

August 24, 2015

MEMORANDUM TO: Gloria J. Kulesa, Chief
Steam Generator Tube Integrity and
Chemical Engineering Branch
Division of Engineering
Office of Nuclear Reactor Regulation

FROM: Alan T. Huynh, Materials Engineer */RA/*
Steam Generator Tube Integrity and
Chemical Engineering Branch
Division of Engineering
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF THE JULY 30, 2015, CATEGORY 2
PUBLIC MEETING WITH INDUSTRY REGARDING THE STEAM
GENERATOR DIVIDER PLATE AND TUBE-TO-TUBESHEET WELD

The U.S. Nuclear Regulatory Commission (NRC) staff met with the industry on July 30, 2015, to discuss issues associated with aging management for potential divider plate and tube-to-tubesheet weld degradation, at NRC Headquarters in Rockville, MD. The topics discussed are shown in the industry's slides, which are available in the Agencywide Documents Access and Management System (ADAMS) under Accession No. ML15211A507. The slides in ADAMS contain minor differences compared to those provided during the meeting (e.g., the slides in ADAMS include additional references to reports). The enclosure to this letter provides a list of people who attended the meeting in person and by phone. This meeting was noticed as a public meeting and the agenda is available in ADAMS under Accession No. ML15182A220. The NRC staff requested the industry address a list of items during the meeting, which are in Enclosure 1 of the meeting notice (ADAMS Accession No. ML15182A052).

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Acronyms used and not defined in the industry slides include:

- ASME – American Society of Mechanical Engineers
- B&W – Babcock and Wilcox
- BWR – Boiling Water Reactor
- EdF – Électricité de France
- EPRI – Electric Power Research Institute
- gpm – gallons per minute
- GTAW – Gas Tungsten Arc Welding
- IGSCC – Intergranular Stress Corrosion Cracking
- LOCA – Loss of Coolant Accident
- NDE – Nondestructive Examination

- NEI – Nuclear Energy Institute
- OG – Owner’s Group
- OTSG – Once-Through Steam Generator
- PWR – Pressurized Water Reactor
- PWSCC – Primary Water Stress Corrosion Cracking
- RCS – Reactor Coolant System
- ROTSG – Replacement Once-Through Steam Generator
- RSG – Replacement Steam Generator
- SCC – Stress Corrosion Cracking
- SEM – Scanning Electron Microscope
- SG – Steam Generator
- SGMP – Steam Generator Management Program
- TIG – Tungsten Inert Gas (also known as Gas Tungsten Arc Welding or GTAW)
- TT – Thermally Treated
- US – United States

During the meeting, industry made a presentation which addressed topics described in the meeting notice. At various points in the meeting, there were additional discussions about the agenda topics. Information exchanged during these discussions and not included in the presentation materials is summarized below:

- The industry indicated that although a fatigue growth evaluation was performed for a postulated flaw 0.25 inches deep into the low alloy steel, it is unlikely that a crack would propagate into the low alloy steel since low alloy steel is not susceptible to PWSCC.
- The industry indicated that all US plants are required to follow the EPRI SGMP Chemistry Guidelines.
- To EPRI's knowledge, all US utilities are performing visual inspections in accordance with Westinghouse Nuclear Safety Advisory Letter 12-1. The industry indicated that inspections of the divider plate, stub runner, and other items not specified in Westinghouse Nuclear Safety Advisory Letter 12-1 are included in the newest draft of the Steam Generator Integrity Assessment Guidelines, which will be issued in 2016.
- The Z-seam weld is approximately 3.5 inches below the bottom of the tubesheet.

Project No.: 689

Enclosure:
Attendance List

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ADAMS ACCESSION Nos.: Package: ML15218A513

Meeting Summary: ML15218A516

Meeting Notice: ML15182A220

Enclosure: ML15182A052

Industry Slides: ML15211A507

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|---------------|-------------|------------|-------------|
| OFFICE | NRR/DE/ESGB | NRR/DE | NRR/DE/ESGB |
| NAME | AHuynh | KKarwoski | GKulesa |
| DATE | 08/06/2015 | 08/21/2015 | 08/24/2015 |

OFFICIAL RECORD COPY

Attendance List
July 30, 2015, NRC Public Meeting with the
Meeting with Industry to Discuss Tube-to-Tubesheet Weld and Divider Plate Cracking Report

Note: The list of phone participants may not be all-inclusive

Industry Participants

Nelson Azevedo, Entergy
Helen Cothron, EPRI
Michael Giaco, Enercon
Greg Kammerdeiner, FENOC
Richard Smith, SIA

Industry Phone Participants

Kenneth W. Blair, Callaway Plant
Eric Blocher, STARS License Renewal
Gary Whiteman, Westinghouse

Members of the Public Participants

Ray Kuyler, Morgan Lewis
Brian Lusignan, State of New York

NRC

Robert Davis
Brian Harris
Allen Hiser
Alan Huynh
Andrew Johnson
Kenneth Karwoski
Gloria Kulesa
Gregory Makar
Seung Min
MaryJane Ross-Lee

Members of the Public Phone Participants

Lisa S. Kwong, State of New York