



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

November 29, 2010

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 THE UPDATE TO THE RISK-INFORMED
INSPECTION PROGRAM FOR THE THIRD 10-YEAR INSPECTION INTERVAL
(TAC NO. ME3528)

Dear Mr. Heacock:

By letter dated March 5, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML100640456), Dominion Nuclear Connecticut, Inc. (DNC or the licensee) submitted a relief request for the third 10-year inservice inspection interval program at Millstone Power Station, Unit No. 3 (MPS3). DNC requested the use of an alternative from selected requirements of the American Society of Mechanical Engineer (ASME) Boiler and Pressure Vessel Code (ASME Code), Section XI requirements. Specifically, relief request IR-3-14 proposes to use an updated version of the Risk-Informed Program (RI) that was approved for the second 10-year inservice inspection interval (ISI) (ADAMS Accession No. ML020570312). The RI-ISI is based on Westinghouse Owners Group WCAP-14572, Revision 1-NP-A, "Westinghouse Owners Group Application of Risk-Informed Methods to Piping Inservice Inspection Topical Report," and Supplement 1. The request for relief applies to the third 10-year ISI interval, Class 1 piping in which the licensee adopted the 2004 Edition with no Addenda. 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 October 28, 2010, Ms. Wanda Craft, of your staff, agreed that you would provide a response by December 21, 2010.

D. Heacock

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

Sincerely,

A handwritten signature in black ink, appearing to read "Carleen J. Sanders". The signature is written in a cursive style with a large initial "C" and "S".

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

cc w/encl: Distribution via Listserv

OFFICE OF NUCLEAR REACTOR REGULATION
REQUEST FOR ADDITIONAL INFORMATION
RISK-INFORMED INSERVICE INSPECTION PROGRAM
THIRD 10-YEAR INSERVICE INSPECTION INTERVAL
DOMINION NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION, UNIT 3
DOCKET NUMBER 50-423

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1. On page 3 of the submittal, it states: "As a result of the changes to the risk analysis, the Large Early Release Frequency (LERF) results for large and medium LOCA [loss of coolant accident] are now negligible because the Reactor Coolant System (RCS) depressurizes quickly..." Please explain in detail the evaluation that leads to the conclusion that large and medium LOCAs depressurize so rapidly that steam generator tube rupture is prohibited. Provide the evaluation for any applicable changes to thermal hydraulic analyses and success criteria in the probabilistic risk assessment (PRA) model.
2. On page 3 and 4 of the submittal, a discussion on thermal cyclic fatigue was given for examination reduction of some branch lines and drain lines. For the 3rd interval, provide the number of branch lines and drain lines that are being examined and the examination methods, and provide the number of lines that were examined during the 2nd interval (make a comparison between intervals).
3. On page 4 of the submittal, six additional high safety significant (HSS) segments resulting in five welds were added for volumetric examinations. Identify the piping systems associated with the 5 welds.

Enclosure

4. The submittal states that the RI-ISI program is consistent with the Westinghouse Topical Report, WCAP-14572, Revision 1-NP-A with listed deviations. After the issuance of WCAP-14572, Revision 1-NP-A, the topical report was updated with later revision(s), supplement(s) and addenda. Identify the updates to WCAP-14572, Revision 1-NP-A and WCAP-14572, Revision 1-NP-A, Supplement 1, if any, that apply to the proposed alternative.
5. In Attachment 1, Table 1 of the submittal, two columns are identified as "SES Matrix Region." Define the abbreviation SES and provide a discussion on what these columns are presenting.
6. In Attachment 1, Table 1 of the submittal, the totals are listed and identified as NDE (nondestructive examinations) for the 2nd and 3rd intervals. Provide NDE values shown as totals by volumetric only, volumetric and surface, and surface only.
7. In Attachment 1, Table 1 of the submittal, the RCS lists 59 examination locations for the 2nd interval and 46 examination locations + one visual location for the 3rd interval. Provide an explanation for the decrease in examination locations between the two intervals.
8. The introduction of WCAP-14572, Revision 1-NP-A references Code Case N-577 (N-577). The NRC listed N-577 in Regulatory Guide 1.193, "ASME Code Cases Not Approved for Use." The NRC staff has accepted licensees' referencing N-577, Table 1 in submittals requesting relief from selected requirements of the ASME Code. If sections, other than Table 1 in N-577 are used in the proposed alternative, provide a description of the sections, their application, and technical justification.
9. A major step in the WCAP-14572, Revision 1-NP-A, process is assignment of segments into safety significance categories based on integrated decision making process, and the selection of segments for inspection locations. The requested table summarizes the results of the safety significance categorization process as determined by the quantitative criteria and by the expert panel's deliberations based on other considerations. The summarizing information requested in the table below will provide an overview of the distribution of the safety significance of the segments based on the quantitative results, and the final distribution based on the integrated decision making. Each segment has four risk reduced worth's (RRWs) calculated, a core damage frequency (CDF) with and without operator action, and a LERF with and without operator action. Please provide the following table:

System (Note 1)	Number of Segments with any RRW > 1.005	Number of Segments with Any RRW Between 1.005 and 1.001	Number of Segments with all RRW < 1.001	Number of Segments with any RRW between 1.005 and 1.001 placed in HHS	Number of segments with all RRW < 1.001 selected for inspection	Total number of segments selected for inspection (high safety significant segments)

NOTE: (1) RCS – Reactor Coolant System, SIH – High Pressure Safety Injection System, SIL – Low Pressure Safety Injection System, CHS – Chemical Volume & Control System, RHS – Residual Heat Removal System

10. Please verify that a sensitivity study was conducted to address uncertainty as described on page 125 (Section 3.6.1) of WCAP-14572, Revision 1-NP-A. Identify how many segments' RRW increased from below 1.001 to greater than or equal to 1.005 based on this study.
11. Please state that the change in risk calculations were performed according to all the guidelines provided on page 213 (Section 4.4.2) of WCAP-14572, Revision 1-NP-A or provide a description and justification of any deviation.
12. Please provide a brief summary of qualifications possessed by the representatives on the expert panel and reasons for excluding any particular expertise mentioned for the expert panel in WCAP-14572, Revision 1-NP-A.
13. Attachment 2 of DNC's request states that the MPS3 probabilistic risk assessment PRA model and documentation have been maintained as a living program and the PRA is routinely updated approximately every 3 years to reflect the current plant configuration and to reflect the accumulation of additional plant operating history and configuration failure data. Please state how DNC plans to maintain a living RI-ISI program which can be affected by changes in plant design or operations during the third 10-year interval.

D. Heacock

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

Sincerely,
/RA/

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

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As stated

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***By Memos dated**

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