

ATTACHMENT TO LICENSE AMENDMENT NO. 52

TO FACILITY COMBINED LICENSE NO. NPF-94

DOCKET NO. 52-028

Replace the following page of the Facility Combined License No. NPF-94 with the attached revised page(s). The revised pages are identified by an amendment number and contain marginal lines indicating the areas of change.

Facility Combined License No. NPF-94

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Facility Combined License No. NPF-94

Appendix A – Technical Specifications

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- (b) SCE&G shall report any violation of a requirement in Section 2.D.(3), Section 2.D.(4), Section 2.D.(5), and Section 2.D.(6) of this license within 24 hours. Initial notification shall be made to the NRC Operations Center in accordance with 10 CFR 50.72, with written follow up in accordance with 10 CFR 50.73.

(8) Incorporation

The Technical Specifications, Environmental Protection Plan, and ITAAC in Appendices A, B, and C, respectively of this license, as revised through Amendment No. 52, are hereby incorporated into this license.

(9) Technical Specifications

The technical specifications in Appendix A to this license become effective upon a Commission finding that the acceptance criteria in this license (ITAAC) are met in accordance with 10 CFR 52.103(g).

(10) Operational Program Implementation

SCE&G shall implement the programs or portions of programs identified below, on or before the date SCE&G achieves the following milestones.

- (a) Environmental Qualification Program implemented before initial fuel load;
- (b) Reactor Vessel Material Surveillance Program implemented before initial criticality;
- (c) Preservice Testing Program implemented before initial fuel load;
- (d) Containment Leakage Rate Testing Program implemented before initial fuel load;
- (e) Fire Protection Program
 1. The fire protection measures in accordance with Regulatory Guide (RG) 1.189 for designated storage building areas (including adjacent fire areas that could affect the storage area) implemented before initial receipt of byproduct or special nuclear materials that are not fuel (excluding exempt quantities as described in 10 CFR 30.18);
 2. The fire protection measures in accordance with RG 1.189 for areas containing new fuel (including adjacent areas where a fire could affect the new fuel) implemented before receipt of fuel onsite;

Technical Specifications

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SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.4.1	Verify individual rod positions within alignment limit.	12 hours
SR 3.1.4.2	<p>-----</p> <p style="text-align: center;">- NOTE -</p> <p>Not applicable to GRCAs.</p> <p>-----</p> <p>Verify rod freedom of movement (trippability) by moving each rod not fully inserted in the core ≥ 10 steps in either direction.</p>	92 days
SR 3.1.4.3	<p>-----</p> <p style="text-align: center;">- NOTE -</p> <p>Not applicable to GRCAs.</p> <p>-----</p> <p>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:</p> <ol style="list-style-type: none"> a. $T_{avg} \geq 500^{\circ}F$, and b. All reactor coolant pumps operating. 	Once prior to reactor criticality after each removal of the reactor head, and after each earthquake requiring plant shutdown

3.2 POWER DISTRIBUTION LIMITS

3.2.1 Heat Flux Hot Channel Factor ($F_Q(Z)$) (Constant Axial Offset Control (CAOC) W(Z) Methodology)

LCO 3.2.1 $F_Q(Z)$, as approximated by $F_Q^C(Z)$ and $F_Q^W(Z)$, shall be within the limits specified in the COLR.

APPLICABILITY: MODE 1 with On-Line Power Distribution Monitoring System (OPDMS) not monitoring parameters.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. ----- - NOTE - Required Action A.4 shall be completed whenever this Condition is entered. ----- $F_Q^C(Z)$ not within limit.</p>	<p>A.1 Reduce THERMAL POWER $\geq 1\%$ RTP for each $1\% F_Q^C(Z)$ exceeds limit. <u>AND</u> A.2 Reduce Power Range Neutron Flux – High trip setpoints $\geq 1\%$ for each $1\% F_Q^C(Z)$ exceeds limit. <u>AND</u> A.3 Reduce Overpower ΔT trip setpoints $\geq 1\%$ for each $1\% F_Q^C(Z)$ exceeds limit. <u>AND</u> A.4 Perform SR 3.2.1.1 and SR 3.2.1.2.</p>	<p>15 minutes after each $F_Q^C(Z)$ determination</p> <p>72 hours after each $F_Q^C(Z)$ determination</p> <p>72 hours after each $F_Q^C(Z)$ determination</p> <p>Prior to increasing THERMAL POWER above the limit of Required Action A.1</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. -----</p> <p style="text-align: center;">- NOTE -</p> <p>Required Action B.4 shall be completed whenever this Condition is entered.</p> <p>-----</p> <p>$F_Q^W(Z)$ not within limits.</p>	<p>B.1 Reduce THERMAL POWER $\geq 1\%$ for each 1% $F_Q^W(Z)$ exceeds limit.</p> <p style="text-align: center;"><u>AND</u></p> <p>B.2 Reduce Power Range Neutron Flux – High trip setpoints $\geq 1\%$ for each 1% $F_Q^W(Z)$ exceeds the limit.</p> <p style="text-align: center;"><u>AND</u></p> <p>B.3 Reduce Overpower ΔT trip setpoints $\geq 1\%$ for each 1% $F_Q^W(Z)$ exceeds the limit.</p> <p style="text-align: center;"><u>AND</u></p> <p>B.4 Perform SR 3.2.1.1 and SR 3.2.1.2.</p>	<p>4 hours</p> <p>72 hours</p> <p>72 hours</p> <p>Prior to increasing THERMAL POWER above the limit of Required Action B.1</p>
<p>C. Required Action and associated Completion Time not met.</p>	<p>C.1 Be in MODE 2.</p>	<p>6 hours</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.2.1.1 -----</p> <p style="text-align: center;">- NOTE -</p> <p>Not required to be performed if OPDMS was monitoring parameters upon exceeding 75% RTP.</p> <p>-----</p> <p>Verify $F_Q^C(Z)$ within limit.</p>	<p>Once after each refueling prior to THERMAL POWER exceeding 75% RTP</p>
<p>SR 3.2.1.2 -----</p> <p style="text-align: center;">- NOTE -</p> <p>Not required to be performed if OPDMS was monitoring parameters upon exceeding 75% RTP.</p> <p>-----</p> <p>Verify $F_Q^W(Z)$ within limits.</p>	<p>Once after each refueling prior to THERMAL POWER exceeding 75% RTP</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.2.1.3 -----</p> <p style="text-align: center;">- NOTE -</p> <p>Not required to be performed until 31 days after the last verification of OPDMS parameters.</p> <p>-----</p> <p>Verify $F_Q^C(Z)$ within limit.</p>	<p>Once within 12 hours after achieving equilibrium conditions after exceeding, by $\geq 10\%$ RTP, the THERMAL POWER at which $F_Q^C(Z)$ was last verified</p> <p><u>AND</u></p> <p>31 effective full power days (EFPD) thereafter</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.2.1.4 -----</p> <p style="text-align: center;">- NOTES -</p> <ol style="list-style-type: none"> 1. Not required to be performed until 31 days after the last verification of OPDMS parameters. 2. If $F_Q^W(Z)$ measurements indicate maximum over z $F_Q^C(Z)$ has increased since the previous evaluation of $F_Q^C(Z)$: <ol style="list-style-type: none"> a. Increase $F_Q^W(Z)$ by the greater of a factor of 1.02 or by an appropriate factor specified in the COLR and reverify $F_Q^W(Z)$ is within limits; or b. Repeat SR 3.2.1.4 once per 7 EFPD until two successive flux maps indicate maximum over z $F_Q^C(Z)$ has not increased. <p>-----</p> <p>Verify $F_Q^W(Z)$ within limits.</p>	<p>Once within 12 hours after achieving equilibrium conditions after exceeding, by $\geq 10\%$ RTP, the THERMAL POWER at which $F_Q^W(Z)$ was last verified</p> <p>AND</p> <p>31 EFPD thereafter</p>

3.2 POWER DISTRIBUTION LIMITS

3.2.3 AXIAL FLUX DIFFERENCE (AFD) (Constant Axial Offset Control (CAOC) Methodology)

LCO 3.2.3

The AFD:

- a. Shall be maintained within the target band specified in the COLR about the target flux difference.
- b. May deviate outside the target band with THERMAL POWER < 90% RTP, but ≥ 50% RTP, provided AFD is within the acceptable operation limits specified in the COLR and cumulative penalty deviation time is ≤ 1 hour during the previous 24 hours.
- c. May deviate outside the target band with THERMAL POWER < 50% RTP

- NOTES -

- 1. The AFD shall be considered outside the target band when two or more OPERABLE excore channels indicate AFD to be outside the target band.
 - 2. With THERMAL POWER ≥ 50% RTP, penalty deviation time shall be accumulated on the basis of a 1 minute penalty deviation for each 1 minute of power operation with AFD outside the target band.
 - 3. With THERMAL POWER < 50% RTP and > 15% RTP, penalty deviation time shall be accumulated on the basis of a 0.5 minute penalty deviation for each 1 minute of power operation with AFD outside the target band.
 - 4. A total of 16 hours of operation may be accumulated with AFD outside the target band without penalty deviation time during surveillance of power range channels in accordance with SR 3.3.1.5, provided AFD is maintained within acceptable operation limits.
-

APPLICABILITY:

MODE 1 with THERMAL POWER > 15% RTP and with the On-Line Power Distribution Monitoring System (OPDMS) not monitoring parameters.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. THERMAL POWER \geq 90% RTP.</p> <p><u>AND</u></p> <p>AFD not within the target band.</p>	<p>A.1 Restore AFD to within the target band.</p>	<p>15 minutes</p>
<p>B. Required Action and associated Completion Time of Condition A not met.</p>	<p>B.1 Reduce THERMAL POWER to < 90% RTP</p>	<p>15 minutes</p>
<p>C. -----NOTE-----</p> <p>Required Action C.1 must be completed whenever Condition C is entered.</p> <p>-----</p> <p>THERMAL POWER < 90% and \geq 50% RTP with cumulative penalty deviation time > 1 hour during the previous 24 hours.</p> <p><u>OR</u></p> <p>THERMAL POWER < 90% and \geq 50% RTP with AFD not within the acceptable operation limits.</p>	<p>C.1 Reduce THERMAL POWER to < 50% RTP.</p>	<p>30 minutes</p>
<p>D. Required Action and associated Completion Time for Condition C not met.</p>	<p>D.1 Reduce THERMAL POWER to \leq 15% RTP.</p>	<p>9 hours</p>

SURVEILLANCE REQUIREMENTS

- NOTE -

Not required to be performed until 7 days after the last verification of OPDMS parameters.

SURVEILLANCE		FREQUENCY
SR 3.2.3.1	Verify AFD within limits for each OPERABLE excore channel.	7 days
SR 3.2.3.2	Update the target flux difference.	Once within 31 EFPD after each refueling <u>AND</u> 31 EFPD thereafter
SR 3.2.3.3	<p style="text-align: center;">----- - NOTE - -----</p> <p>The initial target flux difference after each refueling may be determined from design predictions.</p> <p style="text-align: center;">-----</p> <p>Determine, by measurement, the target flux difference.</p>	Once within 31 EFPD after each refueling <u>AND</u> 92 EFPD thereafter

5.6 Reporting Requirements

5.6.3 CORE OPERATING LIMITS REPORT (COLR)

- a. Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, and shall be documented in the COLR for the following:
 - 2.1.1, "Reactor Core SLs";
 - 3.1.1, "SHUTDOWN MARGIN (SDM)";
 - 3.1.3, "Moderator Temperature Coefficient (MTC)";
 - 3.1.5, "Shutdown Bank Insertion Limits";
 - 3.1.6, "Control Bank Insertion Limits";
 - 3.2.1, "Heat Flux Hot Channel Factor ($F_Q(Z)$) (Constant Axial Offset Control (CAOC) W(Z) Methodology)";
 - 3.2.2, "Nuclear Enthalpy Rise Hot Channel Factor ($F_{\Delta H}^N$)";
 - 3.2.3, "AXIAL FLUX DIFFERENCE (AFD) (Constant Axial Offset Control (CAOC) Methodology)";
 - 3.2.5, "On-Line Power Distribution Monitoring System (OPDMS)-Monitored Parameters";
 - 3.3.1, "Reactor Trip System (RTS) Instrumentation";
 - 3.4.1, "RCS Pressure, Temperature, and Flow Departure from Nucleate Boiling (DNB) Limits"; and
 - 3.9.1, "Boron Concentration."

- b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:
 - 1. WCAP-9272-P-A, "Westinghouse Reload Safety Evaluation Methodology," July 1985 (Westinghouse Proprietary) and WCAP-9273-NP-A (Non-Proprietary).

(Methodology for Specifications 3.1.3 - Moderator Temperature Coefficient, 3.1.5 - Shutdown Bank Insertion Limits, 3.1.6 - Control Bank Insertion Limits, 3.2.1 - Heat Flux Hot Channel Factor, 3.2.2 - Nuclear Enthalpy Rise Hot Channel Factor, 3.2.3 - AXIAL FLUX DIFFERENCE, and 3.9.1 - Boron Concentration.)

 - 2a. WCAP-8385, "Power Distribution Control and Load Following Procedures - Topical Report," September 1974 (Westinghouse Proprietary) and WCAP-8403 (Non-Proprietary).

(Methodology for Specification 3.2.3 - AXIAL FLUX DIFFERENCE (Constant Axial Offset Control).)

5.6 Reporting Requirements

5.6.3 CORE OPERATING LIMITS REPORT (COLR) (continued)

- 2b. T. M. Anderson to K. Kniel (Chief of Core Performance Branch, NRC) January 31, 1980 - Attachment: Operation and Safety Analysis Aspects of an Improved Load Follow Package.

(Methodology for Specification 3.2.3 - AXIAL FLUX DIFFERENCE (Constant Axial Offset Control).)

- 2c. NUREG-0800, Standard Review Plan, U.S. Nuclear Regulatory Commission, Section 4.3, Nuclear Design, July 1981. Branch Technical Position CPB 4.3-1, Westinghouse Constant Axial Offset Control (CAOC), Rev. 2, July 1981.

(Methodology for Specification 3.2.3 - AXIAL FLUX DIFFERENCE (Constant Axial Offset Control).)

- 3. WCAP-10216-P-A, Revision 1A, "Relaxation of Constant Axial Offset Control F_Q Surveillance Technical Specification," February 1994 (Westinghouse Proprietary) and WCAP-10217-A (Non-Proprietary).

(Methodology for Specification 3.2.1 - Heat Flux Hot Channel Factor (W(Z) surveillance requirements for F_Q Methodology).)

- 4. WCAP-12945-P-A, Volumes 1-5, "Westinghouse Code Qualification Document for Best Estimate Loss of Coolant Accident Analysis," Revision 2, March 1998 (Westinghouse Proprietary) and WCAP-14747 (Non-Proprietary).

(Methodology for Specification 3.2.1 - Heat Flux Hot Channel Factor.)

- 5. WCAP-12472-P-A, "BEACON Core Monitoring and Operations Support System," August 1994, Addendum 1, May 1996 (Westinghouse Proprietary), and Addendum 2, March 2001 (Westinghouse Proprietary) and WCAP-12473-A (Non-Proprietary).

(Methodology for Specification 3.2.5 - OPDMS - Monitored Parameters.)

- 6. APP-GW-GLR-137, Revision 1, "Bases of Digital Overpower and Overtemperature Delta-T ($OP_{\Delta T}/OT_{\Delta T}$) Reactor Trips," Westinghouse Electric Company LLC.

(Methodology for Specification 2.1.1 – Reactor Core Safety Limits, and 3.3.1 – Reactor Trip System (RTS) Instrumentation.)