

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

SOUTHERN CALIFORNIA EDISON COMPANY
SAN DIEGO GAS & ELECTRIC COMPANY
THE CITY OF RIVERSIDE, CALIFORNIA
THE CITY OF ANAHEIM, CALIFORNIA

DOCKET NO. 50-362

SAN ONOFRE NUCLEAR GENERATING STATION, UNIT 3
FACILITY OPERATING LICENSE

License No. NPF-15

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for licenses filed by the Southern California Edison Company, San Diego Gas and Electric Company, the City of Riverside, California and the City of Anaheim, California (the licensees), as amended, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the San Onofre Nuclear Generating Station, Unit 3 (the facility), has been substantially completed in conformity with Construction Permit No. CPPR-98 and the application as amended, the provisions of the Act, and the regulations of the Commission;
 - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission;
 - D. There is reasonable assurance: (i) that the activities authorized by this operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the regulations of the Commission set forth in 10 CFR Chapter I;
 - E. The Southern California Edison Company* is technically qualified to engage in the activities authorized by this operating license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;

*The Southern California Edison Company is authorized to act as agent for the other co-owners and has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility.

- F. The licensees have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
- G. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public;
- H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Facility Operating License No. NPF-15, subject to the condition for protection of the environment set forth herein, is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied; and
- I. The receipt, possession, and use of source, byproduct, and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70.

2. Based on the foregoing findings, the Partial Initial Decision issued by the Atomic Safety and Licensing Board on January 11, 1982, and the Initial Decision issued by the Atomic Safety and Licensing Board on May 14, 1982 regarding this facility, Facility Operating License No. NPF-15 is hereby issued to the Southern California Edison Company, the San Diego Gas and Electric Company, the City of Riverside, California, and the City of Anaheim, California to read as follows:

- A. This license applies to the San Onofre Nuclear Generating Station, Unit 3, a pressurized water nuclear reactor and associated equipment (the facility), owned by the licensees. The facility is located in San Diego County, California, and is described in the Final Safety Analysis Report, as amended, through Amendment 30, and the Environmental Report, as amended, through Amendment 6.
- B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
 - (1) Southern California Edison Company, San Diego Gas and Electric Company, the City of Riverside, California, and the City of Anaheim, California to possess the facility at the designated location in San Diego County, California, in accordance with the procedures and limitations set forth in this license;
 - (2) Southern California Edison Company (SCE), pursuant to Section 103 of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location in San Diego County, California in accordance with the procedures and limitations set forth in this license.

- (3) SCE, pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;
- (4) SCE, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use at any time any byproduct, source and special nuclear materials as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (5) SCE, pursuant to the Act and 10 CFR Parts 30, 40, and 70 to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
- (6) SCE, pursuant to the Act and 10 CFR Parts 30, 40, and 70 to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

Southern California Edison Company (SCE) is authorized to operate the facility at reactor core power levels not in excess of 3390 megawatts thermal in accordance with the conditions specified herein and in Attachment 1 to this license. The preoperational tests, startup tests and other items identified in Attachment 1 to this license shall be completed as specified. Attachment 1 is hereby incorporated into this license. Pending Commission approval, this license is restricted to core power levels not to exceed five percent of full power (169.5 megawatts thermal).

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B attached hereto are hereby incorporated in this license. SCE shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Antitrust Conditions

SCE shall comply with the antitrust conditions delineated in Appendix C to this license.

(4) Containment Tendon Surveillance (Section* 3.8.1, SER, SSER #5)

Within two (2) years of the date of issuance of this license, SCE shall provide for NRC approval, and within three (3) years of the date of issuance of this license, SCE shall implement a tendon surveillance test program which will ensure full conformance with the provisions of Regulatory Guide 1.35 and Regulatory Guide 1.35.1. This tendon surveillance program shall include a specific program and commitments for re-tensioning of the tendons, such that the predicted prestressing force of each tendon will be greater than the required design prestressing force of the tendon for the entire plant life.

(5) Environmental Qualification (Section 3.11, SER, SSER #3, SSER #4)

- a. Prior to startup following the first refueling outage, the facility shall be in compliance with the provisions of NUREG-0528, "Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment," Revision 1, dated July 1981, for safety-related electrical equipment exposed to a harsh environment.
- b. Complete and auditable records shall be available and maintained at a central location which describe the environmental qualification status for all safety-related electrical equipment. Such records shall be updated and maintained current as equipment is replaced, further tested, or otherwise further qualified to document complete compliance.
- c. SCE shall implement and keep in effect at all times the environmental qualification maintenance procedures identified in the SCE letter of August 23, 1982, as modified by the NRC letter of August 30, 1982.

*The parenthetical notation following the title of many license conditions denotes the section of the Safety Evaluation Report and/or its supplements wherein the license condition is discussed.

- d. Prior to startup following the first refueling outage, SCE shall provide affirmation of implementation of the improved surveillance and improved maintenance program procedures.

(6) High Burnup Fission Gas Release (Section 4.2.2.2, SER)

Prior to beginning the cycle of reactor operation during which peak fuel pellet burnups will achieve greater than 20,000 megawatt days per metric ton of uranium, SCE shall provide revised analyses using fission gas release models acceptable to the NRC staff.

(7) Low Temperature Overpressurization Protection (Section 5.2.2.2, SER)

Prior to operation for more than five (5) effective full power years, SCE shall provide a report describing its reexamination of the Technical Specification requirements for steam generator/ reactor coolant system delta temperature and shutdown cooling system initiation temperature limits that are presently provided for overpressure protection. The report must either demonstrate that the current Technical Specification limits are still suitably conservative, or propose and justify revised limits.

(8) Volume Control Tank Control Logic (Section 7.3.5, SSER #4)

Prior to startup following the first refueling outage, the volume control tank outlet valve control logic shall be modified to ensure that the valve does not change position following safety injection actuation signal reset. In the interim, SCE shall maintain emergency procedures that require the volume control tank outlet valve to be placed in the manual mode prior to SIAS reset.

(9) Compliance with Regulatory Guide 1.97 (Section 7.5.1, SER, SSER #5)

Prior to startup following the first refueling outage, SCE shall comply with the recommendations of Revision 2 to Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident," as described in the SCE letter of May 13, 1982.

(10) Control System Failures (Section 7.7, SER, SSER #4)

By April 1, 1983, SCE shall provide an evaluation, for NRC staff review and approval, of control system failures caused by high energy line break, and by failures of any power sources, sensors, or sensor impulse lines which provide power or signals to two or more control systems. Implementation of any corrective action resulting from this evaluation shall be completed on a schedule acceptable to the NRC.

(11) Diesel Generator Modifications (Section 8.3.1, SER)

Prior to startup following the first refueling outage, SCE shall install a heavy duty turbocharger gear drive assembly on the emergency diesel generators.

(12) Fire Protection (Section 9.5.1, SER, SSER #4, SSER #5, Section 1.12, SSER #5)

- a. SCE shall maintain in effect and fully implement all provisions of the approved Fire Protection Plan as amended through Amendment 12 and the NRC staff's Fire Protection Review described in the SER, Supplements 4 and 5 to the SER, and in the Safety Evaluation issued with this license. In addition, SCE shall meet the technical requirements of Section III.G, "Fire Protection of Safe Shutdown Capability," III.J "Emergency Lighting," and III.O "Oil Collection System for Reactor Coolant Pump" of Appendix R to 10 CFR 50.
- b. Prior to exceeding five (5) percent power, SCE shall complete the installation of the following items and shall submit a license amendment request to add items 1, 3 and 5 to the Technical Specifications (Appendix A to this license).
 1. Provide fire detection in fire zones 11, 28, 45, 62, and 72.
 2. Install metal shrouding on the AFW turbine lube oil system.
 3. Install additional sprinklers in the AFW pump room.
 4. Provide a 1 1/2 hour fire damper for one of the three charging pump rooms.
 5. Provide fire detection and portable extinguishers in the technical support center.

(13) Turbine Disc Inspection (Section 10.2.2, SER)

Prior to startup following the second refueling outage, the bores of the low pressure turbine disc shall be inspected for flaws using ultrasonic testing. The results of the inspection shall be submitted to the NRC staff.

(14) Radioactive Waste System (Section 11.1, SER, SSER #5)

"Wet" solid radwaste shall not be shipped from the facility until the NRC has approved the waste solidification Process Control Program.

(15) Purge System Monitors (Section 11.3, SER, SSER #5)

Prior to startup following the first refueling outage, equipment having the capability to continuously monitor and sample the containment purge exhaust directly from the purge stack shall be operable.

(16) Initial Test Program (Section 14, SER)

SCE shall conduct the post-fuel loading initial test program (set forth in Section 14 of the San Onofre Units 2 and 3 Final Safety Analysis Report, as amended, through Amendment 30) without making any major modifications to this program unless such modifications have been identified and have received prior NRC approval. Major modifications are defined as:

- a. Elimination of any test identified in Section 14 of the Final Safety Analysis Report, as amended, as being essential.
- b. Modification of test objectives, methods, or acceptance criteria for any test identified in Section 14 of the Final Safety Analysis Report, as amended, as being essential.
- c. Performance of any test at a power level different than that described in the test procedure.
- d. Failure to complete any tests included in the described program (planned or scheduled for power levels up to the authorized power level).

(17) NUREG-0727 Conditions (Section 22)

Each of the following conditions shall be completed to the satisfaction of the NRC. Each item references the related subpart of Section 22 of the SER and/or its supplements.

a. Procedures for Transients and Accidents (I.C.1, SSER #1, SSER #2, SSER#5)

Emergency procedures based on guidelines approved by the NRC shall be implemented prior to startup following the first refueling outage that occurs six months or more after NRC approval of the guidelines.

b. Procedures for Verifying Correct Performance of Operating Activities (I.C.6, SSER #1)

Prior to fuel loading, SCE shall implement a system for verifying the correct performance of operating activities, and shall keep the system in effect thereafter.

c. Control Room Design Review (I.D.1, SSER #1)

The control room modifications identified as required in Section 22, Item I.D.1 of Supplement No. 1 to the SER shall be installed and made operational on the schedules identified for each modification in Supplement No. 1 to the SER.

d. Post-Accident Sampling (II.B.3, SSER #1, SSER #4, Section 1.12, SSER #5)

Prior to exceeding five (5) percent power, the post-accident sampling system shall be operable and the post-accident sampling program shall be fully implemented.

e. Direct Indication of Safety Valve Position (II.D.3, SSER #1)

The safety valve position indication system shall be environmentally and seismically qualified consistent with the component or system to which it is attached, and documentation of this shall be maintained.

f. AFW Pump 48-hour Endurance Test (II.E.1.1, SSER #1)

Prior to exceeding five (5) percent power, SCE shall conduct a 48-hour endurance test of all auxiliary feedwater pumps. The results of the test shall be submitted to the NRC staff.

g. Emergency Power Supply for Pressurizer Heaters (II.E.3.1, SSER #1, SSER #5)

SCE shall maintain in effect procedures to preclude the automatic reapplication of pressurizer heaters to Class 1E buses upon SIAS reset.

h. ICC Instrumentation (II.F.2, SSER #1, SSER #2, SSER #4)

Prior to fuel loading, the following items shall be completed, and shall be maintained thereafter:

1. The subcooling monitors shall be modified to include the maximum unheated junction thermocouple temperature and the representative core exit thermocouple input.
2. Incore detector assemblies (core exit thermocouples and associated cabling) shall be environmentally qualified and shall have seismic and environmentally qualified Class 1E connectors.
3. Qualified cables shall be installed for the core exit thermocouples.
4. The heated junction thermocouple probe and associated process instrumentation shall be installed.

Prior to startup following the first refueling outage, the heated junction thermocouple system and the safety parameter display system shall be operable and shall be maintained operable thereafter.

i. Plant-Specific Calculations for Compliance with 10 CFR Section 50.46 (II.K.3.31, SSER #1)

Within one year after model revisions are approved by the NRC, SCE shall provide a supplemental plant-specific analysis to verify compliance with 10 CFR 50.46, using the revised models developed under Item II.K.3.30.

j. Improving Licensee Emergency Preparedness (III.A.2, SSER #1, SSER #5)

1. By January 1, 1983, the upgraded emergency support facilities shall be operational.
2. SCE shall maintain interim emergency support facilities (Technical Support Center, Operations Support Center and the Emergency Operations Facility) until the upgraded facilities are completed.

(18) Emergency Preparedness Conditions

a. Conditions of ASLB Initial Decision of May 14, 1982

By February 17, 1983, SCE shall:

1. Provide evidence that both meteorological towers and the Health Physics Computer System are fully installed and operational. SCE shall maintain offsite assessment and monitoring capabilities, essentially as described in the hearing (see Initial Decision, Section IV, Paragraph D.1-12, pp. 136-140), at no less than that level of readiness, pending development of satisfactory capability of offsite response Paragraph D.27, pp. 145-146, and Section V, Paragraph B, pp. 213-214).
2. Provide an assessment of whether public information regarding emergency planning should also be presented in Spanish (see Initial Decision, Section IV, Paragraph F.32, pp. 168, and Section V, Paragraph C.2 pp. 215).
3. Provide plans demonstrating that SCE and offsite jurisdictions have developed and stand ready to implement arrangements for medical services for members of the offsite public. Documentation of the arrangements and provisions made shall be provided to the Atomic Safety and Licensing Board as well as to the NRC staff (see Initial Decision, Section III, pp. 43-47, and Section V, Paragraph D, pp. 216-217).
4. Provide revised plans demonstrating that the "extended" Emergency Planning Zone (EPZ) concept has been deleted from the San Onofre onsite and offsite plans and the Plume Exposure Pathway EPZ boundary has been extended, along with siren coverage, to Dana Point and all of San Juan Capistrano (see Initial Decision, Section IV, Paragraph D.25, pp. 98, and Section V, Paragraph C.5, pp. 216; see also Order (Making Clarifying Change in Initial Decision) dated May 25, 1982).

b. Completion of Emergency Preparedness Requirements

In the event that the NRC finds that the lack of progress in completion of the procedures in the Federal Emergency Management Agency's proposed rules, 44 CFR 350, is an indication that a major substantive problem exists in achieving or maintaining an adequate state of preparedness, the provisions of 10 CFR 50.54(s)(2) will apply.

(19) RCS Depressurization System (PORV's)

By June 30, 1983, SCE shall provide a complete response to the NRC letter of March 27, 1982, including information relative to the capability of San Onofre 3 for rapid depressurization and decay heat removal without power operated relief valves (PORVs).

(20) Qualification of Auxiliary Feedwater (AFW) Pump Motor Bearings

Prior to exceeding 5% of full power, SCE shall submit a proposed hardware modification and schedule for implementation that will increase the reliability of the AFW motor-driven pumps in the event of a break in the high energy line feeding the steam-driven pump. Prior to the installation of a hardware modification acceptable to the NRC staff, SCE shall perform an augmented in-service inspection of the steam line in accordance with SCE's letter of July 12, 1982.

(21) Surveillance Program (Section 1.12, SSER #5)

Prior to entering any operational mode for the first time, including initial fuel loading, SCE shall:

- a. Have completed a review of the surveillance procedures applicable to the change of mode, and determined that the procedures demonstrate the operability of the required systems with respect to all acceptance criteria defined in the Technical Specifications.
- b. Have dispatched written certification to the NRC Regional Administrator, Region V, that the actions defined in (a), above, have been completed for the mode or modes to be entered.

(22) Auxiliary Building Ventilation System

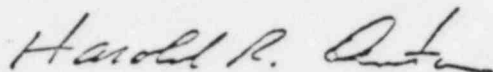
SCE shall complete all modifications to the auxiliary building ventilation system described in the November 5, 1982 letter from H. Ray, SCE, to R. Engelken, NRC, on the schedule proposed in the November 5, 1982 letter.

- D. Exemptions to certain requirements of Appendices G, H and J to 10 CFR Part 50 are described in the Office of Nuclear Reactor Regulation's Safety Evaluation Report. These exemptions are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest. Therefore, these exemptions are hereby granted. The facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission.

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- E. SCE shall maintain in effect and fully implement all provisions of the Commission-approved physical security and guard training and qualification plans, including amendments made pursuant to the authority of 10 CFR Section 50.54(p). The approved plans, which contain 10 CFR 73.21 information, are collectively entitled "Physical Security Plan, San Onofre Nuclear Generation Station, Units 1, 2, and 3," (which includes the contingency plan as Chapter 8) dated March 9, 1981, as revised July 22, 1981, November 30, 1981, December 30, 1981, January 25, 1982, June 30, 1982, and August 18, 1982, including amendments and changes dated December 12, 1979 and August 14, 1981; and the "Guard Training and Qualification Plan, San Onofre Nuclear Generating Station, Units 1, 2, 3" dated August 23, 1979, as revised September 3, 1980 and December 15, 1981. The identification of vital areas and measures used to control access to these areas, as described in the physical security plan, may be subject to amendments in the future based upon a confirmatory evaluation of the plant to determine those areas where acts of sabotage might cause a release of radionuclides in sufficient quantities to result in dose rates equal to or exceeding 10 CFR Part 100 limits.
- F. This license is subject to the following additional condition for the protection of the environment:
- Before engaging in activities that may result in a significant adverse environmental impact that was not evaluated or that is significantly greater than that evaluated in the Final Environmental Statement, SCE shall provide a written notification of such activities to the NRC Office of Nuclear Reactor Regulation and receive written approval from that office before proceeding with such activities.
- G. SCE shall report any violations of the requirements contained in Section 2, Items C.(1), C.(3) through C.(22), E., and F. of this license within 24 hours by telephone and confirm by telegram, mailgram, or facsimile transmission to the NRC Regional Administrator, Region V, or his designee, no later than the first working day following the violation, with a written followup report within fourteen (14) days.
- H. SCE shall notify the Commission, as soon as possible but not later than one hour, of any accident at this facility which could result in an unplanned release of quantities of fission products in excess of allowable limits for normal operation established by the Commission.
- I. SCE shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- J. This license is effective as of the date of issuance and shall expire at midnight on October 18, 2013.

- K. In accordance with the Commission's direction in its Statement of Policy, Licensing and Regulatory Policy and Procedures for Environmental Protection; Uranium Fuel Cycle Impacts, October 29, 1982, this license is subject to the final resolution of the pending litigation involving Table S-3. See Natural Resources Defense Council v. NRC, No. 74-1586 (D. C. Cir., April 27, 1982).

FOR THE NUCLEAR REGULATORY COMMISSION



Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Attachments:

1. Attachment 1
2. Appendix A (Technical Specifications)
3. Appendix B (Environmental Protection Plan)
4. Appendix C (Antitrust Conditions)

Date of Issuance: NOV 15 1982

TO
NPF-15

The following item must be completed prior to initial criticality:

The deficiency identified by the SCE letter, dated July 19, 1982, to R. H. Engelken from Dr. L.T. Papay regarding discrepant inputs to the Core Protection Calculator from Reactor Coolant Pump shaft speed and Control Element Assembly position indication shall be corrected.