



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

ARIZONA PUBLIC SERVICE COMPANY

SALT RIVER PROJECT AGRICULTURAL IMPROVEMENT AND POWER DISTRICT

EL PASO ELECTRIC COMPANY

SOUTHERN CALIFORNIA EDISON COMPANY

PUBLIC SERVICE COMPANY OF NEW MEXICO

LOS ANGELES DEPARTMENT OF WATER AND POWER\*

SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY

DOCKET NO. STN 50-528

PALO VERDE NUCLEAR GENERATING STATION, UNIT 1

FACILITY OPERATING LICENSE

License No. NPF-41

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
  - A. The application for license filed by Arizona Public Service Company, on behalf of itself and the Salt River Project Agricultural Improvement and Power District, El Paso Electric Company, Southern California Edison Company, Public Service Company of New Mexico, Los Angeles Department of Water and Power\*, and Southern California Public Power Authority (licensees), complies with the standards and requirements of the Atomic Energy Act of 1954, as amended, 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 Palo Verde Nuclear Generating Station, Unit 1 (facility) has been substantially completed in conformity with Construction Permit No. CPPR-141 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 (except as exempted from compliance in Section 2.D below);

\*Los Angeles Department of Water and Power will be included as an owner in this license on the date it officially acquires an ownership interest in the facility which is expected to occur shortly after Palo Verde Nuclear Generating Station, Unit 1 achieves commercial operation.

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- 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 Commission's regulations set forth in 10 CFR Chapter I (except as exempted from compliance in Section 2.D below);
  - E. Arizona Public Service 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;
  - 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 after considering available alternatives, the issuance of this Facility Operating License No. NPF-41, subject to the conditions for protection of the environment set forth in the Environmental Protection Plan attached as Appendix B, 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. Pursuant to approval by the Nuclear Regulatory Commission at a meeting held on May 30, 1985, the license for fuel loading and low power testing, License No. NPF-34, issued on December 31, 1984, is superseded by Facility Operating License No. NPF-41 hereby issued to the Arizona Public Service Company, Salt River Project Agricultural Improvement and Power District, El Paso Electric Company, Southern California Edison Company, Public Service Company of New Mexico, Los Angeles Department of Water and Power, and Southern California Public Power Authority (licensees) to read as follows:

\*Arizona Public Service Company is authorized to act as agent for Salt River Project Agricultural Improvement and Power District, El Paso Electric Company, Southern California Edison Company, Public Service Company of New Mexico, Los Angeles Department of Water and Power, and Southern California Public Power Authority and has exclusive responsibility and control over the physical construction, operation and maintenance of the facility.

- A. This license applies to the Palo Verde Nuclear Generating Station, Unit 1, a pressurized water reactor and associated equipment (facility) owned by the licensees. The facility is located on the licensees' site in Maricopa County, Arizona and is described in the licensees' Final Safety Analysis Report, as supplemented and amended through Amendment No. 14; in the related CESSAR Final Safety Analysis Report, as supplemented and amended through Amendment No. 8; and in their Environmental Report, as supplemented and amended through Supplement No. 4.
- B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
- (1) Pursuant to Section 103 of the Act and 10 CFR Part 50, Arizona Public Service Company, Salt River Project Agricultural Improvement and Power District, El Paso Electric Company, Southern California Edison Company, Public Service Company of New Mexico, Los Angeles Department of Water and Power, and Southern California Public Power Authority to possess, and Arizona Public Service Company (APS) to use and operate the facility at the designated location in Maricopa County, Arizona, in accordance with the procedures and limitations set forth in this license;
  - (2) Pursuant to the Act and 10 CFR Part 70, APS 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 licensees' Final Safety Analysis Report, as supplemented and amended through Amendment No. 14 and the CESSAR Final Safety Analysis Report as supplemented and amended through Amendment No. 8;
  - (3) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, APS to receive, possess and use at any time any byproduct, source and special nuclear material 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;
  - (4) Pursuant to the Act and 10 CFR Part 30, 40 and 70, APS 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
  - (5) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, APS to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.



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C. 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

Arizona Public Service Company (APS) is authorized to operate the facility at reactor core power levels not in excess of 3800 megawatts thermal (100% power) in accordance with the conditions specified herein and in Attachment 1 to this license. The items identified in Attachment 1 to this license shall be completed as specified. Attachment 1 is hereby incorporated into this license.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. APS shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Antitrust Conditions

This license is subject to the antitrust conditions delineated in Appendix C to this license.

(4) Operating Staff Experience Requirements

APS shall have operators on each shift who meet the requirements described in Attachment 2. Attachment 2 is hereby incorporated into this license.

(5) Post-Fuel-Loading Initial Test Program (Section 14, SER and SSER 2)\*

Any changes in the Initial Test Program described in Section 14 of the FSARs (Palo Verde and CESSAR) made in accordance with the provisions of 10 CFR 50.59 shall be reported in accordance with 50.59(b) within one month of such change.

\*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.



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(6) Environmental Qualification (Section 3.11, SSER 7 and SSER 8)

Prior to November 30, 1985, APS shall environmentally qualify all electrical equipment according to the provisions of 10 CFR 50.49.

(7) Fire Protection Program (Section 9.5.1, SSER 6, SSER 7, and SSER 8)

- (a) APS shall maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report for the facility through Amendment No. 14, and as provided in the SER through Supplement 8, subject to provisions (b) & (c) below.
- (b) APS may make no change in features of the approved fire protection program which would decrease the level of fire protection in the plant without prior approval of the Commission. To make such a change APS must submit an application for license amendment pursuant to 10 CFR 50.90.
- (c) APS may make changes to features of the approved fire protection program which do not decrease the level of fire protection without prior Commission approval, provided:
  - (i) such changes do not otherwise involve a change in a license condition or technical specification or result in an unreviewed safety question (see 10 CFR 50.59), and
  - (ii) such changes do not result in failure to carry out the fire protection program approved by the Commission prior to license issuance.

APS shall maintain, in an auditable form, a current record of all such changes including an analysis of the effects of the change on the fire protection program and shall make such records available to NRC inspectors upon request. All changes to the approved program made without prior Commission approval shall be reported annually to the Director of the Office of Nuclear Reactor Regulation, together with supporting analyses.

(8) Emergency Preparedness

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



(9) Results of Piping Vibration Test Program (Section 3.9.2, SER)

Three months following completion of the piping vibration test program performed during initial startup, APS shall submit a summary of the results which demonstrate that the vibration of piping systems is within acceptable levels.

(10) Response to Salem ATWS Event (Section 7.2, SSER 7, and Section 1.11, SSER 8)

APS shall complete implementation of the requirements of Generic Letter 83-28 on a schedule which is consistent with that given in its letter dated April 19, 1985.

(11) Supplement No. 1 to NUREG-0737 Requirements

APS shall complete the emergency response capabilities as required by Attachment 3.

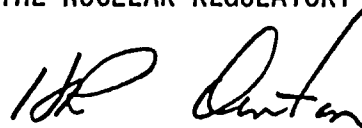
(12) Radiochemistry Laboratory (Section 7.3.1.5(3), Emergency Plan).

APS shall maintain and operate the Palo Verde, Unit 2 radio-chemistry laboratory as part of the Palo Verde, Unit 1 facility under this Part 50 license authorization, in accordance with the commitments made by letter ANPP-30937, dated October 24, 1984, until the Unit 2 facility is issued a Part 50 license.

- D. The facility requires an exemption from Paragraph III.D.2(b)(ii) of Appendix J to 10 CFR Part 50 (Section 6.2.6, SSER 7). This exemption is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest. This exemption is, therefore, hereby granted pursuant to 10 CFR 50.12. With the granting of this exemption, the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission.
- E. APS shall fully implement and maintain in effect all provisions of the Commission approved physical security, guard training and qualification, and safeguards contingency plans, including all amendments and revisions made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p), which are part of this license. These approved plans, which contain Safeguards Information protected under 10 CFR 72.21, are entitled: "Palo Verde Nuclear Generating Station Security Plan," including a Chapter 8 contingency plan, and "Palo Verde Nuclear Generating Station Training and Qualification Plan." The Palo Verde Nuclear Generating Station Safeguards contingency Plan is integrated into the Physical Security Plan.

- F. Except as otherwise provided in the Technical Specifications or the Environmental Protection Plan, APS shall report any violations of the requirements contained in Section 2.C of this license in the following manner: Initial notification shall be made within 24 hours in accordance with the provisions of 10 CFR 50.72 with written follow-up within 30 days in accordance with the procedures described in 10 CFR 50.73(b), (c) and (e);
- G. The licensees 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; and
- H. This license is effective as of the date of issuance and shall expire at midnight on December 31, 2024.

... FOR THE NUCLEAR REGULATORY COMMISSION



Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

Enclosures:

1. Attachment 1 -  
Requirements for Initial Mode 1 Entry
2. Attachment 2 -  
Operating Staff Experience Requirements
3. Attachment 3 -  
Emergency Response Capabilities
4. Appendix A -  
Technical Specifications
5. Appendix B -  
Environmental Protection Plan
6. Appendix C -  
Antitrust Conditions

Date of Issuance: June 1, 1985



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ATTACHMENT 1

PALO VERDE NUCLEAR GENERATING STATION, UNIT 1  
OPERATING LICENSE NPF-41

This attachment identifies items which must be completed to the NRC staff's satisfaction in accordance with the schedule identified below.

Surveillance Program

Prior to entering Mode 1 for the first time, APS 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 notification to the NRC Regional Administrator, Region V, that the action defined in (a), above, has been completed for Mode 1.
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## ATTACHMENT 2

PALO VERDE NUCLEAR GENERATING STATION, UNIT 1  
OPERATING LICENSE NPF-41OPERATING STAFF EXPERIENCE REQUIREMENTS

APS shall have a licensed senior operator on each shift who has had at least six months of hot operating experience on a same type plant, including at least six weeks at power levels greater than 20% of full power, and who has had startup and shutdown experience. For those shifts where such an individual is not available on the plant staff, an advisor shall be provided who has had at least four years of power plant experience, including two years of nuclear plant experience, and who has had at least one year of experience on shift as a licensed senior operator at a similar type facility. Use of advisors who were licensed only at the RO level will be evaluated on a case-by-case basis. Advisors shall be trained on plant procedures, technical specifications and plant systems, and shall be examined on these topics at a level sufficient to assure familiarity with the plant. For each shift, the remainder of the shift crew shall be trained in the role of the advisors. Advisors, or fully trained and qualified replacements, shall be retained until the experience levels identified in the first sentence above have been achieved. The names of any replacement advisors shall be certified by APS prior to these individuals being placed on shift. The NRC shall be notified at least 30 days prior to the date APS proposes to release the advisors from further service.

ATTACHMENT 3

PALO VERDE NUCLEAR GENERATING STATION, UNIT 1  
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EMERGENCY RESPONSE CAPABILITIES

APS shall complete the following requirements of NUREG-0737 Supplement No. 1 on the schedule noted below:

- (a) Three months after the staff issues its evaluation of Revision 2 to the CE Owners Group emergency procedure guidelines (CEN-152), dated May 8, 1984, APS shall provide a schedule for revising (i) the Procedure Generation Package to be in conformance with Revision 2 to CEN-152, as modified by the staff's evaluation, and (ii) the emergency operating procedures to be in conformance with the revised Procedures Generation Package.
- (b) Prior to August 31, 1985, APS shall submit for review and approval a Supplemental DCRDR Summary Report which provides the information described in SSER 7.
- (c) Prior to startup following the first refueling outage, APS shall implement actions to correct HEDs A-5.14, A-5.9, B-5.9, B-5.14 and deferred HEDs A-1.2, A-1.3, 64, 100, 101b, 138, 172, and A-5.16 as described in APS letter, dated October 29, 1984.
- (d) By June 28, 1985, APS shall have installed, tested and made functional the primary system to be used for post accident dose assessment (the Chemical and Radiological Analysis Computer system or an alternate system which meets the NRC staff's requirements).
- (e) After completion of the verification and validation program for the Safety Parameter Display System (SPDS), APS shall provide a date for the NRC staff's on-site audit of the SPDS. The system shall not be used by the operators for accident evaluation until the NRC staff has approved its use.

