

JAN 27 1986

Docket Nos.: 50-528
and 50-529

Mr. E. E. Van Brunt, Jr.
Executive Vice President
Arizona Nuclear Power Project
Post Office Box 52034
Phoenix, Arizona 85072-2034

Dear Mr. Van Brunt:

Subject: Issuance of Amendment No. 5 to Facility Operating License NPF-41
for Palo Verde Unit 1, and Amendment No. 1 to Facility Operating
License NPF-46 for Palo Verde Unit 2

The Commission has issued the enclosed Amendment No. 5 to Facility Operating License No. NPF-41 for the Palo Verde Nuclear Generating Station, Unit 1, and Amendment No. 1 to Facility Operating License NPF-46 for Palo Verde Nuclear Generating Station, Unit 2. The amendments consist of a change to the Technical Specifications in response to your application transmitted by letter dated November 19, 1985.

The amendments revised Technical Specification 3.6.4.2 to each license to permit an exception to the provisions of Specification 3.0.4 during the time that environmental qualification modifications are being made to the hydrogen recombiner system when the containment hydrogen purge system described in Specification 3.6.4.3 is operable. This exception expires on March 30, 1986, or when the above modifications are complete, whichever occurs first.

A copy of the Safety Evaluation supporting the amendments is also enclosed.

Sincerely,

ORIGINAL SIGNED BY

George W. Knighton, Director
PWR Project Directorate No. 7
Division of PWR Licensing-B

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Enclosures:

1. Amendment No. 5 to NPF-41
2. Amendment No. 1 to NPF-46
3. Safety Evaluation

cc: See next page

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EALictra/yt
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OELDD
LDewey
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1/21/86

Mr. E. E. Van Brunt, Jr.
Arizona Nuclear Power Project

Palo Verde

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

ARIZONA PUBLIC SERVICE COMPANY, ET AL.

DOCKET NO. STN 50-528

PALO VERDE NUCLEAR GENERATING STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 5
License No. NPF-41

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment, dated November 19, 1985, by the Arizona Public Service Company (APS) 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 (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 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;
 - 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 enclosure to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-41 is hereby amended to read as follows:

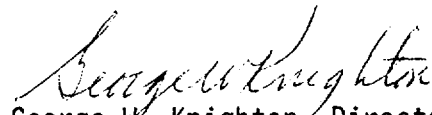
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(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 5, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in this license. APS shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



George W. Knighton, Director
PWR Project Directorate No. 7
Division of PWR Licensing-B

Enclosure:
Change to the Technical
Specifications

Date of Issuance: **JAN 27 1986**

JAN 27 1986

ENCLOSURE TO LICENSE AMENDMENT NO. 5

FACILITY OPERATING LICENSE NO. NPF-41

DOCKET NO. STN 50-528

Replace the following page of the Appendix A Technical Specifications with the enclosed page. The revised page is identified by Amendment number and contains vertical lines indicating the area of change. Also to be replaced is the following overleaf page to the amended page.

Amendment Page

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Overleaf Page

3/4 6-38

CONTAINMENT SYSTEMS

ELECTRIC HYDROGEN RECOMBINERS

LIMITING CONDITION FOR OPERATION

3.6.4.2 Two portable independent containment hydrogen recombiner systems shared among the three units shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

With one hydrogen recombiner system inoperable, restore the inoperable system to OPERABLE status within 30 days or meet the requirements of Specification 3.6.4.3, or be in at least HOT STANDBY within the next 6 hours.*

SURVEILLANCE REQUIREMENTS

4.6.4.2 Each hydrogen recombiner system shall be demonstrated OPERABLE:

- a. At least once per 6 months by:
 1. Verifying through a visual examination that there is no evidence of abnormal conditions within the recombiner enclosure and control console.
 2. Operating the air blast heat exchanger fan motor and enclosed blower motor continuously for at least 30 minutes.
- b. At least once per year by:
 1. Performing a CHANNEL CALIBRATION of recombiner instrumentation.
 2. Performing a "Low-Level Test-Heater Power Off" and "Low-Level Test-Heater Power On" test and verifying that the recombiner temperature increases to and is maintained at $600 \pm 25^{\circ}\text{F}$ for at least 1 hour. With power off and a simulated input signal of 1280°F , verify the OPERABILITY of all control circuits. When this test is conducted, the air blast heat exchanger fan motor and enclosed blower motor shall be operated continuously for at least 30 minutes.
- c. At least once per 5 years by performing a Recombiner System "High-Level Test" and verifying that the recombiner temperature increases to and is maintained at $1200 \pm 50^{\circ}\text{F}$ for at least one hour.

*Prior to March 30, 1986 or until the completion of the environmental qualification modifications to the hydrogen recombiner system, whichever occurs first, the provisions of Specification 3.0.4 are not applicable during implementation of the environmental qualification modifications to the hydrogen recombiner system when the containment hydrogen purge cleanup system described in Specification 3.6.4.3 is OPERABLE.

CONTAINMENT SYSTEMS

HYDROGEN PURGE CLEANUP SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.4.3 A containment hydrogen purge cleanup system, shared among the three units, shall be OPERABLE and capable of being powered from a minimum of one OPERABLE emergency bus.

APPLICABILITY: MODES 1* and 2.*

ACTION:

With the containment hydrogen purge cleanup system inoperable and one hydrogen recombiner OPERABLE as determined by Specification 4.6.4.2, restore the hydrogen purge cleanup system to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.6.4.3 The hydrogen purge cleanup system shall be demonstrated OPERABLE:

- a. At least once per 31 days by initiating flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 15 minutes.
- b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the system by:
 1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is 50 scfm \pm 10%.
 2. Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978.

*With less than two hydrogen recombiners OPERABLE.



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

ARIZONA PUBLIC SERVICE COMPANY, ET AL.

DOCKET NO. STN 50-529

PALO VERDE NUCLEAR GENERATING STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 1
License No. NPF-46

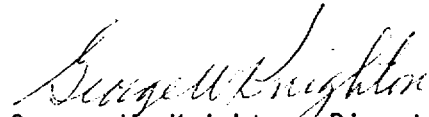
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment, dated November 19, 1985, by the Arizona Public Service Company (APS) on behalf of itself and the Salt River Project Agricultural Improvement and Power District, El Paso Electric Company, Southern 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 (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 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;
 - 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 enclosure to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-46 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 1, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in this license. APS shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



George W. Knighton, Director
PWR Project Directorate No. 7
Division of PWR Licensing-B

Enclosure:
Change to the Technical
Specifications

Date of Issuance: ~~JAN~~ 27 1986

JAN 27 1986

ENCLOSURE TO LICENSE AMENDMENT NO. 1

FACILITY OPERATING LICENSE NO. NPF-46

DOCKET NO. STN 50-529

Replace the following page of the Appendix A Technical Specifications with the enclosed page. The revised page is identified by Amendment number and contains vertical lines indicating the area of change. Also to be replaced is the following overleaf page to the amended page.

Amendment Page

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Overleaf Page

3/4 6-38

CONTAINMENT SYSTEMS

ELECTRIC HYDROGEN RECOMBINERS

LIMITING CONDITION FOR OPERATION

3.6.4.2 Two portable independent containment hydrogen recombiner systems shared among the three units shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

With one hydrogen recombiner system inoperable, restore the inoperable system to OPERABLE status within 30 days or meet the requirements of Specification 3.6.4.3, or be in at least HOT STANDBY within the next 6 hours.*

SURVEILLANCE REQUIREMENTS

4.6.4.2 Each hydrogen recombiner system shall be demonstrated OPERABLE:

- a. At least once per 6 months by:
 1. Verifying through a visual examination that there is no evidence of abnormal conditions within the recombiner enclosure and control console.
 2. Operating the air blast heat exchanger fan motor and enclosed blower motor continuously for at least 30 minutes.
- b. At least once per year by:
 1. Performing a CHANNEL CALIBRATION of recombiner instrumentation.
 2. Performing a "Low-Level Test-Heater Power Off" and "Low-Level Test-Heater Power On" test and verifying that the recombiner temperature increases to and is maintained at $600 \pm 25^{\circ}\text{F}$ for at least one hour. With power off and a simulated input signal of 1280°F , verify the OPERABILITY of all control circuits. When this test is conducted, the air blast heat exchanger fan motor and enclosed blower motor shall be operated continuously for at least 30 minutes.
- c. At least once per 5 years by performing a Recombiner System "High-Level Test" and verifying that the recombiner temperature increases to and is maintained at $1200 \pm 50^{\circ}\text{F}$ for at least one hour.

*Prior to March 30, 1986 or until the completion of the environmental qualification modifications to the hydrogen recombiner system, whichever occurs first, the provisions of Specification 3.0.4 are not applicable during implementation of the environmental qualification modifications to the hydrogen recombiner system when the containment hydrogen purge cleanup system described in Specification 3.6.4.3 is OPERABLE.

CONTAINMENT SYSTEMS

HYDROGEN PURGE CLEANUP SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.4.3 A containment hydrogen purge cleanup system, shared among the three units, shall be OPERABLE and capable of being powered from a minimum of one OPERABLE emergency bus.

APPLICABILITY: MODES 1* and 2*.

ACTION:

With the containment hydrogen purge cleanup system inoperable and one hydrogen recombiner OPERABLE as determined by Specification 4.6.4.2, restore the hydrogen purge cleanup system to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.6.4.3 The hydrogen purge cleanup system shall be demonstrated OPERABLE:

- a. At least once per 31 days by initiating flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 15 minutes.
- b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the system by:
 1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is 50 scfm \pm 10%.
 2. Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978.

*With less than two hydrogen recombiners OPERABLE.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 5 TO FACILITY OPERATING LICENSE NO. NPF-41
AND AMENDMENT NO. 1 TO FACILITY OPERATING LICENSE NO. NPF-46
ARIZONA PUBLIC SERVICE COMPANY, ET AL.
PALO VERDE NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2
DOCKET NOS. STN 50-528 AND STN 50-529

1.0 INTRODUCTION

By letter dated November 19, 1985, the Arizona Public Service Company (APS) on behalf of itself, the Salt River Project Agricultural Improvement and Power District, Southern California Edison Company, EL Paso Electric Company, Public Service Company of New Mexico, Los Angeles Department of Water and Power, and Southern California Public Power Authority (licensees), requested a one-time change to the Technical Specifications for the Palo Verde Nuclear Generating Station, Units 1 and 2 (Appendices A to Facility Operating Licenses NPF-41 and NPF-46, respectively). The application requests that for Specification 3.6.4.2 on hydrogen recombiners, an exception to the provisions of Specification 3.0.4 be granted during the time (not to exceed March 30, 1986) that environmental qualification modifications are being made to the hydrogen recombiner system when the containment hydrogen purge system described in Specification 3.6.4.3 is operable.

2.0 DISCUSSION

Palo Verde Units 1 and 2 are currently completing the environmental qualification testing for the hydrogen recombiner system, specifically the control panels for the system. Upon completion, APS will replace the existing panels at the plant with the qualified panels.

The function of the hydrogen recombiner system is to maintain the hydrogen concentration inside containment below its flammable limit in the event of a postulated loss-of-coolant accident. The system consists of two redundant hydrogen recombiners and is designed so that any one of the two recombiners can perform this function if the other recombiner is inoperable. In addition, the containment hydrogen purge system can also perform this function.

Technical Specification 3.6.4.2 provides the following action statement if one of the two hydrogen recombiners is inoperable:

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- (a) restore the inoperable recombiner to operable status within 30 days or be in at least hot standby within the next 6 hours, or
- (b) meet the requirements of Technical Specification 3.6.4.3 for operability of the containment hydrogen purge system.

Action item (b) above permits continued operation of the plant without restrictions. Hence modifications to the recombiners can be made while the plant is operating without restrictions when using action item (b). However, if the plant is not operating or has been shutdown, Technical Specification 3.0.4 prohibits the use of any action statement to resume power operation.

During the time that the modifications to the hydrogen recombiners are being made, APS requests that the provisions of Specification 3.0.4 be excluded from Specification 3.6.4.2. This exception would be in effect only during the modifications and when the containment hydrogen purge system described in Specification 3.6.4.3 is operable. The exception would expire upon completion of the modifications or on March 30, 1986, whichever comes first.

APS states that the proposed change will not increase the probability of occurrence or consequences of an accident previously evaluated, nor will it create the possibility of a different type of accident than previously evaluated, since the change will not result in operation of the plant outside of its current design basis (i.e., the plant will continue to have available one hydrogen recombiner and the containment hydrogen purge system to maintain hydrogen concentration inside containment below flammable limits in the event of an accident). Additionally, the proposed change will not reduce the margin of safety since it does not increase the out-of-service interval for the hydrogen recombiners.

3.0 EVALUATION

The staff has evaluated the licensees' request and concurs with the above APS evaluation that this one-time exception to the Technical Specifications will not create the possibility for an accident or malfunction of a different type than any evaluated previously. In addition, during the time that the change is in effect, plant operation will be conducted only while both a hydrogen recombiner and the containment hydrogen purge system are operable.

Therefore, the staff concludes that the one-time exception to Technical Specifications for the purpose of making environmental qualification modifications to the hydrogen recombiner system is acceptable.

4.0 CONTACT WITH STATE OFFICIAL

The Arizona Radiation Regulatory Agency has been advised of the proposed determination of no significant hazards consideration with regard to this request for one-time exception to the Technical Specifications. No comments were received.

5.0 ENVIRONMENTAL CONSIDERATIONS

These amendments involve changes in the installation or use of facility components located within the restricted area. The staff has determined that the amendments involve no significant increase in the amounts of any effluents that may be released offsite and that there is no significant increase in individual or commulative occupation radiation exposure. The Commission has previously issued proposed findings that the amendments involve no significant hazards consideration, and there has been no public comment on such findings. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR Sec. 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need to be prepared in connection with the issuance of these amendments.

6.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public. We, therefore, conclude that the proposed changes are acceptable.

Dated: **JAN 27 1986**

JAN 27 1986

ISSUANCE OF AMENDMENT NO. 5 TO FACILITY OPERATING
LICENSE NPF-41 FOR PALO VERDE UNIT 1 AND AMENDMENT NO. 1
TO FACILITY OPERATING LICENSE NPF-46 FOR PALO VERDE UNIT 2

DISTRIBUTION

Docket File 50-528/529

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Local PDR

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