

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

Application of SOUTHERN CALIFORNIA	)	Docket No. 50-361
EDISON COMPANY, <u>ET AL.</u> for a Class 103	)	
License to Acquire, Possess, and Use	)	
a Utilization Facility as Part of	)	Amendment Application
Unit No. 2 of the San Onofre Nuclear	)	No. 150
Generating Station	)	

SOUTHERN CALIFORNIA EDISON COMPANY, ET AL. pursuant to 10 CFR 50.90, hereby submit Amendment Application No. 150.

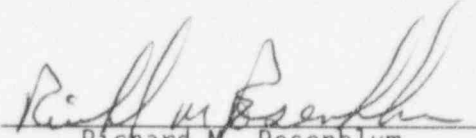
This amendment application consists of Proposed Change Number (PCN)-453 to Facility Operating License No. NPF-10. PCN-453 is a request to revise Unit 2 post PCN-299 (Technical Specification Improvement Program) Technical Specification (TS) 3.8.1, "AC Sources - Operating," to 1) extend the Offsite Circuit Allowed Outage Time (AOT) from "72 hours AND 6 days from discovery of failure to meet LCO" to "72 hours AND 10 days from discovery of failure to meet LCO" and 2) extend the Emergency Diesel Generator (EDG) AOT from "72 hours AND 6 days from discovery of failure to meet LCO" to "7 days AND 10 days from discovery of failure to meet LCO." Additionally, PCN-453 proposes to further extend the EDG AOT to "10 days AND 10 days from discovery of failure to meet LCO" on a once-per-refueling cycle frequency.

Subscribed on this 2nd day of November, 1995

Respectfully submitted,

SOUTHERN CALIFORNIA EDISON COMPANY

By:



Richard M. Rosenblum  
Vice President

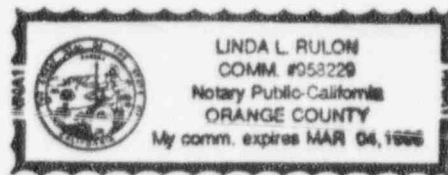
State of California

County of San Diego

On Nov. 2, 1995 before me, Linda L. Rulon/Notary Public,  
personally appeared Richard M. Rosenblum, 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.

Signature Linda L. Rulon



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NUCLEAR REGULATORY COMMISSION

Application of SOUTHERN CALIFORNIA	)	Docket No. 50-362
EDISON COMPANY, <u>ET AL.</u> for a Class 103	)	
License to Acquire, Possess, and Use	)	
a Utilization Facility as Part of	)	Amendment Application
Unit No. 3 of the San Onofre Nuclear	)	No. 134
Generating Station	)	

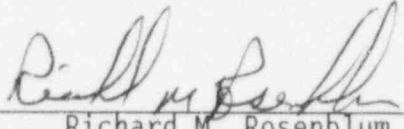
SOUTHERN CALIFORNIA EDISON COMPANY, ET AL. pursuant to 10 CFR 50.90, hereby submit Amendment Application No. 134.

This amendment application consists of Proposed Change Number (PCN)-453 to Facility Operating License No. NPF-15. PCN-453 is a request to revise Unit 3 post PCN-299 (Technical Specification Improvement Program) Technical Specification (TS) 3.8.1, "AC Sources-Operating," to 1) extend the Offsite Circuit Allowed Outage Time (AOT) from "72 hours AND 6 days from discovery of failure to meet LCO" to "72 hours AND 10 days from discovery of failure to meet LCO" and 2) extend the Emergency Diesel Generator (EDG) AOT from "72 hours AND 6 days from discovery of failure to meet LCO" to "7 days AND 10 days from discovery of failure to meet LCO." Additionally, PCN-453 proposes to further extend the EDG AOT to "10 days AND 10 days from discovery of failure to meet LCO" on a once-per-refueling cycle frequency.

Subscribed on this 2nd day of November, 1995.

Respectfully submitted,


SOUTHERN CALIFORNIA EDISON COMPANY

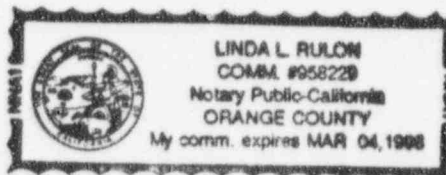
By:   
Richard M. Rosenblum  
Vice President

State of California  
County of San Diego

On Nov. 2, 1995 before me, Linda L. Rulon/Notary Public,  
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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.

Signature 



**DESCRIPTION AND SAFETY ANALYSIS  
OF PROPOSED CHANGE NPF-10/15-453**

This is a request to revise the San Onofre Units 2 and 3 post PCN-299 (Technical Specification Improvement Program) Technical Specification (TS) 3.8.1, "AC Sources - Operating,"

Post PCN-299 (Technical Specification Improvement Program) Specifications

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

Proposed Specifications

Unit 2: See Attachment "C"  
Unit 3: See Attachment "D"

DESCRIPTION OF PROPOSED CHANGES

In post PCN-299 TS 3.8.1, "AC Sources-Operating:"

- o Extend the Second Completion Time in Required Action A.2 for an inoperable Offsite Circuit from "6 days from discovery of failure to meet LCO" to "10 days from discovery of failure to meet LCO."
- o Extend the Allowed Outage Time (AOT) in Required Action B.4 for a single inoperable Emergency Diesel Generator (EDG) from "72 hours AND 6 days from discovery of failure to meet LCO" to "7 days AND 10 days from discovery of failure to meet LCO."
- o Add a Note in Condition B to further extend the EDG AOT in Required Action B.4 to "10 days AND 10 days from discovery of failure to meet LCO" on a "once-per-refueling cycle" frequency.

Included in Attachment "C" for Unit 2 and Attachment "D" for Unit 3, respectively, are revised post PCN-299 LCO pages 3.8-1 and 3.8-2, and revised Bases pages B3.8-6, B3.8-9, and B3.8-29. Due to text overflow, Bases pages B3.8-10 through B3.8-21 are included for completeness.

BACKGROUND

San Onofre Units 2 and 3 are each equipped with two seismically qualified, Class 1E, diesel engine driven generators which supply backup electrical power to the 4160 volt vital AC busses. Each EDG is connected to the 4160 volt bus of a load group. Each EDG is designed to automatically start in the event of a bus undervoltage condition on the 4160 volt Class 1E bus to which it is connected (loss of voltage signal- LOVS) or upon receipt of a Safety Injection Actuation Signal (SIAS).

Each EDG is designed to start automatically so that within 10 seconds following receipt of a start signal it is operating at rated speed and ready to begin load sequencing. The EDG is sized to supply reliable power to all safety-related loads in its respective load group, as well as specific nonsafety related loads. Loads supplied by each EDG are determined on the basis of nameplate or service factor rating, pump pressure and flow conditions, or pump runout conditions. Each EDG has a continuous load rating of 4700 KW. For emergency standby duty, the manufacturer allows specific overload values up to 116.1% of continuous duty rating based on the total hours the EDG is operated per year.

The EDGs may be controlled or placed within their specific operating modes from the mimic bus panel in the control room or from a local panel within each EDG room. These provisions allow EDG operation for surveillance testing and manual start and load operations, as well as local operations.

The EDGs are described in Section 8.3.1 of the San Onofre Units 2 and 3 Updated Final Safety Analysis Report (UFSAR).

#### DISCUSSION OF CHANGE

The San Onofre Units 2 and 3 post PCN-299 (Technical Specification Improvement Program) Technical Specification (TS) 3.8.1 requires if an EDG is declared inoperable for any reason, the EDG must be restored to operable status within "72 hours AND 6 days from discovery of failure to meet LCO" or place the plant in Hot Standby within 6 hours and Cold Shutdown within 36 hours. The proposed amendment would allow up to "7 days AND 10 days from discovery of failure to meet LCO" to restore EDG operability. The proposed change also makes provisions for "10 days AND 10 days from discovery of failure to meet LCO" AOT for a single inoperable EDG based on a "once-per-refueling cycle" frequency for the purpose of performing corrective or preventive maintenance necessary to restore EDG operability or improve its reliability. The proposed amendment also extends the Second Completion Time for an inoperable Offsite Circuit from "6 days from discovery of failure to meet LCO" to "10 days from discovery of failure to meet LCO" to be consistent with the change in the EDG AOT.

The Second Completion Time in the AOTs for the EDG and Offsite Circuit provides a limit on the maximum time allowed for any combination of required alternating current power sources to be inoperable during any single contiguous occurrence of failing to meet the Limiting Condition for Operation.

Implementation of this proposed AOT extension will:

- o Allow increased flexibility in the scheduling and performance of preventive maintenance
- o Reduce the number of individual entries into LCO action statements by providing sufficient time to perform related maintenance tasks with a single entry
- o Allow better control of resource allocation. During outage maintenance windows, plant personnel and resources are spread across a large number

and wide variety of maintenance tasks. Allowing on-line preventive maintenance (including overhauls) gives the flexibility to focus more quality resources on any required or elected EDG maintenance.

- o Avert unplanned plant shutdowns and minimize the potential for requests for Notice of Enforcement Discretions (NOEDs). Risks incurred by unexpected plant shutdowns can be comparable to and often exceed those associated with continued power operation.
- o Improve EDG availability during shutdown modes.
- o Permit scheduling of EDG overhauls of up to 10 days on-line.

CE NPSD-996, CEOG "Joint Applications Report for Emergency Diesel Generators AOT Extension," provided detailed results of an integrated assessment of the overall risk associated with the adoption of the proposed EDG AOT extension. This evaluation includes an assessment considering the risk associated with "at power," "transition," and "shutdown" operations and utilized Probabilistic Safety Analysis (PSA) methodology to fully evaluate the effect of the EDG AOT extension. The results of the evaluation are summarized below.

#### Assessment of At Power Risk

The evaluation of "at power risk" change resulting from the extended AOT was performed using plant specific information from each of the participating CEOG members. The results for San Onofre Units 2 and 3 show that the proposed AOT changes could increase the average core damage frequency (CDF) by 4%.

#### Assessment of Transition Risk

Transition risk represents the risk associated with reducing power and going to hot shutdown or cold shutdown modes. This risk identifies the tradeoff between shutting the plant down and restoring EDG operability while the plant continues to operate. The results of this risk assessment indicate that performing a 7-day AOT corrective maintenance at power, as compared to shutting down the plant to perform the work, would be risk beneficial.

#### Assessment of Shutdown Risk

Shutdown risk is associated with removing an EDG from service while the plant is in a shutdown mode of operation. The results of this risk assessment indicate that performing corrective or preventive maintenance at power would:

- 1) be risk neutral when compared with early outage maintenance, and
- 2) result in a slight increase in risk when compared with late outage maintenance.

However, performing EDG maintenance at power will provide greater EDG reliability upon entering shutdown modes than if maintenance had been performed at the end of a refueling outage.

The CE NPSD-996 report evaluated the impact of the proposed AOT extension on large early release scenarios. Large early release scenarios are releases arising from 1) containment bypass events (e.g., interfacing system LOCAs, steam generator tube ruptures with concomitant loss of steam generator isolation), 2) severe accidents accompanied by loss of containment isolation, and 3) containment failure associated with energetic events in containment. The evaluation concluded that the increased unavailability of one EDG will result in a negligible impact on large early release probability.

The CE NPSD-996 report concludes that an EDG AOT extension from 72 hours to 7 days with a once-per-refueling cycle 10-day AOT may potentially result in a small increase in the "at power" risk. However, when full scope of plant risk is considered, the risks incurred by extending the AOT for either corrective or preventive maintenance will be substantially offset by plant benefits associated with avoiding unnecessary plant transitions, reducing risks during plant shutdown operations and improved EDG reliability upon entering shutdown. The data and risk results in CE NPSD-996 pertaining to the San Onofre units were supplied and endorsed by Southern California Edison.

### 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 an accident previously evaluated?

Response: No

The Emergency Diesel Generators (EDGs) are backup alternating current power sources designed to power essential safety systems in the event of a loss of offsite power. EDGs are not accident initiators in any accident previously evaluated. Therefore, this change does not involve an increase in the probability of an accident previously evaluated.

The EDGs provide backup power to components that mitigate the consequences of accidents. The proposed changes to the Allowed Outage Times (AOTs) do not affect any of the assumptions used in the deterministic safety analysis.

To fully evaluate the effect of the EDG AOT extension, Probabilistic Safety Analysis (PSA) methods were utilized. The results of these analyses show no significant increase in the core damage frequency. As a result, there would be no significant increase in the consequences of accidents previously evaluated.

Therefore, this change does 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 accident previously evaluated?

Response: No

This proposed change does not alter the design, configuration, or method of operation of the plant. Therefore, this change does 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

The proposed changes do not affect the Limiting Conditions for Operation or their Bases that are used in the deterministic analyses to establish the margin of safety. PSA evaluations were used to evaluate these changes, and these evaluations determined that the changes are either risk neutral or risk beneficial.

Therefore, this change does not involve a significant reduction in the 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. Moreover, because this action does not involve a significant hazards consideration, it will also 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"

POST PCN-299 (TECHNICAL SPECIFICATION IMPROVEMENT PROGRAM) SPECIFICATIONS  
UNIT 2