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

BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-317

CALVERT CLIFFS NUCLEAR POWER PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 78
License No. DPR-53

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Baltimore Gas & Electric Company (the licensee) dated August 6, 1982, 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.

DESIGNATED ORIGINAL

Certified By Patricia J. Noonan

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. DPR-53 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 78, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert A. Clark, Chief
Operating Reactors Branch #3
Division of Licensing

Attachment:
Changes to the
Technical Specifications

Date of Issuance: September 27, 1982

ATTACHMENT TO LICENSE AMENDMENT NO. 78

FACILITY OPERATING LICENSE NO. DPR-53

DOCKET NO. 50-317

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

Page
3/4 7-5
3/4 7-5b
B 3/4 7-2

PLANT SYSTEMS

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.2 At least two steam turbine driven steam generator auxiliary feedwater pumps and associated flow paths shall be OPERABLE and capable of automatically initiating flow, within the limits of acceptable operation of Figure 3.7-1, to each steam generator.

APPLICABILITY: MODES 1, 2 and 3*.

ACTION:

a. With one auxiliary feedwater pump inoperable, restore at least two auxiliary feedwater pumps to OPERABLE status within 72 hours or be in HOT SHUTDOWN within the next 12 hours.

b. Whenever a subsystem is inoperable for the performance of periodic testing (i.e., manual discharge valve closed for pump discharge head test) a dedicated operator will be stationed at the local station (i.e., closed valve), with direct communication to the Control Room, to return the subsystem to normal upon instruction from the Control Room. Upon completion of any testing, the subsystem (valve) will be returned to its proper position and verified in its proper position by an independent operator check.

SURVEILLANCE REQUIREMENTS

4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

a. At least once per 31 days by:

1. Verifying that each steam turbine driven pump develops a Total Dynamic Head of $\geq$ 2800 ft. on recirculation flow when the secondary steam supply pressure is greater than 800 psig.

2. Cycling each testable, remote operated valve that is not in its operating position through at least one complete cycle.

3. Verifying that each valve (manual, power operated or automatic) in the direct flow path is in its correct position.

b. Before entering MODE 3 after a COLD SHUTDOWN of at least 14 days by completing a flow test that verifies the flow path from the condensate storage tank to the steam generators.

c. At least once per 18 months by:

1. Verifying that each automatic valve in the flow path actuates to its correct position upon receipt of each auxiliary feedwater actuation test signal.

2. Verifying that each auxiliary feedwater pump starts as designed automatically upon receipt of each auxiliary feedwater actuation test signal.

* Automatic flow initiation need not be OPERABLE during MODE 3.

SURVEILLANCE REQUIREMENTS (Continued)

3. Verifying, upon automatic initiation of auxiliary feedwater, a flow within the acceptable operating limits of Figure 3.7-1, Steam Generator Pressure Versus Auxiliary Feedwater Flow.

*d. Upon repositioning of 1/2-CV-4511 and/or 1/2-CV-4512 the valve shall be realigned to provide flow consistent with Figure 3.7-1.

* Only applicable during MODES 1 and 2.

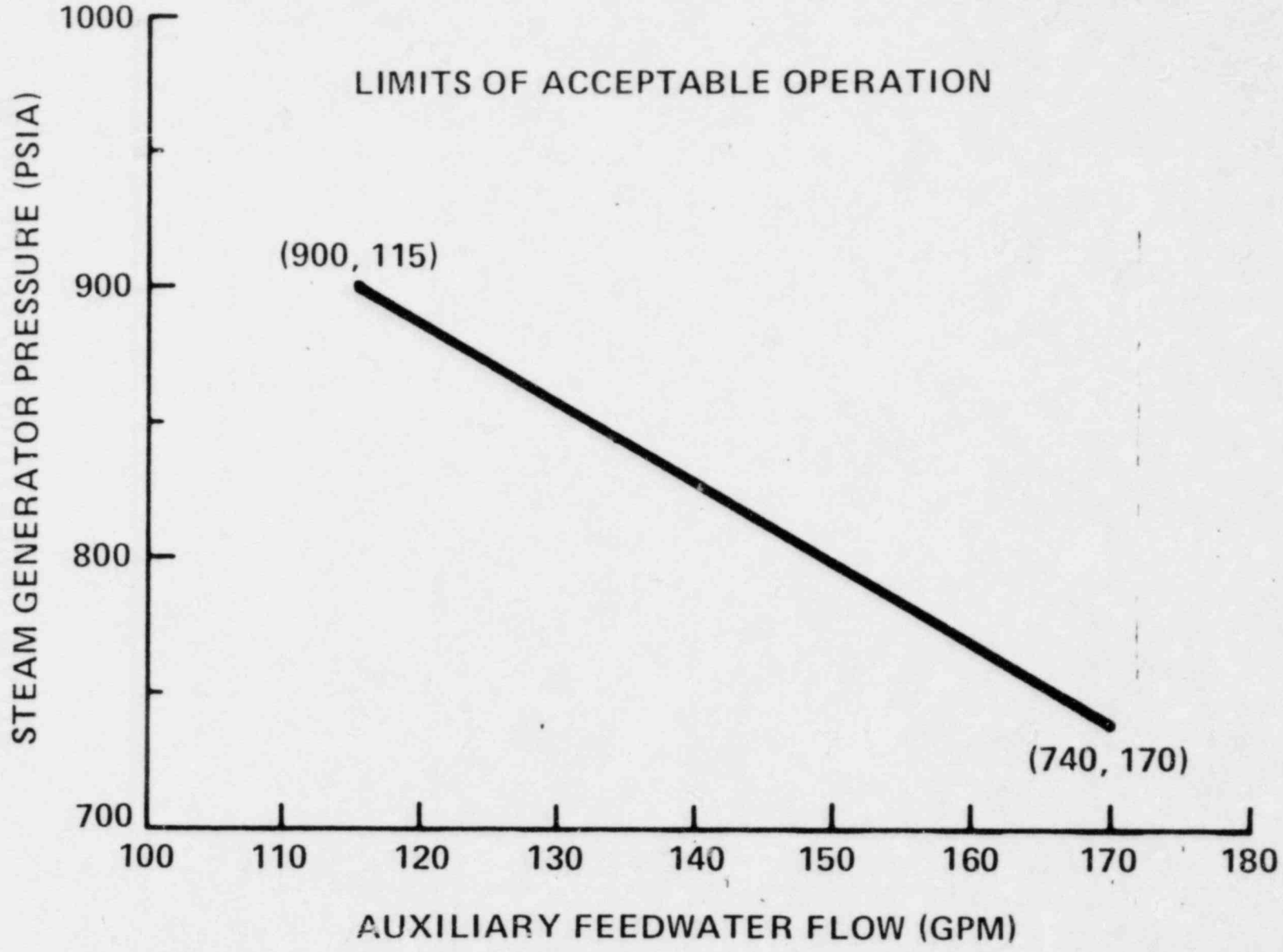

Figure 3.7-1
Steam Generator Pressure vs. Auxiliary Feedwater Flow

CONDENSATE STORAGE TANK

LIMITING CONDITION FOR OPERATION

3.7.1.3 The No. 12 condensate storage tank (CST) shall be OPERABLE with a minimum contained water volume of 150,000 gallons per unit.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

With the No. 12 condensate storage tank inoperable, within 4 hours either:

a. Restore the CST to OPERABLE status or be in HOT SHUTDOWN within the next 12 hours, or

b. Demonstrate the OPERABILITY of the No. 11 condensate storage tank as a backup supply to the auxiliary feedwater pumps and restore the No. 12 condensate storage tank to OPERABLE status within 7 days or be in HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.3.1 The No. 12 condensate storage tank shall be demonstrated OPERABLE at least once per 12 hours by verifying the 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 No. 11 condensate storage tank shall be demonstrated OPERABLE at least once per 12 hours by verifying that the tank contains a minimum of 150,000 gallons of water and by verifying that the flow path for taking suction from this tank is OPERABLE with the manual valves in this flow path open whenever the No. 11 condensate storage tank is the supply source for the auxiliary feedwater pumps.

3/4.7.1 TURBINE CYCLE

3/4.7.1.1 SAFETY VALVES

The OPERABILITY of the main steam line code safety valves ensures that the secondary system pressure will be limited to within its design pressure of 1000 psig during the most severe anticipated system operational transient. The maximum relieving capacity is associated with a turbine trip from 100% RATED THERMAL POWER coincident with an assumed loss of condenser heat sink (i.e., no steam bypass to the condenser).

The specified valve lift settings and relieving capacities are in accordance with the requirements of Section III of the ASME Boiler and Pressure Code, 1971 Edition. The total relieving capacity for all valves on all of the steam lines is 12.18×10^6 lbs/hr which is 108 percent of the total secondary steam flow of 11.23×10^6 lbs/hr at 100% RATED THERMAL POWER. A minimum of 2 OPERABLE safety valves per steam generator ensures that sufficient relieving capacity is available for removing decay heat.

STARTUP and/or POWER OPERATION is allowable with safety valves inoperable within the limitations of the ACTION requirements on the basis of the reduction in secondary system steam flow and THERMAL POWER required by the reduced reactor trip settings of the Power Level-High channels. The reactor trip setpoint reductions are derived on the following bases:

For two loop operation

$$SP = \frac{(X) - (Y)(V)}{X} \times 106.5$$

For single loop operation (two reactor coolant pumps operating in the same loop)

$$SP = \frac{(X) - (Y)(U)}{X} \times 46.8$$

where:

SP = reduced reactor trip setpoint in percent of RATED THERMAL POWER

V = maximum number of inoperable safety valves per steam line

U = maximum number of inoperable safety valves per operating steam line

106.5 = Power Level-High Trip Setpoint for two loop operation

46.8 = Power Level-High Trip Setpoint for single loop operation with two reactor coolant pumps operating in the same loop

X = Total relieving capacity of all safety valves per steam line in lbs/hour

Y = Maximum relieving capacity of any one safety valve in lbs/hour

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 300°F from normal operating conditions in the event of a total loss of offsite power.

Each steam driven auxiliary feedwater pump is capable of delivering a total feedwater flow of 700 gpm at a Total Dynamic Head of 2490 ft to the entrance of the steam generators. A capacity of 450 gpm, however, is sufficient to ensure that adequate feedwater flow is available to remove decay heat and reduce the Reactor Coolant System temperature to less than 300°F when the shutdown cooling system may be placed into operation.

A minimum flow of 88 gpm and a maximum flow of 142 gpm to each steam generator when automatically initiating AFW flow for a steam generator pressure of 900 psia is required to ensure sufficient time for operator action to maintain an adequate heat sink for the reactor. A nominal flow setting of 115 gpm at 900 psia is used to account for instrument error and system flow repeatability. Figure 3.7-1 shows the allowable flow as a function of steam generator pressure.

The minimum flow is adequate enough to allow 20 minutes before the operator is required to increase AFW flow to 450 gpm. At the same time the maximum flow is low enough to ensure 20 minutes for the operator to turn off AFW flow if main feedwater is available. Failure to turn off AFW, in this case, would result in safety injection actuation due to the rapid cooldown of the RCS.