



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 126 TO FACILITY OPERATING LICENSE NO. NPF-10  
AND AMENDMENT NO. 115 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 August 1, 1995, and as supplemented by letter dated October 18, 1995, 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 TS 3/4.3.2, "Engineered Safety Features Actuation System Instrumentation," Table 3.3-3. Table 3.3-3 includes the requirements for the minimum number of toxic gas isolation system (TGIS) trains operable. This request is a one-time-only change to extend the allowed TGIS outage times during replacement of TGIS instrumentation.

The proposed changes would add a note to TS Table 3.3-3 for each unit. This note states that, on a one-time basis during the replacement of the existing TGIS instrumentation, compensatory actions would be taken in lieu of the standard actions required by TS Table 3.3-3.

The October 18, 1995, supplemental letter provided additional clarifying information and did not change the initial no significant hazards consideration determination which was published in the Federal Register on September 13, 1995 (60 FR 47625).

2.0 BACKGROUND

The General Design Criteria (GDC) as defined in Appendix A to 10 CFR Part 50 serve to establish the principal requirements needed for the design, fabrication, construction, testing, and performance of a facility's safety related structures, systems, and components that provide reasonable assurance that a facility can be operated safely. GDC 4, "Environmental and missile

design bases," requires, in part, that those components important to safety be appropriately protected from events and conditions outside the nuclear plant. GDC 19, "Control room," requires that a control room be provided from which actions can be taken to operate the nuclear power unit safely under normal conditions and to maintain it in a safe condition under accident conditions.

The relevant acceptance criteria for the control room habitability are located in Regulatory Guide 1.78, "Assumptions for Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release," and Regulatory Guide 1.95, "Protection of Nuclear Power Plant Control Room Operators Against an Accidental Chlorine Release." Further guidance is provided by Chapter 6.4, "Control Room Habitability System," of the Standard Review Plan (NUREG-0800).

SONGS Units 2 and 3 have a shared control room, with a common control room emergency air cleanup system (CREACUS). The CREACUS contains two redundant emergency filtration trains, each equipped with an emergency ventilation supply unit and an air conditioning unit. Two independent TGIS channels (Channels A and B), located at the outside air intake for the normal air conditioning unit, protect the control room occupants from a toxic release at or in the vicinity of the plant. TGIS analyzers monitor for high concentrations of butane, propane, ammonia, and chlorine. When the technical specification (TS) limit for a toxic chemical release is reached, the toxic gas isolation system (TGIS) automatically isolates the control room and initiates CREACUS operation in the recirculation mode. Both TGIS channels are required by TS 3/4.3.2 to be operable in all modes of operation; Action 14 of TS Table 3.3-3 states that should one channel be inoperable it must be restored within 7 days or the CREACUS must be initiated and maintained in the isolation mode within the next 6 hours. If no TGIS channels are operable, Action 15 of TS Table 3.3-3 states that CREACUS must be initiated and maintained in the isolation mode within 1 hour.

The licensee states that the only TGIS ammonia and butane analyzers have been rendered obsolete due to advances in the field of analytical instrumentation. The increasing unavailability of replacement parts because of the manufacturer's decision to discontinue the manufacturing of the analyzers is another factor in the licensee's decision to replace the analyzers. The relative age of the TGIS is also a growing concern since the ammonia analyzers need more frequent maintenance and have experienced several spurious trips.

The proposed addition of Note 1 to TS Table 3.3-3 will, on a one-time basis for the duration of the TGIS instrumentation replacement interval, replace Actions 14 and 15 with the compensatory measures outlined in the licensee's October 18, 1995, letter to the NRC.

### 3.0 EVALUATION

The TGIS was installed in the SONGS control room because the location, frequency and size of toxic substances near or on the site were such that manual isolation of the control room could not be credited quickly enough to ensure the safety of control room personnel. In order to provide for an

equivalent level of safety during the TGIS instrumentation replacement period, the licensee has, in its letter dated August 1, 1995, as supplemented by letter dated October 18, 1995, committed to the following:

1. Replacement activities will be performed on one channel of TGIS at a time. After the first channel of instrumentation is replaced, both channels of TGIS will be operable for a 7-to-30-day period to assure proper operation of the new instrumentation before the second channel of instrumentation is replaced.
2. To improve reliability of TGIS operation, preventive maintenance will be performed on the operable channel of TGIS instrumentation before the other TGIS train is replaced.
3. The operable channel of TGIS may experience spurious actuations during periods of construction involving extensive cutting and welding work within the cabinet that contains both channels of TGIS. During these periods the control room will be isolated with CREACUS initiated and maintained in the isolation mode and the operable TGIS channel will be in bypass.
4. The control room is not designed to remain in an isolated mode for extended periods of time (toxic gas releases which the TGIS is designed to mitigate are expected to dissipate to acceptable levels in less than 24 hours). If the licensee cannot restore one train of TGIS after 24 hours of control room isolation, the operators will return control room ventilation to normal operation to allow the control room air quality to return to normal. If this situation should arise, the licensee has committed to have dedicated personnel stationed in locations where observation of potential significant toxic releases can be accomplished. These individuals will be in continuous communication with the control room to provide the operators with rapid notification of any accidents involving potential toxic releases. This will provide the operators with sufficient time to manually isolate the control room before toxic releases can intrude into the control room and provides a level of safety that is comparable to that experienced in normal plant operation with the TGIS available.

The staff has compared the compensatory measures outlined above to the design basis and current TS requirements for the TGIS, and concludes that the compensatory measures committed to by the licensee provide an equivalent level of protection to the control room operators. During all phases of the TGIS instrument replacement activities, sufficient measures will be available to protect control room personnel from being adversely affected by events involving toxic releases. For these reasons, the staff finds the licensee's proposed addition of Note 1 to TS Table 3.3-3, allowing a one-time exception to Actions 14 and 15, acceptable.

#### 4.0 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.

#### 5.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to the installation or use of a facility component located in 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 (60 FR 47625). 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.

#### 6.0 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.

Principal Contributor: E. A. Brown

Date: November 2, 1995