

May 3, 2007

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 - PRESSURIZER SURGE, SPRAY, SAFETY,
AND RELIEF NOZZLE WELD SUSCEPTIBILITY TO PRIMARY WATER
STRESS CORROSION CRACKING (TAC NO. MD4158)

Dear Mr. Christian:

This letter acknowledges the receipt of information from Dominion Energy Kewaunee, Inc. pertaining to the pressurizer surge, spray, safety, and relief nozzle and safe end welds at Kewaunee Power Station (KPS).

The discovery, in October 2006, of five circumferential indications in three Alloy 82/182 dissimilar metal (DM) welds on the pressurizer at the Wolf Creek Generating Station (Wolf Creek) raised safety concerns based on the size and location of the indications. At Wolf Creek, three indications were in the pressurizer surge nozzle-to-safe end weld, and two separate indications were in the safety and relief nozzle-to-safe end welds. These findings also indicated that significant concerns might exist with the inspection schedules for addressing the pressurizer weld concerns issued by the industry-sponsored Materials Reliability Program (MRP), in "Primary System Piping Butt Weld Inspection and Evaluation Guideline (MRP-139)."

The Nuclear Regulatory Commission (NRC) is concerned about the pressurizer surge nozzle-to-safe end weld indications, as this is the first time that multiple circumferential primary water stress-corrosion cracking (PWSCC) indications have been identified in a weld. This condition calls into question the degree of safety margin present in past structural integrity evaluations for flawed DM welds susceptible to PWSCC, since multiple stress-corrosion cracking flaws may grow independently and ultimately grow together, significantly reducing the time from flaw initiation to leakage or rupture.

Based on discussions with the NRC staff, licensees of plants susceptible to this condition have committed to enhanced inspection frequency and reactor coolant system leakage monitoring until actions to mitigate the potential of PWSCC in the affected welds have been completed.

In your letter dated February 12, 2007 (Agencywide Documents Access & Management System (ADAMS) Accession Number ML070440188), you stated that the pressurizer surge, spray, safety, and relief nozzle and safe end welds do not contain Alloy 82/182 material at KPS. As a

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result, your response adequately addresses the concerns that the NRC has at this time regarding PWSCC susceptibility of these welds.

Sincerely,

/RA/

Catherine Haney, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-305

cc: See next page

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Sincerely,

/RA/

Catherine Haney, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-305

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Kewaunee Power Station

cc:

Resident Inspectors Office
U.S. Nuclear Regulatory Commission
N490 Hwy 42
Kewaunee, WI 54216-9510

Regional Administrator, Region III
U.S. Nuclear Regulatory Commission
Suite 210
2443 Warrenville Road
Lisle, IL 60532-4351

Ms. Leslie N. Hartz
Dominion Energy Kewaunee, Inc.
Kewaunee Power Station
N 490 Highway 42
Kewaunee, WI 54216

Mr. Chris L. Funderburk
Director, Nuclear Licensing and
Operations Support
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

Mr. Thomas L. Breene
Dominon Energy Kewaunee, Inc.
Kewaunee Power Station
N490 Highway 42
Kewaunee, WI 54216

Ms. Lillian M. Cuoco, Esq.
Senior Counsel
Dominion Resources Services, Inc.
Millstone Power Station
Building 475, 5th Floor
Rope Ferry Road
Waterford, CT 06385