NUCLEAR ENERGY BUSINESS GROUP • GENERAL ELECTRIC COMPANY
SAN JOSE, CALIFORNIA 95125

GENERAL ELECTRIC

APPLICABLE TO:
PUBLICATION NO NEDO-24056
T.I.E NO —
TITLE LOSS-OF-COOLANT ACCIDENT ANALYSIS FOR BROWNS FERRY NUCLEAR PLANT UNIT 1
ISSUE DATE September 1977

ERRATA And ADDENDA SHEET

NO 2
DATE April 1981

NOTE: Correct all copies of the applicable publication as specified below.

ITEM	REFERENCES (SECTION, PAGE PARAGRAPH, LINE)	INSTRUCTIONS (CORRECTIONS AND ADDITIONS)
01	Page 3-1/3-2	Replace with new page 3-1/3-2.
02	Pages 4-9 & 4-10	Replace with new pages 4-9 and 4-10.
03	Pages 4-10a thru 4-10c	Insert new pages 4-10a through 4-10c.
		NOTE: Brackets in right-hand margin indicate areas of revision.

3. INPUT TO ANALYSIS

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

Table 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	14.05×10^6 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 ft^2 (DBA)	1.3 ft^2 (66% DBA)
- Suction	4.2 ft^2	
Number of Drilled Bundles	744	

Fuel Parameters:

Fuel Type	Fuel Bundle Geometry	Peak Technical Specification Linear Heat Generation Rate (kW/ft)	Design Axial Peaking Factor	Initial Minimum Critical Power Ratio*
A. IC Type 1 & 3	7 x 7	18.5	1.5	1.2
B. IC Type 2	7 x 7	18.5	1.5	1.2
C. 8DB274L	8 x 8	13.4	1.4	1.2
D. 8DB274H	8 x 8	13.4	1.4	1.2
E. 8DRB265L	8 x 8	13.4	1.4	1.2
F. P8DRB265L	8 x 8	13.4	1.4	1.2
G. 8DRB265H	8 x 8	13.4	1.4	1.2
H. P8DRB284L	8 x 8	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 MCPR of 1.18 (i.e., 1.2 divided by 1.02) for a bundle with an initial MCPR of 1.20.

Table 4C

MAPLHGR VERSUS AVERAGE PLANAR EXPOSURE

Plant: BF-1 Fuel Type: 8DB274L]

Average Planar Exposure (Mwd/t)	MAPLHGR (kW/ft)	PCT (°F)	Oxidation Fraction
200	11.2	1652	0.003
1,000	11.3	1645	0.003
5,000	11.9	1648	0.003
10,000	12.1	1626	0.002
15,000	12.2	1642	0.003
20,000	12.1	1642	0.003
25,000	11.6	1603	0.002
30,000	10.9	1537	0.002
35,000	9.9	1448	0.001]
40,000	9.3	1391	0.001]

Table 4D

MAPLHGR VERSUS AVERAGE PLANAR EXPOSURE

Plant: BF-1 Fuel Type: 8DB274H]

Average Planar Exposure (Mwd/t)	MAPLHGR (kW/ft)	PCT (°F)	Oxidation Fraction
200	11.1	1646	0.003
1,000	11.2	1635	0.003
5,000	11.8	1640	0.003
10,000	12.1	1630	0.002
15,000	12.2	1647	0.003
20,000	12.0	1648	0.003
25,000	11.5	1608	0.002
30,000	10.9	1547	0.002
35,000	10.0	1459	0.001]
40,000	9.3	1402	0.001]

Table 4E

MAPLHGR VERSUS AVERAGE PLANAR EXPOSURE

Plant: BF-1 Fuel Type: 8DRB265L and P8DRB265L

Average Planar Exposure (MWd/t)	MAPLHGR (kW/ft)	PCT (°F)	Oxidation Fraction
200	11.6	1711	0.004
1,000	11.6	1700	0.004
5,000	12.1	1692	0.003
10,000	12.1	1663	0.003
15,000	12.1	1683	0.003
20,000	11.9	1683	0.003
25,000	11.3	1637	0.003
30,000	10.7	1579	0.002
35,000	10.2	1526	0.002
40,000	9.6	1463	0.001

Table 4F

MAPLHGR VERSUS AVERAGE PLANAR EXPOSURE

Plant: BF-1 Fuel Type: 8DRB265H

Average Planar Exposure (MWd/t)	MAPLHGR (kW/ft)	PCT (°F)	Oxidation Fraction
200	11.5	1707	0.004
1,000	11.6	1698	0.004
5,000	11.9	1681	0.003
10,000	12.1	1666	0.003
15,000	12.1	1688	0.003
20,000	11.9	1687	0.003
25,000	11.3	1639	0.003
30,000	10.7	1580	0.002
35,000	10.2	1526	0.002
40,000	9.6	1465	0.001

Table 4G

MAPLHGR VERSUS AVERAGE PLANAR EXPOSURE

Plant: BF-1 Fuel Type: P8DRB284L

Average Planar Exposure (MWd/t)	MAPLHGR (kW/ft)	PCT (°F)	Oxidation Fraction
200	11.2	1685	0.004
1,000	11.3	1667	0.003
5,000	11.8	1671	0.003
10,000	12.0	1647	0.003
15,000	12.0	1669	0.003
20,000	11.8	1672	0.003
25,000	11.2	1633	0.003
30,000	10.8	1596	0.002
35,000	10.2	1469	0.001
40,000	9.5	1411	0.001