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

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Docket No. 50-305  
License No. DPR-43

**DOMINION ENERGY KEWAUNEE, INC.**  
**KEWAUNEE POWER STATION**  
**2005 ANNUAL OPERATING REPORT**

Attached is the 2005 Kewaunee Power Station (KPS) Annual Operating Report. This report is being submitted in accordance with Section 6.9.a.2 of the KPS Technical Specifications.

This submittal of the 2005 KPS Annual Operating Report also satisfies the reporting requirements of 10 CFR 50.46(a)(3)(ii) (Emergency Core Cooling System evaluation model changes), and KPS Technical Specification 4.2.b.7.b (steam generator inspection). Also, in accordance with the commitment made by KPS upon NRC issuance of the turbine valve test frequency Technical Specifications amendment, any turbine stop and control valve failures are described.

If you have questions or require additional information, please feel free to contact Ms. Mary Jo Haese at 920-388-8277.

Very truly yours,

A handwritten signature in black ink, appearing to read "M. Gaffney" with a stylized flourish at the end.

Michael G. Gaffney  
Site Vice President, Kewaunee Power Station

Attachment

Commitments made by this letter: NONE

ADD

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

NRC Senior Resident Inspector  
Kewaunee Power Station

**ATTACHMENT 1**

**2005 KEWAUNEE POWER STATION ANNUAL OPERATING REPORT  
KEWAUNEE POWER STATION**

**DOMINION ENERGY KEWAUNEE, INC.**

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## **INTRODUCTION**

This annual operating report is being submitted to fulfill several reporting requirements contained either in the Kewaunee Power Station (KPS) Technical Specifications (TS) or in other commitments made by KPS to the Nuclear Regulatory Commission (NRC).

Section 1.0 provides a summary of the steam generator eddy current examination in accordance with KNPP TS 4.2.b.7.b.

Section 2.0 provides the reporting of corrections or changes to the Emergency Core Cooling System (ECCS) evaluation models that are approved for use in performing the loss-of-coolant accident (LOCA) safety analysis in accordance with the provisions of 10 CFR 50.46.

Section 3.0 reports failures of turbine stop and control valves, if applicable, in accordance with a commitment made to the NRC upon approval of KPS TS Amendment 84.

Section 4.0, in accordance with KPS TS 6.9.a.2.D, contains documentation of the results of specific analysis in which the reactor coolant exceeded the limits of KPS TS 3.1.c.1.A, if applicable.

## **1.0 SUMMARY OF THE 2005 STEAM GENERATOR EDDY CURRENT EXAMINATIONS**

During 2005 a steam generator eddy current examination was not performed per KPS License Amendment Request 199, "Steam Generator Eddy Current Inspection Frequency Extension," dated October 8, 2003. The one-time KPS Technical Specification change was approved by the NRC via letter to KPS dated June 18, 2004 (ML041470119).

Technical Specification (TS) 4.2.b.7.b.1 requires a tabulation of the number of tubes inspected and extent of inspection. No tubes were inspected during 2005.

Technical Specification 4.2.b.7.b.2 requires a tabulation of the location of each tube wall degradation and its percent of wall penetration. Degradation is defined in TS 4.2.b as service-induced cracking, wastage, wear or corrosion of a tube wall. No tubes were inspected; therefore, no indications of degradation were reported during 2005.

Technical Specification 4.2.b.7.b.3 requires the identification of tubes plugged. No tubes were inspected; therefore, no tubes were plugged during 2005. There are currently zero tubes plugged in the KPS steam generators.

## **2.0 CHANGES IN THE EMERGENCY CORE COOLING SYSTEM**

In accordance with the provisions of 10 CFR 50.46, this section provides corrections or changes to the emergency core cooling system (ECCS) models.

### **Large Break LOCA Analysis**

The Large Break (LB) LOCA analysis of record peak cladding temperature (PCT) is 2084 °F. This result was increased by 5 °F to account for a revised blowdown heatup uncertainty distribution (Reference 1) resulting in an overall 95th percentile PCT of 2089°F.

### **Small Break LOCA Analysis**

There are no changes in the Small Break (SB) LOCA analysis for the 2004 calendar year. PCT results remain at 1065 °F which is the calculated value of 1030°F increased by 35 °F to account for the SB LOCA evaluation model (NOTRUMP) bubble rise and drift flux model inconsistencies (Reference 1).

The calculated LB LOCA and SB LOCA values for PCT, oxidation, and core-wide hydrogen generation are less than the limits specified in 10 CFR 50.46. Therefore the LB and SB LOCA analyses are acceptable and demonstrate that KNPP complies with the requirements of 10 CFR 50.46 (b)(1)-(4).

### **References:**

Letter from K. B. Hanahan (Westinghouse) to Craig Lambert (NMC) dated April 13, 2005, "10 CFR 50.46 Annual Notification and Reporting for 2004," WPS-05-19.

### **3.0 FAILURES OF TURBINE STOP AND CONTROL VALVES**

There were no failures of the turbine stop, reheat stop, control, or interceptor valves to close during 2005 testing.



#### **4.0 MAXIMUM COOLANT ACTIVITY**

KNPP TS 6.9.a.2.D requires the documentation of the results of specific activity analysis in which the reactor coolant exceeded the limits of TS 3.1.c.1.A during the past year.

The reactor coolant did not exceed the limits of TS 3.1.c.1.A during 2005.