

SEP 19 2019



U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Serial No. 19-375
NSSL/MLC R0
Docket No. 50-423
License No. NPF-49

DOMINION ENERGY NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNIT 3
END OF CYCLE 19 STEAM GENERATOR TUBE INSPECTION REPORT

In accordance with the Millstone Power Station Unit 3 Technical Specification (TS) Section 6.9.1.7, Dominion Energy Nuclear Connecticut, Inc. hereby submits the End of Cycle 19 (EOC19) Steam Generator (SG) Tube Inspection report. The report is submitted within 180 days after initial entry into MODE 4 following completion of the spring 2019 SG inspections performed in accordance with TS 6.8.4.g, "Steam Generator (SG) Program." Initial entry into Mode 4 occurred on May 11, 2019.

Attachment 1 contains the EOC19 SG Tube Inspection report. Attachment 2 contains a list of acronyms.

The report addresses the following reporting requirements:

- a. The scope of inspections performed on each SG,
- b. Degradation mechanisms found,
- c. Nondestructive examination techniques utilized for each degradation mechanism,
- d. Location, orientation (if linear), and measured sizes (if available) of service induced indications,
- e. Number of tubes plugged during the inspection outage for each degradation mechanism,
- f. The number and percentage of tubes plugged to date and the effective plugging percentage in each steam generator,
- g. The results of condition monitoring, including the results of tube pulls and in-situ testing,
- h. The primary to secondary LEAKAGE rate observed in each SG (if it is not practical to assign the LEAKAGE to an individual SG, the entire primary to secondary LEAKAGE should be conservatively assumed to be from one SG) during the cycle preceding the inspection which is the subject of the report,
- i. The calculated accident induced leakage rate from the portion of the tubes below 15.2 inches from the top of the tubesheet for the most limiting accident in the most limiting SG. In addition, if the calculated accident induced leakage rate from the most limiting accident is less than 2.49 times the maximum operational primary to secondary leakage rate, the report should describe how it was determined; and
- j. The results of monitoring for tube axial displacement (slippage). If slippage is discovered, the implications of the discovery and corrective action shall be provided.

ADD
NRR

If you have any questions or require additional information, please contact Mr. Jeffry A. Langan at (860) 444-5544.

Sincerely,



J. R. Daugherty
Site Vice President – Millstone

Attachments:

- 1) Millstone Power Station Unit 3, End of Cycle 19 Steam Generator Tube Inspection Report
- 2) Acronyms

Commitments made in this letter: None

cc: U. S. Nuclear Regulatory Commission
Region I
2100 Renaissance Blvd, Suite 100
King of Prussia, PA 19406-2713

R. V. Guzman
Senior Project Manager – Millstone Power Station
U. S. Nuclear Regulatory Commission
One White Flint North, Mail Stop O8 C2
11555 Rockville Pike
Rockville, MD 20852-2738

NRC Senior Resident Inspector
Millstone Power Station

Serial No. 19-375
Docket No. 50-423

Attachment 1

**Millstone Power Station Unit 3
End of Cycle 19 Steam Generator Tube Inspection Report**

**MILLSTONE POWER STATION UNIT 3
DOMINION NUCLEAR CONNECTICUT, INC. (DNC)**

End of Cycle 19 Steam Generator Tube Inspection Report

Transmittal of this report satisfies Millstone Power Station Unit 3 (MPS3) Technical Specification (TS) 6.9.1.7 which specifies that a report shall be submitted within 180 days after the initial entry into MODE 4 following completion of an inspection performed in accordance with TS 6.8.4.g, Steam Generator (SG) Program. During MPS3's spring 2019 refueling outage (3R19), steam generator inspections were completed in accordance with TS 6.8.4.g. Initial entry into Mode 4 occurred on May 11, 2019; therefore, this report is required to be submitted to the NRC by November 7, 2019.

This attachment provides a summary of the MPS3 SG inspection results and specific responses to each of the TS 6.9.1.7 reporting requirements. Attachment 2 contains a list of acronyms.

Introduction

MPS3 is a four loop Westinghouse pressurized water reactor with Westinghouse Model F SGs. Each SG was fabricated with 5626 U-bend thermally treated Inconel 600 tubes. The tubing is nominally 0.688 inches outside diameter with a 0.040 inch nominal wall thickness. During SG fabrication, the tubes were hydraulically expanded over the full depth of the 21.23-inch thick tubesheet. The tubesheet was drilled on a square pitch with 0.98 inch spacing. There are 59 rows and 122 columns in each SG. The radius of row 1 U-bends is 2.20 inches. U-bends in rows 1 through 10 were stress relieved after being formed. Secondary side tube support structures include a flow distribution baffle, seven plate supports with broached holes on the vertical section of the tubes, and six anti-vibration bars (AVBs) on the U-bend section of the tubes.

The SGs have accrued 26.16 Effective Full Power Years (EFPY) of operation as of the End of Cycle (EOC) 19 (April 2019). MPS3 has the capacity to generate a maximum calculated gross output of approximately 1,296 MWe.

TS 6.9.1.7 Reporting Requirements

This section provides responses to each of the reporting requirements specified in MPS3 TS 6.9.1.7. Bold wording represents TS verbiage. The required information is provided immediately following the restatement of each reporting requirement.

A report shall be submitted within 180 days after the initial entry into MODE 4 following completion of an inspection performed in accordance with TS 6.8.4.g, Steam Generator (SG) Program. The report shall include:

a. The scope of inspections performed on each SG,

One hundred percent of the operational tubes in SG B and SG D, a total of 11,136 tubes or approximately 50 percent of the total population of tubes, were inspected full length using eddy current examination techniques. The majority of the tubing length was examined with bobbin probes. The U-bends of rows 1 and 2 (481 in-service tubes) were examined with a Motorized Rotating Probe Coil (MRPC) technique in addition to the bobbin probe examination of the straight legs of the tubes. An additional augmented sample of 374 tube

locations was examined with a MRPC probe. The augmented sample inspections were performed in areas of special interest including hot leg expansion transitions, tube overexpansion locations, dents, as well as locations where the bobbin probe response was ambiguous. An additional augmented sample of 12,663 tube locations was inspected with an array coil probe. The array coil probe sample included 100% of the hot leg top-of-tubesheet (TTS) locations (11,083 tubes), and approximately 13% of the cold leg TTS locations (1,527 tubes). The extent of the TTS examinations was from the first support structure detected above the secondary face of the tubesheet to 15.2 inches below the secondary face of the tubesheet; except for the tubes categorized as high residual stress tubes. For the high residual stress tubes, the extent included the entire full length of the tubes.

Table 1
3R19 ECT Examination Summary

	SG A	SG B	SG C	SG D	Total
Number of Installed Tubes	5626	5626	5626	5626	22504
Number of Tubes In-service at start of 3R19	5575	5601	5604	5535	22315
Number of Tubes Inspected w/Bobbin Probe	N/A	5601	N/A	5535	11136
Number of Tube Locations Inspected w/Array Probe	N/A	6370	N/A	6293	12663
Number of Exams Performed w/MRPC	N/A	418	N/A	437	855
Previously Plugged Tubes	51	25	22	91	189
Tubes Plugged During 3R19	0	0	0	0	0

During 3R19, secondary side activities were performed in SGs A, B, C, and D and included the following:

- High pressure sludge lancing.
- Post-sludge lancing visual examination of the TTS annulus and no-tube lane to assess as-left material condition and cleanliness, and to identify and remove any retrievable foreign objects.
- Visual investigation of accessible locations having eddy current indications potentially related to foreign objects, and if present, removal of those retrievable foreign objects.
- Secondary side upper internal examinations within SG C as follows:
 - Steam drum visual inspections to evaluate the material condition and cleanliness of key components such as moisture separators, drain systems, and interior surfaces.
 - Drop down examinations (through the primary separators) of the upper tube bundle and AVB supports.
 - Visual inspections of feed ring internal interface for flow accelerated corrosion.
 - Visual inspections of upper tube support plate (TSP) to assess material condition and cleanliness.

The results of all secondary-side visual examinations performed were satisfactory, with no degradation detected.

b. Degradation mechanisms found,

The existing degradation mechanisms found during 3R19 included AVB wear, TSP wear, volumetric indications from fabrication and volumetric degradation from foreign object wear.

c. Nondestructive examination techniques utilized for each degradation mechanism,

Table 2 identifies the examination techniques used for each identified degradation mechanism.

Table 2
Degradation Mechanisms and Inspection Techniques

Classification	Degradation Mechanism	Location	Probe Type
Existing	Tube Wear	Anti-Vibration Bars	Bobbin – Detection and Sizing
Existing	Tube Wear	Tube Support Plate	Bobbin – Detection +Point™ – Sizing
Existing	Tube Wear (foreign objects)	Freespan and TTS	Bobbin, Array and +Point™ – Detection +Point™ – Sizing
Existing	IGA/SCC	Tube Ends	N/A*
Existing	FAC	Feed Ring and J Tube to Feed Ring Interface	Visual Inspection
Existing	Tube Wear	Flow Distribution Baffle	Bobbin – Detection +Point™ – Sizing
Potential	ODSCC PWSCC	Hot Leg Top-of-Tubesheet And Sludge Region	Array - Detection +Point™ – Detection and Sizing
Potential	ODSCC PWSCC	Bulges, Dents, Manufacturing Anomalies, and Above- Tubesheet Overexpansions (OVR)	Array - Detection +Point™ – Detection and Sizing
Potential	PWSCC	Tubesheet Overexpansions (OXF)	Array - Detection +Point™ – Detection and Sizing
Potential	ODSCC PWSCC	Row 1 and 2 U-bends	+Point™ – Detection and Sizing
Potential	FAC	Moisture Separators	Visual Inspection
Potential	Plug Installation Problems	Plugs	Visual Inspection
Potential	Tube Slippage	Within Tubesheet	Bobbin Detection

*Inspection for this mechanism was not necessary under the existing alternate repair criteria.

d. Location, orientation (if linear), and measured sizes (if available) of service induced indications,

Tables 3 through 8 identify the AVB wear and non-AVB wear volumetric indications reported during 3R19.

Table 3
3R19 Volumetric Degradation Summary SG B (Excludes AVB Wear)

SG	Row	Col	Location	Max Depth %TW	Cause	Foreign Object Remaining	Plugged & Stabilized?
B	1	37	03C + 0.36"	6	TSP Wear	N/A	No
B	15	99	03H - 0.80"	8	TSP Wear	N/A	No
B	29	65	08C - 0.78"	7	TSP Wear	N/A	No
B	29	109	04H - 0.55"	5	TSP Wear	N/A	No
B	30	52	05H - 0.74"	9	TSP Wear	N/A	No
B	32	30	06H - 1.18"	9	TSP Wear	N/A	No
B	1	119	TSC + 4.17"	23	Foreign Object Wear	No	No
B	1	120	TSC + 3.76"	19	Foreign Object Wear	No	No
			TSC + 4.74"	17	Foreign Object Wear	No	No
B	1	121	TSC + 6.52"	9	Foreign Object Wear	No	No
B	22	118	TSC + 0.86"	20	Lancing Sled	N/A	No
B	44	98	02H + 15.85"	19	Fabrication	N/A	No

Table 4
3R19 Volumetric Degradation Summary SG D (Excludes AVB Wear)

SG	Row	Col	Location	Max Depth %TW	Cause	Foreign Object Remaining	Plugged & Stabilized?
D	17	24	07C - 0.69"	35	TSP Wear	N/A	No
D	24	89	06C - 0.68	10	TSP Wear	N/A	No
D	27	39	08C - 0.81"	17	TSP Wear	N/A	No
D	35	73	04H - 0.46"	25	TSP Wear	N/A	No
D	46	24	01H - 0.17"	11	FDB Wear	N/A	No
D	46	99	01H + 0.53"	25	Foreign Object Wear	No	No
D	52	42	01H + 0.50"	24	Foreign Object Wear	No	No
D	52	91	01H + 2.54"	31	Foreign Object Wear	No	No
D	58	50	01C + 0.47"	16	Foreign Object Wear	No	No
D	58	51	01C + 0.48"	24	Foreign Object Wear	No	No

Table 5
3R19 AVB Wear Listings, SG B – Repeat Indications

SG	Row	Col	Location	%TW
SGB	30	12	AV2	10
SGB	30	12	AV5	13
SGB	32	108	AV4	13
SGB	33	12	AV2	16
SGB	33	12	AV5	17
SGB	33	39	AV3	10
SGB	33	109	AV2	15
SGB	33	109	AV3	18
SGB	33	109	AV6	7
SGB	34	18	AV3	9
SGB	34	18	AV4	6
SGB	34	71	AV3	9
SGB	34	109	AV2	9
SGB	34	109	AV3	19
SGB	34	109	AV5	12
SGB	34	109	AV6	8
SGB	34	110	AV3	10
SGB	35	103	AV6	11
SGB	35	106	AV3	7
SGB	35	106	AV4	15
SGB	35	106	AV6	9
SGB	36	22	AV6	9
SGB	36	39	AV2	8
SGB	36	39	AV3	9
SGB	36	39	AV4	9
SGB	36	39	AV5	17
SGB	36	39	AV6	11
SGB	36	67	AV6	9
SGB	37	100	AV4	12
SGB	37	103	AV2	10
SGB	37	104	AV3	12
SGB	37	104	AV4	9
SGB	38	104	AV3	12
SGB	38	104	AV4	23
SGB	38	104	AV5	9
SGB	39	30	AV2	10
SGB	39	30	AV4	11
SGB	39	30	AV5	9
SGB	39	96	AV3	13

SG	Row	Col	Location	%TW
SGB	40	23	AV2	12
SGB	40	23	AV3	12
SGB	40	23	AV4	14
SGB	40	23	AV5	15
SGB	40	24	AV3	17
SGB	40	24	AV4	18
SGB	40	24	AV5	11
SGB	41	34	AV2	11
SGB	41	34	AV3	13
SGB	41	34	AV4	32
SGB	41	34	AV5	30
SGB	41	34	AV6	11
SGB	41	50	AV3	17
SGB	41	50	AV4	24
SGB	41	69	AV3	8
SGB	41	69	AV4	16
SGB	41	69	AV5	28
SGB	41	77	AV3	15
SGB	41	77	AV4	10
SGB	41	77	AV5	18
SGB	42	19	AV1	11
SGB	42	21	AV2	18
SGB	42	21	AV3	11
SGB	42	21	AV4	17
SGB	42	21	AV5	26
SGB	42	21	AV6	13
SGB	42	33	AV2	11
SGB	42	96	AV2	17
SGB	42	96	AV3	13
SGB	42	96	AV4	9
SGB	42	96	AV5	10
SGB	42	98	AV1	8
SGB	42	98	AV2	31
SGB	42	98	AV3	34
SGB	42	98	AV4	15
SGB	42	98	AV5	10
SGB	43	86	AV4	7
SGB	43	100	AV3	24
SGB	43	100	AV4	28

SG	Row	Col	Location	%TW
SGB	43	100	AV6	10
SGB	45	22	AV6	9
SGB	46	99	AV4	6
SGB	48	25	AV6	7
SGB	49	27	AV1	11
SGB	49	27	AV2	9
SGB	49	27	AV5	11
SGB	50	29	AV2	17
SGB	50	29	AV6	14
SGB	50	72	AV3	12
SGB	50	88	AV2	17
SGB	50	88	AV3	21
SGB	50	88	AV4	21
SGB	50	88	AV5	11
SGB	50	88	AV6	10
SGB	51	91	AV4	14
SGB	51	91	AV5	13
SGB	51	91	AV6	6
SGB	54	35	AV2	13

SG	Row	Col	Location	%TW
SGB	54	35	AV4	8
SGB	54	35	AV5	13
SGB	54	35	AV6	10
SGB	54	36	AV5	34
SGB	54	36	AV6	13
SGB	54	37	AV1	11
SGB	54	45	AV2	9
SGB	55	84	AV6	13
SGB	56	41	AV3	10
SGB	56	42	AV6	11
SGB	56	71	AV2	11
SGB	56	81	AV1	9
SGB	57	70	AV2	8
SGB	58	74	AV4	10
SGB	58	75	AV5	18
SGB	59	65	AV2	12

Table 6
3R19 AVB Wear Listings, SG B – New Indications

SG	Row	Col	Location	%TW
SGB	39	30	AV3	10
SGB	42	33	AV5	10

Table 7
3R19 AVB Wear Listings, SG D – Repeat Indications

SG	Row	Col	Location	%TW
SGD	9	121	AV6	12
SGD	24	117	AV1	21
SGD	25	93	AV5	11
SGD	25	115	AV1	8
SGD	26	8	AV6	14
SGD	26	115	AV1	14
SGD	26	116	AV1	10
SGD	27	115	AV1	16
SGD	27	115	AV6	13
SGD	28	8	AV1	13
SGD	28	8	AV6	15
SGD	28	114	AV2	30
SGD	28	114	AV5	11
SGD	29	113	AV2	15
SGD	29	113	AV5	15
SGD	30	113	AV2	13
SGD	30	114	AV1	10
SGD	30	114	AV6	22
SGD	31	99	AV2	10
SGD	31	99	AV5	11
SGD	31	99	AV6	10
SGD	32	112	AV5	11
SGD	33	86	AV3	11
SGD	33	86	AV4	14
SGD	33	109	AV2	11
SGD	33	109	AV5	16
SGD	34	109	AV2	11
SGD	35	99	AV2	11
SGD	35	99	AV5	15
SGD	35	102	AV5	10
SGD	35	103	AV5	15
SGD	35	107	AV4	10
SGD	35	108	AV3	16
SGD	35	108	AV4	12
SGD	35	109	AV4	13
SGD	35	109	AV5	9
SGD	36	34	AV2	6
SGD	36	82	AV3	10

SG	Row	Col	Location	%TW
SGD	36	88	AV2	11
SGD	36	88	AV3	10
SGD	36	88	AV5	11
SGD	36	97	AV2	14
SGD	37	93	AV2	13
SGD	37	93	AV3	18
SGD	37	101	AV2	20
SGD	37	101	AV3	15
SGD	37	101	AV4	15
SGD	37	103	AV2	12
SGD	37	103	AV3	12
SGD	37	103	AV5	16
SGD	37	106	AV1	13
SGD	37	106	AV3	19
SGD	37	106	AV4	31
SGD	37	106	AV5	24
SGD	37	106	AV6	15
SGD	38	21	AV5	15
SGD	38	21	AV6	10
SGD	38	95	AV5	9
SGD	38	98	AV2	12
SGD	38	98	AV4	15
SGD	40	32	AV2	13
SGD	40	99	AV2	13
SGD	40	99	AV3	11
SGD	40	99	AV4	27
SGD	40	99	AV5	31
SGD	40	100	AV4	13
SGD	40	100	AV5	16
SGD	40	100	AV6	12
SGD	40	101	AV3	11
SGD	40	101	AV4	10
SGD	40	101	AV5	12
SGD	40	101	AV6	9
SGD	40	102	AV2	9
SGD	40	102	AV3	14
SGD	40	102	AV4	23
SGD	40	102	AV5	17

SG	Row	Col	Location	%TW
SGD	40	102	AV6	10
SGD	40	103	AV1	13
SGD	40	103	AV2	22
SGD	40	103	AV3	24
SGD	40	103	AV4	32
SGD	40	103	AV5	28
SGD	40	103	AV6	15
SGD	41	26	AV2	14
SGD	41	26	AV5	31
SGD	41	26	AV6	32
SGD	41	29	AV4	14
SGD	41	29	AV6	10
SGD	41	30	AV2	10
SGD	41	30	AV3	13
SGD	41	30	AV4	19
SGD	41	30	AV5	14
SGD	41	31	AV2	13
SGD	41	39	AV2	16
SGD	41	39	AV3	21
SGD	41	39	AV4	21
SGD	41	39	AV5	27
SGD	41	39	AV6	11
SGD	41	78	AV2	9
SGD	41	78	AV3	22
SGD	41	78	AV4	13
SGD	41	78	AV5	12
SGD	41	87	AV3	9
SGD	41	90	AV1	11
SGD	41	90	AV3	12
SGD	42	19	AV5	15
SGD	42	103	AV2	17
SGD	43	20	AV6	10
SGD	43	25	AV5	11
SGD	43	33	AV3	8
SGD	43	95	AV4	11
SGD	43	95	AV5	16
SGD	43	100	AV4	18
SGD	43	100	AV5	6
SGD	43	100	AV6	8
SGD	43	102	AV5	13
SGD	43	102	AV6	11

SG	Row	Col	Location	%TW
SGD	44	21	AV1	12
SGD	45	22	AV6	8
SGD	45	41	AV3	17
SGD	45	41	AV4	9
SGD	45	47	AV6	13
SGD	45	92	AV2	12
SGD	45	96	AV2	13
SGD	45	96	AV3	14
SGD	45	96	AV5	12
SGD	47	24	AV1	11
SGD	47	96	AV5	15
SGD	47	98	AV5	6
SGD	48	25	AV6	10
SGD	48	94	AV6	16
SGD	48	96	AV5	17
SGD	49	62	AV1	21
SGD	49	62	AV2	22
SGD	49	62	AV3	30
SGD	49	62	AV4	17
SGD	49	66	AV1	14
SGD	49	66	AV2	32
SGD	49	66	AV3	17
SGD	49	67	AV2	27
SGD	49	67	AV3	24
SGD	49	67	AV4	10
SGD	49	69	AV2	9
SGD	49	70	AV2	13
SGD	49	86	AV3	12
SGD	49	95	AV2	20
SGD	49	95	AV3	20
SGD	49	95	AV4	20
SGD	50	28	AV6	13
SGD	50	80	AV2	11
SGD	50	80	AV3	9
SGD	50	83	AV1	14
SGD	50	83	AV2	16
SGD	50	83	AV3	9
SGD	50	90	AV1	11
SGD	51	87	AV5	12
SGD	51	89	AV6	14
SGD	52	33	AV5	9

SG	Row	Col	Location	%TW
SGD	52	67	AV3	12
SGD	52	67	AV4	22
SGD	52	67	AV5	16
SGD	52	69	AV2	13
SGD	52	87	AV5	11
SGD	52	87	AV6	8
SGD	52	88	AV1	12
SGD	52	88	AV2	17
SGD	52	88	AV3	11
SGD	52	88	AV4	14
SGD	53	33	AV6	10
SGD	53	34	AV6	10
SGD	53	35	AV4	13
SGD	53	35	AV5	15

SG	Row	Col	Location	%TW
SGD	53	35	AV6	16
SGD	53	36	AV6	11
SGD	53	70	AV2	11
SGD	54	49	AV2	18
SGD	54	49	AV3	22
SGD	54	49	AV4	11
SGD	54	87	AV1	8
SGD	55	40	AV6	18
SGD	55	75	AV6	19
SGD	55	84	AV5	25
SGD	55	84	AV6	7
SGD	56	43	AV1	12
SGD	58	59	AV1	12

Table 8
3R19 AVB Wear Listings, SG D – New Indications

SG	Row	Col	Location	%TW
SGD	36	108	AV2	10
SGD	37	103	AV6	12
SGD	38	94	AV2	10

e. Number of tubes plugged during the inspection outage for each degradation mechanism,

Based on inspection results, no tubes were plugged during the 3R19 outage.

f. The number and percentage of tubes plugged to date and the effective plugging percentage in each steam generator.

Table 9 provides the total number of tubes plugged to date and the effective plugging percentage in each SG.

Table 9
Number Tubes Plugged To Date

	SG A	SG B	SG C	SG D
Prior to 3R19	51	25	22	91
During 3R19	0	0	0	0
Total After 3R19	51	25	22	91
Percentage	0.906	0.444	0.391	1.617
Overall Percentage	0.84			

Since no sleeving has been performed in the MPS3 steam generators, the effective plugging percentage is the same as the actual plugging percentage.

g. The results of condition monitoring, including the results of tube pulls and in-situ testing,

No tubes were pulled and no in-situ pressure tests were performed. The condition monitoring assessment concluded that the structural integrity, operational leakage, and accident induced leakage performance criteria were not exceeded during the operating interval preceding 3R19.

h. The primary to secondary LEAKAGE rate observed in each SG (if it is not practical to assign the LEAKAGE to an individual SG, the entire primary to secondary LEAKAGE should be conservatively assumed to be from one SG) during the cycle preceding the inspection which is the subject of the report,

No primary to secondary SG leakage was reported during Cycle 19.

i. The calculated accident induced leakage rate from the portion of the tubes below 15.2 inches from the top of the tubesheet for the most limiting accident in the most limiting SG. In addition, if the calculated accident induced leakage rate from the most limiting accident is less than 2.49 times the maximum operational primary to secondary leakage rate, the report should describe how it was determined;

For the purposes of the condition monitoring assessment, and in accordance with the permanent alternate repair criteria, the accident leakage attributed to degradation within the tubesheet below the H* dimension must be estimated by applying a factor of 2.49 to the operational leakage. There was no recordable operational leakage during Cycle 19; hence, the leakage from this degradation during a limiting accident would have been zero (i.e., 2.49 x 0).

j. The results of monitoring for tube axial displacement (slippage). If slippage is discovered, the implications of the discovery and corrective action shall be provided.

Tube slippage monitoring was performed on SG B and SG D using the bobbin coil data during 3R19. There was no detection of slippage during the 3R19 examination.

Attachment 2

Acronyms

Acronyms

AVB	Anti-Vibration Bar	OVR	Above Tubesheet Over Expansion
BET	Bottom of the Expansion Transition	OXF	Over Expansion
BLG	Bulge	PID	Positive Identification
C	Column	PLG	Tube is plugged
CL	Cold Leg	PLP	Possible Loose Part
DDH	Ding or Dent Signal - Reviewed in History	PTE	Partial Tubesheet Expansion
DDI	Distorted Dent or Ding Indication	PWR	Pressurized Water Reactor
DDS	Ding or Dent Signal - Non-Confirming w/RPC	PWSCC	Primary Water Stress Corrosion Cracking
DNG	Ding	R	Row
DNT	Dent Indication	RAD	Retest Analyst Discretion
ECT	Eddy Current Test	RBD	Retest - Bad Data
EFPY	Effective Full Power Years	RIC	Retest - Incomplete
EPRI	Electric Power Research Institute	RRT	Retest - Restricted Tube
ETSS	Examination Technique Specification Sheet	S/N	Signal-to-Noise Ratio
F/L	Full Length	SAI	Single Axial Indication
FAC	Flow Accelerated Corrosion	SCC	Stress Corrosion Cracking
FDB	Flow Distribution Baffle	SCI	Single Circumferential Indication
FO	Foreign Object	SG	Steam Generator
FOTS	Foreign Object Tracking System	SLG	Sludge
HL	Hot Leg	SSI	Secondary Side Inspection
IGA	Intergranular Attack	SVI	Single Volumetric Indication
INF	Indication Not Found	TEC	Tube End Cold Leg
INR	Indication Not Reportable	TEH	Tube End Hot Leg
LPI	Loose Part Indication	TFH	Tangential Flaw-Like Signal - Reviewed in History
LPR	Loose Part Removed	TFS	Tangential Flaw-Like Signal - Non-Confirming w/RPC
LPS	Loose Part Signal	TSC	Top of Tubesheet Cold Leg
MRPC	Motorized Rotating Pancake Coil	TSH	Top of Tubesheet Hot Leg
NDD	No Detectable Degradation	TSP	Tube Support Plate
NDE	Nondestructive Examination	TTS	Top of Tubesheet
NDF	No Degradation Found	TWD	Through-Wall Depth
NEI	Nuclear Energy Institute	% TW	Percent Through-Wall
NQH	Non-quantifiable Indication - Reviewed in History	VOL	Volumetric Indication
NQI	Non-quantifiable Indication		
OA	Operational Assessment		
ODSCC	Outer Diameter Stress Corrosion Cracking		