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. 56

SOUTHERN CALIFORNIA EDISON COMPANY, ET AL. pursuant to 10 CFR 50.90, hereby submit Amendment Application No. 56.

This amendment application consists of Proposed Technical Specification Change No. NPF-10-261 to Facility Operating License No. NPF-10. Proposed Technical Specification Change No. NPF-10-261 is a request to revise Technical Specification 3/4.1.2.2, "Reactivity Control Systems, Boration Flowpaths - Operating" and Technical Specification 3/4.5.2, "Emergency Core Cooling Subsystems - Tavg Greater Than or Equal to 350°F." The proposed change would increase the 18 month surveillance intervals to "refueling interval" to support nominal 24 month fuel cycle operation.

Pursuant to 10 CFR 170.12, the required amendment application fee of $150 is enclosed.

Subscribed on this 24th day of October, 1988.

Respectfully submitted,

SOUTHERN CALIFORNIA EDISON COMPANY

By: Kenneth P Burkus

Subscribed and sworn to before me this 24th day of October, 1988.

C. Sally Sebo

Notary Public in and for the County of Los Angeles, State of California

OFFICIAL SEAL
C. SALLY SEBO
Notary Public-California
LOS ANGELES COUNTY
My Comm. Exp. Apr. 20, 1990

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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. 3 of the San Onofre Nuclear Generating Station	))))))	Docket No. 50-362 Amendment Application No. 42

SOUTHERN CALIFORNIA EDISON COMPANY, ET AL. pursuant to 10 CFR 50.90, hereby submit Amendment Application No. 42.

This amendment application consists of Proposed Technical Specification Change No. NPF-15-261 to Facility Operating License No. NPF-15. Proposed Technical Specification Change No. NPF-15-261 is a request to revise Technical Specification 3/4.1.2.2, "Reactivity Control Systems, Boration Flowpaths - Operating" and Technical Specification 3/4.5.2, "Emergency Core Cooling Subsystems - Tavg Greater Than or Equal to 350°F." The proposed change would increase the 18 month surveillance intervals to "refueling interval" to support nominal 24 month fuel cycle operation.

Pursuant to 10 CFR 170.12, the required amendment application fee of $150 is enclosed.

Subscribed on this 24th day of October, 1988.

Respectfully submitted,

SOUTHERN CALIFORNIA EDISON COMPANY

By: Kenneth P Baskin

Subscribed and sworn to before me this 24th day of October, 1988.

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DESCRIPTION AND SAFETY ANALYSIS
OF PROPOSED CHANGE NPF-10/15-261

This is a request to revise Technical Specification 3/4.1.2.2, "Reactivity Control Systems, Boration Flowpaths-Operating," and Technical Specification 3/4.5.2, "Emergency Core Cooling Subsystems-Tavg Greater Than or Equal to 350 F."

Existing Specifications:

Unit 2: See Attachment "A"

Unit 3: See Attachment "C"

Proposed Specifications:

Unit 2: See Attachment "B"

Unit 3: See Attachment "D"

Description

The proposed change would revise Technical Specification (TS) 3/4.1.2.2, "Reactivity Control Systems, Boration Flowpaths-Operating," and TS 3/4.5.2, "Emergency Core Cooling Subsystems-Tavg Greater Than or Equal to 350 F." TS 3/4.1.2.2 defines the required number of operable boron injection flow paths to the Reactor Coolant System. TS 3/4.5.2 defines the required number of operable Emergency Core Cooling System (ECCS) subsystems. The boron injection system ensures that negative reactivity control is available during each mode of reactor operation. TS 3/4.5.2 requires two independent operable Emergency Core Cooling Systems (ECCS) in modes 1, 2, and 3. The operability of two separate and independent ECCS subsystems ensures that sufficient emergency core cooling capability will be available in the event of a LOCA assuming the loss of one subsystem through any single failure consideration. In addition, each technical specification defines periodic surveillance tests, and action to be taken, if the minimum operability requirements are not met. These tests require verification that components will operate upon energization/deenergization of the respective initiation relays, that the shutdown cooling isolation valve interlocks will operate properly, and that the Containment Sump is not blocked or damaged.

Surveillance Requirement (SR) 4.1.2.2.c requires that each valve in the boron injection flow path be demonstrated operable at least once per 18 months by verifying that it actuates to its correct position upon a Safety Injection Actuation Signal (SIAS) test signal. SR 4.5.2.e requires that the components in the ECCS flow paths be demonstrated operable at least once per 18 months by verifying that they actuate to their correct position upon a Safety Injection Actuation Signal (SIAS) or Recirculation Actuation Signal (RAS) test signal. These surveillances are accomplished by testing all of the Engineered Safety Features Actuation System (ESFAS) relays in an actuation sub-system (i.e., RAS) as a total unit. This method is performed on an 18 month cycle during a shutdown, as required by the technical specifications.

In accordance with SR 4.3.2.1, Table 4-3.2, Note (4), semi-annual functional testing of ESF components is conducted on those components which can be actuated during plant operation. The combination of the PPS Monthly Test and the ESF Semi-annual Functional Test completely tests the ESF actuation logic from the input to the PPS through the actuation of the tested devices. FSAR Section 7.3.1.1.1.9 describes testing of the ESFAS components. The active logic components in the ESFAS actuation path are the Plant Protection System (PPS) bistables, PPS matrix relays, PPS initiation relays, ESFAS subgroup relays, ESF motor controllers, and the ESF actuated devices. The PPS Monthly Test checks the PPS bistables, matrix relays and the initiation relays. The ESF Semi-Annual Functional Test checks the ESFAS subgroup relays, motor controllers, and actuates the device. The major difference between the combination of the two tests and the 18 month test is that the 18 month test exercises all of the logic and actuated devices for a particular function all at once. The combination of the monthly test of the PPS logic and the semi-annual testing of the subgroup relays on an individual basis provides a high level of assurance that the associated ESFAS and the ECCS components are operational.

Components which cannot be tested during plant operation are tested during the first cold shutdown longer than 24 hours, if they have not been tested in the last 6 months. Depending upon the performance of the units, there may be occasions when a cold shutdown longer than 24 hours does not occur during a fuel cycle. Components which cannot be actuated during plant operation might not be tested except at refuelings. The test history of those components was carefully reviewed to determine the suitability of increasing the refueling surveillance interval from 18 months to 24 months. Three of the valves in the Boron Injection Flowpath and eight of the valves in the Emergency Core Cooling Subsystem cannot be tested in all modes. These valves are HV-9240, HV-9235, and LV-0227B for the Boron Injection Flowpath, and TV-0221, HV-9204, LV-0227B, HV-9205, HV-9306, HV-9307, HV-9347, and HV-9348 for the ECCS. During each of the past refueling cycle outages for both San Onofre Units 2 and 3 these valves have passed their surveillance tests with no deficiencies. In addition, each valve has successfully passed two mid-cycle, semi-annual tests. One other valve that can not be tested in all modes is 2LV-0227C which was recently modified to be a ESFAS actuated valve. This valve has also passed all of the surveillance testing required by SR 4.1.2.2.c.

To further enhance the assurance that safeguards components will properly operate if needed, TS 4.0.5 requires that inservice testing of all ASME Class 1, 2 and 3 pumps and valves be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code. This testing provides yet another degree of assurance that these components are capable of performing their design function.

In addition to the surveillance test history, the maintenance history for the components that cannot be tested during plant operation was reviewed. Only six corrective maintenance activities have been required on these components since the beginning of commercial operation. These activities are briefly discussed as follows.

2HV-9240 required a replacement of a failed limit switch (March 1984). The valve required a limit switch adjustment (January 1985). These were found by Control Room Operators during routine operations. 2LV-0227B required replacement of the actuator motor (November 1987). This was found by Control Room Operators during routine operations. 3LV-0227B valve automatically reopened when simulated SIAS was reset. A lifted wire was found in the motor control center (June 1983). This was found by Operators performing surveillance. 3LV-0227C required replacement of the

actuator motor (November 1983). This was found by Control Room Operators during routine operations. 3HV-9205 would not open. The packing was readjusted. (March 1985). This was found by Control Room Operators during routine operations.

This history demonstrates reliable equipment performance. In addition, most problems related to these valves have been detected by operators during routine evolutions, not as a result of 18 month surveillance testing.

The proposed change would also revise SR 4.5.2.d.1 which requires verifying automatic isolation of the Shutdown Cooling (SDC) System, and confirms that the interlock prevents opening the SDC Isolation Valves when Reactor Coolant System (RCS) pressure is greater than or equal to 376 psia. During normal power operations, the Shutdown Cooling Isolation Valves are closed with the power removed. The SDC System is not designed to accommodate full RCS pressure, and is only used after the RCS is less than 361 psia and less than 350 degrees. In the event of an increase in RCS pressure where the RCS pressure increases to greater than 715 psia, the isolation valves will close.

The surveillance associated with SR 4.5.2.d.1 requires, at least once every 18 months, verifying automatic closure of the Shutdown Cooling Isolation valves when the simulated RCS pressure equals or exceeds 715 psia, and that interlocks prevent opening the valves when the RCS pressure equals or exceeds 376 psia. This involves introducing a simulated RCS pressure signal and verifying that the valves operate correctly. Since this surveillance involves valve operation, it cannot be performed during plant operation. A review of the surveillance history of the required 18 month surveillance tests, from the start of commercial operation to present, revealed no deficiencies on either unit.

Finally, SR 4.5.2.d.2 requires a visual inspection of the Containment Sump to verify that all sump inlets are not restricted by debris and that no evidence of structural distress or abnormal conditions exist. All inspections of both units since the beginning of commercial operation have been satisfactory with no abnormal conditions noted.

SONGS Units 2 and 3 have entered their first nominal 24 month fuel cycle. A plant shutdown is required to perform portions of these surveillances. The current 18 month surveillance interval could necessitate a plant shutdown solely for the purpose of performing 18 month surveillance requirements. To avoid the need for an otherwise unnecessary shutdown, the proposed change would increase the surveillance test interval from 18 months to 24 months.

Since the proposed changes would increase the surveillance interval from 18 months to "refueling interval" for a nominal 24 month cycle, the actual time interval between surveillances will be a function of the plant capacity factor for that particular fuel cycle. The equilibrium fuel cycle length will be approximately 513 effective full power days (EFPD). Assuming a production factor of 90% and a 75 day refueling outage, the actual cycle length, and surveillance interval would be approximately 21 months. Currently, Specification 4.0.2 allows 25% extension of surveillance intervals which would accommodate uninterrupted operation for the equilibrium cycle length, except that the Specification 4.0.2 limitation on the application of a 25% extension such that three consecutive intervals do not exceed 3.25 times the nominal interval eventually would impact operation. Thus, the proposed change does not represent a radical increase over what is already permitted by technical specifications.

Safety Analysis

The proposed changes discussed 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 an accident previously evaluated?

   Response: No

   The required semi-annual testing of the components included within the scope of Surveillance Requirements 4.1.2.2 and 4.5.2.e provides a high level of assurance that the equipment is capable of proper operation. The frequency of the semi-annual testing is not affected by this change. Inservice testing of ASME pumps and valves provides additional assurance of proper operation. Results of surveillance testing to date has demonstrated reliable equipment performance. The proposed change also increases the interval for surveillance testing, associated with Shutdown Cooling Isolation Valve interlocks, currently performed at 18 month intervals. No problems have been detected in the 18 month surveillance program. Access to the Containment Sump area is severely restricted, especially during non-refueling outage periods. This essentially precludes events which could cause the condition of the Containment Sump to deteriorate. Inspections since the beginning of commercial operation of both units have all been satisfactory. Therefore, the proposed change will not significantly increase the probability or consequences of an accident previously analyzed.

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 change only affects the frequency of refueling interval testing and does not alter the configuration of the facility or its operation. Based on the review of plant history, it has been demonstrated that most deficiencies have been detected by means other than surveillances. Therefore, this proposed change will 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 the proposed change involve a significant reduction in a margin of safety?

Response: No

The proposed change only affects the frequency of testing on a sub-system basis (18 months) without affecting the testing frequency that is done on a sub-group basis (semi-annual). The semi-annual test is capable of detecting problems which are most likely to occur. Inservice testing of ASME pumps and valves provides additional assurance of proper operation. This, coupled with reliable equipment performance, makes any potential reduction in safety margin negligible. The proposed change also affects the frequency of certain shutdown cooling isolation valve surveillance tests which may result in a small reduction in confidence in valve operability and the associated margin of safety. However, the 18 month surveillances have historically detected no problems. Therefore, the proposed changes will not result in 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 reasonable assurance that the health and safety of the public will not be endangered by the proposed change; and (3) this action will not result in a condition which significantly alters the impact of the station on the environment as described in the NRC Final Environmental Statement.

ATTACHMENT A

(Existing Specifications)