

Dominion Nuclear Connecticut, Inc.
Millstone Power Station
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August 31, 2004

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

Serial No. 03-373E
MPS Lic/WDB R1
Docket No. 50-423
License No. NPF-49

DOMINION NUCLEAR CONNECTICUT, INC. (DNC)
MILLSTONE POWER STATION UNIT 3
GENERIC LETTER 2003-01, CONTROL ROOM HABITABILITY
SUPPLEMENTAL INFORMATION, TRACER GAS INLEAKAGE TEST
RESULTS, AND TECHNICAL SPECIFICATION CHANGES

On June 12, 2003, the NRC issued Generic Letter (GL) 2003-01, "Control Room Habitability," to all operating reactors. The GL requested information that demonstrates that the control room at each facility complies with the current licensing and design bases as well as applicable regulatory requirements. In a June 1, 2004 letter (Serial No. 03-373D), DNC provided the requested information for Millstone Power Station Units 2 and 3. Based on the change in the tracer gas test schedule for MPS 3 documented in DNC letter (Serial No. 03-373B) dated March 5, 2004, DNC committed to provide supplemental information to complete the generic letter response by August 31, 2004.

DNC herein provides the Millstone Power Station Unit 3 (MPS 3) control room habitability envelope tracer gas inleakage test results. This information is contained in Attachment 1.

The DNC June 1, 2004 NRC Generic Letter 2003-01 response also committed to delineating a plan and schedule for any proposed technical specification changes for MPS 3 control room habitability envelope integrity upon completion of tracer gas inleakage testing. This information is contained in Attachment 2.

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

Very truly yours,

A handwritten signature in black ink, appearing to read "L. Hartz", is written over a white background.

Leslie N. Hartz
Vice President – Nuclear Engineering

Attachments

Commitments made in this letter:

1. An amendment request for MPS 3 that will incorporate the intent of the current proposed TSTF-448 for a control room habitability program will be submitted within six months following either the approval of TSFT-448 or its adoption in the Consolidated Line Item Improvement Process (CLIIP) by the NRC, whichever is later.

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Attachment 1

Serial No. 03-373E

GENERIC LETTER 2003-01, CONTROL ROOM HABITABILITY
SUPPLEMENTAL INFORMATION,
TRACER GAS INLEAKAGE TEST RESULTS

Millstone Power Station Unit 3
Dominion Nuclear Connecticut, Inc. (DNC)

Millstone Power Station Unit 3, Control Room Habitability Envelope Tracer Gas Inleakage Results

With the assistance of NUCON International, Inc., control room habitability envelope tracer gas inleakage testing, in accordance with ASTM E741 test methodology, was completed and the results are summarized in Table 1.

Table 1
Control Room Envelope Tracer Gas In leakage Test Results¹

Operation Mode Tested	Unfiltered Inleakage
Train A Emergency Filtration System Pressurization	20.1 ± 3.6 scfm
Train B Emergency Filtration System Pressurization	7.1 ± 7.0 scfm
Train A Isolation Dampers Closed, Neutral Pressure	91 ± 2 acfm (actual cubic feet per minute)
Train B Isolation Dampers Closed, Neutral Pressure	95 ± 2 acfm

Additional Information

Current control room radiological analysis assumes a 10 cfm unfiltered inleakage (for ingress/egress activities) when the control room is at a positive pressure and a 115 cfm unfiltered inleakage when the control room is at a neutral pressure².

The tracer gas inleakage test showed that the current radiological analysis inleakage assumption was met for the neutral pressure operating mode, but was not met for the positive pressure operating mode. An operability determination³ was performed that evaluated inleakage in excess of that which was assumed in the analysis. The operability determination specified operational restrictions (e.g., maximum permitted containment leak rate and primary to secondary leak rate) affecting potential radiological release pathways to compensate for the higher measured positive pressure mode inleakage, which thereby maintains radiological consequences within the limits specified in the current licensing basis acceptance criteria of 5 rem whole body, 30 rem thyroid, and 30 rem skin dose limits. No credit was taken in the operability determination for the use of self-contained breathing apparatus or the use of potassium iodide.

¹ NUCON International, Inc., Test Report "Control Room Habitability: Tracer Gas Leak Testing of the Millstone Unit 3 Control Room", Purchase Order No. 70118900, July 27, 2004.

² DCN Submittal Serial No. 04-285, "MPS-3 Proposed Technical Specification Changes, Implementation of Alternate Source Term", Table 2.6-1, May 27, 2004.

³ OD No. MP3-070-04.

Attachment 2

Serial No. 03-373E

GENERIC LETTER 2003-01, CONTROL ROOM HABITABILITY
SUPPLEMENTAL INFORMATION,
TECHNICAL SPECIFICATION CHANGES

Millstone Power Station Unit 3
Dominion Nuclear Connecticut, Inc. (DNC)

Millstone Power Station Unit 3, Plan and Schedule For Proposed Changes To The Technical Specifications For Control Room Habitability Envelope Integrity

Background

NRC Generic Letter 2003-01 Item 1 (c) requests confirmation that existing technical specifications are adequate to verify CRE integrity and that CRE in-leakage is bounded by analysis assumptions. If current technical specifications have a ΔP surveillance requirement to demonstrate CRE integrity, the generic letter requests the basis for the conclusion that the current technical specifications remain adequate to be a demonstration of CRE integrity in light of the ASTM E74I testing results.

Assessment Bases

This assessment of the need to change existing technical specification is based upon the alternate source term (AST) analysis inleakage assumptions that are shown in Table 2. The AST analysis was submitted for NRC review and approval on May 27, 2004.

Table 2
Control Room Inleakage Assumptions Employed in the AST Analyses⁴

Parameter	Analysis Assumption
Unfiltered Inleakage During Periods of Neutral Pressure	350 scfm
Unfiltered Inleakage During Periods of Positive Pressure	100 scfm

Response

Based upon industry experience, plants with high inleakage values are typically those with HVAC equipment and ductwork located outside the control room habitability envelope boundary. Most all MPS 3 control room HVAC and ductwork is located within the habitability envelope. Thus, MPS 3 has low susceptibility to this boundary degradation mechanism.

Because of the low leakage boundary design, recent tracer gas inleakage test results, and conservative inleakage assumptions contained in the proposed AST control room dose analysis, the existing technical specification for control room differential pressure (ΔP) surveillance (i.e., Technical Specification 4.7.7.e.2: Maintain a positive pressure of greater than or equal to 1/8 inch water gage at less than or equal to a pressurization flow of 230 cfm.) is considered sufficient to ensure that unfiltered inleakage is maintained within the inleakage values used in the proposed control room habitability

⁴ DNC Correspondence to NRC, Serial No. 04-285, MPS 3 -Proposed Technical Specification Changes, Implementation of Alternate Source Term", dated May 27, 2004 (Table 2.6-1)

analysis. Hence the current technical specifications remain adequate to demonstrate control room envelope integrity in light of the ASTM E741 testing results and the AST submittal.

Given that the Technical Specification 4.7.7.e.2 surveillance frequency is 24 months, a control room habitability program, consistent with the intent of TSTF-448, would provide additional assurance that the envelope inleakage remains within accident analysis assumptions. Therefore, an amendment request for MPS 3 that will incorporate the intent of the current proposed TSTF-448 for a control room habitability program will be submitted within six months following either the approval of TSFT-448 or its adoption in the Consolidated Line Item Improvement Process (CLIP) by the NRC, whichever is later.