.	6 hours
	D.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.2.1 -----NOTES----- 1. An inoperable air lock door does not invalidate the previous successful performance of the overall air lock leakage test. 2. Results shall be evaluated against acceptance criteria applicable to SR 3.6.1.1 ----- Perform required air lock leakage rate testing in accordance with the Containment Leakage Rate Testing Program.	In accordance with the Containment Leakage Rate Testing Program
SR 3.6.2.2 Verify only one door in the air lock can be opened at a time.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.3.1	Not used	
SR 3.6.3.2	Verify each 48 inch containment purge supply and exhaust and 12 inch vacuum/pressure relief valve is closed, except when these valves are open for pressure control, ALARA or air quality considerations for personnel entry, or for Surveillances that require the valves to be open.	In accordance with the Surveillance Frequency Control Program
SR 3.6.3.3	<p>-----NOTE-----</p> <p>Valves and blind flanges in high radiation areas may be verified by use of administrative controls.</p> <p>-----</p> <p>Verify each containment isolation manual valve and blind flange that is located outside containment and not locked, sealed or otherwise secured and required to be closed during accident conditions is closed, except for containment isolation valves that are open under administrative controls.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.6.3.4	<p>-----NOTE-----</p> <p>Valves and blind flanges in high radiation areas may be verified by use of administrative means.</p> <p>-----</p> <p>Verify each containment isolation manual valve and blind flange that is located inside containment and not locked, sealed or otherwise secured and required to be closed during accident conditions is closed, except for containment isolation valves that are open under administrative controls.</p>	Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days
SR 3.6.3.5	Verify the isolation time of each automatic power operated containment isolation valve is within limits.	In accordance with the Inservice Testing Program
SR 3.6.3.6	Not used	

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.3.7	<p>-----NOTE----- This surveillance is not required when the penetration flow path is isolated by a leak tested blank flange. -----</p> <p>Perform leakage rate testing for containment purge supply and exhaust and vacuum/pressure relief valves with resilient seals.</p>	<p>In accordance with the Surveillance Frequency Control Program</p> <p><u>AND</u></p> <p>For containment purge supply and exhaust valves only, within 92 days after opening the valve</p>
SR 3.6.3.8	Verify each automatic containment isolation valve that is not locked, sealed or otherwise secured in position, actuates to the isolation position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.3.9	Not used	
SR 3.6.3.10	Verify each 12 inch containment vacuum/pressure relief valve is blocked to restrict the valve from opening > 50°.	In accordance with the Surveillance Frequency Control Program
SR 3.6.3.11	Not used	

3.6 CONTAINMENT SYSTEMS

3.6.4 Containment Pressure

LCO 3.6.4 Containment pressure shall be ≥ -1.0 psig and $\leq +1.2$ psig.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Containment pressure not within limits.	A.1 Restore containment pressure to within limits.	4 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.4.1 Verify containment pressure is within limits.	In accordance with the Surveillance Frequency Control Program

3.6 CONTAINMENT SYSTEMS

3.6.5 Containment Air Temperature

LCO 3.6.5 Containment average air temperature shall be $\leq 120^{\circ}\text{F}$.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Containment average air temperature not within limit.	A.1 Restore containment average air temperature to within limit.	8 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. <u>AND</u>	6 hours
	B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.5.1 Verify containment average air temperature is within limit.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.6.1	Verify each containment spray manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.	In accordance with the Surveillance Frequency Control Program
SR 3.6.6.2	Operate each CFCU for ≥ 15 minutes.	In accordance with the Surveillance Frequency Control Program
SR 3.6.6.3	Verify component cooling water flow rate to each required CFCU is ≥ 1650 gpm.	In accordance with the Surveillance Frequency Control Program
SR 3.6.6.4	Verify each containment spray pump's developed head at the flow test point is greater than or equal to the required developed head.	In accordance with the Inservice Testing Program
SR 3.6.6.5	Verify each automatic containment spray valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.6.6	Verify each containment spray pump starts automatically on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.6.7	Verify each CFCU starts automatically on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.6.8	Verify each spray nozzle is unobstructed.	In accordance with the Surveillance Frequency Control Program
SR 3.6.6.9	Verify each CFCU starts on low speed.	In accordance with the Surveillance Frequency Control Program

3.6 CONTAINMENT SYSTEMS

3.6.7 Spray Additive System

LCO 3.6.7 The Spray Additive System shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Spray Additive System inoperable.	A.1 Restore Spray Additive System to OPERABLE status.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	84 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.7.1 Verify each spray additive manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.	In accordance with the Surveillance Frequency Control Program
SR 3.6.7.2 Verify spray additive tank solution volume is $\geq 46.2\%$ and $\leq 91.9\%$.	In accordance with the Surveillance Frequency Control Program
SR 3.6.7.3 Verify spray additive tank NaOH solution concentration is $\geq 30\%$ and $\leq 32\%$ by weight.	In accordance with the Surveillance Frequency Control Program
SR 3.6.7.4 Verify each spray additive automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.7.5 Verify spray additive flow from each solution's flow path.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.2.1	<p>-----NOTE-----</p> <p>Only required to be performed in MODES 1 and 2.</p> <p>-----</p> <p>Verify closure time of each MSIV is ≤ 5 seconds.</p>	In accordance with the Inservice Testing Program
SR 3.7.2.2	<p>-----NOTE-----</p> <p>Only required to be performed in MODES 1 and 2.</p> <p>-----</p> <p>Verify each MSIV actuates to the isolation position on an actual or simulated actuation signal.</p>	In accordance with the Surveillance Frequency Control Program

MFIVs, MFRVs, MFRV Bypass Valves, MFWP Turbine Stop Valves
3.7.3

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.7.3.3	Verify each MFIV, MFRV, MFRV bypass valve, and MFWP turbine stop valve actuates to the closed position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.7.3.4	Verify the closure time of each MFWP turbine stop valve is ≤ 1 second.	At each COLD SHUTDOWN, but not more frequently than once per 92 days.

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.4.1	Verify one complete cycle of each ADV.	In accordance with the Surveillance Frequency Control Program
SR 3.7.4.2	Verify one complete cycle of each ADV block valve.	In accordance with the Inservice Testing Program
SR 3.7.4.3	Verify that the backup air bottle for each ADV has a pressure \geq 260 psig.	In accordance with the Surveillance Frequency Control Program

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.	In accordance with the Surveillance Frequency Control Program
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>	In accordance with the Surveillance Frequency Control Program
SR 3.7.5.4	<p>-----NOTES-----</p> <ol style="list-style-type: none"> 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>Verify each AFW pump starts automatically on an actual or simulated actuation signal.</p>	In accordance with the Surveillance Frequency Control Program
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.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.6 Condensate Storage Tank (CST) and Fire Water Storage Tank (FWST)

LCO 3.7.6 The CST level shall be $\geq 41.3\%$ and the FWST level shall be $\geq 22.2\%$ for one unit operation and $\geq 41.7\%$ for two unit operation.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. CST or FWST level not within limit.	A.1 Verify by administrative means OPERABILITY of backup water supply.	4 hours <u>AND</u> Once per 12 hours thereafter
	<u>AND</u> A.2 Restore CST or FWST level to within limit.	7 days
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 4, without reliance on steam generator for heat removal.	18 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.6.1 Verify the CST level is $\geq 41.3\%$.	In accordance with the Surveillance Frequency Control Program
SR 3.7.6.2 Verify the FWST level is $\geq 22.2\%$ for one unit operation and $\geq 41.7\%$ for two unit operation.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.7 Vital Component Cooling Water (CCW) System

LCO 3.7.7 Two vital CCW loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One vital CCW loop inoperable.	A.1 -----NOTE----- Enter applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops - MODE 4," for residual heat removal loops made inoperable by CCW. ----- Restore vital CCW loop to OPERABLE status.	72 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. <u>AND</u> B.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.7.1 -----NOTE----- Isolation of CCW flow to individual components does not render the CCW System inoperable ----- Verify each CCW manual, power operated, and automatic valve in the flow path servicing safety related equipment, that is not locked, sealed, or otherwise secured in position, is in the correct position.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.7.2	Verify each CCW automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.7.7.3	Verify each CCW pump starts automatically on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.8 Auxiliary Saltwater (ASW) System

LCO 3.7.8 Two ASW trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One ASW train inoperable.	A.1 -----NOTE----- Enter applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops - MODE 4," for residual heat removal loops made inoperable by ASW. ----- Restore ASW train to OPERABLE status	72 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.8.1 Verify each ASW manual and power operated, valve in the flow path servicing safety related equipment, that is not locked, sealed, or otherwise secured in position, is in the correct position.	In accordance with the Surveillance Frequency Control Program
SR 3.7.8.2 Verify each ASW power operated valve in the flow path that is not locked, sealed, or otherwise secured in position, can be moved to the correct position.	In accordance with the Inservice Test Program.
SR 3.7.8.3 Verify each ASW pump starts automatically on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Two CRVS trains inoperable in MODE 5 OR 6, or during movement of recently irradiated fuel assemblies.	E.1 Suspend movement of recently irradiated fuel assemblies.	Immediately
F. Two CRVS trains inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition B.	F.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.10.1	Operate each CRVS train for ≥ 15 minutes.	In accordance with the Surveillance Frequency Control Program
SR 3.7.10.2	Verify that each CRVS redundant fan is aligned to receive electrical power from a separate OPERABLE vital bus.	In accordance with the Surveillance Frequency Control Program
SR 3.7.10.3	Perform required CRVS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with VFTP
SR 3.7.10.4	Verify each CRVS train automatically switches into the pressurization mode of operation on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.7.10.5	Verify one CRVS train can maintain a positive pressure of ≥ 0.125 inches water gauge, relative to the outside atmosphere during the pressurization mode of operation.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.12 Auxiliary Building Ventilation System (ABVS)

LCO 3.7.12 Two ABVS trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. The common HEPA filter and/or charcoal adsorber inoperable.	A.1 Restore the common HEPA filter and charcoal adsorber to OPERABLE status.	24 hours
B. One ABVS train inoperable.	B.1 Restore ABVS train to OPERABLE status	7 days
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3. <u>AND</u>	6 hours
	C.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.12.1 ----- This surveillance shall verify that each ABVS train is aligned to receive electrical power from a separate OPERABLE vital bus. ----- Operate each ABVS train for \geq 15 minutes.	In accordance with the Surveillance Frequency Control Program
SR 3.7.12.2 Perform required ABVS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.12.3 -----NOTE----- SR is not applicable to a specific ABVS train when that ABVS train is configured and performing its safety function. ----- Verify each ABVS train actuates on an actual or simulated actuation signal and the system realigns to exhaust through the common HEPA filter and charcoal adsorber.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.7.12.4	Not Used.	
SR 3.7.12.5	Not Used.	
SR 3.7.12.6	Verifying that leakage through the ABVS Dampers M2A and M2B is less than or equal to 5 cfm when subjected to a Constant Pressure or Pressure Decay Leak Rate Test in accordance with ASME N510-1989. The test pressure for the leak rate test shall be based on a maximum operating pressure as defined in ASME N510-1989, of 8 inches water gauge.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.13.1	Operate each FHBVS train for ≥ 15 minutes.	In accordance with the Surveillance Frequency Control Program
SR 3.7.13.2	Perform required FHBVS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.13.3	Verify each FHBVS train actuates on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.7.13.4	Verify one FHBVS train can maintain a pressure ≤ -0.125 inches water gauge with respect to atmospheric pressure during the post accident mode of operation.	In accordance with the Surveillance Frequency Control Program
SR 3.7.13.5	Verify damper M-29 can be closed.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.15 Spent Fuel Pool Water Level

LCO 3.7.15 The spent fuel pool water level shall be \geq 23 ft over the top of irradiated fuel assemblies seated in the storage racks.

APPLICABILITY: During movement of irradiated fuel assemblies in the spent fuel pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Spent fuel pool water level not within limit.	A.1 -----NOTE----- LCO 3.0.3 is not applicable. ----- Suspend movement of irradiated fuel assemblies in the spent fuel pool.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.15.1 Verify the spent fuel pool water level is \geq 23 ft above the top of the irradiated fuel assemblies seated in the storage racks.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.16 Spent Fuel Pool Boron Concentration

LCO 3.7.16 The spent fuel pool boron concentration shall be \geq 2000 ppm.

APPLICABILITY: When fuel assemblies are stored in the spent fuel pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Spent fuel pool boron concentration not within limit.	-----NOTE----- LCO 3.0.3 is not applicable. -----	Immediately
	A.1 Suspend movement of fuel assemblies in the spent fuel pool. <u>AND</u> A.2 Initiate action to restore spent fuel pool boron concentration to within limit.	

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.16.1 Verify the spent fuel pool boron concentration is within limit.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.18 Secondary Specific Activity

LCO 3.7.18 The specific activity of the secondary coolant shall be $\leq 0.10 \mu\text{Ci/gm}$
DOSE EQUIVALENT I-131.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Specific activity not within limit.	A.1 Be in MODE 3.	6 hours
	<u>AND</u> A.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.18.1	Verify the specific activity of the secondary coolant is $\leq 0.10 \mu\text{Ci/gm}$ DOSE EQUIVALENT I-131.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.1.1	Verify correct breaker alignment and indicated power availability for each required offsite circuit.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.2	<p>-----NOTES-----</p> <ol style="list-style-type: none"> Performance of SR 3.8.1.7 satisfies this SR. All DG starts may be preceded by an engine prelube period and followed by a warmup period prior to loading. <p>-----</p> <p>Verify each DG starts from standby conditions and achieves speed ≥ 900 rpm, steady state voltage ≥ 3785 V and ≤ 4400 V, and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.3	<p>-----NOTES-----</p> <ol style="list-style-type: none"> DG loadings may include gradual loading as recommended by the manufacturer. Momentary transients outside the load range do not invalidate this test. This Surveillance shall be conducted on only one DG at a time. This SR shall be preceded by and immediately follow without shutdown a successful performance of SR 3.8.1.2 or SR 3.8.1.7. <p>-----</p> <p>Verify each DG is synchronized and loaded and operates for ≥ 60 minutes at a load ≥ 2340 kW and ≤ 2600 kW.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.4	Verify each day tank contains ≥ 250 gal of fuel oil.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.5	Check for and remove accumulated water from each day tank.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.6	Verify the fuel oil transfer system operates to transfer fuel oil from storage tanks to the day tank.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.7 -----NOTE----- All DG starts may be preceded by an engine prelube period.</p> <p>----- Verify each DG starts from standby condition and achieves:</p> <ol style="list-style-type: none"> a. in ≤ 10 seconds, speed ≥ 900 rpm; and b. in ≤ 13 seconds, voltage ≥ 3785 V and ≤ 4400 V, and frequency ≥ 58.8 Hz and ≤ 61.2 Hz. 	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.8.1.8 -----NOTE----- This Surveillance shall not normally be performed for automatic transfers in MODE 1 or 2. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced.</p> <p>----- Verify automatic and manual transfer of AC power sources from the normal offsite circuit to the alternate required offsite circuit and manual transfer from the alternate offsite circuit to the delayed access circuit.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.8.1.9 -----NOTES-----</p> <ol style="list-style-type: none"> 1. This Surveillance shall not normally be performed in MODE 1 or 2. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced. 2. If performed with the DG synchronized with offsite power, it shall be performed at a power factor ≤ 0.9. <p>----- Verify each DG rejects a load greater than or equal to its associated single largest post-accident load, and:</p> <ol style="list-style-type: none"> a. Following load rejection, the frequency is ≤ 63 Hz; b. Within 2.4 seconds following load rejection, the voltage is ≥ 3785 V and ≤ 4400 V; and c. Within 2.4 seconds following load rejection, the frequency is ≥ 58.8 Hz and ≤ 61.2 Hz. 	<p>In accordance with the Surveillance Frequency Control Program</p>

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.10	Verify each DG operating at a power factor ≤ 0.87 does not trip and voltage is maintained ≤ 5075 V during and following a load rejection of ≥ 2340 kW and ≤ 2600 kW.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.11	<p>-----NOTES-----</p> <ol style="list-style-type: none"> 1. All DG starts may be preceded by an engine prelube period. 2. This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, portions of the Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced. <p>-----</p> <p>Verify on an actual or simulated loss of offsite power signal:</p> <ol style="list-style-type: none"> a. De-energization of emergency buses; b. Load shedding from emergency buses; c. DG auto-starts from standby condition and: <ol style="list-style-type: none"> 1. energizes permanently connected loads in ≤ 10 seconds, 2. energizes auto-connected loads through auto-transfer sequencing timers, 3. maintains steady state voltage ≥ 3785 V and ≤ 4400 V, 4. maintains steady state frequency ≥ 58.8 Hz and ≤ 61.2 Hz, and 5. supplies permanently connected and auto-connected loads for ≥ 5 minutes. 	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.12 -----NOTES-----</p> <ol style="list-style-type: none"> 1. All DG starts may be preceded by an engine prelube period. 2. This Surveillance shall not normally be performed in MODE 1 or 2. However, portions of the Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced. <p>-----</p> <p>Verify on an actual or simulated Safety Injection signal each DG auto-starts from standby condition and:</p> <ol style="list-style-type: none"> a. In ≤ 13 seconds after auto-start and during tests, achieves voltage ≥ 3785 V and ≤ 4400 V; b. In ≤ 13 seconds after auto-start and during tests, achieves frequency ≥ 58.8 Hz and ≤ 61.2 Hz; c. Operates for ≥ 5 minutes; d. Permanently connected loads are energized from the alternate offsite power source; and e. Emergency loads are auto-connected through the ESF load sequencing timers to the alternate offsite power source. 	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.8.1.13</p> <p>Verify each DG's automatic trips are bypassed when the diesel engine trip cutout switch is in the cutout position and the DG is aligned for automatic operation except:</p> <ol style="list-style-type: none"> a. Engine overspeed; b. Generator differential current; and c. Low lube oil pressure; 	<p>In accordance with the Surveillance Frequency Control Program</p>

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.14 -----NOTES-----</p> <p>1. Momentary transients outside the load and power factor ranges do not invalidate this test.</p> <p>-----</p> <p>Verify each DG operating at a power factor ≤ 0.87 operates for ≥ 24 hours:</p> <p>a. For ≥ 2 hours loaded ≥ 2600 kW and ≤ 2860 kW; and</p> <p>b. For the remaining hours of the test loaded ≥ 2340 kW and ≤ 2600 kW.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.8.1.15 -----NOTES-----</p> <p>1. This Surveillance shall be performed within 5 minutes of shutting down the DG after the DG has operated ≥ 2 hours loaded ≥ 2340 kW and ≤ 2600 kW.</p> <p>Momentary transients outside of load range do not invalidate this test.</p> <p>2. All DG starts may be preceded by an engine prelube period.</p> <p>-----</p> <p>Verify each DG starts and achieves:</p> <p>a. in ≤ 10 seconds, speed ≥ 900 rpm; and</p> <p>b. in ≤ 13 seconds, voltage ≥ 3785 V, and ≤ 4400 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.8.1.16 -----NOTE-----</p> <p>This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced.</p> <p>-----</p> <p>Verify each DG:</p> <p>a. Synchronizes with offsite power source while loaded with emergency loads upon a simulated restoration of offsite power;</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.1.16 (continued)	<ul style="list-style-type: none"> b. Transfers loads to offsite power source; and c. Returns to ready-to-load operation. 	
SR 3.8.1.17	<p>-----NOTE-----</p> <p>This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, portions of the Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced.</p> <p>Verify, with a DG operating in test mode and connected to its bus, an actual or simulated Safety Injection signal overrides the test mode by:</p> <ul style="list-style-type: none"> a. Opening the auxiliary transformer breaker; and b. Automatically sequencing the emergency loads onto the DG. 	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.18	<p>-----NOTE-----</p> <p>This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced.</p> <p>Verify each ESF and auto-transfer load sequencing timer is within its limits.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.19	<p>-----NOTES-----</p> <ul style="list-style-type: none"> 1. All DG starts may be preceded by an engine prelube period. 2. This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, portions of the Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced. 	

(continued)

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.19 (continued)</p>	<p>Verify on an actual or simulated loss of offsite power signal in conjunction with an actual or simulated Safety Injection signal:</p> <ul style="list-style-type: none"> a. De-energization of emergency buses; b. Load shedding from emergency buses; and c. DG auto-starts from standby condition and: <ul style="list-style-type: none"> 1. energizes permanently connected loads in ≤ 10 seconds, 2. energizes auto-connected emergency loads through load sequencing timers, 3. achieves steady state voltage ≥ 3785 V and ≤ 4400 V, 4. achieves steady state frequency ≥ 58.8 Hz and ≤ 61.2 Hz, and 5. supplies permanently connected and auto-connected emergency loads for ≥ 5 minutes. 	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.8.1.20</p>	<p>-----NOTE----- All DG starts may be preceded by an engine prelube period. -----</p> <p>Verify when started simultaneously from standby condition, each DG achieves:</p> <ul style="list-style-type: none"> a. in ≤ 10 seconds, speed ≥ 900 rpm; and b. in ≤ 13 seconds, voltage ≥ 3785 V and ≤ 4400 V, and frequency ≥ 58.8 Hz and ≤ 61.2 Hz. 	<p>In accordance with the Surveillance Frequency Control Program</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.3.1	Verify fuel oil storage tanks contain combined storage within limits.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.2	Verify lubricating oil inventory is \geq 650 gal.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.3	Verify fuel oil properties of new and stored fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program.	In accordance with the Diesel Fuel Oil Testing Program
SR 3.8.3.4	Verify each DG has at least one air start receiver with a pressure is \geq 180 psig.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.5	Check for and remove accumulated water from each fuel oil storage tank.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.6	Verify each DG turbocharger air assist air receiver pressure is \geq 180 psig.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.4.1	Verify battery terminal voltage is greater than or equal to the minimum established float voltage.	In accordance with the Surveillance Frequency Control Program
SR 3.8.4.2	<p>Verify each battery charger supplies ≥ 400 amps at greater than or equal to the minimum established float voltage for ≥ 4 hours.</p> <p><u>OR</u></p> <p>Verify each battery charger can recharge the battery to the fully charged state within 12 hours while supplying the largest combined demands of the various continuous steady state loads, after a battery discharge to the bounding design basis event discharge state.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.8.4.3	<p>-----NOTES-----</p> <ol style="list-style-type: none"> 1. The modified performance discharge test in SR 3.8.6.6 may be performed in lieu of SR 3.8.4.3. 2. This Surveillance shall not be performed in MODE 1, 2, 3, or 4. <p>-----</p> <p>Verify battery capacity is adequate to supply, and maintain in OPERABLE status, the required emergency loads for the design duty cycle when subjected to a battery service test.</p>	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.6.1	<p>-----NOTE-----</p> <p>Not required to be met when battery terminal voltage is less than the minimum established float voltage of SR 3.8.4.1.</p> <p>-----</p> <p>Verify each battery float current is ≤ 2 amps.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.8.6.2	Verify each battery pilot cell voltage is ≥ 2.07 V.	In accordance with the Surveillance Frequency Control Program
SR 3.8.6.3	Verify each battery connected cell electrolyte level is greater than or equal to minimum established design limits.	In accordance with the Surveillance Frequency Control Program
SR 3.8.6.4	Verify each battery pilot cell temperature is greater than or equal to minimum established design limits.	In accordance with the Surveillance Frequency Control Program
SR 3.8.6.5	Verify each battery connected cell voltage is ≥ 2.07 V.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.6.6 -----NOTE----- This Surveillance shall not be performed in MODE 1, 2, 3, or 4. ----- Verify battery capacity is $\geq 80\%$ of the manufacturer's rating when subjected to a performance discharge test or a modified performance discharge test.</p>	<p>In accordance with the Surveillance Frequency Control Program <u>AND</u> 24 months when battery shows degradation or has reached 85% of expected life with capacity < 100% of manufacturer's rating. <u>AND</u> 24 months when battery has reached 85% of the expected life with capacity $\geq 100\%$ of manufacturer's rating.</p>

3.8 ELECTRICAL POWER SYSTEMS

3.8.7 Inverters-Operating

LCO 3.8.7 Four Class 1E Vital 120 V UPS inverters shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required inverter inoperable.	A.1 -----NOTE----- Enter applicable Conditions and Required Actions of LCO 3.8.9, "Distribution Systems - Operating" with any vital 120 V AC bus de-energized. ----- Restore inverter to OPERABLE status.	24 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.8.7.1 Verify correct inverter voltage and alignment to required AC vital buses.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.8.1	Verify correct inverter voltage, and alignments to required AC vital buses.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.9.1	Verify correct breaker alignments and voltage to required AC, DC, and 120 VAC vital bus electrical power distribution subsystems.	In accordance with the Surveillance Frequency Control Program

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.2.4 Initiate actions to restore required AC, DC, and 120 VAC vital bus electrical power distribution subsystems to OPERABLE status. <u>AND</u>	Immediately
	A.2.5 Declare associated required residual heat removal subsystem(s) inoperable and not in operation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.8.10.1 Verify correct breaker alignments and voltage to required AC, DC, and 120 VAC vital bus electrical power distribution subsystems.	In accordance with the Surveillance Frequency Control Program

3.9 REFUELING OPERATIONS

3.9.1 Boron Concentration

LCO 3.9.1 Boron concentrations of all filled portions of the Reactor Coolant System, the refueling canal, and the refueling cavity, that have direct access to the reactor vessel, shall be maintained within the limit specified in the COLR.

APPLICABILITY: MODE 6

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Boron concentration not within limit.	A.1 Suspend CORE ALTERATIONS.	Immediately
	<u>AND</u>	
	A.2 Suspend positive reactivity additions.	Immediately
	<u>AND</u>	
	A.3 Initiate action to restore boron concentration to within limit.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.9.1.1 Verify boron concentration is within the limit specified in COLR.	In accordance with the Surveillance Frequency Control Program

3.9 REFUELING OPERATIONS

3.9.3 Nuclear Instrumentation

LCO 3.9.3 Two source range neutron flux monitors shall be OPERABLE.

APPLICABILITY: MODE 6

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required source range neutron flux monitor inoperable.	A.1 Suspend CORE ALTERATIONS except for latching control rod drive shafts and friction testing of individual control rods.	Immediately
	<u>AND</u> A.2 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet the boron concentration of LCO 3.9.1.	Immediately
B. Two required source range neutron flux monitors inoperable.	B.1 Initiate action to restore one source range neutron flux monitor to OPERABLE status.	Immediately
	<u>AND</u> B.2 Perform SR 3.9.1.1.	Once per 12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.3.1	Perform CHANNEL CHECK.	In accordance with the Surveillance Frequency Control Program
SR 3.9.3.2	<p>-----NOTE----- Neutron detectors are excluded from CHANNEL CALIBRATION. -----</p> <p>Perform CHANNEL CALIBRATION.</p>	In accordance with the Surveillance Frequency Control Program

3.9 REFUELING OPERATIONS

3.9.4 Containment Penetrations

- LCO 3.9.4 The containment penetrations shall be in the following status:
- a. The equipment hatch capable of being closed and held in place by four bolts;
 - b. One door in each air lock capable of being closed; and
 - c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere either:
 - 1. closed by a manual or automatic isolation valve, blind flange, or equivalent, or
 - 2. capable of being closed by an OPERABLE Containment Purge and Exhaust Isolation valve.

-----NOTE-----

Penetration flow path(s) providing direct access from the containment atmosphere to the outside atmosphere may be unisolated under administrative controls.

APPLICABILITY: During CORE ALTERATIONS,
During movement of irradiated fuel assemblies within containment.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more containment penetrations not in required status.	A.1 Suspend CORE ALTERATIONS.	Immediately
	<u>AND</u>	
	A.2 Suspend movement of irradiated fuel assemblies within containment.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.4.1	Verify each required containment penetration is in the required status.	In accordance with the Surveillance Frequency Control Program
SR 3.9.4.2	Verify each required containment purge and exhaust ventilation isolation valves actuates to the isolation position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.9.5.1	<p>With the reactor subcritical less than 57 hours, verify one RHR loop is in operation and circulating reactor coolant at a flow rate of ≥ 3000 gpm,</p> <p><u>OR</u></p> <p>With the reactor subcritical for 57 hours or more, verify one RHR loop is in operation and circulating reactor coolant at a flow rate of ≥ 1300 gpm.</p>	<p>In accordance with the Surveillance Frequency Control Program</p> <p>In accordance with the Surveillance Frequency Control Program</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.6.1	<p>With the reactor subcritical less than 57 hours, verify one RHR loop is in operation and circulating reactor coolant at a flow rate of ≥ 3000 gpm,</p> <p><u>OR</u></p> <p>With the reactor subcritical for 57 hours or more, verify one RHR loop is in operation and circulating reactor coolant at a flow rate of ≥ 1300 gpm.</p>	<p>In accordance with the Surveillance Frequency Control Program</p> <p>In accordance with the Surveillance Frequency Control Program</p>
SR 3.9.6.2	<p>Verify correct breaker alignment and indicated power available to the required RHR pump that is not in operation.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

3.9 REFUELING OPERATIONS

3.9.7 Refueling Cavity Water Level

LCO 3.9.7 Refueling cavity water level shall be maintained ≥ 23 ft above the top of reactor vessel flange.

APPLICABILITY: During movement of irradiated fuel assemblies within containment.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Refueling cavity water level not within limit.	A.1 Suspend movement of irradiated fuel assemblies within containment.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.9.7.1 Verify refueling cavity water level is ≥ 23 ft above the top of reactor vessel flange.	In accordance with the Surveillance Frequency Control Program

5.5 Programs and Manuals

5.5.16 Containment Leakage Rate Testing Program (continued)

- d. Leakage rate acceptance criteria are:
 - 1. Containment overall leakage rate acceptance criterion is $\leq 1.0 L_a$. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $< 0.60 L_a$ for the Type B and Type C tests and $\leq 0.75 L_a$ for Type A tests;
 - 2. Air lock testing acceptance criteria are:
 - a) Overall air lock leakage rate is $\leq 0.05 L_a$ when tested at $\geq P_a$.
 - b) For each door, leakage rate is $\leq 0.01 L_a$ when pressurized to ≥ 10 psig.
- e. The provisions of SR 3.0.2 do not apply to the test frequencies specified in the Containment Leakage Rate Testing Program.
- f. The provisions of SR 3.0.3 are applicable to the Containment Leakage Rate Testing Program.

5.5.17 Battery Monitoring and Maintenance Program

This Program provides for restoration and maintenance, based on the recommendations of IEEE Standard 450, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Vented Lead-Acid Batteries for Stationary Applications," or of the battery manufacturer, of the following:

- a. Actions to restore battery cells with float voltage < 2.13 V, and
- b. Actions to equalize and test battery cells that have been discovered with electrolyte level below the top of the plates.

5.5.18 Surveillance Frequency Control Program

This program provides controls for Surveillance Frequencies. The Program shall ensure that Surveillance Requirements specified in the Technical Specifications are performed at intervals sufficient to assure the associated Limiting Conditions for Operation are met.

- a. The Surveillance Frequency Control Program shall contain a list of Frequencies of those Surveillance Requirements for which the Frequency is controlled by the program.
 - b. Changes to the Frequencies listed in the Surveillance Frequency Control Program shall be made in accordance with NEI 04-10, "Risk-Informed Method for Control of Surveillance Frequencies," Revision 1.
 - c. The provisions of Surveillance Requirements 3.0.2 and 3.0.3 are applicable to the Frequencies established in the Surveillance Frequency Control Program.
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 200 TO FACILITY OPERATING LICENSE NO. DPR-80
AND AMENDMENT NO. 201 TO FACILITY OPERATING LICENSE NO. DPR-82
PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT, UNITS 1 AND 2
DOCKET NOS. 50-275 AND 50-323

1.0 INTRODUCTION

By application to the U.S. Nuclear Regulatory Commission (NRC) dated October 15, 2007 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML072950183), as supplemented by letter dated July 8, 2008 (ADAMS Accession No. ML081980057), Pacific Gas and Electric Company (PG&E, the licensee) requested changes to the technical specifications (TS) for the Diablo Canyon Power Plant, Units 1 and 2 (DCPP) in accordance with Section 50.90 of Title 10 of the *Code of Federal Regulations* (10 CFR). The supplemental letter dated July 8, 2008, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff's original proposed no significant hazards consideration determination as published in the *Federal Register* (FR) on November 20, 2007 (72 FR 65370).

1.1 Proposed License Amendment

The proposed changes would relocate surveillance frequencies of most surveillance tests from the TS to a licensee-controlled document, the Surveillance Frequency Control Program (SFCP). Once relocated, changes to the surveillance frequencies may be made using a risk-informed methodology, Nuclear Energy Institute (NEI) document NEI 04-10, "Risk-Informed Technical Specifications Initiative 5B, Risk-Informed Method for Control of Surveillance Frequencies," Rev. 1 (ADAMS Accession No. ML071360456) (Ref. 8), as specified in the Administrative Controls of the TS. By letter dated September 19, 2007, the NRC staff issued its "Final Safety Evaluation For Nuclear Energy Institute (NEI) Topical Report (TR) 04-10, Revision 1, "Risk-Informed Technical Specification Initiative 5B, 'Risk-Informed Method For Control Of Surveillance Frequencies (TAC No. MD6111)," (ADAMS Accession No. ML072570267) (Ref. 9), which approved NEI 04-10 Rev. 1, as acceptable for referencing by licensees proposing to amend their TS to establish a surveillance frequency control program.

The term "STAGGERED TEST BASIS" in Section 1.1, "DEFINITIONS," is deleted since it is no longer contained in any TS. A new TS Section 5.5.18, "Surveillance Frequency Control Program" is added to the Administrative Controls:

This program provides controls for Surveillance Frequencies. The program shall ensure that Surveillance Requirements specified in the Technical Specifications

are performed at intervals sufficient to assure the associated Limiting Conditions for Operation are met.

- a. the Surveillance Frequency Control Program shall contain a list of Frequencies of those Surveillance Requirements for which the Frequency is controlled by the program,
- b. changes to the Frequencies listed in the Surveillance Frequency Control Program shall be made in accordance with NEI-04-10, "Risk-Informed Method for Control of Surveillance Frequencies", Revision 1,
- c. the provisions of Surveillance Requirements 3.0.2 and 3.0.3 are applicable to the Frequencies established in the Surveillance Frequency Control Program.

The following TS surveillance frequencies were proposed to be removed from the TS and relocated:

3.1.1.1	3.3.3.1	3.4.8.1	3.6.2.2	3.7.12.6	3.8.7.1
3.1.2.1*	3.3.3.2	3.4.8.2	3.6.3.2	3.7.13.1	3.8.8.1
3.1.4.1	3.3.4.1	3.4.9.1	3.6.3.3	3.7.13.3	3.8.9.1
3.1.4.2	3.3.4.2	3.4.9.2	3.6.3.7*	3.7.13.4	3.8.10.1
3.1.5.1	3.3.4.3	3.4.9.3	3.6.3.8	3.7.13.5	3.9.1.1
3.1.6.2	3.3.5.2	3.4.11.1	3.6.3.10	3.7.15.1	3.9.3.1
3.1.6.3	3.3.5.3	3.4.11.3	3.6.4.1	3.7.16.1	3.9.3.2
3.1.8.2	3.3.6.1	3.4.11.4	3.6.5.1	3.7.18.1	3.9.4.1
3.1.8.3	3.3.6.2	3.4.11.5	3.6.6.1	3.8.1.1	3.9.4.2
3.1.8.4	3.3.6.3	3.4.12.1	3.6.6.2	3.8.1.2	3.9.5.1
3.2.1.1*	3.3.6.4	3.4.12.2	3.6.6.3	3.8.1.3	3.9.6.1
3.2.1.2*	3.3.6.5	3.4.12.3	3.6.6.5	3.8.1.4	3.9.6.2
3.2.2.1*	3.3.6.6	3.4.12.5	3.6.6.6	3.8.1.5	3.9.7.1
3.2.3.1	3.3.6.7	3.4.12.6	3.6.6.7	3.8.1.6	
3.2.4.1	3.3.6.8	3.4.12.8	3.6.6.8	3.8.1.7	
3.2.4.2	3.3.7.1	3.4.12.9	3.6.6.9	3.8.1.8	
3.3.1.1	3.3.7.2	3.4.13.1	3.6.7.1	3.8.1.9	
3.3.1.2	3.3.7.3	3.4.13.2	3.6.7.2	3.8.1.10	
3.3.1.3	3.3.7.4	3.4.14.1*	3.6.7.3	3.8.1.11	
3.3.1.4	3.3.7.5	3.4.15.1	3.6.7.4	3.8.1.12	
3.3.1.5	3.3.7.6	3.4.15.2	3.6.7.5	3.8.1.13	
3.3.1.6	3.3.7.7	3.4.15.3	3.7.2.2	3.8.1.14	
3.3.1.7	3.3.8.1	3.4.15.4	3.7.3.3	3.8.1.15	
3.3.1.8*	3.3.8.2	3.4.15.5	3.7.4.1	3.8.1.16	
3.3.1.9	3.3.8.4	3.4.16.1	3.7.4.3	3.8.1.17	
3.3.1.10	3.3.8.5	3.4.16.2*	3.7.5.1	3.8.1.18	
3.3.1.11	3.4.1.1	3.5.1.1	3.7.5.3	3.8.1.19	
3.3.1.12	3.4.1.2	3.5.1.2	3.7.5.4	3.8.1.20	
3.3.1.13	3.4.1.3	3.5.1.3	3.7.5.6	3.8.3.1	
3.3.1.14	3.4.1.4	3.5.1.4*	3.7.6.1	3.8.3.2	

3.3.1.16	3.4.2.1	3.5.1.5	3.7.6.2	3.8.3.4
3.3.2.1	3.4.3.1	3.5.2.1	3.7.7.1	3.8.3.5
3.3.2.2	3.4.4.1	3.5.2.2	3.7.7.2	3.8.3.6
3.3.2.4	3.4.5.1	3.5.2.3	3.7.7.3	3.8.4.1
3.3.2.5	3.4.5.2	3.5.2.5	3.7.8.1	3.8.4.2
3.3.2.6	3.4.5.3	3.5.2.6	3.7.8.3	3.8.4.3
3.3.2.8	3.4.6.1	3.5.2.7	3.7.10.1	3.8.6.1
3.3.2.9	3.4.6.2	3.5.2.8	3.7.10.2	3.8.6.2
3.3.2.10	3.4.6.3	3.5.4.1	3.7.10.4	3.8.6.3
3.3.2.11	3.4.7.1	3.5.4.2	3.7.10.5	3.8.6.4
3.3.2.12	3.4.7.2	3.5.4.3	3.7.12.1	3.8.6.5
3.3.2.13	3.4.7.3	3.5.5.1	3.7.12.3	3.8.6.6*

*Event-based surveillance frequency portion is retained in TS.

1.2 Related NRC Actions

By letter dated September 28, 2006 (ADAMS Accession No. ML062420049), Richard V. Guzman, NRC, to Christopher M. Crane, Exelon, the NRC issued a Safety Evaluation related to Amendment Nos. 186 and 147 to Facility Operating License Nos. NPF-39 and NPF-85, Exelon Generation Company, LLC for Limerick Generating Station, Units 1 and 2, Docket Nos. 50-352 and 50-353. Limerick was the first pilot submittal in support of this risk-informed TS Initiative 5b.

2.0 REGULATORY EVALUATION

In the "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors" published in the *Federal Register* on July 22, 1993 (58 FR 39132), the Nuclear Regulatory Commission (the Commission) addressed the use of Probabilistic Safety Analysis (PSA, currently referred to as Probabilistic Risk Analysis or PRA) in Standard Technical Specifications (STS). In this 1993 *FR* publication, the Commission states, in part:

The Commission believes that it would be inappropriate at this time to allow requirements which meet one or more of the first three criteria [of 10 CFR 50.36] to be deleted from Technical Specifications based solely on PSA (Criterion 4). However, if the results of PSA indicate that Technical Specifications can be relaxed or removed, a deterministic review will be performed.

Additionally, the Commission states in the 1993 Final Policy Statement:

The Commission Policy in this regard is consistent with its Policy Statement on 'Safety Goals for the Operation of Nuclear Power Plants,' 51 FR 30028, published on August 21, 1986. The Policy Statement on Safety Goals states in part, "... probabilistic results should also be reasonably balanced and supported through use of deterministic arguments. In this way, judgments can be made ... about the degree of confidence to be given these [probabilistic] estimates and assumptions. This is a key part of the process for determining the degree of regulatory conservatism that may be warranted for particular decisions. This

'defense-in-depth' approach is expected to continue to ensure the protection of public health and safety."

The Commission further states in the 1993 publication:

The Commission will continue to use PSA, consistent with its policy on Safety Goals, as a tool in evaluating specific line-item improvements to Technical Specifications, new requirements, and industry proposals for risk-based Technical Specification changes.

Approximately 2 years later, the Commission provided additional detail concerning the use of PRA in the "Final Policy Statement: Use of Probabilistic Risk Assessment Methods in Nuclear Regulatory Activities" published in the *Federal Register* (FR) (60 FR 42622, August 16, 1995) the NRC addressed the use of PRA. In this FR publication, the Commission's opening statement states, in part:

The Commission believes that an overall policy on the use of PRA methods in nuclear regulatory activities should be established so that the many potential applications of PRA can be implemented in a consistent and predictable manner that would promote regulatory stability and efficiency. In addition, the Commission believes that the use of PRA technology in NRC regulatory activities should be increased to the extent supported by the state-of-the-art in PRA methods and data and in a manner that complements the NRC's deterministic approach.

The following excerpts are taken, in part, from the 1995 Commission Policy Statement:

PRA addresses a broad spectrum of initiating events by assessing the event frequency. Mitigating system reliability is then assessed, including the potential for multiple and common-cause failures. The treatment, therefore, goes beyond the single failure requirements in the deterministic approach. The probabilistic approach to regulation is, therefore, considered an extension and enhancement of traditional regulation by considering risk in a more coherent and complete manner.

Therefore, the Commission believes that an overall policy on the use of PRA in nuclear regulatory activities should be established so that the many potential applications of PRA can be implemented in a consistent and predictable manner that promotes regulatory stability and efficiency. This policy statement sets forth the Commission's intention to encourage the use of PRA and to expand the scope of PRA applications in all nuclear regulatory matters to the extent supported by the state-of-the-art in terms of methods and data.

Therefore, the Commission adopts the following policy statement regarding the expanded NRC use of PRA:

- (1) The use of PRA technology should be increased in all regulatory matters to the extent supported by the state-of-the-art in PRA methods and data

and in a manner that complements the NRC's deterministic approach and supports the NRC's traditional defense-in-depth philosophy.

- (2) PRA and associated analyses (e.g., sensitivity studies, uncertainty analyses, and importance measures) should be used in regulatory matters, where practical within the bounds of the state-of-the-art, to reduce unnecessary conservatism associated with current regulatory requirements, regulatory guides, license commitments, and staff practices. Where appropriate, PRA should be used to support the proposal for additional regulatory requirements in accordance with 10 CFR 50.109 (Backfit Rule). Appropriate procedures for including PRA in the process for should be developed and followed. It is, of course, understood that the intent of this policy is that existing rules and regulations shall be complied with unless these rules and regulations are revised.
- (3) PRA evaluations in support of regulatory decisions should be as realistic as practicable and appropriate supporting data should be publicly available for review.
- (4) The Commission's safety goals for nuclear power plants and subsidiary numerical objectives are to be used with appropriate consideration of uncertainties in making regulatory judgments on the need for proposing and backfitting new generic requirements on nuclear power plant licensees.

In 10 CFR 50.36, the Commission established its regulatory requirements related to the content of TS. Pursuant to 10 CFR 50.36, TS are required to include items in the following five specific categories related to station operation: (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation; (3) surveillance requirements (SRs); (4) design features; and (5) administrative controls. As stated in 10 CFR 50.36(c)(3), "Surveillance Requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met." The SRs are required by 10 CFR 50.36(c)(3) to reside in TS and will remain in TS. The new TS SFCP will provide the necessary surveillance frequency programmatic controls and is located in the TS Administrative Controls Section (STS Section 5.0).

Changes to surveillance frequencies in the SFCP are made using the methodology contained in NEI 04-10, Rev. 1, including qualitative considerations, results of risk analyses, sensitivity studies and any bounding analyses, and recommended monitoring of SSCs are required to be documented. Changes to frequencies are subject to regulatory review and oversight of the SFCP implementation through the rigorous NRC review of safety related SSC performance provided by the reactor oversight program.

DCPP's SFCP ensures that surveillance requirements specified in the TS are performed at intervals sufficient to assure the above regulatory requirements are met. Existing regulatory requirements, such as 10 CFR 50.65 (maintenance rule) and 10 CFR 50 Appendix B (corrective

action program), require licensee monitoring of surveillance test failures and implementing corrective actions to address such failures. One of these actions may be to consider increasing the frequency at which a surveillance test is performed. In addition, the SFCP implementation guidance in NEI 04-10, Rev. 1, requires monitoring of the performance of structures, systems, and components (SSCs) for which surveillance frequencies are decreased to assure reduced testing does not adversely impact the SSCs.

This change is analogous with other NRC-approved TS changes in which the surveillance requirements are retained in technical specifications but the related surveillance frequencies are relocated to licensee-controlled documents, such as surveillances performed in accordance with the Inservice Testing Program and the Primary Containment Leakage Rate Testing Program. Thus, this proposed change complies with 10 CFR 50.36(c)(3) by retaining the requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met and meets the first key safety principle articulated in Regulatory Guide (RG) 1.177 (Reference 3) for plant-specific, risk-informed TS changes by complying with current regulations.

Licensees are required by TS to perform surveillance test, calibration, or inspection on specific safety related system equipment such as reactivity control, power distribution, electrical, instrumentation, and others to verify system operability. Surveillance frequencies, currently identified in TS, are based primarily upon deterministic methods such as engineering judgment, operating experience, and manufacturer's recommendations. The licensee's use of NRC-approved PRA methodologies identified in NEI 04-10, Rev. 1, provides a way to establish risk-informed surveillance frequencies that complements the deterministic approach and supports the NRC's traditional defense-in-depth philosophy.

These regulatory requirements, and the monitoring required by NEI 04-10, Rev. 1, ensure that surveillance frequencies are sufficient to assure that the requirements of 10 CFR 50.36 are satisfied and that any performance deficiencies will be identified and appropriate corrective actions taken.

2.1 Optional Changes and Variations

PG&E is not proposing any variations or deviations from the methodology for relocating surveillance frequencies from the TSs as described in the NRC staff's safety evaluation for NEI 04-10. Because this amendment is adopting the methodology in NEI 04-10, the NRC staff reviewed the conditions of and limitations on the use of the methodology in NEI 04-10 for plant-specific licensing applications that are given in Section 4.0 of the safety evaluation issued in the NRC letter dated September 19, 2007, that approved the use of NEI 04-10. The licensee's application and its supplemental letter provides the documentation on the PRA models and technical adequacy with respect to the NRC position in Sections 1.2, 1.3, and 4.2 of Regulatory Guide 1.200 (Ref. 5), which is required by the NRC safety evaluation that approved the use of NEI 04-10 in plant-specific license amendments. Therefore, the licensee's amendment application meets the conditions and limitation specified for the use of NEI 04-10.

3.0 TECHNICAL EVALUATION

PG&E submitted its proposed change to the TS, which provides for administrative relocation of applicable surveillance frequencies and provides for the addition of the SFCP to the Administrative Controls of the TS. In accordance with NEI 04-10, probabilistic risk assessment (PRA) methods are used, in combination with plant performance data and other considerations, to identify and justify modifications to the surveillance frequencies of equipment at nuclear power plants. This is in accordance with guidance provided in Regulatory Guides (RGs) 1.174 and 1.177 (Ref. 3 and 4, respectively) in support of changes to surveillance test intervals. The requirement to perform a surveillance frequency is retained in the TS, and the requirement for a frequency is retained in the TS, it is the specific frequency interval (number) that is relocated to a licensee controlled document. Initial surveillance frequencies were taken from vendor/manufacture's recommendations, industry codes and standards, engineering judgement, TS completion times (allowed outage times), historical equipment reliability data, and when (under what plant conditions) can the surveillance frequency be performed. Once a surveillance frequency is determined in accordance with the SFCP it will be recorded in a licensee-controlled document, and as far as the operator/maintainer is concerned it is the same as having the actual frequency number in TS.

Figure 1 in NEI 04-10 provides a process flow map for making changes to surveillance frequencies in the SFCP. In approving the Limerick license amendment, six cases/proposals for changing surveillance test intervals (STI) were evaluated (some acceptable for change, others not), thereby testing all the logic paths in NEI-04-10 (see flow chart in NEI-04-10) prior to approval. Exelon's selection was based on the draft NEI 04-10 document which had additional process paths (HSS and LSS) that are not included in the current version. The current process in NEI 04-10 includes three different flow paths to follow depending on how the PRA is modeled, as shown in steps 8, 9, and 10 of Figure 1:

- STI SSC Modeled in PRA
- STI SSC Not Modeled in PRA, but could be
- STI SSC Modeling is Impractical

Consistent with NEI 04-10 and its objective of selecting sufficient STIs to demonstrate each of the alternative process paths, PG&E has identified three technical specification surveillance frequencies to demonstrate the frequency change process. The surveillances selected to demonstrate the functionality of the three process paths at DCPD are:

- TS Surveillance 3.3.5.2 – Diesel Generator Trip Actuating Device Operational Test (Path 1)
- TS Surveillance 3.6.3.3 – Containment Isolation Manual Valve Sealed Checklist (Path 2)
- TS Surveillance 3.1.2.1 – Verify Measured Core Reactivity (Path 3)

The SFCP reviews the current surveillance frequency bases to determine if the surveillance frequency is amenable to the NEI process. This would include determining if the surveillance frequency can be changed. For instance, the surveillance frequency may have been established as a commitment to the NRC and cannot be changed. It should be noted that no

surveillance frequencies will be changed as a result of this amendment. The NRC staff concludes that the selected STI candidates, evaluated as part of the pilot process at DCP, demonstrate the functionality of the three process paths for the frequency change process as proposed in NEI 04-10.

RG 1.177 identifies five key safety principles to be met for risk-informed changes to TS. As noted above, PG&E has not proposed any variations or deviations from the guidance in NEI 04-10. As such, the evaluations provided in NRC SE dated September 19, 2007, for each of these principles as addressed by the industry methodology document (NEI 04-10), are applicable to DCP. In addition, the NRC staff has provided plant-specific discussions for several of the five key safety principles. The generic and plant-specific evaluations are provided below as DCP is a pilot application and can be used for future reference:

1. The proposed change meets the current regulations unless it is explicitly related to a requested exemption or rule change.

10 CFR 50.36(c)(3) provides that TSs will include surveillances which are "requirements relating to test, calibration, or inspection to assure that necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met." NEI 04-10, Revision 1, provides guidance for relocating the surveillance frequencies from the TSs to a licensee-controlled program by providing a NRC-approved methodology for control of the surveillance frequencies. The surveillances themselves would remain in the TSs, as required by 10 CFR 50.36(c)(3).

This change is consistent with other NRC-approved TS changes in which the surveillance frequencies are relocated to licensee-controlled documents, such as surveillances performed in accordance with the In-Service Testing Program or the Primary Containment Leakage Rate Testing Program. Thus, this proposed change meets the first key safety principle of RG 1.177 by complying with current regulations.

2. The proposed change is consistent with the defense-in-depth philosophy.

Consistency with the defense-in-depth philosophy is maintained if:

- A reasonable balance is preserved among prevention of core damage, prevention of containment failure, and consequence mitigation.
- Over-reliance on programmatic activities to compensate for weaknesses in plant design is avoided.
- System redundancy, independence, and diversity are preserved commensurate with the expected frequency, consequences of challenges to the system, and uncertainties (e.g., no risk outliers). Because the scope of the proposed methodology is limited to revision of surveillance frequencies, the redundancy, independence, and diversity of plant systems are not impacted.

- Defenses against potential common cause failures (CCFs) are preserved, and the potential for the introduction of new CCF mechanisms is assessed.
- Independence of barriers is not degraded.
- Defenses against human errors are preserved.
- The intent of the General Design Criteria in 10 CFR Part 50, Appendix A, are maintained.

NEI 04-10, Revision 1, uses both the core damage frequency (CDF) and the large early release frequency (LERF) metrics to evaluate the impact of proposed changes to surveillance frequencies. Compliance with the guidance of RG 1.174 and RG 1.177 for changes to CDF and LERF is achieved by evaluation using a comprehensive risk analysis, which assesses the impact of proposed changes including contributions from human errors and CCFs. Defense-in-depth is also included in the methodology explicitly as a qualitative consideration outside of the risk analysis, as is the potential impact on detection of component degradation that could lead to increased likelihood of CCFs. Both the quantitative risk analysis and the qualitative considerations assure a reasonable balance of defense-in-depth is maintained to ensure protection of public health and safety, satisfying the second key safety principle of RG 1.177.

3. The proposed change maintains sufficient safety margins.

The design, operation, testing methods, and acceptance criteria for SSCs, specified in applicable codes and standards (or alternatives approved for use by the NRC) will continue to be met as described in the plant licensing basis (including the final safety analysis report and bases to TS), since these are not affected by changes to the surveillance frequencies. Similarly, there is no impact to safety analysis acceptance criteria as described in the plant licensing basis. Thus, safety margins are maintained by the proposed methodology, and the third key safety principle of RG 1.177 is satisfied.

4. When proposed changes result in an increase in CDF or risk, the increases should be small and consistent with the intent of the Commission's Safety Goal Policy Statement.

RG 1.177 provides a framework for risk evaluation of proposed changes to surveillance frequencies, which requires identification of the risk contribution from impacted surveillances, determination of the risk impact from the change to the proposed surveillance frequency, and performance of sensitivity and uncertainty evaluations. NEI 04-10, Revision 1, satisfies the intent of RG 1.177 requirements for evaluation of the change in risk, and for assuring that such changes are small.

Quality of the PRA.

The quality of the PRA must be compatible with the safety implications of the proposed TS change and the role the PRA plays in justifying the change. The NRC has developed regulatory guidance to address PRA technical adequacy,

RG 1.200 (Reference 5), which addresses the use of the American Society of Mechanical Engineers (ASME) RA-Sa-2005, Addenda to ASME RA-S-2002 Standard for Probabilistic Risk Assessment for Nuclear Power Plant Applications (Reference 6), and the NEI peer review process NEI 00-02, "PRA Peer Review Process Guidance" (Reference 7). NEI 04-10, Revision 1, requires an assessment of the PRA models used to support the SFCP against the requirements of RG 1.200 to assure that the PRA models are capable of determining the change in risk due to changes to surveillance frequencies of SSCs, using plant-specific data and models. Capability category II of ASME RA-Sa-2005 is applied as the standard, and any identified deficiencies to those requirements are assessed further in sensitivity studies to determine any impacts to proposed decreases to surveillance frequencies.

In addition, PG&E identified the completion of an industry peer review along with three separate gap assessments conducted for the DCP PRA, which taken collectively assess the PRA internal events model compared to the applicable requirements of RG 1.200 and the ASME standard for capability category II, as required by NEI 04-10. All significant ("A" and "B" level) findings from the industry peer review have been resolved. The licensee further identified focused scope peer reviews conducted for the human reliability analysis (HRA) portion of the PRA model to address the upgrade implemented.

The findings from the gap assessments and the focused scope peer review of the HRA were provided by the licensee for staff review. The NRC staff reviewed the open items to determine how they might impact this application.

- The HRA was found by the gap assessment to not conform to the standard in the areas of maximum credit for recovery in pre-initiator events (element HR-D4), bases for success criteria for timing analyses (HR-G4), and validation of human action timing (HR-G5). The licensee stated that these issues are planned to be resolved in 2009, and in the interim will be addressed by sensitivity analyses. The staff accepts this disposition as adequate to address this application.
- The licensee's processes for evaluation of data for its PRA do not address element DA-D2 (no applicable generic data) or DA-D7 (existing plant experience no longer applicable). The reviewers identified that the current DCP PRA model does not have these data conditions, and so the elements are not applicable, but still recommended that a process be in place. Since the elements do not apply to the current PRA model, they do not affect this application.
- The definition of the human failure events is not sufficient to allow an independent analyst to easily replicate the analyses; the response time assumptions are not always directly traceable to a thermal-hydraulic analysis; procedure steps and manpower availability should be validated; documentation could be improved. The licensee stated that these issues are planned to be resolved in 2009, and in the interim will be addressed by sensitivity analyses. The staff accepts this disposition as adequate to address this application.

Based on the evaluation of the DCPD PRA using RG 1.200 and the ASME standard, and the licensee's planned use of sensitivity analyses to address deficiencies in its HRA, the staff determined that the DCPD PRA internal events model satisfied the guidance of RG 1.200, Revision 1, and is acceptable for this application because this level of PRA quality is sufficient to support the evaluation of changes to surveillance frequencies within the SFCP, and is consistent with Regulatory Position 2.3.1 of RG 1.177.

Scope of the PRA.

NEI 04-10 requires evaluation of each proposed surveillance frequency change to determine its potential impact on risk, due to impacts from internal events, fires, seismic, other external events, and from shutdown conditions. Consideration is made of both CDF and LERF metrics. Where quantitative risk models are unavailable, bounding analyses or other conservative quantitative evaluations are performed. A qualitative screening analysis may be used when the surveillance frequency impact on plant risk can be shown to be negligible or zero.

The DCPD PRA model is a full-scope, at-power model, and is acceptable for this application. The scope of the PRA model does not include other external events (i.e., high winds, nearby facility accidents), which were found in the screening analyses of the Individual Plant Examination of External Events (IPEEE) to not represent unique site vulnerabilities, nor does the PRA model scope include shutdown conditions. The licensee will use the alternative evaluation methods consistent with NEI 04-10.

Fire PRA Model

NEI 04-10 provides for the use of fire PRA models, bounding analyses, or other quantitative methods in assessing fire risk impacts for changes to surveillance frequencies. The licensee identified that it intends to use a fire PRA model to support changes made in the SFCP.

The licensee submitted relevant information about its fire PRA model in support of its SFCP. A fire PRA model is currently under development by the licensee to support transitioning to National Fire Protection Association (NFPA) standard NFPA-805. Portions of this model have been completed and peer reviewed against the American Nuclear Society PRA standard for fire PRA models (Ref. 11). The licensee cited NUREG/CR-6850 (Ref. 12) as the basis for development of most aspects of its fire PRA model.

Seismic PRA Model

NEI 04-10 provides for the use of seismic PRA models, seismic margins, bounding analyses, or other quantitative methods in assessing seismic risk impacts for changes to surveillance frequencies. The licensee identified that it intends to use a seismic PRA model to support changes made in the SFCP.

The licensee submitted relevant information about its seismic PRA model in support of its SFCP. The seismic hazard evaluation uses site-specific seismic hazard levels resolved into six separate seismic initiating events, each with a unique frequency of occurrence. Structure and component fragility analysis provides unique fragility curves, defined by the median ground spectral acceleration capacities and accounting for randomness and uncertainty variables. Seismic logic analyses of plant system structural and component failures are evaluated using the event tree logic for general transients. Although most nonsafety-related components and systems are assumed to fail during any seismic event, the seismically-induced loss of offsite power is probabilistically evaluated based on the switchyard seismic fragility.

The scope of the DCCP PRA model, and the evaluations of other external events and shutdown conditions, is sufficient to ensure the scope of the risk contribution of each surveillance are properly identified for evaluation, and is consistent with Regulatory Position 2.3.2 of RG 1.177.

PRA Modeling.

NEI 04-10 determines if the SSCs affected by a surveillance are modeled in the PRA. Where the SSC is directly or implicitly modeled, a quantitative evaluation of the risk impact is carried out. The methodology adjusts the failure probability of the impacted SSCs, including any impacted common cause failure modes, based on the proposed change to the surveillance frequency. Where the SSC is not modeled in the PRA, bounding analyses are performed to characterize the impact of the proposed change to surveillance frequency. Potential impacts on the risk analyses due to screening criteria and truncation levels are adequately addressed by the requirements for PRA technical adequacy addressed by RG 1.200, and by sensitivity studies identified in NEI 04-10. Guidance is provided for the quantitative evaluation of the impact of selected testing strategy (i.e., staggered testing or sequential testing) consistent with the guidance of NUREG/CR-6141 and NUREG/CR-5497.

The licensee's program conforms to the guidance in NEI 04-10 Rev. 1 and is, therefore, acceptable because PRA modeling is sufficient to ensure an acceptable evaluation of risk due to the change in surveillance frequency, and is consistent with Regulatory Position 2.3.3 of RG 1.177.

Assumptions.

The failure probabilities of SSCs modeled in a PRA include a standby time-related contribution and a cyclic demand-related contribution. NEI 04-10 adjusts the time-related failure contribution of SSCs affected by the proposed change to surveillance frequency. This is consistent with RG 1.177 Section 2.3.3 which permits separation of the failure rate contributions into demand and standby for evaluation of surveillance requirements. If the available data do not support distinguishing between the time-related failures and demand failures, then the change to surveillance frequency is conservatively assumed to impact the total failure probability of the SSC, including both standby and demand contributions. The SSC failure rate (per unit time) is assumed to be unaffected by the change in test frequency, and this is confirmed by the required monitoring

and feedback implemented after the change in surveillance frequency is implemented.

The process requires consideration of qualitative sources of information with regards to potential impacts of test frequency on SSC performance, including industry and plant-specific operating experience, vendor recommendations, industry standards, and code-specified test intervals. Thus the process is not reliant upon risk analyses as the sole basis for the proposed changes.

The potential beneficial risk impacts of reduced surveillance frequency, including reduced downtime, lesser potential for restoration errors, reduction of potential for test-caused transients, and reduced test-caused wear of equipment, are identified qualitatively, but are conservatively not required to be quantitatively assessed.

The licensee's program conforms to the guidance in NEI 04-10 Rev. 1 and is, therefore, acceptable because it employs reasonable assumptions with regard to extensions of surveillance test intervals, and is consistent with Regulatory Position 2.3.4 of RG 1.177.

Sensitivity and Uncertainty Analyses.

NEI 04-10 requires sensitivity studies to assess the impact of uncertainties from key assumptions of the PRA, uncertainty in the failure probabilities of the affected SSCs, impact to the frequency of initiating events, and of any identified deviations from capability category II of ASME RA-Sb-2005. Where the sensitivity analyses identify a potential impact on the proposed change, revised surveillance frequencies are considered, along with any qualitative considerations that may bear on the results of such sensitivity studies. Required monitoring and feedback of SSC performance once the revised surveillance frequencies are implemented are also used. Thus, NEI 04-10 appropriately considers the possible impact of PRA model uncertainty and sensitivity to key assumptions and model limitations, consistent with Regulatory Position 2.3.5 of RG 1.177.

The licensee's program conforms to the guidance in NEI 04-10 Rev. 1 and is, therefore, acceptable because it appropriately considers the possible impact of PRA model uncertainty and sensitivity to key assumptions and model limitations, consistent with Regulatory Position 2.3.5 of RG 1.177.

Acceptance Guidelines.

NEI 04-10 quantitatively evaluates the change in total risk (including internal and external events contributions) in terms of CDF and LERF for both the individual risk impact of a proposed change in surveillance frequency and the cumulative impact from all individual changes to surveillance frequencies. Each individual change to surveillance frequency must be shown to result in a risk impact below $1E-6$ per year for change to CDF, and below $1E-7$ per year for change to LERF. These are consistent with the limits of RG 1.174 for very small changes in risk.

Where the RG 1.174 limits are not met, the process either considers revised surveillance frequencies which are consistent with RG 1.174, or the process terminates without permitting the proposed changes. Where quantitative results are unavailable to permit comparison to acceptance guidelines, appropriate qualitative analyses are required to demonstrate that the associated risk impact of a proposed change to surveillance frequency is negligible or zero. Otherwise, bounding quantitative analyses are required which demonstrate the risk impact is at least one order of magnitude lower than the RG 1.174 acceptance guidelines for very small changes in risk.

In addition to assessing each individual SSC surveillance frequency change, the cumulative impact of all changes must result in a risk impact below $1E-5$ per year for change to CDF, and below $1E-6$ per year for change to LERF, and the total CDF and total LERF must be reasonably shown to be less than $1E-4$ per year and $1E-5$ per year, respectively. These are consistent with the limits of RG 1.174 for acceptable changes in risk, as referenced by RG 1.177 for changes to surveillance frequencies. The staff interprets this assessment of cumulative risk as a requirement to calculate the change in risk from a baseline model utilizing failure probabilities based on the surveillance frequencies prior to implementation of the SFCP, compared to a revised model with failure probabilities based on changed surveillance frequencies. The staff further notes that NEI 04-10 includes a provision to exclude the contribution to cumulative risk from individual changes to surveillance frequencies associated with small risk increases (less than $5E-8$ CDF and $5E-9$ LERF) once the baseline PRA models are updated to include the effects of the revised surveillance frequencies.

The quantitative acceptance guidance of RG 1.174 is necessary but not sufficient to accept decreases in surveillance frequencies. The process also considers qualitative information to evaluate the proposed changes to surveillance frequencies, including industry and plant-specific operating experience, vendor recommendations, industry standards, the results of sensitivity studies, and SSC performance data and test history. The final acceptability of the proposed change is based on all of these considerations and not solely on the PRA results compared to numerical acceptance guidelines. Performance monitoring and feedback are also required to assure that lessons learned from past experience are considered.

These items are evaluated by an Integrated Decision-making Panel (IDP) in accordance with NEI 04-10. Per NEI 04-10, the IDP is composed of the site Maintenance Rule Expert Panel, supplemented by a Surveillance Test Coordinator, and a Subject Matter Expert.

The licensee's program conforms to the guidance with NEI 04-10 Rev. 1 and is, therefore, acceptable because it provides reasonable acceptance guidelines and methods for evaluating the risk increase of proposed changes to surveillance frequencies, consistent with Regulatory Position 2.4 of RG 1.177.

Therefore, based on the technical adequacy of the licensee's PRA models and on the licensee's conformance to the guidance of NEI 04-10 Rev. 1, the licensee's proposed change satisfies the

fourth key safety principle of RG 1.177 by assuring any increase in risk is small consistent with the intent of the Commission's Safety Goal Policy Statement.

5. The impact of the proposed change should be monitored using performance measurement strategies.

The licensee's proposed change requires application of NEI 04-10 in the SFCP.

NEI 04-10 requires performance monitoring of SSCs whose surveillance frequency has been revised as part of a feedback process to assure that the change in test frequency has not resulted in degradation of equipment performance and operational safety. The monitoring and feedback includes consideration of Maintenance Rule monitoring of equipment performance. In the event of degradation of SSC performance, the surveillance frequency is reassessed in accordance with the methodology, in addition to any corrective actions which may apply as part of the Maintenance Rule requirements.

The licensee's program conforms to the guidance in NEI 04-10 Rev. 1 and is, therefore, acceptable because the performance monitoring and feedback is sufficient to reasonably assure acceptable SSC performance and is consistent with Regulatory Position 3.2 of RG 1.177. Thus, the fifth key safety principle of RG 1.177 is satisfied.

4.0 SUMMARY AND CONCLUSIONS

The NRC staff has reviewed the licensee's proposed TS changes for relocation of surveillance frequencies to a licensee controlled document, and controlling changes to surveillance frequencies in accordance with a new program, the SFCP, identified in the Administrative Controls of TS. The SFCP references NEI 04-10 Revision 1, which provides a risk-informed methodology using plant-specific risk insights and performance data to revise surveillance frequencies within an SFCP, allowing for licensee control of the surveillance frequencies.

The NRC staff finds that the proposed TS changes and implementation of the methodology of NEI 04-10 Revision 1, as referenced in the Administrative Controls of TS, satisfies the key principles of risk-informed decision making applied to changes to TS as delineated in RG 1.177 and RG 1.174, in that:

- The proposed change meets current regulations;
- The proposed change is consistent with defense-in-depth philosophy;
- The proposed change maintains sufficient safety margins;
- Increases in risk resulting from the proposed change are small and consistent with the Commission's Safety Goal Policy Statement; and
- The impact of the proposed change is monitored with performance measurement strategies.

Based on the above evaluation, the NRC staff concludes the proposed changes meet the technical requirements in the regulations that are discussed in Section 2.0 of this safety evaluation. Based on this, the NRC staff further concludes that the proposed TS changes in the

proposed amendment meet 10 CFR 50.36 and, therefore, the proposed amendment is acceptable.

5.0 REGULATORY COMMITMENTS

In its letter dated October 15, 2007, PG&E committed to the following actions as Regulatory Commitments.

- 1) PG&E will conduct another Integrated Decisionmaking Panel (IDP) panel for the NRC to observe, that will review TS Surveillance 3.6.3.3 and discuss the two previously reviewed STIs.
- 2) PG&E commits to evaluate the impact of future model updates (internal model or external model) on the conclusions of the assessments that are performed in support of this application.
- 3) The upgraded human reliability analysis was recently subjected to a focused peer review. All the findings of this focused review will be addressed prior to implementation of the proposed TS changes either by modifying the model or treatment of the issue via a sensitivity study.
- 4) Three recent limited scope and independent assessments of the DCPD PRA Level 1 and Level 2 PRA models have been performed by leading industry PRA experts (i.e., Gap Analyses) to support several risk-informed applications, including the MSPI [Mitigating System Performance Indicators] calculations and DCPD's transition to the National Fire Protection Association (NFPA) 805 Standard. All the findings of these assessments will be addressed prior to implementation of the proposed TS changes and based on the system being subject to change either by modifying the model or treatment of the issue via a sensitivity study.
- 5) PG&E will either close all identified RG 1.200 gaps, or will address the gaps through sensitivity studies for the surveillance test interval being evaluated using the NEI 04-10 process and methodology.

6.0 STATE CONSULTATION

In accordance with the Commission's regulations, the California State official was notified of the proposed issuance of the amendments. The State official had no comments.

7.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration and there has been no public comment on such finding published in the *Federal Register* on November 20, 2007 (72 FR 65370). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

8.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

9.0 REFERENCES

1. Becker, J. R., Pacific Gas and Electric Company, letter to U.S. Nuclear Regulatory Commission, "Proposed Technical Specifications Change to Relocate Surveillance Test Intervals to a Licensee-Controlled Program (Risk-Informed Technical Specifications Initiative 5b)," October 15, 2007, ADAMS Accession No. ML072950183.
2. Becker, J. R., Pacific Gas and Electric Company, letter to U.S. Nuclear Regulatory Commission, "Response to Request for Additional Information on, Proposed Technical Specifications Change to Relocate Surveillance Test Intervals to a Licensee-Controlled Program (Risk-Informed Technical Specifications Initiative 5b)," July 8, 2008, ADAMS Accession No. ML081980057.
3. U.S. Nuclear Regulatory Commission, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," Regulatory Guide 1.174, July 1998, ADAMS Accession No. ML003740133.
4. U.S. Nuclear Regulatory Commission, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications," Regulatory Guide 1.177, August 1998, ADAMS Accession No. ML003740176 .
5. U.S. Nuclear Regulatory Commission, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," Regulatory Guide 1.200 for Trial Use, ADAMS Accession No. ML070240001.

6. American Society of Mechanical Engineers, Addenda to ASME RA-S-2002 Standard for Probabilistic Risk Assessment for Nuclear Power Plant Applications, RA-Sb-2005, December 2005.
7. NEI 00-02, Revision 43, "Probabilistic Risk Assessment (PRA) Peer Review Process Guidance," 2000, ADAMS Accession No. ML003728023.
8. NEI 04-10, "Risk-Informed Technical Specifications Initiative 5B, Risk-Informed Method for Control of Surveillance Frequencies," Revision 1, April 2007, ADAMS Accession No. ML071360456.
9. Ho K. Nieh, NRC, Letter to Biff Bradley, Nuclear Energy Institute, "Final Safety Evaluation For Nuclear Energy Institute (NEI) Topical Report (TR) 04-10, Revision 1, "Risk-Informed Technical Specification Initiative 5B, "Risk-Informed Method For Control Of Surveillance Frequencies (TAC No. MD6111)," September 19, 2007, ADAMS Accession No. ML072570267.
10. Richard V. Guzman, NRC, Letter to Christopher M. Crane, Exelon Generation Company, LLC, "Limerick Generating Station, Units 1 and 2 - Issuance of Amendment Re: Relocate Surveillance Test Intervals to Licensee-Controlled Program (TAC Nos. MC3567 and MC3568)," September 28, 2006, ADAMS Accession No. ML062420049.
11. American National Standards Institute/American Nuclear Society, ANSI/ANS-58.23-2007, "Fire PRA Methodology," November 20, 2007.
12. Kassawara, R.P., September 30, 2005, EPRI/NRC-RES Fire PRA Methodology for Nuclear Power Facilities, Volume 1: Summary and Overview, NUREG/CR-6850, ADAMS Accession No. ML052580075.

Principal Contributor: Andrew J. Howe, NRR/DRA

Date: October 30, 2008

October 30, 2008

Mr. John Conway
Senior Vice President - Station
Generation and Chief Nuclear Officer
Pacific Gas and Electric Company
Diablo Canyon Power Plant
P.O. Box 770000
San Francisco, CA 94177-0001

SUBJECT: DIABLO CANYON POWER PLANT, UNIT NOS. 1 AND 2 - ISSUANCE OF AMENDMENTS RE: TECHNICAL SPECIFICATIONS CHANGE TO RELOCATE SURVEILLANCE TEST INTERVALS TO A LICENSEE-CONTROLLED PROGRAM (RISK-INFORMED INITIATIVE 5B) (TAC NOS. MD8911 AND MD8912)

Dear Mr. Conway:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 200 to Facility Operating License No. DPR-80 and Amendment No. 201 to Facility Operating License No. DPR-82 for the Diablo Canyon Power Plant, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated October 15, 2007, and as supplemented by letter dated July 8, 2008.

The amendments relocate surveillance frequencies of most surveillance tests from the TSs to a licensee-controlled document, the Surveillance Frequency Control Program. Once relocated, changes to the surveillance frequencies may be made using a risk-informed methodology, Nuclear Energy Institute (NEI) document NEI 04-10 Rev. 1, as specified in the Administrative Controls of the TS. The NRC staff has previously approved NEI 04-10 Rev. 1, as acceptable for referencing in licensing applications.

A copy of the related Safety Evaluation is enclosed. The Notice of Issuance will be included in the Commission's next regular biweekly *Federal Register* notice.

Sincerely,

/RA/

Alan B. Wang, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-275 and 50-323

Enclosures:

1. Amendment No. 200 to DPR-80
2. Amendment No. 201 to DPR-82
3. Safety Evaluation

cc w/encls: See next page

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*SE input

**See previous concurrence

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NAME	AWang **	GLappert <i>GL</i>	MRubin *	<i>E. Williams</i>	MMarkley <i>M</i>	AWang <i>AW</i>
DATE	9/12/08	10/27/08	8/22/2008	10/28/08	10/30/08	10/30/08

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