

ATTACHMENT 2

Markup of Technical Specification Pages

1.1 Definitions (continued)

MINIMUM CRITICAL POWER RATIO (MCPR)	The MCPR shall be the smallest critical power ratio (CPR) that exists in the core for each class of fuel. The CPR is that power in the assembly that is calculated by application of the appropriate correlation(s) to cause some point in the assembly to experience boiling transition, divided by the actual assembly operating power.
MODE	A MODE shall correspond to any one inclusive combination of mode switch position, average reactor coolant temperature, and reactor vessel head closure bolt tensioning specified in Table 1.1-1 with fuel in the reactor vessel.
OPERABLE—OPERABILITY	A system, subsystem, division, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, division, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).
Insert A → RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3546 MWt.
REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME	The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until de-energization of the scram pilot valve solenoids. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and method for verification have been previously reviewed and approved by the NRC.

(continued)

Insert A

Pressure and Temperature Limits Report (PTLR)

The PTLR is the document that provides the reactor vessel pressure and temperature limits, including heatup and cooldown rates, for the current vessel fluence period. The pressure and temperature limits shall be determined for each fluence period in accordance with Specification 5.6.7.

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.4.11.1 -----NOTE----- Only required to be performed during RCS heatup and cooldown operations, and RCS inservice leak and hydrostatic testing. -----</p> <p>Verify: the PTLR;</p> <p>a. RCS pressure and RCS temperature are within the applicable limits specified in Figures 3.4.11-1, 3.4.11-2, 3.4.11-3 for Unit 1 up to 32 EFPY, and Figures 3.4.11-4, 3.4.11-5, and 3.4.11-6 for Unit 2 up to 32 EFPY;</p> <p>b. RCS heatup and cooldown rates are ≤ 100°F in any 1 hour period; and</p> <p>c. RCS temperature change during system leakage and hydrostatic testing is ≤ 20°F in any one hour period when the RCS pressure and RCS temperature are not within the limits of Figure 3.4.11-2 for Unit 1 up to 32 EFPY and Figure 3.4.11-5 for Unit 2 up to 32 EFPY.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.4.11.2 Verify RCS pressure and RCS temperature are within the criticality limits specified in Figure 3.4.11-3 for Unit 1 up to 32 EFPY and Figure 3.4.11-6 for Unit 2 up to 32 EFPY.</p>	<p>Once within 15 minutes prior to control rod withdrawal for the purpose of achieving criticality</p>

within the limits specified in the PTLR;

within the limits specified in the PTLR.

the PTLR.



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SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.4.11.3 -----NOTE----- Only required to be met in MODES 1, 2, 3, and 4 during recirculation pump startup. -----</p> <p>Verify the difference between the bottom head coolant temperature and the reactor pressure vessel (RPV) coolant temperature is ≤ 145°F.</p> <p style="text-align: center;">within the limits specified in the PTLR.</p>	<p>Once within 15 minutes prior to each startup of a recirculation pump</p>
<p>SR 3.4.11.4 -----NOTE----- Only required to be met in MODES 1, 2, 3, and 4 during recirculation pump startup. -----</p> <p>Verify the difference between the reactor coolant temperature in the recirculation loop to be started and the RPV coolant temperature is ≤ 50°F.</p> <p style="text-align: center;">within the limits specified in the PTLR.</p>	<p>Once within 15 minutes prior to each startup of a recirculation pump</p>
<p>SR 3.4.11.5 -----NOTE----- Only required to be performed when tensioning the reactor vessel head bolting studs. -----</p> <p>Verify reactor vessel flange and head flange temperatures are ≥ 72°F for Unit 1 and ≥ 86°F for Unit 2.</p> <p style="text-align: center;">within the limits specified in the PTLR.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.4.11.6 -----NOTE----- Not required to be performed until 30 minutes after RCS temperature $\leq 77^{\circ}\text{F}$ for Unit 1 and $\leq 91^{\circ}\text{F}$ for Unit 2 in MODE 4. -----</p> <p>Verify reactor vessel flange and head flange temperatures are $\geq 72^{\circ}\text{F}$ for Unit 1 and $\geq 86^{\circ}\text{F}$ for Unit 2.</p> <p>within the limits of the PTLR. </p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.4.11.7 -----NOTE----- Not required to be performed until 12 hours after RCS temperature $\leq 92^{\circ}\text{F}$ for Unit 1 and $\leq 106^{\circ}\text{F}$ for Unit 2 in MODE 4. -----</p> <p>Verify reactor vessel flange and head flange temperatures are $\geq 72^{\circ}\text{F}$ for Unit 1 and $\geq 86^{\circ}\text{F}$ for Unit 2.</p> <p>within the limits of the PTLR. </p>	<p>In accordance with the Surveillance Frequency Control Program</p>

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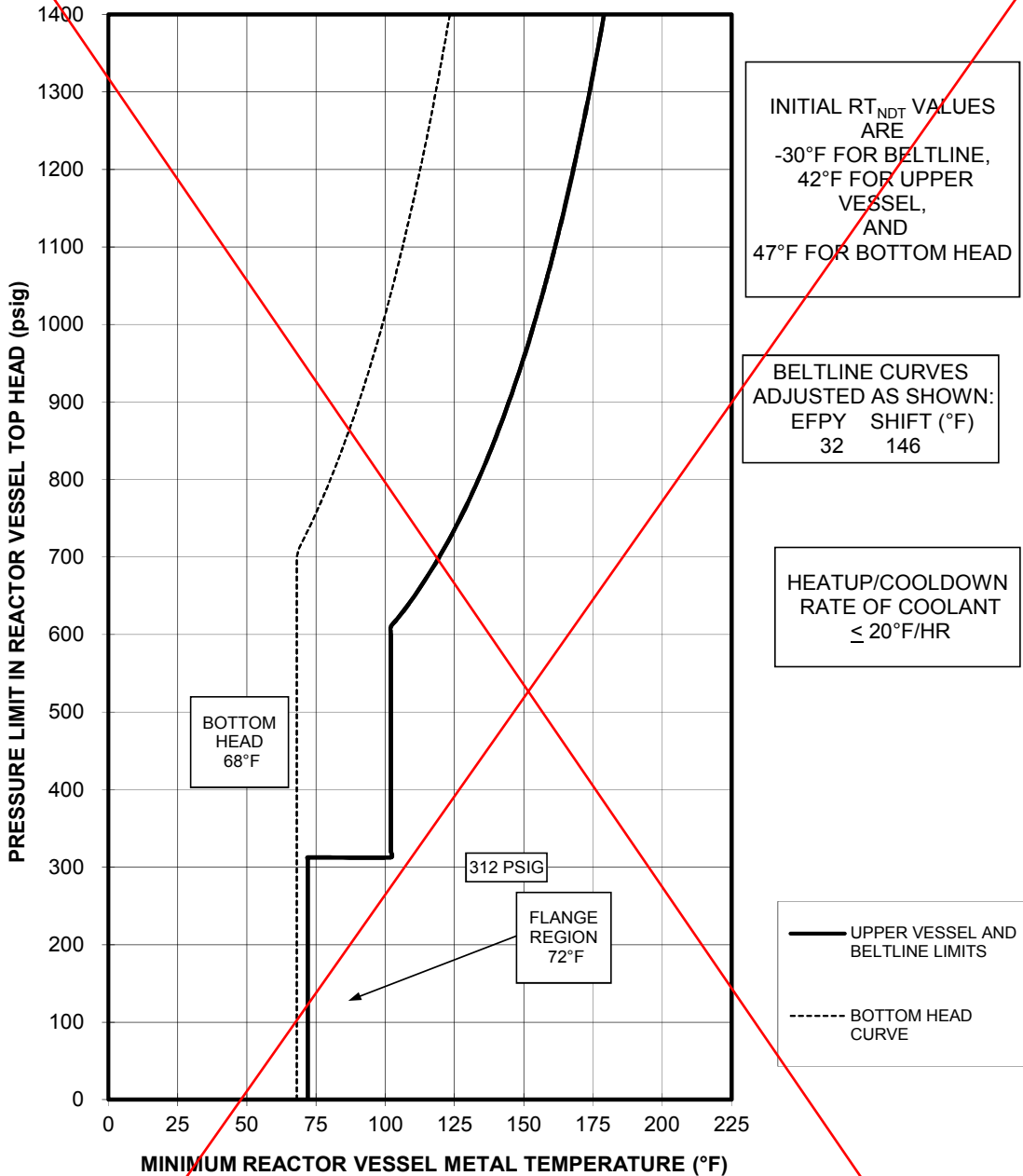


Figure 3.4.11-1 (Page 1 of 1)
Unit 1
P-T Curves for Hydrostatic or Leak Testing up to 32 EPY

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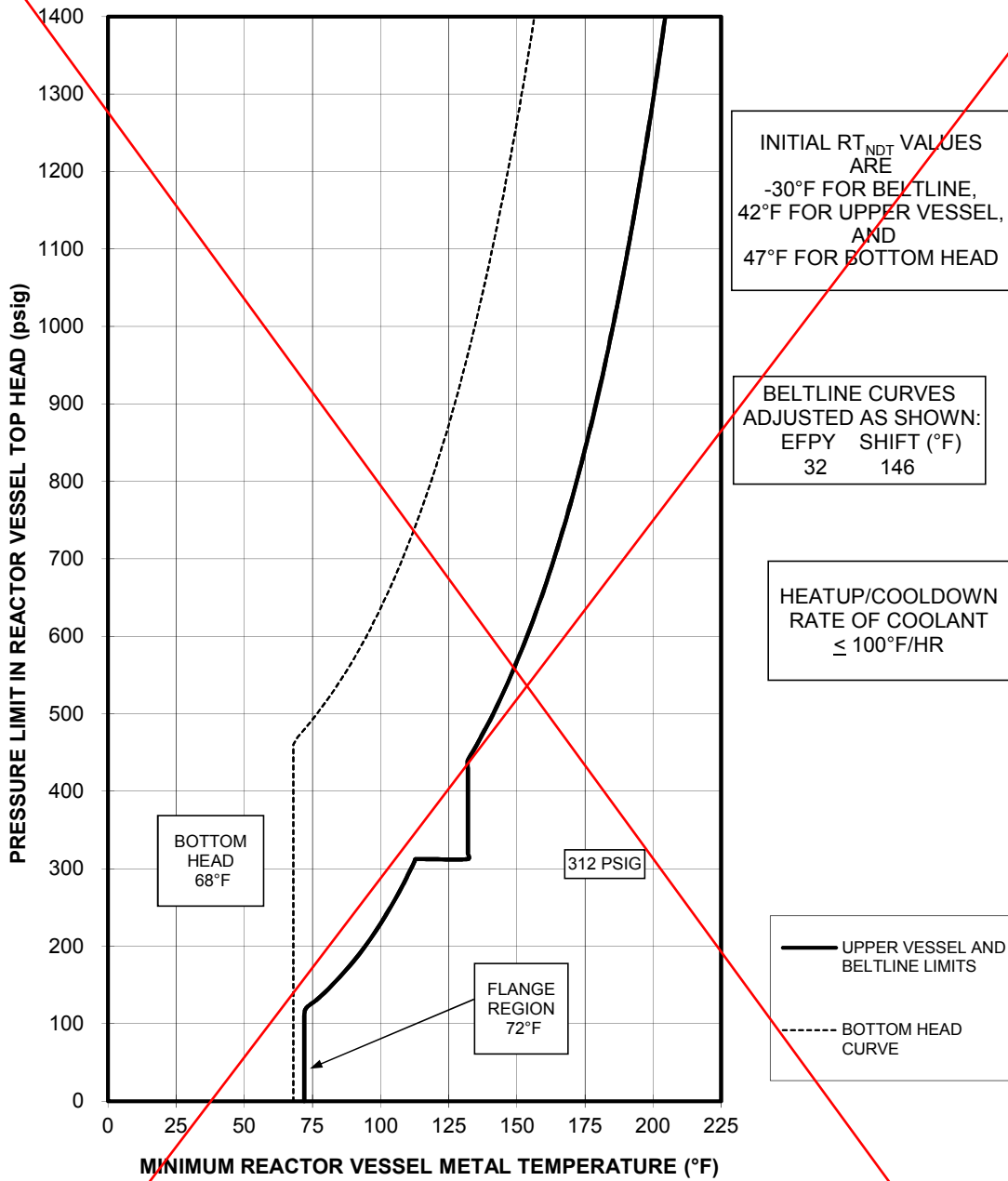


Figure 3.4.11-2 (Page 1 of 1)
Unit 1

P-T Curves for Heatup by Non-Nuclear Means, (Core Not Critical) Cooldown Following a Nuclear Shutdown and Low Power Physics Testing up to 32 EFPY

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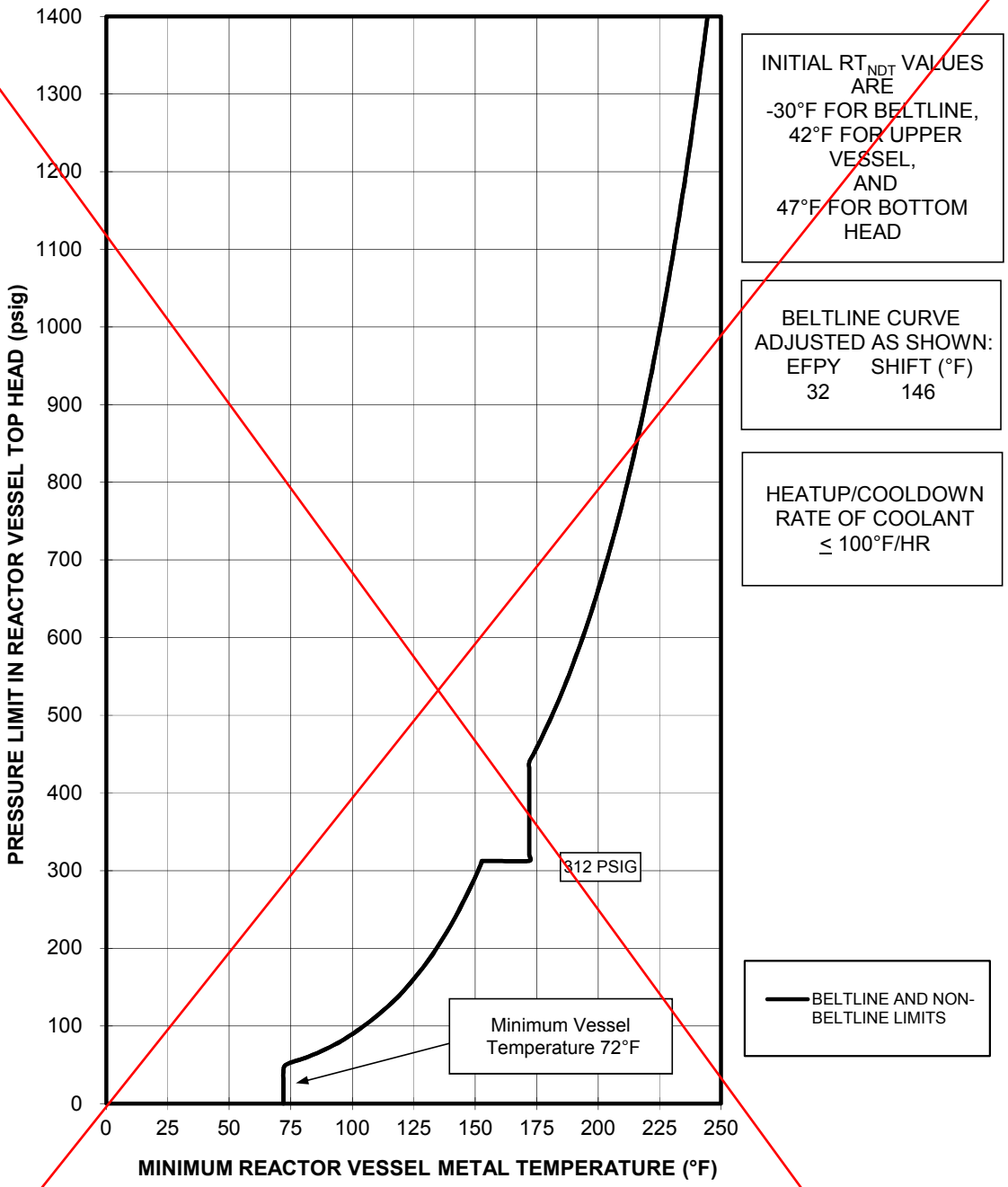


Figure 3.4.11-3 (Page 1 of 1)
Unit 1
P-T Curves for Operation with a Core Critical
other than Low Power Physics Testing up to 32 EFPY

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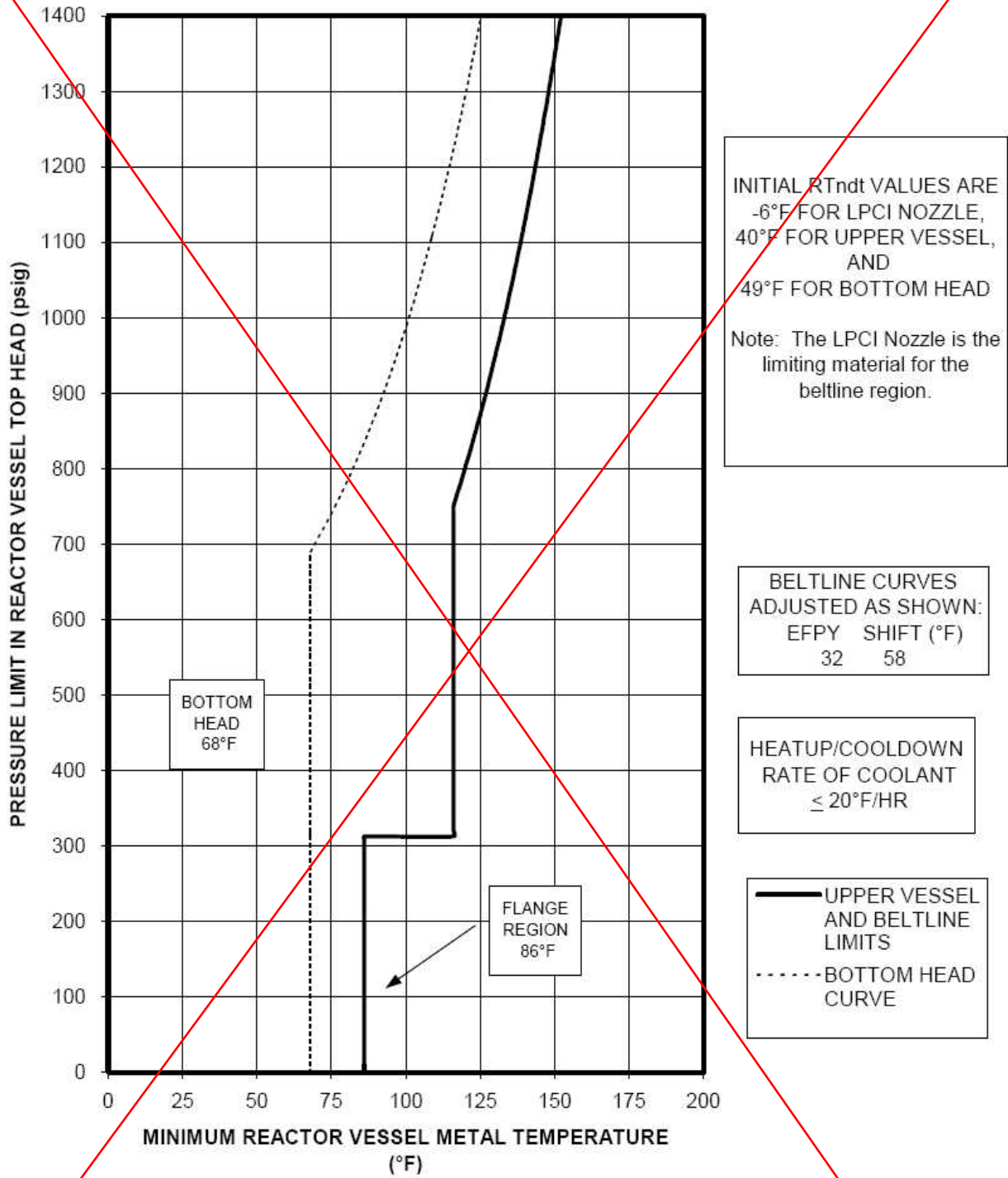


Figure 3.4.11-4 (Page 1 of 1)
Unit 2
P-T Curves for Hydrostatic or Leak Testing up to 32 EPFY

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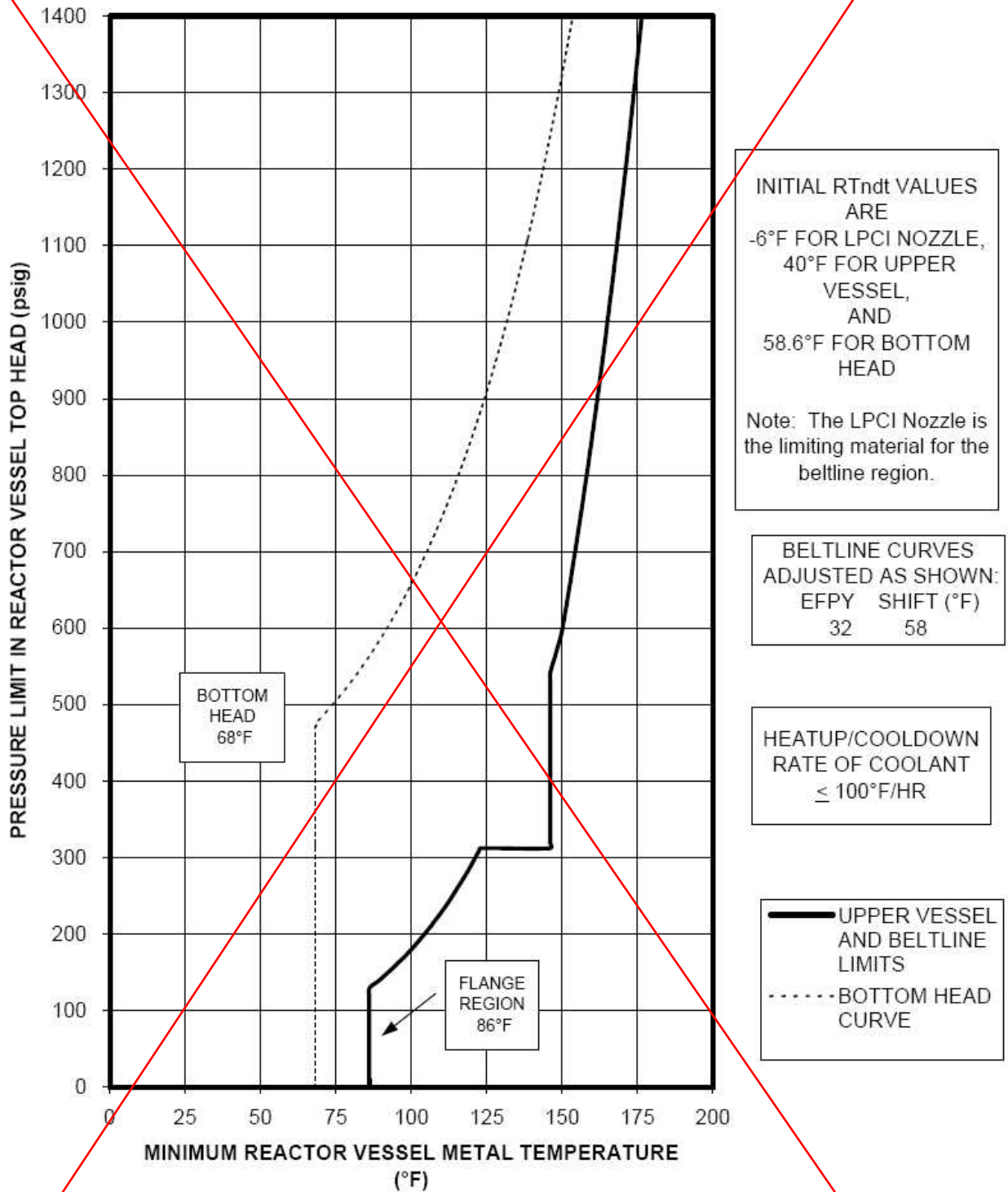


Figure 3.4.11-5 (Page 1 of 1)
Unit 2

P-T Curves for Heatup by Non-Nuclear Means, Cooldown Following a Nuclear Shutdown and Low Power Physics Testing up to 32 EFPY

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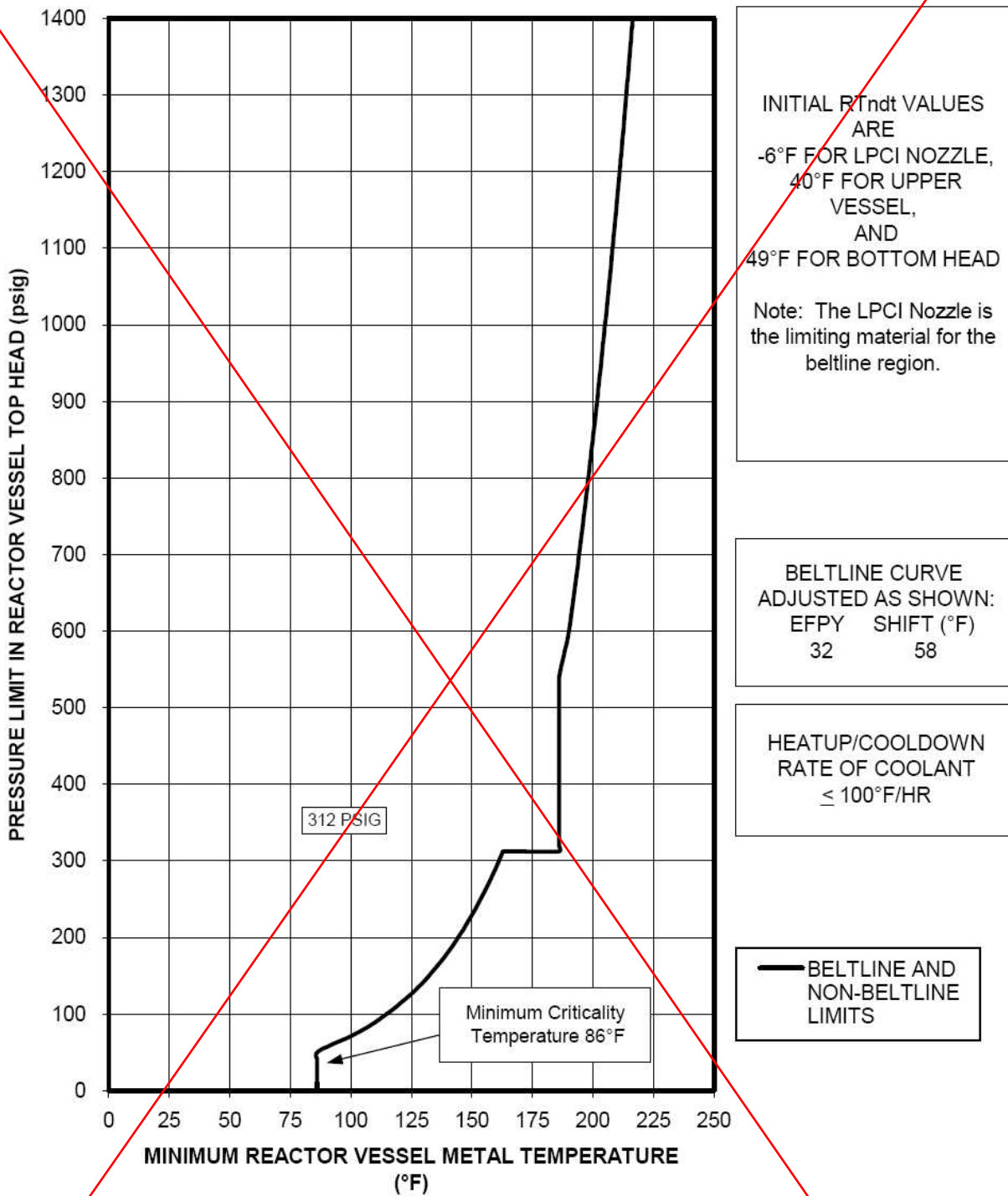


Figure 3.4.11-6 (Page 1 of 1)
Unit 2
P-T Curves for Operation with a Core Critical
other than Low Power Physics Testing up to 32 EFPY

5.6 Reporting Requirements

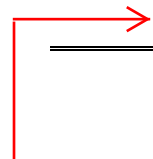
5.6.5 CORE OPERATING LIMITS REPORT (COLR) (continued)

The COLR will contain the complete identification for each of the TS referenced topical reports used to prepare the COLR (i.e., report number, title, revision, date, and any supplements).

- c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems (ECCS) limits, nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met.
- d. The COLR, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

5.6.6 Post Accident Monitoring (PAM) Instrumentation Report

When a report is required by Condition B or F of LCO 3.3.3.1, "Post Accident Monitoring (PAM) Instrumentation," a report shall be submitted within the following 14 days. The report shall outline the preplanned alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the instrumentation channels of the Function to OPERABLE status.



5.6.7 Reactor Coolant System (RCS) Pressure and Temperature Limits Report (PTLR)

RCS pressure and temperature limits for heatup, cooldown, low temperature operation, criticality, and hydrostatic testing as well as heatup and cooldown rates shall be established and documented in the PTLR for the Limiting Condition for Operation and Surveillance Requirements Section 3.4.11, "RCS Pressure and Temperature (P/T) Limits."

The analytical methods used to determine the RCS pressure and temperature limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:

- a. BWROG-TP-11-022-A, Revision 1 (SIR-05-044), "Pressure-Temperature Limits Report Methodology for Boiling Water Reactors," dated August 2013, (ML13277A557).

The PTLR shall be provided to the NRC upon issuance for each reactor vessel fluence period and for any revision or supplements thereto.