

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Application of SOUTHERN CALIFORNIA
EDISON COMPANY, ET AL. for a Class 103
License to Acquire, Possess, and Use
a Utilization Facility as Part of
Unit No. 2 of the San Onofre Nuclear
Generating Station

}
Docket No. 50-361

}
Amendment Application
No. 123

SOUTHERN CALIFORNIA EDISON COMPANY, ET AL. pursuant to 10 CFR 50.90, hereby
submit Amendment Application No. 123.

This amendment application consists of Proposed Technical Specification
Change No. NPF-10-418 to Facility Operating License NPF-10. Proposed
Technical Specification Change No. NPF-10-418 is a request to include a new
Technical Specification 3.4.7.3.1, "Component Cooling Water Safety Related
Makeup System", and its associated Bases 3.4.7.3.1, in the San Onofre Unit 2
Technical Specifications.

The proposed change will include operability and surveillance requirements
for the Component Cooling Water Safety Related Makeup System.

Subscribed on this 30th day of December, 1992.

Respectfully submitted,

SOUTHERN CALIFORNIA EDISON COMPANY

By: Harold B. Ray
Harold B. Ray
Senior Vice President

State of California

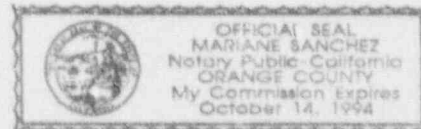
County of Orange

On 12/30/92 before me, Mariane Sanchez, personally
appeared Harold B. Ray, personally known to me ~~(or proved to me~~
~~on the basis of satisfactory evidence)~~ to be the person(s) whose name(s)
~~is/are~~ subscribed to the within instrument and acknowledged to me that
he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(ies), and
that by his/~~her/their~~ signature(s) on the instrument the person(s), or the
entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature

Mariane Sanchez



James A. Beoletto
Attorney for Southern
California Edison Company

By:

James A. Beoletto

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Application of SOUTHERN CALIFORNIA
EDISON COMPANY, ET AL. for a Class 107
License to Acquire, Possess, and Use
a Utilization Facility as Part of
Unit No. 3 of the San Onofre Nuclear
Generating Station

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Docket No. 50-362

Amendment Application
No. 107.

SOUTHERN CALIFORNIA EDISON COMPANY, ET AL. pursuant to 10 CFR 50.90, hereby
submit Amendment Application No. 107.

This amendment application consists of Proposed Technical Specification
Change No. NPF-10-418 to Facility Operating License NPF-15. Proposed
Technical Specification Change No. NPF-10-418 is a request to include a new
Technical Specification 3/4.7.3.1, "Component Cooling Water Safety Related
Makeup System" and its associated Bases 3.4.7.3.1, in the San Onofre Unit 3
Technical Specifications.

The proposed change will include operability and surveillance requirements
for the Component Cooling Water Safety Related Makeup System.

Subscribed on this 30th day of December, 1992.

Respectfully submitted,

SOUTHERN CALIFORNIA EDISON COMPANY

By: Harold B. Ray
Harold B. Ray
Senior Vice President

State of California

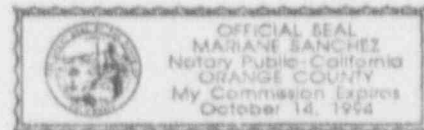
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entity upon behalf of which the person(~~s~~) acted, executed the instrument.

WITNESS my hand and official seal.

Signature

Mariane Sanchez



James A. Beoletto
Attorney for Southern
California Edison Company

By:

James A. Beoletto

DESCRIPTION AND SAFETY ANALYSIS
OF PROPOSED CHANGE NPF-10/15-418

This is a request to include a new Technical Specification (TS) 3/4.7.3.1 "Component Cooling Water Safety Related Makeup System," and its associated Bases in the San Onofre Unit 2 and Unit 3 Technical Specifications.

Proposed Specifications:

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

SUMMARY OF CHANGES

SCE plans to install a dedicated source of safety related seismically qualified makeup water for the CCW System during the Units 2 and 3 Cycle 7 outages. The proposed change will incorporate into the San Onofre Nuclear Generating Station (SONGS) Unit 2 and Unit 3 Technical Specifications new Technical Specification 3/4.7.3.1 concerning the new Component Cooling Water Safety Related Makeup System.

The proposed TS 3/4.7.3.1 will ensure sufficient component cooling water capacity is available for continued operation of safety-related equipment during normal conditions and Design Basis Events.

Background

The current SONGS Unit 2 and Unit 3 accident analysis credits being able to provide Seismic Category I makeup water from the seismic fire tankers via hose connections to the CCW surge tanks. Although the primary function of these tankers is to provide water for fire protection following a design basis earthquake (DBE), the supply can be replenished with water from the Unit 1 reservoir.

Between May 2 and June 10, 1988, a Safety System Functional Inspection (SSFI) was performed at San Onofre Units 2 and 3 by the NRC. The SSFI assessed the operational readiness of the Component Cooling Water (CCW) System and Salt Water Cooling (SWC) System under normal and analyzed accident conditions. NRC Standard Review Plan (SRP), Section 9.2.2, specifies that a Seismic Category I source provide makeup water for at least seven days of potential CCW leakage. As a result of the SSFI, SCE in a letter to the NRC, dated July 30, 1990, committed to provide a Seismic Category I source of makeup water for the CCW System.

The Component Cooling Water Safety Related Makeup System for each unit will consist of one shared Primary Plant Makeup Storage Tank (PPMU Tank) and two redundant flow paths, each supplying a CCW critical loop as illustrated in Sketch A. Each Unit has its own PPMU Tank and redundant flow paths. Each flow path incorporates one 100% capacity pump. PPMU Tank T-056 is lined up for service to Unit 2 and T-055 for service to Unit 3.

Each PPMU Tank is fabricated from stainless steel and has a capacity of approximately 303,500 gallons. The tanks receive demineralized makeup water from the Nuclear Service Water System. The CCW Safety Related Makeup System is designed to provide each critical loop of CCW with adequate makeup for seven days under Design Basis Events.

The purpose of the requested additional technical specification is to ensure that sufficient inventory is maintained in the PPMU Tanks during plant operation. The required level will be based on CCW System leak rate, unrecoverable volume in the tanks and Total Loop Uncertainty (TLU) in the tank level instrumentation.

DESCRIPTION OF CHANGES

1. The proposed Technical Specification will be numbered 3/4.7.3.1, with a title of "Component Cooling Water Safety Related Makeup System."

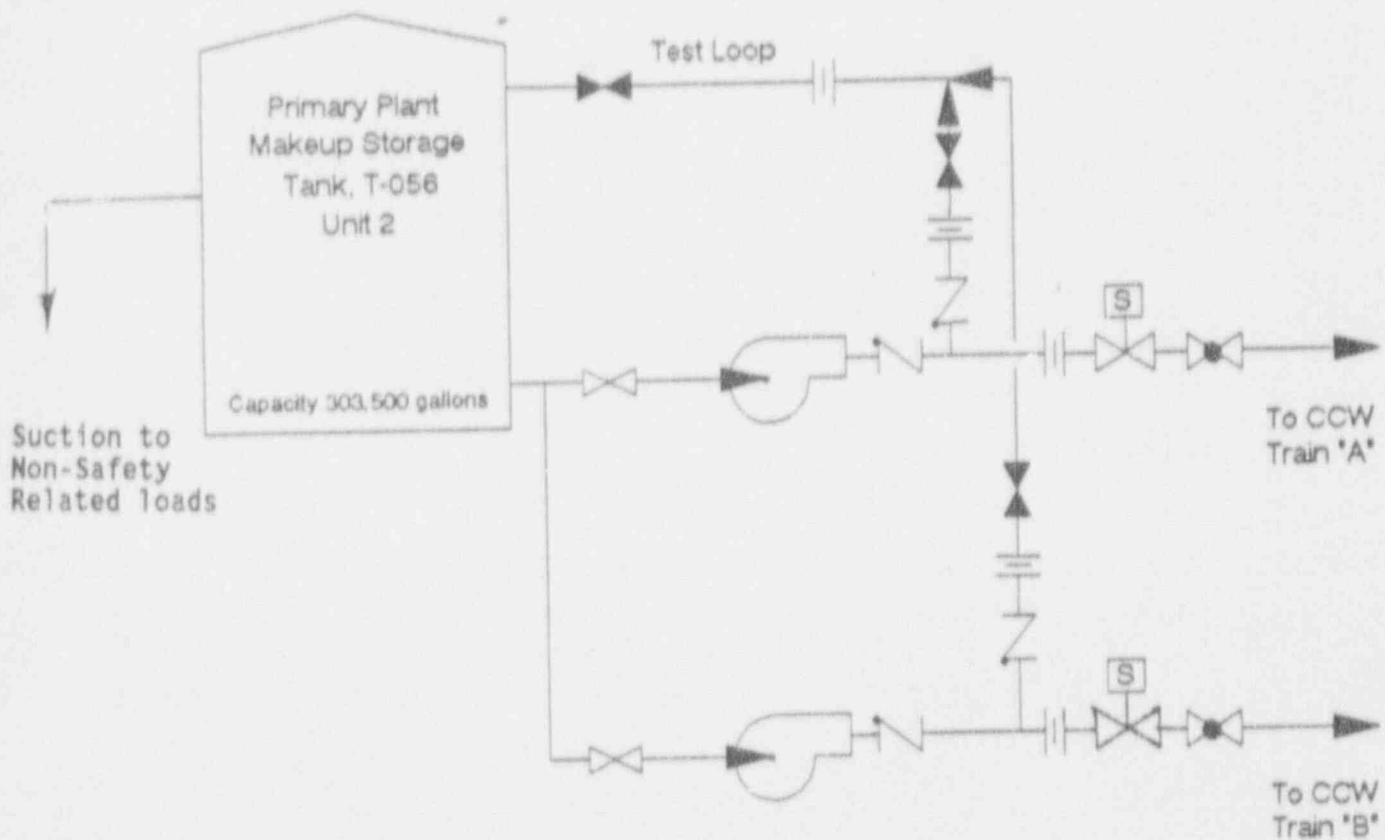
Discussion

A new proposed Technical Specification will be numbered 3/4.7.3.1 in accordance with the existing practice of numbering the Technical Specifications. The new system is a support system for the CCW System; therefore, the proposed new Technical Specification will be located immediately after the CCW Technical Specification.

2. The LIMITING CONDITION FOR OPERATION for the proposed new Technical Specification 3/4.7.3.1 will read:

"Two Trains of Component Cooling Water (CCW) Safety Related Makeup System shall be OPERABLE with a contained volume in the Primary Plant Makeup Storage Tank at or above the level specified in Figure 3.7-2."

SKETCH A



COMPONENT COOLING WATER SAFETY RELATED MAKEUP SYSTEM FOR UNIT 2.
(CCW SAFETY RELATED MAKEUP SYSTEM FOR UNIT 3 IS IDENTICAL TO UNIT 2 SYSTEM)

Discussion

The water source for the Component Cooling Water Safety Related Makeup System is the PPMU Tank. The total capacity of each PPMU Tank is approximately 303,500 gallons. The curve for PPMU Tank volume represents a seven day supply of makeup water at a specific allowable leakage rate from the CCW system. The requirement for seven days is consistent with Standard Review Plan, Section 9.2.2.III.c.

3. The APPLICABILITY statement for the proposed Technical Specification 3/4.7.3.1 will read: "MODES 1,2,3, and 4."

Discussion

The Component Cooling Water Safety Related Makeup System is a support system to the CCW System. This means whenever the CCW System is required to be OPERABLE its support system should be OPERABLE also. In MODES 1,2,3, and 4, Technical Specification 3/4.7.3 "Component Cooling Water" requires "At least two independent component cooling water loops shall be OPERABLE." Therefore, in MODES 1,2,3, and 4, the PPMU Tank and both trains of the makeup flow of the Component Cooling Water Safety Related Makeup System shall be OPERABLE.

4. The proposed ACTION a for Technical Specification 3/4.7.3.1 is "With one CCW Safety Related Makeup flow path inoperable, restore the flow path to OPERABLE status within 7 days."

Discussion

With one CCW Safety Related Makeup System's flow path inoperable, action must be taken to restore OPERABLE status within 7 days.

The allowable completion time of 7 days is considered reasonable based on the low probability of a DBE occurring during the 7 days and the redundant capability of the OPERABLE CCW Safety Related Makeup flow path. A Probabilistic Risk Assessment (PRA) was performed to assess the increased risk of core damage from a 7 day allowed outage time for one train of the CCW Safety Related Makeup System. The PRA indicated that the increased risk of core damage from a 7 day allowed outage time is less than 1×10^{-6} per year. This increase in core damage risk is considered acceptably small.

5. The proposed Action b for Technical Specification 3/4.7.3.1 is: "With the Primary Plant Makeup Storage Tank level less than that required by Figure 3.7-2 and/or both CCW Safety Related Makeup flow paths inoperable, restore the Primary

Plant Makeup Storage Tank level and one CCW Safety Related Makeup flow path to OPERABLE status within 8 hours."

Discussion

This operating condition is more restrictive than the Action a condition. If the level in the PPMU Tank drops below that required to support two CCW critical loops operation for seven days, the condition is similar to loss of both CCW Safety Related Makeup System flow paths. Actions should be taken to restore the PPMU Tank level within 8 hours. If both CCW Safety related Makeup flow paths are inoperable, one CCW Safety Related Makeup flow path should be restored to OPERABLE status within 8 hours.

The allowed completion time of 8 hours is based on operating experience and a Probabilistic Risk Assessment (PRA). Operating experience shows that the likelihood of Primary Plant Makeup Storage Tank level dropping below 66% (which corresponds to an allowable CCW leakage of 18 gpm based on Figure 3.7-2) is extremely low. Also, a Probabilistic Risk Assessment (PRA) was performed to assess the increased risk of core damage from an 8 hour allowed outage time for two trains of the CCW Safety Related Makeup System. The PRA indicated that the increased risk of core damage from an 8 hour allowed outage time is less than 1×10^{-6} per year. This increase in core damage risk is considered acceptably small.

6. The proposed Action c for Technical Specification 3/4.7.3.1 is: "With Actions a or b, above, not completed in the specified action times, be in HOT STANDBY within the next 6 hours, and be in COLD SHUTDOWN within the following 24 hours."

Discussion

In MODES 1,2,3, and 4, two CCW System critical loops provide cooling to a number of safety related systems, such as HPSI, LPSI, shutdown cooling, emergency chillers, etc. The CCW Safety Related Makeup System is a support system for the CCW System. Two CCW Safety Related Makeup flow paths are required to provide makeup to the two CCW critical loops. If one CCW Safety Related Makeup flow path can not be restored to OPERABLE status in seven days, the Unit must be placed in a MODE in which the LIMITING CONDITION FOR OPERATION does not apply.

To achieve this status, the Unit must be placed in a' least HOT STANDBY within the next 6 hours, and in COLD SHUTDOWN within the following 24 hours.

Similarly, action should be taken if the PPMU Tank level is below that required for two CCW critical loops operation and/or both CCW Safety Related Makeup flow paths are inoperable. If both the PPMU Tank level and at least one flow path are not OPERABLE within 8 hours, the Unit must then be placed in a MODE in which the LIMITING CONDITION FOR OPERATION does not apply. To achieve this status, the Unit must be placed in at least HOT STANDBY within the next 6 hours, and in COLD SHUTDOWN within the following 24 hours.

The allowed completion time is consistent with other Technical Specification completion time requirements to reach the required unit conditions from full power conditions in an orderly manner.

7. The proposed Action d for Technical Specification 3/4.7.3.1 is: "The provisions of Specification 3.0.4 are not applicable."

Discussion

Specification 3.0.4 requires that entry not be made into an OPERATIONAL MODE or other specified condition unless the conditions of the Limiting Condition for Operation are met without reliance on provisions contained in the Action requirements. The exemption from this requirement gives Operations more flexibility to change MODES while still performing required Actions. Exemption from Specification 3.0.4 will not restrain Operations from changing MODES. The CCW Safety Related Makeup System is only required to support the CCW system in the event of a Design Basis Earthquake. It should be noted that the CCW system itself does not have a 3.0.4 exemption. Therefore, the CCW system is always OPERABLE during up MODE changes. The PRA has demonstrated that the allowed outage times specified would result in an acceptably small risk of core damage. Therefore, a 3.0.4 exemption for the CCW Safety Related Makeup System is considered acceptable.

8. The proposed SURVEILLANCE REQUIREMENT 4.7.3.1.1 for Technical Specification 3/4.7.3.1 is: "The Primary Plant Makeup Storage Tank shall be demonstrated OPERABLE at least once per 7 days by verifying the contained water volume is within its limits."

Discussion

This SURVEILLANCE REQUIREMENT verifies that the PPMU Tank contains the required volume of makeup water. The 7 days frequency is based on similar SURVEILLANCE REQUIREMENTS frequencies. The 7 days frequency is considered adequate in

view of other indications in the control room, including alarms, to alert the operator to abnormal PPMU Tank level deviations.

9. The proposed SURVEILLANCE REQUIREMENT 4.7.3.1.2 for Technical Specification 3/4.7.3.1 is: "Each CCW Safety Related Makeup flow path shall be demonstrated OPERABLE at least once per 92 days by testing the CCW makeup pumps pursuant to Specification 4.0.5."

Discussion

This SURVEILLANCE REQUIREMENT verifies that the CCW makeup pumps develop sufficient discharge pressure to deliver the required flow to the CCW system from the Primary Makeup Water Storage Tank. Performance of inservice testing, discussed in the ASME Code, Section XI at three month intervals, satisfies this requirement.

10. The proposed SURVEILLANCE REQUIREMENT 4.7.3.1.3 for Technical Specification 3/4.7.3.1 is: "Measure CCW leakage at least once per refueling interval."

Discussion

This SURVEILLANCE REQUIREMENT measures CCW leakage to ensure the PPMU Tank level is adequate in accordance with Figure 2.7-2. The specified frequency is considered adequate in view of the special alignment required to perform this test. This measurement can be performed only when one CCW critical loop can be removed from service. Therefore, this measurement needs to be performed during refueling outages.

11. Proposed Bases B3/4.7.3.1, "Component Cooling Water Safety Related Makeup System," is added.

Discussion

Bases B3/4.7.3.1 describes the CCW Safety Related Makeup System, its major elements and their functions in sufficient detail to understand the OPERABILITY of this system.

Safety Analysis

The proposed change described above shall be deemed to involve a significant hazards consideration if there is a positive finding in any one of the following areas:

1. Will operation of the facility in accordance with this

proposed change involve a significant increase in the probability or consequences of any accident previously evaluated?

Response: No

The CCW Safety Related Makeup System provides an assured water supply to the CCW in case of a Design Basis Event. As such, the proposed Technical Specifications describe a new system which will ensure that the CCW remains OPERABLE following a Design Basis Event. Therefore, this proposed change will not involve a significant increase in the probability or consequences of any accident previously evaluated.

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 previously evaluated?

Response: No

The changes proposed herein improve the reliability of the CCW system by providing it with a safety related makeup. Therefore, this proposed change will not create the possibility of a new or different kind of accident from any 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

Operation of the facility in accordance with the proposed change will not be altered as a result of the proposed change. The purpose of this change is to ensure the CCW will continue to perform its functions in case of a DBE without reliance on the non-Seismic I Nuclear Service Water System. Therefore, the proposed change will not involve a significant reduction in a margin of safety.

Safety and Significant Hazards Determination

Based on the above Safety Analysis, it is concluded that: (1) the proposed change does not constitute a significant hazards consideration as defined by 10 CFR 50.92; and (2) there is