

May 28, 2003

MEMORANDUM TO: James W. Clifford, Chief
 Project Directorate Section I-2
 Division of Licensing Project Management

FROM: A. Louise Lund, Section Chief /RA/
 Steam Generator Integrity and Chemical Engineering Section
 Materials and Chemical Engineering Branch
 Division of Engineering

SUBJECT: SUMMARY OF THE STAFF'S REVIEW OF THE MILLSTONE UNIT 2,
 STEAM GENERATOR TUBE INSPECTION REPORT FROM THE
 SPRING 2002 (TAC NO. MB7965)

By letters dated March 12, 2002 (ML020870655) and February 28, 2003 (ML030700380), Dominion Nuclear Connecticut, Inc. (the licensee) submitted reports summarizing the steam generator (SG) tube inspections performed during the End of Cycle (EOC) 14 (Spring 2002) refueling outage for Millstone Unit 2. During this outage, the licensee inspected only SG 1.

The staff's review of the licensee's SG tube inspection report is attached. After careful review, the staff concluded that the licensee provided the required information outlined by their technical specifications (TSS) and that at this time no additional information is required. The attached evaluation completes our examination of the licensee's submittal and our efforts under TAC MB7965.

When the review is forwarded to the licensee, please include myself, Martin Murphy, and Raymond Lorson on distribution for the trial document. If you elect to significantly change the attached evaluation prior to sending it to the licensee, please include me on concurrence.

Attachment: Steam Generator Tube Inspection Summary Review

Docket: 50-336

CONTACT: Leslie Miller, NRR/DE/EMCB
 301-415-2526

Information in this record was deleted
 in accordance with the Freedom of Information
 Act, exemptions 4
 FOIA- 2005-0210

E11

MEMORANDUM TO: James W. Clifford, Chief
Project Directorate Section I-2
Division of Licensing Project Management

FROM: A. Louise Lund, Section Chief /RA/
Steam Generator Integrity and Chemical Engineering Section
Materials and Chemical Engineering Branch
Division of Engineering

SUBJECT: SUMMARY OF THE STAFF'S REVIEW OF THE MILLSTONE UNIT 2,
STEAM GENERATOR TUBE INSPECTION REPORT FROM THE
SPRING 2002 (TAC NO. MB7965)

By letters dated March 12, 2002 (ML020870655) and February 28, 2003 (ML030700380), Dominion Nuclear Connecticut, Inc. (the licensee) submitted reports summarizing the steam generator (SG) tube inspections performed during the End of Cycle (EOC) 14 (Spring 2002) refueling outage for Millstone Unit 2. During this outage, the licensee inspected only SG 1.

The staff's review of the licensee's SG tube inspection report is attached. After careful review, the staff concluded that the licensee provided the required information outlined by their technical specifications (TSs) and that at this time no additional information is required. The attached evaluation completes our examination of the licensee's submittal and our efforts under TAC MB7965.

When the review is forwarded to the licensee, please include myself, Martin Murphy, and Raymond Lorson on distribution for the trial document. If you elect to significantly change the attached evaluation prior to sending it to the licensee, please include me on concurrence.

Attachment: Steam Generator Tube Inspection Summary Review

Docket: 50-336

CONTACT: Leslie Miller, NRR/DE/EMCB
301-415-2526

DISTRIBUTION: K Karwoski R Larson R Ennis
B Fu J Jimenez C Khan P Klein C Lauron
L Miller E Murphy M Murphy J Tsao M Yoder

Accession No.: ML031530738

INDICATE IN BOX: "C"=COPY W/O ATTACHMENT/ENCLOSURE, "E"=COPY W/ATT/ENCL, "N"=NO COPY

OFFICE	EMCB:DE	E	EMCB:DE	
NAME	Lmiller		ALLund	
DATE	5/27/03		5/28/03	

OFFICIAL RECORD COPY

MILLSTONE NUCLEAR POWER STATION UNIT 2

DOMINION NUCLEAR CONNECTICUT, INC.

STAFF ASSESSMENT OF SPRING 2002 (END OF CYCLE 14)

STEAM GENERATOR 1 TUBE INSPECTION REPORT

By letters dated March 12, 2002 (ML020870655) and February 28, 2003 (ML030700380), Dominion Nuclear Connecticut, Inc. (the licensee) submitted reports summarizing the steam generator (SG) tube inspections performed during the End of Cycle (EOC) 14 (Spring 2002) refueling outage for Millstone Unit 2. These reports were submitted in accordance with Millstone Unit 2 technical specification (TS) Sections 4.4.5.1.5, 4.4.5.1.5.a, and 6.9.1.5.b. A summary of the staff's evaluation of the EOC 14 refueling outage tube inspection results is provided below.

During the 2002 outage, the licensee inspected only SG 1. Millstone Unit 2, SG 1 was fabricated [REDACTED] This SG consists of [REDACTED] The SG utilizes a [REDACTED] expansion method and has [REDACTED] steel lattice grid tube supports. Steam generator 1 was placed in operation in 1993.

exemption #4

The steam generator tube inspection summary stated that the licensee inspected 100% of tubes in SG 1 full length (tube end cold (TEC) to tube end hot (TEH)) using a bobbin probe. A total of 57 additional inspections were conducted using a +Point™ probe. Of these additional inspections, 37 were special interest locations (bulges, dents, dings, hot leg tube sheet areas, and manufacturing burnish marks) and 20 were potential loose part locations. No SG tubes were plugged due to the SG tube inspection results.

The licensee reported two tubes (R40C155 and R140C93) that exhibited tube degradation indications. Both tube degradation indications were identified to have a 9% through-wall thickness due to wear at fan bar locations (fan bars 6 and 8).

Seventy-seven (77) manufacturing burnish marks (MBMs) were identified during the bobbin probe inspections. The MBM indications reported for this inspection were compared to the 1991 baseline inspection results and exhibited no change from the baseline inspection.

The licensee conducted extensive visual examinations of the top of tubesheet (TTS), the blowdown holes, the inner bundle, and the tubesheet annulus of SG 1 to investigate the source of Loose Parts Monitoring System (LPMS) alarms which occurred in February 2002. Due to the inspections, a small foreign object was found. This foreign object was lodged between four tubes (R23C102, R24C101, R24C102, and R24C103). Based on these visual inspections, the bobbin data for these tubes was reviewed. This review confirmed that a marginal, potential loose part signal was present in 3 of these tubes. These potential loose part signals were present in the 1994 and 1997 inspection data. No tube damage was associated with these potential loose part signals. The loose part was not retrieved, however, the licensee addressed potential problems associated with leaving the loose part in the SG within the Condition

ATTACHMENT

Monitoring and Operational Assessment (CMOA). The licensee concluded that this loose part did not result in the LPMS alarm. As a result, the upper steam drum and the upper tube bundle were inspected. No evidence of a loose part which could have caused the LPMS alarm was found. The licensee subsequently concluded that the LPMS alarm was a result of a cable malfunction in the LPMS system.

The licensee conducted a condition monitoring assessment which concluded that the structural and leakage performance criteria were met for the previous operating cycle. Based on these results, the licensee indicated there was reasonable assurance that the structural and leakage integrity performance criteria will be met throughout the next operating interval between inspections.

Based on the staff's review of the information provided by the licensee, the staff concludes that the licensee provided the required information outlined by their technical specifications and that at this time no additional information is required.