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DPR-32/37

DOMINION ENERGY KEWAUNEE, INC. (DEK)
DOMINION NUCLEAR CONNECTICUT, INC. (DNC)
VIRGINIA ELECTRIC AND POWER COMPANY (DOMINION)
KEWAUNEE POWER STATION
MILLSTONE POWER STATION UNITS 2 AND 3
NORTH ANNA POWER STATION UNITS 1 AND 2
SURRY POWER STATION UNITS 1 AND 2
ALTERNATIVE REQUESTS FOR USE OF ASME SECTION III,
DIVISION 1, CODE CASES N-756 AND N-757

In accordance with the guidance provided in NRC Regulatory Guide 1.84, Design, Fabrication, And Materials Code Case Acceptability, ASME Section III, Revision 33, August 2005, Dominion Energy Kewaunee, Inc. (DEK), Dominion Nuclear Connecticut, Inc. (DNC) and Virginia Electric and Power Company (Dominion), request approval to use the alternative rules of ASME Code Cases N-756 and N-757 reprinted in this letter by permission of ASME and provided in Attachment 1. These Code Cases contain alternative rules for the design of nonwelded Class 1, 2, and 3 valves, 1-inch nominal pipe size (NPS) and smaller, that may be used for replacements and design changes at Kewaunee Power Station, Millstone Power Station Units 2 and 3, North Anna Power Station Units 1 and 2, and Surry Power Station Units 1 and 2, subject to NRC approval of the attached requests to use these Code Cases pursuant to 10 CFR 50.55a(a)(3)(i).

Recently, an ASME certified supplier has developed a new product line of small valves for instrumentation and sampling line applications in Class 1, 2, and 3 systems with nonwelded end connections other than flanges, that do not meet the current design thickness requirements or other design-related provisions in ASME Section III. As a result of this situation, ASME has developed new alternative design rules in these two Code Cases to accept these types of valves for Section III applications. Because these Code Cases are new and have just been approved by ASME on January 21, 2007, the Code Cases have not yet been published in the ASME Code Cases Nuclear Components Book and have not been endorsed by the NRC and included into Regulatory Guide 1.84. Therefore, DEK, DNC, and Dominion request approval to use valves designed to these Code Cases as an alternative to the Section III, Division 1, Editions and Addenda requirements referenced as approved for use in 10 CFR 50.55a up to and including the

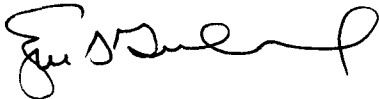
2003 Addenda, and subject to the future limitations in the regulation and as applicable to each of the DEK, DNC, and Dominion Units listed above.

DEK, DNC, and Dominion have determined, as discussed in Attachment 2, that the use of these small valves, when designed in accordance with these new Code Cases and their alternative Section III design rules, provide an acceptable level of quality and safety. Therefore, these relief requests meet the necessary requirements for approval under 10 CFR 50.55a(a)(3)(i).

To support the next refueling outage where these new valves may be used, which is the Millstone Unit 2 Spring 2008 outage, DEK, DNC, and Dominion requests NRC complete its review and approval of these requests by February 1, 2008.

If you have any questions or require additional information, please contact Mr. Thomas Shaub at (804) 273-2763.

Very truly yours,



Eugene S. Grecheck
Vice President - Nuclear Support Services

Attachments:

1. ASME Code Case N-756, Alternative Rules for Acceptability for Class 1 Valves, NPS 1 (DN 25) and Smaller With Nonwelded End Connections Other Than Flanges Section III, Division 1 and ASME Code Case N-757, Alternative Rules for Acceptability for Class 2 and 3 Valves, NPS 1 (DN 25) and Smaller With Welded and Nonwelded End Connections Other Than Flanges Section III, Division 1.
2. DEK— Kewaunee Power Station Alternative Request, RR-G-6, DNC - Millstone Power Station Units 2 and 3 Alternative Requests, RR-89-63 and IR-2-49, and Dominion - North Anna Power Station Units 1 and 2, Alternative Request, NAPS-ISI-07-009 and Surry Power Station Units 1 and 2 Alternative Request, SPS-ISI-07-007.

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ATTACHMENT 1

**ASME CODE CASE N-756, "ALTERNATIVE RULES FOR ACCEPTABILITY FOR
CLASS 1 VALVES, NPS 1 (DN 25) AND SMALLER WITH NONWELDED END
CONNECTIONS OTHER THAN FLANGES SECTION III, DIVISION 1"**

**ASME CODE CASE N-757, "ALTERNATIVE RULES FOR ACCEPTABILITY FOR
CLASS 2 AND 3 VALVES, NPS 1 (DN 25) AND SMALLER WITH WELDED AND
NONWELDED END CONNECTIONS OTHER THAN FLANGES SECTION III,
DIVISION 1"**

**DOMINION ENERGY KEWAUNEE, INC. (DEK)
DOMINION NUCLEAR CONNECTICUT, INC. (DNC)
VIRGINIA ELECTRIC AND POWER COMPANY (DOMINION)
KEWAUNEE POWER STATION
MILLSTONE POWER STATION UNITS 2 AND 3
NORTH ANNA POWER STATION UNITS 1 AND 2
SURRY POWER STATION UNITS 1 AND 2**

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Approval Date: January 21, 2007

The ASME Boiler and Pressure Vessel Standards Committee took action to eliminate Code Case expiration dates effective March 11, 2005. This means that all Code Cases listed in this Supplement and beyond will remain available for use until annulled by the ASME Boiler and Pressure Vessel Standards Committee.

07 Case N-756
**Alternative Rules for Acceptability for Class 1 Valves,
NPS 1 (DN 25) and Smaller With Nonwelded End Con-
nections Other Than Flanges**
Section III, Division 1

Inquiry: Under what rules may instrument, control, and sampling line valves, NPS 1 (DN 25) and smaller, with nonwelded piping end connections other than flanges, be designed in accordance with the alternative provisions of NB-3513.2?

Reply: It is the opinion of the Committee that instrument, control, and sampling line valves, NPS 1 (DN 25)

and smaller, with nonwelded piping end connections other than flanges, may also be designed in accordance with the alternative provisions of NB-3512.2(d) for weld end valves, provided the following requirements are met:

(a) The end connections shall meet the requirements of NB-3671.3 or NB-3671.4.

(b) The design shall be qualified in accordance with the requirements of MSS-SP-105-2005, Section 5.

(c) Valve bonnets threaded directly into valve bodies shall have a lock weld or locking device that assures the assembly does not disengage either through stem operation or vibration.

(d) This Case number shall be identified on the NPV-1 Data Report Form.

The Committee's function is to establish rules of safety, relating only to pressure integrity, governing the construction of boilers, pressure vessels, transport tanks and nuclear components, and inservice inspection for pressure integrity of nuclear components and transport tanks, and to interpret these rules when questions arise regarding their intent. This Code does not address other safety issues relating to the construction of boilers, pressure vessels, transport tanks and nuclear components, and the inservice inspection of nuclear components and transport tanks. The user of the Code should refer to other pertinent codes, standards, laws, regulations or other relevant documents.



Footer: NC - SUPP. 1 (Status: ON)

PDF Footer: PDF RELEASE (Status: ON)

Case number: N-757

Approval Date: January 21, 2007

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Case N-757

**Alternative Rules for Acceptability for Class 2 and 3 Valves, NPS 1 (DN 25) and Smaller With Welded and Nonwelded End Connections Other Than Flanges
Section III, Division 1**

Inquiry: Under what rules may instrument, control and sampling line valves, NPS 1 (DN 25) and smaller, with welded and nonwelded end connections other than flanges, meet the design requirements of Section III, Division 1, Class 2 and 3 rules of NC-3512 and ND-3512, when the valve minimum wall thickness does not meet the t_m requirements of ASME B16.34?

Reply: It is the opinion of the Committee that instrument, control and sampling line valves, NPS 1 (DN 25) and smaller, having valve minimum wall thickness not in accordance with the t_m requirements of ASME B16.34 with welded and nonwelded end connections other than flanges, may meet the design requirements of Section III, Division 1, Class 2 and 3 rules of NC-3500 and ND-3500, provided the following additional requirements are met:

(a) Valves not meeting the t_m wall thickness requirements of ASME B16.34, shall meet the pressure design rules of NC-3324 and ND-3324; an experimental stress analysis (Section III, Division 1, Appendix II); or Design Based on Stress Analysis (Section III, Division 1, Appendix XIII). The design shall be qualified in accordance with the requirements of MSS-SP-105-2005, Section 5.

(b) The end connections shall meet the requirements of NC-3661 and ND-3661, -3671.3 or -3671.4, for welded, threaded, and flared, flareless and compression type fittings tube ends.

(c) Valve bonnets threaded directly into valve bodies shall have a lock weld or locking device to assure that the assembly does not disengage either through stem operation or vibration.

(d) This Case number shall be identified on the NPV-1 Data Report Form.

ATTACHMENT 2

USE OF ASME CODE CASES N-756 AND N-757, SECTION III, DIVISION 1

KEWAUNEE POWER STATION ALTERNATIVE REQUEST, RR-G-6,

MILLSTONE POWER STATION UNITS 2 AND 3
ALTERNATIVE REQUESTS, RR-89-63 AND IR-2-49

NORTH ANNA POWER STATION UNITS 1 AND 2,
ALTERNATIVE REQUEST, NAPS-ISI-07-009

SURRY POWER STATION UNITS 1 AND 2 ALTERNATIVE REQUEST, SPS-ISI-07-007

DOMINION ENERGY KEWAUNEE, INC. (DEK)
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KEWAUNEE POWER STATION
MILLSTONE POWER STATION UNITS 2 AND 3
NORTH ANNA POWER STATION UNITS 1 AND 2
SURRY POWER STATION UNITS 1 AND 2

Use of ASME Code Cases N-756 and N-757, Section III, Division 1

**Kewaunee Power Station Alternative Request, RR-G-6, Millstone Power Station
Units 2 and 3 Alternative Requests, RR-89-63 and IR-2-49, and North Anna Power
Station Units 1 and 2, Alternative Request, NAPS-ISI-07-009 and Surry Power
Station Units 1 and 2 Alternative Request, SPS-ISI-07-007**

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Kewaunee Power Station Alternative Request, RR-G-6, Millstone Power Station Units 2 and 3 Alternative Requests, RR-89-63 and IR-2-49, and North Anna Power Station Units 1 and 2, Alternative Request, NAPS-ISI-07-009 and Surry Power Station Units 1 and 2 Alternative Request, SPS-ISI-07-007 for Use of ASME Code Cases N-756 and N-757, Section III, Division 1

*Proposed Alternative
In Accordance with 10 CFR 50.55a(a)(3)(i)*

- Alternative Provides Acceptable Level of Quality and Safety -

1.0 ASME CODE COMPONENTS AFFECTED:

Code Class: 1, 2, and 3

System: Valves - 1-inch nominal pipe size and less with nonwelded end connections other than flanges in Class 1, 2, and 3 systems.

Valves, 1-inch nominal pipe size and less nonwelded instrumentation and sampling line valves, designed to the alternative rules in Code Case N-756 for Class 1 and Code Case N-757 for Class 2 and 3, will be used as needed for replacements or design changes at Kewaunee Power Station (KPS), Millstone Power Station Units 2 and 3 (MPS2 and MPS3), North Anna Power Station Units 1 and 2 (NAPS1 and NAPS2), and Surry Power Station Units 1 and 2 (SPS1 and SPS2).

2.0 APPLICABLE CODE EDITION AND ADDENDA:

Within Code Cases N-756 and N-757, specific design requirements of Section III, Division 1 are specified for attributes such as NB-3671.3 or NB-3671.4 for Class 1 end connections and NC-3661 and ND-3661 etc., for Class 2 and 3 end connections. Each of these references to Section III provisions may be used consistent with the Section III Editions and Addenda that are acceptable for use pursuant to 10 CFR 50.55a and applicable to that station.

3.0 APPLICABLE CODE REQUIREMENTS:

As part of the alternative design rules in these Code Cases and in addition to the Section III requirements specified within these Code Cases, the design of the valves must be qualified in accordance with the requirements of Manufacturers Standardization Society (MSS), Standard Practice (SP) MSS-SP-105-2005, Section 5.

4.0 REASON FOR REQUEST:

Allowing the use of these small nonwelded valves for Class 1, 2, and 3 instrumentation and sampling line applications will reduce personnel radiation exposure for virtually all

applicable Class 1 valve replacements and applicable design changes. A similar potential for the same reductions in personnel exposure applies for portions of Class 2 systems that are located in areas such as charging pump cubicles and other high radiation areas outside the primary containment.

5.0 PROPOSED ALTERNATIVE AND BASIS FOR USE:

The proposed alternative is to allow DEK, DNC, and Dominion to accept the provisions of Code Case N-756 and N-757 from an ASME certificate holder in the purchase and use of nonwelded small ASME N-stamped Class 1, 2, or 3 valves that have been designed in accordance with the alternative rules of both of the Section III, Code Cases.

With approval of this alternative by the NRC, these valves will be used for replacement or design changes in applicable Class 1, 2, or 3 systems at KPS, MPS2, MPS3, NAPS1, NAPS2, SPS1, and SPS2. These valves will be identified by the supplier as meeting the alternative design requirements of these Code Cases by listing the applicable Code Case N-756 for Class 1 valves or Code Case N-757 for Class 2 or 3 valves on the required ASME NPV-1 Data Report Form.

Upon review of the requirements in the Code Cases, DEK, DNC, and Dominion have determined that the requirements, as approved by ASME, in these Code Cases are sufficient to effectively assure that valves designed to these alternative rules will meet the necessary structural integrity requirements of ASME Section III and thus provide an acceptable level of quality and safety.

6.0 DURATION OF PROPOSED ALTERNATIVE:

Since this request applies to the use of Section III Code Cases related to the design requirements for small valves, the duration for the use of this request will be for the life of the valves designed to these requirements.

7.0 PRECEDENTS:

These Code Cases have just recently been approved by ASME and were released with special permission from ASME to be used for this request at all the DEK, DNC, and Dominion Units. We know of no other previous requests involving the use of these Code Cases.