



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 58 TO LICENSE NO. DPR-13

SOUTHERN CALIFORNIA EDISON COMPANY

SAN DIEGO GAS & ELECTRIC COMPANY

SAN ONOFRE UNIT NO. 1

DOCKET NO. 50-206

1.0 INTRODUCTION AND BACKGROUND

1.1 Introduction

By letter dated May 7, 1981, Southern California Edison Company and San Diego Gas and Electric Company (the licensees) proposed changes to the San Onofre Nuclear Generating Station (SONGS) Unit No. 1, Technical Specifications and addition of Licensing Conditions. This proposal supersedes a similar request proposed in a letter dated February 8, 1980. The staff has not completed its review of all the proposed changes submitted by this application but this Safety Evaluation documents the results of the reviews that have been completed. The amendment incorporates certain Three Mile Island (TMI)-2 Lessons Learned Category "A" requirements. The licensee's request is in direct response to the NRC staff's letter dated July 2, 1980.

1.2 Background

By our letter dated September 13, 1979, we issued to all operating nuclear power plants requirements established as a result of our review of the TMI-2 accident. Certain of these requirements, designated Lessons Learned Category "A" requirements, were to have been completed by the licensee prior to any operation subsequent to January 1, 1980. Our evaluation of the licensee's compliance with these Category "A" items was attached to our letter to SCECO dated May 2, 1980. SONGS 1 was in an extended maintenance outage from March, 1980 through May of 1981 and their submittal reflects some of the modifications completed during this period.

In order to provide reasonable assurance that operating reactor facilities are maintained within the limits determined acceptable following the implementation of the TMI-2 Lessons Learned Category "A" items, we requested that licensees amend their TS to incorporate additional Limiting Conditions for Operation and Surveillance Requirements, as appropriate. This request was transmitted to all

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licensees on July 2, 1980. Included therein were model specifications that we had determined to be acceptable. Each of the issues identified by the NRC staff and the licensee's response is discussed in the evaluation below, except auxiliary feedwater automatic initiation, which will be resolved in a separate issuance.

2.0 EVALUATION

2.1.1 Emergency Power Supply Requirements

The pressurizer water level indicators, pressurizer relief and block valves, and pressurizer heaters are important in a post-accident situation. Adequate emergency power supplies add assurance of post-accident functioning of these components. The facility's design has the requisite emergency power supplies. We find the TSs provide appropriate surveillance and actions in the event of component inoperability and are thus acceptable.

2.1.3.a Direct Valve Indication

The licensee has installed stem mounted limit switches with CONAX conductor seal module assemblies at each switch connector on the PORVs, their associated block valves and the safety valves. Each limit switch has a position indicator in the control room. Alarms are provided in the control room to indicate if either of the PORVs or safety valves are open. The stem mounted limit switches are powered from vital buses. The licensee has submitted TSs that provide for 31-day channel check and 18-month channel calibration requirements. These TSs are acceptable as they meet our July 2, 1980 model TS criteria.

2.1.3.b Instrumentation for Inadequate Core Cooling

The licensee has installed an instrument system to detect the effects of inadequate core cooling. This instrument system, a subcooling meter, receives and processes data from existing plant instrumentation. The licensee has agreed to TS with a monthly channel check and a refueling interval channel calibration requirement and appropriate actions to be taken in the event of component inoperability. We conclude the TS are acceptable as they provide adequate surveillance and meet our July 2, 1980 model TS criteria.

2.1.4 Containment Isolation

The licensee's June 25, 1979 and January 17, 1980 submittals identified the essential and non-essential systems and the bases for the essential system classification. The isolation control system was modified to provide diverse containment isolation signals. Non-essential systems are isolated automatically upon receipt of a safety injection signal or a containment high pressure signal.

Containment isolation system relay panels have been installed to multiply the containment isolation actuation signal for individual valve control. Each valve control circuit consists of a latching relay control and override control in addition to the valve position indication circuit. The latching control scheme prevents automatic reopening of the isolation valve on containment isolation actuation signal reset.

The licensee has made the additional isolation control modifications described in their March 25, 1980 submittal. These modifications preclude group reopening of the isolation valves, so that reopening is accomplished on a valve-by-valve or penetration basis. The surveillance requirements for the containment purge supply and exhaust valves is currently under review by the licensee and NRC staff. The instrumentation requirements for these valves is under active review in SEP. The submitted TS's are therefore acceptable until the reviews are complete.

2.1.5 Dedicated Penetrations for External Recombiners or Post-Accident External Purge System

The NRC's position is that dedicated containment isolation systems should be used for the external recombiners or purge systems that meet redundancy and single failure requirements.

The licensee would utilize a purge system for post-accident hydrogen control. Those systems that could be used are described in the licensee's March 25, 1980 submittal. The submittal also includes a single failure analysis of the system for the hydrogen control function, and the containment integrity function.

2.1.6.a Integrity of Systems Outside Containment

Our request indicated that licensees should be required to periodically conduct a System Integrity Measurements Program to prevent the release of significant amounts of radioactivity to the environment via leakage from engineered safety systems and auxiliary systems which are located outside reactor containment. The licensee's program includes provision for a preventive maintenance program and periodic visual inspections. The program also includes system leak test measurements at frequencies not to exceed refueling cycle intervals.

Based on our review we find that inclusion of this requirement as a license condition satisfies our requirement and is acceptable.

2.1.7b Auxiliary Feed Flow Indication

Control grade auxiliary feed flow indication has been provided for each steam generator. Diverse backup indication is provided by steam generator level indicators in the control room. The power to the auxiliary feedwater flow indication is from a vital bus. The accuracy of the auxiliary feed flow is within the requirement of $\pm 10\%$. The licensee has submitted TSs with a monthly channel check and a refueling outage calibration requirement; thus the TSs are acceptable and they meet out July 2, 1980 model TS criteria.

2.1.8.c Iodine Monitoring

We requested that the licensees implement a program which will ensure the capability to determine the airborne iodine concentration in areas requiring personnel access under accident conditions. The licensee's program includes training of personnel, procedures for monitoring and provisions for maintenance of sampling and analysis equipment.

Based on our review we find that inclusion of this requirement as a license condition satisfies our requirement and is acceptable.

2.2.1.b Shift Technical Advisor

Our request indicated that the TS related to minimum shift manning should be revised to reflect the augmentation of Shift Technical Advisor. The licensee's application would add one Shift Technical Advisor to each shift to perform the function of accident assessment during reactor operation. The individual performing this function will have at least a bachelor's degree or equivalent in a scientific or engineering discipline with special training in plant design, and response and analysis of the plant for transients and accidents. Part of the Shift Technical Advisor duties are related to operating experience review function. Based on our review, we find the licensee's submittal satisfies our requirement and is, therefore, acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

4.0 CONCLUSION

We have concluded, based on the consideration discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: November 6, 1981