

February 8, 2001

Mr. Gregg R. Overbeck
Senior Vice President, Nuclear
Arizona Public Service Company
P. O. Box 52034
Phoenix, AZ 85072-2034

SUBJECT: PALO VERDE NUCLEAR GENERATING STATION, UNITS 1, 2, AND 3 RE:
ISSUANCE OF AMENDMENTS ON POST ACCIDENT MONITORING
INSTRUMENTATION (TAC NOS. MA9477, MA9478, AND MA9479)

Dear Mr. Overbeck:

The Commission has issued the enclosed Amendment No. 131 to Facility Operating License No. NPF-41, Amendment No. 131 to Facility Operating License No. NPF-51, and Amendment No. 131 to Facility Operating License No. NPF-74 for the Palo Verde Nuclear Generating Station, Units 1, 2, and 3, respectively. The amendments consist of changes to the Technical Specifications (TSs) in response to the application dated June 16, 2000 (102-04458).

The amendments revise TS Table 3.3.10-1, "Post Accident Monitoring Instrumentation," to add the high pressure safety injection (HPSI) cold leg flow and HPSI hot leg flow instrumentation to the table.

A copy of the related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

/RA/

Jack N. Donohew, Senior Project Manager, Section 2
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. STN 50-528, STN 50-529,
and STN 50-530

Enclosures: 1. Amendment No. 131 to NPF-41
2. Amendment No. 131 to NPF-51
3. Amendment No. 131 to NPF-74
4. Safety Evaluation

cc w/encls: See next page

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** See previous concurrence

* No significant changes to EEIB memo dated 12/12/00

ADAMS ACCESSION NO: ML01

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| OFFICE | PDIV-2/PM | PDIV-D/LA | EEIB/SC | OGC | PDIV-2/SC |
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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

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cc w/encls: See next page

Palo Verde Generating Station, Units 1, 2, and 3

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

ARIZONA PUBLIC SERVICE COMPANY, ET AL.

DOCKET NO. STN 50-528

PALO VERDE NUCLEAR GENERATING STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 131
License No. NPF-41

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Arizona Public Service Company (APS or the licensee) 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 dated June 16, 2000, 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;
 - 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 2.C(2) of Facility Operating License No. NPF-41 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. 131 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. APS shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

3. This license amendment is effective as of the date of issuance and shall be implemented within 30 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Stephen Dembek, Chief, Section 2
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: February 8, 2001



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

ARIZONA PUBLIC SERVICE COMPANY, ET AL.

DOCKET NO. STN 50-529

PALO VERDE NUCLEAR GENERATING STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 131
License No. NPF-51

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Arizona Public Service Company (APS or the licensee) 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 dated June 16, 2000, 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;
 - 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 2.C(2) of Facility Operating License No. NPF-51 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. 131 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. APS shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

3. This license amendment is effective as of the date of issuance and shall be implemented within 30 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Stephen Dembek, Chief, Section 2
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: February 8, 2001



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

ARIZONA PUBLIC SERVICE COMPANY, ET AL.

DOCKET NO. STN 50-530

PALO VERDE NUCLEAR GENERATING STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 131
License No. NPF-74

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Arizona Public Service Company (APS or the licensee) 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 dated June 16, 2000, 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;
 - 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 2.C(2) of Facility Operating License No. NPF-74 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. 131, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. APS shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

3. This license amendment is effective as of the date of issuance and shall be implemented within 30 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Stephen Dembek, Chief, Section 2
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: February 8, 2001

ATTACHMENT TO LICENSE AMENDMENT NOS. 131, 131, AND 131

FACILITY OPERATING LICENSE NOS. NPF-41, NPF-51, AND NPF-74

DOCKET NOS. STN 50-528, STN 50-529, AND STN 50-530

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE

3.3.10-4

INSERT

3.3.10-4

Table 3.3.10-1 (page 1 of 1)
Post Accident Monitoring Instrumentation

| FUNCTION | REQUIRED CHANNELS | CONDITIONS REFERENCED FROM REQUIRED ACTION E.1 |
|---|-----------------------------------|--|
| 1. Logarithmic Neutron Flux | 2 | F |
| 2. Reactor Coolant System Hot Leg Temperature | 2 per loop | F |
| 3. Reactor Coolant System Cold Leg Temperature | 2 per loop | F |
| 4. Reactor Coolant System Pressure (wide range) | 2 | F |
| 5. Reactor Vessel Water Level | 2(d) | G |
| 6. Containment Sump Water Level (wide range) | 2 | F |
| 7. Containment Pressure (wide range) | 2 | F |
| 8. Containment Isolation Valve Position | 2 per penetration flow path(a)(b) | F |
| 9. Containment Area Radiation (high range) | 2 | G |
| 10. Containment Hydrogen Monitors | 2 | F |
| 11. Pressurizer Level | 2 | F |
| 12. Steam Generator Water Level (wide range) | 2 per steam generator | F |
| 13. Condensate Storage Tank Level | 2 | F |
| 14. Core Exit Temperature - Quadrant 1 | 2(c) | F |
| 15. Core Exit Temperature - Quadrant 2 | 2(c) | F |
| 16. Core Exit Temperature - Quadrant 3 | 2(c) | F |
| 17. Core Exit Temperature - Quadrant 4 | 2(c) | F |
| 18. Steam Generator Pressure | 2 per steam generator | F |
| 19. Reactor Coolant System Subcooling Margin Monitoring | 2 | F |
| 20. Reactor Coolant System Activity | 2 | G |
| 21. High Pressure Safety Injection Cold Leg Flow | 2 per loop | F |
| 22. High Pressure Safety Injection Hot Leg Flow | 2 | F |

(a) Not required for isolation valves whose associated penetration is isolated by at least one closed and de-activated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured.

(b) Only one position indication channel is required for penetration flow paths with only one installed control room indication channel.

(c) A channel consists of two or more core exit thermocouples.

(d) A channel is eight sensors in a probe. A channel is OPERABLE if four or more sensors, two or more in the upper four and two or more in the lower four, are OPERABLE.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 131 TO FACILITY OPERATING LICENSE NO. NPF-41,
AMENDMENT NO. 131 TO FACILITY OPERATING LICENSE NO. NPF-51,
AND AMENDMENT NO. 131 TO FACILITY OPERATING LICENSE NO. NPF-74
ARIZONA PUBLIC SERVICE COMPANY, ET AL.
PALO VERDE NUCLEAR GENERATING STATION, UNITS 1, 2, AND 3
DOCKET NOS. STN 50-528, STN 50-529, AND STN 50-530

1.0 INTRODUCTION

By application dated June 16, 2000, the Arizona Public Service Company (the licensee) requested changes to the Technical Specifications (TSs) for the Palo Verde Nuclear Generating Station, Units 1, 2, and 3 (Palo Verde). The licensee submitted this request 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. The proposed changes would revise TS Table 3.3.10-1, "Post Accident Monitoring Instrumentation," by adding the high pressure safety injection (HPSI) cold leg flow and HPSI hot leg flow instrumentation to the table.

2.0 BACKGROUND

On June 18, 1985, the staff issued a Safety Evaluation Report regarding the licensee's conformance to Regulatory Guide (RG) 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident," Revision 2, for Palo Verde. In that report, the staff concluded that the Palo Verde Units 1, 2, and 3 design was acceptable with respect to conformance to the guidelines of RG 1.97.

3.0 EVALUATION

Modifications to the HPSI system hot leg injection valve limit switch settings changed how flow balancing during a loss of coolant accident (LOCA) would be accomplished. Prior to the modification, balancing was achieved using a control room key switch to fully open the hot leg injection valves to a predetermined limit setting on the valves. After the modification, operators are now required to manually throttle flow to balance the hot and cold legs of HPSI injection.

The licensee's operating procedures direct the operators to perform this manual balancing at 2 to 3 hours post LOCA. Based, on the modified usage, the RG 1.97 classification of the HPSI cold leg flow and HPSI hot leg flow instrumentation is being changed from Type D, Category 2

to Type A, Category 1. Along with this reclassification the licensee has proposed to add HPSI cold leg flow and HPSI hot leg flow functions to TS Table 3.3.10-1, "Post Accident Monitoring Instrumentation."

The proposed TS actions and surveillance requirements for the HPSI cold leg flow and HPSI hot leg flow functions are the same as other post accident monitoring functions currently in TS Table 3.3.10-1. These actions and surveillance requirements are consistent with the actions and surveillance requirements for post accident monitoring functions in the Combustion Engineering Standard TSs.

Type A, Category 1 instrumentation should meet the Category 1 criteria of RG 1.97. The licensee's HPSI cold leg flow and HPSI hot leg flow instrumentation meet the Category 1 criteria, with the exception of the recording criteria. RG 1.97 recommends that post accident information be recorded. The licensee states that the HPSI cold leg flow and HPSI hot leg flow information is being recorded by the Emergency Response Facility Data Acquisition and Display System (ERFDADS). The HPSI cold leg flow and HPSI hot leg flow information can also be recorded by a strip chart recorder. Therefore, the staff concludes that the use of ERFDADS and a strip chart recorder is an acceptable alternative method of meeting the RG 1.97 recording criteria.

Based on the above evaluation, the staff concludes that the modifications to the HPSI hot leg flow and HPSI cold leg flow instrumentation meet the criteria of RG 1.97 and the licensee's proposed revisions to the TS Table 3.3.10-1 are consistent with the Palo Verde licensing basis, and the Combustion Engineering Standard Technical Specifications, and are, therefore, acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Arizona State official was notified of the proposed issuance of the amendments. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (65 FR 59220). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission 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 the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Barry S. Marcus

Date: February 8, 2001