

March 12, 2002

LICENSEE: Dominion Nuclear Connecticut, Inc.

FACILITY: Millstone Nuclear Power Station, Unit No. 2

SUBJECT: SUMMARY OF JANUARY 24, 2002, MEETING TO DISCUSS THE LICENSEE'S REACTOR PRESSURE VESSEL HEAD PENETRATION NOZZLE INSPECTION PLANS IN RESPONSE TO NRC BULLETIN 2001-01 (TAC NO. MB2639)

This summary refers to the meeting with Dominion Nuclear Connecticut, Inc. (DNC or the licensee) conducted on January 24, 2002, at the U.S. Nuclear Regulatory Commission (NRC) office in Rockville, Maryland. The meeting was open to the public and was held to discuss DNC's plans to inspect the Millstone Nuclear Power Station, Unit No. 2, (MNPS) reactor pressure vessel head penetration nozzles in response to Bulletin 2001-01, "Circumferential Cracking of Reactor Pressure Vessel Head Penetration Nozzles," issued by the NRC on August 3, 2001.

The meeting agenda (Enclosure 1) was available to all attendees. The list of attendees is included as Enclosure 2 and a copy of the slides presented by DNC as Enclosure 3. During the public meeting DNC noticed that slides 15 and 16 contained information related to a proprietary process currently being developed by a vendor. Therefore, these slides were replaced with blank pages.

The NRC Project Manager for MNPS provided the following overview:

The nuclear industry has discovered cracked and sometimes leaking reactor pressure vessel head nozzles. Because of the safety significance of this issue, the NRC issued Bulletin 2001-01 that requires licensees to provide a written response including a variety of specific information relevant to this issue. For moderately susceptible plants such as Millstone Unit 2, the bulletin states that an effective visual examination of 100% of the vessel head penetration nozzles may be sufficient to provide reasonable confidence that degradation would be identified prior to posing an undue risk. The purpose of this meeting is to provide DNC the opportunity to explain to the NRC how they can justify examining less than 100% of their nozzles.

DNC followed with their presentation as depicted by their slides. The following major topics were discussed as part of their slide presentation:

- 1) MNPS reactor head overview;
- 2) MNPS response to Bulletin 2001-01 summary;
- 3) Industry experience with effective visual examinations;
- 4) Non-destructive examination (NDE) techniques and equipment

- 5) Probabilistic Risk Assessment (PRA) based contingency plans in the event that nozzle inspections cannot be completed;
- 6) Future inspection plans; and
- 7) Inspection program summary

Upon conclusion of DNC's presentation, DNC announced that Framatome prepared a presentation but that it included proprietary information. The public was asked to leave and was invited back for the NRC's closing remarks and for the opportunity to participate in a public question and comment period.

Framatome presented an explanation of their new examination techniques along with a visual depiction of actual inspection data gathered from the industry using the new method. Upon conclusion of Framatome's presentation, the NRC caucused in a separate room to reach a consensus of the information presented. Upon reconvening in the public meeting room, the NRC staff informed DNC that the examination equipment, technology, and methods proposed to be utilized by the licensee in their upcoming outage to inspect the nozzles appear to provide an effective examination. The staff also informed DNC that the PRA statistical analysis they presented did not appear to justify inspecting fewer than 100% of the nozzles. Therefore, the staff continues to expect DNC to perform an inspection of 100% of the nozzles as described by Bulletin 2001-01. DNC stated that they will submit a supplement to their bulletin response to include information provided during their presentation.

Upon conclusion of the meeting, the members of the public in attendance were invited to stay to have their comments or questions addressed by the NRC staff. No members of the public participated and the meeting was adjourned.

John Harrison, Project Manager, Section 2  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-336

Enclosures: As stated

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- 7) Inspection program summary

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**/RA/**

John Harrison, Project Manager, Section 2  
Project Directorate I  
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NAME	JHarrison	TClark	WBateman	CGratton for JClifford
DATE	2/14/02	2/14/02	2/20/02	3/5/02

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Vice President - Nuclear Operations - Millstone  
c/o Mr. David A. Smith  
Dominion Nuclear Connecticut, Inc.  
Rope Ferry Road  
Waterford, CT 06385

# **AGENDA**

## **NUCLEAR REGULATORY COMMISSION PUBLIC MEETING WITH DOMINION NUCLEAR CONNECTICUT, INC.**

### **MILLSTONE UNIT 2 REACTOR PRESSURE VESSEL HEAD PENETRATION NOZZLE INSPECTION PLANS**

(re: NRC Bulletin 2001-01, Circumferential Cracking of  
Reactor Pressure Vessel Head Penetration Nozzles)

Date: Thursday, January 24, 2002

Location: Room O-10B4, USNRC, 11555 Rockville Pike, Rockville, MD

Time: 9:00 a.m. to 12:00 noon

- |               |   |
|---------------|---|
| 9:00 - 9:15   | Opening remarks, self-introductions, and brief overview (John Harrison) |
| 9:15 - 11:15  | Dominion Presentation   |
|               | Opening Remarks (Alan Price ~5 minutes)                                 |
|               | Overview (Steve Scace ~5 minutes)                                       |
|               | Summary of Response (Clark Maxson ~10 minutes)                          |
|               | Industry Experience (Clark Maxson ~10 minutes)                          |
| Break         |   |
|               | NDE Methods (Mike Stark ~30 minutes)                                    |
|               | NDE Equipment (Dan Slater, FTI ~15 minutes)                             |
|               | Contingency Plans/PRA (Yehia Khalil ~30 minutes)                        |
|               | Future Plans (Steve Scace ~10 minutes)                                  |
|               | Summary (Alan Price ~5 minutes)   |
| 11:15 - 11:30 | NRC to caucus, re-convene, and provide closing remarks                  |
| 11:30 - 12:00 | Public question and comment period                                      |
| 12:00 noon    | Adjourn   |

## MEETING ATTENDANCE LIST

Licensee: Dominion Nuclear Connecticut, Inc.  
Plant: Millstone Nuclear Power Station, Unit No. 2  
Subject: Meeting to Discuss the Licensee's Reactor Pressure Vessel Head Penetration Nozzle Inspection Plans in Response to NRC Bulletin 2001-01 (TAC No. MB2639)

Date: January 24, 2001 Time: 9:00 a.m

Location: NRC Offices, OWFN Room 10-B4

<u>NAME</u>	<u>POSITION</u>	<u>ORGANIZATION</u>
J. Clifford	Section Chief	NRC/NRR/DLPM/PDI-2
J. Harrison	Project Manager	NRC/NRR/DLPM/PDI-2
W. Bateman	Branch Chief, EMCB	NRC/NRR/DE/EMCB
A. Hiser	Sr. Materials Engineer	NRC/NRR/DE/EMCB
A. Lee	Materials Engineer	NRC/NRR/DE/EMCB
T. Steingass	Materials Engineer	NRC/NRR/DE/EMCB
J. Chung	PRA	NRC/NRR/DSSA/SPSB
S. Long	Risk Analyst	NRC/NRR/DSSA/SPSB
L. Abramson	Sr. Research Statistician	NRC/RES/DRAA/PRAB
L. Hartz	V.P. of Nuclear Engineering	Dominion
J. A. Price	Millstone Site V.P.	Dominion
H. Fontecilla	Regulatory Affairs Advisor	Dominion
D. Smith	Manager of Regulatory Affairs	Dominion
B. Sharrow	Licensing Engineer	Dominion
S. Scace	Engineering Director	Dominion
C. Maxson	Manager of Engineering	Dominion
Y. Khalil	Supervisor of PRA	Dominion
R. Schonenberg	Materials Engineer	Dominion
M. Stark	NDE Level III	Dominion
D. Schlader	Manager of Business Development	Framatome ANP
M. Hacker	UT Level III	Framatome ANP
M. Murphy	Sr. Materials Engineer	CCNPP, Inc.
G. Tesfaye	Senior Engineer	CCNPP, Inc.
R. Hardies	Metallurgical Consultant	CNS, Inc.
R. Huston	Licensing Support Services	Principal