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March 2, 1979

**Director of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555**

**Subject: Dresden Station Unit 2
Proposed Amendment to License and
Appendix A, Technical Specifications,
for Facility Operating License DPR-19
to Support Reload No. 4
NRC Docket No. 50-237**

**Reference (a): C. Reed letter to Director of Nuclear
Reactor Regulation dated January 15,
1979**

Dear Sir:

Reference (a) transmitted our proposed amendment to the License and Appendix A, Technical Specifications, to support Reload 4 for Dresden Unit 2.

As a result of delaying the originally scheduled shutdown date, an evaluation of the applicability of the reload analysis for Dresden Unit 2, NEDO-24160, was made. This evaluation resulted in a new reference core loading pattern (Figure 1) changes to the core average exposures (Sec. 3) and the core effective multiplication and control system worths (Sec. 4) as presented in NEDO-24160. The shutdown margin remains greater than technical specification requirements. The standby liquid control system shutdown capability was determined to be unchanged from the documented value. The reload transient analysis inputs (Sec. 6) given in the document are the same or conservative for the new core. Thus, the transient analysis (Sec. 9), the over pressure protection analysis (Sec. 12) and the stability analysis (Sec. 13) remain unchanged and are bounding. The GETAB analysis initial conditions (Sec. 7) remain the same. The rod withdrawal error (Sec. 10) was reanalyzed and the values given in the document for the 107% RBM setpoint are conservative. Thus, the operating limit MCFR (Sec. 11) remains unchanged. The changes do not impact on the LOCA analysis (Sec. 14). The control rod drop accident (Sec. 16) has been determined to remain not limiting and, therefore, was not changed.

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GENERAL  ELECTRIC

APPLICABLE TO:
PUBLICATION NO. NEDO-24160
T. I. E. NO. 78NED294
TITLE SUPPLEMENTAL RELOAD
LICENSING SUBMITTAL FOR DRESDEN
NPS UNIT 2 RELOAD 4
ISSUE DATE November 1978

**ERRATA And ADDENDA
SHEET**

NO. 2
DATE February 1979
*NOTE: Correct all copies of the applicable
publication as specified below.*

ITEM	REFERENCES (SECTION, PAGE PARAGRAPH, LINE)	INSTRUCTIONS (CORRECTIONS AND ADDITIONS)
1	Page 1	Replace with new page 1.
2	Page 6	Replace with new page 6.

1. PLANT UNIQUE ITEMS (1.0)*

- a. Plant Parameter Changes. See Appendix A
- b. Loading Error See Appendix A
- c. Loss-of-Coolant Accident Analysis See Reference 1 (Pg. 5)
- d. R (Item 4) Value shown includes effect of B₄C settling (0.0002Δk)

2. RELOAD FUEL BUNDLES (1.0, 3.3.1 and 4.0)

	<u>Fuel Type</u>	<u>Number</u>	<u>Number Drilled</u>
Irradiated	Initial (7DB212)	56	
	Reload-1 (7DB230)	32	
	(8DB250)	124	
	Reload-2 (8DB250)	80	
	(8DB262)	80	
	Reload-3 (8DB250)	192	
New	Reload-4 (8DRB265L)	<u>160</u>	<u>160</u>
Total		<u>724</u>	<u>160</u>

3. REFERENCE CORE LOADING PATTERN (3.3.1)

Nominal previous cycle exposure: 15,812 MWd/t

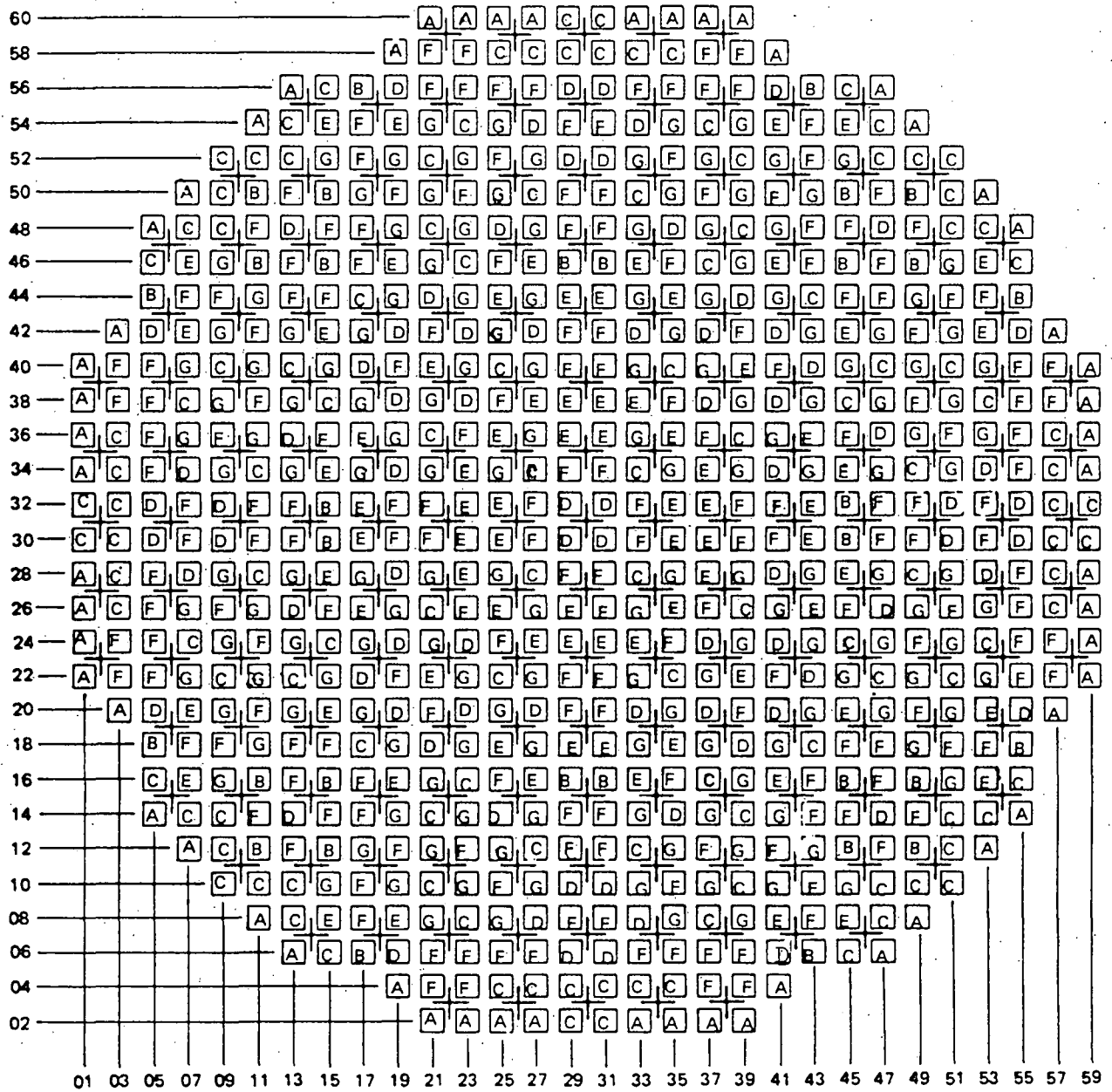
Assumed reload cycle exposure: 16,450 MWd/t

Core loading pattern: Figure 1

4. CALCULATED CORE EFFECTIVE MULTIPLICATION AND CONTROL SYSTEM WORTH - NO VOIDS, 20°C (3.3.2.1.1 AND 3.3.2.1.2)

BOC k _{eff}	
Uncontrolled	1.107
Fully Controlled	0.949
Strongest Control Rod Out	0.987
R, Maximum Increase in Cold Core Reactivity with Exposure Into Cycle, Δk	0.0002

*() refers to areas of discussion in "Generic Reload Fuel Application," NEDE-24011-P-A, August 1978.



FUEL TYPE	
A = INITIAL FUEL	E = RELOAD 2 (8DB262)
B = RELOAD 1 (7DB230)	F = RELOAD 3 (8DB250)
C = RELOAD 1 (8DB250)	G = RELOAD 4 (8DR8265L)
D = RELOAD 2 (8DB250)	

Figure 1. Dresden Unit 2 Reload 4 Design Reference Core Loading