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December 5, 1990

Re: Indian Point Unit No. 2
Docket No. 50-247

Document Control Desk
US Nuclear Regulatory Commission
Mail Station P1-137
Washington, DC 20555

SUBJECT: Steam Generator Tube Inservice Inspection Program

Attachment A to this letter presents the Steam Generator Tube Examination Program planned for the upcoming 1991 refueling outage for Indian Point Unit No. 2. This submittal is being made in compliance with Technical Specification 4.13.C.1.

Should you or your staff have any questions concerning this matter, please contact Mr. Charles W. Jackson, Manager, Nuclear Safety and Licensing.

Very truly yours,

cc: Mr. Thomas T. Martin
Regional Administrator - Region I
US Nuclear Regulatory Commission
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ATTACHMENT A

PROPOSED STEAM GENERATOR TUBE
EXAMINATION PROGRAM
1991 REFUELING OUTAGE

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
DECEMBER, 1990

Indian Point 2
Proposed Steam Generator Tube Examination Program
1991 Refueling Outage

Steam Generator Tube Eddy Current Examination

1. Bobbin Coil Probe

A standard 700 or 720 mil bobbin coil eddy current probe will be used to perform the initial eddy current testing. If any tube does not permit passage of the standard 700 mil probe, the tube will be tested with a 610 mil bobbin coil probe.

Tubes that do not pass the 610 mil probe will be plugged. Furthermore, the tubes immediately adjacent to any tube that does not pass the 610 mil probe will also be subjected to an eddy current examination.

The examination will be conducted from either the hot or cold leg side of the channel head. All tubes that require full length inspection will be examined from the mouth of the tube through the tubesheet, around the U-bend, to the mouth of the tube on the opposite side.

One hundred percent (100%) of the tubes (both hot leg and cold leg) will be examined from the tubesheet to the first support plate.

Selected tubes in Steam Generators 21, 22, 23, 24, will be eddy current examined for both dents and defects over their full length. The examination will be performed at 10, 100, 400, and 600 KHz.

The tubes selected for full length examination are given in Tables 1, 2, 3, and 4. In Steam Generator 21, 1216 tubes , or 40.3% of all active tubes will be examined. In Steam Generator 22, 1485 tubes, or 50.2% of all the active tubes will be examined. In Steam Generator 23, 1305 tubes, or 43.1% of all the active tubes, will be examined. In Steam Generator 24, 1188 tubes, or 39.4% of all the active tubes will be examined. The criteria for selection of tubes for examination over their entire length are as follows:

a) Tube is in Row 2 or Row 3.
b) Tube is within two tubes of the periphery or hard spot area of the bundle.
c) Tube had a restriction which did not allow passage of a 700 mil eddy current probe during the 1989 refueling outage.
d) Tube is adjacent to a tube that did not pass a 700 mil eddy current probe during the 1989 refueling outages.
e) Tube is in the patch plate area of the bundle.
f) Tube is adjacent to a plugged tube.

g) Tube is adjacent to an in-place foreign object on the secondary side.
h) Twenty percent (20%) of active tubes that do not meet any of the above criteria, but were selected at random by a computer program as not having been inspected in the previous 4 refueling outages.

2. **Motorized Rotating Pancake Coil Probe**

In addition, 101 tubes in Steam Generator 21 will be examined with the motorized rotating pancake coil (MRPC) probe on an exploratory basis to detect defects including axial and circumferential intergranular corrosion and/or cracking in the tubesheet and tube support plate regions. These tubes are listed in Table 5.

TABLE 1

TUBES TO BE EDDY CURRENT EXAMINED OVER THEIR FULL LENGTH

STEAM GENERATOR NO. 21

COLUMNS	ROWS	NO. OF TUBES
1	3 4 5 6 7 8	6
2	2 3 4 5 6 7 8 9 10 11 12	11
3	2 3 4 7 8 9 10 11 12 13 14	11
4	2 3 7 8 9 10 11 12 13 17	10
5	2 3 5 7 9 10 11 12 14 17 18 19 20	13
6	2 3 5 7 10 11 13 14 18 19 20 21	12
7	2 3 10 12 13 19 20 21 22 23	10
8	3 11 12 16 19 22 23 24 25	9
9	2 3 4 6 12 13 16 24 25 26	10
10	2 3 5 7 9 12 14 22 25 26 27	11
11	2 3 9 13 20 25 27 28	8
12	2 3 7 12 15 18 20 21 24 26 27 28 29 30	14
13	2 3 6 9 11 19 20 21 26 28 29 30	12
14	3 4 5 10 14 22 25 26 28 29 30	11
15	3 11 17 18 21 24 25 28 29 30 31 32 33	13
16	2 3 7 19 23 28 29 30 31 32 33 34	12
17	2 3 5 6 9 16 26 27 28 29 30 31 32 33	14
18	2 3 5 23 26 31 32 34 35	9
19	2 3 5 19 23 29 30 32 33 34 35 36	12
20	2 3 5 8 11 13 18 19 20 24 27 29 33 35 36 37	16
21	2 3 4 6 9 10 13 14 21 29 30 31 33 35 36 37 38	17
22	2 3 5 7 22 30 31 37 38	9
23	2 3 6 7 8 15 20 21 23 31 33 36 37 39	14
24	2 3 4 7 27 37 38 39	8
25	2 3 8 15 26 28 29 32 39 40	10
26	2 3 23 30 35 38 39 40	8
27	2 3 10 15 16 21 22 24 30 34 37 40 41	13
28	2 3 16 19 30 36 39 40 41	9
29	2 3 8 9 17 19 20 23 27 28 35 36 37 41 42	15
30	2 3 13 15 20 23 30 36 41 42	10
31	3 7 16 17 26 30 34 35 37 41 42	11
32	2 4 11 12 16 17 31 35 36 37 38 42 43	13
33	2 3 5 10 14 25 27 34 36 37 38 39 42 43	14
34	2 3 4 5 14 18 21 22 26 29 34 37 42 43	14
35	2 3 9 12 18 25 26 27 29 36 37 38 40 42 43 44	16
36	2 3 4 11 16 19 22 29 32 35 36 37 41 42 43 44	16
37	2 3 4 5 7 26 29 30 32 33 36 38 42 43 44	15
38	2 3 4 10 12 13 24 30 38 40 42 44	12
39	2 3 4 15 19 23 31 32 33 34 35 36 37 38 39 40 41 42 43 44	20
40	2 3 15 18 31 32 33 34 35 36 37 38 39 40 41 42 43 45	18
41	2 3 4 8 9 10 14 16 23 30 32 33 35 36 37 38 42 43 45	19
42	2 3 4 7 10 16 31 32 33 36 39 42 43 44 45	15
43	2 3 8 10 13 17 32 33 39 41 42 43 44 45	14
44	2 3 4 10 11 14 15 32 33 37 41 42 43 44 45	15
45	2 3 4 22 25 27 32 33 36 37 38 41 42 43 44 45	16
46	2 3 4 5 7 11 14 18 19 21 24 25 26 27 32 33 36 37 38 42 43 44 45	23

TABLE 1 (continued)

STEAM GENERATOR 21

47	3 4 7 14 16 22 27 29 32 33 35 36 37 38 41 42 43 44 45	19
48	2 3 5 6 7 8 9 18 19 21 24 27 30 32 33 34 36 37 39 40 41 42 43 44 45	25
49	3 4 11 30 31 32 33 35 36 39 40 41 42 43 44 45	16
50	2 3 4 8 11 18 19 25 28 29 32 33 35 41 42 43 44 45	18
51	3 4 14 15 17 20 25 29 32 33 38 40 42 43 44 45	16
52	2 3 4 5 6 8 9 10 15 17 18 26 32 33 35 41 43 44 45	19
53	2 3 5 9 12 13 15 16 17 18 19 20 21 26 30 32 33 34 35 36 37 38 39 40 41 42 43 44 45	29
54	2 3 4 9 12 13 19 20 24 25 29 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45	26
55	2 3 4 5 6 9 19 20 26 34 36 37 40 41 42 43	16
56	2 3 4 5 7 9 10 20 26 28 37 41 42 43	14
57	2 3 4 6 11 12 17 40 41 42 43 44	12
58	2 3 4 6 9 10 27 37 39 41 43 44	12
59	2 3 6 9 15 18 20 24 26 27 34 36 42 43	14
60	2 3 7 14 23 24 28 34 41 42	10
61	2 3 4 6 8 9 10 17 19 20 23 26 27 36 37 39 41 42	18
62	2 3 8 12 15 26 29 35 40 41 42	11
63	2 3 4 6 8 14 38 39 40 41 42	11
64	2 3 5 8 11 13 16 23 24 29 38 40 41 42	14
65	2 3 4 6 14 19 21 26 27 29 33 39 40 41	14
66	2 3 7 9 10 14 16 17 26 29 32 34 37 40 41	15
67	2 3 12 30 31 34 35 39 40	9
68	2 3 10 12 14 16 17 21 32 36 39 40	12
69	2 3 5 7 9 14 16 18 20 21 22 28 30 31 37 38 39	17
70	2 3 4 5 6 7 8 14 18 27 32 35 38 39	14
71	2 3 5 7 9 10 16 17 22 23 35 36 37 38	14
72	2 3 5 7 10 13 16 28 33 37 38	11
73	2 3 10 13 26 29 30 32 36 37	10
74	2 3 6 7 10 21 22 30 34 35 36	11
75	2 3 6 10 15 16 19 26 33 34 35	11
76	2 3 5 6 13 16 26 28 29 30 31 32 33 34 35	15
77	2 4 6 9 10 13 16 18 20 25 26 28 29 30 31 32 33 34	18
78	12 18 20 23 28 29 30 31 32 33	10
79	2 3 6 14 19 28 29 30	8
80	2 3 4 17 18 21 25 28 29 30	10
81	2 3 5 7 10 11 16 18 21 22 27 29 30	13
82	2 3 5 7 8 10 14 24 25 27 29	11
83	2 3 4 8 9 14 18 19 22 23 26 27	12
84	2 3 8 9 10 15 16 17 23 24 25 26	12
85	3 4 7 12 22 23 24 25	8
86	3 4 8 10 11 12 13 14 19 20 21 22 23	13
87	2 3 4 9 10 11 13 14 15 16 17 18 19 20 21	15
88	2 3 4 9 11 12 15 16 17 18 19 20	12
89	2 3 8 10 11 13 15	7
90	2 3 7 8 9 10 11 13 14	9
91	3 4 5 6 7 8 9 10 11 12	10
92	2 3 4 5 6 7 8	7

1216

TABLE 2

TUBES TO BE EDDY CURRENT EXAMINED OVER THEIR FULL LENGTH

STEAM GENERATOR NO. 22

COLUMNS	ROWS	NO. OF TUBES
1	3 4 5 6 7 8	6
2	3 4 5 6 7 8 9 10 11 12	10
3	3 4 5 7 8 9 10 11 12 13 14 15	12
4	2 4 5 6 8 9 10 13 14 15 16 17	12
5	3 4 5 6 7 9 11 12 13 14 15 16 17 18 19	15
6	2 3 4 5 6 7 9 12 13 14 15 17 18 19 20 21	16
7	4 5 6 7 8 13 17 18 19 20 21	11
8	2 3 5 6 7 13 14 17 21 22 23 24 25	13
9	3 4 5 6 7 9 12 18 22 24 25 26	12
10	4 5 6 7 14 15 20 21 26 27	10
11	2 3 4 5 6 7 9 10 12 14 15 25 27 28 29	15
12	2 3 4 5 14 17 19 20 28 29 30	11
13	2 3 4 7 10 25 27 28 29 30	10
14	3 4 5 7 12 14 16 17 23 25 28 29 30	13
15	4 5 10 19 20 25 26 28 29 30 31 33	12
16	4 5 12 19 24 25 27 28 29 30 31 32 33	13
17	3 4 15 17 18 23 24 25 28 29 30 31 32 33 35	15
18	2 3 8 10 19 23 25 27 28 29 30 31 32 34 35	15
19	3 4 6 9 13 16 18 28 29 30 31 33 34 35 36	15
20	3 4 5 7 12 15 22 25 27 28 29 30 31 32 33 34 35 36 37	19
21	2 3 4 5 6 11 12 14 18 19 20 27 28 29 30 31 32 33 34 35 36 37 38	23
22	2 3 4 5 6 7 8 13 19 21 27 28 29 30 31 32 33 34 35 36 37 38	22
23	4 5 6 7 8 9 11 12 13 15 18 19 22 23 26 28 29 30 31 34 35 36 37 38 39	25
24	3 4 6 7 8 10 13 16 21 22 29 30 33 34 35 36 37 38 39	19
25	3 4 5 6 7 8 9 10 12 13 14 15 20 21 26 30 34 35 36 38 39 40	22
26	2 3 4 5 6 7 8 12 13 19 23 25 26 27 29 30 35 39 40	19
27	2 3 4 5 6 7 10 14 24 25 26 37 38 39 40 41	16
28	2 3 4 5 7 8 9 10 12 16 18 23 24 25 26 35 36 37 38 40 41	21
29	3 4 5 8 9 10 11 12 13 14 17 18 19 20 21 23 24 25 27 29 33 37 38 41 42	25
30	3 4 5 8 10 12 13 14 16 17 18 19 20 21 22 23 24 26 27 34 37 40 41	23
31	4 5 8 9 10 13 14 15 16 17 18 19 21 23 26 27 28 29 30 33 36 38 40 41	24
32	4 9 12 16 17 18 19 21 23 25 27 28 37 38 41	15
33	4 7 9 10 14 15 16 17 18 22 23 24 26 28 39 41 43	17
34	2 3 4 13 15 16 17 18 21 23 26 32 34 37 39 40 41 42 43	19
35	2 3 4 6 7 9 10 16 17 18 19 23 28 32 34 40 41 42 43	19
36	2 3 4 5 6 7 8 14 16 17 18 19 20 21 33 37 41 42 43 44	20
37	3 4 5 6 7 8 9 12 16 17 18 19 21 23 26 31 32 43 44	19
38	3 4 5 6 7 9 10 14 17 21 24 30 42 44	14
39	3 4 5 6 7 8 9 12 13 14 15 23 24 28 29 32 33 34 35 36 37 38 39 40 41 42 44 45	28
40	2 3 4 5 6 7 8 10 14 15 18 19 20 21 23 26 28 29 30 32 33 34 35 36 37 38 39 40 41 42 43 45	32
41	2 3 4 5 6 7 9 13 14 15 17 18 19 20 21 27 29 32 33 34 35 39 41 42 43 44 45	27
42	3 4 5 14 16 17 18 19 21 26 29 32 33 34 40 42 43 44 45	19
43	3 4 8 12 14 16 17 18 19 21 25 26 31 32 33 35 43 44 45	19
44	3 17 18 21 25 32 33 35 37 41 42 43 44 45	14
45	3 11 12 13 15 18 21 23 27 28 29 31 32 33 34 35 43 44 45	19
46	4 13 15 16 17 26 30 32 33 36 42 43 44 45	14

TABLE 2 (continued)

STEAM GENERATOR 22

47	4 5 8 17 21 25 28 30 31 32 33 34 40 41 42 43 44 45	18
48	2 3 4 5 8 20 25 32 33 35 37 40 41 42 43 44 45	17
49	3 4 5 8 9 10 14 16 18 25 28 29 32 33 36 37 40 41 42 43 44 45	22
50	3 4 5 8 14 19 20 28 32 33 34 35 39 40 41 42 43 44 45	19
51	3 4 5 15 18 32 33 40 41 42 43 44	12
52	2 3 4 6 11 19 20 21 32 33 38 39 40 41 42 43 44	17
53	6 7 8 15 18 24 28 29 32 33 34 35 36 38 39 40 41 42 43	19
54	3 4 6 7 8 11 15 21 22 23 30 31 32 33 34 35 36 37 38 39 40 41 42 43	24
55	2 3 5 6 7 8 14 16 19 20 27 31 32 33 36 41 42 43	18
56	2 3 5 6 7 8 10 12 14 20 24 34 35 38 40 41 42 43	18
57	2 3 4 5 7 15 26 32 37 39 40 41 42 43	14
58	4 5 6 7 8 11 12 13 18 19 20 25 30 32 35 39 40 41 42 43	20
59	3 6 8 21 34 36 37 38 39 40 41 42 43	13
60	3 11 12 13 15 16 17 24 27 32 33 34 37 40 41 42 43	17
61	4 11 14 17 22 24 27 29 31 32 33 34 36 37 38 39 42 43	18
62	2 3 4 5 6 7 9 11 13 20 21 26 27 30 33 34 36 37 38 39 41 42	22
63	2 3 4 8 10 16 24 27 32 33 37 38 39 40 41 42	16
64	2 3 6 8 10 16 18 20 22 23 24 35 38 41 42	15
65	2 3 4 6 7 9 13 14 24 26 40 41	12
66	2 3 4 5 6 7 10 11 16 19 25 27 31 35 40 41	16
67	2 3 8 14 15 19 20 26 28 30 33 39 40	13
68	2 3 5 7 8 9 11 13 17 22 23 26 34 36 37 39 40	17
69	2 4 5 6 7 8 14 18 24 29 30 32 34 38 39	15
70	2 3 4 5 6 7 9 10 14 16 22 23 29 31 32 33 34 35 38 39	20
71	2 3 4 5 6 7 9 13 24 25 32 37 38	13
72	2 3 5 6 7 8 10 11 13 15 20 27 31 32 33 34 35 36 37 38	20
73	2 3 6 7 9 10 14 16 20 22 27 28 31 32 33 35 36 37	18
74	2 3 7 14 15 17 20 24 27 28 30 31 33 34 35 36	16
75	3 8 13 14 15 17 18 22 29 30 31 34	12
76	2 3 4 5 8 14 15 17 20 26 28 29 30 31 32 33	16
77	2 3 4 10 17 18 21 26 28 29 30 31 32 33 34	15
78	2 3 4 9 17 20 27 28 29 30 31 32 33	13
79	3 6 8 15 20 23 28 29 30	9
80	2 3 8 14 16 18 22 25 26 27 28 29 30	13
81	2 3 16 18 22 26 27 28 29 30	10
82	2 3 15 16 19 24 25 26 27 29	10
83	2 3 13 14 15 16 24 25 26 27	10
84	3 5 8 13 14 15 16 17 21 23 24 25 26	13
85	2 3 4 5 10 12 13 14 15 16 18 19 21 22 23 24 25	17
86	2 3 4 5 6 10 11 12 13 14 15 16 18 19 21 22 23	17
87	3 4 6 10 11 14 15 17 18 19 20	11
88	3 4 5 7 9 10 12 13 15 16 17 19 20	13
89	2 3 4 6 8 9 11 12 13 16 17	11
90	2 3 7 10 11 12 13 14 15	9
91	2 3 4 5 6 7 8 9 10 11 12	11
92	2 3 4 5 6 7 8	7

TABLE 3

TUBES TO BE EDDY CURRENT EXAMINED OVER THEIR FULL LENGTH

STEAM GENERATOR NO.23

COLUMNS	ROWS	NO. OF TUBES
1	3 4 5 6 7 8	6
2	3 4 5 6 7 8 9 10 11 12	10
3	3 4 5 9 10 11 12 13 14 15	10
4	3 4 6 8 9 10 13 14 15 16 17	11
5	3 4 5 6 7 9 12 13 14 15 16 17 18 19 20	15
6	3 4 5 6 7 8 11 12 13 14 15 16 18 19 20 21	16
7	3 4 5 6 7 9 12 13 16 19 21 22 23	13
8	3 4 5 6 7 8 10 11 15 16 18 21 22 23 24 25	16
9	3 4 5 6 7 8 11 19 20 24 25 26	12
10	3 4 5 6 7 9 15 20 22 23 24 26 27	13
11	3 4 5 6 7 9 22 23 26 27 28 29	12
12	3 4 5 13 15 18 20 24 27 28 29 30	12
13	3 4 8 11 15 20 21 23 24 27 28 29 30	13
14	2 3 4 5 11 16 18 28 29 30	10
15	2 3 4 9 16 18 20 28 29 30 31 32 33	13
16	4 8 16 22 25 27 28 29 30 31 32 33 34	13
17	3 4 6 7 8 9 20 26 28 29 30 31 32 33 34	15
18	3 7 8 13 19 22 23 29 32 33 34 35	12
19	2 3 7 11 14 18 26 30 31 32 33 34 35	13
20	2 3 4 7 12 14 23 29 32 33 34 35 36	13
21	2 3 4 5 6 10 13 16 17 22 27 31 33 34 36 37 38	17
22	2 3 4 5 6 10 12 13 15 18 20 21 22 23 31 32 34 37 38	19
23	2 4 5 6 7 8 9 12 15 17 19 21 22 23 24 37 38 39	18
24	2 3 4 5 6 7 8 9 21 22 23 24 31 36 38 39	16
25	2 3 4 5 6 7 8 9 12 17 19 20 22 23 27 28 30 31 34 35 38 39 40	23
26	2 3 4 5 6 7 8 9 10 11 12 18 21 23 31 38 39 40	18
27	2 3 4 5 6 7 9 18 19 20 22 27 35 40 41	15
28	2 3 4 6 9 12 16 19 20 23 25 27 28 31 40 41	16
29	2 3 4 6 20 25 30 35 41 42	10
30	2 3 7 8 11 13 17 20 22 25 29 32 34 41 42	15
31	3 4 5 14 19 21 24 36 39 40 41 42	12
32	4 6 32 34 35 38 39 40 42 43	10
33	2 3 4 5 6 11 22 31 34 36 37 38 39 40 41 42 43	17
34	2 3 4 7 8 10 11 12 24 25 26 29 31 38 40 41 42 43	18
35	2 3 4 5 9 10 11 12 14 16 17 22 23 28 39 41 42 43 44	19
36	2 3 4 5 6 9 10 11 22 24 25 32 39 40 42 43 44	17
37	2 3 4 5 6 9 10 12 15 18 23 24 25 31 34 39 40 41 43 44	20
38	2 3 4 5 6 10 11 12 13 15 16 19 22 24 27 38 41 42 44	19
39	2 3 4 5 6 7 8 12 14 21 23 24 25 27 29 32 33 34 35 36 37 38 39 40 41 42 43 44 45	29
40	2 3 4 5 6 7 8 11 18 20 21 25 26 32 33 34 35 36 37 38 39 40 41 42 43 44 45	27
41	2 3 4 5 6 7 8 10 11 12 14 18 24 26 27 29 31 32 33 34 35 36 38 40 41 44 45	27
42	2 3 7 8 9 10 11 12 19 21 31 32 33 34 35 36 44 45	18
43	2 3 8 11 13 23 31 32 33 35 36 40 43 44 45	15
44	3 7 12 13 14 18 19 20 22 23 25 26 32 33 43 44 45	17
45	3 5 7 10 13 14 17 19 25 31 32 33 35 43 44 45	16
46	3 4 8 14 17 22 25 28 31 32 33 37 39 44 45	15

TABLE 3 (continued)

STEAM GENERATOR 23

47	4 5 6 9 11 15 18 19 20 22 25 30 32 33 34 41 42 43 44 45	20
48	3 11 20 23 24 26 30 32 33 43 44 45	12
49	2 3 6 8 21 27 29 31 32 33 34 39 40 41 43 44 45	17
50	3 15 19 21 24 26 29 30 32 33 34 37 38 41 42 43 44 45	18
51	2 3 20 21 24 26 29 32 33 34 41 42 43 44 45	15
52	3 4 6 15 20 21 24 26 29 32 33 34 38 40 42 43 44 45	18
53	3 4 5 6 7 10 12 19 20 22 24 32 33 34 35 36 37 38 39 41 42 43 45	23
54	3 4 5 6 17 20 24 27 31 32 33 34 35 36 37 38 39 40 43 44	20
55	2 4 5 6 9 12 13 16 18 19 23 24 27 28 31 37 41 42 44	19
56	2 3 4 5 16 21 24 28 34 41 43 44	12
57	2 3 4 9 11 14 16 22 24 25 29 32 33 34 35 40 42 43 44	19
58	2 3 6 9 13 22 32 34 39 41 42 43 44	13
59	3 5 6 14 16 18 27 31 35 39 40 42 43	13
60	2 3 20 21 25 29 30 33 37 42 43	11
61	3 8 14 17 18 26 27 36 41 42 43	11
62	3 4 7 8 10 15 17 24 28 29 32 39 41 42	14
63	3 5 7 8 9 10 16 20 23 26 30 41 42	13
64	2 3 5 7 13 16 20 28 33 35 37 41 42	13
65	2 3 6 8 26 37 40 41	8
66	3 7 8 9 10 16 17 27 40 41	10
67	3 10 11 14 17 20 24 25 28 34 39 40	12
68	3 5 14 20 29 31 34 37 39 40	10
69	2 3 4 6 8 10 15 17 22 30 31 38 39	13
70	2 3 4 6 9 16 32 38 39	9
71	2 3 11 23 24 26 27 32 37 38	10
72	2 3 10 11 12 30 34 35 36 37 38	11
73	2 3 4 6 10 11 14 24 25 32 34 35 36 37	14
74	2 3 7 11 12 15 16 24 25 26 28 33 35 36	14
75	2 3 6 14 15 19 20 23 25 31 32 34 35	13
76	2 3 9 11 13 14 15 16 26 27 28 29 30 33 34 35	16
77	3 5 7 8 11 14 16 18 19 25 26 28 29 32 33 34	16
78	3 9 12 26 27 28 31 32 33	9
79	2 3 4 6 9 10 13 18 21 26 27 30	12
80	2 3 12 15 17 21 23 25 26 27 29 30	12
81	3 14 15 16 18 19 22 24 25 26 28 29 30	13
82	2 3 8 12 13 19 21 22 23 24 26 27 28 29	14
83	3 5 7 19 22 24 25 26 27	9
84	2 3 4 7 10 13 15 16 19 23 24 25 26	13
85	2 3 4 5 7 9 11 12 16 19 22 23 24 25	14
86	3 4 10 13 16 21 22 23	8
87	2 3 9 10 13 14 15 18 19 20	10
88	2 3 6 9 16 17 18 19 20	9
89	2 3 6 8 11 12 13 17	8
90	2 3 6 9 10 11 12 13 14	9
91	2 3 4 5 6 7 8 9 10 11 12	11
92	2 4 5 6 7 8	6

TABLE 4

TUBES TO BE EDDY CURRENT EXAMINED OVER THEIR FULL LENGTH

STEAM GENERATOR NO. 24

COLUMNS	ROWS	NO. OF TUBE
1	2 3 4 5 6 7	6
2	3 4 5 6 7 9 10 11 12	9
3	2 3 6 7 9 10 11 12 13 14	10
4	2 3 6 8 10 11 12 13 15 16 17	11
5	2 3 4 9 11 12 14 15 16 17 18 19 20	13
6	2 3 4 5 10 13 14 18 19 20 21	11
7	2 3 4 5 10 11 13 14 18 21 22 23	12
8	3 4 5 10 11 12 13 14 15 17 19 21 22 23 24 25	16
9	3 4 10 11 13 14 15 19 21 24 25	11
10	2 3 4 13 25 26	6
11	2 3 4 9 14 20 26	7
12	2 3 5 6 10 24 27 29 30	9
13	2 3 5 11 14 16 26 27 29 30	10
14	2 3 16 17 23 25 26 27 28	9
15	2 3 6 7 9 10 19 22 24 27 28 29 31 32 33	15
16	2 3 4 7 24 28 29 30 31 32 33 34	12
17	3 8 9 10 11 16 28 29 30 31 32 33	12
18	2 3 9 12 29 30 31 32	8
19	2 3 13 14 19 23 28 29 30 31 32 34 35	13
20	2 3 4 14 25 27 31 32 33 34 35 36 37	13
21	2 3 4 6 7 9 11 12 18 20 34 36 37 38	14
22	2 3 4 11 15 16 19 25 26 27 31 36 37 38	14
23	2 3 4 7 15 16 24 35 36 37 38 39	12
24	3 4 5 10 16 23 24 28 29 36 37 38 39	13
25	3 4 11 12 13 14 18 20 23 32 33 35 36 37 38 39 40	17
26	2 3 4 8 15 18 30 33 35 37 39 40	12
27	2 3 10 11 28 32 36 37 39 40 41	11
28	2 3 10 17 19 23 36 37 40 41	10
29	2 3 13 14 16 22 23 24 26 31 35 36 37 41 42	15
30	2 3 6 13 14 25 29 36 39 40 41 42	12
31	2 3 7 9 10 11 12 26 29 32 33 36 38 41 42	15
32	2 3 4 6 9 22 31 37 41 42 43	11
33	2 3 4 6 8 9 15 16 19 33 34 36 38 40 41 42 43	17
34	3 10 19 20 22 35 36 39 40 41 42 43	12
35	3 6 12 27 28 30 34 39 40 41 43 44	12
36	3 4 5 12 29 30 33 38 39 40 41 42 43	13
37	3 4 5 6 10 16 22 26 27 31 35 38 41 43	14
38	3 4 5 6 16 18 23 35 42	9
39	4 5 6 8 13 17 19 26 32 33 34 35 36 37 38 39 40 41 42 43 44	21
40	4 5 8 11 12 22 26 28 32 33 34 35 36 37 38 39 40 41 42 43 44	21
41	3 4 5 15 18 19 31 32 33 35 39 42 43 44 45	15
42	3 4 8 12 15 21 22 26 32 33 34 36 39 44 45	15
43	2 3 4 5 6 7 9 19 21 22 32 33 38 40 44 45	16
44	2 3 14 15 16 26 31 32 33 41 42 44 45	13
45	2 3 6 13 20 28 32 33 34 38 40 41 42 44 45	15
46	3 5 7 8 14 15 20 24 25 30 32 33 34 35 37 38 39 43 44 45	20

TABLE 4 (continued)

STEAM GENERATOR 24

47	2 4 15 17 24 26 30 31 32 33 38 41	12
48	2 3 4 5 15 16 28 29 30 32 33 38 44 45	14
49	2 3 6 21 27 32 33 39 40 41 43 44	12
50	2 3 4 7 12 13 25 27 28 30 32 33 36 38 39 43 44 45	18
51	2 3 4 6 13 14 20 22 30 32 33 36 40 43 44 45	16
52	2 3 5 6 8 11 14 19 32 33 39 40 41 45	14
53	4 5 6 18 21 25 32 33 34 35 36 37 38 39 41 42 43 45	18
54	5 6 10 12 18 19 22 26 31 32 33 34 35 36 37 38 39 40 41 42 43	21
55	4 5 6 8 11 16 19 27 29 30 31 34 35 40 41 42 43	17
56	4 5 6 8 11 12 25 27 35 41 42 43	12
57	3 4 5 6 8 10 12 17 18 19 29 38 40 41 42 43 44	17
58	2 3 4 8 9 17 20 27 28 29 34 36 40 41 43 44	16
59	3 4 18 21 22 30 34 38 40 41 42 43	12
60	2 3 4 5 6 8 12 15 18 22 24 25 26 29 33 40 42 43	18
61	2 3 4 15 18 21 34 35 40 41 43	11
62	2 3 4 11 12 30 35 40 41 42	10
63	2 3 9 17 18 25 26 29 35 40 41 42	12
64	2 3 9 11 13 15 19 21 22 31 32 33 34 36 37 40 41	17
65	2 3 4 20 23 35 40	7
66	2 3 4 9 12 22 23 27 34 40 41	11
67	2 3 4 6 18 21 22 23 25 31 34 39 40	13
68	3 4 6 9 10 11 13 18 23 24 25 32 37 38 39 40	16
69	2 3 4 5 6 17 29 32 38 39	10
70	3 4 6 8 10 14 17 23 25 32 37 38 39	13
71	2 3 4 5 12 15 19 23 26 27 28 35 37 38	14
72	2 3 4 10 11 13 26 34 37 38	10
73	2 3 21 22 23 24 25 36 37	9
74	2 3 7 12 15 16 17 24 28 29 30 34 35 36	14
75	2 3 5 7 10 13 19 23 28 29 33 34 35	13
76	2 3 4 5 6 9 11 12 14 16 20 23 28 29 30 31 32 33 34 35	20
77	2 3 11 14 16 25 28 29 30 31 32 33 34	13
78	3 4 12 13 15 26 27 28 29 30 31 32 33	13
79	3 10 20 23 28 29 30	7
80	2 3 12 16 17 18 26 27 28 29 30	11
81	2 3 4 9 11 16 17 18 23 26 27 28 29 30	14
82	3 4 5 20 21 22 27 28 29	9
83	3 5 6 7 8 9 14 15 18 19 26 27	12
84	3 6 7 12 16 24 25 26	8
85	2 3 4 6 7 9 12 13 16 19 21 22 23 24 25	15
86	3 4 5 6 10 11 16 17 18 19 21 22 23	13
87	2 3 4 5 10 13 14 15 16 18 19 20 21	13
88	2 3 4 5 7 9 10 11 12 13 14 15 16 17 18 19 20	17
89	2 3 4 5 6 8 9 10 13 14 15 16 17	13
90	2 3 4 5 7 8 9 10 11 12 13 14 15	13
91	2 3 4 5 6 7 8 9 10 11 12	11
92	2 3 4 5 6 7 8	7

TABLE 5

Steam Generator Tubes To Be Examined During 1991 Refueling Outage By MRPC

STEAM GENERATOR NO. 21

Col	Row	Col	Row	Col	Row
1	3	34	28	48	6
1	4	35	7	48	18
2	3	35	8	49	3
2	4	35	9	49	4
3	2	35	12	49	3
3	13	35	18	50	3
20	5	36	8	50	4
20	8	36	13	50	29
22	13	37	10	51	3
23	9	37	14	51	4
23	21	37	20	51	15
24	9	37	29	51	20
24	12	37	30	52	10
25	16	38	26	53	9
26	8	39	10	53	13
26	16	39	15	53	15
28	14	40	13	53	17
28	16	41	10	54	19
29	4	41	12	54	20
29	8	41	20	55	6
29	13	41	24	56	3
30	11	42	10	56	7
30	19	42	11	57	8
30	20	42	12	58	6
31	9	42	26	64	14
31	12	43	8	66	15
31	22	43	13	81	18
32	6	43	15	89	3
32	7	43	19	90	3
32	10	44	10	91	4
32	12	46	18	92	2
32	25	46	25	92	3
33	10	48	3	92	4
33	12	48	4		

Total: 101 tubes