

INDEX

LIST OF FIGURES

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<u>FIGURE</u>	<u>PAGE</u>
3.1-1 REQUIRED STORED BORIC ACID VOLUME AS A FUNCTION OF CONCENTRATION.....	3/4 1-13
3.4-1 DELETED.....	3/4 4-27
3.4-2 WATERFORD UNIT 3 HEATUP CURVE - 32 EFPY REACTOR COOLANT SYSTEM PRESSURE - TEMPERATURE LIMITS.....	3/4 4-30
3.4-3 WATERFORD UNIT 3 COOLDOWN CURVE - 32 EFPY REACTOR COOLANT SYSTEM PRESSURE - TEMPERATURE LIMITS.....	3/4 4-31
3.6-1 DELETED.....	3/4 6-12
4.7-1 SAMPLING PLAN FOR SNUBBER FUNCTIONAL TEST.....	3/4 7-26
5.1-1 EXCLUSION AREA.....	5-2
5.1-2 LOW POPULATION ZONE.....	5-3
5.1-3 SITE BOUNDARY FOR RADIOACTIVE GASEOUS AND LIQUID EFFLUENTS.....	5-4
5.6-1 ALTERNATIVE CHECKERBOARD ARRANGEMENTS.....	5-6a
5.6-2 ACCEPTABLE BURNUP DOMAIN FOR UNRESTRICTED STORAGE OF SPENT FUEL IN REGION 2.....	5-6b
5.6-3 ACCEPTABLE BURNUP DOMAIN FOR SPENT FUEL IN CHECKERBOARD ARRANGEMENT WITH FUEL OF 5% ENRICHMENT (OR LESS) AT 27 MWD/KgU.....	5-6c
6.2-1 DELETED.....	6-3
6.2-2 DELETED.....	6-4

## REACTOR COOLANT SYSTEM

### HOT SHUTDOWN

#### LIMITING CONDITION FOR OPERATION

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3.4.1.3 At least two of the loop(s)/train(s) listed below shall be OPERABLE and at least one reactor coolant and/or shutdown cooling loops shall be in operation.\*

- a. Reactor Coolant Loop 1 and its associated steam generator and at least one associated reactor coolant pump,\*\*
- b. Reactor Coolant Loop 2 and its associated steam generator and at least one associated reactor coolant pump,\*\*
- c. Shutdown Cooling Train A,
- d. Shutdown Cooling Train B.

APPLICABILITY: MODE 4

#### ACTION:

- a. With less than the above required reactor coolant and/or shutdown cooling loops OPERABLE, immediately initiate corrective action to return the required loops to OPERABLE status as soon as possible; if the remaining OPERABLE loop is a shutdown cooling loop, be in COLD SHUTDOWN within 24 hours.
- b. With no reactor coolant or shutdown cooling loop in operation, suspend operations that would cause introduction into the RCS, coolant with boron concentration less than required to meeting SHUTDOWN MARGIN of Technical Specification 3.1.1.1 or 3.1.1.2 and immediately initiate corrective action to return the required coolant loop to operation.

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\* All reactor coolant pumps and shutdown cooling pumps (LPSI pumps) may be deenergized for up to 1 hour provided (1) no operations are permitted that would cause introduction into the RCS, coolant with boron concentration less than required to meet the SHUTDOWN MARGIN of Technical Specification 3.1.1.1 or 3.1.1.2, and (2) core outlet temperature is maintained at least 10°F below saturation temperature.

\*\*A reactor coolant pump shall not be started with one or more of the Reactor Coolant System cold leg temperatures less than or equal to 200°F unless (1) the pressurizer water volume is less than 900 cubic feet or (2) the secondary water temperature of each steam generator is less than 100°F above each of the Reactor Coolant System cold leg temperatures.

## REACTOR COOLANT SYSTEM

### COLD SHUTDOWN - LOOPS FILLED

#### LIMITING CONDITION FOR OPERATION

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- 3.4.1.4 At least two of the loop(s)/trains listed below shall be OPERABLE and at least one reactor coolant and/or shutdown cooling loop shall be in operation.\*
- a. Reactor Coolant Loop 1 and its associated steam generator and at least one associated reactor coolant pump\*\*,
  - b. Reactor Coolant Loop 2 and its associated steam generator and at least one associated reactor coolant pump\*\*,
  - c. Shutdown Cooling Train A,
  - d. Shutdown Cooling Train B.

APPLICABILITY: MODE 5 with reactor coolant loops filled\*\*.

#### ACTION:

- a. With less than the above required reactor coolant and/or shutdown cooling loops OPERABLE or with less than the required steam generator level, immediately initiate corrective action to return the required loops to OPERABLE status or to restore the required level as soon as possible.
- b. With no reactor coolant or shutdown cooling loop in operation, suspend operations that would cause introduction into the RCS, coolant with boron concentration less than required to meet SHUTDOWN MARGIN of Technical Specification 3.1.1.1 or 3.1.1.2 and immediately initiate corrective action to return the required coolant loop to operation.

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\*All reactor coolant pumps and shutdown cooling pumps (LPSI pumps) may be deenergized for up to 1 hour provided (1) no operations are permitted that would cause introduction into the RCS, coolant with boron concentration less than required to meet the SHUTDOWN MARGIN of Technical Specification 3.1.1.1 or 3.1.1.2, and (2) core outlet temperature is maintained at least 10°F below saturation temperature.

\*\*A reactor coolant pump shall not be started with one or more of the Reactor Coolant System cold leg temperatures less than or equal to 200°F unless (1) the pressurizer water volume is less than 900 cubic feet or (2) the secondary water temperature of each steam generator is less than 100°F above each of the Reactor Coolant System cold leg temperatures.

REACTOR COOLANT SYSTEM

COLD SHUTDOWN - LOOPS FILLED

SURVEILLANCE REQUIREMENTS

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- 4.4.1.4.1 The required reactor coolant pump(s), if not in operation, shall be determined to be OPERABLE once per 7 days by verifying correct breaker alignments and indicated power availability.
- 4.4.1.4.2 The required steam generator(s) shall be determined OPERABLE by verifying the secondary side water level to be  $\geq 50\%$  of wide range indication at least once per 12 hours.
- 4.4.1.4.3 At least one reactor coolant loop or shutdown cooling train shall be verified to be in operation and circulating reactor coolant at least once per 12 hours.

REACTOR COOLANT SYSTEM

3/4.4.8 PRESSURE/TEMPERATURE LIMITS

REACTOR COOLANT SYSTEM

LIMITING CONDITION FOR OPERATION

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3.4.8.1 The Reactor Coolant System (except the pressurizer) temperature and pressure shall be limited in accordance with the limit lines shown on Figures 3.4-2 and 3.4-3 during heatup, cooldown, criticality, and inservice leak and hydrostatic testing with:

- a. A maximum heatup rate of 60°F per hour.
- b. A maximum cooldown rate of 100°F per hour.

APPLICABILITY: At all times.

ACTION:

*With any of the above limits exceeded, restore the temperature and/or pressure to within the limit within 30 minutes; perform an engineering evaluation to determine the effects of the out-of-limit condition on the structural integrity of the Reactor Coolant System; determine that the Reactor Coolant System remains acceptable for continued operations or be in at least HOT STANDBY within the next 6 hours and reduce the RCS  $T_{avg}$  and pressure to less than 200°F and 500 psia, respectively, within the following 30 hours.*

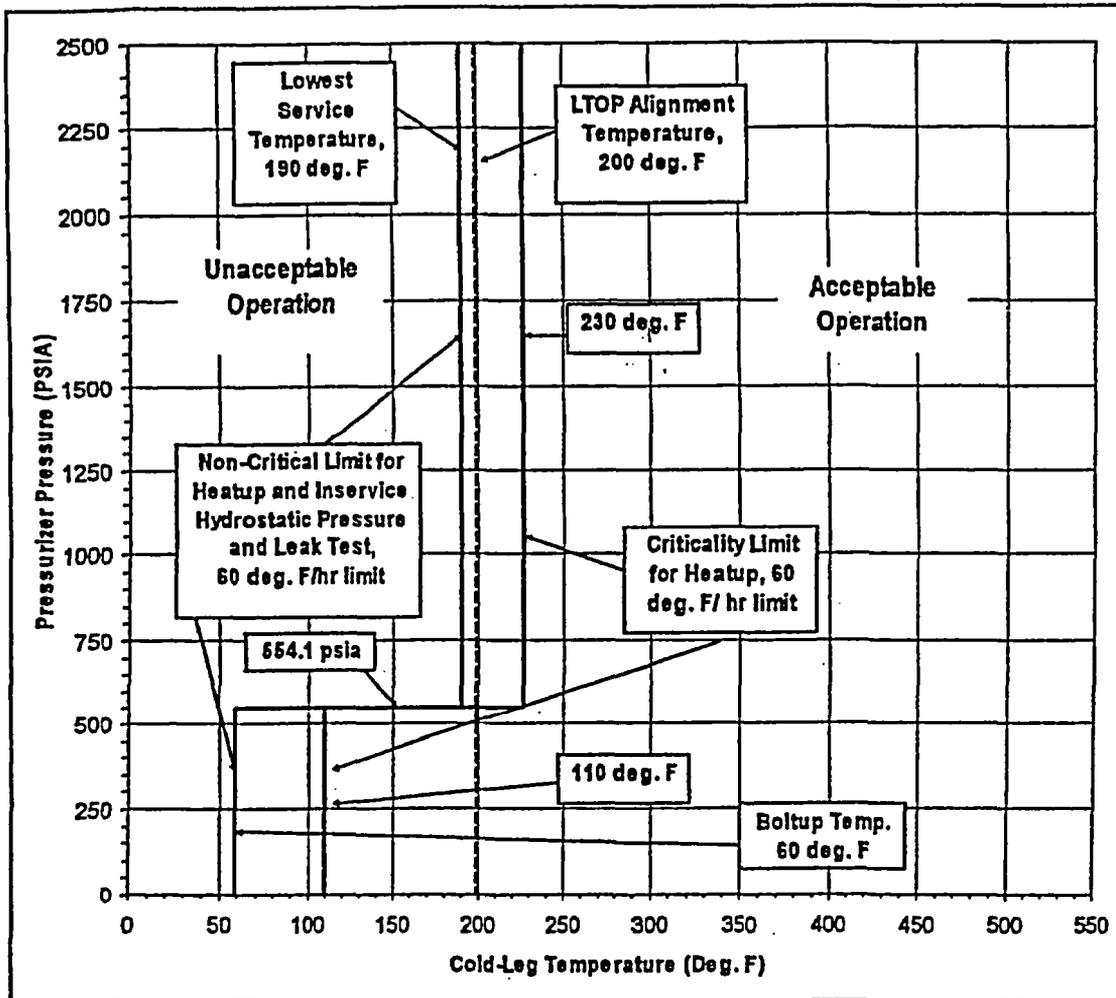


FIGURE 3.4-2

WATERFORD UNIT 3 HEATUP CURVE - 32 EPFY.

REACTOR COOLANT SYSTEM PRESSURE-TEMPERATURE LIMITS

(Curves do not include margins for instrument uncertainties)

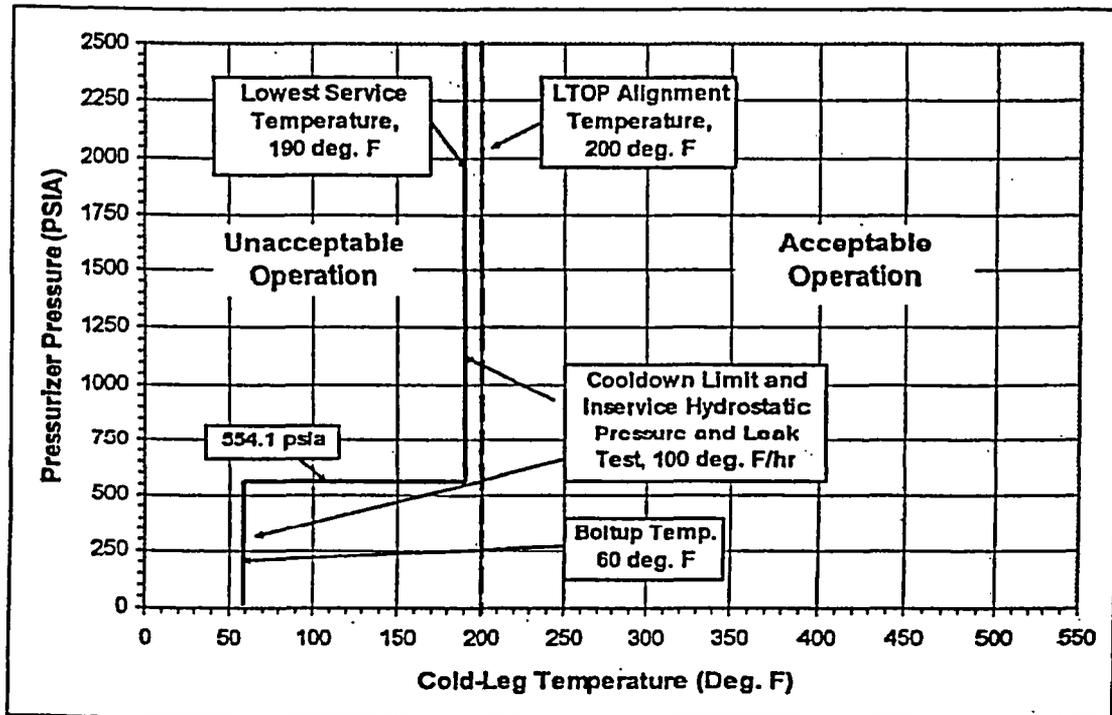


FIGURE 3.4-3

WATERFORD UNIT 3 COOLDOWN CURVE - 32 EPY

REACTOR COOLANT SYSTEM PRESSURE TEMPERATURE LIMITS

(Curves do not include margins for instrument uncertainties)

## REACTOR COOLANT SYSTEM

### OVERPRESSURE PROTECTION SYSTEMS

#### LIMITING CONDITION FOR OPERATION

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3.4.8.3 Two Shutdown Cooling (SDC) System suction line relief valves (SI-406A and SI-406B) shall be OPERABLE with a lift setting of less than or equal to 430 psia.

APPLICABILITY: MODE 4 when the temperature of any RCS cold leg is less than or equal to 200°F, MODE 5, and MODE 6 when the head is on the reactor vessel and the RCS is not vented through a 5.6 square inch or larger vent.

ACTION:

- a. With one SDC System suction line relief valve inoperable in MODE 4, restore the inoperable valve to OPERABLE status within 7 days, or depressurize and vent the RCS through at least a 5.6 square inch vent within the next 8 hours.
- b. With one SDC System suction line relief valve inoperable in MODES 5, or 6, either (1) restore the inoperable valve to OPERABLE status within 24 hours, or (2) complete depressurization and venting of the RCS through at least a 5.6 square inch vent within a total of 32 hours.
- c. With both SDC System suction line relief valves inoperable, complete depressurization and venting of the RCS through at least a 5.6 square inch vent within 8 hours.
- d. In the event either the SDC System suction line relief valve(s) or the RCS vent(s) are used to mitigate an RCS pressure transient, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 30 days. The report shall describe the circumstances initiating the transient, the effect of the SDC System suction line relief valve(s) or RCS vent(s) on the transient, and any corrective action necessary to prevent recurrence.
- e. The provisions of Specification 3.0.4 are not applicable.