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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 114 TO FACILITY OPERATING LICENSE NO. NPF-10

AND AMENDMENT NO. 103 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 March 5, 1993, and supplemented by letter dated September 22, 1994, Southern California Edison Company, et al. (SCE or the licensee) submitted a request for changes to the Technical Specifications (TS) for San Onofre Nuclear Generating Station, Unit Nos. 2 and 3. The proposed changes would revise Technical Specification (TS) 3/4.7.1.1, "Main Steam Safety Valves," and the associated Bases to (1) increase the as-found setpoint tolerance of Table 3.7-1 for the Main Steam Safety Valves (MSSVs) from ±1 percent to +2 percent and -3 percent; (2) add a footnote to Table 3.7-1 to indicate that the setpoint tolerance for the lowest set pair of MSSVs will be +1 percent and -3 percent; (3) add a footnote to TS 3.7.1.1 and revise footnote 1 of Table 3.7-1 to clarify that the MSSVs will be left at the lift setting according to Table 3.7-1 within a ±1 percent tolerance following inservice testing; (4) add an ACTION statement requiring the plant to be in HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 12 hours for the case of less than five MSSVs operable per operable steam generator; (5) require the plant to be in "HOT SHUTDOWN within the following 12 hours" instead of "COLD SHUTDOWN within the following 30 hours" per the existing ACTION statement; (6) revise the title of column 1 of Table 3.7-2 to read "Number of Operable Safety Valves per Operable Steam Generator," instead of "Maximum Number of Inoperable Safety Valves on Any Operating Steam Generator, for better readability; and (7) delete the ORIFICE SIZE column of Table 3.7-1.

The additional information contained in the supplemental letter dated September 22, 1994, served to clarify the amendments, was within the scope of the initial notice, and did not affect the Commission's proposed no significant hazards consideration determination.

2.0 EVALUATION

The licensee proposes to revise Technical Specification 3.7.1.1 and Table 3.7-1 to (1) increase the as-found setpoint tolerance of the MSSVs from ±1 percent to +2/-3 percent, (2) maintain the lowest set pair of valves at 1100 psia +1/-3 percent, and (3) require the as-left setpoint tolerance to be within ±1 percent. The purpose of these changes is to increase the allowable lift setting tolerance for normal MSSV setpoint drift. To support the proposed changes, the licensee considered the results of transients and accidents that would be affected by the proposal in its reanalyses. These parameters are overpressurization events, small break loss-of-coolant accident (LOCA), and steam generator tube rupture (SGTR).

The MSSVs are designed to prevent overpressurization of the steam generators and associated equipment and to provide a passive heat sink for the primary coolant. To meet these design functions, the actual MSSV lift setpoints must be less than or equal to the limiting lift setpoint assumed in the overpressurization analyses. These overpressurization analyses are performed using loss of condenser vacuum (LOCV) and feedwater line break (FWLB) as the limiting events. As a result, the licensee incorporated these events into its reanalyses.

The LOCV and FWLB events were reanalyzed assuming lift setpoints 2 percent above the existing TS setpoints. As a result of this change, the LOCV peak primary and secondary pressures were found to increase from 2732 psia to 2734 psia and from 1186 psia to 1195 psia, respectively. These new calculated values are within the maximum allowable primary and secondary pressures of 2750 psia and 1210 psia respectively. Additionally, the reanalyses found that the FWLB peak primary pressure does not increase from its current value of 2911 psia but that the FWLB secondary pressure increases from 1150 psia to 1160 psia. These values are also found within the maximum allowable primary and secondary FWLB pressures of 3000 psia and 1210 psia, respectively, for the San Onofre units.

The -3 percent as-found tolerance proposed by this request allows for only one of the nine MSSVs to reach the 1067 psia. In accordance with the proposed changes and Table 3.7-1 all other MSSVs as-found settings must be above 1067 psia.

In the event of a small-break LOCA, raising the upper limit of lift pressures over the existing TS values would affect the initial condition of the event. This event was not reanalyzed by the licensee. Instead, a footnote is proposed to be added to Table 3.7-1 which requires that the lowest set pair of valves will be maintained at 1100 psia +1/-3 percent. This note would ensure that the lowest set pair of valves would lift as is required by the current TS (at the current highest allowable lift pressure).

In the case of an SGTR, operation of the MSSVs at reduced pressures can impact radiological releases and primary-to-secondary leakage following the event. In case of maximum allowable negative drift, the proposed changes would potentially reduce the lifting pressure of the lowest set pair of valves from

1089 psia (1100 psia -1 percent) to 1067 psia (1100 psia -3 percent). However, on studying the existing SGTR analysis, it was determined that the MSSV model used bounds the characteristics of an MSSV with setpoints as low as 1067 psia. Therefore, the proposed changes are within the limits of the existing analyses and maintain the current dose assumption associated with a SGTR.

The revisions to add a footnote to limiting condition for operation (LCO) 3.7.1.1 and to revise footnote 1 of Table 3.7-1 are intended to (1) clarify that the MSSVs must be left within a ±1 percent tolerance following inservice testing and (2) reduce the potential of the setpoint drifting outside the proposed acceptable +2/-3 percent tolerance range before the next scheduled inservice testing. In accordance with these revisions, if after inservice testing an MSSV is found to be within the as-found +2/-3 percent, but outside the as-left ±1 percent tolerance limits, the valve will be considered operable but must be returned to within the as-left ±1 limit of the setpoint.

Based on the above considerations, the staff finds acceptable the proposed revisions to Technical Specification 3.7.1.1 and Table 3.7-1 to (1) increase the as-found setpoint tolerance of the MSSVs from ±1 percent to +2/-3 percents, (2) maintain the lowest set pair of valves at 1100 psia +1/-3 percent and (3) require the as-left setpoint tolerance to be within ±1 percent.

The licensee proposes to revise ACTION statement "a" of TS 3.7.1.1 to (1) require entry into "HOT SHUTDOWN within the following 12 hours" instead of "COLD SHUTDOWN within the following 30 hours" and (2) delete the option of restoring the MSSVs to operable status.

While existing TS require entry into COLD SHUTDOWN (Mode 5), the applicability statement for the TS requires the valves operable in Modes 1, 2, and 3. Therefore, since previous analyses of events did not require the valves operable in Mode 4 (HOT SHUTDOWN), the appropriate action if the LCO is not met is to enter Mode 4 (HOT SHUTDOWN). Due to the seriousness of the conditions requiring entry into this ACTION, the time limit is conservatively shortened from 30 hours to 12 hours. Also, the existing statement requiring restoration of the inoperable valves to operable status in order to exit the LCO is unnecessary because restoration of the inoperable valves causes an automatic exit from the LCO.

Based on the above discussion and consistency between the requested revision and the language in the improved Standard Technical Specifications (STS) for Combustion Engineering plants (NUREG-1432), the staff finds acceptable the proposed revisions to ACTION statement "a" of TS 3.7.1.1 to (1) require entry into "HOT SHUTDOWN within the following 12 hours" instead of "COLD SHUTDOWN within the following 30 hours" and (2) delete the option of restoring the MSSVs to operable status.

The licensee proposes the addition of ACTION statement b, "With one or more steam generators having less than five main steam safety valves OPERABLE, be

in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 12 hours," to TS 3.7.1.1. The addition of this statement is conservative and provides explicit guidance to the operators for the applicable configurations of inoperable MSSVs. Therefore, the staff finds this change acceptable.

The licensee proposes to delete the "ORIFICE SIZE" column of Table 3.7-1. Deleting the "ORIFICE SIZE" column from Table 3.7-1 is an editorial change. This information is not used by the operators nor do the operators have any control over it. Additionally, the orifice size is a constant measure of the relieving capacity of the valves, which is discussed in great detail in the Bases. The request is also consistent with the STS. Therefore the proposed change to delete the "ORIFICE SIZE" column from Table 3.7-1 is acceptable.

The licensee proposes to revise the title of column 1 of Table 3.7-2 to read "Number of Operable Safety Valves per Operable Steam Generator," instead of "Maximum Number of Inoperable Safety Valves on Any Operating Steam Generator. Specifying the minimum number of operable MSSVs instead of the maximum number of inoperable MSSVs is an editorial change to improve readability and does not change the intent or requirements of the TS. Therefore, the staff finds this change acceptable

The licensee also proposed to revise the Bases to TS 3/4.7.1 to provide consistency with the above changes. These changes have been reviewed and found to accurately reflect the changes. Therefore, the staff finds the proposed changes to the Bases acceptable.

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 requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. 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 34093). 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: November 23, 1994