July 3, 2006

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

SUBJECT: KEWAUNEE POWER STATION - REQUEST FOR RELIEF FROM THE REQUIREMENTS OF THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS BOILER AND PRESSURE VESSEL CODE FOURTH INSERVICE INSPECTION INTERVAL CONCERNING SNUBBERS (TAC NO. MD0008)

Dear Mr. Christian:

By letter dated February 6, 2006, Dominion Energy Kewaunee, Inc (the licensee) submitted, together with a license amendment request to extend certain technical specification surveillance intervals, on a one-time basis, relief request RR-G-4 for the fourth 10-year inservice inspection and examination program interval for snubbers at Kewaunee Power Station. In response to the staff's request for additional information (RAI), the licensee submitted its response, in a letter dated May 5, 2006. The licensee requested relief from certain inservice inspection (ISI) and examination requirements of the American Society of Mechanical Engineers (ASME) *Boiler and Pressure Vessel Code* (ASME Code), *Section XI*, 1998 Edition through 2000 Addenda, Article IWF-5000. IWF-5000 references ASME/ANSI OM, Part 4, 1987 Edition with OMa-1988. The Kewaunee Power Station's (Kewaunee's) fourth 10-year ISI interval commenced June 16, 2004, and will end on June 16, 2014.

The U.S. Nuclear Regulatory Commission staff concludes, based upon the enclosed Safety Evaluation, that the licensee's proposed alternative to perform visual examination of small bore snubber RC-H72 at the next scheduled refueling outage in lieu of the Code-required 18-month frequency, provides an acceptable level of quality and safety. Therefore, pursuant to Title 10 of

D. Christian

the *Code of Federal Regulations*, Section 50.55a(a)(3)(i), the NRC staff authorizes the proposed alternative for the fourth 10-year ISI interval for Kewaunee.

The license amendment request to extend certain technical specification surveillance intervals, on a one-time basis, will be addressed in a separate correspondence (see TAC No. MC9782).

Sincerely,

#### /**RA**/

L. Raghavan, Chief Plant Licensing Branch III-1 Division of Operating Reactor Licensing Office of Nuclear Reactor Regulation

Docket No. 50-305

Enclosure: Safety Evaluation

cc w/encls: See next page

D. Christian

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## Kewaunee Power Station

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# SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

### FOURTH 10-YEAR INTERVAL INSERVICE INSPECTION PROGRAM INTERVAL

# **RELIEF REQUESTS RR-G-7-4**

# DOMINION ENERGY KEWAUNEE, INC.

## KEWAUNEE POWER STATION

## DOCKET NO. 50-305

#### 1.0 INTRODUCTION

By letter dated February 6, 2006, Dominion Energy Kewaunee, Inc. (the licensee), submitted, together with a license amendment request to extend certain technical specification surveillance intervals, on a one-time basis, relief request RR-G-4 for the fourth 10-year inservice inspection and examination program interval at Kewaunee Power Station (Kewaunee). In response to the staff's request for additional information (RAI), the licensee submitted its response, in a letter dated May 5, 2006. The licensee requested relief from certain inservice inspection (ISI) and examination requirements of the American Society of Mechanical Engineers (ASME) *Boiler and Pressure Vessel Code* (ASME Code), *Section XI*, 1998 Edition through 2000 Addenda, Article IWF-5000. IWF-5000 references ASME/ANSI OM, Part 4, 1987 Edition with OMa-1988. The Kewaunee fourth 10-year ISI interval commenced June 16, 2004, and will end on June 16, 2014.

The license amendment request to extend certain technical specification surveillance intervals, on a one-time basis, will be addressed in a separate correspondence (see TAC No. MC9782).

#### 2.0 <u>REGULATORY REQUIREMENTS</u>

The ISI of ASME Code Class 1, 2, and 3 components shall be performed in accordance with Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," of the ASME Code and applicable addenda as required by Title 10 of the Code of Federal Regulations (10 CFR) Section 50.55a(g), except where specific written relief has been granted by the Commission, pursuant to 10 CFR 50.55a(g)(6)(i). Section 50.55a(a)(3) states that alternatives to the requirements of paragraph (g) may be used, when authorized by the NRC, if: (i) the proposed alternatives would provide an acceptable level of quality and safety, or (ii) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Pursuant to 10 CFR 50.55a(g)(4), ASME Code Class 1, 2, and 3 components (including supports) shall meet the requirements, except the design and access provisions and the preservice examination requirements, set forth in the ASME Code, Section XI, to the extent practical within the limitations of design, geometry, and materials of construction of the components. The regulations require that inservice examination of components and system pressure tests conducted during the first 10-year interval and subsequent intervals comply with the requirements in the latest edition and addenda of Section XI of the ASME Code incorporated by reference in 10 CFR 50.55a(b), 12 months prior to the start of the 120-month interval, subject to the limitations and modifications listed therein. The applicable edition of Section XI of the ASME Code for the Kewaunee fourth 10-year ISI interval is the 1998 Edition up to and including the 2000 Addenda.

The Nuclear Regulatory Commission's (NRC's) findings with respect to granting or denying the ISI program relief request are given below:

#### 3.0 TECHNICAL EVALUATION

- 3.1 Relief Request RR-G-4
- 3.1.1 Code Requirements

IWF-5200(a) and IWF-5300(a) require that preservice and inservice examinations be performed in accordance with ASME/ANSI OM, Part 4, 1987 Edition with OMa-1988, using the VT-3 visual examination method described in IWA-2213. Further, IWF-5200(b) and IWF-5300(b) require that preservice and inservice tests be performed in accordance with ASME/ANSI OM, Part 4. ASME/ANSI OM, Part 4, Section 2.3.3, "Inservice Examination Frequency," Section 2.3.2.2, "Examination Intervals" requires a VT-3 examination to be performed at 18 month intervals. ASME/ANSI OM, Part 4 allows the examination period to vary + or - 25 percent to coincide with planned outages.

#### 3.1.2 Specific Relief Requested

The licensee requested relief from the ASME/ANSI OM, Part 4, Section 2.3.2.2 for Class 1 small bore hydraulic snubber RC-H72, located in the containment pressurizer vault.

#### 3.1.3 Licensee's Basis for Requesting Relief

Kewaunee small bore hydraulic snubber VT-3 visual examinations were performed during the scheduled fall 2004 refueling outage. The next required VT-3 visual examinations were scheduled for performance during the refueling outage to commence on April 1, 2006. Kewaunee entered a forced outage on February 20, 2005, which was completed July 2, 2005. Due to the extended forced outage, the start of the next refueling outage was re-scheduled from April 1, 2006, to September 2, 2006. Based on the current requirements of ASME/ANSI OM, Part 4, Section 2.3.2.2, the next VT-3 visual examination of Kewaunee small bore hydraulic snubbers would require performance by August 30, 2006. The August 30, 2006, date will be slightly prior to the current scheduled shutdown date, for Kewaunee, of September 2, 2006. This is Kewaunee's current schedule and as such, these dates are tentative and subject to change based on other factors associated with scheduling an outage. Performance of the VT-3 visual examination during power operation is not practical due to the inaccessibility of small

bore hydraulic snubber RC-H72. This snubber is located in the containment pressurizer vault on a 3/4" relief vent line. Performance, in conjunction with other Class 1, Class 2, and Class 3 small bore hydraulic snubber VT-3 visual examinations located in containment during the Kewaunee Power Station forced shutdown in November 2005, was not practical for small boreGrinnel hydraulic snubber RC-H72 due to safety concerns of high temperature and access when at Hot Shutdown conditions.

#### 3.1.4 Licensee's Proposed Alternative Testing

Kewaunee proposes to perform the VT-3 visual examination of small bore Grinnel hydraulic snubber RC-H72 during the fall 2006 refueling outage (presently scheduled to start September 2, 2006).

#### 3.1.5 Evaluation of Relief Request No. RR-G-4

ASME/ANSI OM, Part 4, Section 2.3.2, "Inservice Examination Frequency," Section 2.3.2.2, "Examination Intervals," requires a VT-3 visual examination to be performed at 18 month intervals. This section further states that the examination period may vary in time by  $\pm$  25 percent to coincide with planned outages. Therefore, ASME/ANSI OM, Part 4 allows visual examination of snubbers on an 18-month frequency, plus 25 percent for schedule flexibility.

The licensee states that Kewaunee small bore hydraulic snubber VT-3 visual examinations were performed during the scheduled fall 2004 refueling outage. The next required VT-3 visual examinations were scheduled during the refueling outage to commence on April 1, 2006. Kewaunee entered a forced outage (due to auxiliary feedwater flooding) on February 20, 2005, which was completed July 2, 2005. There was another Kewaunee forced outage (due to main generator cooling) in November 2005. Due to the extended forced outages, the start of the next refueling outage was re-scheduled from April 1, 2006, to September 2, 2006.

Based on ASME/ANSI OM, Part 4 requirements, the next VT-3 visual examination of small bore hydraulic snubber RC-H72 is required to be performed by August 30, 2006 (18-months plus 25 percent for schedule flexibility). The August 30, 2006, date will be slightly prior to current scheduled shutdown date of September 2, 2006. The licensee states the current schedule date is tentative and subject to change based on other factors associated with scheduling an outage. The licensee further states that VT-3 visual examination of the small bore hydraulic snubber RC-H72 during power operation is not practical due to inaccessibility. Also, during a forced shutdown (due to main generator cooling) in November 2005, the visual examination of snubber RC-H72, in conjunction with other Class 1, Class 2, and Class 3 small bore hydraulic snubber VT-3 visual examinations was not practical due to safety concerns of high temperature and access when at Hot Shutdown conditions.

The licensee states that in order to fully utilize the fuel loaded into the core during the 2004 refueling outage and maintain plant operation during the high summer electrical load period, the start of the next refueling outage is presently scheduled for September 2006. The licensee proposed to perform the VT-3 visual examination of small bore snubber RC-H72 during the fall 2006 refueling outage in lieu of the originally scheduled April 2006 refueling outage. This is a slight delay in the visual examination of small bore snubber RC-H72 from the Code allowed visual examination frequency (18 months  $\pm$  25 percent).

Generic Letter (GL) 90-09, "Alternative Requirements for Snubber Visual Inspection Intervals and Corrective Action," provides alternative visual examination requirements in lieu of the ASME/ANSI OM, Part 4 requirements. GL 90-09, Table 4.7-2, "Snubber Visual Inspection Interval," Note 3, states that if the number of unacceptable snubbers is equal to or less than the number in Column A of Table 4.7-2, the next inspection interval may be twice the previous interval but not greater than 48 months (for 24 month refueling outage intervals). In its RAI response dated May 5, 2006, the licensee stated that during the 2004 refueling outage, three indications were identified, none of which rendered the affected snubber inoperable. The number of unacceptable snubbers was zero. Therefore, based on GL 90-09, Table 4.7-2, Note 3, the next visual examination interval at Kewaunee could be extended to twice the previous interval, i.e., to 36 months (2 x 18 months). The licensee proposed to perform the VT-3 visual examination of small bore snubber RC-H72 during the next scheduled refueling outage in fall 2006 in lieu of the Code-required frequency. This delay will postone the Coderequired visual examination small bore snubber RC-H72 from 22.5 months to approximately 23 months of which is still less than 36 months. Therefore, because the proposed delay is short and within the interval contemplated by GL 90-09, the staff finds that the proposed alternative to perform visual examination of snubber RC-H72 provides an acceptable level of quality and safety.

## 4.0 <u>CONCLUSION</u>

Based on the above evaluation, the licensee's proposed alternative to perform visual examination of small bore snubber RC-H72 at the next scheduled refueling outage in lieu of the Code-required 18-month frequency, provides an acceptable level of quality and safety. Therefore, pursuant to Title 10 of the *Code of Federal Regulations*, Section 50.55a(a)(3)(i), the NRC staff authorizes the proposed alternative for the fourth 10-year ISI interval for Kewaunee.

Principal Contributor: G. Bedi

Date: July 3, 2006