

WOLF CREEK

NUCLEAR OPERATING CORPORATION

Richard A. Muench
President and Chief Executive Officer

October 27, 2004

WM 04-0046

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

Subject: Docket No. 50-482: Results of the Twelfth Steam Generator Tube
Inservice Inspection

Gentlemen:

The attached Steam Generator Tube Inspection Report is submitted in accordance with Wolf Creek Generating Station (WCGS) Technical Specification 5.6.10.b. This report provides the results of Wolf Creek Generating Station's twelfth steam generator tube inservice inspection. The Steam Generator Tube Inspection Report includes the number and extent of tubes inspected, location and percent of wall-thickness penetration for each indication of an imperfection, and identification of tubes plugged. Attachment 1 provides the Steam Generator Tube Inspection Report.

No commitments are contained in this correspondence.

If you have any questions concerning this matter, please contact me at (620) 364-4000, or Mr. Kevin Moles at (620) 364-4126.

Very truly yours,



Richard A. Muench

RAM/rlg

Attachment

cc: J. N. Donohew (NRC), w/a
D. N. Graves (NRC), w/a
B. S. Mallett (NRC), w/a
Senior Resident Inspector (NRC), w/a

A047

STEAM GENERATOR TUBE INSPECTION REPORT

This report is being submitted pursuant to Technical Specification 5.6.10.b to report the results of the twelfth steam generator tube inservice inspection. Additional information established by NEI 97-06, "Steam Generator Program Guidelines," is also included with this report.

Summary

The twelfth steam generator tube inservice inspection was completed by Westinghouse Electric Corporation on October 31, 2003, during Refueling Outage 13. Section 1 of this report describes the inspection programs, which were completed in Steam Generators "A" and "D" including: 100% bobbin coil except the U-bend portion of row 1 and row 2, 55% Rotating Pancake Coil (RPC) top of tube sheet on the hot leg side, 50% RPC row 1 and 2 U-bends, and a special interest program. The inspection results, which include the location and percent of wall-thickness penetration for each indication of an imperfection, are listed in Section 2 of this report.

Mechanical plugging was necessary due to indications found during the inservice inspection. Of the 5600 tubes inspected in Steam Generator "A", three tubes were plugged due to anti-vibration bar (AVB) wear indications that exceeded the 40 percent through wall Technical Specification acceptance criteria. Sixteen of the 5546 tubes inspected in Steam Generator "D" were plugged due to AVB wear indications that exceeded the 40 percent through wall Technical Specification acceptance criteria. In addition, one tube in Steam Generator "D" was plugged due to an obstruction in the tube. Identification of tubes plugged, as well as the total number and percentage of tubes plugged to date for each steam generator, is included in Section 3 of this report.

The results of the twelfth steam generator tube inservice inspection have been classified as Category C-2. Category C-2 is defined in Technical Specification 5.5.9 as inspection results that indicate "one or more tubes, but not more than 1% of the total tubes inspected are defective, or between 5% and 10% of the total tubes inspected are degraded tubes." Steam Generator "A" had 0.05 percent defective tubes and 1.50 percent degraded tubes. Steam Generator "D" had 0.31 percent defective tubes and 2.72 percent degraded tubes.

STEAM GENERATOR TUBE INSPECTION REPORT

Technical Specification Required Reports

Section 1: Number and Extent of Tubes Inspected.

- A. Steam Generator "A": A total of 5600 tubes were inspected
- B. Steam Generator "D": A total of 5546 tubes were inspected

Test Extent	Steam Generator A	Steam Generator D
Bobbin Full Length	5356	5302
Bobbin Cold Leg Straight Length	244	244
Bobbin Hot Leg Straight Length	244	244
RPC Hot Leg Top of Tubesheet (+/- 3 inches)	3281	3240
RPC Row 1 and 2 U-bends	122	122

A Special Interest +Point RPC program included all bobbin "I" codes (signals that were new or changed after historical review). All 5.00 volts or greater dents on the hot leg side were examined. A 5% sample of "H" codes and 5% sample of "S" codes were examined. The "H" codes are primarily due to manufacturing burnish mark (MBM) signals and small (<2 volt) dent signals that have rotated into the flaw plane. These are resolved by history look-back and are monitored to ensure characteristics are not changing. The "S" codes are signals that have been +Point examined for diagnostic purposes at some previous time and were then determined to be non-degradation. These signals are tracked to detect signal change and are resolved by history look-back. RPC examinations were also performed to track Flow Distribution Baffle wear indications. None of the freespan or support plate indications tested with RPC were reported as degradation.

The following are the indication totals for each special interest category.⁽¹⁾

Indication/Signals	Description	SG A	SG D
DNG	Freespan Ding (Total/>5V)	185/48	244/60
DNT	Dents at Structures (Total/>5V)	354/127	149/53 ⁽²⁾
FSH/FSS	Freespan signals history / RPC (Includes burnish marks)	601/9	580/2
PCT	AVB% Wear Indications (Bobbin Sizing)	430	723 ⁽³⁾
PLP	Possible Loose Parts	6 ⁽⁴⁾	4 ⁽⁵⁾
PVN	Permeability Variation	2	3
VOL	Volumetric Indications - +Point	1	5
WAR	Wear (non-crack like) at FDB	0	18

1. Numbers may differ from EC database due to duplicate entries in database
2. Includes DDS (distorted dent cleared by +Point)
3. Excludes PCT calls for volumetric indications other than AVB wear
4. All from +Point, involving 5 tubes
5. Five indications are in the database, 4 from bobbin, 1 from +Point. The +Point PLP is interpreted as the same indication as the bobbin indication on the tube.

STEAM GENERATOR TUBE INSPECTION REPORT

Section 2: Location and Percent of Wall Thickness Penetration for Each Indication of an Imperfection.

The following tables contain all tubes inspected that had a percent through wall loss indication.

The key below provides a description of the abbreviations used in the following tables.

#H, #C	(# = number) of Support Plate(s) Hot Leg or Cold Leg Side
AV#	Anti-Vibration Bar (# = number)
TSH	Tube Sheet Hot Leg
FBC	Flow Baffle Cold Leg

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "A"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
25	8	11	AV6	0.02
27	10	10	AV5	-0.22
30	10	15	AV5	-0.06
38	19	14	AV4	0.03
40	20	14	AV5	0.00
39	25	16	AV2	0.06
45	25	22	AV2	0.00
45	25	21	AV4	0.03
45	25	31	AV5	-0.16
30	26	12	AV6	-0.08
45	26	24	AV3	-0.06
45	26	25	AV4	-0.11
48	27	14	AV4	0.05
48	27	13	AV5	0.00
38	29	17	AV2	0.00
38	29	14	AV3	0.00
45	30	20	AV2	0.09
45	30	23	AV3	0.00
45	30	18	AV5	-0.03
50	30	12	AV5	-0.05
41	31	19	AV4	0.08
44	31	17	AV4	0.08
41	32	11	AV2	-0.12
41	32	19	AV3	0.00
41	32	16	AV4	-0.11
45	32	15	AV2	-0.09
45	32	23	AV3	-0.20
45	32	34	AV4	0.00
45	32	26	AV5	-0.22
45	32	17	AV6	-0.08
47	32	17	AV2	-0.06
47	32	33	AV3	0.00
47	32	25	AV4	-0.08
47	32	14	AV5	-0.05
34	33	17	AV4	0.03
45	33	25	AV4	0.21
50	34	17	AV2	0.11
48	35	15	AV4	-0.03
48	35	21	AV5	0.03
33	36	18	AV2	0.17
33	36	15	AV3	0.00
33	36	10	AV4	0.00
35	36	16	AV5	0.00
45	36	21	AV2	0.00

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "A"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
36	37	13	AV3	0.11
45	37	19	AV2	0.00
45	37	25	AV3	0.00
45	37	15	AV4	0.00
45	37	13	AV6	-0.19
48	37	16	AV3	0.08
30	38	16	AV5	0.30
30	38	10	AV6	0.00
40	38	17	AV4	0.00
43	38	17	AV2	-0.15
43	38	35	AV3	0.23
43	38	18	AV4	0.03
43	38	15	AV5	-0.19
45	38	18	AV3	0.12
48	38	11	TSH	-0.08
39	39	18	AV3	0.00
39	39	20	AV5	-0.14
44	39	18	AV2	0.20
44	39	16	AV3	-0.06
44	39	31	AV4	-0.11
44	39	23	AV5	0.00
38	40	16	AV2	0.11
38	40	18	AV3	0.00
41	40	15	AV2	0.00
41	40	16	AV5	0.00
41	40	19	AV6	0.05
44	40	13	AV3	0.00
45	40	18	AV3	-0.09
45	40	23	AV4	-0.03
46	40	28	AV2	0.08
46	40	33	AV4	0.11
46	40	28	AV5	0.05
27	41	21	AV2	0.17
27	41	23	AV5	0.06
28	41	17	AV2	0.08
28	41	17	AV5	0.14
38	41	28	AV3	0.00
38	41	23	AV4	-0.14
40	41	18	AV3	0.03
40	41	17	AV4	-0.16
44	41	26	AV5	0.25
44	41	19	AV6	-0.14
45	41	17	AV2	0.09
45	41	33	AV3	0.00

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "A"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
45	41	28	AV4	0.00
45	41	24	AV5	0.03
45	41	21	AV6	0.08
27	42	17	AV5	0.08
30	42	15	AV2	0.03
36	42	19	AV2	0.03
36	42	16	AV3	-0.20
36	42	17	AV4	-0.03
36	42	19	AV5	0.05
40	42	16	AV3	0.14
40	42	22	AV4	0.00
40	42	15	AV5	0.00
56	42	12	AV6	0.00
28	43	18	AV2	0.00
36	43	23	AV2	-0.06
41	43	16	AV3	0.03
41	43	14	AV4	-0.03
41	43	23	AV5	0.00
41	43	17	AV6	0.19
56	43	11	AV3	0.11
56	43	12	AV5	-0.08
57	43	11	AV5	-0.08
35	44	13	AV5	0.00
38	44	12	AV5	0.00
41	44	15	AV2	-0.03
41	44	22	AV3	0.00
41	44	18	AV4	0.45
41	44	14	AV5	0.00
44	44	35	AV2	0.00
44	44	27	AV3	0.00
44	44	24	AV4	0.00
44	44	27	AV5	0.00
44	44	23	AV6	0.21
28	45	27	AV5	0.06
28	45	19	AV6	0.03
35	45	18	AV1	0.00
35	45	21	AV2	0.00
36	45	23	AV2	-0.06
36	45	18	AV3	-0.14
36	45	19	AV4	-0.08
36	45	25	AV5	-0.14
36	45	23	AV6	0.08
37	45	17	AV6	0.00
39	45	33	AV4	0.19

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "A"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
40	45	15	AV3	0.23
40	45	16	AV4	0.05
41	45	17	AV6	-0.08
43	45	13	AV3	0.32
44	45	20	AV3	-0.03
44	45	15	AV4	-0.11
44	45	16	AV5	-0.08
56	45	14	AV4	0.16
26	46	15	AV2	0.00
28	46	26	AV5	-0.30
28	46	16	AV6	0.00
38	46	18	AV1	0.00
38	46	16	AV2	0.00
38	46	17	AV3	0.00
38	46	36	AV4	0.00
39	46	28	AV2	0.00
39	46	20	AV3	0.00
39	46	19	AV4	-0.05
40	46	35	AV2	0.00
40	46	41	AV3	0.00
40	46	38	AV4	0.21
40	46	40	AV5	0.00
40	46	19	AV6	0.00
43	46	13	AV2	0.00
43	46	14	AV3	0.08
43	46	30	AV4	0.00
43	46	13	AV5	-0.05
44	46	16	AV2	0.19
44	46	18	AV3	0.22
44	46	17	AV4	-0.05
44	46	15	AV5	0.00
50	46	20	AV3	-0.03
34	47	24	AV2	0.17
34	47	20	AV3	0.00
34	47	24	AV5	-0.08
36	47	11	AV3	-0.09
37	47	20	AV3	-0.06
37	47	28	AV4	0.27
37	47	20	AV5	-0.14
39	47	13	AV2	-0.20
39	47	14	AV4	-0.03
39	47	13	AV5	-0.05
40	47	17	AV1	-0.14
40	47	28	AV2	-0.06

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "A"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
40	47	30	AV3	-0.11
40	47	23	AV4	0.00
40	47	15	AV5	0.05
44	47	17	AV2	-0.09
58	47	10	AV3	0.00
36	48	18	AV5	0.00
37	48	16	AV2	0.00
38	48	26	AV2	0.00
38	48	23	AV3	0.08
38	48	16	AV4	0.00
38	48	15	AV5	0.16
40	48	18	AV5	0.00
22	49	16	AV2	-0.09
30	49	18	AV1	0.25
30	49	41	AV2	0.23
30	49	36	AV5	0.25
36	49	21	AV2	0.17
36	49	15	AV3	0.00
36	49	19	AV4	0.05
40	49	17	AV2	-0.17
40	49	18	AV3	-0.28
40	49	10	AV4	-0.27
57	49	11	AV6	0.00
36	50	16	AV2	0.11
36	50	18	AV3	-0.11
36	50	20	AV4	0.03
36	50	16	AV5	0.19
36	50	12	AV6	-0.35
38	50	18	AV4	0.16
39	50	15	AV4	0.03
27	51	12	AV5	-0.17
35	51	15	AV1	-0.12
49	51	27	AV2	0.14
49	51	21	AV4	-0.03
49	51	23	AV5	-0.05
49	51	14	AV6	-0.05
38	52	20	AV3	-0.03
38	52	18	AV4	-0.11
38	52	14	AV5	0.13
40	52	19	AV2	0.36
40	52	16	AV3	0.00
40	52	21	AV4	0.08
40	52	28	AV5	0.16
40	52	17	AV6	-0.13

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "A"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
43	52	18	AV2	0.00
33	53	18	AV2	-0.06
34	53	17	AV2	-0.15
40	53	14	AV3	0.00
42	53	18	AV2	-0.15
42	53	24	AV5	0.00
49	53	16	AV5	0.08
49	53	14	AV6	-0.05
35	54	18	AV2	0.03
36	54	22	AV3	0.23
36	54	11	AV6	0.00
41	54	24	AV5	-0.13
42	54	21	AV5	0.05
18	55	18	AV1	0.19
38	55	20	AV2	0.09
38	55	28	AV3	0.00
38	55	30	AV4	0.00
42	55	12	AV4	0.00
35	56	17	AV2	-0.03
44	56	20	AV2	0.25
44	56	25	AV3	0.00
44	56	22	AV4	0.03
44	56	19	AV5	0.03
19	58	18	AV1	0.00
31	58	17	AV2	-0.11
40	58	14	AV2	0.06
40	58	34	AV3	0.03
40	58	17	AV4	0.00
40	58	28	AV5	0.00
40	58	12	AV6	-0.05
41	58	23	AV2	0.00
41	58	20	AV3	0.06
43	58	28	AV2	0.25
43	58	20	AV3	0.12
43	58	20	AV4	0.08
43	58	16	AV5	-0.08
39	59	16	AV5	0.11
41	59	19	AV2	0.12
41	59	25	AV3	0.00
41	59	19	AV4	0.00
44	59	23	AV2	0.33
44	59	22	AV3	0.25
44	59	15	AV6	0.00
40	60	38	AV3	0.00

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "A"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
40	60	27	AV4	0.00
40	60	24	AV5	0.00
44	60	21	AV3	0.11
44	60	18	AV4	0.03
44	60	14	AV5	-0.11
34	61	23	AV4	0.00
42	61	20	AV2	0.27
36	63	12	AV2	-0.11
36	63	13	AV3	0.00
37	64	17	AV2	0.06
37	64	15	AV3	0.00
37	64	15	AV4	0.00
57	64	19	AV2	-0.09
51	66	19	AV2	-0.09
49	68	18	AV2	0.00
49	68	15	AV3	0.00
40	70	26	AV3	0.00
40	70	22	AV4	0.00
40	70	14	AV5	0.00
40	70	11	AV6	0.00
50	70	27	AV2	0.00
27	71	13	AV2	0.00
37	74	13	AV1	-0.41
37	74	29	AV3	-0.05
37	74	29	AV4	0.00
37	74	27	AV5	-0.05
37	74	10	AV6	0.00
39	75	17	AV3	0.06
40	75	26	AV1	0.14
40	75	13	AV2	0.32
40	75	27	AV3	0.14
40	75	18	AV4	-0.34
40	75	28	AV5	-0.19
41	75	17	AV2	-0.29
41	75	18	AV3	0.03
41	75	16	AV4	0.05
41	75	27	AV5	-0.11
41	75	14	AV6	-0.40
42	75	17	AV1	-0.17
44	75	16	AV3	0.00
44	75	14	AV4	0.13
44	75	19	AV5	-0.03
44	75	16	AV6	-0.37
39	76	23	AV2	-0.32

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "A"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
50	76	26	AV2	0.00
50	76	25	AV3	0.00
50	76	46	AV4	0.00
50	76	37	AV5	0.00
44	77	19	AV4	0.05
58	77	11	AV6	-0.05
34	78	16	AV2	-0.06
34	78	14	AV3	0.00
34	78	20	AV5	0.08
39	78	17	AV3	0.00
39	79	15	AV3	0.11
39	79	21	AV4	0.05
39	79	13	AV5	0.03
39	79	15	AV6	0.13
27	80	16	AV5	0.03
34	80	12	AV1	0.28
34	80	18	AV2	-0.03
39	80	24	AV2	-0.08
39	80	25	AV3	0.03
39	80	25	AV4	0.08
39	80	18	AV5	0.03
39	80	38	AV6	0.13
40	80	17	AV2	0.03
39	81	19	AV2	-0.03
39	81	18	AV4	0.13
39	81	18	AV5	-0.03
44	81	15	AV2	0.14
48	81	23	AV2	0.17
48	81	18	AV3	-0.28
48	81	17	AV4	0.13
48	81	37	AV5	-0.24
56	81	14	AV5	0.03
27	82	17	AV5	0.03
40	82	16	AV2	0.00
40	82	13	AV3	0.00
40	82	13	AV4	0.00
40	82	15	AV5	0.00
36	83	20	AV1	-0.03
46	83	17	AV1	0.00
46	83	19	AV2	-0.06
34	84	19	AV3	0.00
39	84	10	AV1	0.00
39	84	30	AV2	0.14
39	84	32	AV3	0.17

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "A"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
39	84	22	AV4	0.10
39	84	24	AV5	0.10
39	84	22	AV6	-0.21
53	84	14	AV5	0.10
39	85	19	AV2	0.09
39	85	33	AV3	0.06
39	85	35	AV4	0.03
39	85	25	AV5	-0.13
39	85	18	AV6	0.03
54	85	17	AV5	-0.03
25	86	14	AV5	0.05
31	86	22	AV5	0.00
46	86	15	AV1	0.11
46	86	14	AV2	-0.08
30	87	18	AV5	-0.16
39	87	14	AV2	0.03
39	87	29	AV4	0.00
39	87	17	AV6	0.05
44	87	15	AV2	0.00
50	87	19	AV4	-0.03
50	87	22	AV5	0.03
20	88	14	AV6	0.00
30	88	19	AV2	0.14
30	88	16	AV5	0.23
44	89	18	AV3	0.03
44	89	24	AV4	0.08
44	89	20	AV5	0.13
44	89	21	AV6	0.11
53	89	17	AV3	0.00
50	90	29	AV5	0.00
35	91	13	AV1	0.00
35	91	22	AV4	-0.11
36	91	20	AV2	-0.03
36	91	24	AV4	-0.20
36	91	11	AV5	-0.14
36	91	17	AV6	-0.11
41	91	15	AV6	0.00
35	92	16	AV3	0.05
36	92	11	AV2	-0.08
36	92	17	AV5	-0.26
44	92	18	AV4	-0.14
39	93	13	AV2	-0.21
39	93	28	AV3	-0.26
39	93	16	AV5	0.22

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "A"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
39	94	14	AV5	-0.03
20	95	14	AV6	0.03
38	95	15	AV4	0.06
38	95	19	AV5	-0.11
39	95	16	AV3	0.00
39	95	19	AV4	-0.08
39	95	12	AV5	-0.14
39	96	16	AV3	-0.16
39	96	17	AV4	-0.03
27	97	18	AV2	0.00
35	97	17	AV4	0.06
37	97	12	AV3	0.03
37	97	15	AV5	-0.03
38	98	18	AV3	-0.03
38	98	24	AV4	-0.17
38	99	23	AV4	-0.03
37	100	12	AV3	0.00
37	100	15	AV4	0.29
45	100	11	AV1	-0.05
45	100	13	AV2	0.08
45	100	15	AV3	0.00
45	100	15	AV4	0.00
39	101	12	AV3	0.08
39	101	17	AV4	-0.20
39	101	10	AV5	0.06
40	102	17	AV3	0.03
40	102	17	AV4	-0.06
40	102	16	AV5	0.00
44	102	11	AV1	0.03
43	103	14	AV3	-0.16
36	110	13	AV3	0.00
36	110	24	AV4	-0.17
36	110	30	AV5	0.00
36	110	17	AV6	-0.14

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "D"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
27	8	10	AV1	0.00
27	8	16	AV6	0.00
29	10	13	AV1	0.00
29	10	11	AV2	-0.46
29	10	21	AV5	0.03
30	10	15	AV2	-0.17
30	10	23	AV5	0.00
32	11	14	AV2	0.00
32	11	18	AV6	-0.13
33	11	19	AV2	-0.06
33	11	13	AV5	0.00
33	11	17	AV6	0.03
32	12	17	AV5	0.00
32	12	11	AV6	0.00
33	12	16	AV2	0.00
33	12	27	AV4	0.00
33	12	26	AV5	0.00
33	12	13	AV6	0.00
33	13	24	AV4	0.00
33	13	23	AV5	0.00
33	13	36	AV6	0.00
34	13	31	AV3	0.00
32	14	16	AV4	0.00
32	14	12	AV5	0.00
33	14	15	AV2	0.00
33	14	16	AV3	0.00
33	14	18	AV4	0.00
35	14	16	AV5	0.00
33	15	16	AV4	0.00
35	15	12	AV4	0.00
36	15	21	AV5	0.40
36	16	25	AV4	0.14
36	16	12	AV5	0.43
37	16	15	AV3	0.12
37	16	20	AV4	0.08
37	16	18	AV5	-0.06
37	16	15	AV6	0.00
38	16	13	AV3	0.00
38	16	19	AV4	0.10
35	17	22	AV2	0.06
35	17	24	AV3	0.00
37	17	10	AV3	0.06
37	17	26	AV4	0.00
37	17	20	AV5	0.00
37	17	18	AV6	0.00

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "D"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
38	17	13	AV4	-0.03
37	18	15	AV4	-0.03
38	18	14	AV4	0.14
38	18	11	AV5	0.00
38	18	10	AV6	0.17
39	18	15	AV2	0.00
39	18	16	AV3	-0.06
33	19	15	AV3	0.00
37	19	14	AV1	0.00
37	19	24	AV3	0.00
37	19	15	AV4	0.00
38	19	15	AV1	0.03
38	19	25	AV3	0.00
38	19	14	AV4	0.00
38	19	12	AV5	0.37
38	19	15	AV6	0.00
39	19	29	AV2	0.00
39	19	23	AV3	0.00
39	19	21	AV5	0.00
39	19	20	AV6	0.00
40	19	13	AV2	-0.11
40	19	10	AV4	0.00
41	19	15	AV1	0.12
41	19	38	AV2	0.00
41	19	29	AV3	0.00
41	19	22	AV4	0.00
41	19	26	AV5	0.43
41	19	19	AV6	0.00
37	20	13	AV2	0.09
39	20	16	AV2	0.00
39	20	27	AV3	0.00
40	20	18	AV4	0.03
40	20	14	AV6	-0.06
41	20	19	AV3	-0.03
41	20	29	AV4	0.09
41	20	34	AV5	-0.17
41	20	25	AV6	0.17
31	21	9	TSH	0.08
37	21	17	AV2	0.21
38	21	21	AV2	0.00
38	21	16	AV4	-0.06
39	21	15	AV3	0.00
40	21	11	AV4	-0.06
41	21	18	AV5	0.03
38	22	19	AV3	-0.03

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "D"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
41	22	22	AV2	0.09
41	22	26	AV3	0.09
41	22	25	AV5	0.00
41	22	19	AV6	-0.03
42	22	18	AV5	0.06
38	23	17	AV5	0.00
38	23	16	AV6	0.00
40	23	17	AV5	0.00
43	23	17	AV1	0.00
43	23	20	AV2	0.03
43	23	38	AV4	0.00
43	23	32	AV5	-0.03
43	23	24	AV6	0.37
39	24	19	AV4	0.06
39	25	16	AV3	0.06
39	25	12	AV5	0.00
43	25	16	AV2	0.09
43	25	26	AV3	-0.09
43	25	25	AV4	0.00
43	25	13	AV5	0.06
43	25	19	AV6	-0.09
44	25	21	AV3	-0.38
44	25	21	AV4	-0.03
44	25	18	AV5	0.34
45	25	13	AV2	0.00
45	25	21	AV3	0.15
45	25	34	AV5	0.09
45	25	32	AV6	0.06
46	25	19	AV1	0.09
46	25	20	AV2	-0.12
46	25	37	AV3	0.03
46	25	28	AV4	0.00
46	25	23	AV5	0.06
47	25	22	AV4	-0.10
37	26	19	AV2	0.06
41	27	15	AV4	0.00
41	27	14	AV5	0.00
43	27	17	AV2	0.03
43	27	30	AV3	-0.15
43	27	17	AV5	0.03
43	27	16	AV6	-0.06
44	27	13	AV4	0.06
49	27	24	AV4	0.06
42	28	17	AV2	0.06
42	28	14	AV3	0.00

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "D"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
45	28	15	AV2	0.12
45	28	17	AV3	0.06
45	28	26	AV5	-0.03
45	28	19	AV6	0.00
47	28	21	AV5	0.00
48	28	15	AV5	0.03
49	28	18	AV4	0.00
49	28	39	AV5	0.09
49	28	38	AV6	0.09
1	29	7	FBC	-0.25
1	29	7	FBH	0.25
44	29	18	AV3	0.00
49	29	15	AV2	0.13
49	29	18	AV4	-0.05
49	29	15	AV6	0.05
1	30	6	FBC	0.31
46	30	17	AV3	-0.12
49	30	32	AV2	0.03
49	30	32	AV3	0.03
49	30	14	AV4	-0.09
49	30	19	AV5	0.09
49	30	22	AV6	0.06
50	30	20	AV6	-0.06
1	31	7	FBC	0.34
1	31	6	FBH	0.25
46	31	11	AV1	0.00
46	31	19	AV2	0.00
46	31	23	AV3	-0.15
46	31	29	AV4	0.09
46	31	24	AV5	0.00
47	31	25	AV5	0.00
49	31	18	AV3	0.00
49	31	22	AV5	0.00
49	31	18	AV6	0.00
50	31	16	AV4	0.00
1	32	8	FBC	-0.20
1	32	5	FBH	0.03
32	32	14	AV3	0.15
47	32	21	AV4	0.06
47	32	23	AV5	0.09
49	32	19	AV3	0.09
49	32	13	AV4	0.00
50	32	18	AV2	0.09
50	32	15	AV3	-0.03
50	32	24	AV4	0.06

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "D"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
50	32	20	AV5	0.03
1	33	7	FBC	0.22
1	33	6	FBH	0.25
37	33	14	AV2	0.00
37	33	23	AV3	0.00
47	33	13	AV3	0.06
47	33	18	AV4	0.00
47	33	16	AV5	0.00
47	33	15	AV6	0.00
48	33	13	AV3	-0.06
48	33	15	AV4	0.00
52	33	16	AV6	0.00
33	34	15	AV5	0.00
35	34	13	AV3	-0.06
48	34	27	AV2	0.06
48	34	27	AV3	0.00
48	34	17	AV5	-0.09
45	35	16	AV2	0.03
53	35	21	AV3	0.00
53	35	22	AV5	0.00
54	35	14	AV5	-0.03
43	36	13	AV4	-0.11
39	37	17	AV2	0.06
39	37	21	AV3	0.14
39	37	21	AV4	-0.08
39	37	15	AV5	0.06
41	37	16	AV4	0.19
49	37	10	AV2	-0.12
49	37	19	AV3	0.09
49	37	16	AV4	0.17
49	37	14	AV6	-0.04
51	37	16	AV2	0.06
52	37	26	AV1	0.00
52	37	27	AV1	0.03
52	37	66	AV2	0.00
52	37	56	AV2	0.00
52	37	53	AV3	0.00
52	37	44	AV3	0.00
52	37	57	AV4	0.00
52	37	66	AV4	0.00
52	37	26	AV5	0.00
52	37	25	AV5	-0.14
52	37	17	AV6	0.08
52	37	19	AV6	0.00
43	38	21	AV2	0.03

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "D"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
43	38	24	AV4	-0.03
43	38	18	AV5	0.08
46	38	18	AV3	0.03
49	38	14	AV5	0.00
45	39	13	AV3	0.00
46	39	13	AV5	-0.03
48	39	16	AV2	0.09
48	39	15	AV3	0.00
48	39	32	AV4	0.14
48	39	22	AV5	0.22
48	39	12	AV6	0.08
49	39	11	AV3	0.00
52	39	13	AV3	0.28
52	39	21	AV4	0.25
52	39	18	AV5	0.11
38	40	28	AV2	0.00
38	40	18	AV4	0.11
41	40	19	AV3	0.42
41	40	18	AV4	0.06
39	41	16	AV2	0.23
39	41	17	AV3	0.00
39	41	13	AV4	-0.11
39	41	12	AV5	-0.03
42	41	13	AV2	0.00
42	41	25	AV3	0.00
42	41	17	AV4	0.11
42	41	16	AV5	0.11
42	41	17	AV6	0.03
51	41	20	AV1	0.00
51	41	18	AV2	0.00
51	41	24	AV3	0.00
37	42	21	AV4	0.00
41	42	17	AV4	0.06
43	42	14	AV5	-0.17
45	42	16	AV2	0.06
47	42	19	AV4	0.00
47	42	24	AV5	0.25
47	42	18	AV6	0.17
39	43	20	AV2	0.21
39	43	32	AV3	0.00
39	43	34	AV4	0.00
39	43	21	AV5	-0.17
41	43	34	AV2	0.00
41	43	30	AV3	0.00
41	43	14	AV4	0.25

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "D"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
41	43	15	AV5	0.36
43	43	18	AV2	0.00
45	43	20	AV3	-0.18
45	43	25	AV4	-0.28
45	43	20	AV5	0.25
45	43	16	AV6	0.14
42	44	20	AV4	-0.03
42	44	16	AV5	0.03
43	44	24	AV2	0.00
43	44	28	AV3	-0.09
33	45	10	AV4	0.08
37	45	16	AV1	0.00
37	45	36	AV2	0.00
37	45	20	AV3	0.00
37	45	20	AV4	0.06
37	45	15	AV5	0.17
46	45	13	AV3	0.00
46	45	12	AV4	0.06
44	46	15	AV2	-0.12
44	46	21	AV5	0.08
45	46	17	AV2	0.21
45	46	16	AV3	0.18
45	46	19	AV6	0.08
41	47	23	AV2	0.00
41	47	12	AV3	-0.26
41	47	12	AV4	-0.19
41	47	16	AV6	0.06
50	47	14	AV4	0.00
50	47	15	AV5	0.19
50	47	11	AV6	0.08
44	48	18	AV5	0.00
44	49	10	AV4	0.03
44	49	18	AV5	-0.03
44	49	13	AV6	0.03
49	49	18	AV2	-0.09
50	49	26	AV2	0.00
50	49	24	AV2	0.00
50	49	50	AV3	-0.09
50	49	48	AV3	0.00
50	49	42	AV4	-0.06
50	49	39	AV4	0.00
50	49	24	AV5	0.00
50	49	26	AV5	-0.03
50	49	19	AV6	-0.19
50	49	19	AV6	0.00

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "D"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
58	49	18	AV1	0.27
40	50	21	AV3	0.08
40	50	22	AV4	0.02
40	50	25	AV5	0.19
48	50	16	AV1	0.00
48	50	32	AV3	-0.03
48	50	31	AV4	0.00
48	50	32	AV5	0.06
51	50	12	AV1	0.00
52	50	13	AV2	0.00
52	50	15	AV3	0.00
52	50	15	AV5	0.00
50	51	31	AV2	-0.06
50	51	17	AV4	0.03
50	51	13	AV5	-0.11
50	51	10	AV6	-0.28
41	52	16	AV2	0.00
41	52	13	AV3	0.00
41	52	18	AV4	0.00
44	52	16	AV2	0.00
52	52	22	AV2	0.00
52	52	20	AV3	0.00
25	53	12	AV2	0.03
25	53	12	AV5	-0.22
36	53	15	AV2	-0.26
37	53	12	AV4	-0.17
37	53	18	AV5	0.03
33	54	16	AV2	0.00
35	54	15	AV3	0.00
35	54	18	AV4	0.00
35	54	20	AV5	0.00
45	54	23	AV2	0.00
45	54	30	AV3	0.00
45	54	22	AV4	0.00
45	54	26	AV5	0.00
45	54	14	AV6	0.00
39	55	18	AV1	-0.11
39	55	16	AV4	-0.06
41	55	19	AV3	-0.03
41	55	21	AV4	-0.14
45	55	15	AV2	0.00
45	55	15	AV3	0.00
45	55	26	AV4	0.03
48	55	16	AV3	-0.03
49	55	16	AV2	0.20

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "D"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
49	55	22	AV3	0.00
49	55	42	AV4	0.00
49	55	32	AV5	0.08
49	55	21	AV6	0.00
50	55	40	AV2	-0.06
50	55	21	AV3	0.00
50	55	20	AV4	-0.17
50	55	21	AV5	-0.06
34	56	29	AV2	0.00
34	56	32	AV5	0.00
44	56	17	AV6	0.00
45	56	18	AV1	0.00
45	56	28	AV2	0.00
45	56	26	AV3	0.00
45	56	31	AV4	0.00
45	56	24	AV5	0.00
45	56	14	AV6	0.00
50	56	15	AV2	0.00
50	56	28	AV3	0.00
50	56	33	AV4	0.00
50	56	22	AV5	0.00
35	58	12	AV2	0.20
50	58	11	AV3	0.20
50	58	11	AV4	0.06
50	58	14	AV5	0.36
50	58	12	AV6	0.00
45	59	17	AV1	-0.40
45	59	23	AV2	0.03
45	59	19	AV3	0.00
45	59	39	AV4	-0.03
45	59	32	AV5	0.11
45	59	17	AV6	-0.11
50	59	15	AV2	0.00
50	59	15	AV4	0.00
50	59	14	AV5	0.28
50	59	14	AV6	0.06
35	60	27	AV5	0.00
48	60	12	AV2	-0.46
48	60	34	AV3	0.06
48	60	29	AV4	0.08
48	60	25	AV5	0.08
48	60	26	AV6	0.06
33	61	17	AV2	0.00
33	61	16	AV3	0.00
35	61	13	AV2	0.00

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "D"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
35	61	21	AV3	0.00
44	61	14	5H	-0.55
44	61	19	AV3	0.00
44	61	16	AV4	0.00
49	61	46	AV2	0.00
49	61	29	AV3	0.00
49	61	16	AV4	0.17
50	62	23	AV1	0.31
50	62	44	AV2	-0.03
50	62	40	AV3	0.03
50	62	47	AV4	0.00
50	62	23	AV5	-0.11
50	62	15	AV6	-0.22
55	62	28	AV1	0.06
55	62	26	AV2	0.09
33	64	17	AV2	-0.28
33	64	12	AV3	-0.14
33	64	21	AV4	-0.08
33	64	13	AV5	-0.33
41	64	22	AV3	-0.09
41	64	10	AV4	-0.08
41	64	16	AV5	0.14
41	64	20	AV5	-0.44
53	64	12	AV1	-0.09
53	64	12	AV2	-0.06
56	64	12	AV1	-0.03
15	65	14	5H	0.00
41	65	30	AV1	0.00
41	65	30	AV1	0.00
41	65	30	AV2	0.00
41	65	26	AV2	0.00
41	65	47	AV3	0.00
41	65	43	AV3	0.00
41	65	50	AV4	0.00
41	65	50	AV4	0.00
41	65	48	AV5	0.00
41	65	47	AV5	0.00
41	65	27	AV6	0.00
41	65	29	AV6	0.00
48	65	22	AV1	0.14
48	65	24	AV2	0.00
48	65	43	AV3	0.00
48	65	44	AV4	0.00
48	65	37	AV5	0.14
48	65	33	AV6	-0.11

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "D"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
31	66	18	AV2	0.20
33	66	14	AV2	-0.06
33	66	13	AV3	-0.12
41	66	16	AV2	-0.09
41	66	21	AV3	0.00
41	66	25	AV4	-0.14
41	66	25	AV5	-0.11
41	66	24	AV6	-0.19
45	66	35	AV2	-0.06
45	66	20	AV3	-0.11
45	66	35	AV4	-0.11
45	66	40	AV5	-0.14
45	66	16	AV6	-0.06
44	67	16	AV2	0.00
34	68	13	AV2	0.14
40	68	14	AV2	0.19
46	68	27	AV2	0.15
46	68	18	AV3	-0.03
31	69	10	AV1	-0.09
31	69	15	AV5	0.06
48	69	10	AV1	0.00
48	69	43	AV2	0.00
48	69	41	AV3	-0.34
48	69	10	AV4	0.00
48	69	14	AV5	0.08
48	69	11	AV6	-0.06
52	69	11	AV1	0.00
44	70	16	AV1	0.03
44	70	20	AV2	0.11
44	70	13	AV3	0.00
44	70	16	AV5	0.08
44	70	16	AV6	0.22
46	70	22	AV2	0.12
50	70	19	AV2	-0.14
50	70	17	AV3	0.29
57	70	12	AV5	0.00
36	71	35	AV1	0.06
36	71	26	AV2	0.00
36	71	25	AV3	0.15
36	71	20	AV4	-0.08
36	71	23	AV5	0.13
36	71	17	AV6	0.16
49	71	35	AV4	0.19
49	71	22	AV5	0.19
32	72	26	AV1	0.00

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "D"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
32	72	16	AV5	-0.14
36	73	15	AV2	0.25
36	73	19	AV5	0.19
39	74	14	AV3	0.00
44	74	29	AV1	0.00
44	74	25	AV2	0.00
44	74	23	AV3	0.26
44	74	15	AV4	0.00
44	74	42	AV5	0.05
44	74	20	AV6	0.00
45	74	12	AV1	0.00
45	74	14	AV2	-0.06
48	74	26	AV2	0.09
39	75	11	AV2	-0.11
39	75	15	AV3	0.00
39	75	13	AV5	0.00
44	75	18	AV2	-0.03
46	75	38	AV2	0.00
46	75	17	AV3	0.34
46	75	47	AV4	0.00
46	75	15	AV5	0.11
50	75	38	AV2	0.00
50	75	31	AV3	0.00
50	75	21	AV4	-0.06
50	75	30	AV5	0.00
36	76	13	AV1	0.06
36	76	16	AV2	0.00
45	76	15	AV1	0.12
45	76	15	AV2	0.15
45	76	16	AV3	0.12
45	76	34	AV4	0.03
45	76	14	AV5	0.00
45	76	14	AV6	0.00
52	76	14	AV2	0.17
57	76	11	AV4	0.00
57	76	19	AV5	-0.03
39	77	16	AV1	0.08
39	77	26	AV2	0.08
39	77	21	AV3	-0.03
39	77	15	AV4	0.11
39	77	31	AV5	0.16
39	77	14	AV6	0.00
44	77	16	AV3	0.17
39	78	26	AV3	0.00
41	78	16	AV2	-0.24

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "D"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
46	78	20	AV2	0.29
50	78	14	AV2	0.00
50	78	16	AV3	0.00
28	79	10	AV2	0.28
28	79	12	AV5	0.00
33	79	11	AV5	-0.17
39	79	17	AV2	0.00
42	79	12	AV3	0.00
36	80	17	AV3	0.00
36	80	17	AV4	0.00
39	80	21	AV2	0.00
39	80	19	AV4	0.00
50	80	16	AV2	-0.03
37	81	14	AV3	0.14
37	81	11	AV4	0.14
43	81	14	AV2	0.26
43	81	24	AV3	0.09
43	81	10	AV4	-0.17
43	81	13	AV5	-0.08
45	81	20	AV2	0.00
45	81	33	AV3	-0.03
45	81	22	AV4	-0.17
45	81	13	AV5	0.17
47	81	14	AV3	0.00
49	81	25	AV2	0.03
51	81	19	AV2	0.00
51	81	17	AV4	0.10
51	81	16	AV5	-0.03
24	82	11	AV6	-0.17
43	82	16	AV2	-0.06
43	82	20	AV4	-0.11
45	82	27	AV3	0.00
49	82	20	AV2	0.00
39	83	29	AV3	0.00
39	83	20	AV4	-0.03
40	83	16	AV3	0.00
48	83	10	AV2	0.25
48	83	10	AV4	0.08
20	84	18	AV6	-0.05
32	84	10	AV3	0.00
41	84	19	AV1	0.00
41	84	27	AV3	0.00
41	84	18	AV4	0.00
41	84	18	AV5	0.00
46	84	30	AV3	0.00

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "D"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
46	84	18	AV4	0.00
35	85	13	AV3	0.09
35	85	14	AV4	-0.14
45	85	22	AV2	0.25
45	85	40	AV3	0.00
45	85	29	AV4	-0.33
45	85	19	AV5	0.00
45	85	17	AV6	0.03
49	85	27	AV2	0.28
49	85	13	AV4	0.11
49	85	13	AV5	0.03
50	85	21	AV4	0.06
50	85	18	AV5	0.08
50	85	10	AV6	0.03
40	87	15	AV1	0.31
40	87	17	AV2	-0.14
40	87	16	AV3	0.11
40	87	32	AV4	0.08
47	87	11	AV1	-0.03
50	87	13	AV4	0.06
50	87	15	AV5	0.08
20	88	16	AV1	0.23
38	88	19	AV2	0.00
38	88	15	AV3	0.00
45	88	16	AV3	0.18
45	88	22	AV4	0.00
45	88	30	AV5	0.00
53	88	15	AV2	0.00
36	89	17	AV3	-0.14
38	89	21	AV3	0.09
38	89	25	AV4	0.03
38	89	17	AV5	0.08
48	89	33	AV3	0.00
48	89	12	AV4	0.11
48	89	20	AV5	0.06
50	89	20	AV3	0.00
1	90	5	FBC	0.00
1	90	6	FBH	0.18
36	90	16	AV3	-0.09
36	90	12	AV4	0.00
36	90	15	AV6	-0.13
39	90	13	AV2	0.11
42	90	38	AV4	0.00
42	90	48	AV5	0.00
45	90	20	AV3	0.00

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "D"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
53	90	22	AV4	0.00
53	90	27	AV5	0.00
53	90	17	AV6	0.08
1	91	5	FBC	-0.31
1	91	6	FBH	0.26
32	91	17	AV5	-0.16
49	91	27	AV2	0.06
1	92	6	FBC	-0.31
1	92	6	FBH	0.00
40	92	19	AV1	0.00
40	92	20	AV3	-0.11
40	92	17	AV5	0.00
43	92	24	AV3	-0.08
45	92	12	AV3	-0.03
45	92	16	AV4	-0.03
45	92	17	AV5	-0.03
49	92	21	AV2	0.09
49	92	20	AV4	0.03
49	92	17	AV5	0.06
1	93	8	FBC	0.36
45	93	19	AV3	0.03
45	93	25	AV4	0.00
45	93	22	AV5	0.21
1	94	5	FBC	0.36
1	94	7	FBH	0.33
41	94	31	AV2	0.14
41	94	29	AV3	0.06
41	94	25	AV4	0.00
41	94	21	AV5	-0.03
41	94	10	AV6	0.00
43	94	27	AV2	0.09
43	94	16	AV3	-0.03
43	94	17	AV4	0.00
43	94	22	AV5	-0.03
44	94	17	AV3	-0.03
38	95	23	AV2	-0.06
41	95	17	AV2	0.17
41	95	12	AV4	0.13
41	95	16	AV5	0.00
44	95	19	AV3	-0.08
45	95	14	AV2	-0.11
45	95	13	AV3	0.08
45	95	29	AV4	0.00
45	95	34	AV5	0.00
45	95	15	AV6	0.00

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "D"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
41	96	14	AV2	0.00
41	96	20	AV3	-0.03
44	96	19	AV2	-0.06
44	96	26	AV3	-0.08
44	96	16	AV4	-0.11
45	96	19	AV2	-0.06
45	96	26	AV5	-0.11
27	97	9	TSH	-0.64
38	97	16	AV5	0.06
40	97	20	AV3	0.06
40	97	22	AV4	0.08
41	97	27	AV3	0.14
41	97	34	AV4	0.16
46	97	18	AV3	0.17
40	98	20	AV2	-0.06
40	98	23	AV3	0.06
40	98	12	AV4	0.16
47	98	27	AV2	0.06
47	98	40	AV3	0.00
47	98	27	AV4	0.16
47	98	31	AV5	0.26
47	98	17	AV6	-0.05
38	99	23	AV2	0.00
38	99	19	AV3	0.00
43	99	16	AV5	-0.05
34	100	13	AV3	0.00
38	100	19	AV2	-0.11
38	100	15	AV3	0.11
41	100	26	AV2	0.00
41	100	25	AV3	0.03
41	100	25	AV4	0.08
41	100	19	AV5	0.14
42	100	22	AV4	0.05
36	101	15	AV2	0.00
38	101	24	AV3	-0.28
38	101	22	AV4	-0.17
40	102	30	AV3	0.00
40	102	23	AV4	0.00
34	103	11	AV6	0.00
36	103	11	AV3	-0.20
36	103	16	AV4	-0.08
38	103	16	AV3	-0.14
38	103	29	AV4	-0.03
38	103	17	AV5	0.00
40	103	21	AV2	0.00

STEAM GENERATOR TUBE INSPECTION REPORT

Tube Indications on Steam Generator "D"

<u>Row</u>	<u>Column</u>	<u>Indication (% of Wall Thickness)</u>	<u>Location</u>	<u>Inch (+/-) From Location</u>
40	103	27	AV3	0.00
40	103	24	AV4	-0.06
40	103	14	AV5	-0.14
40	103	14	AV6	-0.03
35	104	13	AV5	-0.17
38	104	12	AV3	0.00
40	104	35	AV2	0.00
40	104	23	AV3	-0.03
40	104	16	AV5	0.00
40	104	16	AV6	-0.36
35	105	12	AV6	0.00
38	105	35	AV3	-0.08
38	105	22	AV4	-0.08
34	106	13	AV4	-0.08
35	106	17	AV2	0.00
35	106	11	AV3	0.08
35	106	17	AV4	0.00
35	106	15	AV6	-0.44
35	107	18	AV3	0.00
35	107	20	AV4	0.03
35	107	16	AV5	0.00
35	108	24	AV4	0.05
35	108	11	AV5	0.00
35	108	16	AV6	0.00
32	109	14	AV5	-0.14
33	109	20	AV3	0.03
33	109	22	AV4	-0.58
33	109	24	AV5	-0.14
34	109	15	AV2	0.06
34	109	11	AV4	-0.19
34	109	12	AV6	-0.14
32	110	12	AV5	0.00
35	110	28	AV4	0.00
35	110	17	AV6	0.08
30	111	16	AV2	0.17
30	111	15	AV6	0.06
27	113	17	AV2	-0.03
30	114	37	AV5	0.05
24	115	16	AV1	0.03
26	115	13	AV1	0.00
27	115	13	AV6	-0.11
28	115	40	AV6	0.00
21	117	9	TSH	0.01

STEAM GENERATOR TUBE INSPECTION REPORT

Section 3: Identification of Tubes Plugged.

A. Steam Generator "A":
New pluggable indication

Row	Column
40	46
30	49
50	76

B. Steam Generator "D":
New pluggable indication

Row	Column
52	37
*40	41
50	49
49	55
50	55
49	61
50	62
41	65
48	65
45	66
48	69
44	74
46	75
45	85
42	90
47	98
28	115

* Tube (40,41) in Steam Generator contained an obstruction. This tube was further inspected with camera equipment but the obstruction could not be dislodged. This tube was administratively plugged.

Total number of Tubes Plugged in Each Steam Generator (this includes tubes plugged during pre-service inspections):

Steam Generator	Total Number of Tubes Plugged	Total Percentage Plugged
A	*29	0.52%
B	28	0.50%
C	19	0.34%
D	97	1.72%

*An additional 3 plugs are installed in Steam Generator "A" cold leg only, due to tube sheet drilling mistakes during manufacturing. No tubes are installed in those locations.

STEAM GENERATOR TUBE INSPECTION REPORT

Summary of Tube Integrity Assessment

The examination results confirm that the Wolf Creek steam generators currently meet all industry and regulatory structural and leakage integrity guidance.

The only operational degradation mechanisms observed during this examination was tube wear at the AVB intersections. Although wear due to loose parts was observed, this degradation depends specifically on the presence of foreign objects, and is not inherent to the operating conditions of the steam generators. A number of new AVB wear indications were found in both Steam Generators "A" and "D". AVB wear is an active degradation mechanism in Steam Generator "D" according to the definition of an active degradation mechanism in the EPRI PWR Steam Generator Examination Guidelines, Rev. 6.

One tube in Steam Generator "A" and three tubes in Steam Generator "D" were reported from the Top of Tube Sheet +Point program to have volumetric indications. All of the indications were sized using a qualified technique, with the largest indication being 11% through wall (TW). These indications are judged to be the result of wear with previous foreign objects or due to manufacturing anomalies. No possible loose parts were associated with these indications. Since the largest indication is much less than the conservative structural limit, the criteria for condition monitoring are met for top of tubesheet volumetric indications.

Eighteen indications of wear at the flow distribution baffle (FDB) intersections were observed in Steam Generator "D". Examination with the +Point probe showed that these indications were not crack-like. These indications have been previously observed, and lookback evaluation to Refueling Outage 11 data shows that there are no significant changes in the shape or size of the signal. The maximum reported depth from the sizing was 8% TW. Since the maximum indications plus the non-destructive examination (NDE) uncertainty is less than the structural limit, the requirements for condition monitoring are satisfied for wear at the FDB.

Indications of wear at a support plate location were reported in two tubes in Steam Generator "D" at the 5th support plate on the hot leg side. Originally reported as distorted support plate intersections from the bobbin program, these indications were examined with +Point to confirm the absence of cracking. The RPC examination concluded these indications were wear. A look-back evaluation indicated that these small bobbin signals were present at Refueling Outage 11 also, but not reported, and remain unchanged since that time. The indications are attributed to wear from foreign objects which are no longer resident at these positions. The maximum depth of these indications is 14% TW. Since the indication depth plus the sizing uncertainty is significantly less than the structural limit, the requirements for condition monitoring are met for these indications.

The obstruction in tube (40,41) in Steam Generator "D" was determined to be a remnant (bolt shank) of the split pin that failed just after Refueling Outage 12. The tube was removed from service with the obstruction still in place. Because of the location of the foreign object in the tube, and because the tube was removed from service, this tube does not represent a potential degradation mechanism because no significant driving forces for either mechanical vibration or corrosion exist.

All structural and leakage criteria are projected to be satisfied for Steam Generators "A" and "D" through, at least, end of cycle 15, when they will next be inspected. Based on the results of this

STEAM GENERATOR TUBE INSPECTION REPORT

inspection, Steam Generators "B" and "C", which were not inspected during Refueling Outage 13, are projected to satisfy all structural and leakage criteria through, at least, end of cycle 14. Steam Generators "B" and "C" will be next inspected at the end of cycle 14.