



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 23, 2015

Mr. David A. Heacock
President and Chief Nuclear Officer
Dominion Nuclear Connecticut, Inc.
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

SUBJECT: MILLSTONE POWER STATION, UNIT 3 – SUMMARY OF CONFERENCE
CALL REGARDING THE FALL 2014 STEAM GENERATOR TUBE
INSPECTIONS (TAC NO. MF5037)

Dear Mr. Heacock:

On October 27, 2014, the U.S. Nuclear Regulatory Commission (NRC) staff participated in a conference call with representatives of Dominion Nuclear Connecticut, Inc. (the licensee) regarding the ongoing steam generator (SG) inspection activities at Millstone Power Station, Unit 3 (MPS3). The purpose of this call and NRC review of the ensuing SG 180-day report is to ensure acceptable tube inspections are being performed and that tube integrity is being maintained. In addition, these conference calls and reviews provide the NRC with information to verify that underlying assumptions made in the licensee's assessments of tube integrity (e.g., growth rates) are consistent with the licensee's original assumptions.

Enclosure 1 is a summary of the October 27, 2014, conference call, and Enclosure 2 includes the materials that were provided by the licensee in support of the call.

If you have any questions, please contact me at 301-415-1030 or via e-mail at Richard.Guzman@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Guzman", is written over a horizontal line.

Richard V. Guzman, Senior Project Manager
Plant Licensing I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-423

Enclosures:

1. Fall 2014 SG Inspection Conference
Call Summary
2. Licensee-provided Information

cc w/encls: Distribution via Listserv

ENCLOSURE 1

CONFERENCE CALL SUMMARY REGARDING FALL 2014

STEAM GENERATOR TUBE INSPECTION ACTIVITIES

DOMINION NUCLEAR CONNECTICUT, INC.

MILLSTONE POWER STATION, UNIT 3

DOCKET NO. 50-423

CONFERENCE CALL SUMMARY REGARDING
FALL 2014 STEAM GENERATOR TUBE INSPECTION ACTIVITIES
DOMINION NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION, UNIT 3
DOCKET NO. 50-423
TAC NO. MF5037

On October 27, 2014, the U.S. Nuclear Regulatory Commission (NRC) staff participated in a conference call with representatives of Dominion Nuclear Connecticut, Inc. (the licensee) regarding the ongoing steam generator (SG) inspection activities at Millstone Power Station, Unit 3 (MPS3). In support of the conference call, the licensee provided the documents in Enclosure 2. This information is summarized below.

MPS3 has four Westinghouse model F steam generators. Each steam generator has 5,626 thermally treated Alloy 600 tubes. The tubes have an outside diameter of 0.688 inches and a nominal wall thickness of 0.040 inches. The tubes are hydraulically expanded for the full depth of the tubesheet at each end. The tubes are supported by stainless steel support plates with quatrefoil-shaped holes and V-shaped chrome plated Alloy 600 anti-vibration bars (AVBs). The first 10 rows of tubes were stress-relieved to improve corrosion resistance. The tubes have a square pitch with a center-to-center spacing of 0.980 inches.

The following abbreviations are used in Enclosure 2:

- | | |
|-------------------------|-------------------------------------|
| • CL – Cold leg | • TEC – Tube End Hot |
| • HL – Hot Leg | • TSP – Tube Support Plate |
| • OXP - Overexpansion | • TW – Through-wall |
| • S/G – Steam Generator | • 3R16 – Unit 3 Refueling Outage 16 |
| • TEH – Tube End Hot | |

Additional clarifying information regarding the documents provided by the licensee in Enclosure 2 and information not included in the licensee-provided document is summarized below.

- There were no trends in the amount of primary-to-secondary leakage observed during the recently completed cycle.
- No secondary side pressure tests were performed during the outage.
- No exceptions were taken to the industry guidelines.
- During this outage, 100 percent of the tubes in SG "A" and SG "C" were inspected full length using a bobbin probe. A rotating coil probe was used to inspect the U-bends in rows 1 and 2.

- There was no corrosion degradation found during this inspection.
- There were no new foreign object wear indications found.
- There were no plans to plug any tubes in either SG at the time of the call.
- There were no in-situ pressure tests planned.
- One loose part was found in SG "C" and was described as a 3.4-inch long metal rod. No wear indications were attributed to this loose part.
- Using a soft chemical cleaning process known as Deposit Minimization Treatment, approximately 12,000 pounds of material were removed from the steam generators.
- Secondary side inspections included foreign object search and retrieval for possible loose parts, steam drum visual inspections, upper tube support visual inspections for cleanliness, and deposit mapping.
- There were no unexpected or unusual results found during these inspections.

Additional information provided by the licensee subsequent to the conference call is summarized below:

- Among 317 AVB wear indications found in 165 tubes of SG "A", the maximum depth was 36 percent TW. Of these, 27 were newly reported with a maximum depth of 17 percent TW.
- Among 8 TSP wear indications found in 8 tubes of SG "A", the maximum depth was 16 percent TW. Of these, 2 were newly reported with a maximum depth of 16 percent TW. The maximum depth among the 6 previously reported indications was 15 percent TW.
- Among 76 AVB wear indications found in 39 tubes of SG "C", the maximum depth was 26 percent TW. Of these, 9 were newly reported with a maximum depth of 11 percent TW among them.
- Among 6 TSP wear indications found in 6 tubes of SG "C", the maximum depth was 21 percent TW. Of these, 3 were newly reported with a maximum depth of 21 percent TW among them. The maximum depth among the 3 previously reported indications was 13 percent TW.

The NRC staff did not identify any issues that required follow-up action at this time; however, the staff asked to be notified in the event that any unusual conditions were detected during the remainder of the outage.

ENCLOSURE 2

LICENSEE-PROVIDED STEAM GENERATOR

TUBE INSPECTION INFORMATION

DOMINION NUCLEAR CONNECTICUT, INC.

MILLSTONE POWER STATION, UNIT 3

DOCKET NO. 50-423



Millstone Nuclear Station
October 2014 - 3R16 ECT Inspection
Status Report



10/23/2014 3:40

Examination	Leg	Probe	Extent	S/G "A"				S/G "C"			
				Planned	Acquired	Resolved	% Complete	Planned	Acquired	Resolved	% Complete
Bobbin Exam											
Full Length	Cold	560MR	TEHTEC	4491	330		0.00%	4524	4289	4270	94.39%
HL Straights (R 1-9)	Hot	560MR	08HTEH	1086	1086	236	21.73%	1080	1069	1069	98.98%
CL Straights (R 1-2)	Cold	560MR	08CTEC	243			0.00%	232	156	99	42.67%
CL Candy Canes (R 3-9)	Cold	560UC	08HTEC	843			0.00%	848	564	11	1.30%

Array Exam											
HL Tubesheet (Baffle Plate)	Hot	560XP	01HTEH	4338			0.00%	4361	3917	1601	36.71%
HL Tubesheet (Non-Baffle)	Hot	560XP	02HTEH	1739			0.00%	1243	1185	667	53.66%
CL Tubesheet (Baffle Plate)	Cold	560XP	01CTEC	606			0.00%	621			0.00%
CL Tubesheet (Non-Baffle)	Cold	560XP	02CTEC	116			0.00%	111			0.00%
CL OXP (Baffle Plate)	Cold	560XP	01CTEC	8			0.00%	15			0.00%
CL OXP (Non Baffle Plate)	Cold	560XP	02CTEC	12			0.00%	5			0.00%
Additional Array Exams	Both	560XP	Various					4			0.00%

MRPC Exam											
Low Row U-Bend	Cold	5201P	08C08H	243			0.00%	232			0.00%
Hist. U-Bend Special Interest	Hot	5201P	Various	14			0.00%	12			0.00%
Hist. HL Special Interest	Hot	560PP	Various	204			0.00%	164			0.00%
Hist. CL Special Interest	Cold	560PP	Various	32			0.00%	39			0.00%
3R16 HL Special Interest	Hot	560PP	Various					52			0.00%
3R16 CL Special Interest	Cold	560PP	Various					24			0.00%
3R16 U-Bend Special Interest	Both	5201P	Various					6			0.00%
Total Inspections				13475	1416	236	1.75%	13573	11180	7717	56.86%

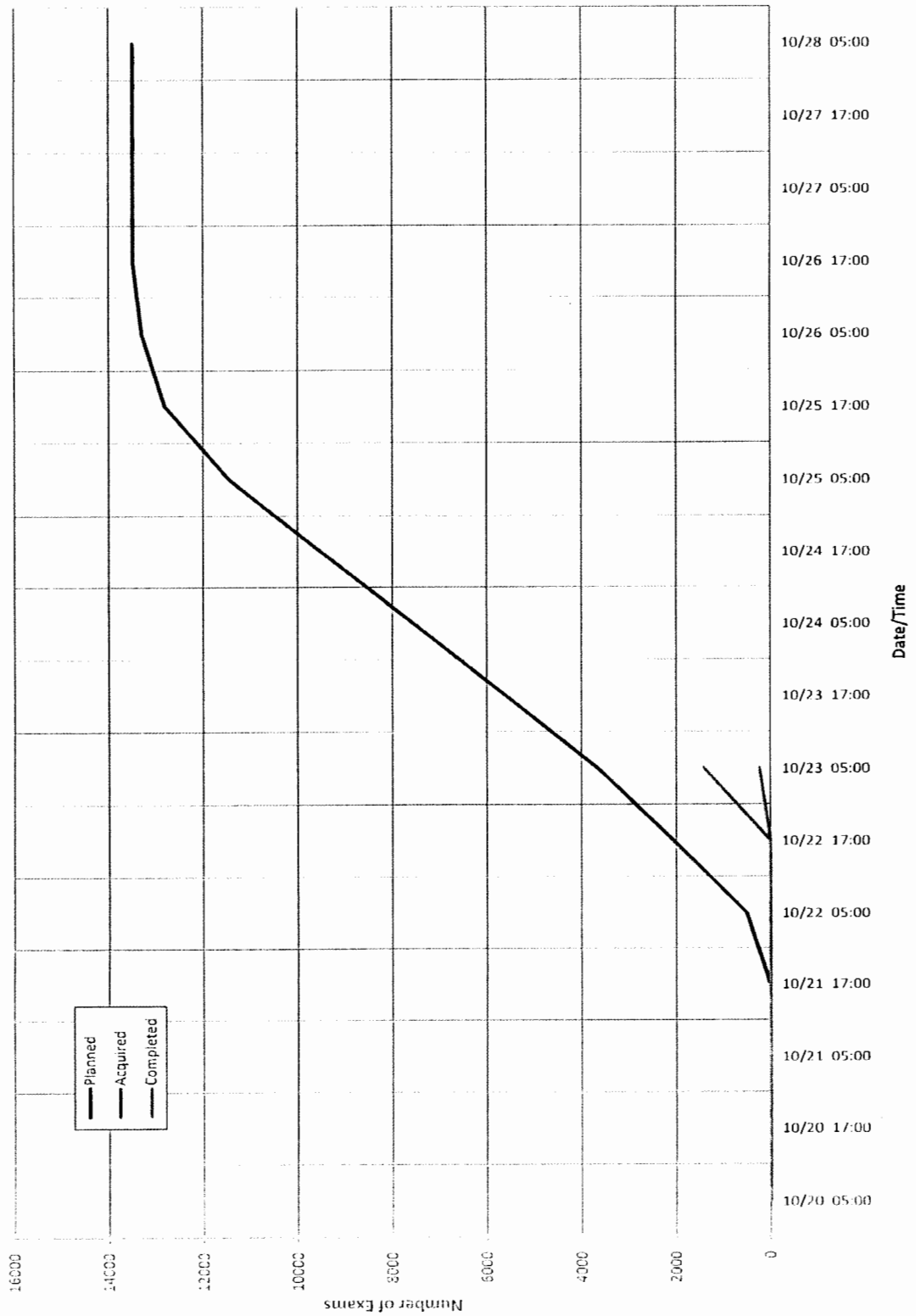
	# Calls	# Tubes		# Calls	# Tubes
%TW Indications					
1 - 19%	0	0		57	37
20 - 36%	0	0		18	10
37 - 100%	0	0		0	0
Bobbin Indication Codes					
S / H Codes	7	5		805	572
"I" Codes (Possible Repairable)	0	0		52	47
MRPC Indication Codes					
"I" Codes (Possible Repairable)	0	0		0	0
Estimated Number of Tubes to Plug		0			0



October 2014 - 3R16 ECT Inspection

S/G "A"

Trend Report

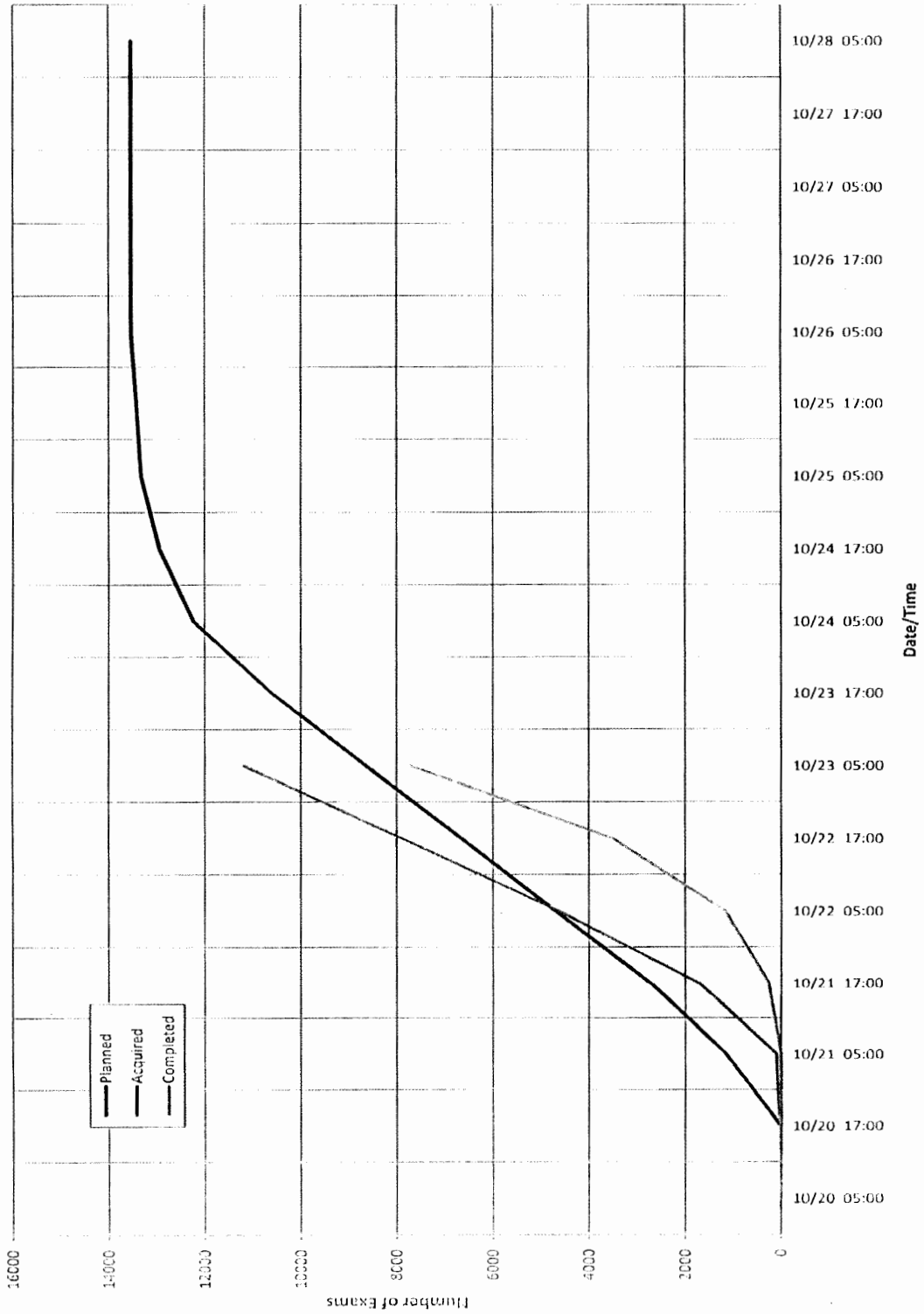




October 2014 - 3R16 ECT Inspection

S/G "C"

Trend Report



June 23, 2015

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Sincerely,

/RA/

Richard V. Guzman, Senior Project Manager
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Division of Operating Reactor Licensing
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*memo dated (ML14330A528)

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DATE	06/22/2015	06/22/2015	12/17/2014	06/23/2015	06/23/2015

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