

L. Diesel Generators

The licensee's request dated June 22, 1988, as supplemented July 15, 19, 21, and 22, 1988, to raise the rating of the diesel generators from 4500 kW ( $\pm 5\%$ ) to 5250 kW ( $\pm 5\%$ ) until the next refueling outage is approved, subject to the following:

- (1) Main journals no. 8 and 9 on diesel-generator no. 1, and main journals no. 9 and 10 on diesel-generator no. 2 are to be inspected prior to plant operation and found to be free of cracks.
- (2) Journals no. 8 through 12 on both diesel-generator units are to be inspected at the next refueling outage and each subsequent refueling outage until the issue of crankshaft cracking has been resolved.
- (3) All piston skirts are to be replaced with type AE at the next refueling outage.
- (4) All diesel starts for testing and surveillance will be slow starts (greater than 24 seconds duration) except for the fast start required by Technical Specification 4.4.F conducted once per 18 months during shutdown and any other fast start required following specific maintenance involving the fast start capability.
- (5) The licensee will conduct confirmatory load tests of the major loads on the diesel generators buses to confirm the accuracy of the calculated loads contained in its letter of July 15, 1988, and report the results to the NRC staff.
- (6) Within 60 days the licensee will evaluate the existing motors and try to provide a certification of the charging pump motors to at least 700 horsepower with a service factor of 1.15. If the evaluation is unsuccessful, SCE will provide motors with NEMA rating of 800 horsepower by either rewinding the existing motors or replacing the motors. In the event rewinding or replacement is required, every effort will be made to accomplish this during the upcoming Cycle X refueling outage; however, if this is not possible, at least 60 days prior to the end of that outage SCE will provide for NRC approval the schedule for rewinding or replacement and further justification for plant operation beyond that outage.

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#### 4.4 EMERGENCY POWER SYSTEM PERIODIC TESTING

<u>APPLICABILITY:</u>	Applies to testing of the Emergency Power System.	82 11/7/84
<u>OBJECTIVE:</u>	To verify that the Emergency Power System will respond promptly and properly when required.	
<u>SPECIFICATION:</u>	A. The required offsite circuits shall be determined OPERABLE at least once per 7 days by verifying correct breaker alignments and power availability.	
	B. The required diesel generators shall be demonstrated OPERABLE:	84 11/14/84
	1. At least once per 31 days on a STAGGERED TEST BASIS by:	
	a. Verifying the diesel performs a DG SLOW START from standby conditions,	105 7/22/88
	b. Verifying a fuel transfer pump can be started and transfers fuel from the storage system to the day tank,	34 4/1/77
	c. Verifying the diesel generator is synchronized and running at 4500 kW $\pm$ 5% for $\geq$ 60 minutes, to include a brief load increase to 5250 kW $\pm$ 5%,	105 7/22/88
	d. Verifying the diesel generator is aligned to provide standby power to the associated emergency buses,	
	e. Verifying the day tank contains a minimum of 290 gallons of fuel, and	34 4/1/77
	f. Verifying the fuel storage tank contains a minimum of 37,500 gallons of fuel.	
	2. At least once per 3 months by verifying that a sample of diesel fuel from the required fuel storage tanks is within the acceptable limits as specified by the supplier when checked for viscosity, water and sediment.	84 11/14/84
	C. AC Distribution	
	1. The required buses specified in Technical Specification 3.7, Auxiliary Electrical Supply, shall be determined OPERABLE and energized from AC sources other than the diesel generators with tie breakers open between redundant buses at least once per 7 days by verifying correct breaker alignment and power availability.	34 4/1/77

Attachment 2  
Supplemental Changes to  
Proposed Change No. 197

#### L. Diesel Generators

The following requirements shall apply to the standby diesel generators:

- (1) A diesel engine maintenance and surveillance program as described in the Safety Evaluation Report on the Operability/Reliability of Emergency Diesel Generators Manufactured by Delaval, Inc. (TDI), dated \_\_\_\_\_, is to be implemented. Changes to this program will be subject to the provisions of 10CFR 50.59.
- (2) Crankshaft journals Nos. 9 and 10 on both diesel-generator units are to be inspected at each refueling outage until the issue of crankshaft cracking has been resolved.

If during these inspections cracks are found in the oil holes or in other crankshaft surfaces, these findings are to be reported to the NRC within 24 hours. The affected engine is to be considered inoperable and is not to be restored to operable status until the proposed disposition and/or corrective actions have been approved by the NRC staff.

- (3) Whenever diesel generator No. 1 is operated in excess of 4375 kw for one hour or more, a visual inspection of the right bank cylinder block is to be performed under intense light within 48 hours after engine shutdown to verify the absence of stud-to-stud and stud-to-end cracks.

If stud-to-stud or stud-to-end cracks are found, these findings are to be reported to the NRC within 24 hours. The affected engine is to be considered inoperable and is not to be restored to operable status until the proposed disposition and/or corrective actions have been approved by the NRC staff.

- (4) All diesel starts for testing and surveillance will be slow starts (greater than 24 seconds duration) except for the fast start required by Technical Specification 4.4.F conducted once per 18 months during shutdown and any other fast start required following specific maintenance involving the fast start capability.

#### 4.4. EMERGENCY POWER SYSTEM PERIODIC TESTING

APPLICABILITY: Applies to testing of the Emergency Power System.

OBJECTIVE: To verify that the Emergency Power System will respond promptly and properly when required.

- SPECIFICATION:
- A. The required offsite circuits shall be determined OPERABLE at least once per 7 days by verifying correct breaker alignments and power availability.
  - B. The required diesel generators shall be demonstrated OPERABLE:
    - 1. At least once per 31 days on a STAGGERED TEST BASIS by:
      - a. Verifying the diesel performs a DG SLOW START from standby conditions,
      - b. Verifying a fuel transfer pump can be started and transfers fuel from the storage system to the day tank,
      - c. Verifying the diesel generator is synchronized and running at 6000 kW  $\pm$  5% for  $\geq$  60 minutes,
      - d. Verifying the diesel generator is aligned to provide standby power to the associated emergency buses,
      - e. Verifying the day tank contains a minimum of 290 gallons of fuel, and
      - f. Verifying the fuel storage tank contains a minimum of 37,500 gallons of fuel.
    - 2. At least once per 3 months by verifying that a sample of diesel fuel from the required fuel storage tanks is within the acceptable limits as specified by the supplier when checked for viscosity, water and sediment.
  - C. AC Distribution
    - 1. The required buses specified in Technical Specification 3.7, Auxiliary Electrical Supply, shall be determined OPERABLE and energized from AC sources other than the diesel generators with tie breakers open between redundant buses at least once per 7 days by verifying correct breaker alignment and power availability.