



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

June 18, 2012

Mr. Randall K. Edington
Executive Vice President Nuclear/
Chief Nuclear Officer
Mail Station 7602
Arizona Public Service Company
P.O. Box 52034
Phoenix, AZ 85072-2034

**SUBJECT: PALO VERDE NUCLEAR GENERATING STATION, UNITS 1, 2, AND 3 -
ISSUANCE OF AMENDMENTS RE: REQUEST FOR AMENDMENT TO
VARIOUS TECHNICAL SPECIFICATIONS TO IMPLEMENT ADMINISTRATIVE
CHANGES (TAC NOS. ME7621, ME7622, AND ME7623)**

Dear Mr. Edington:

The Commission has issued the enclosed Amendment No. 189 to Renewed Facility Operating License No. NPF-41, Amendment No. 189 to Renewed Facility Operating License No. NPF-51, and Amendment No. 189 to Renewed 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 your application dated November 22, 2011, as supplemented by letter dated May 11, 2012.

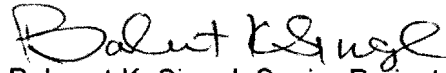
The amendments revise TS 3.3.1, "Reactor Protective System (RPS) Instrumentation – Operating," TS 3.3.2, "Reactor Protective System (RPS) Instrumentation – Shutdown," TS 3.3.5, "Engineered Safety Features Actuation System (ESFAS) Instrumentation," TS 3.3.9, "Control Room Essential Filtration Actuation Signal (CREFAS)," TS 3.5.5, "Refueling Water Tank (RWT)," TS 3.7.11, "Control Room Essential Filtration System (CREFS)," TS 5.4, "Procedures," and TS 5.5.16, "Containment Leakage Rate Testing Program," to make administrative and editorial changes to clarify and align existing TSs.

R. Edington

- 2 -

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,



Balwant K. Singal, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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

Enclosures:

1. Amendment No. 189 to NPF-41
2. Amendment No. 189 to NPF-51
3. Amendment No. 189 to NPF-74
4. Safety Evaluation

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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 RENEWED FACILITY OPERATING LICENSE

Amendment No. 189
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 November 22, 2011, as supplemented by letter dated May 11, 2012, 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.

Enclosure 1

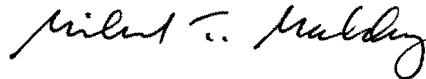
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C(2) of Renewed Facility Operating License No. NPF-41 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 189, 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 90 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael T. Markley, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License No. NPF-41
and Technical Specifications

Date of Issuance: June 18, 2012



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 RENEWED FACILITY OPERATING LICENSE

Amendment No. 189
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 November 22, 2011, as supplemented by letter dated May 11, 2012, 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.

Enclosure 2

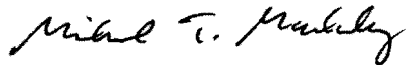
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C(2) of Renewed Facility Operating License No. NPF-51 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 189, 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 90 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael T. Markley, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License No. NPF-51
and Technical Specifications

Date of Issuance: June 18, 2012



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 RENEWED FACILITY OPERATING LICENSE

Amendment No. 189
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 November 22, 2011, as supplemented by letter dated May 11, 2012, 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.

Enclosure 3

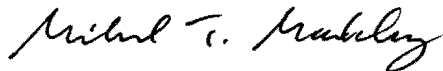
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C(2) of Renewed Facility Operating License No. NPF-74 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 189, 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 90 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael T. Markley, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License No. NPF-74
and Technical Specifications

Date of Issuance: June 18, 2012

ATTACHMENT TO LICENSE AMENDMENT NOS. 189, 189, AND 189

RENEWED 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 Renewed Facility Operating Licenses Nos. NPF-41, NPF-51, and NPF-74, and 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.

Renewed Facility Operating License No. NPF-41

REMOVE

5

INSERT

5

Renewed Facility Operating License No. NPF-51

REMOVE

6

INSERT

6

Renewed Facility Operating License No. NPF-74

REMOVE

4

INSERT

4

Technical Specifications

REMOVE

3.3.1-7

3.3.2-5

3.3.5-4

3.3.5-5

3.3.9-1

3.3.9-2

3.5.5-3

3.5.5-4

3.7.11-2

5.4-1

5.5-16

INSERT

3.3.1-7

3.3.2-5

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3.3.5-4

3.3.9-1

3.3.9-2

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3.5.5-3

3.7.11-2

5.4-1

5.5-16

(1) Maximum Power Level

Arizona Public Service Company (APS) is authorized to operate the facility at reactor core power levels not in excess of 3990 megawatts thermal (100% power), in accordance with the conditions specified herein.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 189, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this renewed operating 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) Antitrust Conditions

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

(4) Operating Staff Experience Requirements

Deleted

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

Deleted

(6) Environmental Qualification

Deleted

(7) Fire Protection Program

APS shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report for the facility, as supplemented and amended, and as approved in the SER through Supplement 11, subject to the following provision:

APS may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

* 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.

(1) Maximum Power Level

Arizona Public Service Company (APS) is authorized to operate the facility at reactor core power levels not in excess of 3990 megawatts thermal (100% power) in accordance with the conditions specified herein.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 189, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this renewed operating 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) Antitrust Conditions

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

(4) Operating Staff Experience Requirements (Section 13.1.2, SSER 9)*

Deleted

(5) Initial Test Program (Section 14, SER and SSER 2)

Deleted

(6) Fire Protection Program

APS shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report for the facility, as supplemented and amended, and as approved in the SER through Supplement 11, subject to the following provision:

APS may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

(7) Inservice Inspection Program (Sections 5.2.4 and 6.6, SER and SSER 9)

Deleted

* 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.

- (4) Pursuant to the Act and 10 CFR Part 30, 40, and 70, APS to receive, possess, and use in amounts 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.
- C. This renewed operating 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 3990 megawatts thermal (100% power), in accordance with the conditions specified herein.
 - (2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 189, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this renewed operating 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) Antitrust Conditions

This renewed operating license is subject to the antitrust conditions delineated in Appendix C to this renewed operating license.
 - (4) Initial Test Program (Section 14, SER and SSER 2)

Deleted
 - (5) Additional Conditions

The Additional Conditions contained in Appendix D, as revised through Amendment No. 171, are hereby incorporated into this renewed operating license. The licensee shall operate the facility in accordance with the Additional Conditions.

RPS Instrumentation – Operating 3.3.1

Table 3.3.1-1 (page 1 of 3)
Reactor Protective System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Variable Over Power	1,2	SR 3.3.1.1 SR 3.3.1.4 SR 3.3.1.6 SR 3.3.1.7 SR 3.3.1.8 SR 3.3.1.9 SR 3.3.1.13	Ceiling \leq 111.0% RTP Band \leq 9.9% RTP Incr. Rate \leq 11.0%/min RTP Decr. Rate $>$ 5%/sec RTP
2. Logarithmic Power Level – High ^(a)	2	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.9 SR 3.3.1.12 SR 3.3.1.13	\leq 0.011% NRTP
3. Pressurizer Pressure – High	1,2	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.9 SR 3.3.1.13	\leq 2388 psia
4. Pressurizer Pressure – Low	1,2	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.9 SR 3.3.1.12 SR 3.3.1.13	\geq 1821 psia
5. Containment Pressure – High	1,2	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.9 SR 3.3.1.13	\leq 3.2 psig
6. Steam Generator #1 Pressure – Low	1,2	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.9 SR 3.3.1.13	\geq 955 psia ^(aa)
7. Steam Generator #2 Pressure – Low	1,2	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.9 SR 3.3.1.13	\geq 955 psia ^(aa)

(continued)

(a) Trip may be bypassed when logarithmic power is $>$ 1E-4% NRTP. Bypass shall be automatically removed when logarithmic power is \leq 1E-4% NRTP.

(aa) 1. If the as-found channel setpoint is conservative with respect to the Allowable Value but outside its predetermined as-found acceptance criteria band, then the channel shall be evaluated to verify that it is functioning as required before returning the channel to service. If the as-found instrument channel setpoint is not conservative with respect to the Allowable Value, the channel shall be declared inoperable.

2. The instrument channel setpoint shall be reset to a value that is within the as-left tolerance of the UFSAR Trip Setpoint, or within the as left tolerance of a setpoint that is more conservative than the UFSAR Trip Set Point; otherwise the channel shall be declared inoperable. The UFSAR Trip Setpoint and the methodology used to determine 1) the UFSAR Trip Setpoint, 2) the predetermined as found acceptance criteria band, and 3) the as-left setpoint tolerance band are specified in the UFSAR.

RPS Instrumentation – Shutdown
3.3.2

Table 3.3.2-1
Reactor Protective System Instrumentation - Shutdown

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Logarithmic Power Level-High ^(d)	(a) 3, (a) 4, (a) 5	SR 3.3.2.1 SR 3.3.2.2 SR 3.3.2.3 SR 3.3.2.4 SR 3.3.2.5	≤ 0.011% NRTP ^(c)
2. Steam Generator #1 Pressure-Low ^(b)	(a) 3	SR 3.3.2.1 SR 3.3.2.2 SR 3.3.2.4 SR 3.3.2.5	≥ 955 psia ^(e)
3. Steam Generator #2 Pressure-Low ^(b)	(a) 3	SR 3.3.2.1 SR 3.3.2.2 SR 3.3.2.4 SR 3.3.2.5	≥ 955 psia ^(e)

(a) With any Reactor Trip Circuit Breakers (RTCBs) closed and any control element assembly capable of being withdrawn.

(b) The setpoint may be decreased as steam pressure is reduced, provided the margin between steam pressure and the setpoint is maintained ≤ 200 psig. The setpoint shall be automatically increased to the normal setpoint as steam pressure is increased.

(c) The setpoint must be reduced to ≤ 1E-4% NRTP when less than 4 RCPs are running.

(d) Trip may be bypassed when logarithmic power is > 1E-4% NRTP. Bypass shall be automatically removed when logarithmic power is ≤ 1E-4% NRTP.

(e) 1. If the as-found channel setpoint is conservative with respect to the Allowable Value but outside its predetermined as-found acceptance criteria band, then the channel shall be evaluated to verify that it is functioning as required before returning the channel to service. If the as-found instrument channel setpoint is not conservative with respect to the Allowable Value, the channel shall be declared inoperable.

2. The instrument channel setpoint shall be reset to a value that is within the as-left tolerance of the UFSAR Trip Setpoint, or within the as left tolerance of a setpoint that is more conservative than the UFSAR Trip Set Point; otherwise the channel shall be declared inoperable. The UFSAR Trip Setpoint and the methodology used to determine 1) the UFSAR Trip Setpoint, 2) the predetermined as found acceptance criteria band, and 3) the as-left setpoint tolerance band are specified in the UFSAR.

Table 3.3.5-1 (page 1 of 1)
Engineered Safety Features Actuation System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	ALLOWABLE VALUE
1. Safety Injection Actuation Signal		
a. Containment Pressure – High	1,2,3	≤ 3.2 psig
b. Pressurizer Pressure – Low ^(a)		≥ 1821 psia
2. Containment Spray Actuation Signal		
a. Containment Pressure – High High	1,2,3	≤ 8.9 psig
3. Containment Isolation Actuation Signal		
a. Containment Pressure – High	1,2,3	≤ 3.2 psig
b. Pressurizer Pressure – Low ^(a)		≥ 1821 psia
4. Main Steam Isolation Signal ^(c)		
a. Steam Generator #1 Pressure–Low ^(b)	1,2,3	≥ 955 psia ^(d)
b. Steam Generator #2 Pressure–Low ^(b)		≥ 955 psia ^(d)
c. Steam Generator #1 Level–High		≤ 91.5%
d. Steam Generator #2 Level–High		≤ 91.5%
e. Containment Pressure–High		≤ 3.2 psig
5. Recirculation Actuation Signal		
a. Refueling Water Storage Tank Level–Low	1,2,3	≥ 9.15 and ≤ 9.65% ^(d)
6. Auxiliary Feedwater Actuation Signal SG #1 (AFAS-1)		
a. Steam Generator #1 Level–Low	1,2,3	≥ 25.3%
b. SG Pressure Difference–High		≤ 192 psid
7. Auxiliary Feedwater Actuation Signal SG #2 (AFAS-2)		
a. Steam Generator #2 Level–Low	1,2,3	≥ 25.3%
b. SG Pressure Difference–High		≤ 192 psid

(a) The setpoint may be decreased to a minimum value of 100 psia, as pressurizer pressure is reduced, provided the margin between pressurizer pressure and the setpoint is maintained ≤ 400 psia or ≥ 140 psia greater than the saturation pressure of the RCS cold leg when the RCS cold leg temperature is ≥ 485°F. Trips may be bypassed when pressurizer pressure is < 400 psia. Bypass shall be automatically removed when pressurizer pressure is ≥ 500 psia. The setpoint shall be automatically increased to the normal setpoint as pressurizer pressure is increased.

(b) The setpoint may be decreased as steam pressure is reduced, provided the margin between steam pressure and the setpoint is maintained ≤ 200 psig. The setpoint shall be automatically increased to the normal setpoint as steam pressure is increased.

(c) The Main Steam Isolation Signal (MSIS) Function (Steam Generator Pressure – Low, Steam Generator Level–High and Containment Pressure – High signals) is not required to be OPERABLE when all associated valves isolated by the MSIS Function are closed.

(d) 1. If the as-found channel setpoint is conservative with respect to the Allowable Value but outside its predetermined as-found acceptance criteria band, then the channel shall be evaluated to verify that it is functioning as required before returning the channel to service. If the as-found instrument channel setpoint is not conservative with respect to the Allowable Value, the channel shall be declared inoperable.

2. The instrument channel setpoint shall be reset to a value that is within the as-left tolerance of the UFSAR Trip Setpoint, or within the as left tolerance of a setpoint that is more conservative than the UFSAR Trip Set Point; otherwise the channel shall be declared inoperable. The UFSAR Trip Setpoint and the methodology used to determine 1) the UFSAR Trip Setpoint, 2) the predetermined as found acceptance criteria band, and 3) the as-left setpoint tolerance band are specified in the UFSAR.

3.3 INSTRUMENTATION

3.3.9 Control Room Essential Filtration Actuation Signal (CREFAS)

LC0 3.3.9 One CREFAS channel shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, 4, 5, and 6.
During movement of irradiated fuel assemblies.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. CREFAS Manual Trip, Actuation Logic, or radiation monitor inoperable in MODE 1, 2, 3, or 4.	A.1 Place one CREFS train in essential filtration mode.	1 hour
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. CREFAS Manual Trip, Actuation Logic, or radiation monitor inoperable in MODE 5 or 6, or during movement of irradiated fuel assemblies.	C.1 Place one CREFS train in essential filtration mode.	Immediately
	<u>OR</u>	
	C.2.1 Suspend movement of irradiated fuel assemblies.	Immediately
	<u>AND</u>	
	C.2.2 Suspend positive reactivity additions.	Immediately
	<u>AND</u>	
	C.2.3 Suspend CORE ALTERATIONS.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.3.9.1 Perform a CHANNEL CHECK on the required control room radiation monitor channel.	In accordance with the Surveillance Frequency Control Program

(continued)

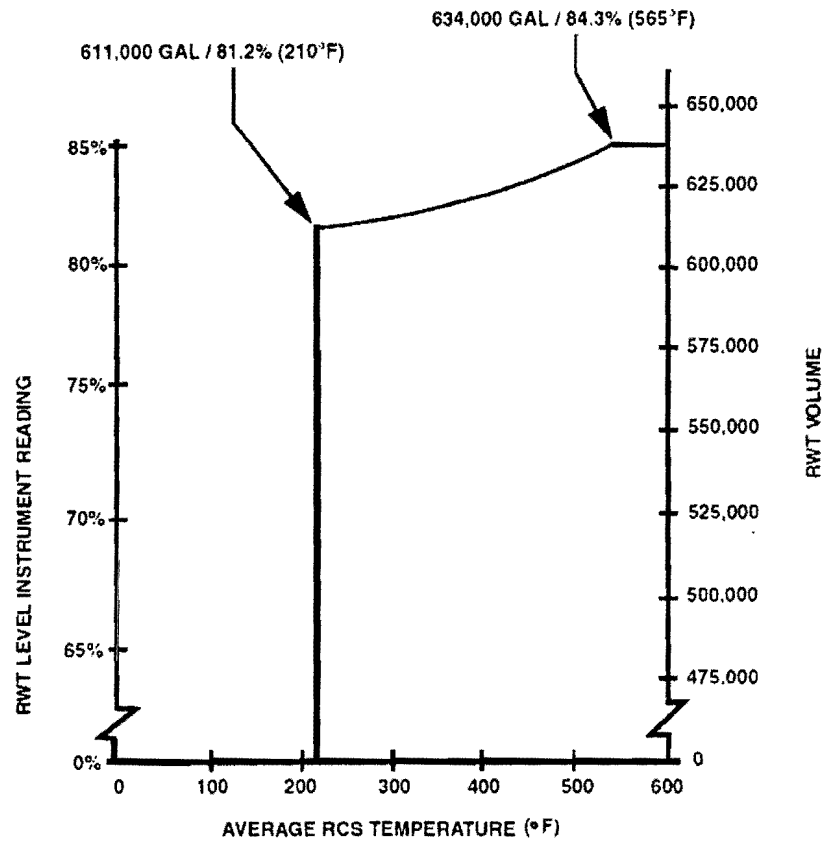


FIGURE 3.5.5-1
Minimum Required RWT Volume

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, 3, or 4.	C.1 Be in MODE 3. <u>AND</u> C.2 Be in MODE 5.	6 hours 36 hours
D. Required Action and associated Completion Time of Condition A not met in MODE 5 or 6.	D.1 Place OPERABLE CREFS train in essential filtration mode.	Immediately
E. Required Action and associated Completion Time of Condition A not met during movement of irradiated fuel assemblies.	E.1 Place OPERABLE CREFS Train in essential filtration mode. <u>OR</u> E.2 Suspend movement of irradiated fuel assemblies.	Immediately Immediately
F. Two CREFS trains inoperable in MODE 5 or 6, or during movement of irradiated fuel assemblies. <u>OR</u> One or more CREFS trains inoperable due to inoperable CRE boundary in MODE 5 or 6, or during movement of irradiated fuel assemblies.	F.1 Suspend CORE ALTERATIONS. <u>AND</u> F.2 Suspend movement of irradiated fuel assemblies.	Immediately Immediately
G. Two CREFS trains inoperable in MODE 1, 2, 3, or 4, for reasons other than Condition B.	G.1 Enter LCO 3.0.3.	Immediately

(continued)

5.0 ADMINISTRATIVE CONTROLS

5.4 Procedures

- 5.4.1 Written procedures shall be established, implemented, and maintained covering the following activities:
- The applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978;
 - The emergency operating procedures required to implement the requirements of NUREG-0737 and to NUREG-0737, Supplement 1, as stated in Generic Letter 82-33;
 - Quality assurance for effluent and environmental monitoring;
 - Fire Protection Program implementation; and
 - All programs specified in Specification 5.5.
 - Modification of core protection calculator (CPC) addressable constants. These procedures shall include provisions to ensure that sufficient margin is maintained in CPC type I addressable constants to avoid excessive operator interaction with CPCs during reactor operation.

Modifications to the CPC software (including changes of algorithms and fuel cycle specific data) shall be performed in accordance with the most recent version of the "Software Program Manual for Common Q Systems," CE-CES-195, which has been determined to be applicable to the facility. Additions or deletions to CPC addressable constants or changes to addressable constant software limit values shall not be implemented without prior NRC approval.

5.5 Programs and Manuals (continued)

5.5.16 Containment Leakage Rate Testing Program (continued)

3. The first Type A test performed after the Unit 1 November 1999 Type A test shall be prior to November 4, 2014.
 4. The first Type A test performed after the Unit 2 November 2000 Type A test shall be prior to November 2, 2015.
 5. The first Type A test performed after the Unit 3 April 2000 Type A test shall be prior to April 27, 2015.
- b. The peak calculated containment internal pressure for the design basis loss of coolant accident, P_a , is 58.0 psig. The containment design pressure is 60 psig.
 - c. The maximum allowable containment leakage rate, L_a , at P_a , shall be 0.1 % of containment air weight per day.
 - d. Leakage Rate acceptance criteria are:
 1. Containment leakage rate acceptance criterion is $\leq 1.0 L_a$. During the first unit startup following testing in accordance with this program, the leakage rate acceptance are $< 0.60 L_a$ for the Type B and C tests and $\leq 0.75 L_a$ for Type A tests.
 2. Air lock testing acceptance criteria are:
 - a) Overall air lock leakage rate is $\leq 0.05 L_a$ when tested at $\geq P_a$.
 - b) For each door, leakage rate is $\leq 0.01 L_a$ when pressurized to ≥ 14.5 psig.
 - e. The provisions of SR 3.0.2 do not apply to the test frequencies in the Containment Leakage Rate Testing Program.
 - f. The provisions of SR 3.0.3 are applicable to the Containment Leakage Rate Testing Program.

(continued)



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NOS. 189, 189, AND 189 TO RENEWED FACILITY
OPERATING LICENSE NOS. NPF-41, NPF-51, AND 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 November 22, 2011 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML11334A046), as supplemented by letter dated May 11, 2012 (ADAMS Accession No. ML12144A146), Arizona Public Service Company (APS, the licensee) requested changes to the Technical Specifications (TSs) for Palo Verde Nuclear Generating Station (Palo Verde), Units 1, 2, and 3. The supplemental letter dated May 11, 2012, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the U.S. Nuclear Regulatory Commission (NRC) staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on January 24, 2012 (77 FR 3510).

The proposed changes would revise TS 3.3.1, "Reactor Protective System (RPS) Instrumentation – Operating," TS 3.3.2, "Reactor Protective System (RPS) Instrumentation – Shutdown," TS 3.3.5, "Engineered Safety Features Actuation System (ESFAS) Instrumentation," TS 3.3.9, "Control Room Essential Filtration Actuation Signal (CREFAS)," TS 3.5.5, "Refueling Water Tank (RWT)," TS 3.7.11, "Control Room Essential Filtration System (CREFS)," TS 5.4, "Procedures," and TS 5.5.16, "Containment Leakage Rate Testing Program," to make administrative and editorial changes to clarify and align existing TSs.

2.0 REGULATORY EVALUATION

Section 182a of the Atomic Energy Act requires applicants for nuclear power plant operating licenses to include TSs as part of the license. These TSs are derived from the plant safety analyses. Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.36, "Technical specifications," contains the requirements for the content of TSs. Pursuant to 10 CFR 50.36, TSs are required to include items in the following five specific categories related to station operation: (1) safety limits, limiting safety system settings, and limiting control settings;

(2) limiting conditions for operation (LCOs); (3) surveillance requirements (SRs); (4) design features; and (5) administrative controls.

Licensees may revise the TSs provided that a plant-specific review supports a finding of continued adequate safety. The changes proposed by this amendment are considered either editorial or administrative in nature. However, 10 CFR 50.59(c)(1)(i) requires a licensee to submit a license amendment application pursuant to 10 CFR 50.90, if a change to the TS is required. Furthermore, the requirements of 10 CFR 50.59 necessitate that NRC approve the TS changes via an amendment before the TS changes are implemented.

3.0 TECHNICAL EVALUATION

3.1 TS 3.3.1, "Reactor Protective System (RPS) Instrumentation – Operating," and TS 3.3.2, "Reactor Protective System (RPS) Instrumentation – Shutdown"

APS is proposing to delete the reference to "3990 MWt RTP" from the allowable value column in Palo Verde, Units 1, 2, and 3 TS Table 3.3.1-1, for functions 6 and 7 and TS Table 3.3.2-1, for functions 2 and 3. References to thermal power level and corresponding steam generator pressures were introduced when the three units were operating at different thermal power levels. The reference to "3990 MWt RTP" in Table 3.3.1-1 and Table 3.3.2-1 is no longer needed as a result of the completion of the stretch power uprate (SPU) in all three Palo Verde units. This change removes information that has been succeeded by license Amendment No. 157 dated November 16, 2005 (Reference 1), and is no longer applicable at Palo Verde, Units 1, 2, and 3. This change is administrative.

3.2 TS 3.3.5, "Engineered Safety Features Actuation System (ESFAS) Instrumentation," and TS 3.5.5, "Refueling Water Tank (RWT)"

APS is proposing to delete the reference to "3990 MWt RTP" from the allowable value column in Palo Verde, Units 1, 2, and 3, TS Table 3.3.5-1, for functions 4a and 4b. As stated in Section 3.1, the reference to "3990 MWt RTP" in Table 3.3.5-1 is no longer needed as a result of the completion of the SPU in all three Palo Verde units. This change removes information that has been succeeded by license Amendment No. 157 (Reference 1) and is no longer applicable at Palo Verde, Units 1, 2, and 3. This change is administrative.

APS is proposing to delete the pre-RWT [refueling water tank] TS setpoint change Table 3.3.5-1 and Figure 3.5.5-1. In addition, APS will remove the words "After RWT TS Setpoint Change," from the remaining versions of Table 3.3.5-1 and Figure 3.5.5-1 and renumber the TS pages. License Amendment No. 182 dated November 24, 2010 (Reference 2), revised Table 3.3.5-1 of TS 3.3.5, "Engineered Safety Features Actuation System (ESFAS) Instrumentation," to raise the RWT low level allowable value for the recirculation actuation signal; raised the minimum required RWT volume shown in Figure 3.5.5-1 of TS 3.5.5, "Refueling Water Tank (RWT)"; and implemented a time-critical operator action to close the RWT isolation valves. APS completed these modifications to Palo Verde, Units 1, 2, and 3, and the "After RWT TS Setpoint Change" allowable values are now fully implemented in Palo Verde, Units 1, 2, and 3. As a result, the "Pre-RWT TS Setpoint Change" versions of the tables are no longer applicable to Palo Verde, Units 1, 2, and 3. This change removes information that is no longer applicable at Palo Verde,

Units 1, 2, and 3, and is administrative.

3.3 TS 3.3.9 "Control Room Essential Filtration Actuation Signal (CREFAS)," and TS 3.7.11 "Control Room Essential Filtration System (CREFS)"

APS is proposing to revise TS 3.3.9 Required Actions A.1 and C.1 from "Place one CREFS train in operation" to "Place one CREFS train in essential filtration mode." In addition, APS is proposing to revise TS 3.7.11 Required Actions D.1 and E.1 from "Place OPERABLE CREFS train in operation" to "Place OPERABLE CREFS train in essential filtration mode." These revisions clarify the Required Actions by stating the configuration necessary to meet the Required Actions. This clarification uses more precise language to ensure consistency with the Palo Verde, Units 1, 2, and 3, design and licensing basis. This change is administrative.

3.4 TS 5.4, "Procedures"

APS is proposing to add an open quotation mark preceding the words Software Program Manual for Common Q Systems, and move the comma trailing these words inside the closed quotation mark in the second paragraph in TS 5.4.1.f. This change corrects typographical errors and is considered administrative.

3.5 TS 5.5.16, "Containment Leakage Rate Testing Program"

APS is proposing to revise TS 5.5.16.b to remove historical data on the calculated containment internal pressures (Pa) for each of the Palo Verde units and reflect that the current (Pa) for all three units is 58.0 psig. This change removes information that is no longer applicable at Palo Verde, Units 1, 2, and 3, and is administrative.

3.6 Summary of Changes

The proposed changes in Sections 3.1 through 3.5 above are non-technical, administrative changes that are editorial in nature or involve the reorganization or reformatting of requirements without affecting technical content or operational requirements. These changes are administrative in nature and do not approve any design changes for Palo Verde, Units 1, 2, and 3. The NRC staff concludes that the proposed changes are acceptable.

4.0 STATE CONSULTATION

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

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to 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 published in the *Federal Register* on January 24, 2012 (77 FR 3510). 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.

7.0 REFERENCES

1. Fields, M. B., U.S. Nuclear Regulatory Commission, letter to James M. Levine, Arizona Public Service Company, "Palo Verde Nuclear Generating Station, Units 1, 2, and 3 - Issuance of Amendments Re: Replacement of Steam Generators and Upgraded Power Operations and Associated Administrative Changes (TAC Nos. MC3777, MC3778, and MC3779)," dated November 16, 2005 (ADAMS Accession No. ML053130275).
2. Hall, J. R., U.S. Nuclear Regulatory Commission, letter to Randall K. Edington, "Palo Verde Nuclear Generating Station, Units 1, 2, and 3 - Issuance of Amendments Re: Technical Specifications Changes to Minimum Refueling Water Tank Volume and Setpoints (TAC Nos. ME2842, ME2843, and ME2844)," dated November 24, 2010 (ADAMS Accession No. ML102710301).

Principal Contributor: Kristy Bucholtz, DSS/DSS/STSB

Date: June 18, 2012

R. Edington

- 2 -

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/

Balwant K. Singal, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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

Enclosures:

1. Amendment No. 189 to NPF-41
2. Amendment No. 189 to NPF-51
3. Amendment No. 189 to NPF-74
4. Safety Evaluation

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KBucholtz, NRR/DSS/STSB

ADAMS Accession No. ML120860092

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