

**ATTACHMENT 9
LICENSE AMENDMENT REQUEST
EXTENDED POWER UPRATE
CORE OPERATING LIMITS REPORT (COLR)
MARKUPS**

(For Information Only)

**FLORIDA POWER & LIGHT
ST. LUCIE NUCLEAR PLANT UNIT 1**

This coversheet plus 11 pages

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Proposed COLR Figure 3.1.1a

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Proposed COLR Figure 3.2.1

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Proposed COLR Figure 3.2.2

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Proposed COLR Figure 3.2.3

2.5 Total Integrated Radial Peaking Factor - F_r^T (TS 3.2.3)

1.65

The calculated value of F_r^T at RATED THERMAL POWER shall be limited to 1.70

The power dependent F_r^T limits are shown on Figure 3.2-3.

2.6 DNB Parameters - ~~AXIAL SHAPE INDEX~~ (TS 3.2.5)

The ~~AXIAL SHAPE INDEX~~ shall be maintained within the limits specified in Figure 3.2-4.

New Text

The following DNB-related parameters shall be maintained within the limits shown on Table 3.2-1:

- a. Cold Leg Temperature
- b. Pressurizer Pressure
- c. Reactor Coolant System Flow rate
- d. AXIAL SHAPE INDEX

2.7 Refueling Operations - Boron Concentration (TS 3.9.1)

With the reactor vessel head unbolted or removed, the boron concentration of all filled portions of the Reactor Coolant System and the refueling cavity shall be maintained uniform and sufficient to ensure that the more restrictive of the following reactivity conditions is met:

- a. Either a K_{eff} of 0.95 or less, which includes a 1000 pcm conservative allowance for uncertainties, or
- b. A boron concentration of 1720 ppm, which includes a 50 ppm conservative allowance for uncertainties.

1900

2.8 SHUTDOWN MARGIN - T_{avg} Greater Than 200 °F (TS 3.1.1.1)

The SHUTDOWN MARGIN shall be greater than or equal to 3600 pcm.

2.9 SHUTDOWN MARGIN - T_{avg} Less Than or Equal To 200 °F (TS 3.1.1.2)

The SHUTDOWN MARGIN shall be greater than or equal to 2000 pcm.

St. Lucie Unit 1 – Proposed COLR Table 3.2-1

Table 3.2-1

DNB MARGIN LIMITS

<u>PARAMETER</u>	<u>FOUR REACTOR COOLANT PUMPS OPERATING</u>
Cold Leg Temperature	$\leq 551^{\circ}\text{F}$
Pressurizer Pressure*	≥ 2225 psia
Reactor Coolant System Total Flow Rate	$\geq 375,000$ gpm
AXIAL SHAPE INDEX	COLR Figure 3.2-4

* Limit not applicable during either a THERMAL POWER ramp increase in excess of 5% of RATED THERMAL POWER per minute or a THERMAL POWER step increase of greater than 10% of RATED THERMAL POWER.

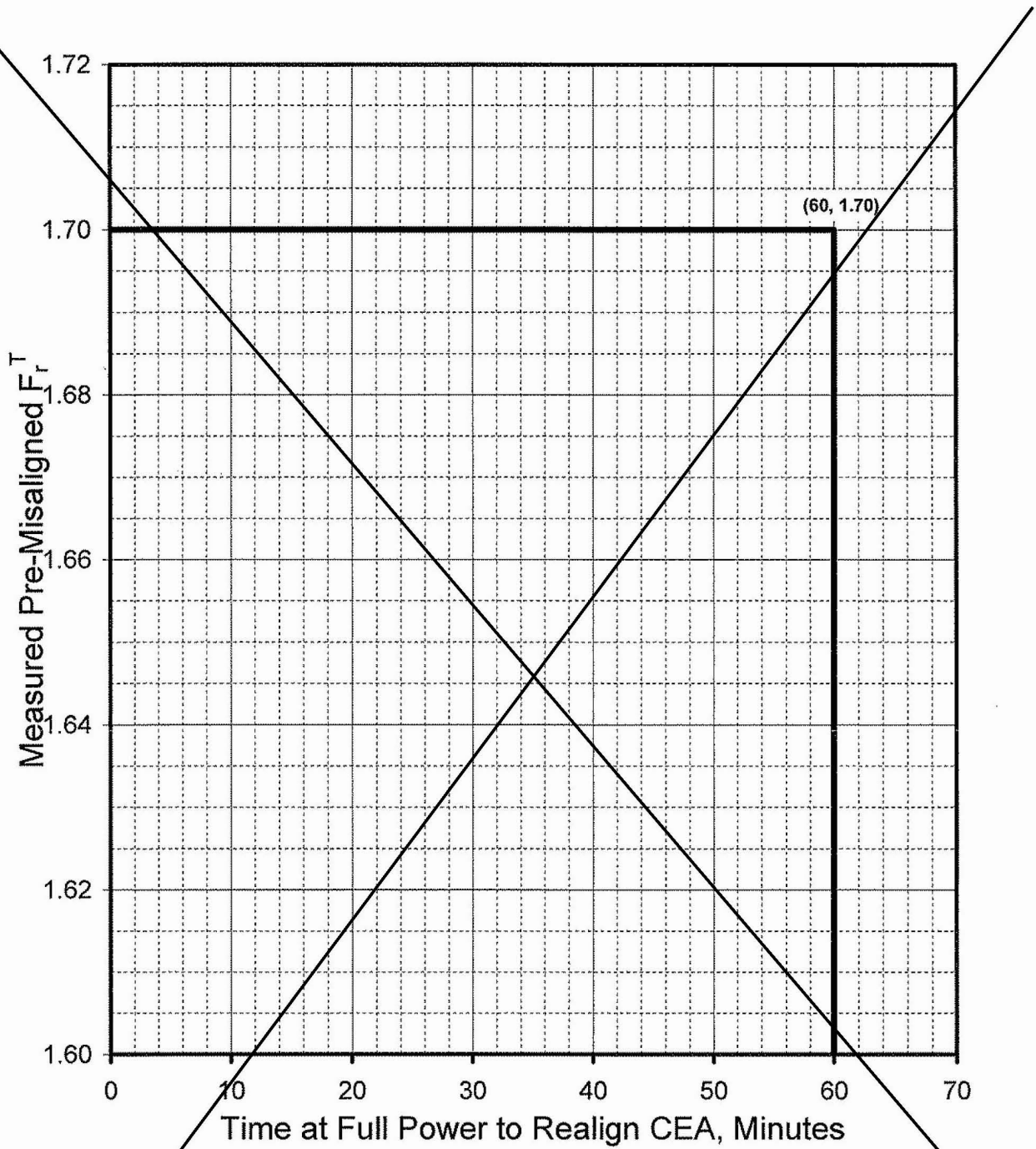


FIGURE 3.1-1a
Allowable Time to Realign CEA vs. Initial F_r^T

St. Lucie Unit 1 – Proposed COLR Figure 3.1-1a

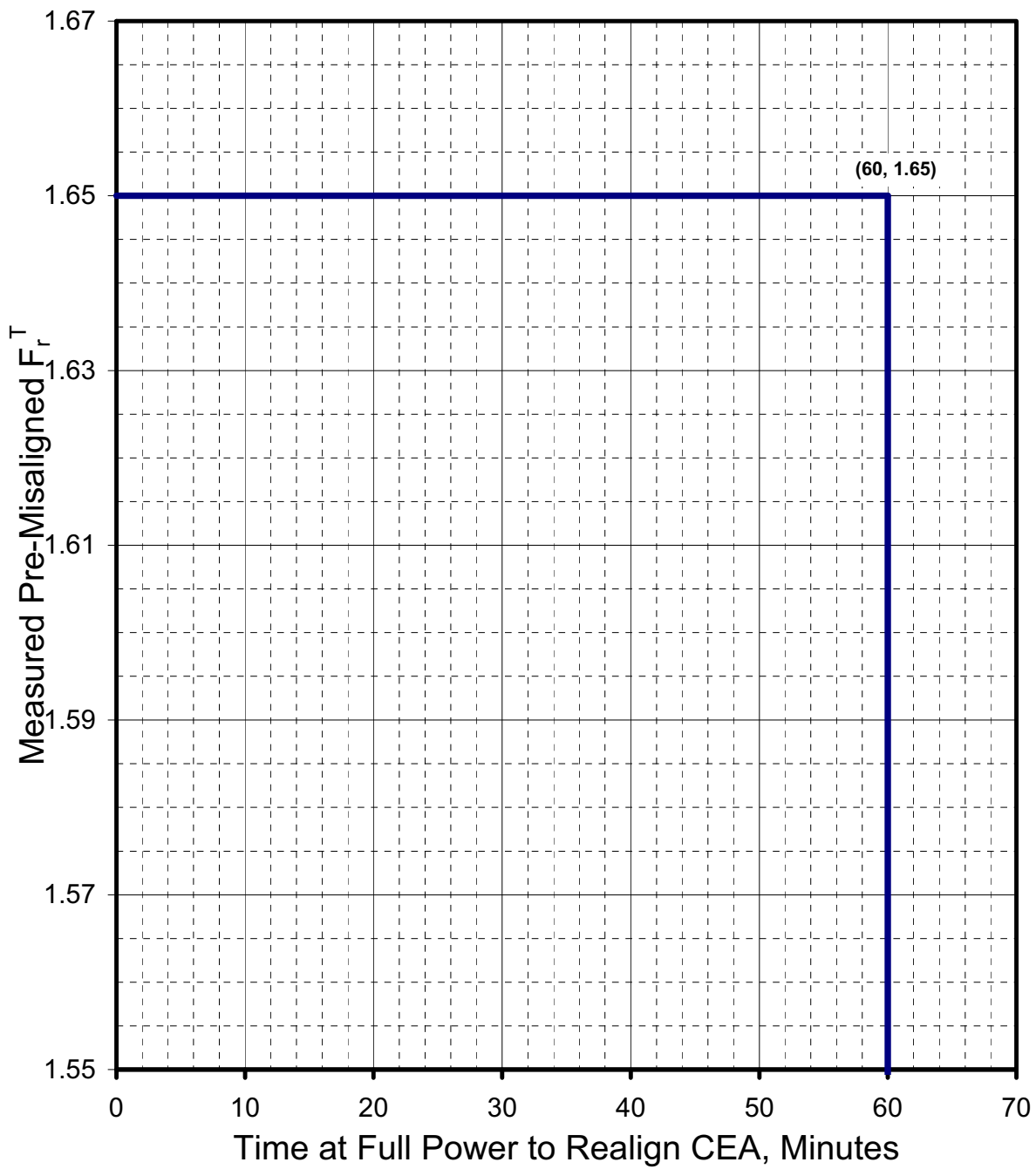
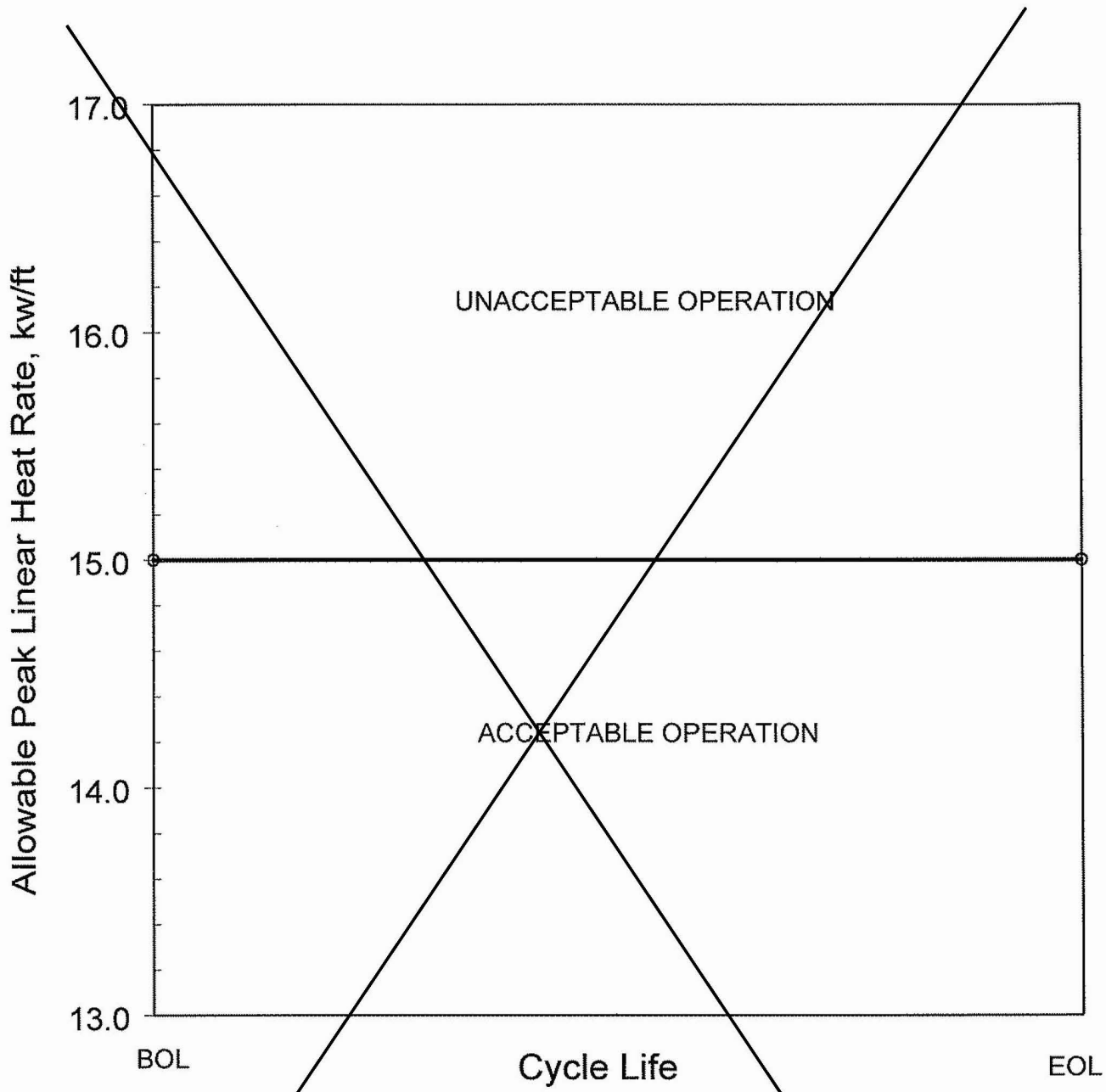


FIGURE 3.1-1a
Allowable Time to Realign CEA vs. Initial F_r^T



(Fuel + Clad + Moderator)

FIGURE 3.2-1
Allowable Peak Linear Heat Rate vs. Burnup

St. Lucie Unit 1 – Proposed COLR Figure 3.2-1

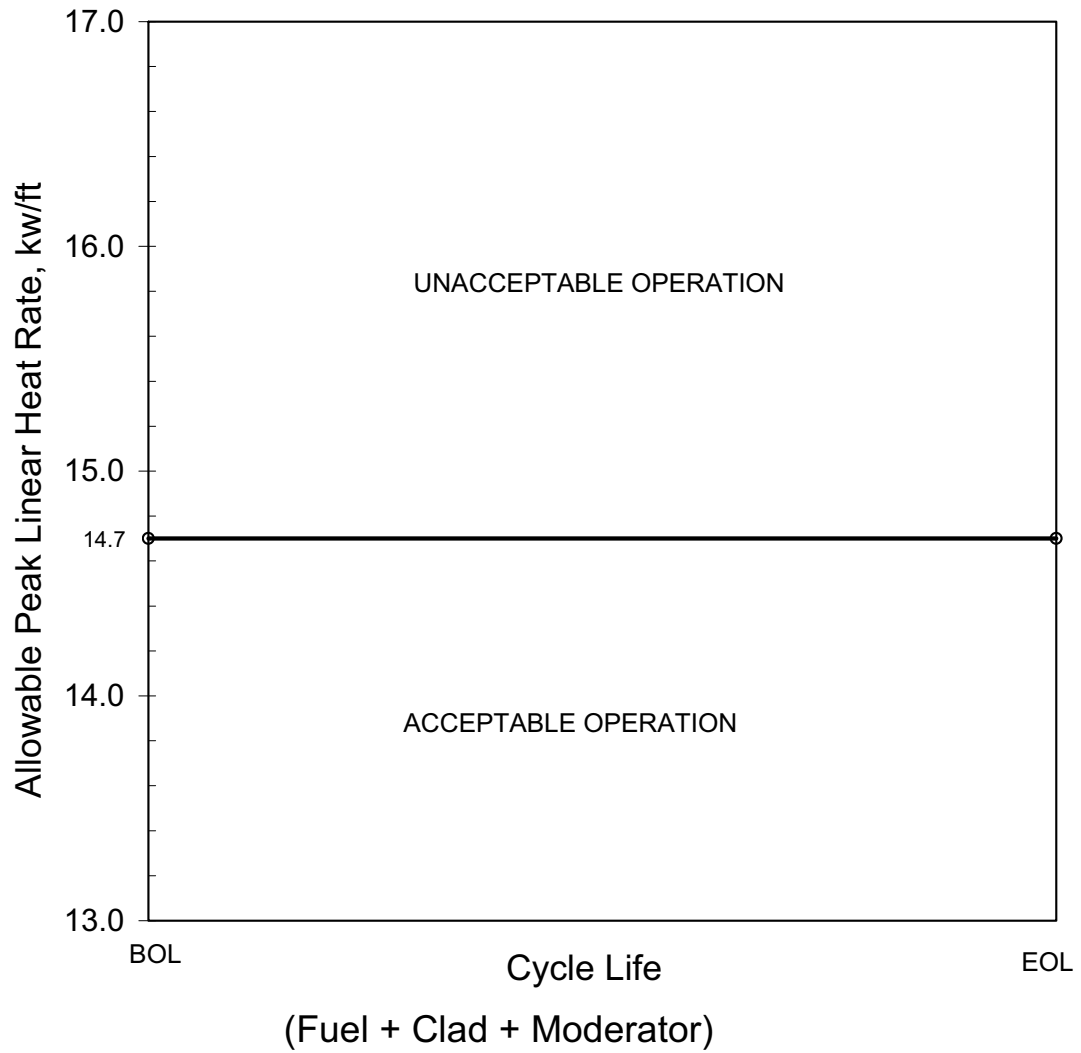
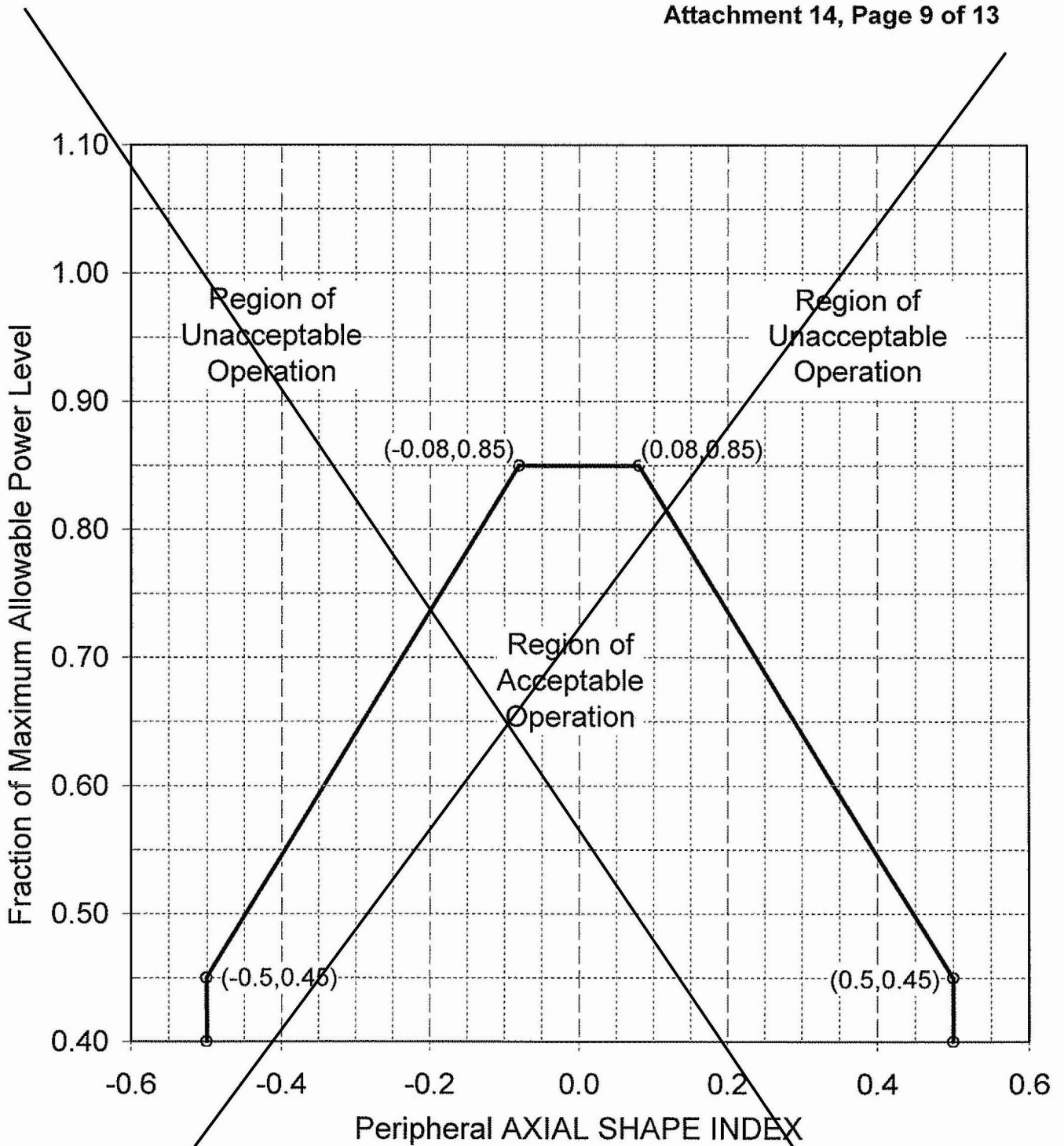


FIGURE 3.2-1
Allowable Peak Linear Heat Rate vs. Burnup

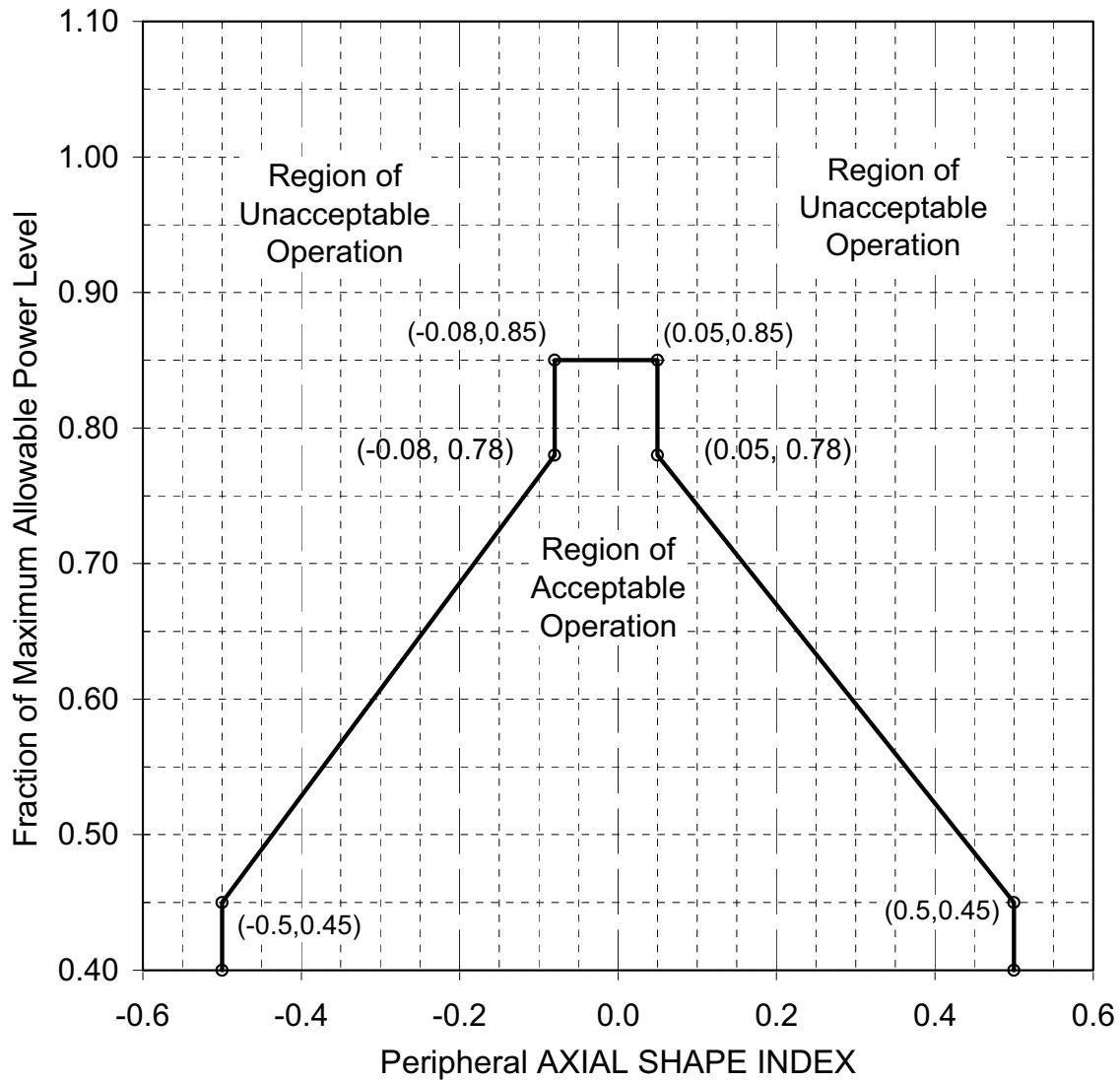


(Not Applicable Below 40% Power)

Note: AXIAL SHAPE INDEX limits for Linear Heat Rate when using Excore Detector Monitoring System)

FIGURE 3.2-2
AXIAL SHAPE INDEX vs. Maximum Allowable Power Level

St. Lucie Unit 1 – Proposed COLR Figure 3.2-2



(Not Applicable Below 40% Power)

Note: AXIAL SHAPE INDEX limits for Linear Heat Rate when using Excore Detector Monitoring System)

FIGURE 3.2-2
AXIAL SHAPE INDEX vs. Maximum Allowable Power Level

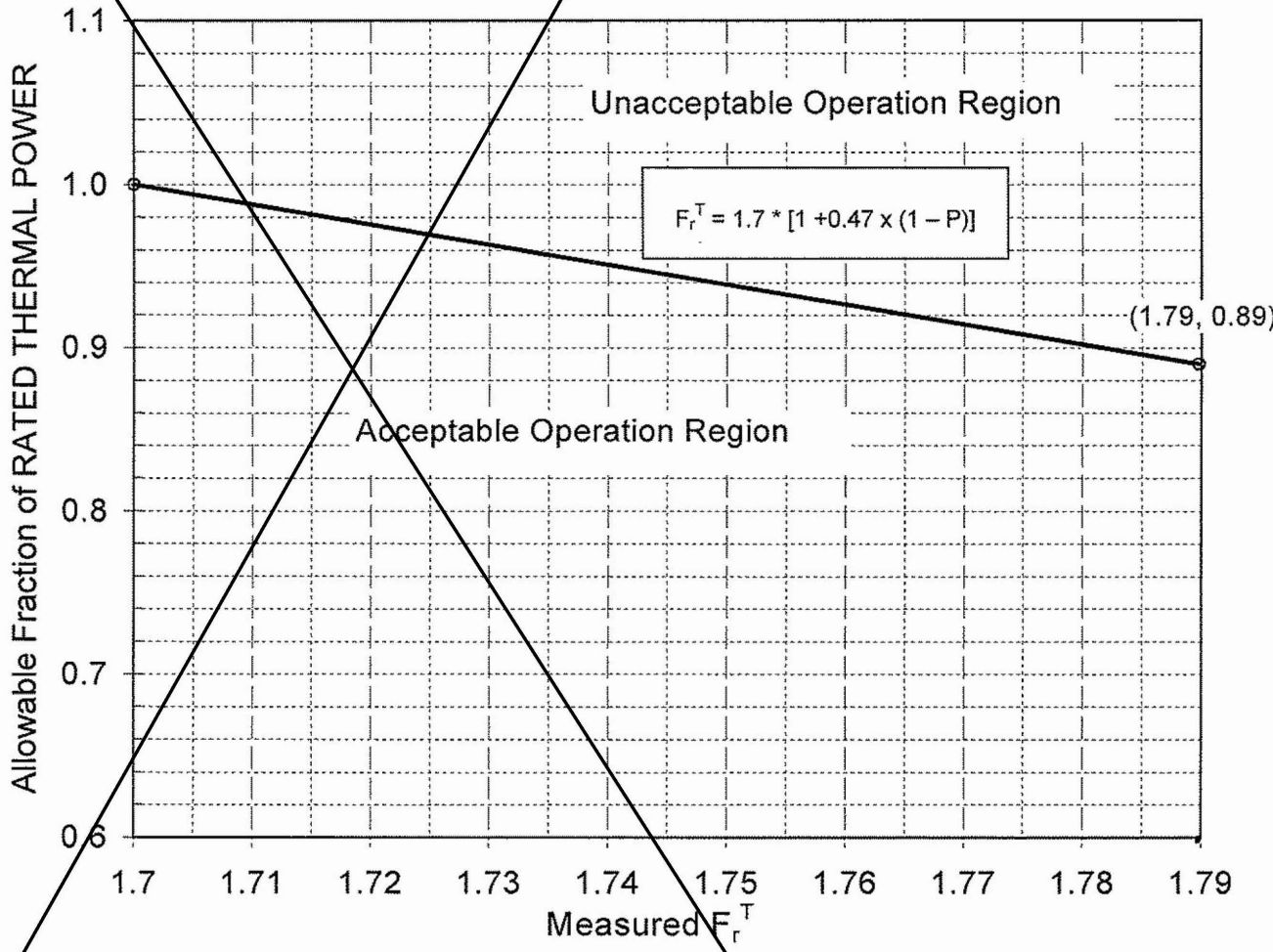


FIGURE 3.2-3
Allowable Combinations of THERMAL POWER and F_r^T

St. Lucie Unit 1 – Proposed COLR Figure 3.2-3

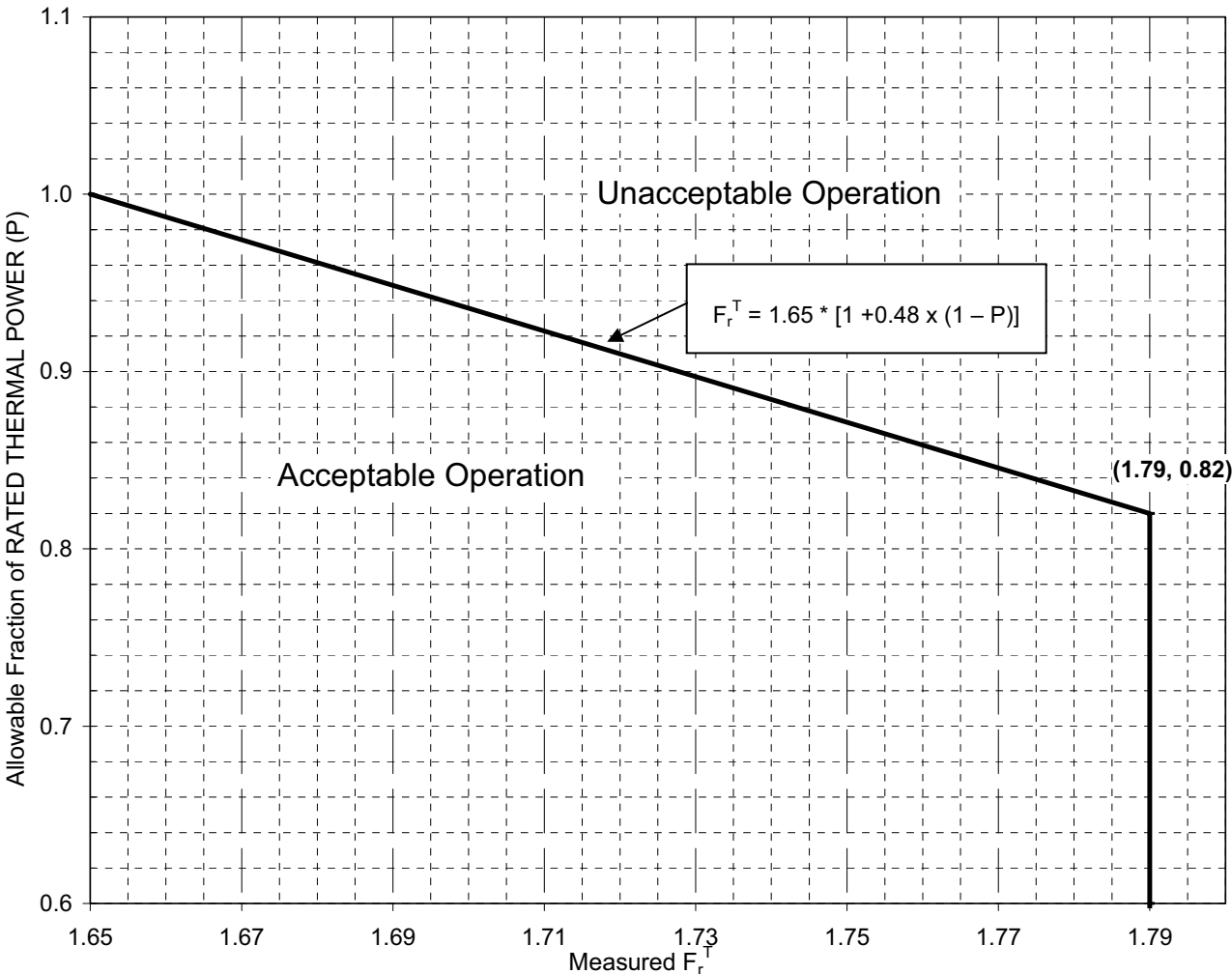


FIGURE 3.2-3
Allowable Combinations of THERMAL POWER and F_r^T