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Downers Grove, IL 60515

ComEd

January 12, 1996

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

Attn: Document Control Desk

Subject: Dresden Nuclear Power Station Units 2 and 3
Plant Specific ECCS Evaluation Changes - 30 Day 10CFR50.46 Report
DPR-19 and DPR-25
NRC Docket Nos. 50-237 and 50-249

References:
(1) XN-NF-85-63, "Dresden Unit 3 LOCA-ECCS Analysis MAPLHGR Results for ANF 9x9 Fuel," September 1985.
(2) ANF-88-191, "Dresden 2 and 3 LOCA-ECCS Analysis MAPLHGR Results for ANF 9x9 Fuel," December 1988.

The Dresden Station LOCA ECCS analysis for Units 2 and 3 was recently supplemented by the Dresden fuel vendor, Siemens Power Corporation (SPC). Although the analysis resulted in a substantial reduction in the calculated peak cladding temperature (PCT) for both units, this notification is required per 10CFR50.46(a)(3)(ii) because the change in PCT is greater than the thirty day reporting threshold (50 °F) for the cumulation of the absolute magnitude of changes in the evaluation models or their application.

Background

In 1985, Siemens Power Corporation (SPC) calculated a limiting value for PCT of **2045 °F** for Dresden Station Unit 3 in the Reference (1) analysis of record. During the period 1985 to 1995, both Dresden Units transitioned from 8x8 to 9x9 fuel (which has a shorter reflood time) and implemented several plant changes. Due to the mixed core transition, the 1985 analysis conservatively applied 8x8 reflood characteristics for both fuel types. The Reference (2) analysis report continued to apply the conservative 8x8 reflood time to the 9x9 fuel. The plant changes were evaluated per 10CFR50.59 and shown to have small effects on PCT that were bounded by the conservative analysis of record.

180065

A001

During the period 1985 to 1995, changes evaluated include:

1) both Dresden Units completed the transition to 9x9 fuel (with an associated reduced reflood time that was conservatively not credited in the analysis of record during the transition);

2) small variations in fuel bundle types were included in new LOCA evaluations; and,

3) emergent leakage paths (e.g., associated with core shroud repair) were accounted for.

On December 14, 1995, ComEd completed an acceptance review of SPC supplements to the Reference (2) LOCA analysis report. These supplements reflect the improved reflood time for a full 9x9 core and utilize the latest version of the NRC approved LOCA analysis computer codes. The new analyses also included other plant changes as summarized above and in Attachments A and B. The limiting PCTs resulting from the revised LOCA analysis are **1884 °F** and **1856 °F** for Unit 2 and Unit 3, respectively. This represents a decrease of 161 °F and 189 °F in the limiting PCT for Dresden Units 2 and 3, respectively, thus requiring a 30 day notification.

Since continued compliance with the 10CFR50.46(b) acceptance criteria has been demonstrated, this is not considered to be a potential safety issue, nor is it reportable under 10CFR21 as a substantial safety hazard. ComEd will utilize the revised PCTs reported herein to assess the need for reporting of any future Dresden LOCA model changes or application changes pursuant to 10CFR50.46.

Please direct any questions you may have concerning this submittal to this office.

Sincerely,

Bob Rybak
Nuclear Licensing Administrator

Attachments: A. Dresden Unit 2 LOCA Model Change Summary
B. Dresden Unit 3 LOCA Model Change Summary

cc: H. J. Miller, Regional Administrator - RIII
J. F. Stang, Project Manager - NRR
C. L. Vanderniet, Senior Resident Inspector - Dresden
Office of Nuclear Facility Safety - IDNS

Attachment A
Dresden Unit 2 LOCA Model Change Summary

PLANT NAME: Dresden Unit 2
ComEd ACCEPTANCE DATE: December 14, 1995
CURRENT OPERATING CYCLE: 15

LOCA ANALYSIS OF RECORD

Evaluation Model:	EXEM BWR [XN-NF-80-19(P)(A)]
Previous AOR Reports:	XN-NF-81-75 as Supplemented 8x8 PCT = 2159 °F XN-NF-82-88 9x9 LTA PCT = 1918 °F Tech Spec Amend # 75 - 4/07/83 SER (exposure limited to 12 GWD/MTU) XN-NF-85-63 (9x9) 9x9 PCT = 2045 °F Tech Spec Amend # 95 - 3/31/87 SER
Limiting Break Type and Location:	Double Ended Guillotine Break of Suction Line to Reactor Recirculation Pump
Limiting Single Failure:	LPCI Injection Valve Failure to Open
Previous PCT for 9x9 Fuel:	2045 °F
Subsequent Analysis Reports:	ANF-87-111 as supplemented ANF-88-191 ANF-88-205 as supplemented ANF-89-131 as supplemented
Current Analysis Reports:	Supplements 1, 2 and 3 to ANF 88-191 Transmitted via SPC letters to ComEd SPCCWE:223:95 and SPCCWE:245:95

New Analysis of Record PCT for Unit 2
1884 °F

Attachment A
(continued)

DRESDEN UNIT 2 LOCA MODEL CHANGE ASSESSMENTS

LOCA MODEL CHANGE	Analysis Report Date	D PCT (°F)	
		8x8	9x9
Reactor Recirculation Discharge Valve Closure Time Increase	May 1990	+ 0	+ 0
Various Valve Stroke Times Increased (includes LPCS Injection Valve increase to 14 seconds)	September 1990	< +1	< +1
Reactor Recirculation Discharge Valve Closure Time Increase	September 1991	+ 0	+ 0

Note: At the end of Cycle 13 (January 1993) all 8x8 fuel was discharged from Unit 2

Jet Pump Baffle Plate Access Hole Cover Weld Repair Leakage (78 gpm) Evaluation	February 1993	N/A	+10
D2C15 with 9x9 fuel type reflood time	November 1995	N/A	-157
AND			
Bottom Head Drain Flowpath (286 gpm, DPCT< +10°F) AND analysis performed using the latest version of FLEX		N/A	-42
AND			
Shroud Repair Leakage (184 gpm) AND LPCS Injection Line Crack Postulated Leakage (83 gpm)		N/A	+28

Attachment B
Dresden Unit 3 LOCA Model Change Summary

PLANT NAME: Dresden Unit 3
ComEd ACCEPTANCE DATE: December 14, 1995
CURRENT OPERATING CYCLE: 14

LOCA ANALYSIS OF RECORD

Evaluation Model:	EXEM BWR [XN-NF-80-19(P)(A)]
Previous AOR Reports:	XN-NF-81-75 (8x8) as Supplemented 8x8 PCT = 2159 °F Tech Spec Amend # 63 - 4/29/82 SER XN-NF-85-63 (9x9) 9x9 PCT = 2045 °F Tech Spec Amend # 87 - 7/24/86 SER
Limiting Break Type and Location:	Double Ended Guillotine Break of Suction Line to Reactor Recirculation Pump
Limiting Single Failure:	LPCI Injection Valve Failure to Open
Previous PCT for 9x9 Fuel:	2045 °F
Subsequent Analysis Reports:	ANF-87-111 as supplemented ANF-88-191 ANF-88-205 as supplemented ANF-89-131 as supplemented
Current Analysis Reports:	Supplements 1 and 2 to ANF 88-191 Transmitted via SPC letter SPCCWE:223:95 to ComEd
New Analysis of Record PCT for Unit 3	1856°F

Attachment B
(continued)

DRESDEN UNIT 3 LOCA MODEL CHANGE ASSESSMENTS

LOCA MODEL CHANGE	Analysis Report Date	D PCT (°F)	
		8x8	9x9
Reactor Recirculation Discharge Valve Closure Time Increase	May 1990	+ 0	+ 0
Various Valve Stroke Times Increased (includes LPCS Injection Valve increase to 14 seconds)	September 1990	< +1	< +1
Reactor Recirculation Discharge Valve Closure Time Increase	September 1991	+ 0	+ 0

Note: At the end of Cycle 13 (March 1994) all 8x8 fuel was discharged from Unit 3

D3C14 with 9x9 reflood time AND Jet Pump Baffle Plate Access Hole Cover Weld Repair Leakage (78 gpm)	November 1995	N/A	-147
AND			
Bottom Head Drain Flowpath (286 gpm, DPCT< +10°F) AND analysis performed using the latest version of FLEX		N/A	-42