G. Marked-up Technical Specification Page

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.3 ECCS – Operating

LCO 3.5.3 Two ECCS trains shall be OPERABLE.

APPLICABILITY: MODES 1 and 2,
MODE 3 with pressurizer pressure ≥ 1837 psia or with RCS T_c ≥ 485°F.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One LPSI subsystem inoperable.	A.1	Restore subsystem to OPERABLE status.	72 hours 7 days
B. One or more trains inoperable for reasons other than Condition A. AND At least 100% of the ECCS flow equivalent to a single OPERABLE ECCS train available.	B.1	Restore train(s) to OPERABLE status.	72 hours
C. Required Action and associated Completion Time not met.	C.1	Be in MODE 3.	6 hours
	AND		
	C.2	Reduce pressurizer pressure to < 1837 psia.	12 hours
	AND		
	C.3	Reduce RCS T_c to < 485°F.	12 hours

H. Retyped Technical Specification Page

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.3 ECCS – Operating

LCO 3.5.3 Two ECCS trains shall be OPERABLE.

APPLICABILITY: MODES 1 and 2,
MODE 3 with pressurizer pressure ≥ 1837 psia or with RCS T_c ≥ 485°F.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One LPSI subsystem inoperable.	A.1	Restore subsystem to OPERABLE status.	7 days
B. One or more trains inoperable for reasons other than Condition A. AND At least 100% of the ECCS flow equivalent to a single OPERABLE ECCS train available.	B.1	Restore train(s) to OPERABLE status.	72 hours
C. Required Action and associated Completion Time not met.	C.1	Be in MODE 3.	6 hours
	AND		
	C.2	Reduce pressurizer pressure to < 1837 psia.	12 hours
	AND		
	C.3	Reduce RCS T_c to < 485°F.	12 hours

Attachment

Updated PVNGS Plant-Specific Values for CE NPSD-995, "Joint Applications Report for Low Pressure Safety Injection System AOT Extension"

Attachment

Updated PVNGS Plant-Specific Values for CE NPSD-995, "Joint Applications Report for Low Pressure Safety Injection System AOT Extension"

UPDATED TABLE 6.3.2-1 FROM CE NPSD-995

CEOG AOT CONDITIONAL CDF CONTRIBUTIONS FOR LPSI SYSTEM – CORRECTIVE MAINTENANCE
(page 1 of 2)

PARAMETER	PALO VERDE 1, 2, & 3 (Reported in CE NPSD-995, May 1995)	PALO VERDE 1, 2, & 3 (February 1999)
LPSI System Success Criteria	1 of 2	1 of 2
Current AOT, days	3	3
Proposed AOT, days	7	7
Conditional CDF, per yr (1 LPSI train unavailable)	7.00E-05	4.74E-05
Conditional CDF, per yr (1 LPSI train not out for T/M)	4.74E-05	3.93E-05
Increase in CDF, per yr	2.26E-05	8.1E-06
Single AOT Risk (Current full AOT)	1.86E-07	6.66E-08
Single AOT Risk (Proposed full AOT)	4.33E-07	1.55E-07
Downtime Frequency, events/yr/train	0.33	1.33[a]
Yearly AOT Risk (Current full AOT), per yr	1.23E-07	1.77E-07
Yearly AOT Risk (Proposed full AOT), per yr	2.86E-07	4.12E-07
Proposed Downtime, hrs/yr/train	---	31.9[b]
Mean Duration, hrs/event	24[c]	24[c]
Single AOT Risk (for mean duration)	6.19E-08	2.22E-08
Yearly AOT Risk (for mean duration), per yr	4.09E-08	5.91E-08

a. Corrective maintenance (CM) and preventive maintenance (PM) downtime frequencies are expressed in events/yr/train. They are determined by dividing the actual CM or PM events by three years, three units, and two trains (18). The PM events include time that LPSI was not available because it was being used for RWT re-circulation for sampling. These events accounted for approximately 50% of the total frequency. Although no credit was taken, during these events LPSI can be easily recovered.

Attachment

Updated PVNGS Plant-Specific Values for CE NPSD-995, "Joint Applications Report for Low Pressure Safety Injection System AOT Extension"

UPDATED TABLE 6.3.2-1 FROM CE NPSD-995

CEOG AOT CONDITIONAL CDF CONTRIBUTIONS FOR LPSI SYSTEM – CORRECTIVE MAINTENANCE
(page 2 of 2)

(footnotes continued)

a. (continued)
Actual CM Downtime frequency = 24/18 = 1.33 events/train/yr.

Actual PM Downtime frequency = 317/18 = 17.6 events/train/yr.

Proposed downtime frequency for CM events is assumed unaffected by the proposed AOT extention, while PM events are expected to increase by one additional scheduled event per cycle (2/3 event/yr)

Proposed PM Downtime frequency = Actual PM freq + 2/3
= 17.6 + 0.7
= 18.3 events/train/yr

b. CM proposed downtime is assumed to be the Mean duration times the downtime frequency.

CM Proposed Downtime = 24 * 1.33 = 31.9 hrs/yr/tr

PM Proposed downtime is the actual PM hours per year plus an additional PM event equal to 2/3 of an AOT adjusted for the 18 month fuel cycle to a yearly basis.

PM Proposed downtime = ("actual '94-'96 PM hours" /3 yr / 3 Units/ 2 tr)
+ (2/3 AOT/tr/cy *2/3 cycles per year)
= 909/18 + 168 *2/3*2/3
= 125.17 hrs/yr/tr

c. 24 hours is assumed to be a bounding value based on historic data.

Attachment

Updated PVNGS Plant-Specific Values for CE NPSD-995, "Joint Applications Report for Low Pressure Safety Injection System AOT Extension"

UPDATED TABLE 6.3.2-2 FROM CE NPSD-995

CEOG AOT CONDITIONAL CDF CONTRIBUTIONS FOR LPSI SYSTEM – PREVENTIVE MAINTENANCE
(page 1 of 3)

PARAMETER	PALO VERDE 1, 2, & 3 (Reported in CE NPSD-995, May 1995)	PALO VERDE 1, 2, & 3 (February 1999)
LPSI System Success Criteria	1 of 2	1 of 2
Current AOT, days	3	3
Proposed AOT, days	7	7
Conditional CDF, per yr (1 LPSI train unavailable)	4.80E-05	4.38E-05
Conditional CDF, per yr (1 LPSI train not out for T/M)	4.74E-05	3.93E-05
Increase in CDF, per yr	6.00E-07	4.5E-06
Single AOT Risk (Current full AOT)	4.93E-09	3.70E-08
Single AOT Risk (Proposed full AOT)	1.15E-08	8.63E-08
Downtime Frequency, events/yr/train	1.50	17.6[a]
Yearly AOT Risk (Current full AOT), per yr	1.48E-08	1.30E-06
Yearly AOT Risk (Proposed full AOT), per yr	3.45E-08	3.04E-06
Proposed Downtime, hrs/yr/train	168	125.17[b]
Mean Duration, hrs/event	112[c]	6.85[c]
Single AOT Risk (for mean duration)	7.67E-09	3.52E-09
Yearly AOT Risk (for mean duration), per yr	2.30E-08	1.29E-07

a. Corrective maintenance (CM) and preventive maintenance (PM) downtime frequencies are expressed in events/yr/train. They are determined by dividing the actual CM or PM events by three years, three units, and two trains (18). The PM events include time that LPSI was not available because it was being used for RWT re-circulation for sampling. These events accounted for approximately 50% of the total frequency. Although no credit was taken, during these events LPSI can be easily recovered.

Attachment

Updated PVNGS Plant-Specific Values for CE NPSD-995, "Joint Applications Report for Low Pressure Safety Injection System AOT Extension"

UPDATED TABLE 6.3.2-2 FROM CE NPSD-995

CEOG AOT CONDITIONAL CDF CONTRIBUTIONS FOR LPSI SYSTEM – PREVENTIVE MAINTENANCE
(page 2 of 3)

(footnotes continued)

b. CM proposed downtime is assumed to be the Mean duration times the downtime frequency.

   CM Proposed Downtime = 24 * 1.33 = 31.9 hrs/yr/tr

   PM Proposed downtime is the actual PM hours per year plus an additional PM event equal to 2/3 of an AOT adjusted for the 18 month fuel cycle to a yearly basis.

   PM Proposed downtime = ("actual '94-'96 PM hours" /3 yr / 3 Units/ 2 tr)
   + (2/3 AOT/tr/cy *2/3 cycles per year)
   = 909/18 + 168 *2/3*2/3
   = 125.17 hrs/yr/tr

c. Mean duration for CM was conservatively assumed to be 24 hours, which is considered a bounding case justified in CEOG report CE NPSD-995. (Note that the current actual CM duration is 213.61hr/24events = 8.9hr.)

   CM mean duration = 24 hours

   In CE NPSD-995, May 1995, the conservative assumption was made to use 2/3 of the proposed new AOT due to lack of real plant data. With three years of actual maintenance history the following method was used:

Updated PVNGS Plant-Specific Values for CE NPSD-995, "Joint Applications Report for Low Pressure Safety Injection System AOT Extension"

UPDATED TABLE 6.3.2-2 FROM CE NPSD-995

CEOG AOT CONDITIONAL CDF CONTRIBUTIONS FOR LPSI SYSTEM – PREVENTIVE MAINTENANCE
(page 3 of 3)

(footnotes continued)

c. (continued)
PM Mean Duration hours were determined by using the maintenance history tracked for the Maintenance Rule. It is assumed that as a result of the change in AOT that one additional PM event per train per cycle will be scheduled with a duration of 2/3 of the allowed AOT. During the period of 1994 through 1996 there were 317 PM events with a total duration of 909.03 hours. This resulted in 101.0 hours per unit per year. To this amount, 149.33 hours (2/3 of an AOT times 2 trains times 2/3 to account for the 18 month fuel cycle) was added to obtain a proposed total maintenance duration. The proposed maintenance duration was divided by the actual PM events per unit per year plus 2*2/3 (to account for the two new proposed events per cycle). The 2/3 factor accounts for the 18 month fuel cycle. This method is also supported in a CEOG report NPSD-995.

PM mean duration = {(909.03 / 9) + [2/3*(168)*2/3*2} / (317 / 9 + 2*2/3)
= (101 + 149.33) / (35.22 + 4/3) = 6.85 hours/event.

Attachment

Updated PVNGS Plant-Specific Values for CE NPSD-995, "Joint Applications Report for Low Pressure Safety Injection System AOT Extension"

UPDATED TABLE 6.3.2-3 FROM CE NPSD-995

CEOG PROPOSED AVERAGE CDFs
Page 1 of 2

PARAMETER	PALO VERDE 1, 2, & 3 (Reported in CE NPSD-995, May 1995)	PALO VERDE 1, 2, & 3 (February 1999)
LPSI System Success Criteria	1 of 2	1 of 2
Present AOT, days	3	3
Proposed AOT, days	7	7
Proposed Downtime, hrs/yr/train	192	157.1[(a)]
Average CDF (base), per yr	4.74E-05	3.93E-05
Proposed Average CDF, per yr	4.74E-05	3.95E-05[(b)]

a. CM proposed downtime is assumed to be the Mean duration times the downtime frequency.

CM Proposed Downtime = 24 * 1.33 = 31.9 hrs/tr/yr

PM Proposed downtime is the actual PM hours per year plus an additional PM event equal to 2/3 of an AOT adjusted for the 18 month fuel cycle to a yearly basis.

PM Proposed downtime = ("actual '94-'96 PM hours" /3 yr / 3 Units/ 2 tr)
+ (2/3 AOT/tr/cy *2/3 cycles per year)
= 909/18 + 168 *2/3*2/3
= 125.17 hrs/tr/yr

Attachment

Updated PVNGS Plant-Specific Values for CE NPSD-995, "Joint Applications Report for Low Pressure Safety Injection System AOT Extension"

UPDATED TABLE 6.3.2-3 FROM CE NPSD-995

CEOG PROPOSED AVERAGE CDFs PREVENTIVE MAINTENANCE
(page 2 of 2)

(footnotes continued)

b. The proposed average CDF was calculated as the sum of the CDF with no LPSI maintenance plus the incremental CDF due to the proposed LPSI corrective maintenance plus the incremental CDF due to the proposed LPSI preventive maintenance.

Given,
$CDF|_{nocm}$ = 3.93e-5/yr

$ICDF|_{cm}$ = CM freq/tr * 2 trains * CM Mean Duration * Incr in $CDF|_{cm}$
= [(1.33ev/tr yr) * 2tr * 24hr/ev]/8760hr/yr * 8.1e-6/yr
= 5.9e-8/yr

$ICDF|_{pm}$ = PMfreq/tr * 2 trains * PM Mean Duration * Incr in $CDF|_{pm}$
= [(17.6 + 2/3)ev/tr yr * 2 trains * 6.85hr/ev]/8760hr/yr * 4.5e-6/yr
= 1.3e-7/yr

Proposed CDF = $CDF|_{no\ cm}$ + $ICDF|_{cm}$ + $ICDF|_{pm}$
= 3.93e-5/yr + 5.9e-8/yr + 1.3e-7/yr
= 3.95e-5/yr

Enclosure 2

Changes to the Technical Specification Bases and Technical Requirements Manual to Support the LPSI Completion Time Extension

99-B001
3/7

BASES

ACTIONS

A.1

Replace with insert

With one LPSI subsystem inoperable, action must be taken to restore OPERABLE status within 72 hours. In this condition, the remaining OPERABLE ECCS train is adequate to perform the heat removal function. However, the overall reliability is reduced because a single failure to the remaining LPSI subsystem could result in loss of ECCS function. The Completion Time is reasonable to perform corrective maintenance on the inoperable LPSI subsystem.

B.1

If one or more ECCS trains are inoperable, except for reasons other than Condition A (one LPSI subsystem inoperable) and at least 100% of the ECCS flow equivalent to a single OPERABLE ECCS train is available, the inoperable components must be returned to OPERABLE status within 72 hours. The 72 hour Completion Time is based on an NRC study (Ref. 4) using a reliability evaluation and is a reasonable amount of time to effect many repairs.

An ECCS train is inoperable if it is not capable of delivering the design flow to the RCS. The individual components are inoperable if they are not capable of performing their design function, or if supporting systems are not available.

The LCO requires the OPERABILITY of a number of independent subsystems. Due to the redundancy of trains and the diversity of subsystems, the inoperability of one component in a train does not render the ECCS incapable of performing its function. Neither does the inoperability of two different components, each in a different train, necessarily result in a loss of function for the ECCS. The intent of this Condition is to maintain a combination of OPERABLE equipment such that 100% of the ECCS flow equivalent to 100% of a single OPERABLE train remains available. This allows increased flexibility in plant operations when components in opposite trains are inoperable.

(continued)

99-B001
4/7

INSERT FOR BASES A.1

Condition A addresses the specific condition where the only affected ECCS subsystem is a single LPSI subsystem. The availability of at least 100% of the ECCS flow equivalent to a single OPERABLE ECCS train is implicit in the definition of Condition A.

If LCO 3.5.3 requirements are not met due only to the existence of Condition A, then the inoperable LPSI subsystem components must be returned to OPERABLE status within 7 days of discovery of Condition A. This 7 day Completion Time is based on the findings of the deterministic and probabilistic analysis that are discussed in Reference 6. Seven days is a reasonable amount of time to perform many corrective and preventative maintenance items on the affected LPSI subsystem. Reference 6 concluded that the overall risk impact of this Completion Time was either risk-beneficial or risk-neutral.

The Configuration Risk Management Program (CRMP) in TRM Section 5.0.500.19 applies when Condition A is entered.

B 3.5.3-6, Insert

99-B001
5/7

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.5.3.7

Realignment of valves in the flow path on an SIAS is necessary for proper ECCS performance. The safety injection valves have stops to position them properly so that flow is restricted to a ruptured cold leg, ensuring that the other cold legs receive at least the required minimum flow. The 18 month Frequency is based on current industry practice. These valves are also monitored in accordance with the requirements of 10 CFR 50.65 (Ref. 5).

SR 3.5.3.8

Periodic inspection of the containment sump ensures that it is unrestricted and stays in proper operating condition. The 18 month Frequency is based on the need to perform this Surveillance under the conditions that apply during an outage, on the need to have access to the location, and on the potential for unplanned transients if the Surveillance were performed with the reactor at power. This Frequency is sufficient to detect abnormal degradation and is confirmed by operating experience.

REFERENCES

1. 10 CFR 50, Appendix A, GDC 35.

2. 10 CFR 50.46.

3. UFSAR, Chapter 6.

4. NRC Memorandum to V. Stello, Jr., from R. L. Baer, "Recommended Interim Revisions to LCOs for ECCS Components," December 1, 1975.

5. 10 CFR 50.65.

Add

6. Combustion Engineering Owners Group Joint Applications Report for Low Pressure Safety Injection System AOT Extension, CE NPSD-995, dated May 1995, as submitted to NRC in APS letter 102-03392-WLS/SAB/GAM, dated June 13, 1995, with updates described in letter ~~102-???~~ 102-04250 dated ~~??/??/??~~ February 26, 1999.

5.0.500 Programs and Manuals (continued)

99-R001
3/9

5.0.500.17 Process Control Program (PCP)

The purpose of the Process Control Program is to contain the current formulas, sampling, analyses, test, and determinations to be made to ensure that processing and packaging of solid radioactive wastes based on demonstrated processing of actual or simulated wet solid wastes will be accomplished in such a way as to assure compliance with 10 CFR Parts 20, 61, and 71, State regulations, burial ground requirements, and other requirements governing the disposal of solid radioactive waste. The PVNGS Radiation Protection Group is the program owner.

Requirements for changes to the PCP are contained in the PVNGS QA Plan.

5.0.500.18 Technical Requirements Manual (TRM) Control Program

The purpose of the Technical Requirements Manual Control Program is to provide a means for establishing controls and processing changes to the TRM. Nuclear Regulatory Affairs is the program owner.

5.0.500.19 Configuration Risk Management Program (CRMP)

Add insert

(continued)

99-R601
4/9

INSERT FOR TRM 5.0.500.19

5.0.500.19 Configuration Risk Management Program (CRMP)

The Configuration Risk Management Program (CRMP) provides a proceduralized risk-informed assessment to manage the risk associated with equipment inoperability. The program applies to technical specification structures, systems, and components for which a risk-informed Completion Time has been granted. The program shall include the following elements:

a. Provisions for the control and implementation of a Level 1 at-power internal events PRA-informed methodology. The assessment shall be capable of evaluating the applicable plant configuration.

b. Provisions for performing an assessment prior to entering the LCO Condition for preplanned activities.

c. Provisions for performing an assessment after entering the LCO Condition for unplanned entry into the LCO Condition.

d. Provisions for assessing the need for additional actions after the discovery of additional equipment-out-of-service conditions while in the LCO Condition.

e. Provisions for considering other applicable risk significant contributors such as Level 2 issues and external events, qualitatively or quantitatively.

TS 5.0.500.17, Insert

Enclosure 3

Proposed Changes to Facility Operating License Nos. NPF-41, NPF-51, and NPF-74 (PVNGS Units 1, 2, and 3) and Associated Appendix D, Additional Conditions

(Unit 1 OL)
(NPF-41)

(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 radiochemistry 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.

(13) RCP Shaft Vibration Monitoring Program (Section 5.4.1, SSER 12)

Deleted

(14) Additional Conditions

The Additional Conditions contained in Appendix D, as revised through Amendment No. 117, are hereby incorporated into this license. Arizona Public Service Company shall operate the facility in accordance with the Additional Conditions.

Deleted

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

Original Signed By

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
7. Appendix D -
   Additional Conditions

Date of Issuance: June 1, 1985

APPENDIX D

ADDITIONAL CONDITIONS

FACILITY OPERATING LICENSE NO. NPF-41

Arizona Public Service Company shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Conditions	Implementation Date
111	This amendment authorizes the licensee to incorporate in the Updated Final Safety Analysis Report (UFSAR) certain changes to the description of the facility. Implementation of this amendment is the incorporation of these changes as described in the licensee's application dated May 2, 1995, as supplemented by letter dated March 7, 1996, and evaluated in the staff's Safety Evaluation dated March 17, 1997.	60 days from the date of issuance
112	This amendment authorizes the licensee to incorporate in the Updated Final Safety Analysis Report (UFSAR) certain changes to the description of the facility. Implementation of this amendment is the incorporation of these changes as described in the licensee's application dated December 27, 1996, as supplemented by letter dated March 18, 1997, and evaluated in the staff's Safety Evaluation dated March 26, 1997.	60 days from the date of issuance
117	This amendment authorizes the relocation of certain technical specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in Table 3, PVNGS Relocated Details (LA), Table 6, PVNGS Relocated Specifications (R), and Table 5, PVNGS Relocations to the QA Program (QA) in the Safety Evaluation (SE) enclosed with this amendment, as evaluated in the SE.	September 15, 1998

Amendment Number	Additional Conditions	Implementation Date
117	For surveillance requirements (SRs) that are new in this amendment, the first performance is due at the end of the first surveillance interval that begins on the date of implementation of this amendment. For SRs that existed prior to this amendment whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of this amendment. For SRs that existed prior to this amendment that have modified acceptance criteria, the first performance is due at the end of the first surveillance interval that began on the date the surveillance was last performed prior to the date of implementation of this amendment. For SRs that existed prior to this amendment whose intervals of performance are being extended, the first extended surveillance interval begins upon completion of the last surveillance performed prior to the implementation of this amendment.	September 15, 1998
117	This amendment authorizes the change to PVNGS Updated Final Safety Analysis Report (UFSAR) to add a listing to UFSAR Section 17.2 of the other UFSAR sections outside of Chapter 17 that contain Quality Assurance Program commitments.	September 15, 1998
117	This amendment authorizes the extension of the surveillance test interval for the engineered safety features actuation system (ESFAS) instrumentation subgroup relays from 62 days to 9 months on a staggered test basis. Implementation of this amendment shall include that the commercial-grade certification will detect the types of failures that are discussed in References 8, 9, 11, and 12 of the safety evaluation report dated February 27, 1996, that approved the Combustion Engineering Owners Group Topical Report CEN-403, Revision 1, "ESFAS Subgroup Relay Test Interval Extension."	September 15, 1998

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

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 8, 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)

Prior to September 10, 1986, APS shall submit the inservice inspection program for Unit 2 for NRC review and approval.

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

APS shall complete the items listed in Attachment 2.

(9) Additional Conditions Deleted

~~The Additional Conditions contained in Appendix D, as revised through Amendment No. 117, are hereby incorporated into this license. Arizona Public Service Company shall operate the facility in accordance with the Additional Conditions.~~

D. (1) APS has previously been granted an exemption from Paragraph III.D.2(b)(ii) of Appendix J to 10 CFR Part 50. This exemption was previously granted in Facility Operating License NPF-46 pursuant to 10 CFR 50.12.

(2) APS has previously been granted a partial exemption from those portions of General Design Criterion 4 of Appendix A to 10 CFR Part 50 which require protection of structures, systems, and components against certain dynamic effects associated with postulated reactor coolant system pipe breaks. This exemption was granted on November 29, 1985 (50 FR 50020) pursuant to 10 CFR 50.12 for a period ending with the completion of the second refueling outage for PVNGS-2 or the adoption of the proposed rulemaking for modification of GDC 4 whichever occurs first.

With the granting of these exemptions, 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. The licensees shall fully implement and maintain in effect all provisions of the Commission-approved physical security, guard training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to

(Unit 2 OL)
(NPF-51)

the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The Safeguard Contingency Plan is incorporated into the Physical Security Plan. The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "Palo Verde Nuclear Station Physical Security Plan," with revisions submitted through March 18, 1997; and "Palo Verde Nuclear Generating Station Guard Training and Qualification Plan," with revisions submitted through December 26, 1987. Changes made in accordance with 10 CFR 73.55 shall be implemented in accordance with the schedule set forth therein.

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 to the NRC Operations Center via the Emergency Notification System 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 9, 2025.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed By

Darrell G. Eisenhut, Acting Director
Office of Nuclear Reactor Regulation

Attachments:
1. Attachment 1
2. Attachment 2
3. Appendix A - Technical Specifications
4. Appendix B Environmental Protection Plan
5. Appendix C Antitrust Conditions
6. Appendix D Additional Conditions

Date of Issuance: April 24, 1986

APPENDIX D

ADDITIONAL CONDITIONS

FACILITY OPERATING LICENSE NO. NPF-51

Arizona Public Service Company shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Conditions	Implementation Date
103	This amendment authorizes the licensee to incorporate in the Updated Final Safety Analysis Report (UFSAR) certain changes to the description of the facility. Implementation of this amendment is the incorporation of these changes as described in the licensee's application dated May 2, 1995, as supplemented by letter dated March 7, 1996, and evaluated in the staff's Safety Evaluation dated March 17, 1997.	60 days from the date of issuance
104	This amendment authorizes the licensee to incorporate in the Updated Final Safety Analysis Report (UFSAR) certain changes to the description of the facility. Implementation of this amendment is the incorporation of these changes as described in the licensee's application dated December 27, 1996, as supplemented by letter dated March 18, 1997, and evaluated in the staff's Safety Evaluation dated March 26, 1997.	60 days from the date of issuance
117	This amendment authorizes the relocation of certain technical specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in Table 3, PVNGS Relocated Details (LA), Table 6, PVNGS Relocated Specifications (R), and Table 5, PVNGS Relocations to the QA Program (QA) in the Safety Evaluation (SE) enclosed with this amendment, as evaluated in the SE.	September 15, 1998

Amendment Number	Additional Conditions	Implementation Date
117	For surveillance requirements (SRs) that are new in this amendment, the first performance is due at the end of the first surveillance interval that begins on the date of implementation of this amendment. For SRs that existed prior to this amendment whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of this amendment. For SRs that existed prior to this amendment that have modified acceptance criteria, the first performance is due at the end of the first surveillance interval that began on the date the surveillance was last performed prior to the date of implementation of this amendment. For SRs that existed prior to this amendment whose intervals of performance are being extended, the first extended surveillance interval begins upon completion of the last surveillance performed prior to the implementation of this amendment.	September 15, 1998
117	This amendment authorizes the change to PVNGS Updated Final Safety Analysis Report (UFSAR) to add a listing to UFSAR Section 17.2 of the other UFSAR sections outside of Chapter 17 that contain Quality Assurance Program commitments.	September 15, 1998
117	This amendment authorizes the extension of the surveillance test interval for the engineered safety features actuation system (ESFAS) instrumentation subgroup relays from 62 days to 9 months on a staggered test basis. Implementation of this amendment shall include that the commercial-grade certification will detect the types of failures that are discussed in References 8, 9, 11, and 12 of the safety evaluation report dated February 27, 1996, that approved the Combustion Engineering Owners Group Topical Report CEN-403, Revision 1, "ESFAS Subgroup Relay Test Interval Extension."	September 15, 1998

(Unit 3 OL)
(NPF-74)

Effective 10/2/95

(1) Maximum Power Level

Arizona Public Service Company (APS) is authorized to operate the facility at reactor core power levels not in excess of 3876 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, as revised through Amendment No. 119, 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) Antitrust Conditions

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

(4) Initial Test Program (Section 14, SER and FSER 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.

(5) Additional Conditions Deleted

~~The Additional Conditions contained in Appendix D, as revised through Amendment No. 117, are hereby incorporated into this license. Arizona Public Service Company shall operate the facility in accordance with the Additional Conditions~~

D. APS has previously been granted an exemption from Paragraph III.D.2(b)(ii) of Appendix J to 10 CFR Part 50. This exemption was previously granted in Facility Operating License NPF-65 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. The licensees shall fully implement and maintain in effect all provisions of the Commission-approved physical security, guard training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The Safeguard Contingency Plan is incorporated into the Physical Security Plan. The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "Palo Verde

Nuclear Station Physical Security Plan," with revisions submitted through March 18, 1997; and "Palo Verde Nuclear Generating Station Guard Training and Qualification Plan," with revisions submitted through December 26, 1987. Changes made in accordance with 10 CFR 73 55 shall be implemented in accordance with the schedule set forth therein.

F. 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 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.

G. Except as otherwise provided in the Technical Specifications or the Enviornmental 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 to the NRC Operations Center via the Emergency Notification System, with written follow-up within 30 days in accordance with the procedures described in 10 CFR 50.73(b), (c), and (e);

H. 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

I. This license is effective as of the date of issuance and shall expire at midnight on March 25, 2027.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed By

Thomas E. Murley, Director
Office of Nuclear Reactor Regulation

Attachments:
1. Attachment 1
2. Appendix A -
   Technical Specifications
3. Appendix B -
   Environmental Protection Plan
4. Appendix C -
   Antitrust Conditions
5. Appendix D -
   Additional Conditions

Date of Issuance: November 25, 1987

APPENDIX D

ADDITIONAL CONDITIONS

FACILITY OPERATING LICENSE NO. NPF-74

Arizona Public Service Company shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Conditions	Implementation Date
83	This amendment authorizes the licensee to incorporate in the Updated Final Safety Analysis Report (UFSAR) certain changes to the description of the facility. Implementation of this amendment is the incorporation of these changes as described in the licensee's application dated May 2, 1995, as supplemented by letter dated March 7, 1996, and evaluated in the staff's Safety Evaluation dated March 17, 1997.	60 days from the date of issuance
84	This amendment authorizes the licensee to incorporate in the Updated Final Safety Analysis Report (UFSAR) certain changes to the description of the facility. Implementation of this amendment is the incorporation of these changes as described in the licensee's application dated December 27, 1996, as supplemented by letter dated March 18, 1997, and evaluated in the staff's Safety Evaluation dated March 26, 1997.	60 days from the date of issuance
117	This amendment authorizes the relocation of certain technical specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in Table 3, PVNGS Relocated Details (LA), Table 6, PVNGS Relocated Specifications (R), and Table 5, PVNGS Relocations to the QA Program (QA) in the Safety Evaluation Report (SER) enclosed with this amendment, as evaluated in the SE.	September 15, 1998

Amendment Number	Additional Conditions	Implementation Date
117	For surveillance requirements (SRs) that are new in this amendment, the first performance is due at the end of the first surveillance interval that begins on the date of implementation of this amendment. For SRs that existed prior to this amendment whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of this amendment. For SRs that existed prior to this amendment that have modified acceptance criteria, the first performance is due at the end of the first surveillance interval that began on the date the surveillance was last performed prior to the date of implementation of this amendment. For SRs that existed prior to this amendment whose intervals of performance are being extended, the first extended surveillance interval begins upon completion of the last surveillance performed prior to the implementation of this amendment.	September 15, 1998
117	This amendment authorizes the change to PVNGS Updated Final Safety Analysis Report (UFSAR) to add a listing to UFSAR Section 17.2 of the other UFSAR sections outside of Chapter 17 that contain Quality Assurance Program commitments.	September 15, 1998
117	This amendment authorizes the extension of the surveillance test interval for the engineered safety features actuation system (ESFAS) instrumentation subgroup relays from 62 days to 9 months on a staggered test basis. Implementation of this amendment shall include that the commercial-grade certification will detect the types of failures that are discussed in References 8, 9, 11, and 12 of the safety evaluation report dated February 27, 1996, that approved the Combustion Engineering Owners Group Topical Report CEN-403, Revision 1, "ESFAS Subgroup Relay Test Interval Extension."	September 15, 1998