

December 21, 2005

EA-05-176

Mr. David A. Christian  
Senior Vice President and  
Chief Nuclear Officer  
Innsbrook Technical Center  
5000 Dominion Boulevard  
Glen Allen, VA 23060-6711

SUBJECT: FINAL SIGNIFICANCE DETERMINATION FOR A YELLOW FINDING AND  
NOTICE OF VIOLATION (NRC INSPECTION REPORT 05000305/2005018);  
KEWAUNEE POWER STATION

Dear Mr. Christian:

The purpose of this letter is to provide you with the final results of our significance determination of the preliminary Greater Than Green finding which was described in NRC Inspection Report 05000305/20050011, issued October 6, 2005. The finding involved the potential impact of turbine building flooding scenarios on multiple safety related equipment trains that are used to reach and maintain safe shutdown of Kewaunee Power Station (KPS), owned and operated by Dominion Energy Kewaunee, Inc. (Dominion). Specifically, the KPS design may not have been adequate to prevent the loss of safety function for the auxiliary feedwater (AFW) system, 480 and 4160 volt electrical busses, and the emergency diesel generators (EDGs). The inspection finding was assessed using the Significance Determination Process (SDP) and preliminarily characterized as Greater Than Green, (i.e., a finding of greater than very low safety significance resulting in the need for further evaluation to determine significance and therefore the need for additional NRC action).

In a telephone conversation with Mr. Tom Kozak of my staff on September 13, 2005, Mr. Michael Gaffney of your staff requested that a Regulatory Conference be held for this issue. Accordingly, a Regulatory Conference was scheduled and held on November 8, 2005, to discuss any revised or new information associated with the original risk analysis, and any other information related to the finding. The Regulatory Conference summary, including presentation slides, is available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

During the Regulatory Conference, your staff presented an overview of the finding, corrective actions implemented to address the finding, and the methodology and results of your internal flood risk assessment of the finding. The Regulatory Conference also included detailed

discussions regarding five aspects of your original risk assessment for the finding, that the NRC considered may represent non-conservatisms, as documented in our October 6, 2005 inspection report, and the results of your revised risk assessment which was completed to address each of these aspects. At the conclusion of the Regulatory Conference, the NRC determined that additional information and analysis was necessary for three aspects of your revised risk assessment. These three aspects included the initiating event frequency for floods induced by circulating water expansion joint failures, the human error probabilities associated with the isolation of the fire protection system sprinklers, and the success criteria used for some of the evaluated scenarios. Subsequent to the conference, your staff provided additional information relative to these three aspects and a final revised risk assessment. This information was considered in our final significance determination.

After considering the information developed during the inspection, and the additional information you provided prior to, during, and in response to our questions at the Regulatory Conference, the NRC has concluded the inspection finding is appropriately characterized as Yellow (i.e., an issue with substantial importance to safety, that will result in additional NRC inspection and potentially other NRC action).

You have 30 calendar days from the date of this letter to appeal the staff's determination of significance for the identified Yellow finding. Such appeals will be considered to have merit only if they meet the criteria given in NRC Inspection Manual 0609, Attachment 2.

The NRC has also determined that the failure to provide adequate design control to ensure that the design of KPS prevented turbine building flooding from impacting multiple safety related equipment trains needed to achieve and maintain safe shutdown of the plant, is a violation of 10 CFR 50, Appendix B, Criterion III, as cited in the enclosed Notice of Violation (Notice). The circumstances surrounding the violation are described in detail in Inspection Report 05000305/2005011. In accordance with the NRC Enforcement Policy, the Notice is considered an escalated enforcement action because it is associated with a Yellow finding.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response.

Because plant performance for this issue has been determined to be in the degraded cornerstone band, we will use the NRC Action Matrix to determine the most appropriate NRC response for this event. We will notify you, by separate correspondence, of that determination.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARs)

D. Christian

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component of the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (The Public Electronic Reading Room).

Sincerely,

**/RA/**

James L. Caldwell  
Regional Administrator

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

Enclosure: Notice of Violation

cc w/encl: M. Gaffney, Site Vice President  
C. Funderburk, Director, Nuclear Licensing  
and Operations Support  
T. Breene, Manager, Nuclear Licensing  
L. Cuoco, Esq., Senior Counsel  
D. Zellner, Chairman, Town of Carlton  
J. Kitsembel, Public Service Commission of Wisconsin

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OFFICE	OE/NRR	RIII		RIII
NAME	Nolan <sup>1</sup>	**Heller for O'Brien		Caldwell
DATE	12/19/05	12/20/05		12/21/05

**OFFICIAL RECORD COPY**

\*\* OE provided no changes to the draft sent to OE on 12/12/05.

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<sup>1</sup>Concurrence from HQ in 12/19/05 e-mail from C. Nolan, OE, to James Heller, RIII

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## NOTICE OF VIOLATION

Dominion Energy Kewaunee Inc.  
Kewaunee Power Station

Docket No. 50-305  
License No. DPR-43  
EA-05-176

During an NRC inspection conducted from April 15 through September 6, 2005, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

Title 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requires, in part, that measures be established to assure that the design basis for safety-related functions of structures, systems, and components are correctly translated into specifications, drawings, procedures, and instructions. Further, Criterion III requires that the design control measures shall provide for verifying or checking the adequacy of designs.

Kewaunee Updated Safety Analysis Report, Section B.5, states, in part, that Class 1 structures, systems, or components are to be protected against damage from the rupture of a pipe or tank resulting in serious flooding or excessive steam release to the extent that the Class 1 function is impaired.

Contrary to the above, as of June 2005, the licensee failed to implement design control measures to ensure that the design basis for safety-related functions of some Class 1 systems and components were correctly translated into specifications, drawings, procedures, and instructions. Specifically, the licensee failed to ensure that the safety-related function of the auxiliary feedwater pumps, the 480 volt safeguards buses, the safe shutdown panel, the emergency diesel generators, and the 4160 volt safeguards buses, each Class 1 systems or components, would be protected from serious flooding or excessive steam releases as a result of random or seismically induced failures of non-Class 1 systems in the turbine building.

This violation is associated with a Yellow Significance Determination Process finding.

Pursuant to the provisions of 10 CFR 2.201, Dominion Energy Kewaunee Incorporated is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555 with a copy to the Regional Administrator, Region III, and a copy to the NRC Resident Inspector at the Kewaunee Power Station, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation; EA-05-176" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams/html>, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days.

Dated this 21<sup>st</sup> day of December 2005