



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO.111 TO FACILITY OPERATING LICENSE NO. NPF-10  
AND AMENDMENT NO.100 TO FACILITY OPERATING LICENSE NO. NPF-15  
SOUTHERN CALIFORNIA EDISON COMPANY  
SAN DIEGO GAS AND ELECTRIC COMPANY  
THE CITY OF RIVERSIDE, CALIFORNIA  
THE CITY OF ANAHEIM, CALIFORNIA  
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3  
DOCKET NOS. 50-361 AND 50-362

1.0 INTRODUCTION

By letter dated October 16, 1992, Southern California Edison Company, et al. (SCE or the licensee) submitted a request to revise Technical Specification (TS) 3/4.3.4, "Turbine Overspeed Protection," for San Onofre Nuclear Generating Station (SONGS), Unit Nos. 2 and 3. The proposed changes would revise Surveillance Requirements 4.3.4.a and 4.3.4.b to allow one surveillance every 31 days for verification of turbine overspeed protection system operability. Currently, the surveillance tests are performed at power every 7 days and again every 31 days. The 31-day test is performed by an operator with an observer at the valve.

2.0 EVALUATION

The turbine control and overspeed protection system is designed to control turbine action under all normal and abnormal conditions to assure that a turbine trip from full load will not cause the turbine to overspeed beyond acceptable limits and possibly generate a turbine missile.

TS 3/4.3.4, "Turbine Overspeed Protection," identifies turbine overspeed protection system operability requirements, actions to initiate if the overspeed protection system is inoperable, and surveillance tests to demonstrate turbine overspeed protection system operability. Turbine speed control valve operability is verified by Surveillance Requirement (SR) 4.3.4.a. and 4.3.4.b, which require tests of the high pressure main steam stop and control valves and low pressure reheat stop and intercept valves. SR 4.3.4.a requires cycling the four sets of valves through at least one complete cycle from the normal running position of these valves when the plant is operating. This test is required once every 7 days and is performed by an

operator in the control room. In addition, SR 4.3.4.b requires direct observation of the movement of each valve through one complete cycle from the normal position once every 31 days. The surveillance test verifies freedom of movement of valve components, and confirms that nothing inhibits the valve from closing. The objective of the surveillance requirements is to assure that the valves will shut upon demand to prevent turbine overspeed.

Performing these surveillances has caused reactor trips on an industry wide basis, although no trips due to turbine valve testing have been experienced at SONGS Units 2 and 3. The surveillance also results in additional wear to the valves, and stress to the steam system. While the test is being performed, the steam flow to the turbine must be reduced in order to avoid a reactor trip. This is accomplished by dumping steam to the condenser, which could cause vibration of the condenser tubes. The industry has observed that this test is hard on the steam system, potentially causing relief valves to lift and adding thermal and mechanical stresses to the piping.

The proposed changes to the TS would eliminate the weekly testing requirement and leave in place the every 31-day surveillance test. The 31-day test would continue to be implemented with an observer at the valves.

GEC Alsthom International, the turbine manufacturer for SONGS Units 2 and 3, has concurred with the proposed change to SR 4.3.4. The GEC review indicated that changing the testing schedule to once every 31 days will provide sufficient safeguards to ensure turbine overspeed operability. GEC considers adoption of monthly on-load testing to be a reasonable compromise between the maximum assurance provided by frequent testing and the operational upsets which may occur during the course of performing the routine on-load tests.

Generic Letter 93-05, "Line-Item Technical Specifications Improvements To Reduce Surveillance Requirements For Testing During Power Operation," includes a recommendation to reduce the turbine valve testing frequency. The generic letter states that the surveillance can be changed to once per 92 days as long as there is direct observation of the movement of the valve, and the turbine manufacturer concurs with the proposed change. Since both of these conditions have been met as detailed in the licensee's October 16, 1992 letter, and since testing the valves every 31 days is more conservative than the frequency specified in the generic letter, the staff finds acceptable the licensee's proposal to reduce the turbine valve test frequency to once every 31 days.

### 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the California State official was notified of the proposed issuance of the amendment. The State official had no comments.

#### 4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a surveillance requirement with respect to the use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (58 FR 8783). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

#### 5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Date: March 9, 1994