



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

SOUTHERN CALIFORNIA EDISON COMPANY AND

SAN DIEGO GAS AND ELECTRIC COMPANY

DOCKET NO. 50-206

SAN ONOFRE NUCLEAR GENERATING STATION, UNIT NO. 1

AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 97
License No. DPR-13

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Southern California Edison Company and San Diego Gas and Electric Company (the licensees) dated November 12, 1986, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 3.B. of Provisional Operating License No. DPR-13 is hereby amended to read as follows:

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B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 97, are hereby incorporated in the license. Southern California Edison Company shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective the date of issuance and shall be fully implemented no later than 30 days from date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Richard F. Dudley, Project Manager
PWR Project Directorate #1
Division of PWR Licensing-A

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 7, 1987

ATTACHMENT TO LICENSE AMENDMENT NO. 97
PROVISIONAL OPERATING LICENSE NO. DPR-13
DOCKET NO. 50-206

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change.

REMOVE

2
4

INSERT

2
4

2.1 REACTOR CORE - Limiting Combination of Power, Pressure, and Temperature

APPLICABILITY: Applies to reactor power, system pressure, coolant temperature, and flow during operation of the plant.

OBJECTIVE: To maintain the integrity of the reactor coolant system and to prevent the release of excessive amounts of fission product activity to the coolant.

SPECIFICATION: Safety Limits

- (1) The reactor coolant system pressure shall not exceed 2735 psig with fuel assemblies in the reactor.
- (2) The combination of reactor power and coolant temperature shall not exceed the locus of points established for the RCS pressure in Figure 2.1.1. If the actual power and temperature is above the locus of points for the appropriate RCS pressure, the safety limit is exceeded.

MAXIMUM SAFETY SYSTEM SETTINGS

The maximum safety system trip settings shall be as stated in Table 2.1

TABLE 2.1

Three Reactor Coolant
Pumps Operating

*1. Pressurizer High Level	≤ 20.8 ft. above bottom of pressurizer when steam/feedflow mismatch trip <u>is not</u> credited, or ≤ 27.3 ft. above bottom of pressurizer when steam/feedflow mismatch trip <u>is</u> credited
2. Pressurizer Pressure: High	≤ 2220 psig
**3. Nuclear Overpower	$\leq 109\%$ of indicated full power
***4. Variable Low Pressure	≥ 26.15 (0.894 $\Delta T + T$ avg.) - 14341
***5. Coolant Flow	$\geq 85\%$ of indicated full loop flow

- * Credit can be taken for the steam/feedflow mismatch trip when this system is modified such that a single failure will not prevent the system from performing its safety function.
- ** The nuclear overpower trip is based upon a symmetrical power distribution. If an asymmetric power distribution greater than 10% should occur, the nuclear overpower trip on all channels shall be reduced one percent for each percent above 10%.
- *** May be bypassed at power levels below 10% of full power.

Maximum Safety System Settings

1. Pressurizer High Level and High Pressure

In the event of loss of load, the temperature and pressure of the Reactor Coolant System would increase since there would be a large and rapid reduction in the heat extracted from the Reactor Coolant System through the steam generators. The maximum settings of the pressurizer high level trip and the pressurizer high pressure trip are established to maintain the DNB ratio above 1.30 and to prevent the loss of the cushioning effect of the steam volume in the pressurizer (resulting in a solid hydraulic system) during a loss-of-load transient. (3) (4)

In the event that steam/feedflow mismatch trip cannot be credited due to single failure considerations, the pressurizer high level trip is provided. In order to meet acceptance criteria for the Loss of Main Feedwater and Feedline Break transients, the pressurizer high level trip must be set at 20.8 ft. (50%) or less.

2. Variable Low Pressure, Loss of Flow, and Nuclear Overpower Trips

These settings are established to accommodate the most severe transients upon which the design is based, e.g., loss of coolant flow, rod withdrawal at power, inadvertent boron dilution and large load increase without exceeding the safety limits. The settings have been derived in consideration of instrument errors and response times of all necessary equipment. Thus, these settings should prevent the release of any significant quantities of fission products to the coolant as a result of transients. (3) (4) (5)

In order to prevent significant fuel damage in the event of increased peaking factors due to an asymmetric power distribution in the core, the nuclear overpower trip setting on all channels is reduced by one percent for each percent that the asymmetry in power distribution exceeds 10%. This provision should maintain the DNB ratio above a value of 1.30 throughout design transients mentioned above.

The response of the plant to a reduction in coolant flow while the reactor is at substantial power is a corresponding increase in reactor coolant temperature. If the increase in temperature is large enough, DNB could occur, following loss of flow.

The low flow signal is set high enough to actuate a trip in time to prevent excessively high temperatures and low enough to reflect that a loss of flow condition exists. Since coolant loop flow is either full on or full off, any loss of flow would mean a reduction of the initial flow (100%) to zero. (3) (6)