



September 13, 2007

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
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Rockville, Maryland 20852-2738

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License Nos. DPR-65/NPF-49

DOMINION NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNITS 2 AND 3
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION ON THE USE OF
ALTERNATIVES TO THE SYSTEM HYDROSTATIC PRESSURE TEST
REQUIREMENTS OF ASME CODE, SECTION XI, 1989 EDITION

In a letter dated August 17, 2006, Dominion Nuclear Connecticut, Inc. (DNC) submitted Millstone Power Station Units 2 and 3 (MPS2&3) Alternative Requests RR-89-56 and IR-2-45. Therein, DNC requested NRC approval of alternatives to the system hydrostatic pressure test requirements of the American Society of Mechanical Engineers (ASME) Code, Section XI, 1989 Edition. On August 13, 2007, the NRC forwarded a draft request for additional information (RAI) containing six questions related to the DNC request. The response to those questions is provided in the attachment to this letter.

Should you have further questions, please contact Margaret Earle at (804) 273-2768.

Sincerely,

Gerald T. Bischof
Vice President – Nuclear Engineering

Commitments in this letter: None

Attachment

cc: U.S. Nuclear Regulatory Commission
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ATTACHMENT

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Responses to the NRC's questions are provided in the balance of this attachment.

NRC Question 1

Section 5.1, "Alternative Basis for Component Groups 1 and 4," on page 14 of Enclosure 1 to the August 17, 2006, submittal states that the proposed alternative examination will be performed at the nominal operating pressure associated with 100% reactor power. Note 2 of associated Tables 1 and 4 (Attachment 1 to Enclosure 1) lists normal operating pressure as "None." Similarly, Note 3 of associated Tables 1 and 4 (Attachment 1 to Enclosure 1) lists the proposed test pressure as "None." Therefore, the submittal indicates that the proposed alternative will perform a pressure test with no pressure in the line.

Please specify the value of the proposed alternative test pressure for Groups 1 and 4. If this value is zero, please provide a justification describing how the proposed alternative constitutes performance of a pressure test.

DNC Response

Groups 1 and 4 piping segments are the small bore vents, drains, and branch (VTDB) lines and connections that are equipped with manual valves, which provide isolation between the piping segment and the full Reactor Coolant System (RCS) operating pressure. The pressure in these segments is not monitored by installed plant instrumentation; consequently, no test pressure is specified for the segment.

Given the associated hardship, testing of these segments at full RCS operating pressure does not provide a compensating increase in the level of quality or safety for the following reasons:

1. The associated piping segments are designed to the full pressure rating of the Reactor Coolant Pressure Boundary (RCPB).

2. These segments are isolated from the full RCS pressure under normal operating conditions.
3. The segments are subject to ASME Code required VT-2 (Visual) inspection. This inspection is performed with the segments isolated from the RCS and the RCS at its normal operating pressure and temperature. This inspection is performed each refueling outage and is sufficient to identify any structural defects that could potentially challenge the integrity of the segments during normal operation.

NRC Question 2

Section 5.2, "Alternative Basis for Component Groups 2 and 5," on page 15 of Enclosure 1 to the August 17, 2006, submittal states that the proposed alternative examination will be performed at a reduced test pressure. Note 3 of associated Tables 2 and 5 (Attachment 1 to Enclosure 1) states that the proposed test pressure is approximated. Please specify the minimum value for the proposed alternative test pressure.

Also, please provide a description of the "jumper" configuration that is installed to accommodate the current testing requirements for component groups 2 and 5 as noted on pages 7 and 11 of Enclosure 1.

DNC Response

The piping segments in Group 2 have a minimum normal operating system pressure of 200 psig. The minimum proposed test pressure would be 200 psig. The Group 5 piping segments have a minimum normal operating system pressure of 636 psig. The minimum proposed test pressure would be 636 psig. The term "jumper" is a reference to the use of a high pressure hose to mechanically bypass the associated isolation valve.

NRC Question 3

Section 5.3, "Alternative Basis for Component Group 3," on page 16 of Enclosure 1 to the August 17, 2006, submittal states that the proposed alternative examination will be performed at its normal operating pressure. Note 3 of associated Table 3 (Attachment 1 to Enclosure 1) states that the proposed test pressure is approximated. Please specify the minimum value for the proposed alternative test pressure.

In addition, the basis for approval provides a description of the hardship associated with the current testing requirements, but does not include a justification describing the insufficient compensating increase in the level of quality and safety associated with the current testing. Please provide a justification and discussion of the basis upon which the hardship associated with the current testing does not provide a compensating increase in the level of quality and safety.

DNC Response

The Group 3 piping segment consists of a portion of the Shutdown Cooling (SDC) return line that is isolated from the RCS under normal operating conditions. The associated isolation valve is provided with a pressure permissive interlock, which is alarmed in the control room. The Group 3 segment is also provided with a relief valve that operates at 300 psig to further prevent exposing the line to full RCS pressure. The minimum specified operating pressure for this piping segment is 190 psig. The minimum proposed test pressure would be 190 psig.

Given the associated hardship, testing of this segment at full RCS operating pressure does not provide a compensating increase in the level of quality or safety for the following reasons:

1. The design pressure rating of this piping segment is the same as the RCPB; however, the operating pressure of the piping segment is well below full RCS operating pressure.
2. The piping segment is isolated from the full RCS pressure prior to entering MODE 3 during restart from a refueling outage. A pressure interlock on the isolation valve and an installed relief valve further protects the piping from experiencing full RCS pressure.
3. This segment is subject to ASME Code required VT-2 (Visual) inspection. This inspection is performed with the segment isolated from the RCS and the RCS at its normal operating pressure and temperature. This inspection is performed each refueling outage and is sufficient to identify any structural defects that could potentially challenge the integrity of the segment during normal operation.

NRC Question 4

Section 5.4, "Alternative Basis for Component Group 6," on page 16 of Enclosure 1 to the August 17, 2006, submittal states that the proposed alternative examination will be performed at a reduced test pressure. Please specify the minimum value for the proposed alternative test pressure.

In addition, the basis for approval provides a description of the hardship associated with the current testing requirements, but does not include a justification describing the insufficient compensating increase in the level of quality and safety associated with the current testing. Please provide a justification and discussion of the basis upon which the hardship associated with the current testing does not provide a compensating increase in the level of quality and safety.

DNC Response

The proposed test pressure for Group 6 piping segments is not specified as there is no installed pressure instrumentation monitoring those segments. The actual test pressure is that achieved during full flow check valve testing using the Safety Injection (SI) and Charging pumps. This testing is performed with the reactor vessel defueled, the vessel head removed and normal refueling cavity water level established.

Given the associated hardship, testing of these segments at full RCS operating pressure does not provide a compensating increase in the level of quality or safety for the following reasons:

1. The piping segments are located between check valves and isolated from the full RCS pressure. The associated check valves are subject to operability verification in accordance with Technical Specification and ASME Code requirements.
2. The design pressure ratings of these piping segments are the same as the RCPB.
3. The segments are subject to ASME Code required VT-2 (Visual) inspection. This inspection is performed with the segments isolated from the RCS and the RCS at its normal operating pressure and temperature. This inspection is performed each refueling outage and is sufficient to identify any structural defects that could potentially challenge the integrity of the segments during normal operation.

NRC Question 5

Section 5.5, "Alternative Basis for Component Group 7," on page 17 of Enclosure 1 to the August 17, 2006, submittal states that the proposed alternative examination will be performed at a reduced test pressure. Note 3 of associated Table 7 (Attachment 1 to Enclosure 1) states that the proposed test pressure is approximated. Please specify the minimum value for the proposed alternative test pressure.

In addition, the basis for approval provides a description of the hardship associated with the current testing requirements, but does not include a justification describing the insufficient compensating increase in the level of quality and safety associated with the current testing. Please provide a justification and discussion of the basis upon which the hardship associated with the current testing does not provide a compensating increase in the level of quality and safety.

DNC Response

The Group 7 piping segments are in the residual heat removal (RHS) system and are not pressurized during normal plant operation. DNC has proposed a reduced test pressure, based on the nominal operating system conditions that exist prior to the segments being isolated in support of startup from a refueling outage. The minimum pressure specified for the test will be 340 psig.

Given the associated hardship, testing of this segment at full RCS operating pressure does not provide a compensating increase in the level of quality or safety for the following reasons:

1. The design pressure rating of these piping segments is the same as the RCPB; however, the operating pressure of the piping segment is well below full RCS operating pressure.
2. These segments are isolated from the full RCS pressure under normal operating conditions.
3. The segments are subject to ASME Code required VT-2 (Visual) inspection. This inspection is performed with the segments isolated from the RCS and the RCS at its normal operating pressure and temperature. This inspection is performed each refueling outage and is sufficient to identify any structural defects that could potentially challenge the integrity of the segments during normal operation.

NRC Question 6

Section 5.6, "Alternative Basis for Component Group 8," on page 18 of Enclosure 1 to the August 17, 2006, submittal states that the proposed alternative examination will be performed at a reduced pressure associated with 100% reactor power. Note 2 of associated Table 8 (Attachment 1 to Enclosure 1) lists normal operating pressure as "325 psig." Note 3 of associated Table 8 (Attachment 1 to Enclosure 1) lists the proposed test pressure as "None." Therefore, the submittal indicates that the proposed alternative will perform a pressure test with no pressure in the line.

Please specify the value of the proposed alternative test pressure for Groups 1 and 4. If this value is zero, please provide a justification describing how the proposed alternative constitutes performance of a pressure test.

In addition, the basis for approval provides a description of the hardship associated with the current testing requirements, but does not include a justification describing the insufficient compensating increase in the level of quality and safety associated with the current testing. Please provide a justification and discussion of the basis upon which the hardship associated with the current testing does not provide a compensating increase in the level of quality and safety.

DNC Response

Information related to Group 1 and 4 is provided in response to Question 1. The Group 8 piping segment is associated with the pressurizer auxiliary spray line and is isolated from the full RCS pressure during normal plant operation. A test pressure for this piping segment is not specified as there is no installed pressure instrumentation monitoring the segment. Regarding the pressure of 325 psig that is provided in Table 8, this corresponds only to the nominal operating pressure of this piping segment when auxiliary pressurizer spray is utilized during a normal plant cool down. This segment may also be exposed to higher pressures if utilized in response to plant emergencies.

Given the associated hardship, testing of this segment at full RCS operating pressure does not provide a compensating increase in the level of quality or safety for the following reasons:

1. The design pressure rating of this piping segment is the same as the RCPB; however, the operating pressure of the piping segment is well below the normal full RCS operating pressure.
2. This segment is isolated from the full RCS pressure under normal operating conditions.
3. This segment is subject to ASME Code required VT-2 (Visual) inspection. This inspection is performed with the segment isolated from the RCS and the RCS at its normal operating pressure and temperature. This inspection is performed each refueling outage and is sufficient to identify any structural defects that could potentially challenge the integrity of the segment during normal operation.