Dominion Energy Kewaunee, Inc.
5000 Dominion Boulevard, Glen Allen, VA 23060

Dominion®

September 1, 2006

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Serial No. 06-681
NL&OS/CS R0
Docket Nos. 50-305
License Nos. DPR-43

DOMINION ENERGY KEWAUNEE, INC.
KEWAUNEE POWER STATION
30-DAY REPORT OF EMERGENCY CORE COOLING SYSTEM (ECCS) MODEL CHANGES PURSUANT TO THE REQUIREMENTS OF 10 CFR 50.46

In accordance with 10 CFR 50.46(a)(3)(ii), Dominion Energy Kewaunee, Inc. (DEK), hereby submits information regarding changes to the Westinghouse Emergency Core Cooling System (ECCS) Evaluation Model for the Best Estimate Large Break Loss of Coolant Accident (BE LBLOCA) analysis for Kewaunee Power Station (KPS) and its application in existing analyses. Attachment 1 provides a report describing evaluation model changes associated with the Westinghouse BE LBLOCA ECCS Evaluation Model for KPS.

Information regarding the effect of the ECCS evaluation model changes upon the reported BE LBLOCA analyses of record (AOR) results is provided for KPS in Attachment 2. To summarize the information in Attachment 2, the calculated peak cladding temperature (PCT) for the BE LBLOCA analyses for KPS is 2035°F. This result represents a significant change in PCT, as defined in 10 CFR 50.46(a)(3)(i).

The BE LBLOCA results for KPS are confirmed to have sufficient margin to the 2200°F limit of 10 CFR 50.46. Based upon our evaluation of this information and the associated changes in the applicable licensing basis PCT results, no further action is required to demonstrate compliance with the 10 CFR 50.46 requirements.

This information satisfies the 30-day reporting requirements of 10 CFR 50.46(a)(3)(ii). In addition, no reanalysis or other actions are necessary to demonstrate compliance with 10 CFR 50.46 requirements.

If you have any further questions regarding this submittal, please contact Mr. Craig Sly at (804) 273-2784.

Very truly yours,

Gerald T. Bischof
Vice President - Nuclear Engineering

Commitments made in this letter:

1. None.

Attachments:

1. Report of Changes in Westinghouse Best Estimate Large Break LOCA ECCS Evaluation Model – Kewaunee Power Station.

2. Reporting of 10 CFR 50.46 Margin Utilization – Westinghouse Best Estimate Large Break LOCA ECCS Evaluation Model - Kewaunee Power Station.

cc: Administrator, Region
U. S. Nuclear Regulatory Commission
Region III
2443 Warrenville Road
Suite 210
Lisle, Illinois 60532-4352

Mr. D. H. Jaffe
Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop O-7-D-1
Washington, D. C. 20555

Mr. S. C. Burton
NRC Senior Resident Inspector
Kewaunee Power Station

ATTACHMENT 1

REPORT OF CHANGES IN
WESTINGHOUSE BEST ESTIMATE LARGE BREAK LOCA
ECCS EVALUATION MODEL

KEWAUNEE POWER STATION

DOMINION ENERGY KEWAUNEE, INC.

REPORT OF CHANGES IN WESTINGHOUSE BEST ESTIMATE LARGE BREAK LOCA ECCS EVALUATION MODEL

KEWAUNEE POWER STATION

Identification of ECCS Evaluation Model Changes

The current large break LOCA analysis for Kewaunee Power Station (Kewaunee) was performed using the Westinghouse Best Estimate LBLOCA Evaluation Model (BE LBLOCA) with application to PWRs with Upper Plenum Injection (UPI). Westinghouse identified two errors/changes in this model and provided the results of assessments to determine the impact on PCT.

The two errors/changes are summarized below.

1. Inconsistent Vessel Vertical Level Modeling

Westinghouse identified a discrepancy during the course of a BE LBLOCA analysis whereby the number of vertical levels in the vessel are modeled inconsistent with the analysis input guidelines. An assessment was performed to estimate the impact of these differences on the BE LBLOCA results for the affected plants. This assessment concluded that there is no significant impact on the BE LBLOCA analysis results due to the Inconsistent Vessel Vertical Level Modeling, leading to an estimated impact on PCT of ΔPCT=0°F for Kewaunee.

2. Revised Downcomer Gap Inputs

Westinghouse identified an error during the course of a Westinghouse BE LBLOCA Evaluation Model analysis. A factor of ½ had been missed from the downcomer nominal gap width (GAPN) calculations from the Kewaunee analysis, resulting in downcomer GAPN values twice as big as they should be. The error has been corrected and a representative steady state and transient rerun was performed using WCOBRA/TRAC to quantify the effect on PCT. The estimated effect on PCT due to the Revised Downcomer Gap Inputs was determined to be ΔPCT= -59°F for Kewaunee.

Conclusion

Dominion has performed an evaluation of PCT for comparison to 10 CFR 50.46 requirements. The Analysis of Record PCT is 2084°F. Considering the current PCT changes as well as all previously reported changes, the corrected BE LBLOCA PCT is 2035°F. The Kewaunee Power Station BE LBLOCA results have sufficient margin to the 2200°F limit specified in 10 CFR 50.46(b)(1). The PCT assessments for 10 CFR 50.46(a)(3)(i) accumulation are greater than the 50°F limit for reporting; hence, the changes are significant and submittal of this 30-day report to the NRC is required.

ATTACHMENT 2

REPORTING OF 10 CFR 50.46 MARGIN UTILIZATION WESTINGHOUSE BEST ESTIMATE LARGE BREAK LOCA ECCS EVALUATION MODEL

KEWAUNEE POWER STATION

DOMINION ENERGY KEWAUNEE, INC.

10 CFR 50.46 Margin Utilization – Best Estimate LBLOCA

Plant Name: Kewaunee Power Station
Utility Name: Dominion Energy Kewaunee, Inc.

Analysis Information

EM:	UPI (1999)	**Limiting Break Size:**	Split
Analysis Date:	03/25/02		
Vendor:	Westinghouse		
FQ:	2.5	**FdH:**	1.8
Fuel:	422 Vantage +	**SGTP(%):**	10
Notes:	Uprate to 1772 MWt. Effective beginning Cycle 26		

		Clad Temp (°F)
LICENSING BASIS		
	Analysis of Record PCT	2084
PCT ASSESSMENTS (Delta PCT)		
A.	**Prior ECCS Model Assessments**	
1.	Revised Blowdown Heatup Uncertainty Distribution	5
2.	Spacer Grid Heat Transfer Model Inputs	5
B.	**Planned Plant Modification Evaluations**	
1.	None	0
C.	**2006 ECCS Model Assessments**	
1.	Inconsistent Vessel Vertical Level Modeling	0
2.	Revised Downcomer Gap Inputs	-59
D.	**Other**	
1.	None	0
LICENSING BASIS PCT + PCT ASSESSMENTS		**PCT = 2035**