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. 82
License No. DPR-13

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The applications for amendment by Southern California Edison Company and San Diego Gas and Electric Company (the licensees) dated May 7, 1981 and May 17, 1984, the latter supplemented by letter dated September 5, 1984, comply 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:

   B. Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 82, 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 14 days after the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Walter A. Paulson

Walter A. Paulson, Acting Chief
Operating Reactors Branch #5
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 24, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 82

PROVISIONAL OPERATING LICENSE NO. DPR-13

DOCKET NO. 50-206

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

| REMOVE | INSERT |
|---|---|
| 26 | 26 |
| 26a | 26a |
| -- | 27a |
| -- | 27b |
| 33p | 33p |
| 33q | 33q |
| 33r | 33r |
| 44j | 44j |
| 44k | 44k |
| 44l | 44l |
| -- | 44n |
| 52 | 52 |
| 53b | 53b |
| 53c | 53c |

## 3.4 TURBINE CYCLE

### 3.4.1 Operating Status

Applicability: Applies to the operating status of turbine cycle in MODES 1, 2 and 3.

Objective: To define conditions of the turbine cycle necessary to ensure the capability to remove decay heat from the core.

Specification:

(A) A minimum turbine cycle steam-relieving capability of 5,706,000 lb/hr (except for testing of the main steam safety valves).

(B) The auxiliary feedwater pumps OPERABLE as specified in 3.4.3.

(C) The auxiliary feedwater storage tank OPERABLE as specified in 3.4.4.

(D) System piping and valves directly associated with the above components OPERABLE.

Basis: A reactor shutdown from power requires subsequent removal of core decay heat. In the event of a reactor trip from high power levels, immediate decay heat removal requirements are satisfied by the steam bypass to the condensers, supplemented by release to the atmosphere. Thereafter, core decay heat can be continuously dissipated via the steam bypass to the condenser or steam dump to atmosphere as feedwater in the steam generator is converted to steam by heat absorption. In the event of a planned shutdown, steam release to atmosphere is not required. In either case, feedwater to the steam generators is normally supplied by operation of the turbine cycle feedwater pumps.

The power operated relief valves and the main steam safety valves have a total combined relief capability of 7,629,432 lb/hr. A capability of 5,706,000 lb/hr is required to maintain the pressure in turbine cycle components within ASME code allowable values in the event of a full load rejection. Therefore, the limiting conditions for operation can be met with less than the full number of valves in service.

Two auxiliary feedwater pumps, one steam driven and one electric driven, together with the steam system relief valves, provide core decay heat removal capability in the event of a sustained loss of offsite power. The electric driven pump is capable of being powered from the diesel. Either auxiliary feedwater pump has the capability to satisfy decay heat removal requirements from the core.(1)

The OPERABILITY of the auxiliary feedwater storage tank with the minimum water volume ensures that sufficient water is available to maintain the RCS at HOT STANDBY conditions (including cooldown) for 32 hours with steam discharge to the atmosphere concurrent with total loss of offsite power. The contained water volume limit includes an allowance for water not usable because of tank discharge line location or other physical characteristics.

Reference: (1) Supplement No. 1 to the Final Engineering Report and Safety Analysis, Section 3, Question 6.

### 3.4.3 Auxiliary Feedwater System

Applicability: Applies to the motor driven auxiliary feedwater pump and the turbine driven auxiliary feedwater pump for MODES 1, 2 and 3.

Objective: To ensure the availability of auxiliary feedwater to remove decay heat.

Specification:

A. Both steam generator auxiliary feedwater pumps and associated flow paths shall be OPERABLE as follows:

1. One auxiliary feedwater pump capable of being powered from an emergency electrical power source, and

2. One auxiliary feedwater pump capable of being powered from an OPERABLE steam supply system.

B. With one auxiliary feedwater pump inoperable, restore both auxiliary feedwater pumps (one capable of being powered from an emergency electrical power source and one capable of being powered by an OPERABLE steam supply system) to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

Basis: The OPERABILITY of the auxiliary feedwater system ensures that the Reactor Coolant System can be cooled down to less than 350°F for normal operating conditions in the event of a total loss of offsite power.

References:

(1) NRC letter dated July 2, 1980 from D. G. Eisenhut to all pressurized water reactor licensees.

### 3.4.4 Auxiliary Feedwater Storage Tank

Applicability: Applies to the auxiliary feedwater storage tank for MODES 1, 2 and 3.

Objective: To ensure the availability of auxiliary feedwater to remove decay heat.

Specification:

A. The auxiliary feedwater storage tank (AFST) shall be OPERABLE with a contained water volume of at least 150,000 gallons of water.

B. With the AFST inoperable, within 4 hours restore the AFST to OPERABLE status or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

Basis: The OPERABILITY of the auxiliary feedwater storage tank with the minimum water volume ensures that sufficient water is available to maintain the RCS at HOT STANDBY conditions (including cooldown) for 32 hours with steam discharge to the atmosphere concurrent with total loss of offsite power. The contained water volume limit includes an allowance for water not usable because of tank discharge line location or other physical characteristics.

### 3.5.7 Auxiliary Feedwater Instrumentation

Applicability: Applies to automatic initiation of the auxiliary feedwater pumps.

Objective: To ensure reliability of automatic initiation of the auxiliary feedwater pumps.

Specification:

A. The instrumentation channels shown in Table 3.5.7-1 shall be OPERABLE with their trip setpoints set consistent with the Trip Setpoint column of Table 3.5.7-2.

B. With an instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.5.7-2, declare the channel inoperable and apply the applicable ACTION requirement of Table 3.5.7-1 until the channel is restored in OPERABLE status with the trip setpoint adjusted consistent with the Trip Setpoint Value.

C. With an instrumentation channel inoperable, take the action shown in Table 3.5.7-1.

Basis: The OPERABILITY of the auxiliary feedwater instrumentation ensures that 1) the associated action will be initiated when the parameter monitored by each channel or combination thereof reaches its setpoint, 2) the specified coincidence logic is maintained, 3) sufficient redundancy is maintained to permit a channel to be out of service for testing or maintenance, and 4) sufficient system functional capability is available from diverse parameters.

The OPERABILITY of this instrumentation is required to provide the overall reliability, redundancy, and diversity assumed available for the protection and mitigation of accident and transient conditions. The operation of this instrumentation is consistent with the assumptions used in the accident analysis.

References:

(1) NRC letter dated July 2, 1980, from D. G. Eisenhut to all pressurized water reactor licensees.

## TABLE 3.5.7-1

## AUXILIARY FEEDWATER INSTRUMENTATION

| FUNCTIONAL UNIT | TOTAL NO. OF CHANNELS | CHANNELS TO TRIP | MINIMUM CHANNELS OPERABLE | APPLICABLE MODES | ACTION |
|---|---|---|---|---|---|
| a. Manual Actuation | 2 | 1 | 2 | 1, 2, 3 | 12 |
| b. Automatic Actuation Logic | 2 | 1 | 2 | 1, 2, 3 | 13 |
| c. Steam Generator Water Level-Low | | | | | |
| i. Start Motor Driven Pump | 3 | 2 | 2 | 1, 2, 3 | 14,15 |
| ii. Start Turbine-Driven Pump | 3 | 2 | 2 | 1, 2, 3 | 14,15 |

ACTION 12- With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 72 hours or be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours.

ACTION 13- With the number of OPERABLE Channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 72 hours or be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours; however, one channel may be bypassed for up to 8 hours for surveillance testing per Specification 4.1.8 provided the other channel is OPERABLE.

ACTION 14- With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed until performance of the next required CHANNEL TEST provided the inoperable channel is placed in the tripped condition within 1 hour, or an operator shall assume continuous surveillance and actuate manual initiation of auxiliary feedwater, if necessary.

ACTION 15- With more than one channel inoperable, an operator shall assume continuous surveillance and actuate manual initiation of auxiliary feedwater, if necessary. Restore the system to no more than one channel inoperable within 7 days, or be in HOT STANDBY within the following 6 hours and in HOT SHUTDOWN within the following 6 hours.

TABLE 3.5.7-2

AUXILIARY FEEDWATER INSTRUMENTATION TRIP SETPOINTS

| FUNCTIONAL UNIT | TRIP SETPOINT | ALLOWABLE VALUES |
|---|---|---|
| a. Manual Actuation | Not Applicable | Not Applicable |
| b. Automatic Actuation Logic | Not Applicable | Not Applicable |
| c. Steam Generator Water Level-Low | $\geq$ 5% of narrow range instrument span each steam generator | $\geq$ 0% of narrow range instrument span each steam generator |

### 4.1.8 Auxiliary Feedwater Instrumentation Surveillance

Applicability: Applies to the instruments shown in Table 4.1.8-1.

Objective: To ensure reliability of automatic initiation of the auxiliary feedwater pumps.

Specification: A. Each instrumentation channel shall be demonstrated OPERABLE by the performance of the surveillance requirements specified in Table 4.1.8-1.

Basis: The surveillance requirements specified for this instrumentation ensure that the overall system functional capability is maintained comparable to the original design standards. The periodic surveillance tests performed at the minimum frequencies are sufficient to demonstrate this capability.

References: (1) NRC letter dated July 2, 1980, from D. G. Eisenhut to all pressurized water reactor licensees.

TABLE 4.1.8-1

AUXILIARY FEEDWATER INSTRUMENTATION

SURVEILLANCE REQUIREMENTS

| FUNCTIONAL UNIT | CHANNEL CHECK | CHANNEL CALIBRATION | CHANNEL TEST | TRIP ACTUATING DEVICE OPERATIONAL TEST | MODES IN WHICH SURVEILLANCE REQUIRED |
|---|---|---|---|---|---|
| a. Manual | N/A | N/A | N/A | R | 1, 2, 3 |
| b. Automatic Actuation Logic | N/A | N/A | M | N/A | 1, 2, 3 |
| c. Steam Generator Water Level-Low | S | R | M | N/A | 1, 2, 3 |

4.1.9 Auxiliary Feedwater System Surveillance

Applicability: Applies to the motor driven auxiliary feedwater pump, and turbine driven auxiliary feedwater pump, and auxiliary feedwater valves for MODES 1, 2 and 3.

Objective: To ensure the reliability of the auxiliary feedwater system.

Specification:

A. Each auxiliary feedwater pump shall be demonstrated OPERABLE by testing each pump in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50.55a(g), except where specific written relief has been granted by the NRC pursuant to 10 CFR 50.55a(g)(6)(i).

B. At least once per 31 days an inspection shall be made to verify that each non-automatic valve in the emergency flow path that is not locked, sealed, or otherwise secured in position is in its correct position.

C. Each auxiliary feedwater pump shall be demonstrated OPERABLE at least once per 18 months by:

1. Verifying that each automatic valve in the flow path actuates to its correct position upon receipt of each auxiliary feedwater actuation test signal.

2. Verifying that each auxiliary feedwater pump starts as designed automatically upon receipt of each auxiliary feedwater actuation test signal. Within 72 hours after entering MODE 3, the steam driven auxiliary feedwater pump shall be similarly tested.

D. When the reactor coolant system pressure remains less than 500 psig for a period longer than thirty (30) days, a flow test shall be performed to verify the emergency flow path from the auxiliary feedwater storage tank to each steam generator, using the motor driven auxiliary feedwater pump prior to increasing reactor coolant system pressure above 500 psig. The flow test shall be conducted with the auxiliary feedwater system valves in their emergency alignment. Within 72 hours after entering MODE 3, the steam driven auxiliary feedwater pump shall be similarly tested.

4.1.10 Auxiliary Feedwater Storage Tank Surveillance

Applicability: Applies to the auxiliary feedwater storage tank for MODES 1, 2, and 3.

Objective: To ensure the availability of an adequate auxiliary feedwater supply.

Specification: A. The auxiliary feedwater storage tank shall be demonstrated OPERABLE at least once per 12 hours by verifying the contained water volume is within its limits when the tank is the supply source for the auxiliary feedwater pumps.

Basis: See basis for 3.4.4.

## 4.4 EMERGENCY POWER SYSTEM PERIODIC TESTING

Applicability: Applies to testing of the Emergency Power System.

Objective: To verify that the Emergency Power System will respond promptly and properly when required.

Specification:

A. One Southern California Edison Company and one San Diego Gas and Electric transmission line shall be determined OPERABLE at least once per 7 days by verifying correct breaker alignments and power availability.

B. Each diesel generator shall be demonstrated OPERABLE:

1. At least once per 31 days on a staggered test basis by:

a. Verifying the diesel starts from ambient condition,

b. Verifying a fuel transfer pump can be started and transfers fuel from the storage system to the day tank,

c. Verifying the diesel generator is synchronized and running at ≥4422 kW for ≥60 minutes,

d. Verifying the diesel generator is aligned to provide standby power to the associated emergency buses.

e. Verifying the day tank contains a minimum of 290 gallons of fuel,

f. Verifying the fuel storage tank contains a minimum of 37,500 gallons of fuel, and

g. Verifying that the automatic load sequencer is OPERABLE with the interval between each load block within ± 10% of its design interval.

c. At least once per refueling shutdown by verifying that:

(1) The cells, cell plates and battery racks show no visual indication of physical damage or abnormal deterioration,

(2) The cell-to-cell and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material,

(3) The battery charger for 125 volt D.C. Bus No. 1 will supply at least 500 amps at 130 volts for at least 8 hours,

(4) The battery charger for 125 volt D.C. Bus No. 2 will supply at least 45 amps at 125 volt for at least 8 hours, and

(5) The battery charger for UPS will supply at least 10 amps, at 480 volt for at least 1 hour.

d. At least once per refueling cycle, during shutdown by verifying that the battery capacity is adequate to supply and maintain in OPERABLE status all of the actual emergency loads when the battery is subjected to a battery service test. Battery for 125 volt D.C. Bus 1 shall be tested for 8 hours. Battery for 125 volt D.C. Bus 2 shall be tested for 3 hours. The UPS battery shall be tested for two consecutive complete strokes (open and close) for MOV 850C.

e. At least once per 60 months, during shutdown, by verifying that the battery capacity is at least 80% of the manufacturer's rating when subjected to a performance discharge test. This performance discharge test shall be performed subsequent to the satisfactory completion of the required battery service test.

Basis: The normal plant Emergency Power System is normally in continuous operation, and periodically tested.(1)

The tests specified above will be completed without any preliminary preparation or repairs which might influence the results of the test.

The tests will demonstrate that components which are not normally required will respond properly when required.

Reference: (1) Supplement No. 1 to Final Engineering Report and Safety Analysis, Section 3, Questions 6 and 8.