

DESCRIPTION OF PROPOSED CHANGE AND SAFETY ANALYSIS
PROPOSED CHANGE NO. 204 TO THE TECHNICAL SPECIFICATIONS
PROVISIONAL OPERATING LICENSE DPR-13

REVISION 1

This is a request to revise Appendix A Technical Specifications 2.1, "REACTOR CORE - Limiting Combination of Power, Pressure, and Temperature," 3.5.2, "Control Group Insertion Limits," 3.11, "Continuous Power Distribution Monitoring," 3.3.3, "Refueling Water Storage Tank," and 4.1.1, "Operational Safety Items."

Reason for Proposed Change

Due to the Cycle 10 Reload Safety Evaluation for plant operation on the reduced Tav_g program with 20% steam generator tube plugging and other related evaluations, changes to the Technical Specifications for SONGS 1 are necessary. These changes are related to the reanalysis of the Large Break Loss of Coolant Accident, Reactor Coolant Pump Shaft Break Event and Main Steam Line Break Event performed concurrently with the Cycle 10 reload.

The Large Break Loss of Coolant Accident (LBLOCA) was reanalyzed since the existing analysis only covered two cases:

LBLOCA on the nominal Tav_g program with 20% tube plugging

LBLOCA on the reduced Tav_g program with 15% tube plugging

Since the steam generator tube plugging levels have exceeded 15%, reanalysis was necessary to allow SCE to continue operation on the reduced Tav_g program. The reanalysis of the LBLOCA for operation on the reduced Tav_g program with up to 20% steam generator tube plugging will require a change to the allowable linear heat rate of the fuel rods of about 2 kW/foot which affects the peaking factor and Axial Offset Limits. This requires changes to the basis of technical specification 3.5.2 "Control Rod Insertion Limits" and technical specification 3.11 "Continuous Power Distribution Monitoring." These changes are not included in this revision to Proposed Change 204 but will be provided in a later revision when available.

The Reactor Coolant Pump (RCP) Shaft Break Event was reanalyzed with an assumed single failure of the reactor coolant system (RCS) low flow reactor trip. Since the low flow trip is designed with 1 channel per loop, a single failure could prevent a reactor trip. The RCP shaft break event was reanalyzed at the nominal Tav_g program in 1987 with reactor trip generated by the variable low pressure (VLP) trip. In 1988, Westinghouse informed SCE that on the reduced Tav_g program the existing VLP calculator would not generate a reactor trip before the acceptance criteria for this event was exceeded. Subsequently, Westinghouse reanalyzed the RCP shaft break with a revised VLP setpoint and has demonstrated acceptable results. Additional analysis of this event due to increased steam generator tube plugging is necessary. This requires a change to Table 2.1 "Maximum Safety System Settings" of Technical Specification 2.1, "REACTOR CORE - Limiting Combination of Power, Pressure, and Temperature." This change is not included in this revision to Proposed Change 204 but will be provided in a later revision when available.

The Main Steam Line Break event (MSLB) was reanalyzed to model the injection of borated water through a single injection path and to permit a reduced boron concentration for the water in the safety injection lines. A single injection path results from the resolution of single failure concerns related to the operability of the safety injection valves MOV 850 A, B and C, for MSLB outside containment. This assumption in the analysis does not affect any technical specifications. The existing technical specifications require the safety injection lines to be maintained at the technical specification boron concentration for the Refueling Water Storage Tank. Leakage at the interface of the safety injection system and the main feedwater system dilutes the water contained in the lines and required frequent recirculation of the safety injection system. To account for the dilution of this water and determine an acceptable limit, SCE had Westinghouse reanalyze this event. The reanalysis determined that a boron concentration of 1500 ppm for the water in the safety injection lines was acceptable. The reanalysis also accounts for the delay in safety injection delivery time due to postulated voltage degradation. These changes require changes to technical specifications 3.3.3, "Refueling Water Storage Tank," and Table 4.1.2 "Minimum Equipment Check and Sampling Frequency" of technical specification 4.1.1, "Operational Safety Items" to include the specific requirements for the safety injection lines.

Changes were also made where appropriate to incorporate standard technical specification format (e.g., refueling water storage tank surveillance).

EXISTING TECHNICAL SPECIFICATIONS

See Attachment 1 (Proposed changes to Specifications 2.1, 3.5.2 and 3.11 are not included in this revision to Proposed Change 204, but will be included in a later revision.)

PROPOSED TECHNICAL SPECIFICATIONS

See Attachment 2 (Proposed changes to Specifications 2.1, 3.5.2 and 3.11 are not included in this revision to Proposed Change 204, but will be included in a later revision.)

Significant Hazards Consideration Analysis

As required by 10 CFR 50.91(a)(1), this analysis is provided to demonstrate that the proposed license amendment to revise the safety injection line boron concentration limit and surveillances of the refueling water storage tank and safety injection lines for San Onofre Nuclear Generating Station, Unit 1 (SONGS 1) represents a no significant hazards consideration. In accordance with the three factor test of 10 CFR 50.92(c), implementation of the proposed amendment was analyzed using the following standards and found not to:

- 1) involve a significant increase in the probability or consequences for an accident previously evaluated; or
- 2) create the possibility of a new or different kind of accident from any accident previously evaluated; or
- 3) involve a significant reduction in a margin of safety.

Similar findings for those proposed specifications to be submitted in a later supplement of Proposed Change 204 will be provided at that time.

Analysis

Conformance of the proposed amendments to the standards for a determination of no significant hazard as defined in 10 CFR 50.92 (three factor test) is shown in the following:

1. Will operation of the facility in accordance with this proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

Operation of the facility in accordance with the proposed revisions to Section 3.3.3 and 4.1.1 will not increase the probability of an accident previously evaluated because these revisions are limited to the refueling water storage tank (RWST) and safety injection (SI) line. Both these components are part of accident mitigation systems and thus changes will not result in increased probability of an accident. The new safety injection line boron concentration limit has been analyzed, as shown in Attachment 3, and the results demonstrate continued compliance with regulatory acceptance criteria for the applicable accident (i.e., main steam line break) and thus no increase in accident consequences will occur. Changes to the surveillances for these components ensure that safety system parameters are properly monitored and thus will not cause increased consequences.

2. Will operation of the facility in accordance with this proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

The proposed changes to the SI line boron concentration (3.3.3), SI line surveillance (4.1.1) and RWST surveillance (4.1.1) all address the ability of the plant to mitigate previously identified accident scenarios. Failures of these systems will not result in new accidents. Therefore, it is concluded that operation of the facility in accordance with this proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Will operation of the facility in accordance with this proposed change involve a significant reduction in a margin of safety?

Response: No

Changing the SI line (4.1.1) and RWST (4.1.1) surveillances have no impact on margins of safety as they do not affect the performance of plant safety equipment. Changing the SI line boron concentration (3.3.3) has been shown through safety analysis (Attachment 3) to

meet regulatory acceptance criteria for applicable postulated accidents and, therefore, acceptable margin to safety. Therefore, it is concluded that operation of the facility in accordance with these proposed changes does not involve a reduction in a margin of safety.

SAFETY AND SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

Based on the preceding analysis, it is concluded that: (1) Proposed Change No. 204 does not involve a significant hazards consideration as defined by 10 CFR 50.92; and (2) there is reasonable assurance that the health and safety of the public will not be endangered by the proposed change.

Attachment 1 - Existing Specifications
Attachment 2 - Proposed Specifications
Attachment 3 - Accident Analyses

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ATTACHMENT 1
EXISTING TECHNICAL SPECIFICATIONS