

3. One channel of heat tracing for the flow path from the boric acid storage system to the Reactor Coolant System may be out of service provided the failed channel is restored to an operable status within 7 days and the redundant channel is demonstrated to be operable daily during that period.

4. Both channels of heat tracing for the flow path from the boric acid storage system to the Reactor Coolant System may be out of service provided at least one channel is restored to operable status within 48 hours, the required flow path is shown to be clear of blockage, and the second channel is restored to operable status within 7 days.

D. When RCS temperature is less than or equal to 295°F, the requirements of Table 3.1.A-2 regarding the number charging pumps allowed to be energized shall be adhered to.

Basis

The Chemical and Volume Control System provides control of the Reactor Coolant System boron inventory. This is normally accomplished by using any one of the three charging pumps in series with either one of the two boric acid transfer pumps. An alternate method of boration will be to use the charging pumps taking suction directly from the refueling water storage tank.

A third method will be to depressurize and use the safety injection pumps. There are three sources of borated water available for injection through 3 different paths.

(1) The boric acid transfer pumps can deliver the contents of the boric acid storage system to the charging pumps.

(2) The charging pumps can take suction from the refueling water storage tank. (2000 ppm boron solution). Reference is made to Technical Specification 3.3.A.

(3) The safety injection pumps can take their suction from either the refueling water storage tank or the boron injection tank.

The quantity of boric acid in storage from either the boric acid storage system or the refueling water storage tank is sufficient to borate the reactor coolant in order to reach cold shutdown at any time during core life.

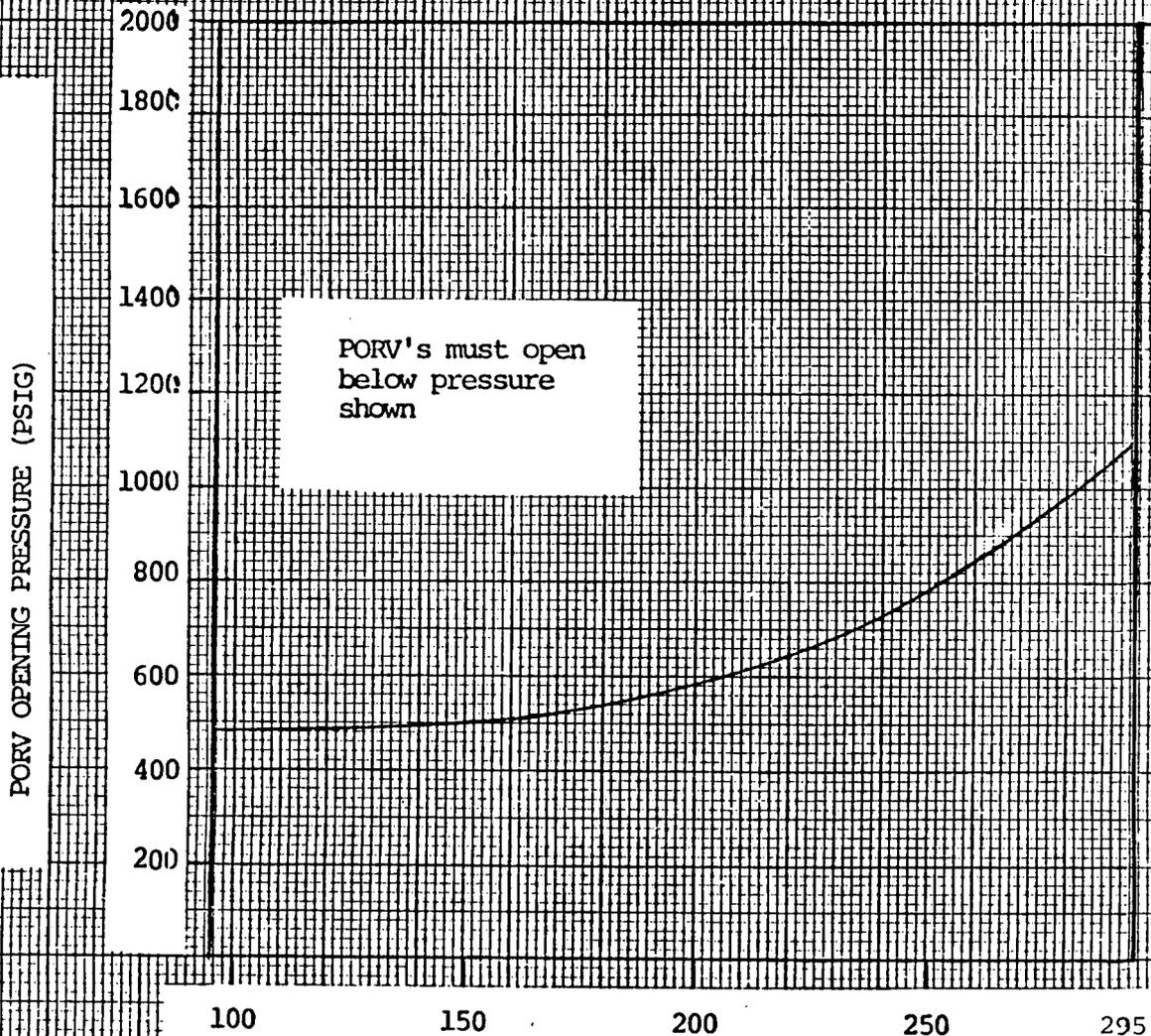
Approximately 4000 gallons of the 11 1/2% to 13% by weight (20,000 ppm to 22,500 ppm of boron) of boric acid are required to meet cold shutdown conditions.

Thus, a minimum of 4400 gallons in the boric acid storage system is specified. An upper concentration limit of 13% (22,500 ppm of boron) boric acid in the boric acid storage system is specified to maintain solution solubility at the specified low temperature limit of 145°F. One of two channels of heat tracing is sufficient to maintain the specified low

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Figure 3.1.A-1

PORV OPENING PRESSURE FOR OPERATION LESS THAN OR EQUAL TO 295°F



Notes:

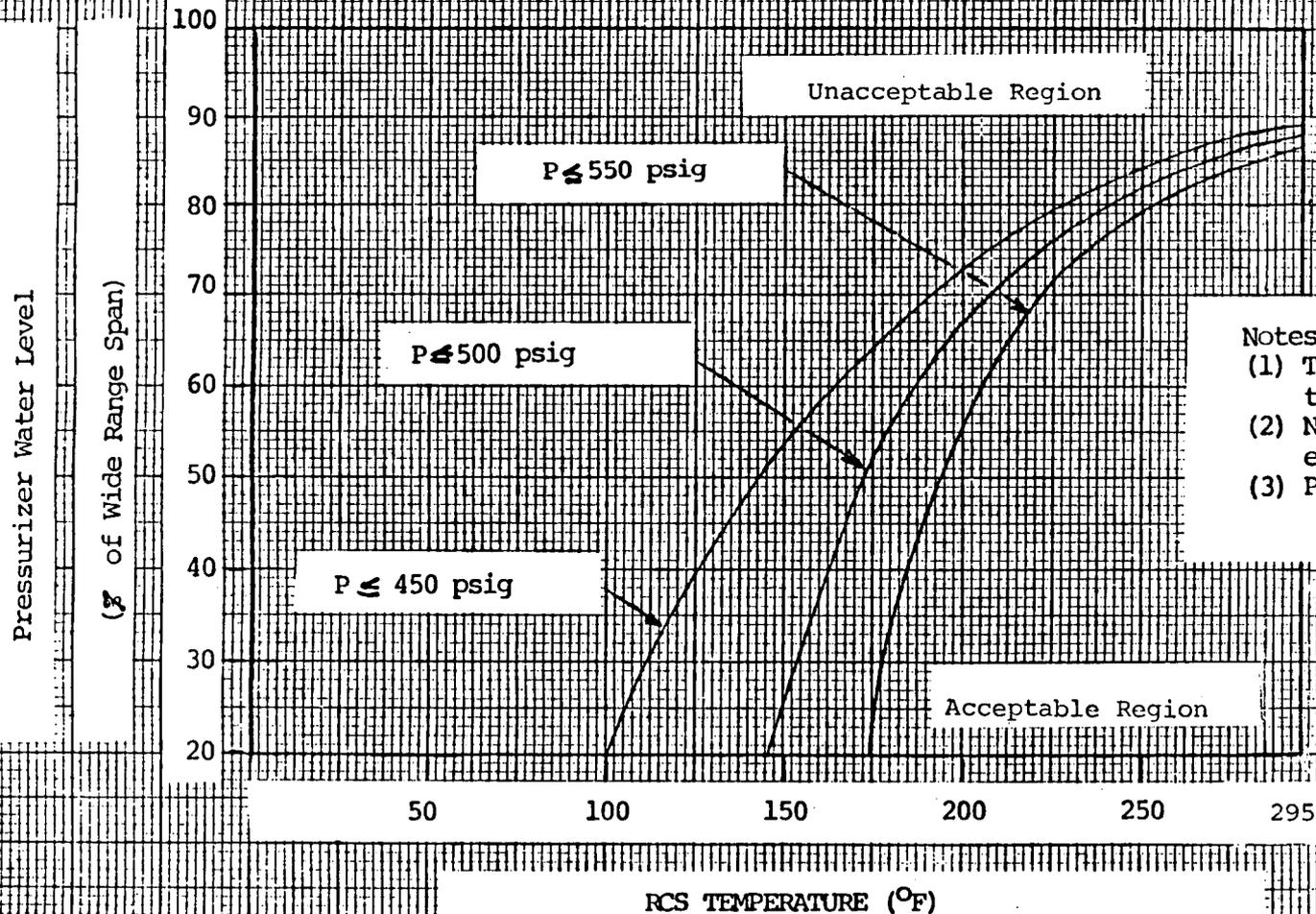
1. Applicable through 15 EFYs.
2. No allowance for instrument error included on this curve.

Amendment No.

RCS TEMPERATURE (°F)

Figure 3.1.A-2

MAXIMUM PRESSURIZER LEVEL WITH PORV'S INOPERABLE & ONE CHARGING PUMP ENERGIZED



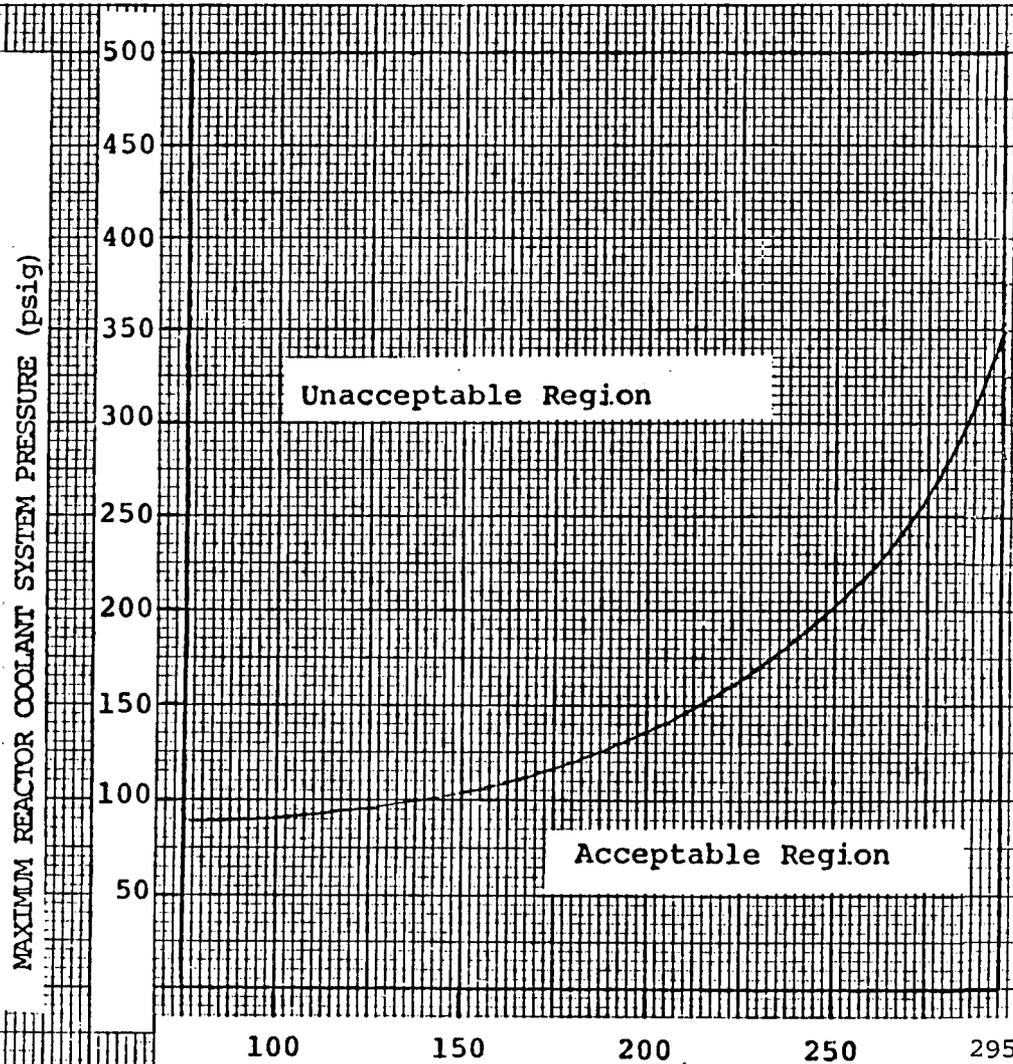
Notes:

- (1) This curve is applicable though 15 EFPYs.
- (2) No allowance for instrument error included in this curve.
- (3) P=RCS pressure.

Figure 3.1.A.-3

MAXIMUM REACTOR COOLANT SYSTEM PRESSURE FOR OPERATION WITH PORV's INOPERABLE AND ONE SAFETY INJECTION PUMP

AND/OR THREE CHARGING PUMPS ENERGIZED



NOTES:

1. Use of this curve requires pressurizer wide range level $\leq 30\%$ of span.
2. No allowance for instrument error included in this curve.
3. Applicable through 15 EFYs.

Amendment No.

RCS TEMPERATURE (°F)