

April 25, 2004

MEMORANDUM TO: Richard J. Laufer, Chief  
Project Directorate Section I-1  
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: REQUEST FOR ADDITIONAL INFORMATION REGARDING  
MILLSTONE 2 STEAM GENERATOR TUBE INSPECTION REPORTS  
FOR THE 2003 OUTAGE (TAC NO.: MC2525)

By letters dated November 5, 2003 (ML033240373), and February 26, 2004 (ML040690874), Dominion Nuclear Connecticut, Inc., the licensee for Millstone Power Station, Unit No. 2, submitted reports summarizing the steam generator (SG) tube inspections performed at Millstone 2 during refueling outage 15 (November 2003). In order for the staff to complete its review, responses to the attached questions are requested.

Docket No.: 50-336

Attachment: As Stated

CONTACT: Ken Karwoski, NRR/DE/EMCB  
301-415-2752

BJB

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OFFICE	EMCB:DE	E	EMCB:DE	
NAME	KKarwoski	ALLund		
DATE	04/22/2004	04/25/2004		

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REQUEST FOR ADDITIONAL INFORMATION  
RELATED TO DOMINION NUCLEAR CONNECTICUT, INC.  
MILLSTONE POWER STATION, UNIT NO. 2  
DOCKET NO. 50-336

By letters dated November 5, 2003 (ML033240373), and February 26, 2004 (ML040690874), Dominion Nuclear Connecticut, Inc., the licensee for Millstone Power Station, Unit No. 2, submitted reports summarizing the steam generator (SG) tube inspections performed at Millstone 2 during refueling outage 15 (November 2003).

In order for the staff to complete its review, responses to the following questions are requested:

1. The steam generators at Millstone 2 were replaced in 1993 with steam generators designed and fabricated by Babcock and Wilcox International. In several locations, the reports reference tube support structures (e.g., 01H) and tube locations (e.g., Row 140 Column 79). In order for the staff to better understand the location of the indications, provide a schematic of the Millstone 2 steam generators which depicts the tube support naming conventions. In addition, provide the following general design information: tube manufacturer, tube support (including fan bar) thickness, fan bar material (e.g., 410 stainless steel), and the radius of your smallest radii tube. In addition, discuss whether measurements from a tube support are from the middle of the support or the edge of the support (e.g., does F02 minus 0.6 inches, specify an indication 0.6 inches from the bottom edge of the second fan bar).
2. A few tubes were reported with dent and ding indications. Please clarify your reporting threshold for dents and dings and discuss whether the calibration procedure (for measuring the size of dents and dings) is consistent with that described in Generic Letter 95-05 (or with industry guidelines). Also, discuss whether the dents and dings found during the RFO 15 inspections were traceable back to the baseline inspection and discuss any changes in magnitude. If the dents or dings are not traceable to your baseline inspection and/or have changed in magnitude, discuss the reason for any change. Please discuss the results from any rotating probe inspections at dents or dings including any anomalies.
3. A few tubes were reported to have possible loose part indications (PLPs). Some of the tubes with these indications are in the interior of the tube bundle. Please clarify whether the tubes with possible loose part signals were visually inspected to confirm the nature of these potential loose parts. If visual inspections were not performed and/or the part was not removed, discuss what analyses were performed to ensure these potential parts do not compromise tube integrity for the period of time between inspections.
4. Several tubes were identified that have bulges. Please discuss whether these indications were present in the baseline inspection and discuss any changes in size. If the bulges are not traceable to your baseline inspection and/or have changed in size, discuss the reason for any change. Please discuss whether these indications were inspected with a rotating probe.
5. Please clarify the number of tubes in each of the two steam generators and discuss whether any tubes were plugged prior to commercial operation.

ATTACHMENT

6. In your report you indicate that tube-to-tube contact occurs primarily in the tube U-bends and is caused from tube bowing between the supports. Please discuss whether any tube-to-tube contact has been observed at Millstone 2. Please discuss whether the number of tubes affected has increased/decreased since the steam generators were installed. If tube-to-tube contact is occurring, please discuss the effects on the eddy current inspection including the ability to detect loose parts.