UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 10, 2009

Mr. David A. Heacock
President and Chief Nuclear Officer
Dominion Nuclear Connecticut, Inc.
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

SUBJECT: MILLSTONE POWER STATION, UNIT NO. 3 – REQUEST FOR ADDITIONAL INFORMATION REGARDING THIRD 10-YEAR INTERVAL INSERVICE INSPECTION PROGRAM RELIEF REQUEST IR-3-05 (TAC NO. ME1257)

Dear Mr. Heacock:

By letter dated April 28, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML091310666), Dominion Nuclear Connecticut, Inc. (DNC), submitted relief request IR-3-05 for Millstone Power Station, Unit No. 3 (MPS3). DNC requested relief from certain examination requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, and proposed alternative examination criterion for the third 10-year in-service inspection (ISI) interval which began on April 23, 2009, and is scheduled to end on April 22, 2019. IR-3-05 pertains to the ISI of Alloy 82/182 dissimilar metal piping welds and adjacent similar metal welds which have had a full structural weld overlay applied at MPS3. To complete its review, the Nuclear Regulatory Commission staff requests responses to the enclosed questions.

The draft questions were sent to Mr. William Bartron, of your staff, to ensure that the questions were understandable, the regulatory basis for the questions was clear, and to determine if the information was previously docketed. On December 9, 2009, Mr. Mohamed Elmaghrabi agreed that you would provide a response by January 15, 2010.

If you have any questions regarding this matter, please contact me at 301-415-1603.

Sincerely,

Carleen J. Sanders, Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-423

Enclosure:
As stated

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REQUEST FOR ADDITIONAL INFORMATION

RELIEF REQUEST NO. IR-3-05 INSERVICE INSPECTION OF WELD OVERLAYS

10-YEAR INSERVICE INSPECTION INTERVAL

DOMINION NUCLEAR CONNECTICUT, INC

MILLSTONE POWER STATION, UNIT NO. 3

DOCKET NO. 50-423

By letter dated April 28, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML091310666), Dominion Nuclear Connecticut, Inc. (DNC), submitted relief request IR-3-05 for Millstone Power Station, Unit No. 3 (MPS3). DNC requested relief from certain examination requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, and proposed alternative examination criterion for the third 10-year in-service inspection (ISI) interval which began on April 23, 2009, and is scheduled to end on April 22, 2019. IR-3-05 pertains to the ISI of Alloy 82/182 dissimilar metal piping welds and adjacent similar metal welds which have had a full structural weld overlay applied at MPS3. Alloy 82/182 is the weld material; Alloy 600 is the base material. To complete its review, the Nuclear Regulatory Commission (NRC) staff requests responses to the questions presented below.

DNC is using the criteria in ASME Code Case N-770 for the inservice inspection of weld overlays presented in IR-3-05. The NRC staff is using the criteria of Code Case N-770 to perform their review. The following questions reflect the use of Code Case N-770 by DNC and the NRC staff.

1. IR-3-05 references the ISI for the weld overlay that was performed in accordance with approved relief requests IR-2-39 (ADAMS Accession No. ML053260012). However, no details of the nondestructive examination were provided. Please discuss the details of the ultrasonic examinations that were performed as noted above. Please include details of any indications detected including fabrication flaws and/or flaws that were not rejectable under IWB-3514 acceptance standards.

2. The ASME Task Group on Alloy 600 and the NRC staff are in agreement that the appropriate dimensions for Figure 2(b) from ASME Code Case N-770, which is utilized in IR-3-05 as Figure 1(b), shall be equivalent to the nominal thickness of the nozzle end preparation or the pipe being overlaid, as appropriate. Please meet the dimensions described above or provide justification for the current dimensions.

3. The ASME Task Group on Alloy 600 and the NRC staff are in agreement that for each overlay in the 25 percent sample that has a design life of less than 10 years, at least one inservice examination shall be performed prior to exceeding the life of the overlay. Please provide the calculated life of the weld overlays addressed in IR-3-05. Additionally, please revise Paragraph 5.1 of IR-3-05 to reflect this update, or provide a justification for not revising Paragraph 5.1.

Enclosure

4. Paragraph 5.2 of IR-3-05 mimics footnote 10 from Code Case N-770; however, the last sentence of footnote 10 was omitted in IR-3-05. Please address this omission and/or revise IR-3-05 accordingly. Consistent with question three above, please provide the mitigation evaluation period and confirm that those welds not included in the 25% sample will be examined prior to the end of the mitigation evaluation period/life of the overlay.

5. Please address whether or not welds categorized as Nonmandatory Appendix R, Table R-2500-1, Examination Category R-A, Item Number R1.15 will be re-classified to Item Number R1.20 as a result of application of the weld overlays.

6. Please address the omission of the discussion in Paragraph -3132.1(b) of Code Case N-770 on acceptability for continued service of a weld with planar surface flaws in the butt welds or base metal inside surface.

7. Please address the discrepancy between IR-3-05 Paragraph 5.4.2.1.3 and Code Case N-770 Paragraph -3132.1(c) related to the location of the flaw either in the butt weld or base metal inside surface.

8. Please address the omission of Code Case N-770, Paragraph -3132.3(a) regarding continued service if an analytical evaluation meets the requirements of IWB-3600 and additional examinations are performed during the current outage.

9. Regarding Paragraph -3132.3(b) of Code Case N-770, the ASME Task Group on Alloy 600 is expected to revise the language of the latter half of the Paragraph, as shown in italics as follows: "Previously-evaluated flaws that were mitigated by the techniques identified in Table 1 need not be reevaluated nor have additional successive or additional examinations performed *if new planar flaws have not been identified or the previously evaluated flaws have remained essentially unchanged."*

   IR-3-05, Paragraph 5.4.2.3.1 reflects the current wording in Paragraph -3132.3(b) of Code Case N-770, "Previously-evaluated flaws that were mitigated by the techniques identified in Table 1 need not be reevaluated nor have additional successive or additional examinations performed if the size difference is within the measurement accuracy of the NDE technique employed."

   Please explain how DNC plans on determining if the size difference is within the measurement accuracy of the NDE technique employed, or revise Paragraph 5.4.2.3.1.

10. Paragraph 5.4.2.3.2 of IR-3-05 has omitted text contained in Code Case N-770 Paragraph -3132.3(d), which addresses reexamination in accordance with Table 1 or Code Case N-770. Please address this omission.

11. To be consistent with Code Case N-770, the last word of Paragraph 5.4.3.2 of Relief Request IR-3-05 should read "outage" rather than "interval." Please justify or revise.

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/ra/
Carleen J. Sanders, Project Manager
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