LIST OF FIGURES

Valve LPSW-108 is the LPSW isolation valve on the discharge side of each Unit's RBCUs. This valve is required to be locked open in order to assure the LPSW flowpath for the RBCUs is available.

Three low pressure service water pumps serve Oconee Units 1 and 2 and two low pressure service water pumps serve Oconee Unit 3. There is a manual cross-connection on the supply headers for Unit 1, 2, and 3. One low pressure service water pump per unit is required for normal operation.

The Units 1 and 2 LPSW system requires two pumps to meet the single failure criterion provided that one of the Units has been defueled and the following LPSW system loads on the defueled Unit are isolated: RBCUs, Component Cooling, main turbine oil tank, RC pumps, and LPI coolers. In this configuration, if two of the three LPSW pumps are inoperable, 72 hours are permitted by TS 3.3.7.b to restore two of the three LPSW pumps to operable status. At all other times when the RCS of Unit 1 or 2 is $\geq$ 350 psig or $\geq$ 250°F, all three LPSW pumps are required to meet the single failure criterion. When all three LPSW pumps are required to be operable and one of the three pumps is inoperable, 72 hours are permitted by TS 3.3.7.b to restore the pump to operable status.

The operability of redundant equipment(s) is determined based on the results of inservice inspection and testing as required by Technical Specification 4.5 and ASME Section XI.

REFERENCES

(1) UFSAR, Section 15.14

(2) Duke Power Company to NRC letter, July 14, 1978, "Proposed Modifications of High Pressure Injection System".

(3) UFSAR, Section 9.3.3.2

Bases

Operation at power with an inoperable control rod is permitted within the limits provided. These limits assure that an acceptable power distribution is maintained and that the potential effects of rod misalignment on associated accident analyses are minimized. For a rod declared inoperable due to misalignment, the rod with the greatest misalignment shall be evaluated first. Additionally, the position of the rod declared inoperable due to misalignment shall not be included in computing the average position of the group for determining the operability of rods with lesser misalignments. When a control rod is declared inoperable, boration may be initiated to achieve the existence of 1% $\Delta k/k$ hot shutdown margin.

The power-imbalance envelope obtained in accordance with the approved methodology is based on LOCA analyses which have defined the maximum linear heat rate (see Figure 3.5.2-16a, b, c, and d) such that the maximum clad temperature will not exceed the Final Acceptance Criteria. Corrective measures will be taken immediately should the indicated quadrant tilt, rod position, or imbalance be outside their specified boundary. Operation in a situation that would cause the Final Acceptance Criteria to be approached should a LOCA occur is highly improbable because all of the power distribution parameters (quadrant tilt, rod position, and imbalance) must be at their limits while simultaneously all other engineering and uncertainty factors are also at their limits.** Conservatism is introduced by application of:

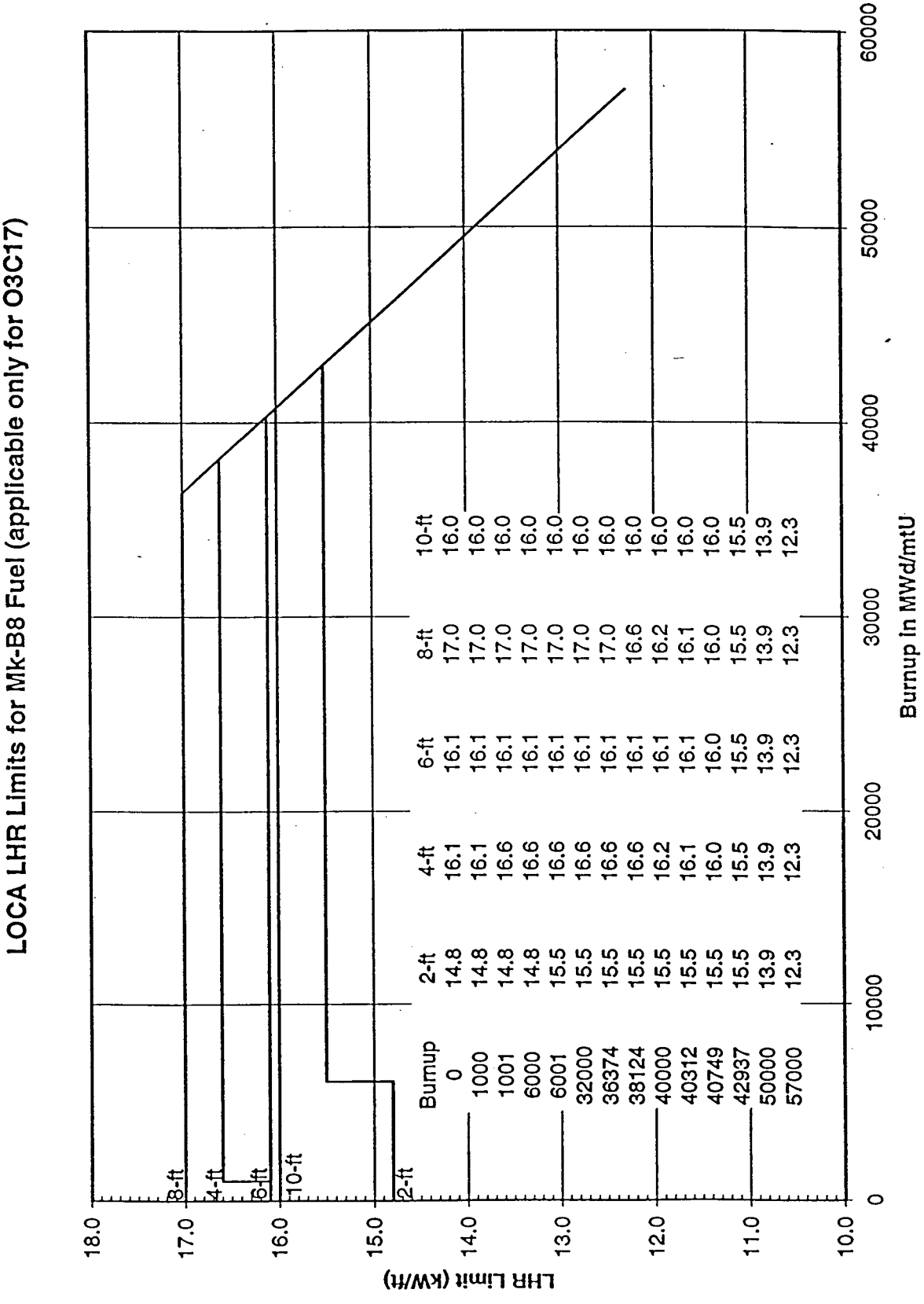
a. Nuclear uncertainty factors
b. Thermal calibration
c. Hot rod manufacturing tolerance factors

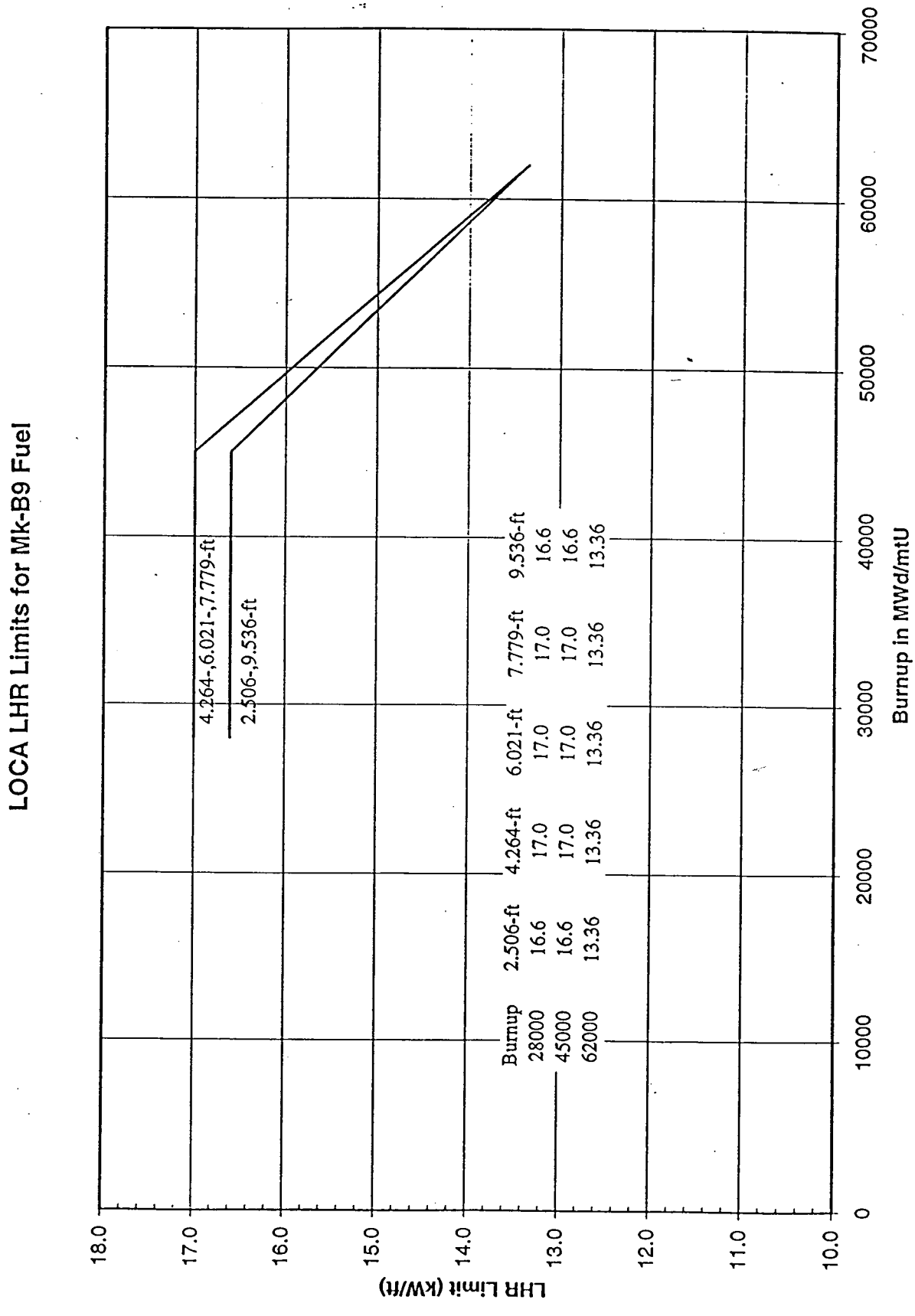
The 25% $\pm$ 5% overlap between successive control rod groups is allowed since the worth of a rod is lower at the upper and lower part of the stroke. Control rods are arranged in groups or banks defined as follows:

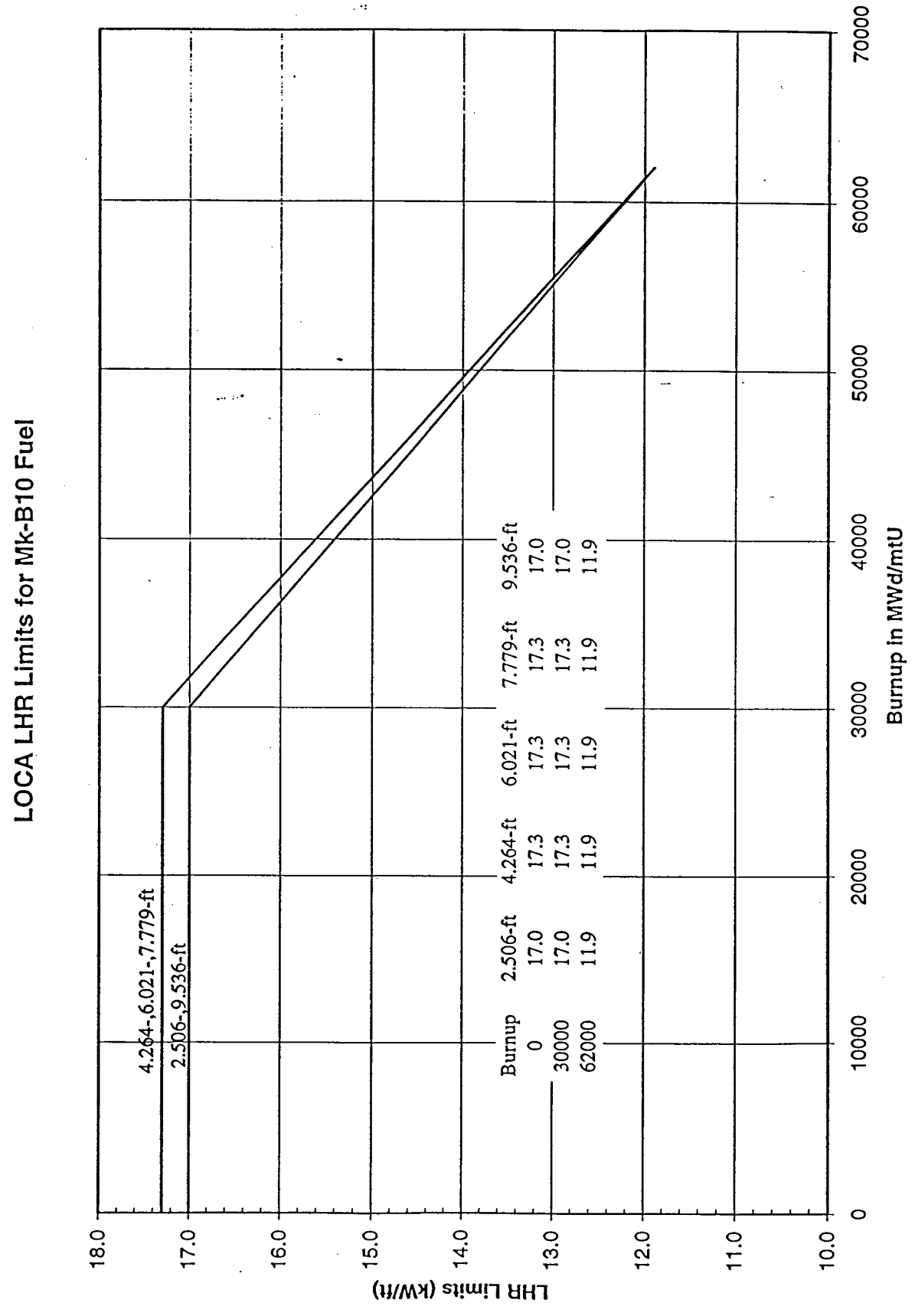
Group	Function
1	Safety
2	Safety
3	Safety
4	Safety
5	Regulating
6	Regulating
7	Xenon transient override
8	APSR (axial power shaping rod)

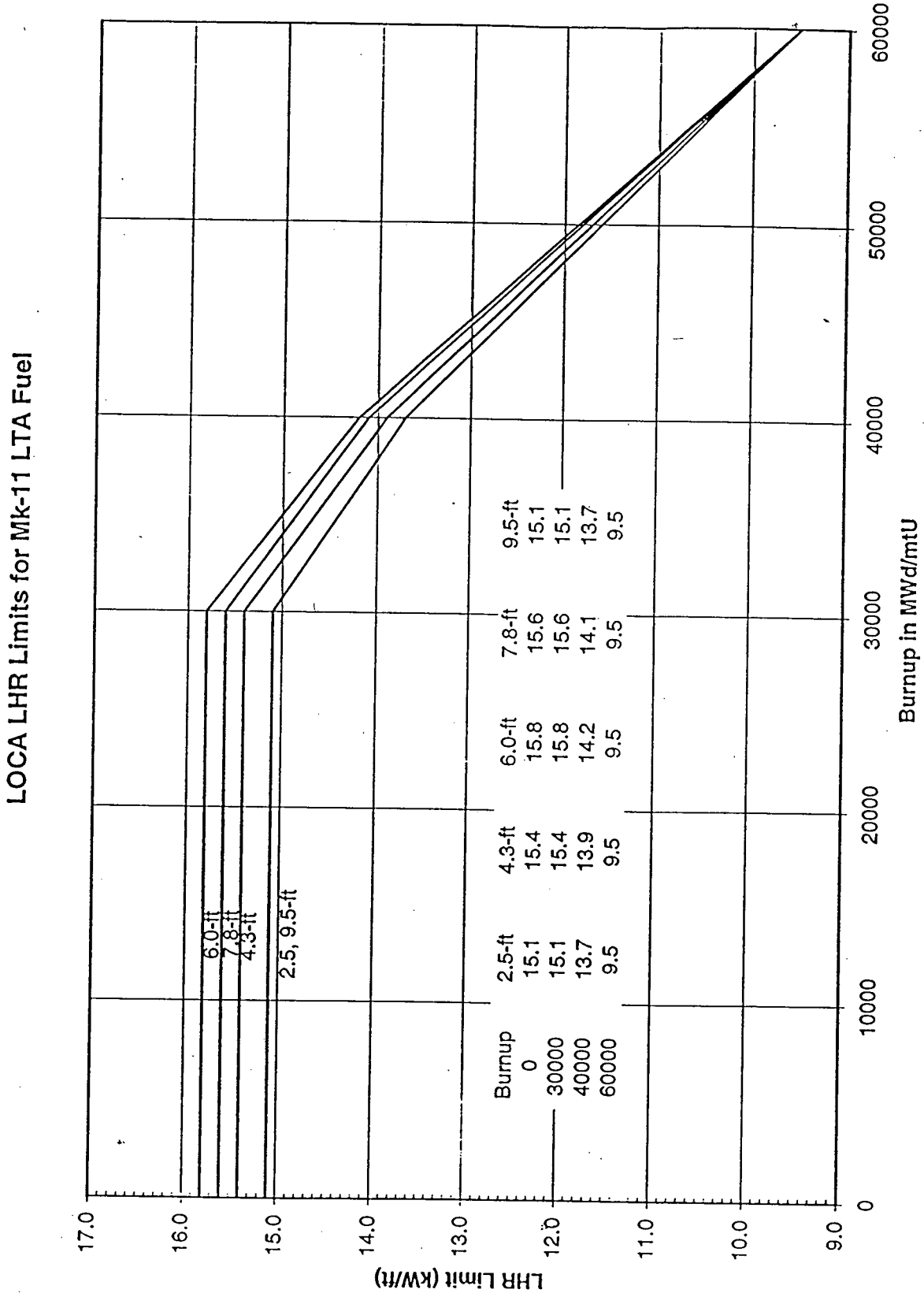
** Actual operating limits depend on whether or not incore or excore detectors are used and their respective instrument calibration errors. The method used to define the operating limits is defined in plant operating procedures.

Figure 3.5.2-16a




LOCA LHR Limits for Mk-B9 Fuel
LHR Limit (kW/ft)
Burnup in MWd/mtU
18.0
17.0
16.0
15.0
14.0
13.0
12.0
11.0
10.0
0
10000
20000
30000
40000
50000
60000
70000
4.264-,6.021-,7.779-ft
2.506-,9.536-ft
Burnup 2.506-ft 4.264-ft 6.021-ft 7.779-ft 9.536-ft
28000 16.6 17.0 17.0 17.0 16.6
45000 16.6 17.0 17.0 17.0 16.6
62000 13.36 13.36 13.36 13.36 13.36


LOCA LHR Limits for Mk-B10 Fuel
LHR Limits (kW/ft)
Burnup in MWd/mtU
18.0
17.0
16.0
15.0
14.0
13.0
12.0
11.0
10.0
0
10000
20000
30000
40000
50000
60000
70000
4.264-,6.021-,7.779-ft
2.506-,9.536-ft
Burnup 2.506-ft 4.264-ft 6.021-ft 7.779-ft 9.536-ft
0 17.0 17.3 17.3 17.3 17.0
30000 17.0 17.3 17.3 17.3 17.0
62000 11.9 11.9 11.9 11.9 11.9


LOCA LHR Limits for Mk-11 LTA Fuel
LHR Limit (kW/ft)
Burnup in MWd/mtU
17.0
16.0
15.0
14.0
13.0
12.0
11.0
10.0
9.0
0
10000
20000
30000
40000
50000
60000
6.0-ft
7.8-ft
4.3-ft
2.5, 9.5-ft
Burnup 2.5-ft 4.3-ft 6.0-ft 7.8-ft 9.5-ft
0 15.1 15.4 15.8 15.6 15.1
30000 15.1 15.4 15.8 15.6 15.1
40000 13.7 13.9 14.2 14.1 13.7
60000 9.5 9.5 9.5 9.5 9.5

Attachment #2

Markup of Existing Technical Specifications Bases

Attachment # 2

Markup of Existing Technical Specification Bases

T.S. Bases 3.3 & 3.5

Valve LPSW-108 is the LPSW isolation valve on the discharge side of each Unit's RBCUs. This valve is required to be locked open in order to assure the LPSW flowpath for the RBCUs is available.

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The operability of redundant equipment(s) is determined based on the results of inservice inspection and testing as required by Technical Specification 4.5 and ASME Section XI.

REFERENCES

(1) ~~ECCS Analysis of B&W's 177-FA Lowered-Loop NSS, BAW-10103, Babcock & Wilcox, Lynchburg, Virginia, June 1975.~~ UFSAR, SECTION 15.14

(2) Duke Power Company to NRC letter, July 14, 1978, "Proposed Modifications of High Pressure Injection System".

(3) UFSAR, Section 9.3.3.2

~~(4) UFSAR, Section 15.14.5~~

Bases

Operation at power with an inoperable control rod is permitted within the limits provided. These limits assure that an acceptable power distribution is maintained and that the potential effects of rod misalignment on associated accident analyses are minimized. For a rod declared inoperable due to misalignment, the rod with the greatest misalignment shall be evaluated first. Additionally, the position of the rod declared inoperable due to misalignment shall not be included in computing the average position of the group for determining the operability of rods with lesser misalignments. When a control rod is declared inoperable, boration may be initiated to achieve the existence of 1% Δk/k hot shutdown margin.

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6	Regulating
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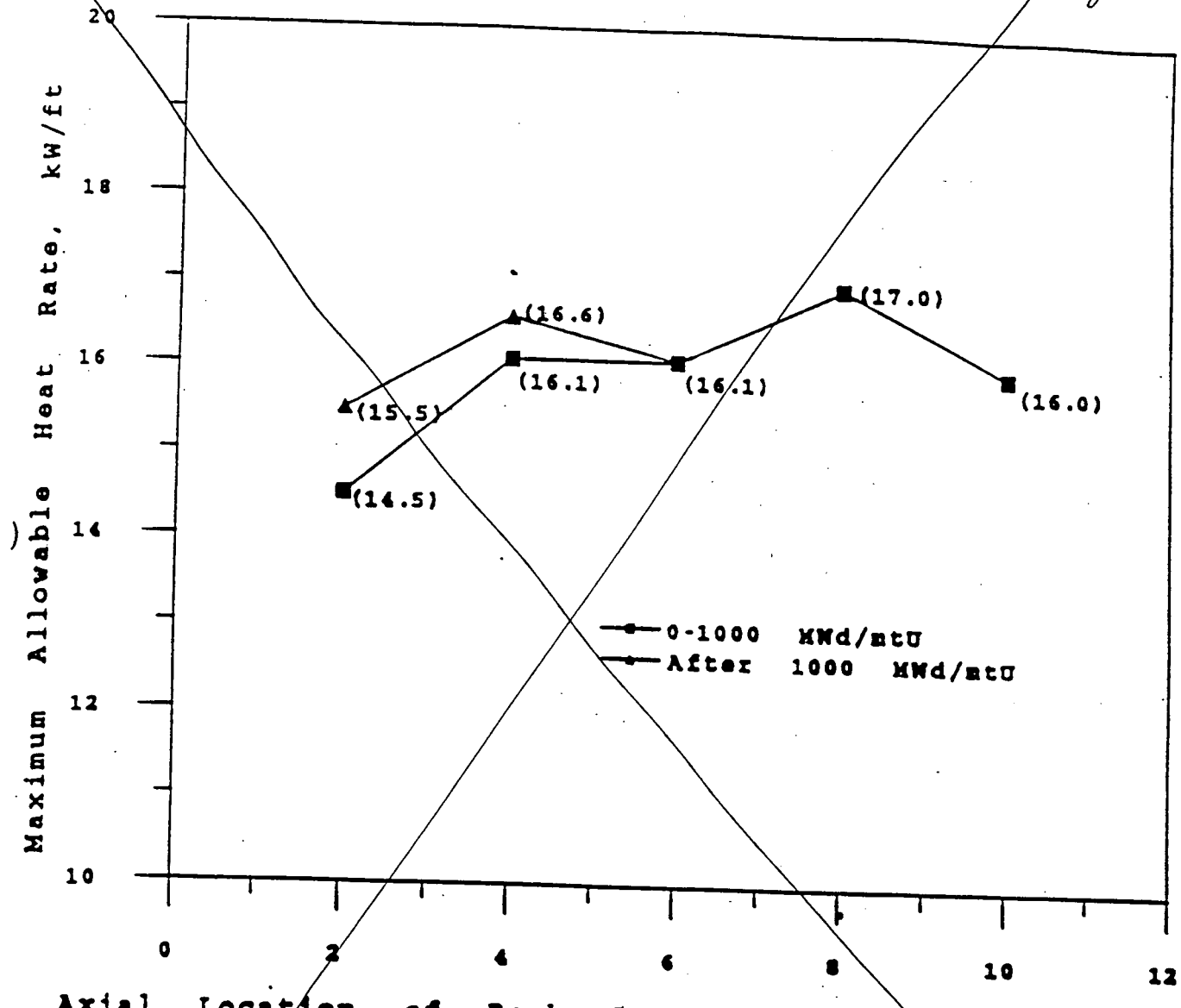
8	APSR (Axial power shaping rods)

** Actual operating limits depend on whether or not incore or excore detectors are used and their respective instrument calibration errors. The method used to define the operating limits is defined in plant operating procedures.

Amendment No. 209 (Unit 1)
Amendment No. 209 (Unit 2)
Amendment No. 206 (Unit 3)

LOCA -Limited Maximum Allowable Linear Heat Rate For Mark B8* Fuel Rods

delete



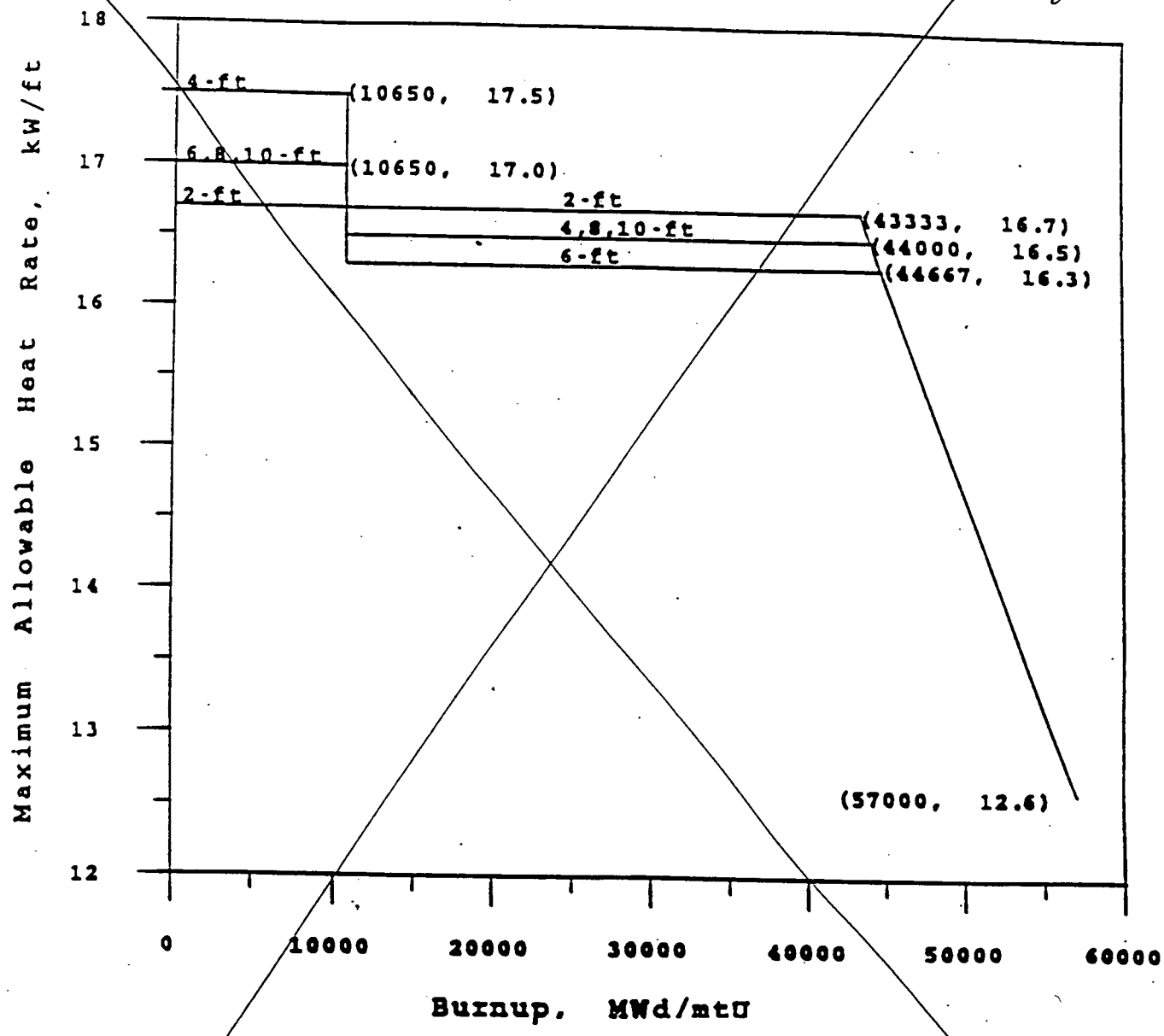
* Mark-B8 fuel rods with a fuel pellet diameter of 0.3686 inches are used in Mark-B8 and earlier fuel assemblies.

Oconee Nuclear Station
Figure 3.5.2-16a

Amendment No. 209 (Unit 1)
Amendment No. 209 (Unit 2)
Amendment No. 206 (Unit 3)

LOCA- Limited Maximum Allowable Linear Heat Rate For Mark B9* Fuel Rods

delete



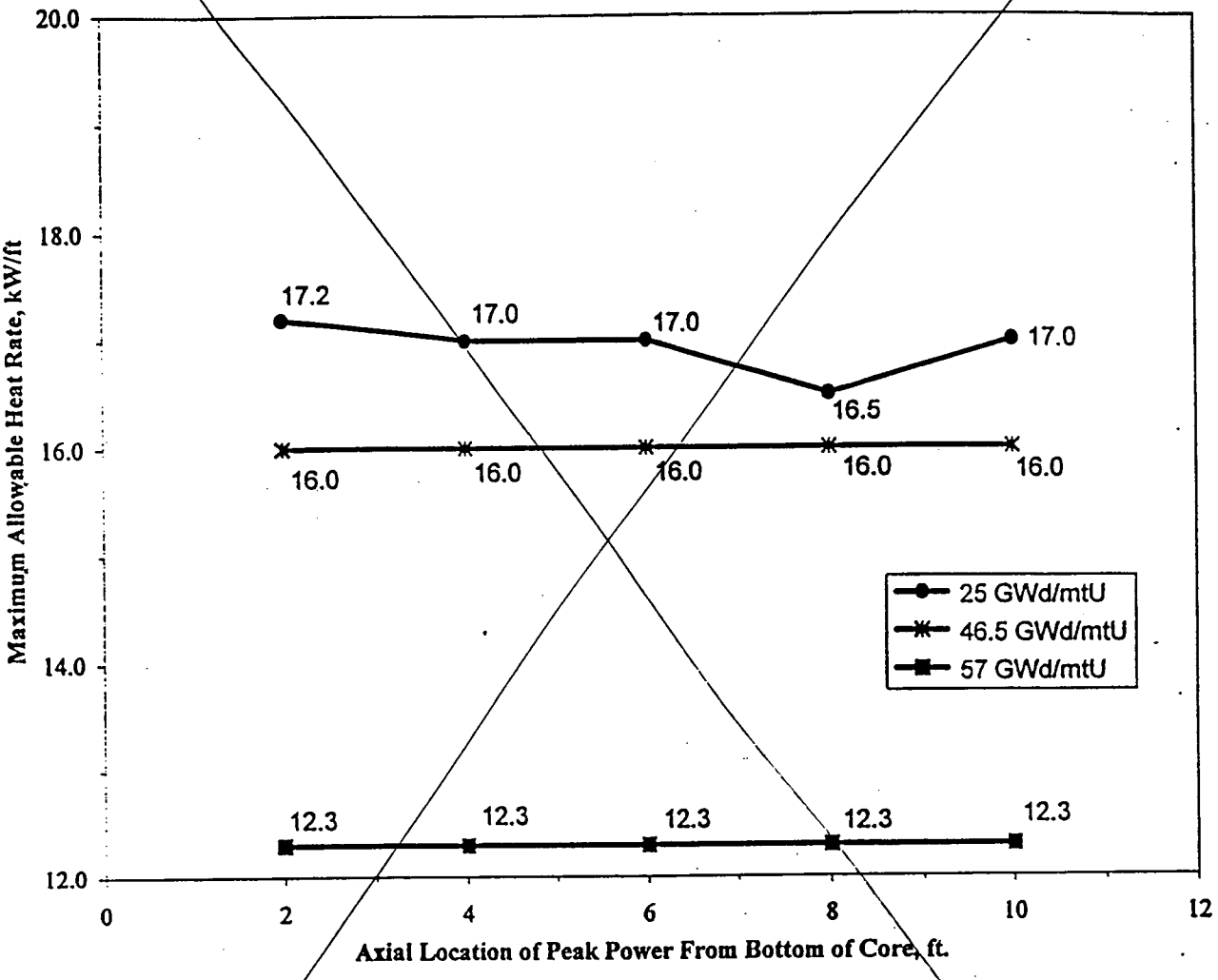
*Mark-B9 fuel rods with a fuel pellet diameter of 0.3700 inches are used in Mark-B9 and Mark-B10 fuel assemblies.

Oconee Nuclear Station
Figure 3.5.2-16b

Amendment No. 209 (Unit 1)
Amendment No. 209 (Unit 2)
Amendment No. 206 (Unit 3)

delete

LOCA-Limited Maximum Allowable Linear Heat Rate For Mark-B10* Fuel Rods



* Mark-B10 fuel rods with a fuel pellet diameter of 0.3735 inches are used in the Mark B10T fuel assemblies.

Oconee Nuclear Station
Figure 3.5.2-16c