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. 109

SOUTHERN CALIFORNIA EDISON COMPANY, ET AL. pursuant to 10 CFR 50.90, hereby submit Amendment Application No. 109.

This amendment application consists of Proposed Change Number NPF-10-355 to Facility Operating License No. NPF-10. Proposed Change Number NPF-10-355 is a request to revise Surveillance Requirement 4.8.1.1.2.d.1 in Technical Specification 3/4.8.1, "A. C. Sources, Electrical Power Systems," to permit up to a one month extension, on a one-time basis, for the 24-month refueling interval surveillance inspection associated with the two separate and independent diesel generators.

Subscribed on this 22nd day of MAY, 1991.

Respectfully submitted,

SOUTHERN CALIFORNIA EDISON COMPANY

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

State of California
County of ORANGE
On MAY 22, 1991 before me, BARBARA A. McCARTHY, NOTARY PUBLIC, personally appeared HAROLD B. RAY, personally known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

OFFICIAL SEAL
BARBARA A. MC CARTHY
Notary Public-California
ORANGE COUNTY
My Commission Expires
March 31, 1995

Signature Barbara A. McCarthy

James A. Beoletto
Attorney for Southern
California Edison Company

By: James A. Beoletto

OFFICIAL SEAL
BARBARA A. MC CARTH
Notary Public-Califo
ORANGE COUNTY
My Commission Expire
March 31, 1995

DESCRIPTION AND SAFETY ANALYSIS OF PROPOSED CHANGE NPF-10-355

This is a request to revise Surveillance Requirement 4.8.1.1.2.d.1 in Technical Specification 3/4.8.1, "A.C. Sources, Electrical Power Systems."

Existing Specifications

Attachment A - Unit 2

Proposed Specifications

Attachment B - Unit 2

DESCRIPTION

Technical Specification (TS) 4.0.2, which permits extensions of surveillance intervals up to a maximum of 25%, does not apply to Surveillance Requirement (SR) 4.8.1.1.2.d.1. SR 4.8.1.1.2.d.1 requires each diesel generator (DG) to be demonstrated operable at least once per refueling interval (24 months) by subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with the manufacturer's recommendation. This surveillance must be performed with the Unit in a long term shutdown, as the DG is rendered inoperable.

Due to fuel cycle extension as a result of several unplanned outages, including major outages such as the steam generator feedring repair in July/August 1990 and the reactor coolant pump seal replacement in April/May 1991, the potential exists during the upcoming Cycle 6 refueling outage for the A-Train DG surveillance to expire while the refueling interval inspection is being performed on the B-Train DG (it is necessary to perform the refueling surveillance inspection first on the B-Train DG because of scheduling concerns). Both DG trains would then become inoperable and a significant impact in the outage schedule would result, including termination of refueling activities.

In order to avoid Cycle 6 refueling outage schedule disruptions, Southern California Edison (SCE) proposes to revise the footnote in the current TS to allow, a one-time, one month extension of the 24-month surveillance interval for SR 4.8.1.1.2.d.1. The proposed change only affects the frequency of the 24-month surveillance inspection of the DGs. The more frequent surveillance tests (weekly, monthly, quarterly) and the remaining SR 4.8.1.1.2.d refueling interval surveillances will not be affected by this change and will continue to provide effective indications of system capability.

This proposed one month, one-time basis, SR 4.8.1.1.2.d.1 refueling surveillance interval extension is identical to the SR 4.8.1.1.2.d refueling surveillance interval extension for Cycle 4, which was granted by the staff in Amendment 75 for Unit 2 on July 28, 1989, and in Amendment 75 for Unit 3 on April 9, 1990.

This proposed surveillance extension was reviewed and approved by the DG manufacturer. In a May 6, 1991, letter from MKW Power Systems, Inc. to SCE, a one-time, 3 month surveillance interval extension for SR 4.8.1.1.2.d.1 was authorized provided 1) all fluid systems are visually inspected for leakage during every scheduled start, 2) critical system temperatures and pressures are monitored/trended during monthly surveillance testing, and 3) lube oil filter replacement must be performed as scheduled (recommended on a yearly basis). Fluid leakage inspections and monitoring of critical system temperatures and pressures are currently performed monthly under Procedure SO23-3-3.23, "Diesel Generator Monthly Test." Filter replacement is currently performed once per refueling (24 month) under Procedure SO23-I-8.69, "Diesel Generator Cleaning and Inspection." SCE will now perform DG filter replacement on a yearly basis through the Repetitive Maintenance Order process.

DISCUSSION

SR 4.8.1.1.2.d.1 requires a diesel generator inspection consistent with the manufacturer's recommendations at least once per refueling interval.

In October 1986, SCE committed to performing, on a staggered test basis during each refueling outage, an in-service inspection and testing of certain valves on safety related systems. This concept requires that if a problem is found with the first valve, the remaining valves in the system of the same type and size, including the valves in the opposite train, must also be inspected. During the Unit 2 Cycle 5 refueling outage, A-Train valves were tested. Therefore, the B-Train valves must be tested during the upcoming Cycle 6 outage. B-Train valves must be tested during the early part of the outage to allow sufficient time to test the A-Train valves if problems are found in the B-Train. Because all train related work must be coordinated, the B-Train DG must be the first to undergo SR 4.8.1.1.2.d.1 inspection during this outage.

In Amendment No. 75 for Unit 2, the NRC revised TS 3/4.8.1, "A.C. Sources", by increasing the surveillance interval in SR 4.8.1.1.2.d from 18 months to at least once per refueling interval (nominally 24 months), and disallowing the 25% surveillance interval extension generally permitted under TS 4.0.2. In the safety evaluation for these amendments the NRC stated "the proposed change affects only the frequency of the 18 month surveillance tests of the AC power systems, which may result in a small reduction in confidence in system operability and in the associated margin of safety. However, the failure history indicates that the systems at SONGS 2 and 3 have been extremely reliable. In addition, the weekly, quarterly, and monthly surveillance tests will continue to provide effective indications of system capability. Also, Technical Specification 4.0.2 allows the current 18 month interval to be extended by 25%, to 22.5 months. For these reasons, any reduction in confidence in system operability is expected to be small for an increase from the currently allowable 22.5 months to 24 months. Therefore, a surveillance interval of 24 months is acceptable. However, the 25% extension of the surveillance interval allowed under Technical Specification 4.0.2 will no longer be permitted, and the proposed Technical Specification has been modified accordingly." In Amendment 75 (Reissued November 21, 1989), however,

a one-time surveillance extension of up to one month, to a maximum 25 month surveillance interval, was permitted during Cycle 4 only for all SR 4.8.1.1.2.d surveillances. A similar surveillance interval extension was granted for Unit 3 by Amendment 75 on April 9, 1990.

SCE's request to increase the surveillance interval from 18 months to at least once per refueling interval was submitted to the NRC on October 24, 1988, as Proposed Change Number NPF-10/15-252 (PCN-252). In the submittal, SCE stated the increase was to a nominal 24-month interval plus the 25% extension allowed by TS 4.0.2 (for a maximum of 30 months). This proposed surveillance interval extension is about 4% and is significantly less than the 25% interval extension of six months that could be allowed under TS 4.0.2. A one month extension on a 24-month interval, on a one-time basis, would not significantly affect the capability of the DGs to perform their function.

SURVEILLANCE/FAILURE HISTORIES

Diesel Generator Surveillances/Failure History

The history of the completed 18-month and 24-month DG refueling interval surveillances performed under SR 4.8.1.1.2.d.1 through 4.8.1.1.2.d.14 was reviewed. The review did not reveal any significant problems. The only example of a minor problem occurred during performance of Procedure SO23-3-3.23.1, "Diesel Generator Refueling Interval Tests," for SR 4.8.1.1.2.d.2 through d.5, d.7, d.8, and 4.8.1.1.d.12. This minor problem involved one of the DGs failing to achieve the two hour load rating (110% full load). However, this failure was attributed to a load regulation deficiency, wherein the load carrying capability was continually drifting downward during diesel operation. This failure was of a nature that would have been found during the monthly DG operability run.

Surveillances performed under Procedure SO23-3-3.12, "Integrated ESF System Refueling Tests", for SR 4.8.1.1.2.d.7.a and b and 4.8.1.1.2.d.9 through d.11 and d.13, did not indicate any significant problems that would prevent the DGs from performing their function. DG inspections conducted under Procedure SO23-I-2.11, "Diesel Generator Surveillance Inspection," have been successfully passed on all occasions. Procedure SO123-I-2.11 provides the details for performing the diesel manufacturer-recommended inspection which satisfies SR 4.8.1.1.2.d.1.

From a review of DG failure history for both Units 2 and 3 over the 6 year period of 1985 through the first part of 1991, there have been only 7 valid (in accordance with Regulatory Guide 1.108) test failures out of over 260 valid test runs, for a success rate of approximately 97%. Only 3 of these failures were associated with the Unit 2 DGs. These valid failures included 1) the December 9, 1987, Unit 3 "B" DG train failure of the radiator fans to auto-start caused by a defective relay contact arm, 2) the January 20, 1988, Unit 3 "A" DG train emergency ventilation fans, which provide DG room cooling for long term DG operation, failure to auto-start due to a faulty relay, 3) the May 19, 1988, Unit 2 "B" DG train trip on loss of excitation, while attempting to manually adjust volt amperes reactive (VAR) loading during an operability surveillance test, due to a dirty spot on the automatic voltage

regulator (AVR) Channel B voltage adjusting potentiometer, 4) the January 12, 1990, Unit 2 "A" DG train termination of post-maintenance testing due to the absence of either field current or voltage with AVR Channel B selected due to two burnt AVR B fuses, 5) the January 25, 1990, Unit 2 "B" DG train trip on loss of excitation under full load during post-maintenance testing due to loose AVR fuse clips, 6) the August 2, 1990, Unit 3 "A" DG train trip 57 minutes into a 1-hour post-maintenance operability testing due to loose AVR fuse clips, and 7) the August 3, 1990, Unit 3 "A" DG train emergency ventilation fan (one of the two fans) failure to operate automatically or manually during post-maintenance testing due to faulty motor thermal overloads. It was noted that, without exception, these failures were detected by the monthly surveillance testing.

Overall, the review of the DG surveillances/failure history indicates a one month extension beyond the 24-month surveillance interval, on a one-time basis, will not significantly increase the risks of an accident due to loss of A.C. Sources. Other than the above minor problems, there have been no problems found during subsequent performances of the DG surveillances that could prevent the DGs from performing their intended function. Operator errors and other failures that would not prohibit DG operations are not included in this review.

SAFETY ANALYSIS:

The proposed change described above shall be deemed to involve a significant hazards consideration if there is a positive finding in any 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.

   This proposed change only involves an interval extension, on a one-time basis, for the once per refueling interval inspection of the diesel generator specified in SR 4.8.1.1.2.d.1. Extending the surveillance interval by one month will not significantly increase the probability of the DG system failing to perform its intended function. The failure history indicates AC power systems at SONGS 2 and 3 are extremely reliable. The weekly, monthly, quarterly, and the remaining refueling surveillance tests will continue to provide effective indications of system capability. In addition, this change does not alter any of the other AC power system surveillances which serve to assure continued operability of the AC power systems. Therefore, this proposed change will not constitute a significant increase in the probability or consequences of an 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 accident previously evaluated?

   RESPONSE: No.

The proposed change only revises, on a one-time basis, the frequency of a diesel generator surveillance inspection performed every refueling outage. The proposed change does not alter either the configuration of the facility or its manner of operation. Furthermore, there are no changes in surveillance requirement acceptance criteria as a result of the proposed change. Therefore, the 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.

This proposed increase in the surveillance interval on a one-time basis only affects the frequency of a diesel generator surveillance performed every refueling outage, not the surveillances. The weekly, monthly, quarterly, and the remaining refueling interval surveillance frequencies and tests will not be affected by this proposed change and will continue to provide effective indications of system capability. The more frequent operability checks will assure DG operability. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

SAFETY AND SIGNIFICANT HAZARDS CONSIDERATION 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; (2) there is a 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.