



January 20, 2017

Technical Specification 6.9.1.10

LR-N17-0009

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington DC 20555-001

Salem Nuclear Generating Station Unit 1  
Facility Operating License No. DPR-70  
NRC Docket No. 50-272

Subject: **Steam Generator Tube Inspection Report – Twenty-fourth Refueling Outage (1R24)**

PSEG Nuclear, LLC (PSEG) hereby submits the Steam Generator Tube Inspection Report consistent with the requirements of Technical Specification (TS) 6.9.1.10. The report is being submitted within 180 days after the initial entry into HOT SHUTDOWN following completion of the inspection performed in accordance with Technical Specification 6.8.4.i, "Steam Generator (SG) Program." Salem Unit 1 entered HOT SHUTDOWN (Mode 4) on July 24, 2016, following the completion of its twenty-fourth refueling outage.

The following attachments are included in this letter:

Attachment 1	Steam Generator Tube Inspection Report TS 6.9.1.10
Attachment 2	Salem Unit 1 Model F SG Tube Support Arrangement and Terminology
Attachment 3	1R24 Repairable Tube Status Report
Attachment 4	Total Number and percentage of Tubes Plugged to Date
Attachment 5	1R24 Nondestructive Examination Techniques
Attachment 6	1R24 Service Induced Indications (AVB Wear)
Attachment 7	1R24 Service Induced Indications (TSP Wear)
Attachment 8	1R24 Service Induced Indications (FBP Wear)
Attachment 9	1R24 Service Induced Indications (Foreign Object Wear)

There are no commitments contained in this letter.

Should you have any questions regarding this submittal, please contact Mr. Michael Phillips at (856) 339-1873.

Sincerely,

  
F. Kenneth Grover  
Plant Manager – Salem

Attachments (9)

cc: Mr. D. Dorman, Administrator, Region I, NRC  
Ms. C. Parker, Project Manager, NRC  
Mr. P. Finney, NRC Senior Resident Inspector, Salem  
Mr. P. Mulligan, Manager IV, NJBNE  
Mr. L. Marabella, Corporate Commitment Tracking Coordinator  
Mr. T. Cachaza, Salem Commitment Tracking Coordinator  
Mr. Milton Washington, Chief Inspector – Occupational Safety and Health Bureau of  
Boiler and Pressure Vessel Compliance

Attachment 1  
LR-N17-0009

Steam Generator Tube Inspection Report  
TS 6.9.1.10

## STEAM GENERATOR TUBE INSPECTION REPORT TS 6.9.1.10

PSEG Nuclear LLC  
Salem Unit 1

### INTRODUCTION

In 1998 Salem Unit 1 commenced operating cycle 13 with the newly replaced steam generators from the canceled Seabrook-2 plant. Salem Unit 1 is a four (4) loop Westinghouse Pressurized Water Reactor (PWR) with Model F SGs that incorporate thermally treated Inconel 600 U-tubes. The tube bundle consists of 5,626 tubes with an outside diameter (OD) of 0.688 inches and a nominal tube wall thickness of 0.040 inches. During SG fabrication, the tubes were hydraulically expanded over the full tubesheet depth and the first ten tube rows were thermally stress relieved after U-bend formation. The seven (7) tube support plates (TSP) are fabricated from 405 stainless steel (SS) and have broached "quatrefoil" tube holes. A flow distribution baffle (FDB) plate, also 405SS, between the secondary face of the tubesheet and the first tube support plate, provides top-of-tubesheet (TTS) sludge pile control. Tube support within the U-bend region is provided by three V-shaped chrome-plated Inconel 600 antivibration bars (AVB's). Attachment 2 provides a general summary of the Salem Unit 1 Model F SG Tube Support Arrangement and Terminology.

Consistent with Technical Specification (TS) 6.9.1.10, this report is being submitted within 180 days after the initial entry into HOT SHUTDOWN following completion of inspection performed in accordance with the Specification 6.8.4.i, "Steam Generator Program".

This report includes:

- a. The scope of inspections performed on each SG,
- b. Active 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 active degradation mechanism,
- f. Total number and percentage of tubes plugged to date, and
- 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 15.21 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 2.16 times the maximum operational primary to secondary leakage rate, the report should describe how it was determined,
- 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.

## STEAM GENERATOR TUBE INSPECTION REPORT TS 6.9.1.10

### EXPLANATION OF TERMS

- 1R18: Unit 1 18<sup>th</sup> Refueling Outage
- 1R20: Unit 1 20<sup>th</sup> Refueling Outage
- 1R22: Unit 1 22<sup>th</sup> Refueling Outage
- 1R24: Unit 1 24<sup>th</sup> Refueling Outage
- AVB: Anti-Vibration Bar (NOTE AV#- designates the Anti-Vibration Bar Number based on the information provided in Attachment 1)
- BET: Bottom Expansion Transition (synonymous with BHT)
- BHT: Bottom Hydraulic Transition (synonymous with BET)
- BLG: Bulge (Expansion (Per PSEG reporting requirement, these typically occur within the hydraulically expanded tubesheet))
- CL: Cold Leg
- CM: Condition Monitoring
- DNG: Ding (Freespan region of the tube per PSEG reporting requirements)
- DNT: Dent (At support structures per PSEG reporting requirements)
- EPRI: Electric Power Research Institute
- ETL: Expansion Transition Location (PSEG reporting requirements)
- ETSS: Examination Technique Specification Sheet
- FBC: Flow Baffle Coldleg (designates the Flow Distribution Baffle Plate on the Cold Leg)
- FBH: Flow Baffle Hotleg (designates the Flow Distribution Baffle Plate on the Hot leg)
- FBP: Flow Distribution Baffle Plate (synonymous with FDB)
- FDB: Flow Distribution Baffle Plate (synonymous with FBP)
- FO: Foreign Object
- HL: Hot Leg
- NDE: Non Destructive Examination
- NQI: Non Quantifiable Indication (Bobbin Coil report entry per PSEG requirements)
- OA: Operational Assessment
- OD: Outside Diameter
- ODSCC: Outside Diameter Stress Corrosion Cracking
- OEX: Over Expansion (a localized variation in tube diameter within the hydraulically expanded tubesheet)
- OXP: Over Expansion (hydraulic expansion occurring above the top of tubesheet)
- PLP: Possible Loose Part
- PVN: Permeability Variation
- PWR: Pressurized Water Reactor
- PWSCC: Primary Water Stress Corrosion Cracking (NOTE: Per PSEG reporting requirements, occurs on the Inside Diameter of the tube)
- RTS: Return to Service
- SG: Steam Generator
- SGMP: Steam Generator Management Program
- TEC: Tube End Coldleg
- TEH: Tube End Hotleg
- TS: Technical Specification

## STEAM GENERATOR TUBE INSPECTION REPORT TS 6.9.1.10

- TSC: Tubesheet Cold Leg
- TSH: Tubesheet Hot Leg
- TTS: Top of Tubesheet
- TSP: Tube Support Plate (07H would designate the 7th TSP on the Hot leg, 03C would designate the 3rd TSP on the Cold Leg, etc)
- TW: Through-Wall
- Vpp: Volts Peak to Peak; is a method of measuring displayed eddy current signals

SG inspections were performed in accordance with TS 6.8.4.i, "Steam Generator Program", during Salem Unit 1 Outage 1R24. Each reporting requirement of TS 6.9.1.10 is addressed below (items a through j).

### **a. Technical Specification 6.9.1.10.a, "The scope of inspections performed on each SG"**

If not stated otherwise, the following inspections were performed on all four steam generators:

#### **Bobbin Probe**

1. A full-length (tube end to tube end) bobbin coil probe inspection was performed on 100% of the in-service tubes.

#### **Array Probe (X-Probe)**

1. Array Probe (X-Probe) Inspection of the first 3 outer periphery tubes on both hot leg (HL) and cold leg (CL); and the first 3 rows of no-tube lane on the HL and CL. Inspection extent was from TSH -15.21" (i.e. - 15.21 inches below the TTS) to the first tube support above the TTS (i.e. - FBH or 01H), and TSC -2" to the first tube support above the TTS (i.e. - FBC or 01C).
2. 100% OXP, ETL, BHT  $\geq 0$  or BHT  $\leq -0.40$  inches, TSH +3" to -15.21" and TSC +3" to -2".
3. 50% HL BLG  $\geq 18$  volts and OEX  $> 0.25$  inches, TSH +3" to -15.21"
4. 50% HL TTS Expansion Transitions, TSH +3" to -15.21"
5. Special Interest Inspections, including bounding locations with possible loose parts identified by eddy current or secondary side inspections.

#### **Rotating Probe (+Point)**

1. 50% HL DNT and DNG  $> 2$  volts as reported from 1R22, TSH to 07H (Includes 50% of the DNT and DNG  $> 5$  volts)
2. 20% CL DNT and DNG  $> 5$  volts as reported from 1R22, TSC to 07C
3. 20% U-bend DNT and DNG  $> 2$  volts, as reported from 1R22, 07H to 07C (Includes 20% of the DNT and DNG  $> 5$  volts)
4. 20% Row 1 and Row 2 tubes, 07H to 07C
5. 100% FBP and TSP wear as reported by Bobbin or Array probe
6. New DNT and DNG as reported by Bobbin

## **STEAM GENERATOR TUBE INSPECTION REPORT**

### **TS 6.9.1.10**

7. Special Interest Inspections, including Bobbin "I" codes and bounding locations with possible loose parts identified by eddy current or secondary side inspections.

#### **b. Technical Specification 6.9.1.10.b, "Active degradation mechanisms found"**

The active degradation mechanisms found during outage 1R24 are AVB wear, TSP wear, FBP wear, and FO wear.

#### **c. Technical Specification 6.9.1.10.c, "Nondestructive examination techniques utilized for each degradation mechanism"**

Attachment 5 provides the Nondestructive examination techniques utilized for each degradation mechanism.

#### **d. Technical Specification 6.9.1.10.d, "Location, orientation (if linear), and measured sizes (if available) of service induced indications"**

The service induced indications detected during outage 1R24 are AVB wear, TSP wear, FBP wear, and FO wear. Attachments 6, 7, 8, and 9 provide location, orientation, and measured sizes (as applicable and if available) for the service induced indications found during 1R24 inspection outage.

#### **e. Technical Specification 6.9.1.10.e, "Number of tubes plugged during the inspection outage for each active degradation mechanism"**

Attachment 3 provides the number of tubes plugged during the inspection outage for each active degradation mechanism.

#### **f. Technical Specification 6.9.1.10.f, "Total number and percentage of tubes plugged to date"**

Attachment 4 provides the total number and percentage of tubes plugged to date.

#### **g. Technical Specification 6.9.1.10.g, "The results of condition monitoring, including the results of tube pulls and in-situ testing"**

The largest depth of degradation detected during 1R24 for AVB wear was 39% TW, for TSP wear was 27% TW, for FBP wear was 9% TW, and for FO wear was 23% TW (reference response to 6.9.1.10.d for further details). All tubes inspected met the tube integrity performance criteria in TS 6.8.4.i.b. No tubes required in-situ pressure testing, and no tube pulls were required.

**STEAM GENERATOR TUBE INSPECTION REPORT**  
**TS 6.9.1.10**

**h. Technical Specification 6.9.1.10.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”**

PSEG did not observe any primary to secondary operational leakage at or greater than the detection threshold of approximately one (1) gallon per day over the cycle preceding the inspection in any of the steam generators at Salem Unit 1.

**i. Technical Specification 6.9.1.10.i, “The calculated accident induced leakage rate from the portion of the tubes below 15.21 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 2.16 times the maximum operational primary to secondary leakage rate, the report should describe how it was determined”**

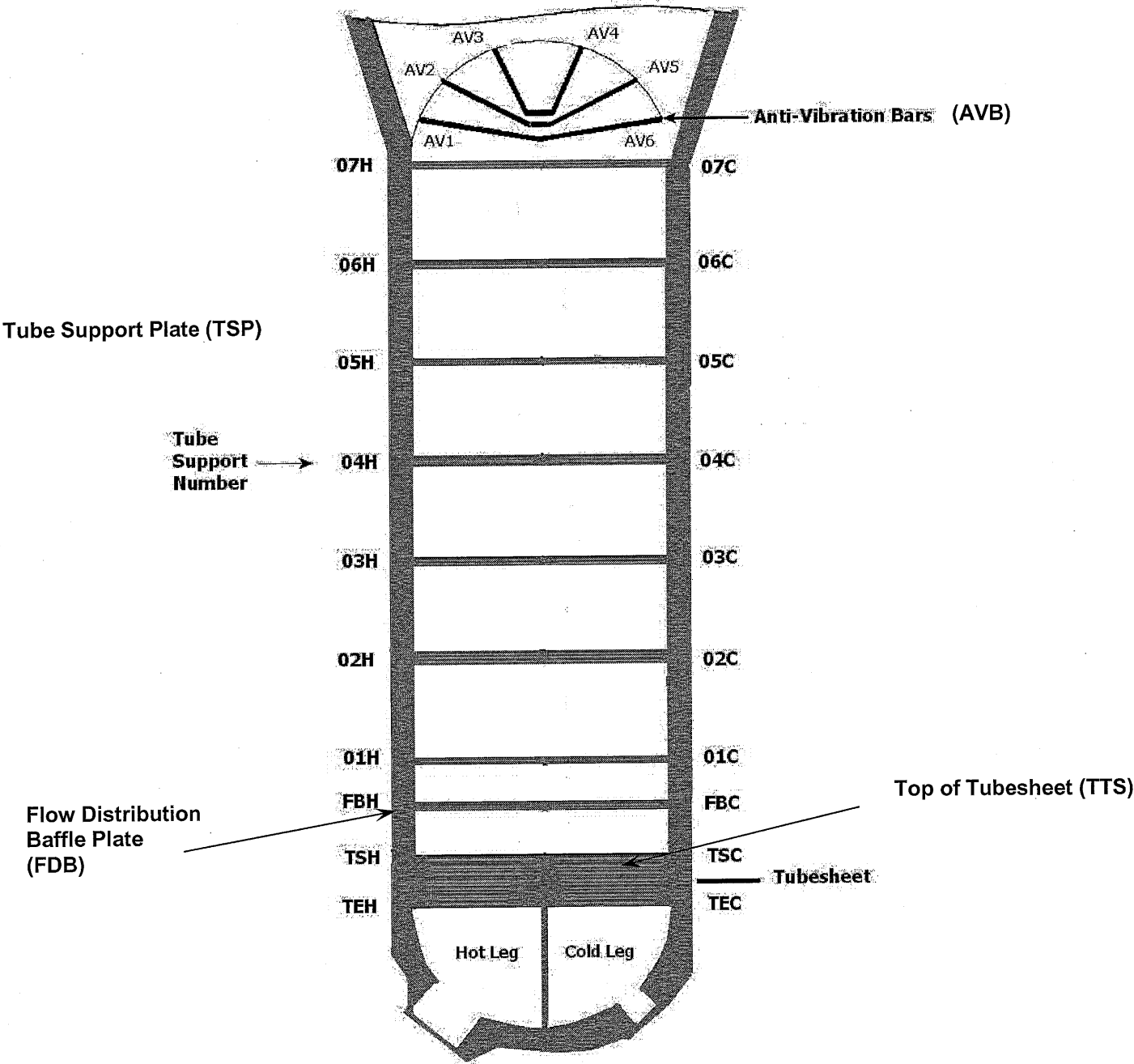
PSEG did not observe any primary to secondary operational leakage at or greater than the detection threshold of approximately one (1) gallon per day over the cycle preceding the inspection in any of the steam generators at Salem Unit 1. Since PSEG did not observe any measurable SG primary to secondary operational leakage, the calculated accident induced leakage rate from the most limiting accident would not be significant.

**j. Technical Specification 6.9.1.10.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”**

100% of all in-service tubes within the tubesheet, both HL and CL, were monitored for tube axial displacement (slippage) using Bobbin coil inspections. No indications of slippage were detected.



SALEM UNIT 1 MODEL F SG TUBE SUPPORT ARRANGEMENT AND TERMINOLOGY



### 1R24 REPAIRABLE TUBES STATUS REPORT

Location	Tube Degradation	Steam Generator				Total
		11	12	13	14	
All	>39% TW	0	0	0	0	0
AVB	Wear	0	3	1	0	4
TSP	Wear	0	0	1	0	1
FBP	Wear	0	0	0	0	0
All	Foreign Object Wear	1	0	0	0	1
Total Tubes Plugged		1	3	2	0	6

**TOTAL NUMBER AND PERCENTAGE OF TUBES PLUGGED TO DATE**

Salem Unit 1 Steam Generator Tube Plugging Status					
	SG 11	SG 12	SG 13	SG 14	Total
Tubes Plugged Prior to 1R24	50	54	111	36	251
Tubes Plugged During 1R24	1	3	2	0	6
Total Tubes Plugged	51	57	113	36	257
Total Percentage	0.91%	1.01%	2.01%	0.64%	1.14%

## 1R24 NONDESTRUCTIVE EXAMINATION TECHNIQUES

Salem Technique		Industry Qualification	Damage Mechanism	Demonstrated Applicability	Extended Applicability	Site-Specific Review	
						Deemed Acceptable	
						Detection	Sizing
1	Bobbin	96001.1 Revision 11	Thinning	TSP and TTS	None	Yes	Yes
2	Bobbin	96004.1 Revision 13	Wear	TSP and AVB	None	Yes	Yes
3	Bobbin	96004.3 Revision 13	Wear	TSP and AVB	None	Yes	Yes
4	Bobbin	I-28411 Revision 3	Axial ODSCC	Within non dented drilled TSP and within drilled TSP with dents $\leq 2.0$ Vpp.	None	Yes	For CM/OA or Info Only
5	Bobbin	I-28412 Revision 3	Axial ODSCC	Freespan with or without dents $\leq 2.0$ Vpp	None	Yes	For CM/OA or Info Only
6	Bobbin	I-28413 Revision 3	Axial ODSCC	Within Freespan, Sludge Pile region and Broached TSP with or without dents $\leq 2.0$ Vpp	None	Yes	For CM/OA or Info Only
7	Bobbin	24013.1 Revision 2	Axial ODSCC	Freespan, including Dings $\leq 5.0$ Vpp	None	Yes	N/A
8	Bobbin	27091.2 Revision 1	Loose Part Volumetric Wear (Part Not Present)	Freespan, PLP Wear(part not present)	Part Present	Yes	N/A Size with RC
9	Bobbin	13091.1 Revision 0	Wear	Tube to Tube	None	Yes	N/A Size with RC
10	Bobbin	96005.3 Revision 9	Pitting	Freespan	Sludge Pile	Yes	No – Size with 21998.1
37	Bobbin	96004.2	Wear	TSP and AVB	None	Yes	Yes

**1R24 NONDESTRUCTIVE EXAMINATION TECHNIQUES**

Salem Technique		Industry Qualification	Damage Mechanism	Demonstrated Applicability	Extended Applicability	Site-Specific Review	
						Deemed Acceptable	
						Detection	Sizing
11	+Point	96910.1 Revision 10	Wear	Broached TSP	FDB & Loose Parts Wear with Part Present for Info Only	Yes	Yes – TSP Wear; CM/OA or Info Only Extended Applicability Areas
12	+Point	I-11524 Revision 0	Circ PWSCC	Expansion Transition	Dings, Dents, Tubesheet and Non-dented support structures	Yes	See 20510.1 for sizing
13	+Point	20510.1 Revision 7	Circ PWSCC	Expansion Transition	Dings, Dents, Tubesheet and Non-dented support structures	N/A See I-11524 for detection	For CM/OA or Info Only
14	+Point	96703.1 Revision 17	Axial PWSCC	Dent or Ding	Non-dented support structure and tubesheet	Yes	For CM/OA or Info Only
15	+Point	20511.1 Revision 8	Axial PWSCC	Expansion Transition	Non-dented support structure and tubesheet	Yes	For CM/OA or Info Only
16	+Point	21410.1 Revision 6	Circ ODSCC	Expansion Transition	Freespan, Dings, Dented and Non-dented support structures, Sludge Pile, Tubesheet	Yes	For CM/OA or Info Only

## 1R24 NONDESTRUCTIVE EXAMINATION TECHNIQUES

Salem Technique		Industry Qualification	Damage Mechanism	Demonstrated Applicability	Extended Applicability	Site-Specific Review	
						Deemed Acceptable	
						Detection	Sizing
17	+Point	I-28424 Revision 3	Axial ODSCC	Sludge Pile; within non dented drilled TSP and within drilled TSP with dents (or Dings) $\leq 2.0$ Vpp.	Expansion Transition	Yes	N/A See I-28431 for sizing
18	+Point	I-28425 Revision 3	Axial ODSCC	Freespan; within non dented broached TSP and within broached TSP with dents (or Dings) $\leq 2.0$ Vpp.	Expansion Transition	Yes	N/A See I-28432 for sizing
19	+Point	21409.1 Revision 7	Axial ODSCC	Support structures, freespan regions, sludge pile and tubesheet crevice	None	Yes	For CM/OA or Info Only
20	+Point	96511.2 Revision 16	Axial and Circ PWSCC	U-bend	None	Yes	For CM/OA or Info Only
21	+Point	I-28431 Revision 2	Axial ODSCC	Sizing Sludge Pile and Drilled TSP with or w/o Dents $\leq 2$ volts	None	N/A See I-28424 for detection	Yes
22	+Point	I-28432 Revision 2	Axial ODSCC	Sizing Freespan, Broached TSP w/o Dents $\leq 2$ volts	None	N/A See I-28425 for detection	Yes

## 1R24 NONDESTRUCTIVE EXAMINATION TECHNIQUES

Salem Technique		Industry Qualification	Damage Mechanism	Demonstrated Applicability	Extended Applicability	Site-Specific Review	
						Deemed Acceptable	
						Detection	Sizing
23	+Point	27901.1 R1 27902.1 R2 27903.1 R1 27904.1 R2 27905.1 R2 27906.1 R1 27907.1 R2	PLP Wear	Freespan, TSP and Expansion Transition PLP Wear Morphology Dependent (part not present)	Detection of foreign material based on material and proximity of foreign material to the tube per EPRI reports 1020631 and 1018561. For sizing of PLP wear when part is present based on EPRI Report 1020631 on an as needed basis.	Yes	Yes – Part Not Present or Removed
24	+Point	10411.1 and 10411.2 Revision 0	Axial ODSCC	U-bend Row 3-5	Ax and Circ ODSCC, Row 1 and 2 U-bends & Higher Row U-bends (>R5)	Yes	For CM/OA or Information Only
25	+Point	10908.4 Revision 1	AVB Wear	U-bend	None	Yes	Yes
26	+Point	22401.1 Revision 4	Axial ODSCC	Dented Tube Support Structures (TSP/FDB)	Dented AVB and U-bend dings	Yes	For CM/OA or Info Only
27	+Point	13901.1 Revision 1	Wear	Tube to Tube	N/A	Yes	Yes
28	+Point	21998.1 Revision 4	Volumetric	Freespan	Sludge Pile	Yes	Yes

# 1R24 NONDESTRUCTIVE EXAMINATION TECHNIQUES

Salem Technique		Industry Qualification	Damage Mechanism	Demonstrated Applicability	Extended Applicability	Site-Specific Review	
						Deemed Acceptable	
						Detection	Sizing
29	Array	20400.1 Revision 5	Circ ODSCC	Expansion Transitions.	Volumetric degradation (PLP Wear) at Top-of-Tubesheet and Freespan.  Axial ODSCC at Expansion Transition  Circ ODSCC Freespan with/without Deposits (including sludge pile)	Yes	N/A
30	Array	20403.1 Revision 5	Axial ODSCC	Freespan – Not associated with Deposits	Freespan – Deposits Present (including sludge pile)	Yes	N/A
31	Array	20500.1 and 20501.1 Revision 4	Ax and Circ PWSCC	Expansion Transition	OEX, BLG and OXP locations above and within the tubesheet	Yes	N/A



# 1R24 NONDESTRUCTIVE EXAMINATION TECHNIQUES

Salem Technique		Industry Qualification	Damage Mechanism	Demonstrated Applicability	Extended Applicability	Site-Specific Review Deemed Acceptable	
						Detection	Sizing
32	Ghent	20406.1 Revision 7	Circ ODSCC	Top of Tubesheet and Expansion Transitions	None	Yes	N/A
33	Ghent	20407.1 Revision 7	Axial ODSCC	TSP and Freespan	None	Yes	N/A
34	Ghent	20507.1 Revision 6	Circ PWSCC	Expansion Transitions	None	Yes	N/A
35	Ghent	20508.1 Revision 6	Axial PWSCC	Expansion Transitions	None	Yes	N/A
36	Ghent	20509.1 Revision 5	Axial PWSCC	Dented TSP	None	Yes	N/A

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
11	22	80	AV1	-0.1	12
11	22	80	AV2	-0.02	12
11	24	117	AV2	0.16	13
11	24	117	AV5	0.23	10
11	26	43	AV1	-0.11	12
11	26	43	AV2	0.25	15
11	26	43	AV5	-0.18	9
11	26	91	AV1	-0.16	18
11	26	91	AV5	-0.09	9
11	26	91	AV6	0.21	15
11	27	33	AV2	-0.16	15
11	27	33	AV5	0.14	12
11	27	33	AV6	-0.09	11
11	27	44	AV2	-0.09	20
11	27	44	AV5	-0.11	11
11	27	44	AV6	0.3	22
11	27	78	AV2	0.25	13
11	27	79	AV2	-0.27	9
11	27	80	AV2	0.07	22
11	27	115	AV6	0.07	10
11	28	10	AV1	0.02	12
11	28	10	AV2	0.15	11
11	28	114	AV1	0.27	19
11	28	114	AV6	-0.09	21
11	29	9	AV2	0.17	17
11	29	9	AV5	-0.02	28
11	29	54	AV1	0.14	9
11	29	54	AV2	0.16	10
11	29	112	AV2	-0.3	24
11	29	112	AV5	-0.1	12
11	29	114	AV1	0.07	22
11	29	114	AV6	-0.07	31
11	30	48	AV2	0.27	11
11	30	73	AV5	-0.48	15
11	30	86	AV1	0.5	10
11	30	86	AV2	0.11	12
11	31	109	AV6	-0.14	8

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
11	32	12	AV4	-0.07	16
11	32	12	AV5	0.18	14
11	32	15	AV2	0.18	14
11	32	20	AV5	-0.07	11
11	32	31	AV2	-0.04	16
11	32	69	AV4	0.05	11
11	32	72	AV1	-0.19	16
11	32	72	AV2	0.18	13
11	32	72	AV3	-0.08	17
11	32	72	AV4	-0.03	17
11	32	84	AV4	-0.16	9
11	32	112	AV2	-0.56	6
11	32	112	AV5	0.72	9
11	33	107	AV6	-0.05	9
11	34	109	AV2	-0.22	22
11	34	111	AV2	-0.6	10
11	34	111	AV6	-0.43	8
11	35	13	AV5	-0.02	14
11	35	13	AV6	-0.09	9
11	35	44	AV1	-0.16	12
11	35	44	AV4	0.2	20
11	35	44	AV5	0.27	24
11	35	44	AV6	0.31	15
11	36	108	AV1	-0.56	11
11	36	109	AV6	-0.2	9
11	36	110	AV3	-0.04	11
11	37	48	AV2	0.04	8
11	37	65	AV2	0.16	12
11	37	67	AV1	0.49	12
11	37	68	AV2	0.31	22
11	37	68	AV3	-0.09	16
11	37	68	AV4	0.18	11
11	37	68	AV4	-0.09	12
11	37	68	AV5	-0.09	17
11	37	73	AV4	0.36	12
11	37	79	AV1	0.09	9
11	37	79	AV2	0.02	15

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
11	37	79	AV4	0.09	19
11	37	79	AV5	0.18	10
11	37	84	AV1	0.02	9
11	37	100	AV1	-0.04	10
11	37	100	AV2	-0.04	10
11	37	100	AV4	0.11	11
11	37	100	AV5	0.16	10
11	38	15	AV1	-0.15	11
11	38	15	AV2	0.26	11
11	38	49	AV3	0.02	18
11	38	49	AV4	0.09	26
11	38	51	AV2	-0.34	13
11	38	51	AV4	-0.16	20
11	38	51	AV5	0.09	17
11	38	51	AV6	0.16	13
11	38	66	AV1	-0.09	11
11	38	66	AV2	0.02	20
11	38	66	AV3	-0.1	13
11	38	66	AV4	0.11	9
11	38	66	AV5	-0.22	26
11	38	66	AV6	0.29	22
11	38	74	AV3	-0.02	11
11	38	76	AV2	0.22	15
11	38	76	AV3	0.2	15
11	38	76	AV4	0.09	10
11	38	90	AV3	-0.13	11
11	38	105	AV2	0.07	23
11	38	105	AV3	-0.09	23
11	38	105	AV4	-0.09	12
11	38	105	AV5	0.11	25
11	38	105	AV6	0.02	11
11	38	108	AV3	-0.2	12
11	38	108	AV4	-0.13	9
11	38	108	AV5	0.42	9
11	39	17	AV5	0.15	17
11	39	37	AV6	0.18	9
11	39	41	AV2	0.18	13

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
11	39	55	AV3	-0.18	10
11	39	55	AV5	0.02	11
11	39	60	AV4	0.13	12
11	39	61	AV4	-0.13	12
11	39	61	AV5	-0.09	15
11	39	61	AV6	-0.16	11
11	39	64	AV3	0.25	15
11	39	64	AV4	0.04	19
11	39	69	AV2	-0.07	20
11	39	69	AV4	-0.11	12
11	39	72	AV1	-0.16	13
11	39	72	AV2	0.2	21
11	39	72	AV3	-0.04	19
11	39	72	AV4	0.25	25
11	39	72	AV5	0.18	9
11	39	74	AV2	-0.65	10
11	39	74	AV3	-0.02	9
11	39	74	AV4	-0.07	25
11	39	74	AV5	0.29	32
11	39	74	AV6	0.56	28
11	39	99	AV2	-0.16	33
11	39	99	AV3	-0.07	13
11	39	99	AV5	0.02	18
11	39	107	AV4	0.18	8
11	40	19	AV3	0.16	15
11	40	20	AV2	0.09	11
11	40	20	AV3	-0.07	21
11	40	20	AV4	0.09	17
11	40	27	AV4	-0.18	11
11	40	37	AV2	0.2	11
11	40	40	AV1	0.1	12
11	40	40	AV2	0.1	10
11	40	42	AV1	0.1	15
11	40	42	AV2	0.29	12
11	40	42	AV3	0.1	11
11	40	42	AV4	-0.1	16
11	40	43	AV1	-0.04	14

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
11	40	43	AV2	-0.18	31
11	40	43	AV3	0.25	29
11	40	43	AV4	0.27	24
11	40	43	AV6	0.2	17
11	40	45	AV4	0.2	13
11	40	45	AV5	-0.07	13
11	40	48	AV2	-0.04	17
11	40	48	AV3	0.02	14
11	40	48	AV4	0.02	12
11	40	48	AV6	-0.11	13
11	40	58	AV2	0.07	12
11	40	58	AV3	0.04	23
11	40	58	AV4	0.13	8
11	40	58	AV5	0.19	14
11	40	58	AV6	0.2	21
11	40	64	AV2	-0.16	12
11	40	77	AV3	-0.11	11
11	40	78	AV1	0.07	17
11	40	78	AV2	-0.2	14
11	40	78	AV3	-0.27	33
11	40	78	AV4	-0.25	12
11	40	78	AV5	0.11	29
11	40	78	AV6	-0.11	10
11	40	79	AV1	-0.74	9
11	40	79	AV2	0.4	16
11	40	79	AV3	-0.04	25
11	40	79	AV5	-0.04	13
11	40	84	AV3	0.2	8
11	40	84	AV4	0.22	15
11	40	84	AV5	-0.18	10
11	40	84	AV6	0.25	15
11	40	85	AV2	0.2	20
11	40	86	AV5	0.13	10
11	40	89	AV2	-0.31	7
11	40	89	AV3	0.18	13
11	40	89	AV4	-0.11	21
11	40	89	AV5	-0.07	12

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
11	40	91	AV1	-0.07	13
11	40	98	AV4	0.22	15
11	40	98	AV5	-0.11	22
11	40	104	AV1	0.13	9
11	40	104	AV3	0.18	14
11	40	104	AV4	-0.13	29
11	40	104	AV5	-0.04	29
11	40	104	AV6	-0.04	11
11	40	105	AV2	0.02	16
11	40	105	AV3	0.02	33
11	40	105	AV4	-0.09	23
11	40	105	AV5	0.16	26
11	40	105	AV6	0.04	32
11	40	106	AV5	0.11	10
11	40	106	AV6	-0.09	13
11	41	19	AV6	0.18	16
11	41	23	AV1	0.16	10
11	41	59	AV1	-0.32	11
11	41	73	AV2	-0.04	9
11	41	82	AV4	-0.02	11
11	41	90	AV4	0.04	14
11	41	90	AV5	0.09	13
11	41	100	AV2	0.16	12
11	41	100	AV5	-0.07	13
11	41	102	AV1	-0.13	14
11	41	102	AV2	0.07	13
11	41	102	AV5	0.02	15
11	41	102	AV6	-0.04	12
11	41	103	AV1	0.22	15
11	41	103	AV2	0.22	10
11	41	103	AV4	-0.04	9
11	41	103	AV5	-0.11	21
11	41	105	AV1	0.36	8
11	41	105	AV6	-0.36	11
11	42	33	AV2	0.02	26
11	42	33	AV3	-0.04	17
11	42	50	AV5	-0.11	9

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
11	42	54	AV5	-0.09	12
11	42	78	AV5	0.33	11
11	42	95	AV3	0.16	11
11	42	95	AV4	-0.04	12
11	42	97	AV1	0.16	14
11	42	97	AV2	-0.11	9
11	42	97	AV3	-0.04	12
11	42	99	AV4	-0.07	12
11	42	104	AV6	-0.36	9
11	42	104	AV6	0.16	10
11	43	20	AV5	0.15	21
11	43	22	AV3	0.15	10
11	43	22	AV4	0.22	28
11	43	25	AV3	0.11	13
11	43	25	AV4	0.27	23
11	43	25	AV5	0.2	28
11	43	33	AV2	0.2	11
11	43	38	AV1	0.04	21
11	43	38	AV2	-0.09	28
11	43	38	AV3	0.07	32
11	43	39	AV2	-0.04	14
11	43	39	AV5	-0.09	9
11	43	43	AV2	0.24	26
11	43	43	AV3	-0.04	22
11	43	43	AV5	0.16	26
11	43	44	AV1	-0.16	12
11	43	44	AV2	-0.09	29
11	43	44	AV3	-0.09	23
11	43	44	AV4	-0.04	15
11	43	44	AV5	0.18	22
11	43	44	AV6	0.16	12
11	43	46	AV4	0.35	15
11	43	46	AV5	-0.2	12
11	43	46	AV6	0.27	21
11	43	49	AV3	-0.04	16
11	43	49	AV4	-0.13	23
11	43	49	AV6	-0.16	10



**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
11	43	52	AV2	-0.07	7
11	43	52	AV3	0.02	15
11	43	62	AV1	0.02	10
11	43	62	AV2	-0.07	9
11	43	67	AV1	0.04	10
11	43	67	AV2	-0.04	11
11	43	75	AV1	-0.47	22
11	43	75	AV3	-0.04	18
11	43	79	AV1	-0.35	13
11	43	79	AV2	-0.09	16
11	43	79	AV4	-0.11	17
11	43	79	AV5	0.02	26
11	43	79	AV6	0.02	27
11	43	81	AV5	0.4	9
11	43	82	AV4	0.18	10
11	43	82	AV5	0.09	12
11	43	83	AV2	0.02	12
11	43	83	AV3	0.02	12
11	43	83	AV4	-0.11	29
11	43	83	AV5	0.07	15
11	43	91	AV1	0.04	12
11	43	100	AV1	0.22	13
11	43	100	AV2	-0.07	19
11	43	100	AV3	0.24	29
11	43	100	AV4	0.18	12
11	43	103	AV6	-0.18	8
11	44	22	AV4	-0.04	15
11	44	22	AV5	0.18	27
11	44	41	AV1	0.02	11
11	44	41	AV3	0.02	9
11	44	41	AV4	-0.02	19
11	44	45	AV2	0.16	10
11	44	45	AV3	-0.09	16
11	44	45	AV4	0.11	12
11	44	58	AV3	0.22	19
11	44	58	AV4	0.15	24
11	44	59	AV1	0.2	11

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
11	44	59	AV2	0.2	14
11	44	59	AV3	-0.07	19
11	44	59	AV4	-0.11	14
11	44	60	AV2	0.04	11
11	44	60	AV3	0.04	18
11	44	60	AV4	0.11	26
11	44	61	AV2	-0.11	11
11	44	61	AV3	-0.15	11
11	44	62	AV3	0.11	8
11	44	68	AV3	-0.31	17
11	44	68	AV4	-0.27	19
11	44	68	AV5	-0.13	27
11	44	68	AV6	-0.18	33
11	44	71	AV4	-0.09	14
11	44	71	AV5	-0.09	10
11	44	71	AV6	0.22	10
11	44	74	AV3	0.04	28
11	44	74	AV4	0.04	18
11	44	74	AV5	-0.55	18
11	44	74	AV6	-0.18	16
11	44	100	AV2	-0.11	9
11	44	100	AV3	-0.11	9
11	44	100	AV4	0.07	12
11	44	100	AV5	0.09	31
11	44	100	AV6	-0.04	8
11	44	102	AV5	0.04	12
11	44	102	AV6	-0.2	8
11	45	22	AV4	0.09	11
11	45	23	AV2	0.29	11
11	45	23	AV6	-0.15	16
11	45	26	AV2	-0.13	10
11	45	26	AV3	0.24	13
11	45	83	AV5	-0.24	12
11	45	100	AV6	0.11	9
11	47	43	AV5	0.13	10
11	47	99	AV3	-0.13	14
11	48	25	AV1	0.15	11

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
11	48	26	AV5	0.15	16
11	48	26	AV6	-0.15	11
11	48	47	AV5	0.15	15
11	48	80	AV1	-0.18	12
11	48	97	AV3	-0.07	11
11	48	97	AV4	0.02	10
11	49	27	AV1	0.11	13
11	49	29	AV4	0.04	10
11	49	29	AV5	0.24	28
11	49	36	AV2	-0.11	14
11	49	36	AV4	-0.04	9
11	49	39	AV2	0.1	20
11	49	39	AV4	0.1	18
11	49	43	AV3	0.02	9
11	49	43	AV4	0.26	18
11	49	43	AV5	-0.02	12
11	49	79	AV1	0.11	10
11	49	84	AV1	-0.04	11
11	49	85	AV2	0.11	18
11	49	85	AV3	0.28	23
11	49	85	AV4	0.26	31
11	49	85	AV5	0.02	34
11	49	85	AV6	0.13	13
11	49	94	AV6	-0.07	11
11	49	96	AV6	-0.07	10
11	50	30	AV6	-0.04	11
11	50	65	AV2	0.18	13
11	50	90	AV1	-0.44	15
11	51	47	AV5	0.15	11
11	52	32	AV1	0.07	11
11	52	41	AV3	-0.07	15
11	52	89	AV4	-0.04	10
11	52	91	AV2	0.18	15
11	52	91	AV5	-0.15	13
11	54	39	AV6	0.04	10
11	54	65	AV4	-0.07	15
11	54	86	AV3	0.07	15

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
11	55	79	AV2	-0.11	14
11	55	82	AV2	0.22	7
11	55	83	AV2	0.07	12
11	55	83	AV5	0.02	12
11	55	83	AV6	-0.13	16
11	55	84	AV4	-0.02	9
11	55	84	AV5	-0.04	12
11	55	84	AV6	-0.02	14
11	56	41	AV6	0.13	11
11	56	78	AV2	0.04	11
11	56	79	AV2	-0.07	7
11	57	70	AV1	-0.07	12
11	57	75	AV2	0.11	10
11	57	77	AV2	0.02	18
11	57	77	AV6	-0.02	16
11	57	77	AV6	0.11	12
11	57	79	AV2	0.04	17
11	58	61	AV6	0.04	8
11	58	62	AV1	-0.17	12
11	58	62	AV6	0.22	10
11	58	65	AV1	-0.31	12
11	58	65	AV6	0.18	12
11	59	58	AV6	0.33	9
12	21	84	AV1	-0.14	12
12	21	118	AV1	0.29	11
12	21	118	AV6	0.2	8
12	23	89	AV1	-0.49	11
12	23	89	AV2	-0.07	15
12	23	89	AV6	-0.02	21
12	23	91	AV1	-0.05	19
12	25	116	AV1	0.47	8
12	26	38	AV6	-0.14	15
12	26	74	AV2	-0.09	26
12	26	74	AV5	0.23	19
12	26	83	AV1	-0.16	17
12	26	83	AV2	0.56	20
12	26	95	AV2	-0.07	12

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
12	26	95	AV5	0.12	15
12	26	103	AV2	-0.07	17
12	26	109	AV1	0.07	12
12	26	110	AV2	-0.26	8
12	27	8	AV1	-0.05	25
12	27	8	AV1	0.35	24
12	27	8	AV6	-0.21	14
12	27	8	AV6	0.12	25
12	27	36	AV5	0.26	10
12	27	102	AV2	0.21	10
12	27	112	AV2	0.07	20
12	27	115	AV1	0.02	17
12	27	115	AV6	0.07	32
12	28	109	AV5	0.16	12
12	29	13	AV6	-0.09	17
12	29	39	AV2	0.35	23
12	29	39	AV5	0.07	22
12	29	39	AV6	-0.12	11
12	29	41	AV1	0.52	11
12	29	41	AV2	0.23	16
12	29	41	AV5	-0.16	13
12	29	41	AV6	-0.02	16
12	29	54	AV1	0.16	19
12	29	54	AV2	-0.19	14
12	29	54	AV5	-0.21	22
12	29	54	AV6	0.21	12
12	29	77	AV2	-0.02	12
12	29	86	AV1	-0.16	10
12	29	86	AV2	0.05	17
12	29	86	AV6	-0.16	9
12	29	89	AV2	-0.02	15
12	29	90	AV2	0.07	16
12	29	107	AV2	0.19	15
12	29	108	AV5	0.05	24
12	29	109	AV2	0.21	22
12	29	112	AV5	0.28	17
12	30	10	AV5	0.19	10

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
12	30	12	AV2	-0.19	11
12	30	13	AV2	0.07	21
12	30	104	AV5	0.19	18
12	30	111	AV3	-0.07	12
12	30	111	AV6	0.16	16
12	31	16	AV2	-0.23	10
12	31	113	AV2	-0.21	7
12	31	113	AV5	0.46	7
12	32	106	AV1	0.14	13
12	32	109	AV4	0.07	25
12	32	110	AV2	-0.2	9
12	32	111	AV1	0.16	16
12	32	111	AV2	0.23	29
12	32	111	AV5	0.3	29
12	32	112	AV5	0.37	11
12	33	14	AV1	-0.68	9
12	33	108	AV3	0.05	24
12	33	108	AV5	0.23	23
12	34	110	AV4	-0.21	12
12	35	108	AV2	-0.14	10
12	35	108	AV3	-0.07	10
12	35	108	AV5	0.05	11
12	35	110	AV6	0.07	12
12	36	15	AV2	-0.05	11
12	36	15	AV3	0.26	19
12	36	15	AV4	0.21	25
12	36	15	AV6	-0.12	9
12	36	110	AV3	0.11	16
12	38	15	AV3	-0.25	9
12	38	51	AV2	0.09	15
12	38	51	AV3	-0.16	14
12	38	70	AV3	0.21	12
12	38	70	AV4	0.74	11
12	38	104	AV2	0.18	21
12	38	107	AV1	0.02	15
12	38	107	AV2	0.02	26
12	38	107	AV3	0.07	27

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
12	39	48	AV4	0.14	12
12	39	48	AV5	0.62	10
12	39	48	AV6	0.55	18
12	39	54	AV6	0.21	24
12	39	55	AV5	-0.07	12
12	39	63	AV2	0.02	36
12	39	63	AV3	0.48	35
12	39	63	AV4	-0.12	35
12	39	63	AV5	-0.28	37
12	39	65	AV2	0.42	17
12	39	65	AV3	0.35	30
12	39	65	AV4	0.12	19
12	39	72	AV3	0.16	12
12	39	72	AV4	-0.12	10
12	39	72	AV5	-0.09	15
12	39	73	AV1	-0.16	20
12	39	73	AV2	-0.18	16
12	39	73	AV3	-0.18	29
12	39	73	AV4	-0.21	13
12	39	73	AV5	0.46	22
12	39	73	AV6	-0.18	21
12	39	96	AV2	-0.07	15
12	39	96	AV4	-0.09	11
12	39	96	AV5	-0.05	15
12	39	98	AV6	0.05	11
12	39	100	AV5	0.18	12
12	39	107	AV1	0.48	10
12	39	107	AV4	-0.14	11
12	40	24	AV2	0.28	15
12	40	24	AV3	0.18	12
12	40	24	AV4	0.21	20
12	40	24	AV5	0.18	21
12	40	27	AV5	0.14	9
12	40	30	AV2	0.18	11
12	40	67	AV1	-0.3	11
12	40	69	AV2	0.02	16
12	40	75	AV1	-0.12	13

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
12	40	78	AV4	0.09	15
12	40	79	AV1	0.12	11
12	40	80	AV2	0.19	26
12	40	80	AV3	0.28	29
12	40	80	AV4	0.02	26
12	40	80	AV5	0.23	15
12	40	80	AV6	0.07	14
12	40	82	AV1	-0.39	14
12	40	82	AV2	-0.09	13
12	40	82	AV3	-0.14	37
12	40	82	AV4	0.21	15
12	40	82	AV5	0.14	22
12	40	83	AV1	-0.07	15
12	40	83	AV2	0.41	29
12	40	83	AV3	0.07	30
12	40	83	AV4	0.11	28
12	40	83	AV5	-0.01	31
12	40	83	AV6	0.02	24
12	40	84	AV4	-0.07	16
12	40	85	AV1	-0.11	11
12	40	87	AV1	0.21	14
12	40	87	AV2	0.23	25
12	40	87	AV3	0.21	25
12	40	87	AV4	-0.02	20
12	40	87	AV5	0.12	25
12	40	88	AV1	0.09	30
12	40	88	AV2	-0.19	22
12	40	88	AV3	0.25	31
12	40	88	AV4	0.28	17
12	40	88	AV5	-0.14	22
12	40	94	AV1	0.02	10
12	40	94	AV2	0.05	21
12	40	94	AV3	0.18	27
12	40	94	AV4	-0.16	20
12	40	94	AV5	-0.16	17
12	40	94	AV6	-0.14	19
12	40	95	AV1	-0.21	22



**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
12	40	95	AV2	0.34	33
12	40	95	AV3	0.01	21
12	40	95	AV4	0.16	16
12	40	95	AV5	0.16	24
12	40	95	AV6	0.16	11
12	40	96	AV2	0.21	19
12	41	29	AV3	0.14	12
12	41	29	AV4	-0.02	12
12	41	29	AV5	-0.14	12
12	41	42	AV4	-0.14	12
12	41	56	AV2	-0.18	18
12	41	56	AV3	-0.21	29
12	41	82	AV1	-0.26	18
12	41	82	AV2	0.21	9
12	41	82	AV3	-0.02	12
12	41	83	AV2	0.21	15
12	41	83	AV4	0.07	11
12	41	85	AV1	-0.02	11
12	41	85	AV2	0.25	14
12	41	85	AV3	0.57	24
12	41	85	AV4	0.18	18
12	41	87	AV3	0.11	18
12	41	87	AV4	-0.16	30
12	41	87	AV5	0.09	31
12	41	87	AV6	0.39	18
12	41	87	AV6	-0.09	11
12	41	90	AV1	0.01	16
12	41	90	AV2	0.27	22
12	41	90	AV3	0.01	10
12	41	90	AV4	0.01	11
12	41	90	AV5	0.01	18
12	41	93	AV2	0.18	9
12	41	93	AV4	0.11	16
12	41	94	AV3	0.07	10
12	41	94	AV5	-0.09	13
12	41	95	AV6	0.11	10
12	41	97	AV2	0.23	13

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
12	41	97	AV3	-0.02	23
12	41	97	AV4	0.23	22
12	41	97	AV5	-0.11	13
12	41	97	AV6	0.23	15
12	41	98	AV2	0.32	29
12	41	98	AV3	-0.02	19
12	41	98	AV4	-0.07	15
12	41	98	AV5	0.18	17
12	41	98	AV6	-0.11	22
12	41	99	AV4	0.11	12
12	41	100	AV1	-0.14	19
12	41	100	AV2	-0.12	32
12	41	100	AV3	0.05	30
12	41	100	AV6	0.32	13
12	41	101	AV1	0.14	18
12	41	101	AV2	0.11	28
12	41	101	AV3	0.11	11
12	41	101	AV4	0.14	12
12	41	101	AV5	0.27	31
12	41	101	AV6	0.18	30
12	41	102	AV4	-0.12	15
12	41	102	AV5	0.07	23
12	41	102	AV6	0.02	10
12	41	104	AV1	-0.07	12
12	41	104	AV6	0.09	12
12	41	105	AV1	0.5	7
12	41	105	AV2	-0.09	7
12	42	24	AV1	0.11	12
12	42	46	AV5	-0.21	27
12	42	51	AV4	-0.16	18
12	42	51	AV6	0.21	22
12	42	63	AV2	-0.28	10
12	42	100	AV2	0.21	13
12	42	100	AV3	0.16	11
12	42	104	AV6	-0.01	11
12	43	27	AV2	-0.05	18
12	43	27	AV3	0.02	10

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
12	43	27	AV4	0.02	12
12	43	40	AV2	0.35	25
12	43	40	AV3	0.25	28
12	43	97	AV2	0.21	11
12	43	101	AV1	-0.07	10
12	44	26	AV6	-0.02	10
12	44	100	AV2	-0.16	11
12	45	23	AV5	0.05	12
12	45	67	AV1	-0.11	16
12	45	100	AV2	0.02	9
12	45	100	AV4	-0.07	13
12	46	80	AV2	0.14	10
12	46	91	AV4	-0.16	16
12	46	91	AV5	0.07	12
12	46	97	AV4	0.07	11
12	46	97	AV5	0.23	24
12	47	24	AV1	0.05	7
12	47	24	AV3	0.09	10
12	47	24	AV5	0.18	11
12	47	24	AV6	0.14	15
12	47	67	AV2	0.16	13
12	47	87	AV6	0.2	10
12	47	95	AV3	0.25	13
12	47	95	AV4	0.16	17
12	47	95	AV5	0.14	13
12	47	98	AV5	0.18	16
12	47	98	AV6	0.11	14
12	48	26	AV6	-0.02	12
12	48	79	AV1	-0.11	12
12	48	79	AV2	0.16	16
12	48	79	AV3	0.14	10
12	48	83	AV2	-0.16	16
12	48	86	AV2	-0.09	14
12	48	91	AV2	-0.16	15
12	48	91	AV3	0.05	13
12	48	96	AV1	-0.14	11
12	48	98	AV4	0.11	23

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
12	49	35	AV3	-0.02	12
12	49	60	AV2	-0.16	14
12	49	95	AV4	-0.05	10
12	49	95	AV5	0.14	16
12	49	95	AV6	-0.02	15
12	49	96	AV4	-0.14	9
12	49	96	AV5	-0.02	29
12	49	96	AV6	-0.02	12
12	50	67	AV1	-0.02	23
12	50	67	AV2	0.3	33
12	50	67	AV3	0.02	39
12	50	67	AV4	0.34	34
12	50	93	AV6	-0.18	13
12	50	95	AV1	0.05	10
12	51	67	AV2	0.13	14
12	51	82	AV1	-0.18	22
12	51	85	AV2	0.16	10
12	52	32	AV3	0.18	12
12	52	62	AV2	-0.15	10
12	52	80	AV1	-0.14	21
12	52	80	AV2	0.14	29
12	52	80	AV3	0.16	15
12	52	89	AV5	-0.09	11
12	52	90	AV2	0.11	10
12	52	91	AV1	0.02	12
12	53	33	AV3	0.25	8
12	53	34	AV6	0.2	14
12	53	90	AV1	-0.16	11
12	53	90	AV5	-0.16	11
12	54	35	AV6	-0.04	12
12	54	38	AV2	-0.04	10
12	54	38	AV4	0.04	11
12	54	88	AV1	0.07	13
12	55	83	AV1	0.09	12
12	56	41	AV2	0.11	10
12	56	41	AV6	0.11	13
12	56	42	AV6	0.07	10

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
12	56	77	AV4	-0.13	15
12	57	44	AV4	-0.07	12
12	57	44	AV6	0.07	12
12	57	46	AV1	0.02	12
12	57	53	AV2	-0.04	14
12	57	54	AV1	-0.02	13
12	57	79	AV1	0.16	12
12	58	52	AV3	-0.02	11
12	58	52	AV6	0.11	11
12	58	58	AV6	0.11	13
12	58	60	AV1	-0.34	10
12	58	72	AV6	0.03	10
13	12	2	AV6	-0.28	11
13	12	121	AV1	0.29	12
13	13	78	AV6	-0.3	10
13	15	67	AV1	0.2	10
13	15	67	AV6	0.07	13
13	15	101	AV1	0.33	10
13	16	72	AV1	0.15	10
13	19	53	AV1	0.12	11
13	19	78	AV1	0.21	12
13	19	80	AV1	-0.73	16
13	19	80	AV6	-0.21	25
13	20	81	AV2	0.73	10
13	21	116	AV1	-0.19	9
13	21	118	AV1	0.35	8
13	21	118	AV6	0.41	9
13	22	5	AV6	-0.18	21
13	22	117	AV2	0.74	10
13	23	112	AV1	-0.14	10
13	23	116	AV1	0.12	14
13	23	117	AV1	0.63	20
13	24	6	AV1	-0.26	18
13	24	6	AV1	0.48	12
13	24	6	AV6	-0.05	9
13	24	7	AV1	0.5	15
13	24	7	AV6	-0.1	19

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
13	24	8	AV1	-0.05	12
13	24	53	AV2	0.36	14
13	24	113	AV6	0.01	12
13	24	116	AV1	0.09	11
13	25	7	AV1	-0.07	20
13	25	7	AV6	0.05	25
13	25	9	AV2	0.09	9
13	25	31	AV2	-0.24	14
13	25	36	AV2	0.26	13
13	25	36	AV5	-0.09	10
13	25	38	AV2	0.26	17
13	25	115	AV6	-0.02	14
13	26	43	AV1	0.21	16
13	26	43	AV2	0.26	15
13	26	43	AV5	0.21	18
13	26	43	AV6	0.38	13
13	26	80	AV2	0.4	13
13	26	80	AV5	0.14	10
13	26	111	AV5	-0.07	9
13	26	111	AV6	0.12	9
13	26	115	AV1	0.26	12
13	26	115	AV6	-0.09	10
13	26	116	AV6	-0.37	9
13	27	10	AV1	0.1	9
13	27	10	AV5	0.09	11
13	27	11	AV2	0.14	14
13	27	11	AV6	-0.12	12
13	27	12	AV6	-0.1	13
13	27	103	AV2	0.21	11
13	28	52	AV2	-0.14	14
13	28	108	AV1	0.07	14
13	28	108	AV2	0.46	11
13	28	109	AV1	-0.09	9
13	28	110	AV1	-0.53	8
13	29	99	AV2	0.19	11
13	30	11	AV6	0.24	15
13	30	46	AV2	0.42	24

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
13	30	46	AV6	-0.42	12
13	30	47	AV1	-0.21	11
13	30	47	AV2	-0.26	16
13	30	47	AV5	0.21	11
13	30	66	AV2	0.21	12
13	31	10	AV5	0.28	11
13	31	32	AV2	-0.19	10
13	31	32	AV5	-0.14	20
13	31	55	AV2	0.26	12
13	31	61	AV5	0.14	8
13	31	104	AV5	0.09	11
13	32	14	AV6	0.19	11
13	32	15	AV2	-0.21	27
13	32	16	AV2	0.26	22
13	32	16	AV5	0.17	12
13	32	19	AV2	-0.16	11
13	32	48	AV2	-0.19	18
13	32	61	AV1	0.64	18
13	32	80	AV3	0.32	12
13	32	101	AV5	0.16	9
13	32	103	AV2	-0.18	11
13	32	108	AV5	0.05	13
13	33	15	AV2	-0.05	12
13	33	15	AV4	-0.21	15
13	33	15	AV5	0.05	13
13	33	111	AV6	0.14	16
13	34	48	AV1	0.33	23
13	34	48	AV2	0.21	14
13	34	48	AV3	0.09	11
13	34	48	AV4	-0.28	29
13	34	48	AV5	0.02	15
13	34	48	AV6	-0.16	11
13	34	111	AV1	-0.14	10
13	34	111	AV5	0.21	13
13	34	111	AV6	-0.14	11
13	35	81	AV4	-0.09	10
13	36	14	AV6	-0.28	7

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
13	36	43	AV2	-0.02	14
13	36	43	AV4	0.21	15
13	36	43	AV5	0.19	13
13	36	43	AV6	-0.23	10
13	36	80	AV3	-0.1	31
13	36	80	AV4	-0.16	19
13	36	80	AV5	0.16	16
13	36	87	AV1	0.14	10
13	36	87	AV2	0.14	20
13	36	87	AV3	-0.14	17
13	36	87	AV4	0.02	9
13	36	87	AV6	-0.02	21
13	36	88	AV1	0.12	15
13	36	88	AV2	0.26	16
13	36	88	AV3	-0.14	13
13	36	88	AV4	0.01	26
13	36	88	AV5	0.05	19
13	36	88	AV6	-0.05	20
13	36	89	AV2	0.21	16
13	36	89	AV3	0.16	14
13	36	89	AV4	0.05	18
13	36	89	AV5	0.05	13
13	36	97	AV1	0.07	11
13	36	97	AV2	0.23	14
13	36	97	AV3	0.23	18
13	36	97	AV5	0.09	14
13	36	110	AV6	0.05	13
13	37	60	AV4	0.19	15
13	38	15	AV4	-0.23	8
13	38	26	AV2	0.23	13
13	38	26	AV3	-0.21	14
13	38	28	AV2	0.23	14
13	38	28	AV3	0.21	20
13	38	28	AV4	0.19	12
13	38	28	AV6	-0.07	8
13	38	53	AV1	0.16	13
13	38	53	AV2	-0.33	31



**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
13	38	53	AV3	-0.07	16
13	38	53	AV4	-0.16	18
13	38	53	AV5	0.49	21
13	38	58	AV5	-0.16	20
13	38	58	AV6	0.1	16
13	38	63	AV2	-0.49	9
13	38	63	AV3	0.35	11
13	38	63	AV4	0.16	10
13	38	63	AV5	-0.21	12
13	38	67	AV3	-0.6	15
13	38	67	AV4	-0.12	10
13	38	67	AV6	0.05	10
13	38	69	AV2	0.18	19
13	38	69	AV3	-0.14	10
13	38	72	AV2	0.3	28
13	38	72	AV3	0.3	26
13	38	72	AV4	0.3	30
13	38	72	AV5	0.02	12
13	38	73	AV2	-0.19	8
13	38	73	AV3	-0.16	12
13	38	81	AV5	-0.14	16
13	38	81	AV6	0.12	15
13	38	82	AV3	0.33	17
13	38	83	AV2	0.21	11
13	38	83	AV3	-0.09	27
13	38	83	AV4	-0.16	21
13	38	83	AV5	0.23	27
13	38	85	AV1	0.14	10
13	38	85	AV3	0.16	13
13	38	85	AV4	0.21	17
13	38	85	AV5	0.12	8
13	38	88	AV2	0.09	9
13	38	88	AV3	0.23	18
13	38	88	AV4	0.14	9
13	38	91	AV2	0.19	18
13	38	91	AV3	0.19	13
13	38	91	AV4	0.12	13

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
13	38	91	AV5	-0.21	24
13	38	91	AV6	0.12	15
13	38	92	AV2	0.33	11
13	38	92	AV4	-0.14	18
13	38	92	AV5	0.21	20
13	38	98	AV2	0.14	20
13	38	98	AV3	0.02	22
13	38	98	AV5	0.12	11
13	38	98	AV6	0.19	18
13	38	101	AV3	-0.19	10
13	38	101	AV5	0.21	17
13	39	16	AV1	0.39	7
13	39	16	AV6	-0.49	11
13	39	20	AV5	-0.07	16
13	39	22	AV2	-0.09	15
13	39	22	AV3	0.16	15
13	39	22	AV4	-0.16	14
13	39	22	AV5	0.23	13
13	39	23	AV5	-0.02	13
13	39	35	AV2	-0.19	12
13	39	35	AV3	0.14	15
13	39	35	AV5	0.21	25
13	39	38	AV1	-0.09	15
13	39	38	AV2	0.28	21
13	39	38	AV3	-0.3	27
13	39	38	AV5	-0.21	26
13	39	38	AV6	-0.09	17
13	39	46	AV2	-0.19	17
13	39	53	AV3	-0.19	14
13	39	53	AV4	-0.16	10
13	39	54	AV3	0.35	26
13	39	54	AV4	0.23	22
13	39	54	AV5	-0.16	11
13	39	54	AV6	0.56	10
13	39	64	AV2	-0.21	10
13	39	64	AV3	0.21	13
13	39	65	AV1	0.12	18

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
13	39	65	AV2	-0.14	29
13	39	65	AV3	0.14	14
13	39	65	AV3	-0.16	9
13	39	65	AV4	-0.12	18
13	39	65	AV5	-0.19	16
13	39	80	AV2	-0.26	25
13	39	80	AV3	0.19	16
13	39	80	AV4	0.16	17
13	39	80	AV5	-0.07	15
13	39	80	AV6	0.07	12
13	39	87	AV5	0.23	15
13	39	87	AV6	0.05	9
13	39	100	AV5	-0.05	10
13	40	19	AV3	-0.21	15
13	40	57	AV2	-0.09	11
13	40	100	AV4	-0.12	8
13	40	100	AV5	0.02	11
13	41	31	AV4	-0.14	24
13	41	31	AV5	-0.19	21
13	41	33	AV2	0.19	14
13	41	33	AV3	0.21	14
13	41	66	AV4	0.05	7
13	41	79	AV2	-0.16	13
13	41	79	AV5	0.02	11
13	41	96	AV2	-0.02	12
13	41	96	AV3	0.07	23
13	41	105	AV2	0.02	9
13	42	19	AV3	0.19	8
13	42	19	AV4	0.14	7
13	42	38	AV2	0.3	12
13	42	38	AV3	-0.25	25
13	42	38	AV4	-0.21	29
13	42	38	AV5	0.39	18
13	42	38	AV6	-0.07	14
13	42	46	AV2	0.39	8
13	42	53	AV1	-0.02	8
13	42	53	AV4	-0.12	10

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
13	42	98	AV4	0.09	12
13	42	100	AV6	-0.12	9
13	42	103	AV5	0.14	10
13	42	104	AV1	0.32	10
13	42	104	AV2	0.09	12
13	43	23	AV3	0.23	13
13	43	47	AV3	0.04	10
13	43	56	AV2	0.16	8
13	43	57	AV4	-0.21	15
13	43	57	AV5	0.25	8
13	43	62	AV5	-0.23	19
13	43	62	AV6	-0.39	10
13	43	64	AV3	0.19	14
13	43	64	AV4	0.07	30
13	43	64	AV5	-0.09	10
13	43	69	AV3	0.19	11
13	43	69	AV4	0.21	16
13	43	69	AV5	0.25	19
13	43	69	AV6	-0.14	14
13	43	71	AV5	0.23	16
13	43	72	AV4	0.12	13
13	43	72	AV6	0.21	21
13	43	73	AV3	-0.35	16
13	43	73	AV5	0.25	16
13	43	73	AV6	0.19	12
13	43	75	AV3	0.35	11
13	43	75	AV4	0.74	9
13	43	75	AV5	0.28	21
13	43	75	AV6	0.16	14
13	43	77	AV4	-0.18	9
13	43	77	AV5	-0.28	12
13	43	79	AV1	-0.23	10
13	43	80	AV1	0.18	15
13	43	80	AV2	0.14	26
13	43	80	AV3	-0.23	31
13	43	80	AV4	-0.18	29
13	43	80	AV5	0.21	26

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
13	43	81	AV1	0.21	10
13	43	81	AV2	0.35	29
13	43	81	AV3	0.48	16
13	43	81	AV4	0.23	12
13	43	81	AV5	-0.12	15
13	43	81	AV6	-0.16	30
13	43	83	AV1	0.14	9
13	43	85	AV2	0.32	18
13	43	91	AV3	0.23	17
13	43	91	AV4	-0.12	18
13	43	93	AV2	-0.14	14
13	43	96	AV3	0.16	8
13	43	96	AV4	0.14	11
13	43	96	AV6	-0.05	11
13	44	25	AV2	-0.12	15
13	44	25	AV3	-0.02	11
13	44	26	AV2	-0.11	18
13	44	26	AV3	-0.04	11
13	44	26	AV4	-0.04	10
13	44	59	AV2	0.32	12
13	44	59	AV3	-0.1	10
13	44	60	AV3	-0.1	20
13	44	67	AV5	0.21	10
13	44	68	AV1	0.3	29
13	44	68	AV2	-0.14	23
13	44	68	AV3	0.01	23
13	44	68	AV4	0.12	22
13	44	68	AV5	0.3	26
13	44	71	AV2	0.28	16
13	44	76	AV3	-0.51	19
13	44	77	AV2	0.11	14
13	44	77	AV3	-0.18	16
13	44	77	AV4	0.07	13
13	44	85	AV4	-0.58	5
13	44	91	AV5	-0.11	10
13	44	95	AV4	0.05	11
13	44	100	AV5	0.18	10

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
13	44	101	AV5	0.14	9
13	45	23	AV6	-0.23	10
13	45	64	AV6	0.3	10
13	45	66	AV1	-0.07	9
13	45	66	AV2	0.16	10
13	45	79	AV2	0.18	10
13	45	97	AV4	-0.11	23
13	45	97	AV6	0.18	16
13	46	24	AV5	-0.07	23
13	46	24	AV6	0.14	11
13	46	73	AV2	-0.53	24
13	46	73	AV3	0.35	13
13	46	77	AV4	0.02	9
13	46	77	AV5	-0.14	10
13	47	25	AV4	-0.07	11
13	47	25	AV5	0.18	20
13	47	25	AV6	-0.09	16
13	47	26	AV5	0.21	9
13	47	26	AV6	0.18	14
13	48	25	AV2	-0.07	20
13	48	25	AV4	-0.3	10
13	48	41	AV2	0.09	9
13	48	94	AV2	0.14	10
13	48	95	AV3	0.11	13
13	48	98	AV6	-0.16	9
13	49	27	AV1	0.55	10
13	49	27	AV6	-0.07	10
13	49	32	AV4	-0.11	14
13	49	32	AV5	-0.02	11
13	49	53	AV5	0.27	14
13	49	57	AV6	-0.11	10
13	49	92	AV4	0.09	9
13	49	93	AV1	0.41	18
13	49	93	AV6	0.07	12
13	49	94	AV5	0.05	20
13	49	94	AV6	0.11	32
13	49	95	AV4	0.2	23

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
13	50	56	AV1	0.74	8
13	50	87	AV5	0.23	12
13	50	93	AV5	0.14	23
13	50	94	AV1	0.14	15
13	50	94	AV2	0.2	23
13	50	94	AV6	-0.07	10
13	51	50	AV4	-0.18	19
13	51	50	AV5	-0.02	17
13	51	50	AV6	-0.02	17
13	51	55	AV4	-0.07	12
13	51	55	AV5	-0.1	27
13	51	55	AV6	-0.12	14
13	51	57	AV5	0.11	8
13	51	79	AV1	-0.16	10
13	51	79	AV2	0.16	13
13	51	91	AV3	0.05	16
13	51	91	AV4	0.02	29
13	51	91	AV5	-0.14	11
13	51	92	AV2	-0.14	18
13	51	92	AV4	0.16	12
13	51	92	AV5	-0.18	24
13	52	32	AV3	0.16	9
13	52	34	AV5	-0.02	7
13	52	34	AV6	-0.02	20
13	52	89	AV1	-0.05	9
13	52	89	AV2	0.2	27
13	52	89	AV3	-0.14	25
13	52	89	AV5	0.14	18
13	52	89	AV6	0.18	10
13	53	57	AV1	-0.48	12
13	53	57	AV2	0.14	13
13	53	57	AV3	0.18	22
13	53	57	AV4	0.14	16
13	53	58	AV2	-0.1	14
13	53	69	AV2	0.16	12
13	53	72	AV4	0.14	24
13	53	72	AV5	0.18	11

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
13	53	88	AV4	0.23	15
13	53	88	AV5	0.18	25
13	53	89	AV4	0.11	9
13	53	89	AV5	0.16	16
13	54	36	AV5	0.18	10
13	54	37	AV2	-0.05	10
13	54	37	AV3	-0.14	21
13	54	37	AV4	-0.14	22
13	54	37	AV5	-0.14	15
13	54	37	AV6	0.18	7
13	54	38	AV2	0.23	10
13	54	43	AV4	0.05	14
13	54	71	AV5	-0.11	13
13	54	72	AV2	-0.07	13
13	54	72	AV5	-0.16	19
13	54	72	AV6	-0.18	13
13	54	76	AV1	0.14	14
13	54	85	AV2	-0.23	9
13	54	86	AV1	0.18	9
13	54	86	AV3	0.16	8
13	54	87	AV5	-0.11	26
13	54	88	AV4	0.09	11
13	55	56	AV2	0.16	10
13	55	56	AV5	0.11	9
13	55	83	AV4	-0.04	7
13	55	84	AV4	-0.09	9
13	55	84	AV5	0.16	11
13	56	42	AV2	0.25	10
13	56	66	AV3	0.04	8
13	56	81	AV6	0.11	10
13	57	72	AV5	0.02	11
13	57	73	AV3	-0.05	9
13	57	73	AV5	-0.05	12
13	57	78	AV1	0.14	7
13	57	78	AV2	0.18	11
13	57	78	AV6	-0.14	10
13	57	79	AV2	-0.05	9



**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
13	58	52	AV6	0.23	10
13	58	55	AV1	-0.18	11
13	58	67	AV1	-0.07	7
13	58	73	AV6	0.18	10
13	58	75	AV2	-0.11	7
13	58	75	AV3	0.2	14
13	58	76	AV3	0.18	8
13	58	76	AV5	0.09	10
13	58	76	AV6	0.09	12
13	59	61	AV1	-0.25	10
13	59	61	AV6	0.23	7
13	59	66	AV6	0.25	10
14	16	60	AV6	0.19	12
14	16	91	AV6	-0.12	11
14	20	5	AV1	-0.27	8
14	21	7	AV1	-0.12	9
14	23	6	AV1	0.57	16
14	24	6	AV1	0.02	22
14	24	7	AV1	-0.23	9
14	24	7	AV6	-0.21	14
14	24	8	AV1	-0.21	17
14	24	116	AV1	-0.09	28
14	24	116	AV6	0.58	19
14	24	117	AV6	0.54	6
14	25	7	AV1	-0.02	19
14	25	7	AV6	-0.34	19
14	25	8	AV1	-0.15	30
14	25	9	AV5	0.28	9
14	25	26	AV6	-0.07	9
14	25	35	AV6	-0.19	11
14	25	36	AV6	-0.19	20
14	25	44	AV5	0.05	20
14	25	88	AV5	-0.18	13
14	25	89	AV2	0.14	12
14	25	109	AV6	0.18	12
14	25	115	AV6	0.07	22
14	26	7	AV1	-0.05	22

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
14	26	7	AV6	-0.1	15
14	26	84	AV5	-0.11	12
14	26	109	AV5	0.12	11
14	26	113	AV5	0.19	11
14	26	114	AV2	-0.3	12
14	26	115	AV1	0.02	31
14	26	115	AV5	0.16	12
14	26	115	AV6	0.02	17
14	26	116	AV1	-0.14	15
14	26	116	AV6	0.65	12
14	27	8	AV1	-0.16	28
14	27	8	AV1	0.3	16
14	27	8	AV6	-0.18	17
14	27	8	AV6	0.16	15
14	27	79	AV2	0.11	24
14	27	79	AV5	0.01	25
14	27	79	AV6	0.11	17
14	27	114	AV2	-0.01	19
14	28	9	AV2	0.34	28
14	28	9	AV5	-0.23	27
14	28	9	AV6	0.16	13
14	28	12	AV6	0.16	16
14	28	14	AV6	0.11	16
14	28	38	AV2	0.2	19
14	28	38	AV5	0.14	15
14	28	81	AV5	0.02	13
14	28	109	AV1	0.14	11
14	28	111	AV2	0.18	13
14	28	111	AV5	0.02	10
14	28	113	AV2	-0.21	15
14	28	113	AV5	0.21	18
14	28	113	AV6	0.16	10
14	29	11	AV6	-0.02	9
14	29	109	AV2	-0.23	12
14	29	109	AV6	-0.07	13
14	29	110	AV1	-0.36	9
14	29	110	AV2	0.2	11

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
14	29	110	AV5	-0.2	18
14	29	111	AV1	0.09	15
14	29	111	AV5	-0.16	20
14	30	14	AV6	0.2	13
14	30	18	AV6	-0.02	16
14	30	67	AV5	0.16	18
14	30	72	AV2	0.09	20
14	30	72	AV6	0.02	12
14	30	76	AV5	-0.32	13
14	30	107	AV1	0.09	9
14	30	107	AV5	0.25	16
14	30	109	AV6	-0.02	9
14	30	111	AV2	0.18	14
14	30	114	AV2	-0.48	13
14	31	11	AV6	-0.02	17
14	32	12	AV4	-0.04	23
14	32	12	AV5	0.07	25
14	32	84	AV2	0.27	25
14	32	84	AV3	-0.22	12
14	32	84	AV5	0.02	24
14	32	109	AV2	0.21	14
14	32	112	AV5	0.61	8
14	33	12	AV1	-0.11	12
14	33	12	AV2	0.27	25
14	33	12	AV5	0.05	22
14	33	12	AV6	0.25	19
14	34	91	AV4	0.05	10
14	34	108	AV1	0.11	9
14	34	108	AV2	0.02	10
14	34	108	AV3	0.27	19
14	34	108	AV4	-0.02	24
14	34	108	AV6	-0.07	11
14	34	111	AV2	-0.52	11
14	34	111	AV6	0.45	10
14	37	102	AV5	0.18	9
14	37	103	AV5	0.02	13
14	38	21	AV2	0.16	10

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
14	38	21	AV5	0.02	12
14	38	32	AV3	0.16	12
14	38	92	AV3	0.23	10
14	38	99	AV5	-0.11	14
14	38	101	AV2	0.2	17
14	38	101	AV3	0.09	30
14	38	101	AV4	0.07	26
14	38	101	AV5	0.18	19
14	38	103	AV2	0.18	18
14	38	103	AV4	0.2	13
14	38	103	AV5	0.09	12
14	38	104	AV4	-0.13	19
14	38	108	AV2	-0.29	11
14	38	108	AV3	-0.09	8
14	38	108	AV5	0.2	8
14	38	108	AV6	0.34	11
14	39	56	AV3	0.07	20
14	39	56	AV4	0.25	18
14	39	56	AV5	-0.27	15
14	39	68	AV2	0.18	15
14	39	68	AV3	0.12	23
14	39	68	AV5	0.13	11
14	39	68	AV6	-0.27	23
14	39	71	AV1	-0.18	10
14	39	77	AV2	-0.02	17
14	39	77	AV3	-0.13	21
14	39	77	AV4	-0.4	24
14	39	78	AV2	-0.07	10
14	39	78	AV3	0.43	10
14	39	79	AV3	-0.31	18
14	39	81	AV2	-0.1	15
14	39	82	AV3	0.2	12
14	39	82	AV4	-0.16	11
14	39	89	AV3	0.16	13
14	39	89	AV4	-0.1	12
14	39	89	AV5	0.02	9
14	39	95	AV2	0.2	12

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
14	39	95	AV3	0.25	9
14	39	96	AV1	-0.18	12
14	39	96	AV2	0.29	25
14	39	96	AV3	0.04	22
14	39	96	AV4	0.02	16
14	39	97	AV3	0.02	19
14	39	98	AV3	-0.2	17
14	39	98	AV5	0.02	12
14	39	100	AV2	0.04	18
14	39	100	AV3	0.27	21
14	39	100	AV4	-0.16	10
14	39	100	AV5	0.04	9
14	40	33	AV2	0.24	9
14	40	48	AV1	-0.18	20
14	40	48	AV2	0.18	10
14	40	48	AV3	0.16	21
14	40	48	AV4	-0.16	25
14	40	48	AV5	-0.18	25
14	40	48	AV6	-0.2	23
14	40	58	AV1	0.04	11
14	40	58	AV2	-0.2	17
14	40	58	AV4	-0.13	14
14	40	60	AV1	-0.11	13
14	40	60	AV2	-0.29	12
14	40	60	AV3	-0.36	18
14	40	60	AV4	-0.18	16
14	40	60	AV4	0.36	14
14	40	60	AV6	0.13	13
14	40	66	AV4	0.06	9
14	40	78	AV4	-0.22	14
14	40	78	AV5	0.18	11
14	40	80	AV1	0.2	8
14	40	80	AV2	0.47	20
14	40	80	AV3	-0.2	21
14	40	80	AV4	-0.07	29
14	40	80	AV4	0.34	14
14	40	80	AV5	-0.07	11

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
14	40	80	AV5	0.41	27
14	40	80	AV6	-0.2	9
14	40	80	AV6	0.14	22
14	40	87	AV2	0.16	12
14	40	87	AV3	-0.18	28
14	40	87	AV4	0.18	24
14	40	87	AV5	0.2	29
14	40	87	AV6	0.16	17
14	40	106	AV1	0.11	10
14	40	106	AV3	0.11	10
14	40	106	AV5	0.31	9
14	40	106	AV6	0.25	11
14	41	100	AV3	0.02	16
14	41	100	AV5	0.02	12
14	41	105	AV1	-0.02	8
14	41	105	AV3	-0.04	11
14	41	105	AV5	0.18	8
14	42	19	AV1	0.24	9
14	42	19	AV2	-0.38	12
14	42	21	AV1	-0.13	10
14	42	21	AV2	-0.11	8
14	42	21	AV3	0.2	24
14	42	21	AV4	-0.15	13
14	42	30	AV1	0.16	11
14	42	30	AV2	0.22	23
14	42	30	AV3	0.18	25
14	42	30	AV4	0.27	29
14	42	30	AV5	0.2	22
14	42	39	AV3	-0.02	10
14	42	39	AV5	-0.16	11
14	42	104	AV5	0.22	9
14	42	104	AV6	-0.01	8
14	43	53	AV1	-0.13	7
14	43	53	AV2	0.22	11
14	43	53	AV2	-0.11	16
14	43	53	AV3	0.02	33
14	43	53	AV4	0.36	24

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
14	43	53	AV5	-0.29	26
14	43	100	AV3	0.13	8
14	43	103	AV3	-0.01	10
14	44	21	AV5	0.33	9
14	44	102	AV2	-0.01	12
14	44	102	AV3	-0.01	12
14	44	102	AV6	-0.04	9
14	45	22	AV4	0.09	9
14	45	22	AV5	0.22	12
14	45	101	AV5	0.04	8
14	45	101	AV6	-0.04	9
14	46	24	AV6	0.11	16
14	47	43	AV1	-0.07	9
14	47	43	AV2	0.02	8
14	47	43	AV3	0.04	17
14	47	43	AV4	0.09	12
14	47	57	AV2	0.2	12
14	47	57	AV3	0.24	12
14	47	57	AV5	0.02	12
14	47	57	AV6	0.15	11
14	47	88	AV4	0.11	11
14	48	26	AV2	-0.13	11
14	48	86	AV3	0.18	10
14	48	97	AV6	-0.13	11
14	49	27	AV3	-0.04	7
14	49	27	AV5	0.15	14
14	49	95	AV3	0.13	10
14	49	96	AV6	0.15	17
14	50	28	AV5	0.17	18
14	50	28	AV6	-0.11	27
14	50	93	AV6	-0.11	10
14	50	94	AV3	-0.07	14
14	50	95	AV2	-0.01	11
14	51	31	AV4	-0.04	13
14	51	31	AV5	-0.11	9
14	51	31	AV6	-0.17	13
14	51	92	AV5	-0.09	10

**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
14	52	32	AV3	0.17	10
14	52	32	AV4	-0.02	10
14	52	32	AV5	-0.02	11
14	52	34	AV5	0.15	10
14	52	39	AV6	-0.02	10
14	52	88	AV3	-0.1	10
14	52	90	AV2	-0.15	10
14	52	91	AV2	-0.11	12
14	52	91	AV5	-0.01	13
14	53	33	AV3	0.17	13
14	53	33	AV4	-0.02	18
14	53	33	AV5	0.11	24
14	53	34	AV4	0.07	12
14	53	34	AV6	0.09	15
14	53	35	AV6	-0.04	8
14	53	37	AV6	-0.04	7
14	53	38	AV3	0.09	16
14	53	38	AV4	-0.11	18
14	53	38	AV6	-0.13	16
14	53	39	AV6	-0.13	9
14	53	89	AV3	0.04	12
14	53	90	AV6	0.26	16
14	54	35	AV5	-0.02	9
14	54	35	AV6	0.11	13
14	54	36	AV6	-0.02	10
14	54	37	AV4	0.11	10
14	54	38	AV3	0.09	12
14	54	56	AV2	0.15	6
14	54	56	AV5	-0.02	7
14	54	86	AV2	-0.13	16
14	54	87	AV2	0.09	10
14	54	87	AV3	0.17	12
14	54	87	AV5	0.22	16
14	54	87	AV6	0.17	13
14	55	82	AV2	0.07	11
14	55	83	AV2	0.17	12
14	55	83	AV4	0.15	13



**1R24 SERVICE INDUCED INDICATIONS (AVB WEAR)**

SG	Row	Column	Support	Inch	%TW
14	55	83	AV6	0.2	25
14	56	49	AV6	0.04	9
14	56	57	AV6	0.13	5
14	56	81	AV1	-0.02	10
14	56	81	AV2	0.07	9
14	56	81	AV3	-0.04	7
14	56	82	AV2	0.15	12
14	56	82	AV6	-0.1	12
14	57	44	AV2	-0.09	14
14	57	46	AV2	-0.11	10
14	57	46	AV3	0.09	9
14	57	46	AV6	0.17	14
14	57	61	AV6	0.13	12
14	57	70	AV6	-0.2	9
14	57	79	AV2	0.07	12
14	57	79	AV3	-0.07	9
14	58	47	AV5	-0.02	10
14	58	50	AV1	0.15	13
14	58	52	AV6	0.17	11
14	58	54	AV1	-0.22	11
14	58	57	AV6	0.17	10
14	58	61	AV1	0.15	9
14	58	63	AV2	-0.02	12
14	58	64	AV1	-0.18	9
14	58	70	AV1	0.11	8
14	58	72	AV1	-0.04	6
14	58	74	AV1	-0.02	10
14	58	74	AV2	-0.04	11
14	58	76	AV2	0.17	15
14	59	55	AV1	-0.5	8
14	59	55	AV2	0.2	8
14	59	55	AV6	0.2	16
14	59	57	AV1	-0.52	12
14	59	59	AV3	-0.09	9
14	59	60	AV1	0.13	10
14	59	63	AV6	0.26	12
14	59	64	AV1	-0.23	12

**1R24 SERVICE INDUCED INDICATIONS (TSP WEAR)**

SG	Row	Col	Location	%TW
11	8	41	01H	5
11	47	24	03C	5
11	50	37	07H	5
12	44	22	07C	3
12	53	33	03C	5
13	2	88	04C	27
13	16	119	02C	6
13	30	11	03C	5
13	53	85	01C	7
14	13	94	04H	5
14	17	119	02C	8
14	18	5	01C	6
14	18	5	02C	12
14	18	6	02C	8
14	26	116	02C	11
14	31	113	02C	10
14	33	111	02C	12
14	59	56	03C	6

Note: All %TW sizing was provided with Bobbin measurement, with exception of SG 11 tube 8-41 at 01H and SG 13 tube 2-88 at 04C were sized with Rotating Probe (+Point) due to NQI at these locations.

**1R24 SERVICE INDUCED INDICATIONS (FBP WEAR)**

<b>SG</b>	<b>Tube Row-Col</b>	<b>Location</b>	<b>%TW</b>	<b>Status</b>
11	53-34	FBC	9	Return to Service
13	15-117	FBH	5	Return to Service
13	55-83	FBH	5	Return to Service
14	20-118	FBC	6	Return to Service

**1R24 SERVICE INDUCED INDICATIONS (FOREIGN OBJECT WEAR)**

<b>SG</b>	<b>Tube Row-Col</b>	<b>Location</b>	<b>Axial Length (inches)</b>	<b>Circ Extent (Degrees)</b>	<b>%TW</b>	<b>Status</b>
11	57-48	FBC	0.21	60	23	Plugged and Stabilized