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Millstone Power Station
Rope Ferry Road
Waterford, CT 06385



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JL - 1 2003

Docket No. 50-423
B18923

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Millstone Power Station, Unit No. 3
Response to a Request for Additional Information Regarding Request IR-2-27 for the
Section XI Repair and Replacement Program (TAC No. MB6943)

This letter provides Dominion Nuclear Connecticut, Inc. (DNC) response to a request for additional information on relief request IR-2-27, submitted by DNC letter dated November 26, 2002.⁽¹⁾ IR-2-27 is a request for an alternative to American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code), Section XI requirements, for piping subassemblies fabricated for the Millstone Unit No. 3 "A" and "D" trains of the feedwater system. In a facsimile dated March 28, 2003,⁽²⁾ the U.S. Nuclear Regulatory Commission (NRC) transmitted a draft of a request for additional information. On May 13, 2003, a teleconference was held to discuss this information with the NRC. DNC's response to the NRC questions is provided in Attachment 1.

There are no regulatory commitments contained within this letter.

If you should have any questions regarding this submittal, please contact Mr. David W. Dodson at (860) 447-1791, extension 2346.

Very truly yours,

DOMINION NUCLEAR CONNECTICUT, INC.



J. Alan Price
Site Vice President - Millstone

cc: see next page

⁽¹⁾ DNC letter, "Millstone Power Station Unit No. 3, 10 CFR 50.55a Request, IR-2-27, for the Second Ten Year Interval Section XI Repair & Replacement Program," dated November 26, 2002, (Accession No. ML023440243).

⁽²⁾ V. Nerses (NRC) Facsimile to R. Joshi, "Draft Request for Additional Information (RAI) to be discussed in an Upcoming Conference Call (TAC No. MB6943)," March 28, 2003, (Accession No. ML021960551).

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Attachment (1)

**cc: H. J. Miller, Region I Administrator
V. Nerses, NRC Senior Project Manager, Millstone Unit No. 3
Millstone Senior Resident Inspector**

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Attachment 1

Millstone Power Station, Unit No. 3
Response to a Request for Additional Information Regarding Request IR-2-27 for the
Section XI Repair and Replacement Program (TAC No. MB6943)

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Section XI Repair and Replacement Program (TAC No. MB6943)

BACKGROUND:

Dominion Nuclear Connecticut, Inc. (DNC) letter dated November 26, 2002,⁽¹⁾ submitted Relief Request IR-2-27 to request an alternative to American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code), Section XI requirements, related to piping subassemblies fabricated for the Millstone Unit No. 3 "A" and "D" trains of the feedwater system. Shop fabrication at the vendor's facility for these piping subassemblies had supported Refueling Outage 6 activities in the spring of 1999, and applied stainless steel cladding to 18, 16 and 8 inch schedule 100 piping, with two 16 by 18 inch schedule 100 reducers.

The Millstone Unit No. 3 Repair and Replacement (R&R) Program complies with the ASME Code Section XI, 1989 Edition. The Construction Code for the replacements is the ASME Section III, NC, 1971 Edition through the Summer 1973 Addenda. The ASME Code Section XI, R&R Program, requires a vendor to have an ASME N-type certificate of authorization (NPT-type) and provide a Code Data Report Form NPP with a completed subassembly. However, as a result of discrepancies in the purchase order that allowed fabrication at the vendor's facility, no Code Data Report was developed. Accordingly, IR-2-27 proposes to rely on the provisions of 10 CFR 50 Appendix B along with participation of an Authorized Nuclear Inspector (ANI) as an alternative to requirements of the R&R Program, to be applied for the life of the replacement piping subassemblies.

REQUEST FOR ADDITIONAL INFORMATION:

In a facsimile dated March 28, 2003,⁽²⁾ the U.S. Nuclear Regulatory Commission (NRC) transmitted a draft of a request for additional information on IR-2-27. On May 13, 2003, a teleconference was held to discuss this information with the NRC. DNC's response to the NRC questions is provided in the balance of this Attachment.

⁽¹⁾ DNC letter, "Millstone Power Station Unit No. 3, 10 CFR 50.55a Request, IR-2-27, for the Second Ten Year Interval Section XI Repair & Replacement Program," dated November 26, 2002, (Accession No. ML023440243).

⁽²⁾ V. Nerses (NRC) Facsimile to R. Joshi, "Draft Request for Additional Information (RAI) to be discussed in an Upcoming Conference Call (TAC No. MB6943)," March 28, 2003, (Accession No. ML021960551).

QUESTION 1:

Were the welding procedures and welding procedure qualifications reviewed and approved by the licensee? If so, what edition of the American Society of Mechanical Engineers (ASME) Code did the procedures meet?

RESPONSE TO QUESTION 1:

The licensee has reviewed the welding procedure specifications and procedure qualification records against the applicable Section IX essential, supplemental essential, and non-essential variables. The review was completed by the licensee's welding engineer and found to be acceptable. The procedures were found to meet the Code of Construction ASME Section III, 1971 Edition through Summer 1973 Addenda, and latest Edition and Addenda of ASME Section IX in effect at the time, based on the dates of the documentation from November 11, 1992, to April 30, 1999, and the 6-month implementation period contained in Section IX.

QUESTION 2:

Were the non-destructive evaluation (NDE) reports reviewed by the licensee? If so, were the tests performed sensitive enough to identify discontinuities that may have been detrimental to the integrity of the welds? What were the results of all the inspections? You say the procedures either met or were reconciled to meet the ASME 1992 Edition of Section III, however, there is no statement identifying that the inspection results were acceptable.

RESPONSE TO QUESTION 2:

The non-destructive evaluation (NDE) reports were reviewed by licensee's quality control personnel in the Nuclear Receiving Inspection Group and found to be acceptable. Reviews of the NDE procedures and inspection documentation (including RT Film) assure that the required quality levels of the tests performed were sensitive enough to identify discontinuities that may have been detrimental to the integrity of the welds. The flaws identified by the testing also demonstrate that the tests performed were sensitive enough to identify such discontinuities. The licensee evaluated the final inspection results and determined they were acceptable. The initial results found four (4) areas requiring repair as follows:

The "A" Train weld FW83 had two (2) areas of incomplete fusion, excavated by grinding, and repair welded. The inspection results of Radiography Testing (RT) and Magnetic Particle Testing (MT) were acceptable per ASME III, 1992 Edition.

The "B" Train weld FW67 had two (2) areas of incomplete fusion, excavated by grinding, and repair welded. The inspection results of RT and MT were acceptable per ASME III, 1992 Edition.

QUESTION 3:

Were the radiograph results and technique sheets reviewed by the licensee? Were the tests sensitive enough to identify discontinuities that may have been detrimental to the integrity of the welds?

RESPONSE TO QUESTION 3:

The radiograph results and technique sheets have been reviewed by a licensee RT Level III Examiner and found to be acceptable. The tests were determined by the licensee to be sensitive enough to identify discontinuities that may have been detrimental to the integrity of the welds, as evidenced by the results of the tests and meeting the ASME Section III, 1992 Edition Code requirements to perform Volumetric RT and Surface MT or Liquid Penetrant (PT) examinations.

QUESTION 4:

Were all base material and filler material certifications reviewed and found to meet the requirements of the ASME Code? If so, who reviewed the certifications and what edition of the Code did the material meet?

RESPONSE TO QUESTION 4:

The base material and filler material certifications were reviewed by the licensee and determined to be acceptable. The licensee purchased the base material and licensee quality control personnel performed the certification review for all base material used. The base material used meets ASME Section II and Section III, NC-2000, 1971 Edition through the Summer 1973 Addenda. The filler material was purchased by the vendor and meets ASME Section II, Part C, and Section III, NB-2400, 1986 Edition through the 1998 Edition, and certifications were reviewed and found to be acceptable by both the vendor and the licensee quality control personnel from the Nuclear Receiving Inspection Group.

QUESTION 5:

Were production weld records provided and were they reviewed against the parameters of the production weld procedure used? Were the records reviewed by the licensee? Was the production weld performed by qualified welders?

RESPONSE TO QUESTION 5:

Production weld records were provided in the Final Vendor's Data Package and they were reviewed and found to be acceptable against the parameters of the production weld procedures by the vendor and licensee quality control personnel in the Nuclear Receiving Inspection Group. Production welds were performed by qualified welders as evidenced by the documentation provided in the Final Vendor's Data Package and

verified by licensee quality control personnel. Additionally, weld procedures were reviewed by the licensee's welding engineer, as has been described in response to Question 1, and found to be acceptable prior to performing any production welding. The licensee's welding engineer also observed some of the actual welding at the vendor's facility. Production welding was witnessed and welding documentation was approved by an ANI, as evidenced by the ANI's signature on the vendor's Quality Assurance Travelers and Weld Process Travelers contained in the Final Vendor's Data Package.

QUESTION 6:

The licensee identifies that no nonconformance reports were issued. However, several welds were repaired during fabrication. Please indicate if these repairs were considered minor, or major repairs and what sort of inspection method identified the need to have the repair performed. Was there grinding performed and if so, were the indications dimensionally inspected? Where is the in-process inspection and discrepancy documented?

RESPONSE TO QUESTION 6:

The welds repaired during fabrication were major repairs exceeding 10 percent of the wall thickness and RT was the method that identified the need to have the repairs performed. Details of the size of the flaws are documented on the RT data sheets and the vendor's weld repair data sheets contained in the Final Vendor's Data Package. There was grinding performed and the indications were dimensionally inspected. This documentation is also provided on the vendor's weld repair data sheets and NDE reports. The in-process inspection and discrepancy was documented first on the vendor's Weld Process Travelers and then on the RT and weld repair data sheets described above that are all included in the Final Vendor's Data Package.

QUESTION 7:

What kind of Authorized Nuclear Inspector (ANI) involvement was provided? Did he witness welding, inspection, subassembly? Did the ANI approve the Code Data Report?

RESPONSE TO QUESTION 7:

Review and witness of welding, NDE and records, subassembly steps, material, qualification, and certifications are all evidenced by either a signature on the actual sheets or the steps performed on the vendor's Quality Assurance and Weld Process Travelers. The ANI witnessed the welding, inspection, and subassembly, as evidenced by the traveler sign-offs. There is, however, no Code Data Report. All approvals of reviews and witnessed steps are evidenced by the signature of the ANI on the documents described above that are contained in the Final Vendor's Data Package.

QUESTION 8:

Was the pressure testing performed to Code Case N-416-1?

RESPONSE TO QUESTION 8:

The pressure testing was performed to Code Case N-416-1 upon installation of the subassemblies at Millstone Unit No. 3. The pressure testing was found to be acceptable.

QUESTION 9:

Please provide a breakdown of which joints on the "A" train and the "D" train required weld repair.

RESPONSE TO QUESTION 9:

The joints that required weld repair were FW83 on the "A" train and FW67 on the "D" train. The repairs were performed to remove areas of incomplete fusion described above in these welds. Upon re-welding and re-inspection, both weld repairs were determined to be acceptable.

QUESTION 10:

Did the licensee audit the vendor's facility and work?

RESPONSE TO QUESTION 10:

The licensee audited the vendor's facility and work. The vendor is an approved supplier under 10 CFR 50 Appendix B. Additionally the licensee's welding engineer was at the vendor's facility and observed some of the welding being performed on butt welds and the disposition of cladding on parts of sub-assemblies. The licensee's welding engineer confirmed that the welding observed was being performed acceptably.