

Exelon Generation
Dresden Generating Station
6500 North Dresden Road
Morris, IL 60450-9765
Tel 815-942-2920

www.exeloncorp.com

November 25, 2003

10 CFR 50.46(a)(3)(ii)

RHLTR: #03-0077

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Dresden Nuclear Power Station, Units 2 and 3
Facility Operating License Nos. DPR-19 and DPR-25
NRC Docket Nos. 50-237 and 50-249

Subject: Plant Specific ECCS Evaluation Changes – 10 CFR 50.46 Report

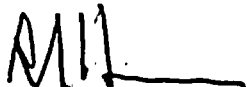
Reference: Letter from R. J. Hovey (Exelon Generation Company, LLC) to U. S. NRC, "Plant Specific ECCS Evaluation Changes – 10 CFR 50.46 Report," dated November 25, 2002

In accordance with 10 CFR 50.46, "Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors," paragraph (a)(3)(ii), Exelon Generation Company (EGC), LLC, is submitting this letter and its attachment to meet the annual reporting requirements.

Dresden Nuclear Power Station Units 2 and 3 is maintaining the same emergency core cooling (ECCS) model as reported in the referenced letter. Two minor errors were discovered by the fuel vendor (General Electric (GE)). The first error involved incorrect initial water levels used in the SAFER model. The second error involved an incorrect initial steam separator pressure drop input used in the SAFER model. GE Determined the peak clad temperature (PCT) impact of these errors on all fuel types in Dresden Units 2 and 3 to be negligible. The PCTs of record are being provided as an attachment to this letter.

If there are any questions concerning this letter, please contact Mr. Jeff Hansen at (815) 416-2800.

Respectfully,



Robert J Hovey
Site Vice President
Dresden Nuclear Power Station

Attachment : Dresden Nuclear Power Station Units 2 and 3 - 10 CFR 50.46 Report

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Dresden Nuclear Power Station

A001

Attachment
Dresden Nuclear Power Station Units 2 and 3
10CFR50.46 Report

PLANT NAME: Dresden Nuclear Power Station, Unit 2
 ECCS EVALUATION MODEL: SAFER/GESTR-LOCA
 REPORT REVISION DATE: 10/24/2003
 CURRENT OPERATING CYCLE: 18

ANALYSIS OF RECORD

Evaluation Model: The GESTR-LOCA and SAFER Models for the Evaluation of the Loss-of-Coolant Accident, Volume III, SAFER/GESTR Application Methodology, NEDE-23785-1-PA, General Electric Company, Revision 1, October 1984.

Calculations:

"SAFER/GESTR-LOCA Loss-of-Coolant Accident Analysis for Dresden Nuclear Station 2 and 3 and Quad Cities Nuclear Station Units 1 and 2," NEDC-32990P, Revision 1, GE Nuclear Energy, September 2001.

Fuel: 9x9-2, ATRIUM-9B and GE14
 Limiting Fuel Type: GE14
 Limiting Single Failure: Diesel Generator
 Limiting Break Size and Location: 1.0 Double-Ended Guillotine in a Recirculation Suction Pipe

Reference Peak Cladding Temperature (PCT) PCT = 2110°F

MARGIN ALLOCATION

A. PRIOR LOCA MODEL ASSESSMENTS

10 CFR 50.46 report dated December 6, 2001 (See Note 1)	$\Delta PCT = 0^\circ F$
10 CFR 50.46 report dated November 25, 2002 (See Note 2)	$\Delta PCT = 0^\circ F$
Net PCT	2110 °F

B. CURRENT LOCA MODEL ASSESSMENTS

SAFER Level/Volume Table Error (See Note 3)	$\Delta PCT = 0^\circ F$
SAFER Initial Steam Separator Pressure Drop Error (See Note 4)	$\Delta PCT = 0^\circ F$
Total PCT change from current assessments	$\Sigma \Delta PCT = 0^\circ F$
Cumulative PCT change from current assessments	$\Sigma \Delta PCT = 0^\circ F$
Net PCT	2110 °F

Attachment
**Dresden Nuclear Power Station Units 2 and 3
 10CFR50.46 Report**

PLANT NAME: Dresden Nuclear Power Station, Unit 3
 ECCS EVALUATION MODEL: SAFER/GESTR-LOCA
 REPORT REVISION DATE: 10/24/2003
 CURRENT OPERATING CYCLE: 18

ANALYSIS OF RECORD

Evaluation Model: The GESTR-LOCA and SAFER Models for the Evaluation of the Loss-of-Coolant Accident, Volume III, SAFER/GESTR Application Methodology, NEDE-23785-1-PA, General Electric Company, Revision 1, October 1984.

Calculations:

"SAFER/GESTR-LOCA Loss-of-Coolant Accident Analysis for Dresden Nuclear Station 2 and 3 and Quad Cities Nuclear Station Units 1 and 2," NEDC-32990P, Revision 1, GE Nuclear Energy, September 2001.

Fuel: 9x9-2, ATRIUM-9B and GE14
 Limiting Fuel Type: GE14
 Limiting Single Failure: Diesel Generator
 Limiting Break Size and Location: 1.0 Double-Ended Guillotine in a Recirculation Suction Pipe

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MARGIN ALLOCATION

A. PRIOR LOCA MODEL ASSESSMENTS

10 CFR 50.46 report dated November 25, 2002 (See Note 2)	$\Delta PCT = 0^\circ F$
Net PCT	2110 °F

B. CURRENT LOCA MODEL ASSESSMENTS

SAFER Level/Volume Table Error (See Note 3)	$\Delta PCT = 0^\circ F$
SAFER Initial Steam Separator Pressure Drop Error (See Note 4)	$\Delta PCT = 0^\circ F$
Total PCT change from current assessments	$\Sigma \Delta PCT = 0^\circ F$
Cumulative PCT change from current assessments	$\Sigma \Delta PCT = 0^\circ F$
Net PCT	2110 °F

Attachment
Dresden Nuclear Power Station Units 2 and 3
10 CFR 50.46 Report

1. Prior LOCA Model Assessment

The 50.46 letter dated December 6, 2001 reported a new LOCA analysis to support extended power uprate (EPU) and transition to GE14 fuel for Dresden Unit 2 Cycle 18. The same report assessed impact of errors in Framatome ANP LOCA analysis model for Dresden Unit 3 Cycle 17 at pre-EPU power level.

[Reference: Letter from Preston Swafford (PSLTR: #01-0122) (Exelon) to USNRC, "Plant Specific ECCS Evaluation Changes – 10 CFR 50.46 Report," December 6, 2001.]

2. Prior LOCA Model Assessment

Unit 3 implemented GE LOCA analysis and GE14 fuel with Dresden Unit 3 Cycle 18 startup on October 25, 2002. Therefore, both Dresden Units 2 and 3 are being maintained under the same LOCA analysis. In the referenced letter, the impact of GE LOCA error in the WEVOL code was reported for Dresden Units 2 and 3 and determined to be negligible.

[Reference: Letter from Robert J. Hovey (RHLTR: #02-0083) (Exelon) to USNRC, "Plant Specific ECCS Evaluation Changes – 10 CFR 50.46 Report," November 25, 2002.]

3. Current LOCA Assessment

GE reported that an error was found in the initial level/volume table for SAFER. The level/volume tables were generated with incorrect initial water levels. This resulted in an incorrect volume split in the nodes above and below the water surface, and incorrect initial liquid mass. GE determined that the PCT impact of this error on all fuel types in the Dresden reactors to be negligible.

[Reference: 10 CFR 50.46 Notification Letter, 2003-01, May 6, 2003.]

4. Current LOCA Assessment

GE reported that an error was found in the initial steam separator pressure drop input to the SAFER model. The calculation of this value for some plant/fuel types applied the wrong loss coefficient or erroneously included a term to account for the hydrostatic pressure. These errors resulted in a higher initial steam separator pressure drop and overly restricted the flow through the separator during the LOCA event. GE determined that the PCT impact of this error on all fuel types in the Dresden reactors to be negligible.

[Reference: 10 CFR 50.46 Notification Letter, 2003-03, May 6, 2003]