



<b>APPLICABLE TO:</b>	
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## ERRATA And ADDENDA SHEET

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<i>NOTE: Correct all copies of the applicable publication as specified below.</i>	

ITEM	REFERENCES (SECTION, PAGE PARAGRAPH, LINE)	INSTRUCTIONS (CORRECTIONS AND ADDITIONS)
1.	Page v/vi	Replace with revised page v/vi.
2.	Page 3-1/3-2	Replace with revised page 3-1/3-2.
3.	Page 4-3	Replace with revised page 4-3.
4.	Page 4-13/4-14	Replace with revised page 4-13/4-14.
5.	Page 4-15/4-16	Delete page 4-15/4-16  (Change bars in right-hand margin indicate where report has been revised.)

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3. INPUT TO ANALYSIS

A list of the significant plant input parameters to the LOCA analysis is presented in Table 3-1.

Table 3-1

## SIGNIFICANT INPUT PARAMETERS TO THE LOSS-OF-COOLANT ACCIDENT ANALYSIS

Plant Parameters

Core Thermal Power	3440 MWt, which corresponds to 105% of rated steam flow
Vessel Steam Output	$14.05 \times 10^6$ lbm/h, which corresponds to 105% of rated steam flow
Vessel Steam Dome Pressure	1055 psia
Recirculation Line Break Area for Large Breaks - Discharge	$1.9 \text{ ft}^2$ (DBA)
- Suction	$4.1 \text{ ft}^2$ (DBA)
Number of Drilled Bundles	360

Fuel Parameters:

<u>Fuel Type</u>	<u>Fuel Bundle Geometry</u>	<u>Peak Technical Specification Linear Heat Generation Rate (kW/ft)</u>	<u>Design Axial Peaking Factor</u>	<u>Initial Minimum Critical Power Ratio</u>
A. IC Type 2	7x7	18.5	1.5	1.2
B. IC Type 3	7x7	18.5	1.5	1.2
C. 8D274L	8x8	13.4	1.4	1.2
D. 8D274H	8x8	13.4	1.4	1.2
E. LTA260	8x8	13.4	1.4	1.2
F. 8DRB284L	8x8	13.4	1.4	1.2
G. P8DRB284H	8x8	13.4	1.4	1.2
H. P8DRB285	8x8	13.4	1.4	1.2
I. P8DRB299/ BP8DRB299	8x8	13.4	1.4	1.2
J. BP8DRB299H	8x8	13.4	1.4	1.2

\*To account for the 2% uncertainty in bundle power required by Appendix K, the SCAT calculation is performed with an MCPK of 1.18 (i.e., 1.2 divided by 1.02) for a bundle with an initial MCPK of 1.20.

#### 4.5 RESULTS OF THE CHASTE ANALYSIS

This code is used, with suitable inputs from the other codes, to calculate the fuel cladding heatup rate, peak cladding temperature, peak local cladding oxidation, and core-wide metal-water reaction for large breaks. The detailed fuel model in CHASTE considers transient gap conductance, clad swelling and rupture, and metal-water reaction. The empirical core spray heat transfer and channel wetting correlations are built into CHASTE, which solves the transient heat transfer equations for the entire LOCA transient at a single axial plane in a single fuel assembly. Iterative applications of CHASTE determine the maximum permissible planar power where required to satisfy the requirements of 10CFR50.46 acceptance criteria.

The CHASTE results presented are:

- Peak Cladding Temperature versus time
- Peak Cladding Temperature versus Break Area
- Peak Cladding Temperature and Peak Local Oxidation versus Planar Average Exposure for the most limiting break size
- Maximum Average Planar Heat Generation Rate (MAPLHGR) versus Planar Average Exposure for the most limiting break size

A summary of the analytical results is given in Table 4-1. Table 4-2 lists the figures provided for this analysis. The MAPLHGR values for each fuel type in the PB-2 core are presented in Tables 4-3a through 4-3j.

Table 4-3i

## MAPLHGR VERSUS AVERAGE PLANAR EXPOSURE

Plant: PB-2Fuel Type: P8DRB299 and BP8DRB299

<u>Average Planar Exposure (MWd/t)</u>	<u>MAPLHGR (kW/ft)</u>	<u>PCT (°F)</u>	<u>Oxidation Fraction</u>
200	10.9	1800	0.007
1,000	11.0	1804	0.007
5,000	11.5	1851	0.008
10,000	12.2	1933	0.011
15,000	12.3	1962	0.012
20,000	12.3	1965	0.012
25,000	11.9	1932	0.011
30,000	11.4	1864	0.009
35,000	10.9	1799	0.007
40,000	10.4	1744	0.005
45,000	10.0	1689	0.004

Table 4-3j

## MAPLHGR VERSUS AVERAGE PLANAR EXPOSURE

Plant: PB-2Fuel Type: BP8DRB299H

<u>Average Planar Exposure (MWd/t)</u>	<u>MAPLHGR (kW/ft)</u>	<u>PCT (°F)</u>	<u>Oxidation Fraction</u>
200	11.1	1820	0.007
1,000	11.2	1822	0.007
5,000	11.7	1877	0.009
10,000	12.2	1940	0.011
15,000	12.3	1954	0.012
20,000	12.0	1930	0.011
25,000	11.2	1843	0.008
30,000	10.5	1767	0.006
35,000	9.8	1682	0.004
40,000	9.2	1607	0.003
45,000	8.7	1543	0.002