



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

ARIZONA PUBLIC SERVICE COMPANY, ET AL.

DOCKET NO. -STN 50-528

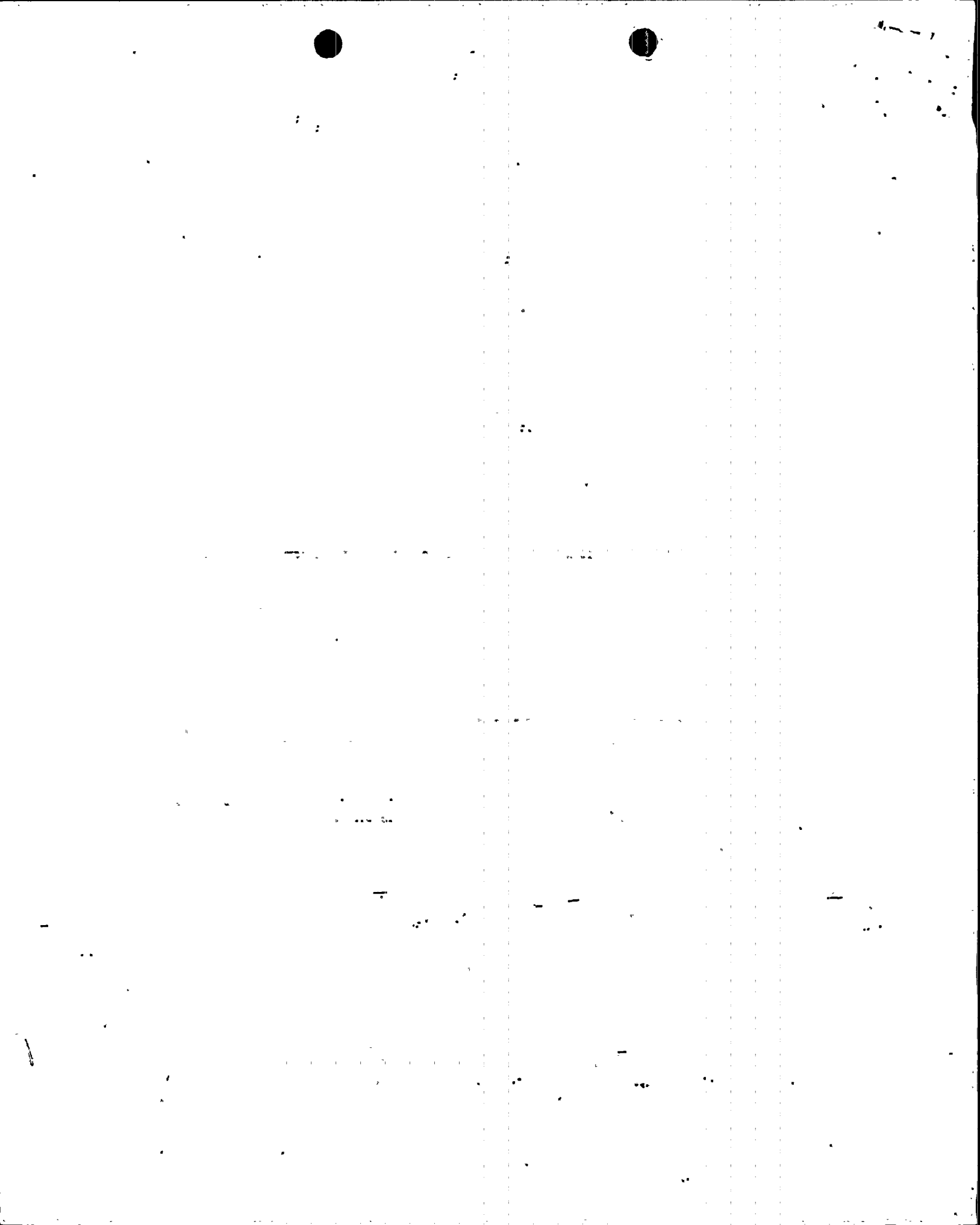
PALO VERDE NUCLEAR GENERATING STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.75
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 13, 1990, supplemented by letters dated May 27, 1992, May 13, 1993, and November 12, 1993, 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:

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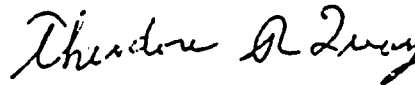


(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No.75 , 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 must be fully implemented no later than December 1, 1994.

FOR THE NUCLEAR REGULATORY COMMISSION



Theodore R. Quay, Director
Project Directorate IV-3
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 16, 1994



ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 75 TO FACILITY OPERATING LICENSE NO. NPF-41

DOCKET NO. STN 50-528

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change. The corresponding overleaf pages are also provided to maintain document completeness.

Remove

3/4 3-11
3/4 4-7
3/4 4-8
3/4 7-2
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B 3/4 7-2

Insert

3/4 3-11
3/4 4-7
3/4 4-8
3/4 7-2
3/4 7-5
B 3/4 7-2

TABLE 3.3-2

REACTOR PROTECTIVE INSTRUMENTATION RESPONSE TIMESFUNCTIONAL UNITRESPONSE TIME

I. TRIP GENERATION

A. Process

- | | |
|-----------------------------------|----------------|
| 1. Pressurizer Pressure - High | ≤ 0.50 seconds |
| 2. Pressurizer Pressure Low | ≤ 1.15 seconds |
| 3. Steam Generator Level - Low | ≤ 1.15 seconds |
| 4. Steam Generator Level - High | ≤ 1.15 seconds |
| 5. Steam Generator Pressure - Low | ≤ 1.15 seconds |
| 6. Containment Pressure - High | ≤ 1.15 seconds |
| 7. Reactor Coolant Flow - Low | ≤ 0.58 second |
| 8. Local Power Density - High | |

- | | |
|---|-----------------|
| a. Neutron Flux Power from Excore Neutron Detectors | ≤ 0.75 second* |
| b. CEA Positions | ≤ 1.35 second** |
| c. CEA Positions: CEAC Penalty Factor | ≤ 0.75 second** |

9. DNBR - Low

- | | |
|---|------------------|
| a. Neutron Flux Power from Excore Neutron Detectors | ≤ 0.75 second* |
| b. CEA Positions | ≤ 1.35 second** |
| c. Cold Leg Temperature | ≤ 0.75 second## |
| d. Hot Leg Temperature | ≤ 0.75 second## |
| e. Primary Coolant Pump Shaft Speed | ≤ 0.30 second# |
| f. Reactor Coolant Pressure from Pressurizer | ≤ 0.75 second### |
| g. CEA Positions: CEAC Penalty Factor | ≤ 0.75 second** |

B. Excore Neutron Flux

- | | |
|-----------------------------------|----------------|
| 1. Variable Overpower Trip | ≤ 0.55 second* |
| 2. Logarithmic Power Level - High | |
| a. Startup and Operating | ≤ 0.55 second* |
| b. Shutdown | ≤ 0.55 second* |

TABLE 3.3-2 (Continued)

REACTOR PROTECTIVE INSTRUMENTATION RESPONSE TIMES

<u>FUNCTIONAL UNIT</u>	<u>RESPONSE TIME</u>
C. Core Protection Calculator System	
1. CEA Calculators	Not Applicable
2. Core Protection Calculators	Not Applicable
D. Supplementary Protection System	
Pressurizer Pressure - High	≤ 1.15 second
II. RPS LOGIC	
A. Matrix Logic	Not Applicable
B. Initiation Logic	Not Applicable
III. RPS ACTUATION DEVICES	
A. Reactor Trip Breakers	Not Applicable
B. Manual Trip	Not Applicable

* Neutron detectors are exempt from response time testing. The response time of the neutron flux signal portion of the channel shall be measured from the detector output or from the input of first electronic component in channel.

** Response time shall be measured from the output of the sensor. Acceptable CEA sensor response shall be demonstrated by compliance with Specification 3.1.3.4.

#The pulse transmitters measuring pump speed are exempt from response time testing. The response time shall be measured from the pulse shaper input.

##Response time shall be measured from the output of the resistance temperature detector (sensor). RTD response time shall be measured at least once per 18 months. The measured response time of the slowest RTD shall be less than or equal to 8 seconds.

###Response time shall be measured from the output of the pressure transmitter. The transmitter response time shall be less than or equal to 0.7 second.

REACTOR COOLANT SYSTEM

3/4.4.2 SAFETY VALVES

SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.2.1 A minimum of one pressurizer code safety valve shall be OPERABLE with a lift setting of 2500 psia +3, -1%*.

APPLICABILITY: MODE 4.

ACTION:

- a. With no pressurizer code safety valve OPERABLE, immediately suspend all operations involving positive reactivity changes and place an OPERABLE shutdown cooling loop into operation.
- b. The provisions of Specification 3.0.4 may be suspended for up to 12 hours for entering into and during operation in MODE 4 for purposes of setting the pressurizer code safety valves under ambient (HOT) conditions provided a preliminary cold setting was made prior to heatup.

SURVEILLANCE REQUIREMENTS

4.4.2.1 No additional Surveillance Requirements other than those required by Specification 4.0.5.

*The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

REACTOR COOLANT SYSTEM

OPERATING

LIMITING CONDITION FOR OPERATION

3.4.2.2 All pressurizer code safety valves shall be OPERABLE with a lift setting of 2500 psia +3, -1%*.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

With one pressurizer code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 15 minutes or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours with the shutdown cooling system suction line relief valves aligned to provide overpressure protection for the Reactor Coolant System.

SURVEILLANCE REQUIREMENTS

4.4.2.2 No additional Surveillance Requirements other than those required by Specification 4.0.5.

*The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

3/4.7 PLANT SYSTEMS

3/4.7.1 TURBINE CYCLE

SAFETY VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.1 All main steam safety valves shall be OPERABLE with lift settings as specified in Table 3.7-1.

APPLICABILITY: MODES 1, 2, 3, and 4*.

ACTION:

- a. With both reactor coolant loops and associated steam generators in operation and with one or more** main steam safety valves inoperable per steam generator, operation in MODES 1 and 2 may proceed provided that within 4 hours, either all the inoperable valves are restored to OPERABLE status or the maximum variable overpower trip setpoint and the maximum Allowable Steady State Power Level are reduced per Table 3.7-2; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. Operation in MODES 3 and 4* may proceed with at least one reactor coolant loop and associated steam generator in operation, provided that there are no more than four inoperable main steam safety valves associated with the operating steam generator; otherwise, be in COLD SHUTDOWN within the following 30 hours.
- c. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.1.1 No additional Surveillance Requirements other than those required by Specification 4.0.5.

*Until the steam generators are no longer required for heat removal.

**The maximum number of inoperable safety valves on any operating steam generator is four (4).

TABLE 3.7-1

STEAM LINE SAFETY VALVES PER LOOPS

<u>VALVE NUMBER</u>		<u>LIFT SETTING ($\pm 3\%$)*</u>	<u>MINIMUM RATED CAPACITY**</u>
<u>S/G No. 1</u>	<u>S/G No. 2</u>		
a. SGE PSV 572	SGE PSV 554	1250 psig	941,543 lb/hr
b. SGE PSV 579	SGE PSV 561	1250 psig	941,543 lb/hr
c. SGE PSV 573	SGE PSV 555	1290 psig	971,332 lb/hr
d. SGE PSV 578	SGE PSV 560	1290 psig	971,332 lb/hr
e. SGE PSV 574	SGE PSV 556	1315 psig	989,950 lb/hr
f. SGE PSV 575	SGE PSV 557	1315 psig	989,950 lb/hr
g. SGE PSV 576	SGE PSV 558	1315 psig	989,950 lb/hr
h. SGE PSV 577	SGE PSV 559	1315 psig	989,950 lb/hr
i. SGE PSV 691	SGE PSV 694	1315 psig	989,950 lb/hr
j. SGE PSV 692	SGE PSV 695	1315 psig	989,950 lb/hr

*The lift setting pressure shall correspond to ambient conditions at the valve at nominal operating temperature and pressure.

**Capacity is rated at lift setting +3% accumulation.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS

- b. At least once per 18 months during shutdown by:
 - 1. Verifying that each automatic valve in the flow path actuates to its correct position upon receipt of an auxiliary feedwater actuation test signal.
 - 2. Verifying that each pump that starts automatically upon receipt of an auxiliary feedwater actuation test signal will start automatically upon receipt of an auxiliary feedwater actuation test signal.
- c. Prior to startup following any refueling shutdown or cold shutdown of 30 days or longer, by verifying on a STAGGERED TEST BASIS (by means of a flow test) that the normal flow path from the condensate storage tank to each of the steam generators through one of the essential auxiliary feedwater pumps delivers at least 650 gpm at 1270 psia or equivalent at the entrance of the steam generator.
- d. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3 or MODE 4 for the turbine-driven pump.

PLANT SYSTEMS

CONDENSATE STORAGE TANK

LIMITING CONDITION FOR OPERATION

3.7.1.3 The condensate storage tank (CST) shall be OPERABLE with an indicated level of at least 25 feet (300,000 gallons).

APPLICABILITY: MODES 1, 2, 3#, and 4*#.

ACTION:

With the condensate storage tank inoperable, within 4 hours either:

- a. Restore the CST to OPERABLE status or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours, or
- b. Demonstrate the OPERABILITY of the reactor makeup water tank as a backup supply to the essential auxiliary feedwater pumps and restore the condensate storage tank to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN with a OPERABLE shutdown cooling loop in operation within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.3.1 The condensate storage tank shall be demonstrated OPERABLE at least once per 12 hours by verifying the level (contained water volume) is within its limits when the tank is the supply source for the auxiliary feedwater pumps.

4.7.1.3.2 The reactor makeup water tank shall be demonstrated OPERABLE at least once per 12 hours whenever the reactor makeup water tank is the supply source for the essential auxiliary feedwater pumps by verifying:

- a. That the reactor makeup water tank supply line to the auxiliary feedwater system isolation valve is open, and
- b. That the reactor makeup water tank contains a water level of at least 25 feet (300,000 gallons).

*Until the steam generators are no longer required for heat removed.

#Not applicable when cooldown is in progress.

3/4.7 PLANT SYSTEMS

BASES

3/4.7.1 TURBINE CYCLE

3/4.7.1.1 SAFETY VALVES

The OPERABILITY of the main steam safety valves (MSSVs) limit secondary system pressure to within 110% (1397 psia) of the design pressure (1270 psia) during the most severe anticipated operational transient. For design purposes the valves are sized to pass a minimum of 102% of the RATED THERMAL POWER at 102% of design power. The adequacy of this relieving capacity is demonstrated by maintaining the Reactor Coolant System pressure below NRC acceptance criteria (120% of design pressure for large feedwater line breaks, CEA ejection and 110% of design pressure for all overpressurization events).

The specified valve lift settings and relieving capacities are in accordance with the requirements of Section III of the ASME Boiler and Pressure Vessel Code, 1974 Edition including the Summer 1975 Addenda. The total relieving capacity for all twenty MSSVs at 110% of system design pressure (adjusted for 50 psi pressure drop to valves inlet) is 19.44×10^6 lbm/hr. This capacity is less than the total rated capacity as the MSSVs are operating at an inlet pressure below rated conditions. At these same secondary pressure conditions, the total steam flow at 102% (2% uncertainty) of 3817 MWt (RATED THERMAL POWER plus 17 MWt pump heat input) is 17.83×10^6 lbm/hr. The ratio of this total steam flow to the total capacity is 109.2%.

STARTUP and/or POWER OPERATION is allowable with MSSVs inoperable if the maximum allowable power level is reduced to a value equal to the product of the ratio of the number of MSSVs available per steam generator to the total number of MSSVs per steam generator with the ratio of the total steam flow to available relieving capacity.

$$\text{Allowable Power Level} = \left(\frac{10-N}{10} \right) \times 109.2$$

The ceiling on the variable over power reactor trip is also reduced to an amount over the allowable power level equal to the BAND given for this trip in Table 2.2-1.

$$SP = \text{Allowable Power Level} + 9.8$$

where:

SP = reduced reactor trip setpoint in percent of RATED THERMAL POWER. This is a ratio of the available relieving capacity over the total steam flow at rated power.

PLANT SYSTEMS

BASES

SAFETY VALVES (continued)

- 10 = total number of secondary safety valves for one steam generator.
- N = number of inoperable main steam safety valves on the steam generator with the greater number of inoperable valves.
- 109.2 = ratio of main steam safety valve relieving capacity of 110% steam generator design pressure to calculated steam flow rate at 100% plant power + 2% uncertainty (see above text)
- 9.8 = BAND between the maximum thermal power and the variable over power trip setpoint ceiling

3/4.7.1.2 AUXILIARY FEEDWATER SYSTEM

The OPERABILITY of the auxiliary feedwater system ensures that the Reactor Coolant System can be cooled down to less than 350°F from normal operating conditions in the event of a total loss-of-offsite power.

Each electric-driven auxiliary feedwater pump is capable of delivering a minimum feedwater flow of 650 gpm at a pressure of 1270 psia at the entrance of the steam generators. The steam-driven auxiliary feedwater pump is capable of delivering a minimum feedwater flow of 650 gpm at a pressure of 1270 psia at the entrance of the steam generators. This capacity is sufficient to ensure that adequate feedwater flow is available to remove decay heat and reduce the Reactor Coolant System temperature to less than 350°F when the shutdown cooling system may be placed into operation.

3/4.7.1.3 CONDENSATE STORAGE TANK

The OPERABILITY of the condensate storage tank ensures that a minimum water volume of 300,000 gallons is available to maintain the Reactor Coolant System at HOT STANDBY for 8 hours followed by an orderly cooldown to the shutdown cooling entry (350°F) temperature with concurrent total loss-of-site power. The contained water volume limit includes an allowance for water not usable because of tank discharge line location or other physical characteristics.



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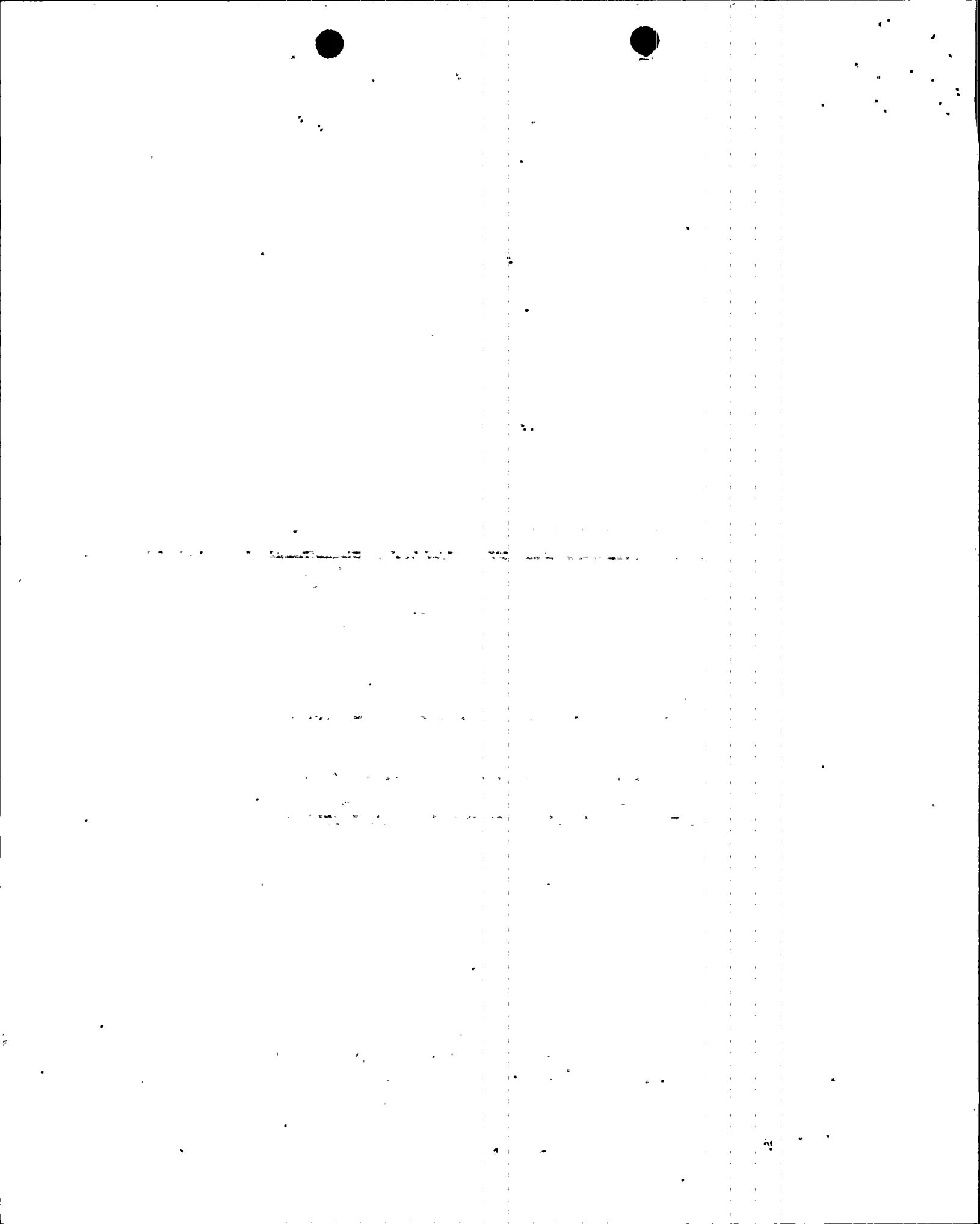
DOCKET NO. STN 50-529

PALO VERDE NUCLEAR GENERATING STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 61
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 13, 1990, supplemented by letters dated May 27, 1992, May 13, 1993, and November 12, 1993, 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 Part 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:

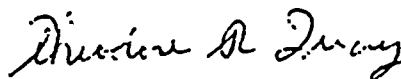


(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 61, 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 must be fully implemented no later than December 1, 1994.

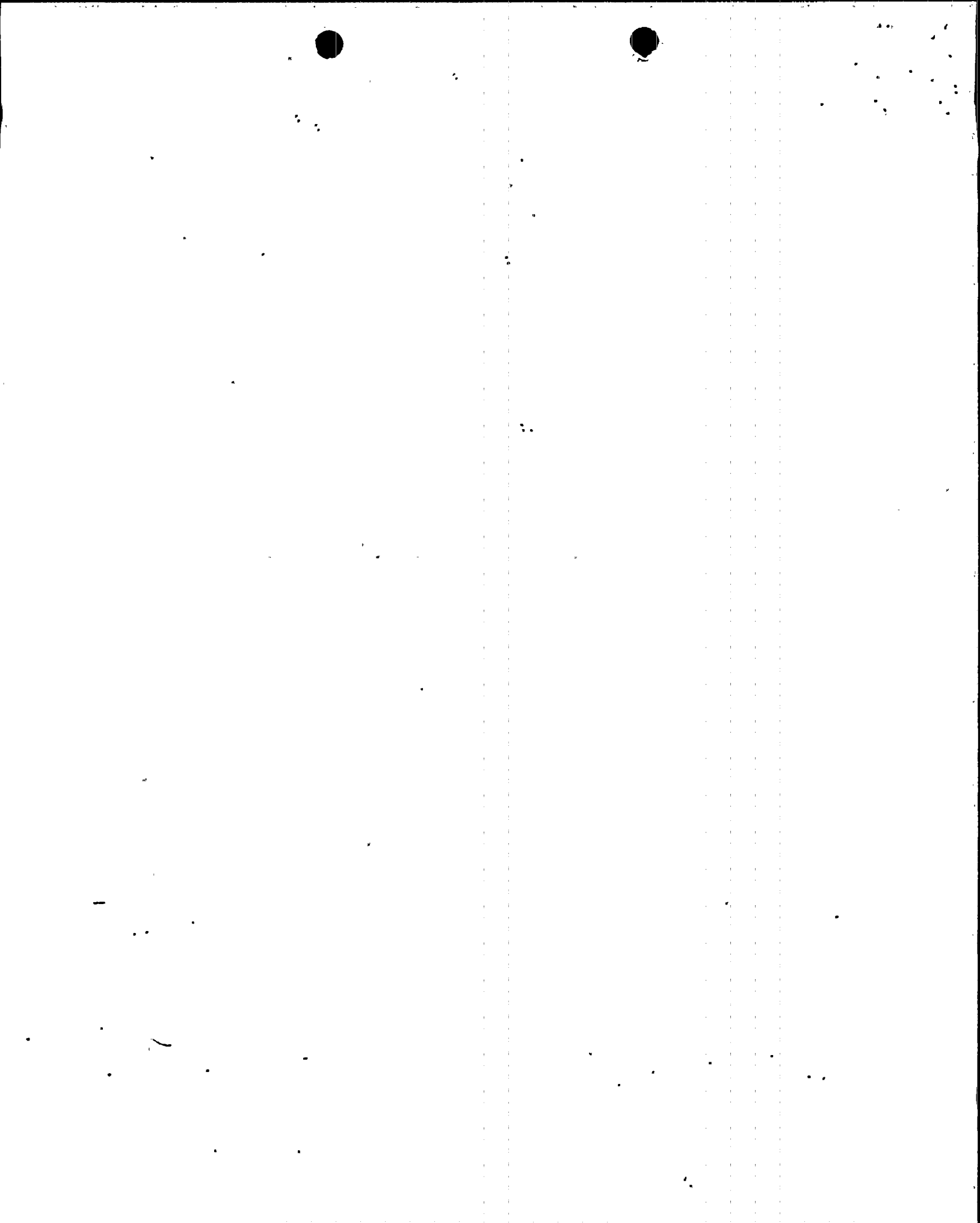
FOR THE NUCLEAR REGULATORY COMMISSION



Theodore R. Quay, Director
Project Directorate IV-3
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 16, 1994



ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 61 TO FACILITY OPERATING LICENSE NO. NPF-51

DOCKET NO. STN 50-529

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change. The corresponding overleaf pages are also provided to maintain document completeness.

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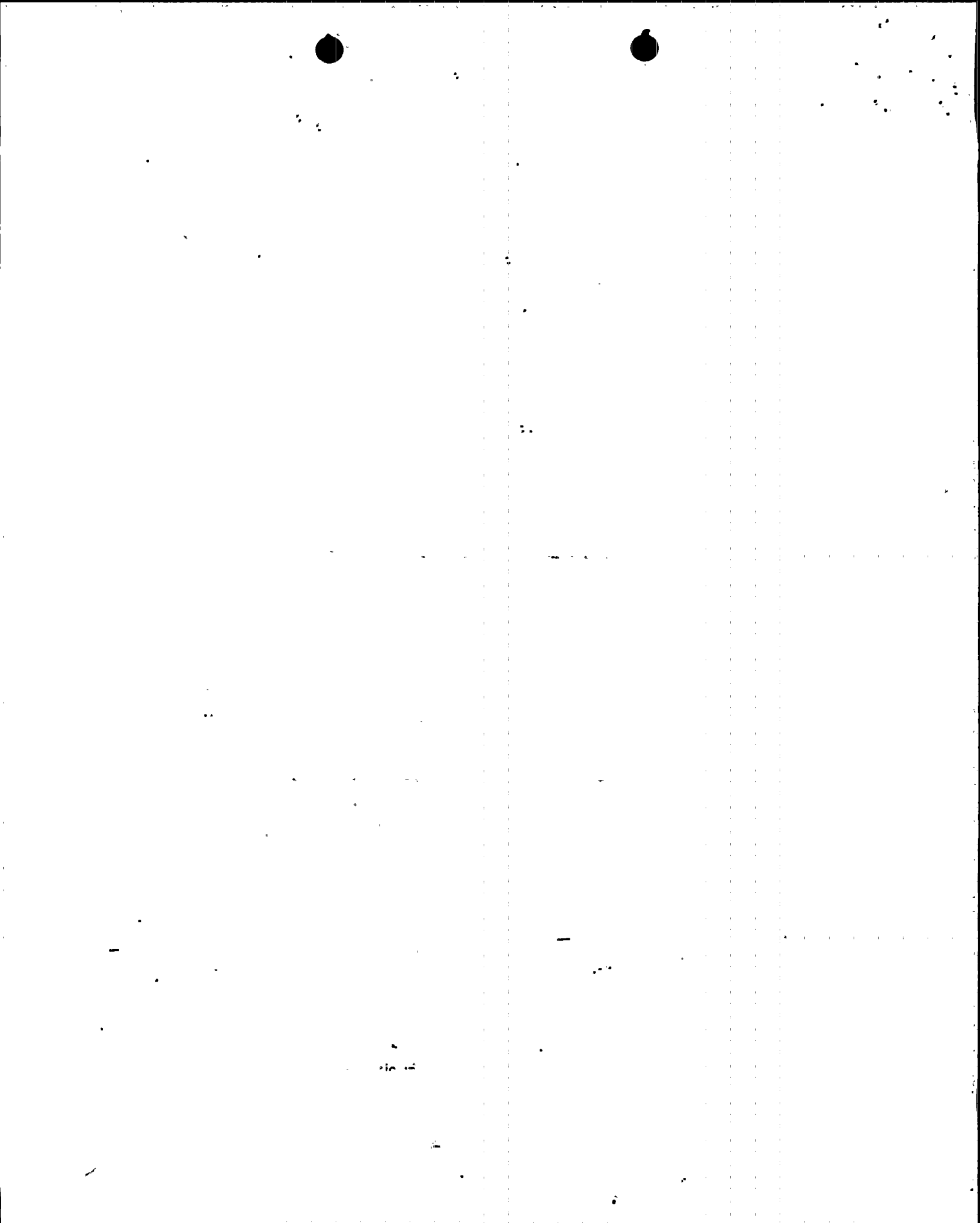


TABLE 3.3-2

REACTOR PROTECTIVE INSTRUMENTATION RESPONSE TIMES

<u>FUNCTIONAL UNIT</u>	<u>RESPONSE TIME</u>
1. TRIP GENERATION	
A. Process	
1. Pressurizer Pressure - High	≤ 0.50 seconds
2. Pressurizer Pressure Low	≤ 1.15 seconds
3. Steam Generator Level - Low	≤ 1.15 seconds
4. Steam Generator Level - High	≤ 1.15 seconds
5. Steam Generator Pressure - Low	≤ 1.15 seconds
6. Containment Pressure - High	≤ 1.15 seconds
7. Reactor Coolant Flow - Low	≤ 0.58 second
8. Local Power Density - High	
a. Neutron Flux Power from Excore Neutron Detectors	≤ 0.75 second*
b. CEA Positions	≤ 1.35 second**
c. CEA Positions: CEAC Penalty Factor	≤ 0.75 second**
9. DNBR - Low	
a. Neutron Flux Power from Excore Neutron Detectors	≤ 0.75 second*
b. CEA Positions	≤ 1.35 second**
c. Cold Leg Temperature	≤ 0.75 second##
d. Hot Leg Temperature	≤ 0.75 second##
e. Primary Coolant Pump Shaft Speed	≤ 0.30 second#
f. Reactor Coolant Pressure from Pressurizer	≤ 0.75 second##
g. CEA Positions: CEAC Penalty Factor	≤ 0.75 second**
B. Excore Neutron Flux	
1. Variable Overpower Trip	≤ 0.55 second*
2. Logarithmic Power Level - High	
a. Startup and Operating	≤ 0.55 second*
b. Shutdown	≤ 0.55 second*

TABLE 3.3-2 (Continued)

REACTOR PROTECTIVE INSTRUMENTATION RESPONSE TIMES

<u>FUNCTIONAL UNIT</u>	<u>RESPONSE TIME</u>
C. Core Protection Calculator System	
1. CEA Calculators	Not Applicable
2. Core Protection Calculators	Not Applicable
D. Supplementary Protection System	
Pressurizer Pressure - High	≤ 1.15 second
II. RPS LOGIC	
A. Matrix Logic	Not Applicable
B. Initiation Logic	Not Applicable
III. RPS ACTUATION DEVICES	
A. Reactor Trip Breakers	Not Applicable
B. Manual Trip	Not Applicable

* Neutron detectors are exempt from response time testing. The response time of the neutron flux signal portion of the channel shall be measured from the detector output or from the input of first electronic component in channel.

** Response time shall be measured from the output of the sensor. Acceptable CEA sensor response shall be demonstrated by compliance with Specification 3.1.3.4.

The pulse transmitters measuring pump speed are exempt from response time testing. The response time shall be measured from the pulse shaper input.

Response time shall be measured from the output of the resistance temperature detector (sensor). RTD response time shall be measured at least once per 18 months. The measured response time of the slowest RTD shall be less than or equal to 8 seconds.

Response time shall be measured from the output of the pressure transmitter. The transmitter response time shall be less than or equal to 0.7 second.

REACTOR COOLANT SYSTEM

3/4.4.2 SAFETY VALVES

SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.2.1 A minimum of one pressurizer code safety valve shall be OPERABLE with a lift setting of 2500 psia +3, -1%*.

APPLICABILITY: MODE 4.

ACTION:

- a. With no pressurizer code safety valve OPERABLE, immediately suspend all operations involving positive reactivity changes and place an OPERABLE shutdown cooling loop into operation.
- b. The provisions of Specification 3.0.4 may be suspended for up to 12 hours for entering into and during operation in MODE 4 for purposes of setting the pressurizer code safety valves under ambient (HOT) conditions provided a preliminary cold setting was made prior to heatup.

SURVEILLANCE REQUIREMENTS

4.4.2.1 No additional Surveillance Requirements other than those required by Specification 4.0.5.

*The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

REACTOR COOLANT SYSTEM

OPERATING

LIMITING CONDITION FOR OPERATION

3.4.2.2 All pressurizer code safety valves shall be OPERABLE with a lift setting of 2500 psia +3, -1%*.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

With one pressurizer code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 15 minutes or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours with the shutdown cooling system suction line relief valves aligned to provide overpressure protection for the Reactor Coolant System.

SURVEILLANCE REQUIREMENTS

4.4.2.2 No additional Surveillance Requirements other than those required by Specification 4.0.5.

*The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

3/4.7 PLANT SYSTEMS

3/4.7.1 TURBINE CYCLE

SAFETY VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.1 All main steam safety valves shall be OPERABLE with lift settings as specified in Table 3.7-1.

APPLICABILITY: MODES 1, 2, 3, and 4*.

ACTION:

- a. With both reactor coolant loops and associated steam generators in operation and with one or more** main steam safety valves inoperable per steam generator, operation in MODES 1 and 2 may proceed provided that within 4 hours, either all the inoperable valves are restored to OPERABLE status or the Maximum Variable Overpower trip setpoint and the Maximum Allowable Steady State Power Level are reduced per Table 3.7-2; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. Operation in MODES 3 and 4* may proceed with at least one reactor coolant loop and associated steam generator in operation, provided that there are no more than four inoperable main steam safety valves associated with the operating steam generator; otherwise, be in COLD SHUTDOWN within the following 30 hours.
- c. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.1.1. No additional Surveillance Requirements other than those required by Specification 4.0.5.

* Until the steam generators are no longer required for heat removal. _ _ _
** The maximum number of inoperable safety valves on any operating steam generator is four (4).

TABLE 3.7-1

STEAM LINE SAFETY VALVES PER LOOPS

<u>VALVE NUMBER</u>		<u>LIFT SETTING</u> ($\pm 3\%$) *	<u>MINIMUM</u> <u>RATED CAPACITY**</u>
<u>S/G No. 1</u>	<u>S/G No. 2</u>		
a. SGE PSV 572	SGE PSV 554	1250 psig	941,543 lb/hr
b. SGE PSV 579	SGE PSV 561	1250 psig	941,543 lb/hr
c. SGE PSV 573	SGE PSV 555	1290 psig	971,332 lb/hr
d. SGE PSV 578	SGE PSV 560	1290 psig	971,332 lb/hr
e. SGE PSV 574	SGE PSV 556	1315 psig	989,950 lb/hr
f. SGE PSV 575	SGE PSV 557	1315 psig	989,950 lb/hr
g. SGE PSV 576	SGE PSV 558	1315 psig	989,950 lb/hr
h. SGE PSV 577	SGE PSV 559	1315 psig	989,950 lb/hr
i. SGE PSV 691	SGE PSV 694	1315 psig	989,950 lb/hr
j. SGE PSV 692	SGE PSV 695	1315 psig	989,950 lb/hr

*The lift setting pressure shall correspond to ambient conditions at the valve at nominal operating temperature and pressure.

**Capacity is rated at lift setting +3% accumulation.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS

- b. At least once per 18 months during shutdown by:
 - 1. Verifying that each automatic valve in the flow path actuates to its correct position upon receipt of an auxiliary feedwater actuation test signal.*
 - 2. Verifying that each pump that starts automatically upon receipt of an auxiliary feedwater actuation test signal will start automatically upon receipt of an auxiliary feedwater actuation test signal.
- c. Prior to startup following any refueling shutdown or cold shutdown of 30 days or longer, by verifying on a STAGGERED TEST BASIS (by means of a flow test) that the normal flow path from the condensate storage tank to each of the steam generators through one of the essential auxiliary feedwater pumps delivers at least 650 gpm at 1270 psia or equivalent at the entrance of the steam generator.
- d. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3 or MODE 4 for the turbine-driven pump.

*Deferred until cycle 3 refueling outage.

PLANT SYSTEMS

CONDENSATE STORAGE TANK

LIMITING CONDITION FOR OPERATION

3.7.1.3 The condensate storage tank (CST) shall be OPERABLE with an indicated level of at least 25 feet (300,000 gallons).

APPLICABILITY: MODES 1, 2, 3,* and 4.*#

ACTION:

With the condensate storage tank inoperable, within 4 hours either:

- a. Restore the CST to OPERABLE status or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours, or
- b. Demonstrate the OPERABILITY of the reactor makeup water tank as a backup supply to the auxiliary feedwater pumps and restore the condensate storage tank to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN with a OPERABLE shutdown cooling loop in operation within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.3.1 The condensate storage tank shall be demonstrated OPERABLE at least once per 12 hours by verifying the level (contained water volume) is within its limits when the tank is the supply source for the auxiliary feedwater pumps.

4.7.1.3.2 The reactor makeup water tank shall be demonstrated OPERABLE at least once per 12 hours whenever the reactor makeup water tank is the supply source for the auxiliary feedwater pumps by verifying:

- a. That the reactor makeup water tank supply line to the auxiliary feed system isolation valve is open, and
- b. That the reactor makeup water tank contains a water level of at least 26 feet (300,000 gallons).

*Until the steam generators are no longer required for heat removed.

#Not applicable when cooldown is in progress.

3/4.7 PLANT SYSTEMS

BASES

3/4.7.1 TURBINE CYCLE

3/4.7.1.1 SAFETY VALVES

The OPERABILITY of the main steam safety valves (MSSVs) limit secondary system pressure to within 110% (1397 psia) of the design pressure (1270 psia) during the most severe anticipated operational transient. For design purposes the valves are sized to pass a minimum of 102% of the RATED THERMAL POWER at 102% of design power. The adequacy of this relieving capacity is demonstrated by maintaining the Reactor Coolant System pressure below NRC acceptance criteria (120% of design pressure for large feedwater line breaks, CEA ejection and 110% of design pressure for all overpressurization events).

The specified valve lift settings and relieving capacities are in accordance with the requirements of Section III of the ASME Boiler and Pressure Vessel Code, 1974 Edition including the Summer 1975 Addenda. The total relieving capacity for all twenty MSSVs at 110% of system design pressure (adjusted for 50 psi pressure drop to valves inlet) is 19.44×10^6 lbm/hr. This capacity is less than the total rated capacity as the MSSVs are operating at an inlet pressure below rated conditions. At these same secondary pressure conditions, the total steam flow at 102% (2% uncertainty) of 3817 MWt (RATED THERMAL POWER plus 17 MWt pump heat input) is 17.83×10^6 lbm/hr. The ratio of this total steam flow to the total capacity is 109.2%.

STARTUP and/or POWER OPERATION is allowable with MSSVs inoperable if the maximum allowable power level is reduced to a value equal to the product of the ratio of the number of MSSVs available per steam generator to the total number of MSSVs per steam generator with the ratio of the total steam flow to available relieving capacity.

$$\text{Allowable Power Level} = \left(\frac{10-N}{10}\right) \times 109.2$$

The ceiling on the variable over power reactor trip is also reduced to an amount over the allowable power level equal to the BAND given for this trip in Table 2.2-1.

$$SP = \text{Allowable Power Level} + 9.8$$

where:

SP = reduced reactor trip setpoint in percent of RATED THERMAL POWER. This is a ratio of the available relieving capacity over the total steam flow at rated power.

PLANT SYSTEMS

BASES

SAFETY VALVES (continued)

- 10 = total number of secondary safety valves for one steam generator.
- N = number of inoperable main steam safety valves on the steam generator with the greater number of inoperable valves.
- 109.2 = ratio of main steam safety valve relieving capacity of 110% steam generator design pressure to calculated steam flow rate at 100% plant power + 2% uncertainty (see above text)
- 9.8 = BAND between the maximum thermal power and the variable over power trip setpoint ceiling

3/4.7.1.2 AUXILIARY FEEDWATER SYSTEM

The OPERABILITY of the auxiliary feedwater system ensures that the Reactor Coolant System can be cooled down to less than 350°F from normal operating conditions in the event of a total loss-of-offsite power.

Each electric-driven auxiliary feedwater pump is capable of delivering a minimum feedwater flow of 650 gpm at a pressure of 1270 psia at the entrance of the steam generators. The steam-driven auxiliary feedwater pump is capable of delivering a minimum feedwater flow of 650 gpm at a pressure of 1270 psia at the entrance of the steam generators. This capacity is sufficient to ensure that adequate feedwater flow is available to remove decay heat and reduce the Reactor Coolant System temperature to less than 350°F when the shutdown cooling system may be placed into operation.

3/4.7.1.3 CONDENSATE STORAGE TANK

The OPERABILITY of the condensate storage tank ensures that a minimum water volume of 300,000 gallons is available to maintain the Reactor Coolant System at HOT STANDBY for 8 hours followed by an orderly cooldown to the shutdown cooling entry (350°F) temperature with concurrent total loss-of-site power. The contained water volume limit includes an allowance for water not usable because of tank discharge line location or other physical characteristics.



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

ARIZONA PUBLIC SERVICE COMPANY, ET AL.

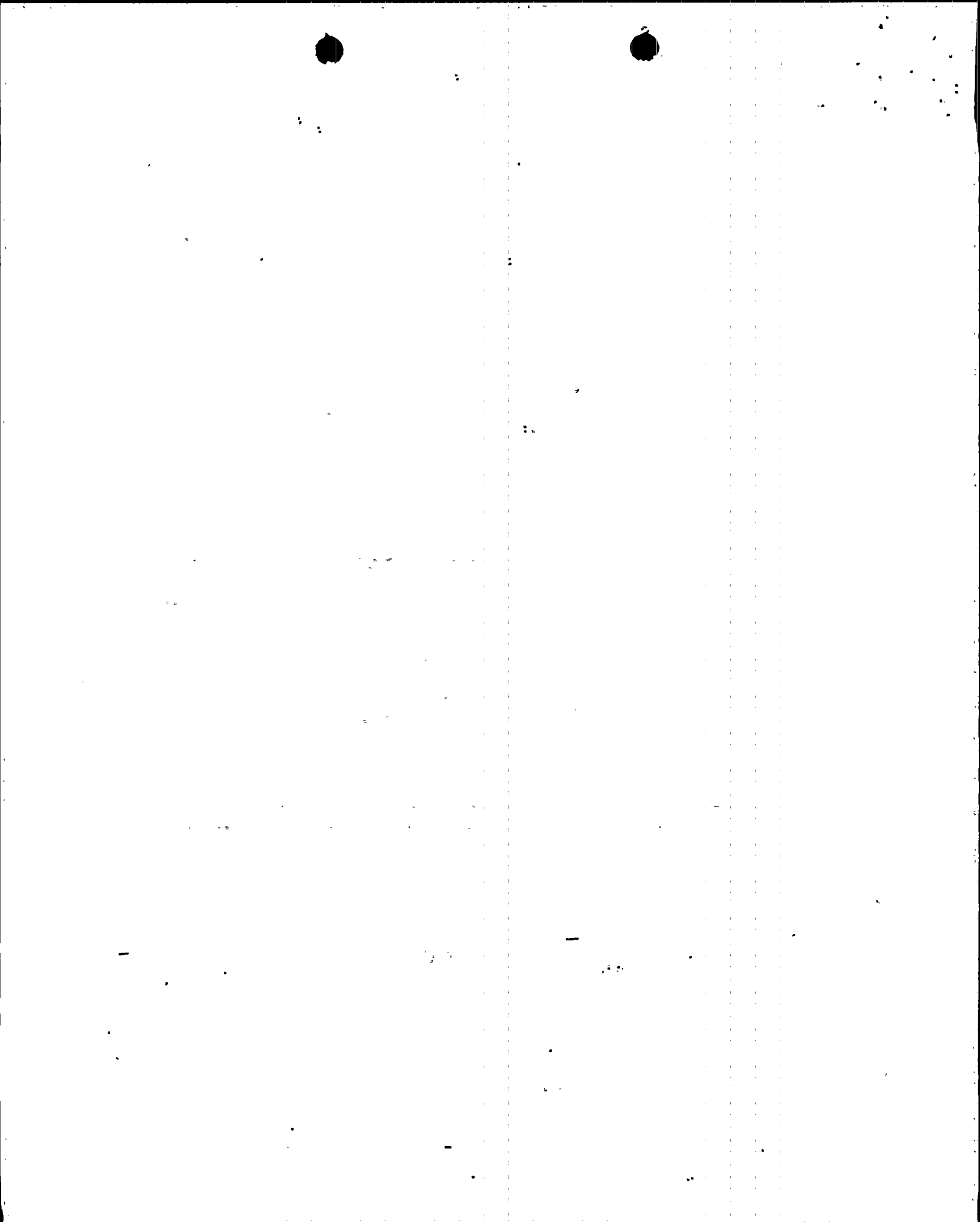
DOCKET NO. STN 50-530

PALO VERDE NUCLEAR GENERATING STATION, UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.47
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 13, 1990, supplemented by letters dated May 27, 1992, May 13, 1993, and November 12, 1993, 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. 47, 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 must be fully implemented no later than December 1, 1994.

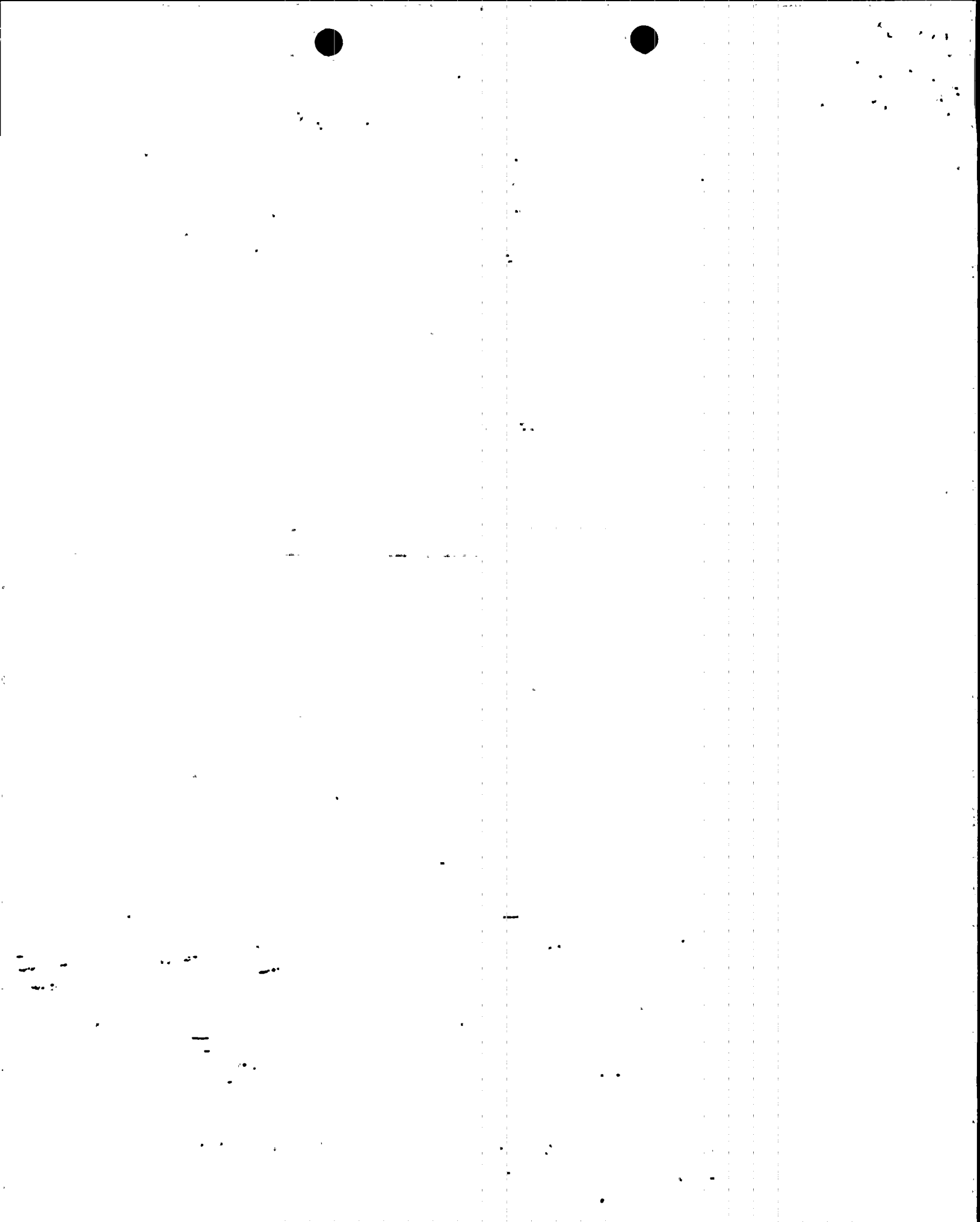
FOR THE NUCLEAR REGULATORY COMMISSION



Theodore R. Quay, Director
Project Directorate IV-3
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 16, 1994



ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 47 TO FACILITY OPERATING LICENSE NO. NPF-74

DOCKET NO. STN 50-530

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change. The corresponding overleaf pages are also provided to maintain document completeness.

Remove

3/4 3-11
3/4 4-7
3/4 4-8
3/4 7-2
3/4 7-5
B 3/4 7-2

Insert

3/4 3-11
3/4 4-7
3/4 4-8
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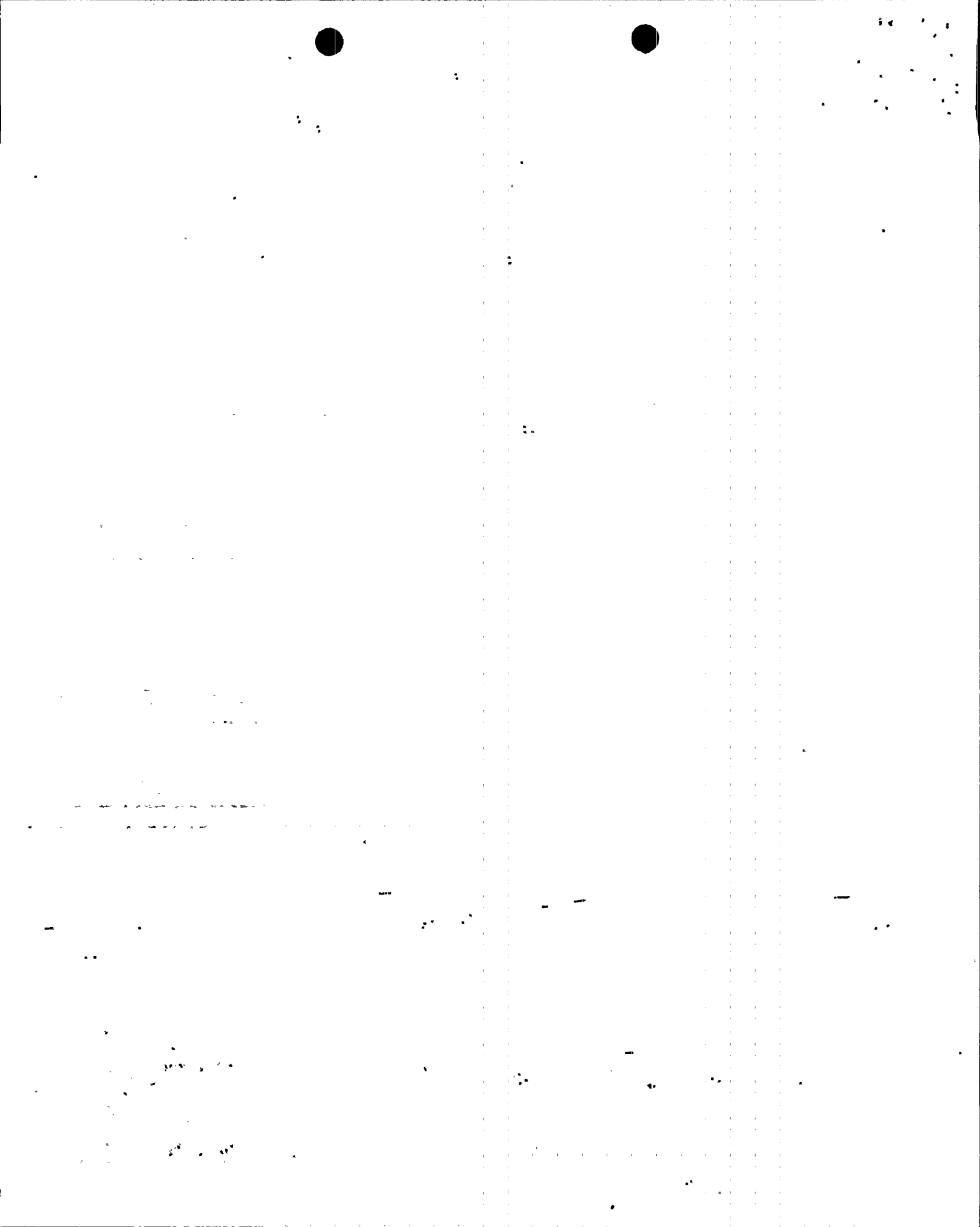


TABLE 3.3-2

REACTOR PROTECTIVE INSTRUMENTATION RESPONSE TIMES

<u>FUNCTIONAL UNIT</u>	<u>RESPONSE TIME</u>
I. TRIP GENERATION	
A. Process	
1. Pressurizer Pressure - High	≤ 0.50 seconds
2. Pressurizer Pressure Low	≤ 1.15 seconds
3. Steam Generator Level - Low	≤ 1.15 seconds
4. Steam Generator Level - High	≤ 1.15 seconds
5. Steam Generator Pressure - Low	≤ 1.15 seconds
6. Containment Pressure - High	≤ 1.15 seconds
7. Reactor Coolant Flow - Low	≤ 0.58 second
8. Local Power Density - High	
a. Neutron Flux Power from Excore Neutron Detectors	≤ 0.75 second*
b. CEA Positions	≤ 1.35 second**
c. CEA Positions: CEAC Penalty Factor	≤ 0.75 second**
9. DNBR - Low	
a. Neutron Flux Power from Excore Neutron Detectors	≤ 0.75 second*
b. CEA Positions	≤ 1.35 second**
c. Cold Leg Temperature	≤ 0.75 second##
d. Hot Leg Temperature	≤ 0.75 second##
e. Primary Coolant Pump Shaft Speed	≤ 0.30 second#
f. Reactor Coolant Pressure from Pressurizer	≤ 0.75 second###
g. CEA Positions: CEAC Penalty Factor	≤ 0.75 second**
B. Excore Neutron Flux	
1. Variable Overpower Trip	≤ 0.55 second*
2. Logarithmic Power Level - High	
a. Startup and Operating	≤ 0.55 second*
b. Shutdown	≤ 0.55 second*

TABLE 3.3-2 (Continued)

REACTOR PROTECTIVE INSTRUMENTATION RESPONSE TIMES

<u>FUNCTIONAL UNIT</u>	<u>RESPONSE TIME</u>
C. Core Protection Calculator System	
1. CEA Calculators	Not Applicable
2. Core Protection Calculators	Not Applicable
D. Supplementary Protection System	
Pressurizer Pressure - High	≤ 1.15 second
II. RPS LOGIC	
A. Matrix Logic	Not Applicable
B. Initiation Logic	Not Applicable
III. RPS ACTUATION DEVICES	
A. Reactor Trip Breakers	Not Applicable
B. Manual Trip	Not Applicable

* Neutron detectors are exempt from response time testing. The response time of the neutron flux signal portion of the channel shall be measured from the detector output or from the input of first electronic component in channel.

** Response time shall be measured from the output of the sensor. Acceptable CEA sensor response shall be demonstrated by compliance with Specification 3.1.3.4.

The pulse transmitters measuring pump speed are exempt from response time testing. The response time shall be measured from the pulse shaper input.

Response time shall be measured from the output of the resistance temperature detector (sensor). RTD response time shall be measured at least once per 18 months. The measured response time of the slowest RTD shall be less than or equal to 8 seconds.

Response time shall be measured from the output of the pressure transmitter. The transmitter response time shall be less than or equal to 0.7 second.

REACTOR COOLANT SYSTEM

3/4.4.2 SAFETY VALVES

SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.2.1 A minimum of one pressurizer code safety valve shall be OPERABLE with a lift setting of 2500 psia +3, -1%*.

APPLICABILITY: MODE 4.

ACTION:

- a. With no pressurizer code safety valve OPERABLE, immediately suspend all operations involving positive reactivity changes and place an OPERABLE shutdown cooling loop into operation.
- b. The provisions of Specification 3.0.4 may be suspended for up to 12 hours for entering into and during operation in MODE 4 for purposes of setting the pressurizer code safety valves under ambient (HOT) conditions provided a preliminary cold setting was made prior to heatup.

SURVEILLANCE REQUIREMENTS

4.4.2.1 No additional Surveillance Requirements other than those required by Specification 4.0.5.

*The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

REACTOR COOLANT SYSTEM

OPERATING

LIMITING CONDITION FOR OPERATION

3.4.2.2 All pressurizer code safety valves shall be OPERABLE with a lift setting of 2500 psia +3, -1%*.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

With one pressurizer code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 15 minutes or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours with the shutdown cooling system suction line relief valves aligned to provide overpressure protection for the Reactor Coolant System.

SURVEILLANCE REQUIREMENTS

4.4.2.2 No additional Surveillance Requirements other than those required by Specification 4.0.5.

*The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

3/4.7 PLANT SYSTEMS

3/4.7.1 TURBINE CYCLE

SAFETY VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.1 All main steam safety valves shall be OPERABLE with lift settings as specified in Table 3.7-1.

APPLICABILITY: MODES 1, 2, 3, and 4*.

ACTION:

- a. With both reactor coolant loops and associated steam generators in operation and with one or more** main steam safety valves inoperable per steam generator, operation in MODES 1 and 2 may proceed provided that within 4 hours, either all the inoperable valves are restored to OPERABLE status or the Variable Overpower trip setpoint ceiling and the Maximum Allowable Steady State Power Level are reduced per Table 3.7-2; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. Operation in MODES 3 and 4* may proceed with at least one reactor coolant loop and associated steam generator in operation, provided that there are no more than four inoperable main steam safety valves associated with the operating steam generator; otherwise, be in COLD SHUTDOWN within the following 30 hours.
- c. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.1.1 No additional Surveillance Requirements other than those required by Specification 4.0.5.

*Until the steam generators are no longer required for heat removal.

**The maximum number of inoperable safety valves on any operating steam generator is four (4).

TABLE 3.7-1

STEAM LINE SAFETY VALVES PER LOOPS

VALVE NUMBER		LIFT SETTING ($\pm 3\%$) *	MINIMUM RATED CAPACITY**
<u>S/G No. 1</u>	<u>S/G No. 2</u>		
a. SGE PSV 572	SGE PSV 554	1250 psig	941,543 lb/hr
b. SGE PSV 579	SGE PSV 561	1250 psig	941,543 lb/hr
c. SGE PSV 573	SGE PSV 555	1290 psig	971,332 lb/hr
d. SGE PSV 578	SGE PSV 560	1290 psig	971,332 lb/hr
e. SGE PSV 574	SGE PSV 556	1315 psig	989,950 lb/hr
f. SGE PSV 575	SGE PSV 557	1315 psig	989,950 lb/hr
g. SGE PSV 576	SGE PSV 558	1315 psig	989,950 lb/hr
h. SGE PSV 577	SGE PSV 559	1315 psig	989,950 lb/hr
i. SGE PSV 691	SGE PSV 694	1315 psig	989,950 lb/hr
j. SGE PSV 692	SGE PSV 695	1315 psig	989,950 lb/hr

*The lift setting pressure shall correspond to ambient conditions at the valve at nominal operating temperature and pressure.

**Capacity is rated at lift setting +3% accumulation.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS

- b. At least once per 18 months during shutdown by:
 - 1. Verifying that each automatic valve in the flow path actuates to its correct position upon receipt of an auxiliary feedwater actuation test signal.
 - 2. Verifying that each pump that starts automatically upon receipt of an auxiliary feedwater actuation test signal will start automatically upon receipt of an auxiliary feedwater actuation test signal.
- c. Prior to startup following any refueling shutdown or cold shutdown of 30 days or longer, by verifying on a STAGGERED TEST BASIS (by means of a flow test) that the normal flow path from the condensate storage tank to each of the steam generators through one of the essential auxiliary feedwater pumps delivers at least 650 gpm at 1270 psia or equivalent at the entrance of the steam generator.
- d. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3 or MODE 4 for the turbine-driven pump.

PLANT SYSTEMS

CONDENSATE STORAGE TANK

LIMITING CONDITION FOR OPERATION

3.7.1.3 The condensate storage tank (CST) shall be OPERABLE with a level of at least 25 feet (300,000 gallons).

APPLICABILITY: MODES 1, 2, 3,# and 4*#.

ACTION:

With the condensate storage tank inoperable, within 4 hours either:

- a. Restore the CST to OPERABLE status or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours, or
- b. Demonstrate the OPERABILITY of the reactor makeup water tank as a backup supply to the essential auxiliary feedwater pumps and restore the condensate storage tank to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN with a OPERABLE shutdown cooling loop in operation within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.3.1 The condensate storage tank shall be demonstrated OPERABLE at least once per 12 hours by verifying the level (contained water volume) is within its limits when the tank is the supply source for the auxiliary feedwater pumps.

4.7.1.3.2 The reactor makeup water tank shall be demonstrated OPERABLE at least once per 12 hours whenever the reactor makeup water tank is the supply source for the essential auxiliary feedwater pumps by verifying:

- a. That the reactor makeup water tank supply line to the auxiliary feedwater system isolation valve is open, and
- b. That the reactor makeup water tank contains a water level of at least 26 feet (300,000 gallons).

*Until the steam generators are no longer required for heat removed.

#Not applicable when cooldown is in progress.

3/4.7 PLANT SYSTEMS

BASES

3/4.7.1 TURBINE CYCLE

3/4.7.1.1 SAFETY VALVES

The OPERABILITY of the main steam safety valves (MSSVs) limit secondary system pressure to within 110% (1397 psia) of the design pressure (1270 psia) during the most severe anticipated operational transient. For design purposes the valves are sized to pass a minimum of 102% of the RATED THERMAL POWER at 102% of design power. The adequacy of this relieving capacity is demonstrated by maintaining the Reactor Coolant System pressure below NRC acceptance criteria (120% of design pressure for large feedwater line breaks, CEA ejection and 110% of design pressure for all overpressurization events).

The specified valve lift settings and relieving capacities are in accordance with the requirements of Section III of the ASME Boiler and Pressure Vessel Code, 1974 Edition including the Summer 1975 Addenda. The total relieving capacity for all twenty MSSVs at 110% of system design pressure (adjusted for 50 psi pressure drop to valves inlet) is 19.44×10^6 lbm/hr. This capacity is less than the total rated capacity as the MSSVs are operating at an inlet pressure below rated conditions. At these same secondary pressure conditions, the total steam flow at 102% (2% uncertainty) of 3817 Mwt (RATED THERMAL POWER plus 17 Mwt pump heat input) is 17.83×10^6 lbm/hr. The ratio of this total steam flow to the total capacity is 109.2%.

STARTUP and/or POWER OPERATION is allowable with MSSVs inoperable if the maximum allowable power level is reduced to a value equal to the product of the ratio of the number of MSSVs available per steam generator to the total number of MSSVs per steam generator with the ratio of the total steam flow to available relieving capacity.

$$\text{Allowable Power Level} = \left(\frac{10-N}{10} \right) \times 109.2$$

The ceiling on the variable over power reactor trip is also reduced to an amount over the allowable power level equal to the BAND given for this trip in Table 2.2-1.

$$SP = \text{Allowable Power Level} + 9.8$$

where:

SP = reduced reactor trip setpoint in percent of RATED THERMAL POWER. This is a ratio of the available relieving capacity over the total steam flow at rated power.

PLANT SYSTEMS

BASES

SAFETY VALVES (continued)

- 10 = total number of secondary safety valves for one steam generator.
- N = number of inoperable main steam safety valves on the steam generator with the greater number of inoperable valves.
- 109.2 = ratio of main steam safety valve relieving capacity of 110% steam generator design pressure to calculated steam flow rate at 100% plant power + 2% uncertainty (see above text)
- 9.8 = BAND between the maximum thermal power and the variable over power trip setpoint ceiling

3/4.7.1.2 AUXILIARY FEEDWATER SYSTEM

The OPERABILITY of the auxiliary feedwater system ensures that the Reactor Coolant System can be cooled down to less than 350°F from normal operating conditions in the event of a total loss-of-offsite power.

Each electric-driven auxiliary feedwater pump is capable of delivering a minimum feedwater flow of 650 gpm at a pressure of 1270 psia at the entrance of the steam generators. The steam-driven auxiliary feedwater pump is capable of delivering a minimum feedwater flow of 650 gpm at a pressure of 1270 psia at the entrance of the steam generators. This capacity is sufficient to ensure that adequate feedwater flow is available to remove decay heat and reduce the Reactor Coolant System temperature to less than 350°F when the shutdown cooling system may be placed into operation.

3/4.7.1.3 CONDENSATE STORAGE TANK

The OPERABILITY of the condensate storage tank ensures that a minimum water volume of 300,000 gallons is available to maintain the Reactor Coolant System at HOT STANDBY for 8 hours followed by an orderly cooldown to the shutdown cooling entry (350°F) temperature with concurrent total loss-of-site power. The contained water volume limit includes an allowance for water not usable because of tank discharge line location or other physical characteristics.