



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

SOUTH CAROLINA ELECTRIC & GAS COMPANY

SOUTH CAROLINA PUBLIC SERVICE AUTHORITY

DOCKET NO. 50-395

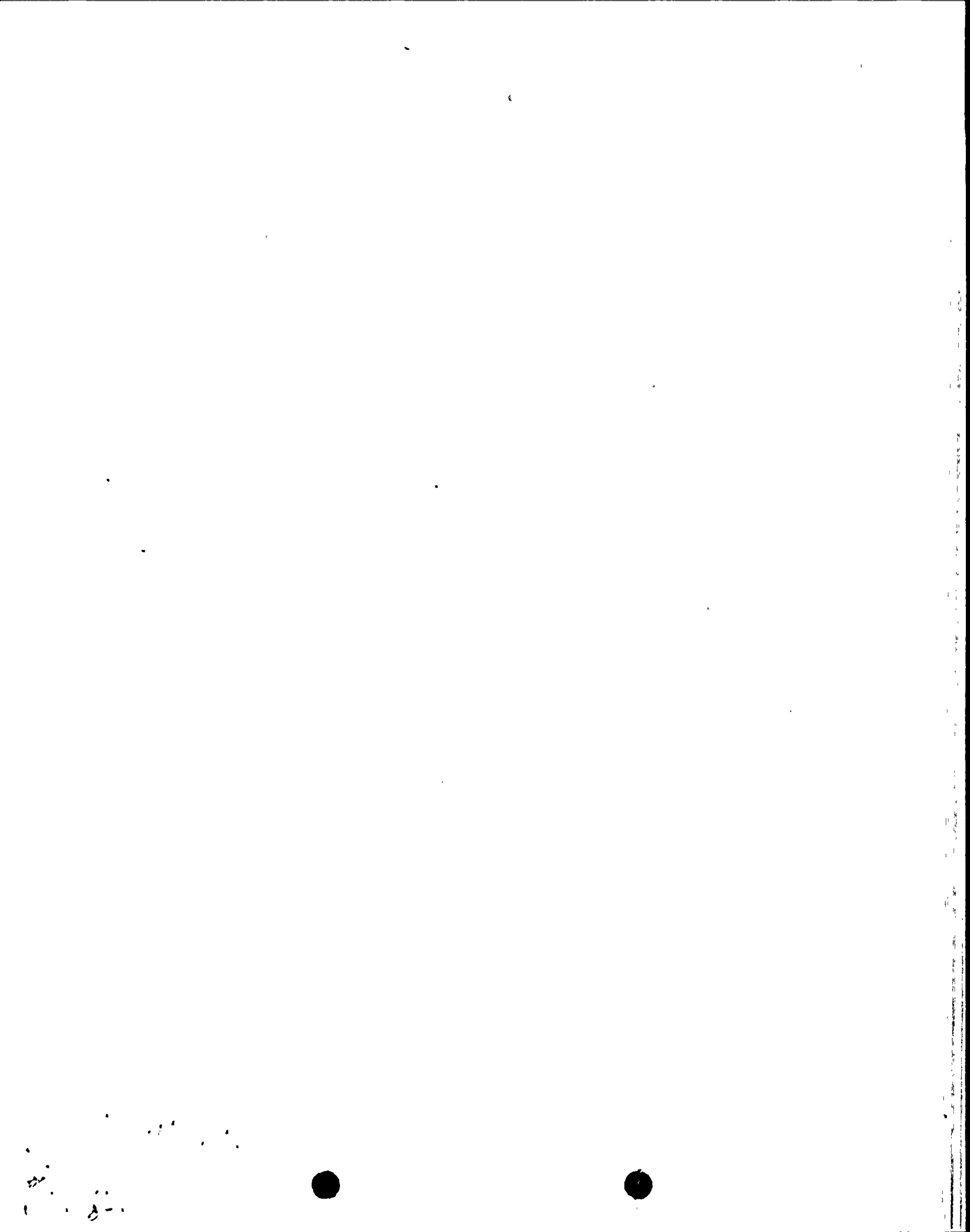
VIRGIL C. SUMMER NUCLEAR STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 129  
License No. NPF-12

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by South Carolina Electric & Gas Company (the licensee), dated June 30, 1995, as supplemented on August 11, 1995, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of 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-12 is hereby amended to read as follows:

9509210334 950918  
PDR ADOCK 05000395  
P PDR

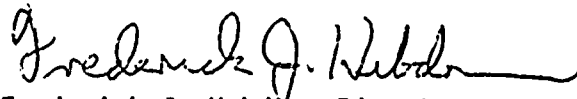


(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 129 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. South Carolina Electric & Gas Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION



Frederick J. Hebdon, Director  
Project Directorate II-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: September 18, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 129  
TO FACILITY OPERATING LICENSE NO. NPF-12  
DOCKET NO. 50-395

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revisions are indicated by marginal lines.

Remove Pages

3/4 4-10  
--  
--  
B3/4 4-2  
--

Insert Pages

3/4 4-10  
3/4 4-10a  
3/4 4-10b  
B3/4 4-2  
B3/4 4-2a



Small, faint, illegible markings or text in the top right corner.

## REACTOR COOLANT SYSTEM

### 3/4.4.4 RELIEF VALVES

#### LIMITING CONDITION FOR OPERATION

---

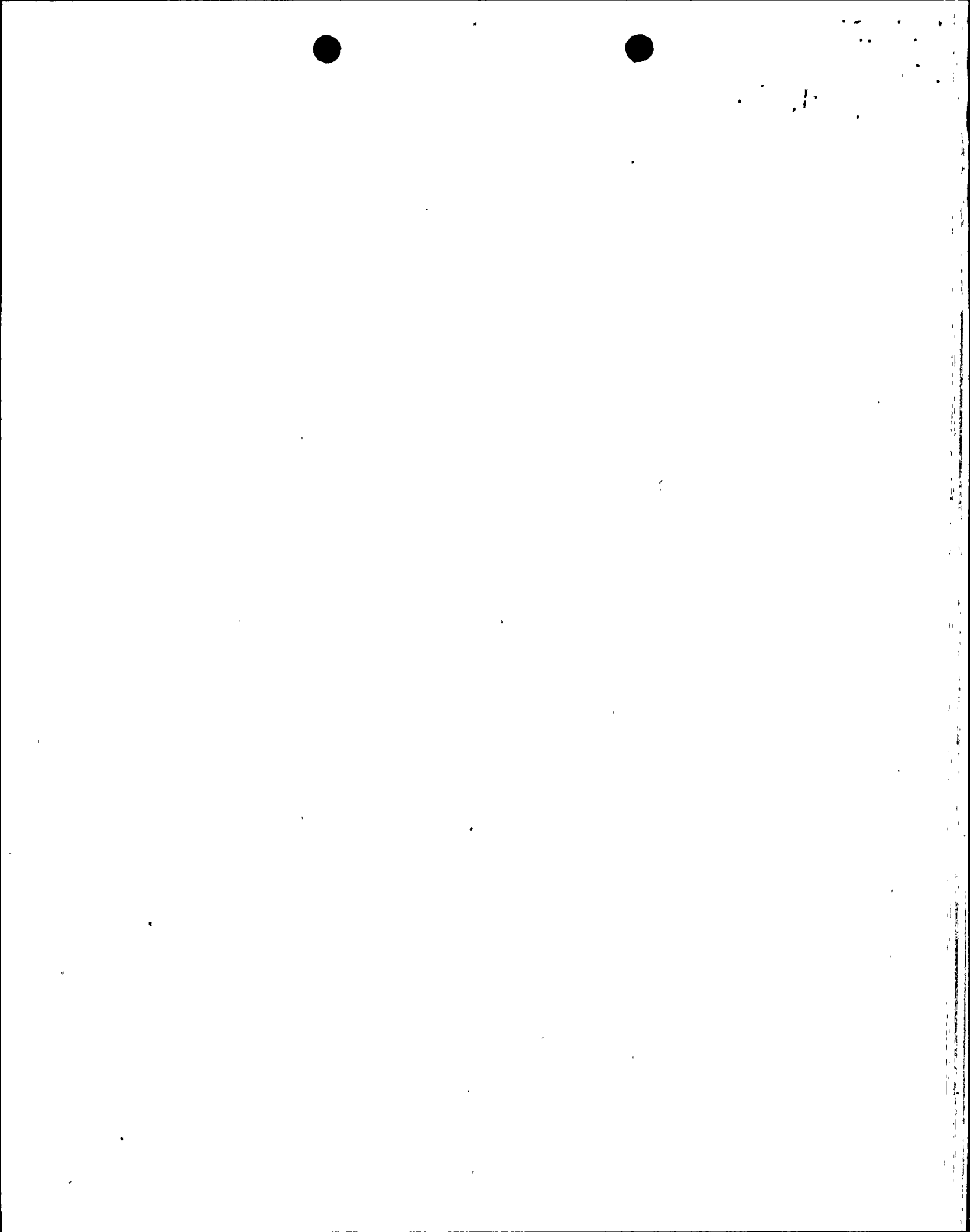
3.4.4 All power operated relief valves (PORVs) and their associated block valves shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With one or more PORV(s) inoperable and capable of being manually cycled, within 1 hour:
  - 1) restore the PORV(s) to OPERABLE status or
  - 2) close the associated block valve(s) and maintain power to the block valve;otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
  
- b. With one PORV inoperable and not capable of being manually cycled, within 1 hour:
  - 1) restore the PORV to OPERABLE status or to a condition where it may be manually cycled\* or
  - 2) close its associated block valve and remove power from the block valve;otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
  
- c. With two PORVs inoperable and not capable of being manually cycled,
  - 1) within 1 hour:
    - a) restore the PORVs to OPERABLE status or to a condition where they are capable of being manually cycled\* or
    - b) close the associated block valves and remove power from the block valves and
  - 2) within the next 72 hours:
    - a) restore a minimum of two PORVs to OPERABLE status or
    - b) restore a minimum of two PORVs to a condition where they are capable of being manually cycled\*;otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

\* If a PORV is inoperable but capable of being manually cycled, the associated block valve must be closed with power maintained to the block valve.



## REACTOR COOLANT SYSTEM

### LIMITING CONDITION FOR OPERATION

#### ACTION: (Continued)

- d. With three PORVs inoperable and not capable of being manually cycled,
- 1) within 1 hour:
    - a) restore at least one PORV to OPERABLE status or to a condition where it is capable of being manually cycled\*, and
    - b) close and remove power from the block valves for any PORVs remaining inoperable and not capable of being manually cycled and
  - 2) within the next 72 hours:
    - a) restore a minimum of two PORVs to OPERABLE status or
    - b) restore a minimum of two PORVs to a condition where they can be manually cycled\*;otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- e. With one block valve inoperable:
- 1) within 1 hour:
    - a) restore the block valve to OPERABLE status, or
    - b) place the associated PORV in manual control and
  - 2) within the next 72 hours:
    - a) restore the block valve to OPERABLE status or
    - b) close the block valve and remove power from the block valve;otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- f. With two block valves inoperable:
- 1) within 1 hour:
    - a) restore the block valves to OPERABLE status, or
    - b) place the associated PORVs in manual control and
  - 2) within 72 hours:
    - a) restore at least two of the three block valves to OPERABLE status and
    - b) ensure that the remaining inoperable block valve is closed and the power is removed;otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

\* If a PORV is inoperable but capable of being manually cycled, the associated block valve must be closed with power maintained to the block valve.



## REACTOR COOLANT SYSTEM

### LIMITING CONDITION FOR OPERATION

---

#### ACTION: (Continued)

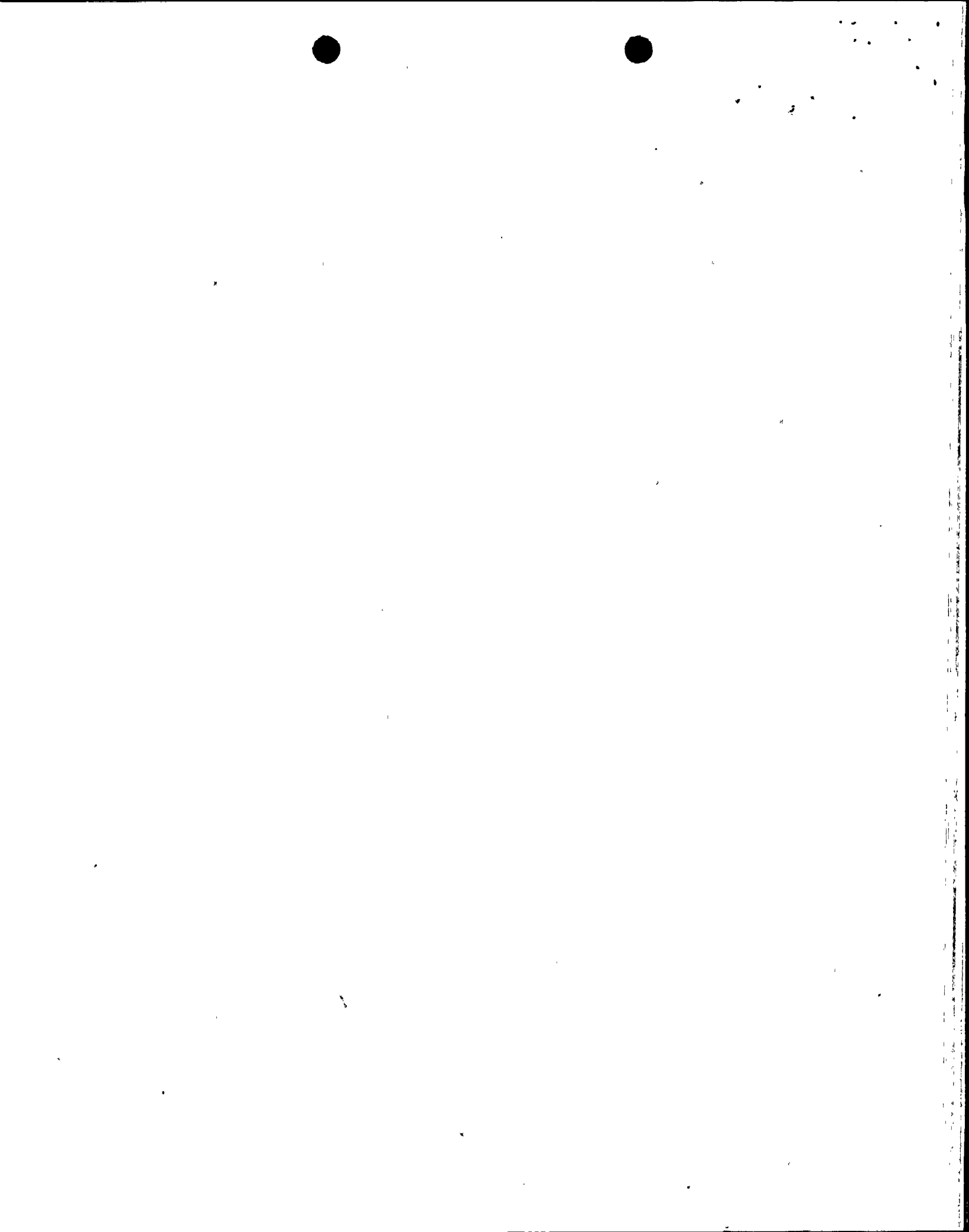
- g. With three block valves inoperable:
  - 1) within 1 hour:
    - a) restore the block valves to OPERABLE status, or
    - b) place the associated PORVs in manual control and
  - 2) within the next 2 hours restore at least one of the three block valves to OPERABLE status and
  - 3) within the next 72 hours:
    - a) restore at least two of the three block valves to OPERABLE status and
    - b) ensure that the remaining inoperable block valve is closed and the power is removed;otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
  
- h. The provisions of Specification 3.0.4 are not applicable.

### SURVEILLANCE REQUIREMENTS

---

4.4.4.1 In addition to the requirements of Specification 4.0.5, each PORV shall be demonstrated OPERABLE at least once per 18 months by operating the valve through one complete cycle of full travel during MODES 3 or 4.

4.4.4.2 Each block valve shall be demonstrated OPERABLE at least once per 92 days by operating the valve through one complete cycle of full travel unless the block valve is closed with the power removed in order to meet the requirements of 3.4.4.b, 3.4.4.c, or 3.4.4.d.



## REACTOR COOLANT SYSTEM

### BASES

---

#### 3/4.4.2 SAFETY VALVES

The pressurizer code safety valves operate to prevent the RCS from being pressurized above its Safety Limit of 2735 psig. Each safety valve is designed to relieve 420,000 lbs per hour of saturated steam at the valve set point plus 3% accumulation. The relief capacity of a single safety valve is adequate to relieve any overpressure condition which could occur during shutdown. In the event that no safety valves are OPERABLE, an operating RHR loop, connected to the RCS, provides overpressure relief capability and will prevent RCS overpressurization. In addition, the Overpressure Protection System provides a diverse means of protection against RCS overpressurization at low temperatures.

During operation, all pressurizer code safety valves must be OPERABLE to prevent the RCS from being pressurized above its safety limit of 2735 psig. The combined relief capacity of all of these valves is greater than the maximum surge rate resulting from a complete loss of load assuming no reactor trip until the first Reactor Protective System trip set point is reached (i.e., no credit is taken for a direct reactor trip on the loss of load) and also assuming no operation of the power operating relief valves or steam dump valves.

Demonstration of the safety valves' lift settings will be performed in accordance with the provisions of Section XI of the ASME Boiler and Pressure Code.

#### 3/4.4.3 PRESSURIZER

The limit on the maximum water volume in the pressurizer assures that the parameter is maintained within the normal steady state envelope of operation assumed in the SAR. The limit is consistent with the initial SAR assumptions. The 12 hour periodic surveillance is sufficient to ensure that the parameter is restored to within its limit following expected transient operation. The maximum water volume also ensures that a steam bubble is formed and thus the RCS is not a hydraulically solid system. The requirement that a minimum number of pressurizer heaters be OPERABLE enhances the capability of the plant to control Reactor Coolant System pressure and establish natural circulation.

#### 3/4.4.4 RELIEF VALVES (PORVs)

The pressurizer power operated relief valves (PORVs) and steam bubble function to relieve RCS pressure during all design transients up to and including the design step load decrease with steam dump. The PORVs and block valves may be used to depressurize the RCS when normal pressurizer spray is unavailable. Operation of the air operated PORVs minimizes the undesirable opening of the spring loaded pressurizer code safety valves. Each PORV has a remotely controlled motor-operated block valve to provide a positive shutoff capability should a relief valve become inoperable. The series arrangement of the PORV and its associated block valve permit surveillance while at power.

## REACTOR COOLANT SYSTEM

### BASES

---

#### RELIEF VALVES (PORVs) (Continued)

The PORVs, their block valves, and their controls are powered from buses that normally receive offsite power but are also capable of being powered from emergency power sources. Two PORVs and their associated block valves are powered from two separate safety trains. By maintaining two PORVs and their associated block valves OPERABLE, redundant capability to perform their design function is maintained.

Plant operators employ the PORVs to depressurize the RCS in response to certain plant transients if normal pressurizer spray is not available. For the Steam Generator Tube Rupture (SGTR) event, the safety analysis assumes that manual operator actions are required to mitigate the event. A loss of offsite power is assumed to accompany the event, and thus, normal pressurizer spray is unavailable to reduce RCS pressure. The PORVs are assumed to be used for RCS depressurization, which is one of the steps performed to equalize the primary and secondary pressures in order to terminate the primary to secondary break flow and the radioactive releases from the affected steam generator.

Credit is taken for the PORVs in safety analyses of events that result in increasing RCS pressure where departure from nucleate boiling ratio (DNBR) criteria are critical. By assuming PORV manual actuation, the primary pressure remains below the high pressurizer pressure trip setpoint, thus the DNBR calculation is more conservative. Events that assume this condition include a turbine trip and the loss of normal feedwater.

One PORV that is capable of manual operation has sufficient capacity to perform its function to depressurize the RCS and mitigate the effects of a postulated event. Two PORVs that are OPERABLE or capable of manual operation provide adequate redundancy.

Operating the PORV and block valve through one complete cycle verifies that the valve and its associated supporting systems are capable of manual operation.