

Northeast
Nuclear Energy

Rope Ferry Rd. (Route 156), Waterford, CT 06385

Millstone Nuclear Power Station
Northeast Nuclear Energy Company
P.O. Box 128
Waterford, CT 06385-0128
(203) 447-1791
Fax (203) 444-4277

The Northeast Utilities System

Docket No. 50-423

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November 14, 1995

MP-95-335

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Millstone Nuclear Power Station, Unit No. 3
Steam Generator Tube Inservice Inspection Report

This special report is being submitted within 12 months following the completion of the fifth Inservice Eddy Current Inspection (ECT) of the Millstone Unit No. 3 Steam Generator (S/G) tubes pursuant to Technical Specification 4.4.5.5.b.

The end of cycle 5 steam generator tube inspection began on April 27, 1995 and was completed on May 5, 1995. The examination was performed by Westinghouse Nuclear Service Division. A total of 8473 tubes or 38 percent of the total tubes in all generators were examined by full length bobbin coil inspection. The examination significantly exceeded that required by Technical Specification 4.4.5.2.

A brief synopsis of the results of the steam generator tube inspection is provided in the enclosed Table 3, "Millstone 3 1995 ECT Summary." Additional information on the details of the inspection plan and ECT results are provided in attached tables and figures.

The inspections were performed on Steam Generators 'B' and 'D'. The initial inspection plan consisted of 4220 tubes in S/G 'B' and 4220 tubes in S/G 'D'. Table 1 is a summary of the locations where the initial samples were taken. Table 2 shows a summary of all tests performed. The evaluation of these results placed both S/G 'B' and S/G 'D' into Category C-2, as defined by the Plant Technical Specifications. The C-2 category resulted from the identification of "one or more tubes, but not more than 1% of the total tubes inspected" as defective. The required action was to inspect an additional '2S' sample (i.e. 12%) in Steam Generators 'B' and 'D'. However, since an initial 75 percent sample was used which included 100 percent of the Antivibration Bar Wear (AVB) region, rows ≥ 25 , and all defects were identified as AVB, no additional sample expansions were required.

Tube Row 52, Column 89 which required plugging in the 'D' Steam Generator was not required to be counted in the inspection classification. A review of the previous ECT data for that tube, which was inspected in 1991 during Refueling Outage 3 (RFO3), confirmed that none of the three defects had progressed more than 10 percent through-wall after two complete cycles of operation. Therefore, these defects were not included in the determination of the inspection category.

The 1995 Eddy Current Testing identified flaws greater than or equal to the plugging limit in ten tubes (one in S/G 'B' and nine in S/G 'D'). The plugging limit is defined in Technical Specifications

AD471

as an imperfection depth of 40 percent nominal tube wall thickness. All ten tubes exhibited degradation attributed to AVB wear. These tubes in addition to tube location Row 52, Column 89, are identified in Table 4, "Location of Tubes Plugged During RFO5", and were removed from service utilizing Westinghouse Alloy 690 Tapered Mechanical Plugs. Table 5 provides a historical listing of all tubes plugged on Millstone 3.

During RFO5, six Westinghouse Inconel 600 mechanical plugs, determined to be susceptible to cracking, were repaired. The repair included the removal (by drilling) and replacement of the mechanical plugs from the 'B' and 'D' hot leg and cold leg plenums. The actual locations are identified in Table 6, "Plug Repairs." All plugs were replaced with Inconel 690 mechanical plugs. Similar repairs are scheduled for the eight remaining cold leg Alloy 600 plugs in the 'A' and 'C' Steam Generators during RFO6.

In response to the Callaway findings, the scope of the Millstone 3 steam generator tube inspection program was expanded to include a sample of tubes in the region where Callaway had identified tube cracking. Five hundred tubes from S/G 'B' and S/G 'D' were inspected, from 12 inches above the top of the hot leg tubesheet to the tube end, using the Cecco-5 probe. The location of the tubes selected for Cecco-5 probe testing corresponded to both the Millstone 3 high sludge region and the region where all of Callaway's circumferential cracks had been located. Figures 2 and 8 show the inspection maps for S/G 'B' and S/G 'D' respectively. The results of the inspection program confirmed that tube cracking had not occurred at Millstone 3 in the region where Callaway had observed circumferential cracking. Unlike Callaway, all tubes in the Millstone 3 steam generators are thermally treated. The inspection results from the Millstone 3 steam generators are consistent with industry experience which has shown that no cracking of thermally treated Inconel 600 tubing has ever occurred in a domestic steam generator.

Prior to the inspection, 50 tube locations were selected for examination with a Rotating Pancake Coil (RPC) probe. The tubes were selected based on previous inspection results which showed excessive tube geometry variations caused by the hydraulic tubesheet expansion process. Since these geometry changes result in increasing tube stress, they are considered more susceptible than other locations for developing Primary Water Stress Corrosion Cracking (PWSCC). Since the Cecco-5 probe was qualified to detect PWSCC and it was being employed for detection of Callaway cracking, the original sample of 50 tubes scheduled for RPC exams was done with the Cecco-5 probe. A total of 7 RPC exams were performed at locations selected based on possible tube flaws identified by the Cecco probe. Figures 3 and 9 show the RPC inspection maps for S/G 'B' and S/G 'D' respectively.

The licensee contact for this report is Larry Loomis, who may be reached at (203) 447-1791, Extension 5468.

Very truly yours,
NORTHEAST NUCLEAR ENERGY COMPANY


Donald B. Miller, Jr.

Senior Vice President, Millstone Station

cc: T.T. Martin, Region I Administrator
P.J. Swetland, Senior Resident Inspector, Millstone Unit Nos. 1, 2, and 3
V. Rooney, NRC Project Manager, Millstone Unit No. 3

Enclosures

TABLE OF CONTENTS FOR TABLES

| TABLE | DESCRIPTION | PAGE # |
|-------|--|--------|
| 1 | Initial Tube Sample Selection | 4 |
| 2 | Summary of Tests Performed | 4 |
| 3 | Millstone 3 1995 ECT Summary | 5 |
| 4 | Location Of Tubes Plugged During RFO5 | 5 |
| 5 | Total Tubes Plugged To Date | 6 |
| 6 | Plug Repairs | 7 |
| 7 | S/G 'B' - AVB Percent TW Indications | 8 |
| 8 | S/G 'B' - Historical ECT Results For AVB Flaws \geq 20% TW in 1995 | 10 |
| 9 | S/G 'B' Hot Leg Percent TW Indications | 11 |
| 10 | S/G 'B' Cold Leg Percent TW Indications | 11 |
| 11 | S/G 'D' - AVB Percent TW Indications | 12 |
| 12 | S/G 'D' - Historical ECT Results For AVB Flaws \geq 20% TW in 1995 | 18 |
| 13 | S/G 'D' Hot Leg Percent TW Indications | 21 |
| 14 | S/G 'D' Cold Leg Percent TW Indications | 21 |

TABLE OF CONTENTS FOR FIGURES

| FIGURE | S/G | DESCRIPTION | PAGE # |
|--------|-----|---|--------|
| 1 | B | Bobbin Inspection Map | 22 |
| 2 | B | Cecco Inspection Map | 23 |
| 3 | B | RPC Inspection Map | 24 |
| 4 | B | Tube Repair History Map(Includes RFO5) | 25 |
| 5 | B | Tubes With %TW \geq 11% Growth | 26 |
| 6 | B | Through Wall Indication Distribution Map(Hot and Cold Legs) | 27 |
| 7 | D | Bobbin Inspection Map | 28 |
| 8 | D | Cecco Inspection Map | 29 |
| 9 | D | RPC Inspection Map | 30 |
| 10 | D | Tube Repair History Map(Includes RFO5) | 31 |
| 11 | D | Tubes With %TW \geq 11% Growth | 32 |
| 12 | D | Through Wall Indication Distribution Map-Hot Leg | 33 |
| 13 | D | Through Wall Indication Distribution Map-Cold Leg | 34 |

MP3 STEAM GENERATOR EXAMINATION - RFO 5

TABLE 1

INITIAL TUBE SAMPLE SELECTION

(FULL LENGTH BOBBIN COIL EXAMINATION)

| CRITERIA | NUMBER OF TESTS | |
|---|-----------------|------|
| | SG B | SG D |
| 100% of Tubes in Rows >25* | 2796 | 2792 |
| 100% of Tubes in Row 1 | 122 | 121 |
| 100% of Perimeter Tubes in Rows 2-24 | 46 | 46 |
| Random, Rows 2-24 Not Examined Since RFO3 | 1256 | 1261 |
| | 4220 | 4220 |

*- Includes previous flaws >20% TW (RFO 3)

(RPC EXAMINATION)

| CRITERIA | NUMBER OF TESTS | |
|---|-----------------|------|
| | SG B | SG D |
| Tubes Susceptible to PWSCC Due to Geometry Variations | 33 | 17 |

TABLE 2

SUMMARY OF TESTS PERFORMED

| TEST METHOD | AREA EXAMINED | SG B | | SG D | | TOTAL |
|-------------|---------------------------------|------|------|------|------|-------|
| | | HOT | COLD | HOT | COLD | |
| Bobbin | Full Length* | 4237 | 122 | 4236 | 121 | 8473 |
| Cecco | 12" Above Tubesheet to Tube End | 534 | 0 | 524 | 0 | 1058 |
| RPC | Expansion Transition | 4 | 0 | 3 | 0 | 7 |

* - Tubes in Row 1 were examined partial length from both hot and cold leg.

TABLE 3**MILLSTONE 3 1995 ECT SUMMARY**

| DESCRIPTION | S/G B | S/G D | TOTAL* |
|--|-------|-------|--------|
| Number of Tubes | 5626 | 5626 | 22504 |
| Number of Tubes Inspected | 4237 | 4236 | 8473 |
| Tubes with Maximum Flaw > 40% | 1 | 10 | 11 |
| Tubes with Flaws > 20% but < 40% | 11 | 29 | 40 |
| Tubes Plugged as a Result of this Inspection | 1 | 10 | 11 |

TABLE 4**LOCATION OF TUBES PLUGGED DURING RF05**

| ROW | COLUMN | S/G | ROW | COLUMN | S/G |
|-----|--------|-----|-----|--------|-----|
| 58 | 76 | B | 55 | 63 | D |
| | | | 42 | 100 | D |
| 36 | 45 | D | 51 | 81 | D |
| 51 | 45 | D | 52 | 89 | D |
| 51 | 46 | D | 52 | 90 | D |
| 41 | 51 | D | 48 | 95 | D |

TABLE 5

TOTAL TUBES PLUGGED TO DATE

| | SG# | Row | Col | % Throughwall | Location |
|----------------------|-----|-----|-----|--------------------|--------------------|
| Fabrication | A | 12 | 100 | | |
| | B | 14 | 21 | | |
| | B | 40 | 17 | | |
| | C | 36 | 94 | | |
| | C | 56 | 73 | | |
| Preservice June 1985 | A | 25 | 61 | 73% | 02C + 1.1" |
| | A | 29 | 60 | 78% | 02C + 32.2 |
| | B | 32 | 71 | Bulge | TSH |
| | C | 1 | 1 | 69% | CL Tangent |
| | D | 1 | 122 | 78% | CL Tangent |
| Nov. 1987 - RF01 | A | 50 | 94 | 34% | AV5 |
| | D | 48 | 98 | 32% | AV4 |
| May 1989 - RF02 | A | 1 | 122 | 36% | HL Tangent |
| | A | 48 | 97 | 51% | AV5 |
| | A | 50 | 28 | 43 | AV3 |
| | A | 50 | 95 | 45 | AV5 |
| Feb. 1991 - RF03 | D | 43 | 42 | 41% | AV5 |
| | D | 43 | 103 | 41%, 42% | AV4, AV3 |
| | D | 53 | 86 | 53%, 43%, 48% | AV3, AV4, AV5 |
| | D | 53 | 88 | 41% | AV5 |
| | D | 53 | 90 | 47%, 40% | AV4, AV5 |
| Aug. 1993 - RF04 | A | 40 | 63 | 61% | AV2 |
| | A | 42 | 79 | 46% | AV4 |
| | A | 48 | 98 | 53%, 44% | AV3, AV5 |
| | A | 50 | 59 | 44% | AV4 |
| | A | 53 | 90 | 54%, 40%, 41% | AV2, AV4, AV5 |
| | A | 54 | 52 | 50%, 56%, 43% | AV2, AV3, AV6 |
| | C | 50 | 92 | 44%, 45% | AV3, AV4 |
| April 1995 - RF05 | B | 58 | 76 | 49%, 48% | AV4, AV5 |
| | D | 36 | 45 | 40%, 44% | AV4, AV5 |
| | D | 41 | 51 | 52% | AV4 |
| | D | 42 | 100 | 59% | AV5 |
| | D | 48 | 95 | 55%, 40% | AV3, AV5 |
| | D | 51 | 45 | 40%, 42%, 51%, 49% | AV3, AV4, AV5, AV6 |
| | D | 51 | 46 | 42% | AV4 |
| | D | 51 | 81 | 41%, 42% | AV4, AV5 |
| | D | 52 | 89 | 41% | AV4 |
| | D | 52 | 90 | 58%, 47% | AV2, AV4 |
| | D | 55 | 63 | 43%, 45%, 56%, 48% | AV3, AV4, AV5, AV6 |

TABLE 6

PLUG REPAIRS

| S/G | Row | Column |
|-----|-----|--------|
| B | 32 | 71 |
| D | 48 | 98 |
| D | 1 | 122 |

Table 7
(Page 1 of 2)

SG - B AVB PERCENT THRU WALL INDICATIONS

Millstone Unit 3 - RFO 5
INSPECTION: April-95

NEU -B/F
6-May-95 16:30

| ROW | COL | CEB | CEE | PROBE | IND | LOC | INCH1 | INCH2 | CHAN | VOLTS | DEG | TAPE |
|-----|-----|-----|-----|--------|-----|-----|-------|-------|------|-------|-----|------|
| 30 | 12 | TEC | TEH | 560-EB | 19 | AV5 | .00 | .00 | M2 | .66 | 7 | |
| 33 | 12 | TEC | TEH | 560-EB | 17 | AV2 | .00 | .00 | M2 | .54 | 7 | |
| 33 | 12 | TEC | TEH | 560-EB | 18 | AV5 | .00 | .00 | M2 | .61 | 7 | |
| 42 | 21 | TEC | TEH | 560-EB | 17 | AV2 | .00 | .00 | M2 | .58 | 13 | |
| 42 | 21 | TEC | TEH | 560-EB | 10 | AV3 | .00 | .00 | M2 | .30 | 13 | |
| 42 | 21 | TEC | TEH | 560-EB | 19 | AV4 | .00 | .00 | M2 | .71 | 13 | |
| 42 | 21 | TEC | TEH | 560-EB | 24 | AV5 | .00 | .00 | M2 | .99 | 13 | |
| 42 | 21 | TEC | TEH | 560-EB | 17 | AV6 | .00 | .00 | M2 | .61 | 13 | |
| 45 | 22 | TEC | TEH | 560-EB | 13 | AV6 | .00 | .00 | M2 | .52 | 15 | |
| 40 | 24 | TEC | TEH | 560-EB | 21 | AV3 | .00 | .00 | M2 | .65 | 19 | |
| 40 | 24 | TEC | TEH | 560-EB | 22 | AV4 | .00 | .00 | M2 | .70 | 19 | |
| 40 | 24 | TEC | TEH | 560-EB | 18 | AV5 | .00 | .00 | M2 | .65 | 19 | |
| 48 | 25 | TEC | TEH | 560-EB | 16 | AV6 | .00 | .00 | M2 | .43 | 19 | |
| 41 | 34 | TEC | TEH | 560-EB | 31 | AV4 | .00 | .00 | M2 | 1.49 | 23 | |
| 41 | 34 | TEC | TEH | 560-EB | 29 | AV5 | .09 | .00 | M2 | 1.30 | 23 | |
| 54 | 36 | TEC | TEH | 560-EB | 28 | AV5 | .09 | .00 | M2 | 1.24 | 25 | |
| 54 | 36 | TEC | TEH | 560-EB | 15 | AV6 | .11 | .00 | M2 | .46 | 25 | |
| 36 | 39 | TEC | TEH | 560-EB | 13 | AV2 | .14 | .00 | M2 | .37 | 27 | |
| 36 | 39 | TEC | TEH | 560-EB | 16 | AV3 | .16 | .00 | M2 | .50 | 27 | |
| 36 | 39 | TEC | TEH | 560-EB | 18 | AV5 | .09 | .00 | M2 | .61 | 27 | |
| 36 | 39 | TEC | TEH | 560-EB | 14 | AV6 | .12 | .00 | M2 | .43 | 27 | |
| 42 | 40 | TEC | TEH | 560-EB | 14 | AV2 | .06 | .00 | M2 | .43 | 29 | |
| 42 | 40 | TEC | TEH | 560-EB | 29 | AV4 | .17 | .00 | M2 | 1.35 | 29 | |
| 56 | 42 | TEC | TEH | 560-EB | 15 | AV6 | .00 | .00 | M2 | .47 | 31 | |
| 59 | 65 | TEC | TEH | 560-EB | 17 | AV2 | .00 | .00 | M2 | .58 | 49 | |
| 41 | 69 | TEC | TEH | 560-EB | 22 | AV5 | .00 | .00 | M2 | .91 | 55 | |
| 57 | 70 | TEC | TEH | 560-EB | 14 | AV2 | .00 | .00 | M2 | .45 | 55 | |
| 58 | 76 | TEC | TEH | 560-EB | 28 | AV3 | .10 | .00 | M2 | 1.24 | 65 | |
| 58 | 76 | TEC | TEH | 560-EB | 49 | AV4 | .00 | .00 | M2 | 4.18 | 65 | |
| 58 | 76 | TEC | TEH | 560-EB | 48 | AV5 | .00 | .00 | M2 | 3.93 | 65 | |
| 41 | 77 | TEC | TEH | 560-EB | 19 | AV3 | .00 | .00 | M2 | .60 | 65 | |
| 41 | 77 | TEC | TEH | 560-EB | 18 | AV5 | .00 | .00 | M2 | .59 | 65 | |
| ROW | COL | CEB | CEE | PROBE | IND | LOC | INCH1 | INCH2 | CHAN | VOLTS | DEG | TAPE |

PAGE

1

TUBES

17

Table 7
(Page 2 of 2)

SG - B AVB PERCENT THRU WALL INDICATIONS

Millstone Unit 3 - RFO 5
INSPECTION: April-95

NEU -B/F
6-May-95 16:30

| ROW | COL | CEB | CEE | PROBE | IND | LOC | INCH1 | INCH2 | CHAN | VOLTS | DEG | TAPE |
|-----------------------|-----|-----|-----|--------|-----|-----|-------|-------|------|-------|-----|------|
| 39 | 96 | TEC | TEH | 560-EB | 19 | AV3 | .00 | .00 | M2 | .70 | 85 | |
| 42 | 96 | TEC | TEH | 560-EB | 16 | AV2 | .08 | .00 | M2 | .56 | 85 | |
| 42 | 98 | TEC | TEH | 560-EB | 21 | AV2 | .07 | .00 | M2 | .87 | 85 | |
| 42 | 98 | TEC | TEH | 560-EB | 24 | AV3 | .07 | .00 | M2 | 1.05 | 85 | |
| 43 | 100 | TEC | TEH | 560-EB | 26 | AV3 | .00 | .00 | M2 | 1.18 | 87 | |
| 43 | 100 | TEC | TEH | 560-EB | 28 | AV4 | .00 | .00 | M2 | 1.36 | 87 | |
| 43 | 100 | TEC | TEH | 560-EB | 20 | AV6 | .00 | .00 | M2 | .81 | 87 | |
| 37 | 104 | TEC | TEH | 560-EB | 16 | AV3 | .00 | .00 | M2 | .47 | 91 | |
| 38 | 104 | TEC | TEH | 560-EB | 18 | AV3 | .00 | .00 | M2 | .58 | 91 | |
| 38 | 104 | TEC | TEH | 560-EB | 24 | AV4 | .00 | .00 | M2 | .94 | 91 | |
| 35 | 106 | TEC | TEH | 560-EB | 19 | AV4 | .00 | .00 | M2 | .64 | 91 | |
| 33 | 109 | TEC | TEH | 560-EB | 19 | AV2 | .00 | .00 | M2 | .67 | 93 | |
| 33 | 109 | TEC | TEH | 560-EB | 20 | AV3 | .00 | .00 | M2 | .70 | 93 | |
| 34 | 109 | TEC | TEH | 560-EB | 24 | AV3 | .00 | .00 | M2 | .95 | 93 | |
| 34 | 109 | TEC | TEH | 560-EB | 19 | AV5 | .00 | .00 | M2 | .64 | 93 | |
| PAGE 2 TOTAL TUBES 25 | | | | | | | | | | | | |

Table 8

HISTORICAL ECT RESULTS FOR AVB FLAWS $\geq 20\%$ TW IN 1995
(BASED ON 1995 RE-ANALYSIS OF DATA)

STEAM GENERATOR B

| ROW | COL | AVB LOCATION | EXAMINATION DATE | | |
|-----|-----|-----------------|------------------|---------|---------|
| | | | NOV '87 | FEB '91 | MAY '95 |
| 42 | 21 | AV5 | NT | NDD | 24% |
| 40 | 24 | AV3 | NT | NDD | 21% |
| | | AV4 | NT | 18% | 22% |
| 41 | 34 | AV4 | NT | 22% | 31% |
| | | AV5 | NT | NDD | 29% |
| 54 | 36 | AV5 | NT | NDD | 28% |
| 42 | 40 | AV4 | NT | 20% | 29% |
| 41 | 69 | AV5 | NT | 19% | 22% |
| 58 | 76 | AV3 | 26% | 23% | 28% |
| | | AV4 | 29% | 34% | 49% |
| | | AV5 | 29% | 26% | 48% |
| 42 | 98 | AV2 | NT | NDD | 21% |
| | | AV3 | NT | NDD | 24% |
| 43 | 100 | AV3 | 18% | 17% | 26% |
| 38 | 104 | AV4 | NT | 18% | 24% |
| 33 | 109 | AV3 | NT | 19% | 20% |
| 34 | 109 | AV3 | NT | 17% | 24% |

NT: No Test

NDD: No Detectable Degradation

SG B HOT LEG PERCENT THRU WALL INDICATIONS

NEU -B/F
6-May-95 16:30

```

+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|ROW  COL  CEB CEE PROBE  IND LOC INCH1      INCH2      CHAN VOLTS  DEG TAPE|
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|ROW  COL  CEB CEE PROBE  IND LOC INCH1      INCH2      CHAN VOLTS  DEG TAPE|
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|                                PAGE          1                                TOTAL TUBES  0
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+

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SG - B COLD LEG PERCENT THRU WALL INDICATIONS

NEU -B/F
6-May-95 16:31

```

+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|ROW  COL  CEB  CEE  PROBE  IND  LOC  INCH1      INCH2      CHAN  VOLTS  DEG  TAPE|
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|ROW  COL  CEB  CEE  PROBE  IND  LOC  INCH1      INCH2      CHAN  VOLTS  DEG  TAPE|
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
                                     PAGE          1
                                     TOTAL TUBES    0

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Table 11
(Page 1 of 6)

SG - D AVB PERCENT THRU WALL INDICATIONS

Millstone Unit 3 - RFO 5
INSPECTION: April-95

NEU -D/F
9-May-95 14:33

| ROW | COL | CEB | CEE | PROBE | IND | LOC | INCH1 | INCH2 | CHAN | VOLTS | DEG | TAPE |
|-----|-----|-----|-----|--------|-----|-----|-------|-------|------|-------|-----|------|
| 26 | 8 | TEC | TEH | 560-EB | 13 | AV6 | .00 | .00 | M2 | .55 | | 53 |
| 28 | 8 | TEC | TEH | 560-EB | 12 | AV6 | .00 | .00 | M2 | .49 | | 53 |
| 38 | 21 | TEC | TEH | 560-EB | 11 | AV5 | .00 | .00 | M2 | .40 | | 59 |
| 44 | 21 | TEC | TEH | 560-EB | 14 | AV1 | .00 | .00 | M2 | .55 | | 59 |
| 44 | 21 | TEC | TEH | 560-EB | 15 | AV6 | .00 | .00 | M2 | .60 | | 59 |
| 43 | 23 | TEC | TEH | 560-EB | 23 | AV3 | .00 | .00 | M2 | 1.16 | | 61 |
| 43 | 23 | TEC | TEH | 560-EB | 31 | AV5 | .00 | .00 | M2 | 1.79 | | 61 |
| 41 | 26 | TEC | TEH | 560-EB | 16 | AV2 | .00 | .00 | M2 | .63 | | 63 |
| 41 | 26 | TEC | TEH | 560-EB | 28 | AV5 | .00 | .00 | M2 | 1.43 | | 63 |
| 41 | 26 | TEC | TEH | 560-EB | 29 | AV6 | .00 | .00 | M2 | 1.59 | | 63 |
| 53 | 35 | TEC | TEH | 560-EB | 14 | AV4 | .00 | .00 | M2 | .51 | | 71 |
| 53 | 35 | TEC | TEH | 560-EB | 16 | AV5 | .00 | .00 | M2 | .61 | | 71 |
| 53 | 35 | TEC | TEH | 560-EB | 16 | AV6 | .09 | .00 | M2 | .61 | | 71 |
| 54 | 37 | TEC | TEH | 560-EB | 14 | AV5 | .00 | .00 | M2 | .50 | | 73 |
| 32 | 38 | TEC | TEH | 560-EB | 19 | AV2 | .00 | .00 | M2 | .77 | | 73 |
| 32 | 38 | TEC | TEH | 560-EB | 29 | AV5 | .00 | .00 | M2 | 1.50 | | 73 |
| 32 | 38 | TEC | TEH | 560-EB | 17 | AV6 | .00 | .00 | M2 | .63 | | 73 |
| 41 | 39 | TEC | TEH | 560-EB | 17 | AV2 | .00 | .00 | M2 | .66 | | 73 |
| 41 | 39 | TEC | TEH | 560-EB | 18 | AV3 | .00 | .00 | M2 | .71 | | 73 |
| 41 | 39 | TEC | TEH | 560-EB | 16 | AV4 | .00 | .00 | M2 | .61 | | 73 |
| 41 | 39 | TEC | TEH | 560-EB | 23 | AV5 | .00 | .00 | M2 | 1.01 | | 73 |
| 55 | 40 | TEC | TEH | 560-EB | 18 | AV6 | .00 | .00 | M2 | .73 | | 75 |
| 55 | 41 | TEC | TEH | 560-EB | 14 | AV5 | .00 | .00 | M2 | .50 | | 75 |
| 56 | 43 | TEC | TEH | 560-EB | 18 | AV1 | .00 | .00 | M2 | .67 | | 77 |
| 36 | 45 | TEC | TEH | 560-EB | 19 | AV1 | .00 | .00 | M2 | .73 | | 77 |
| 36 | 45 | TEC | TEH | 560-EB | 31 | AV2 | .00 | .00 | M2 | 1.67 | | 77 |
| 36 | 45 | TEC | TEH | 560-EB | 39 | AV3 | .00 | .00 | M2 | 2.58 | | 77 |
| 36 | 45 | TEC | TEH | 560-EB | 40 | AV4 | .00 | .00 | M2 | 2.68 | | 77 |
| 36 | 45 | TEC | TEH | 560-EB | 44 | AV5 | .00 | .00 | M2 | 3.40 | | 77 |
| 36 | 45 | TEC | TEH | 560-EB | 21 | AV6 | .00 | .00 | M2 | .87 | | 77 |
| 51 | 45 | TEC | TEH | 560-EB | 28 | AV1 | .00 | .00 | M2 | 1.36 | | 77 |
| 51 | 45 | TEC | TEH | 560-EB | 27 | AV2 | .00 | .00 | M2 | 1.31 | | 77 |
| 51 | 45 | TEC | TEH | 560-EB | 40 | AV3 | .00 | .00 | M2 | 2.67 | | 77 |
| ROW | COL | CEB | CEE | PROBE | IND | LOC | INCH1 | INCH2 | CHAN | VOLTS | DEG | TAPE |

TUBES 15

Table 11

(Page 2 of 6)

SG - D AVB PERCENT THRU WALL INDICATIONS

Millstone Unit 3 - RFO 5
INSPECTION: April-95NEU -D/F
9-May-95 14:03

| ROW | COL | CEB | CEE | PROBE | IND LOC | INCH1 | INCH2 | CHAN | VOLTS | DEG | TAPE |
|-----|-----|-----|-----|--------|---------|-------|-------|------|-------|-----|------|
| 51 | 45 | TEC | TEH | 560-EB | 42 AV4 | .00 | .00 | M2 | 3.03 | | 77 |
| 51 | 45 | TEC | TEH | 560-EB | 51 AV5 | .00 | .00 | M2 | 4.66 | | 77 |
| 51 | 45 | TEC | TEH | 560-EB | 49 AV6 | .00 | .00 | M2 | 4.38 | 56 | 77 |
| 51 | 46 | TEC | TEH | 560-EB | 13 AV1 | .00 | .00 | M2 | .44 | | 79 |
| 51 | 46 | TEC | TEH | 560-EB | 28 AV2 | .00 | .00 | M2 | 1.45 | | 79 |
| 51 | 46 | TEC | TEH | 560-EB | 33 AV3 | .00 | .00 | M2 | 1.84 | | 79 |
| 51 | 46 | TEC | TEH | 560-EB | 42 AV4 | .00 | .00 | M2 | 3.03 | | 79 |
| 51 | 46 | TEC | TEH | 560-EB | 23 AV5 | .00 | .00 | M2 | .99 | | 79 |
| 51 | 46 | TEC | TEH | 560-EB | 39 AV6 | .00 | .00 | M2 | 2.62 | | 79 |
| 54 | 46 | TEC | TEH | 560-EB | 15 AV2 | .00 | .00 | M2 | .57 | | 79 |
| 54 | 46 | TEC | TEH | 560-EB | 26 AV3 | .00 | .00 | M2 | 1.23 | | 79 |
| 54 | 46 | TEC | TEH | 560-EB | 21 AV4 | .00 | .00 | M2 | .91 | | 79 |
| 54 | 46 | TEC | TEH | 560-EB | 20 AV5 | -.03 | .00 | M2 | .85 | | 79 |
| 54 | 49 | TEC | TEH | 560-EB | 19 AV3 | .00 | .00 | M2 | .72 | | 81 |
| 41 | 51 | TEC | TEH | 560-EB | 27 AV2 | .00 | .00 | M2 | 1.35 | | 83 |
| 41 | 51 | TEC | TEH | 560-EB | 38 AV3 | .00 | .00 | M2 | 2.53 | | 83 |
| 41 | 51 | TEC | TEH | 560-EB | 52 AV4 | .00 | .00 | M1 | 7.66 | 98 | 83 |
| 41 | 51 | TEC | TEH | 560-EB | 35 AV5 | .00 | .00 | M2 | 2.18 | | 83 |
| 41 | 51 | TEC | TEH | 560-EB | 33 AV6 | .00 | .00 | M2 | 2.00 | | 83 |
| 41 | 57 | TEC | TEH | 560-EB | 12 AV1 | .00 | .00 | M2 | .44 | | 87 |
| 41 | 57 | TEC | TEH | 560-EB | 25 AV2 | .00 | .00 | M2 | 1.21 | | 87 |
| 41 | 57 | TEC | TEH | 560-EB | 37 AV3 | .00 | .00 | M2 | 2.39 | | 87 |
| 41 | 57 | TEC | TEH | 560-EB | 28 AV4 | .00 | .00 | M2 | 1.46 | | 87 |
| 41 | 57 | TEC | TEH | 560-EB | 37 AV5 | .00 | .00 | M2 | 2.39 | | 87 |
| 41 | 57 | TEC | TEH | 560-EB | 18 AV6 | .00 | .00 | M2 | .72 | | 87 |
| 43 | 58 | TEC | TEH | 560-EB | 26 AV4 | .00 | .00 | M2 | 1.27 | | 87 |
| 43 | 58 | TEC | TEH | 560-EB | 17 AV6 | .00 | .00 | M2 | .66 | | 87 |
| 49 | 62 | TEC | TEH | 560-EB | 16 AV1 | .00 | .00 | M2 | .69 | | 49 |
| 49 | 62 | TEC | TEH | 560-EB | 16 AV2 | .00 | .00 | M2 | .68 | | 49 |
| 49 | 62 | TEC | TEH | 560-EB | 20 AV3 | .00 | .00 | M2 | .93 | | 49 |
| 49 | 62 | TEC | TEH | 560-EB | 17 AV4 | .00 | .00 | M2 | .74 | | 49 |
| 55 | 63 | TEC | TEH | 560-EB | 24 AV2 | .00 | .00 | M2 | 1.08 | | 3 |
| 55 | 63 | TEC | TEH | 560-EB | 43 AV3 | .00 | .00 | M2 | 3.22 | | 3 |
| 55 | 63 | TEC | TEH | 560-EB | 45 AV4 | .00 | .00 | M1 | 5.90 | 103 | 3 |
| 55 | 63 | TEC | TEH | 560-EB | 56 AV5 | .00 | .00 | M1 | 8.35 | 94 | 3 |
| 55 | 63 | TEC | TEH | 560-EB | 48 AV6 | .00 | .00 | M2 | 4.08 | | 3 |
| 49 | 66 | TEC | TEH | 560-EB | 25 AV2 | .00 | .00 | M2 | 1.25 | | 47 |
| 49 | 66 | TEC | TEH | 560-EB | 13 AV3 | .00 | .00 | M2 | .50 | | 47 |
| ROW | COL | CEB | CEE | PROBE | IND LOC | INCH1 | INCH2 | CHAN | VOLTS | DEG | TAPE |

TUBES 25

Table 11
(Page 3 of 6)

SG - D AVB PERCENT THRU WALL INDICATIONS

Millstone Unit 3 - RFO 5
INSPECTION: April-95

NEU -D/F
9-May-95 14:33

| ROW | COL | CEB | CEE | PROBE | IND | LOC | INCH1 | INCH2 | CHAN | VOLTS | DEG | TAPE |
|-----|-----|-----|-----|--------|-----|-----|-------|-------|------|-------|-----|------|
| 49 | 67 | TEC | TEH | 560-EB | 19 | AV2 | .00 | .00 | M2 | .83 | | 45 |
| 49 | 67 | TEC | TEH | 560-EB | 15 | AV3 | .00 | .00 | M2 | .61 | | 45 |
| 51 | 68 | TEC | TEH | 560-EB | 15 | AV1 | .00 | .00 | M2 | .60 | | 45 |
| 51 | 68 | TEC | TEH | 560-EB | 26 | AV2 | .00 | .00 | M2 | 1.35 | | 45 |
| 51 | 68 | TEC | TEH | 560-EB | 19 | AV3 | .00 | .00 | M2 | .87 | | 45 |
| 51 | 68 | TEC | TEH | 560-EB | 35 | AV4 | .00 | .00 | M2 | 2.27 | | 45 |
| 51 | 68 | TEC | TEH | 560-EB | 33 | AV5 | .00 | .00 | M2 | 1.95 | | 45 |
| 51 | 68 | TEC | TEH | 560-EB | 28 | AV6 | .00 | .00 | M2 | 1.53 | | 45 |
| 43 | 69 | TEC | TEH | 560-EB | 16 | AV2 | .00 | .00 | M2 | .65 | | 45 |
| 43 | 69 | TEC | TEH | 560-EB | 34 | AV3 | .00 | .00 | M2 | 2.08 | | 45 |
| 43 | 69 | TEC | TEH | 560-EB | 28 | AV4 | .00 | .00 | M2 | 1.53 | | 45 |
| 43 | 69 | TEC | TEH | 560-EB | 22 | AV5 | .00 | .00 | M2 | 1.07 | | 45 |
| 49 | 69 | TEC | TEH | 560-EB | 12 | AV2 | .00 | .00 | M2 | .45 | | 43 |
| 52 | 70 | TEC | TEH | 560-EB | 22 | AV2 | .09 | .00 | M2 | .97 | | 3 |
| 52 | 70 | TEC | TEH | 560-EB | 30 | AV3 | .00 | .00 | M2 | 1.56 | | 3 |
| 52 | 70 | TEC | TEH | 560-EB | 30 | AV4 | .00 | .00 | M2 | 1.61 | | 3 |
| 52 | 70 | TEC | TEH | 560-EB | 21 | AV5 | .16 | .00 | M2 | .92 | | 3 |
| 52 | 70 | TEC | TEH | 560-EB | 16 | AV6 | .06 | .00 | M2 | .58 | | 3 |
| 52 | 70 | TEC | TEH | 560-EB | 21 | AV2 | .00 | .00 | M2 | .98 | | 43 |
| 52 | 70 | TEC | TEH | 560-EB | 30 | AV3 | .00 | .00 | M2 | 1.70 | | 43 |
| 52 | 70 | TEC | TEH | 560-EB | 30 | AV4 | .00 | .00 | M2 | 1.64 | | 43 |
| 52 | 70 | TEC | TEH | 560-EB | 21 | AV5 | .00 | .00 | M2 | .98 | | 43 |
| 52 | 70 | TEC | TEH | 560-EB | 16 | AV6 | .00 | .00 | M2 | .65 | | 43 |
| 55 | 70 | TEC | TEH | 560-EB | 17 | AV3 | .00 | .00 | M2 | .69 | | 43 |
| 55 | 70 | TEC | TEH | 560-EB | 21 | AV4 | .00 | .00 | M2 | .92 | | 43 |
| 55 | 70 | TEC | TEH | 560-EB | 31 | AV5 | .00 | .00 | M2 | 1.76 | | 43 |
| 55 | 70 | TEC | TEH | 560-EB | 23 | AV6 | .00 | .00 | M2 | 1.08 | | 43 |
| 43 | 75 | TEC | TEH | 560-EB | 15 | AV2 | .00 | .00 | M2 | .59 | | 33 |
| 43 | 75 | TEC | TEH | 560-EB | 15 | AV3 | .00 | .00 | M2 | .59 | | 39 |
| 43 | 75 | TEC | TEH | 560-EB | 21 | AV4 | .00 | .00 | M2 | .97 | | 39 |
| 43 | 75 | TEC | TEH | 560-EB | 22 | AV5 | .00 | .00 | M2 | .99 | | 39 |
| 41 | 78 | TEC | TEH | 560-EB | 16 | AV3 | .00 | .00 | M2 | .65 | | 37 |
| 41 | 78 | TEC | TEH | 560-EB | 15 | AV4 | .00 | .00 | M2 | .62 | | 37 |
| 41 | 78 | TEC | TEH | 560-EB | 14 | AV5 | .00 | .00 | M2 | .57 | | 37 |
| 57 | 78 | TEC | TEH | 560-EB | 37 | AV2 | .00 | .00 | M2 | 2.49 | | 37 |
| 57 | 78 | TEC | TEH | 560-EB | 33 | AV3 | .00 | .00 | M2 | 1.99 | 65 | 37 |
| 57 | 78 | TEC | TEH | 560-EB | 24 | AV4 | .00 | .00 | M2 | 1.23 | | 37 |
| 57 | 78 | TEC | TEH | 560-EB | 36 | AV5 | .18 | .00 | M2 | 2.36 | | 37 |
| 51 | 81 | TEC | TEH | 560-EB | 18 | AV3 | .00 | .00 | M2 | .71 | | 33 |
| ROW | COL | CEB | CEE | PROBE | IND | LOC | INCH1 | INCH2 | CHAN | VOLTS | DEG | TAPE |

TUBES 34

Table 11
(Page 4 of 6)

SG - D AVB PERCENT THRU WALL INDICATIONS

Millstone Unit 3 - RFO 5
INSPECTION: April-95

NEU -D/F
9-May-95 14:33

| ROW | COL | CEB | CEE | PROBE | IND | LOC | INCH1 | INCH2 | CHAN | VOLTS | DEG | TAPE |
|-----|-----|-----|-----|--------|-----|-----|-------|-------|------|-------|-----|------|
| 51 | 81 | TEC | TEH | 560-EB | 41 | AV4 | .00 | .00 | M2 | 3.00 | | 33 |
| 51 | 81 | TEC | TEH | 560-EB | 42 | AV5 | .00 | .00 | M2 | 3.04 | | 33 |
| 51 | 81 | TEC | TEH | 560-EB | 25 | AV6 | .00 | .00 | M2 | 1.18 | | 33 |
| 55 | 84 | TEC | TEH | 560-EB | 22 | AV5 | .00 | .00 | M2 | .99 | | 31 |
| 52 | 87 | TEC | TEH | 560-EB | 17 | AV5 | .00 | .00 | M2 | .68 | | 29 |
| 52 | 88 | TEC | TEH | 560-EB | 14 | AV4 | .11 | .00 | M2 | .58 | | 27 |
| 54 | 88 | TEC | TEH | 560-EB | 19 | AV4 | .03 | .00 | M2 | .80 | | 3 |
| 54 | 88 | TEC | TEH | 560-EB | 26 | AV5 | .00 | .00 | M2 | 1.26 | | 3 |
| 54 | 88 | TEC | TEH | 560-EB | 36 | AV6 | .00 | .00 | M2 | 2.29 | | 3 |
| 52 | 89 | TEC | TEH | 560-EB | 30 | AV2 | .09 | .00 | M2 | 1.64 | | 27 |
| 52 | 89 | TEC | TEH | 560-EB | 39 | AV3 | .17 | .00 | M2 | 2.69 | | 27 |
| 52 | 89 | TEC | TEH | 560-EB | 41 | AV4 | .00 | .00 | M2 | 2.89 | | 27 |
| 41 | 90 | TEC | TEH | 560-EB | 12 | AV1 | .00 | .00 | M2 | .48 | | 25 |
| 52 | 90 | TEC | TEH | 560-EB | 18 | AV1 | .00 | .00 | M2 | .70 | | 3 |
| 52 | 90 | TEC | TEH | 560-EB | 58 | AV2 | .00 | .00 | M1 | 8.50 | 92 | 3 |
| 52 | 90 | TEC | TEH | 560-EB | 36 | AV3 | .00 | .00 | M2 | 2.15 | | 3 |
| 52 | 90 | TEC | TEH | 560-EB | 47 | AV4 | .00 | .00 | M2 | 3.95 | | 3 |
| 52 | 90 | TEC | TEH | 560-EB | 29 | AV5 | .00 | .00 | M2 | 1.48 | | 3 |
| 43 | 91 | TEC | TEH | 560-EB | 39 | AV2 | .08 | .00 | M2 | 2.67 | | 25 |
| 43 | 91 | TEC | TEH | 560-EB | 24 | AV3 | .00 | .00 | M2 | 1.10 | | 25 |
| 43 | 91 | TEC | TEH | 560-EB | 29 | AV4 | .06 | .00 | M2 | 1.54 | | 25 |
| 43 | 91 | TEC | TEH | 560-EB | 17 | AV5 | .00 | .00 | M2 | .68 | | 25 |
| 37 | 93 | TEC | TEH | 560-EB | 16 | AV3 | .00 | .00 | M2 | .73 | | 23 |
| 37 | 93 | TEC | TEH | 560-EB | 13 | AV4 | .00 | .00 | M2 | .46 | | 23 |
| 50 | 93 | TEC | TEH | 560-EB | 14 | AV6 | .00 | .00 | M2 | .60 | | 23 |
| 43 | 95 | TEC | TEH | 560-EB | 17 | AV5 | .00 | .00 | M2 | .67 | | 23 |
| 48 | 95 | TEC | TEH | 560-EB | 55 | AV3 | .00 | .00 | M1 | 6.09 | 91 | 23 |
| 48 | 95 | TEC | TEH | 560-EB | 27 | AV4 | .00 | .00 | M2 | 1.48 | | 23 |
| 48 | 95 | TEC | TEH | 560-EB | 40 | AV5 | .00 | .00 | M2 | 2.84 | | 23 |
| 48 | 95 | TEC | TEH | 560-EB | 21 | AV6 | .00 | .00 | M2 | .90 | | 23 |
| 49 | 95 | TEC | TEH | 560-EB | 15 | AV2 | .00 | .00 | M2 | .57 | | 23 |
| 49 | 95 | TEC | TEH | 560-EB | 18 | AV3 | .00 | .00 | M2 | .83 | | 23 |
| 49 | 95 | TEC | TEH | 560-EB | 13 | AV4 | .00 | .00 | M2 | .54 | | 23 |
| 42 | 96 | TEC | TEH | 560-EB | 12 | AV2 | .00 | .00 | M2 | .39 | | 19 |
| ROW | COL | CEB | CEE | PROBE | IND | LOC | INCH1 | INCH2 | CHAN | VOLTS | DEG | TAPE |

TUBES 48

Table 11
(Page 5 of 6)

SG - D AVB PERCENT THRU WALL INDICATIONS

Millstone Unit 3 - RFO 5
INSPECTION: April-95

NEU -D/F
9-May-95 14:33

| ROW | COL | CEB | CEE | PROBE | IND | LOC | INCH1 | INCH2 | CHAN | VOLTS | DEG | TAPE |
|-----|-----|-----|-----|--------|-----|-----|-------|-------|------|-------|-----|------|
| 42 | 96 | TEC | TEH | 560-EB | 36 | AV5 | .00 | .00 | M2 | 2.28 | 239 | 19 |
| 48 | 96 | TEC | TEH | 560-EB | 18 | AV5 | .00 | .00 | M2 | .70 | | 19 |
| 36 | 97 | TEC | TEH | 560-EB | 13 | AV2 | .00 | .00 | M2 | .44 | | 19 |
| 38 | 98 | TEC | TEH | 560-EB | 18 | AV4 | .00 | .00 | M2 | .69 | | 19 |
| 48 | 98 | TSC | TEH | 560-EB | 25 | AV1 | .00 | .00 | M2 | 1.28 | | 109 |
| 48 | 98 | TSC | TEH | 560-EB | 40 | AV2 | .00 | .00 | M2 | 2.82 | | 109 |
| 48 | 98 | TSC | TEH | 560-EB | 36 | AV3 | .00 | .00 | M2 | 2.37 | | 109 |
| 48 | 98 | TSC | TEH | 560-EB | 73 | AV4 | .00 | .00 | M1 | 21.42 | 76 | 109 |
| 48 | 98 | TSC | TEH | 560-EB | 71 | AV5 | .00 | .00 | M1 | 11.42 | 78 | 109 |
| 48 | 98 | TSC | TEH | 560-EB | 37 | AV6 | .00 | .00 | M2 | 2.47 | | 109 |
| 40 | 99 | TEC | TEH | 560-EB | 24 | AV4 | .00 | .00 | M2 | 1.10 | | 19 |
| 40 | 99 | TEC | TEH | 560-EB | 30 | AV5 | .00 | .00 | M2 | 1.62 | | 19 |
| 47 | 99 | TEC | TEH | 560-EB | 22 | AV4 | .00 | .00 | M2 | .93 | | 19 |
| 47 | 99 | TEC | TEH | 560-EB | 29 | AV5 | .12 | .00 | M2 | 1.52 | | 19 |
| 47 | 99 | TEC | TEH | 560-EB | 30 | AV6 | .00 | .00 | M2 | 1.58 | | 19 |
| 40 | 100 | TEC | TEH | 560-EB | 14 | AV4 | .00 | .00 | M2 | .61 | | 17 |
| 40 | 100 | TEC | TEH | 560-EB | 14 | AV5 | .00 | .00 | M2 | .58 | | 17 |
| 40 | 100 | TEC | TEH | 560-EB | 14 | AV6 | .00 | .00 | M2 | .60 | | 17 |
| 42 | 100 | TEC | TEH | 560-EB | 17 | AV1 | .10 | .00 | M2 | .68 | | 3 |
| 42 | 100 | TEC | TEH | 560-EB | 15 | AV2 | .03 | .00 | M2 | .54 | | 3 |
| 42 | 100 | TEC | TEH | 560-EB | 30 | AV3 | .00 | .00 | M2 | 1.58 | | 3 |
| 42 | 100 | TEC | TEH | 560-EB | 24 | AV4 | .10 | .00 | M2 | 1.07 | | 3 |
| 42 | 100 | TEC | TEH | 560-EB | 59 | AV5 | .00 | .00 | M1 | 6.88 | 91 | 3 |
| 42 | 100 | TEC | TEH | 560-EB | 22 | AV6 | .00 | .00 | M2 | .90 | | 3 |
| 43 | 100 | TEC | TEH | 560-EB | 19 | AV4 | .00 | .00 | M2 | .90 | | 17 |
| 37 | 101 | TEC | TEH | 560-EB | 18 | AV2 | .00 | .00 | M2 | .82 | | 17 |
| 37 | 101 | TEC | TEH | 560-EB | 16 | AV3 | .00 | .00 | M2 | .70 | | 17 |
| 37 | 101 | TEC | TEH | 560-EB | 14 | AV4 | .00 | .00 | M2 | .58 | | 17 |
| 42 | 101 | TEC | TEH | 560-EB | 37 | AV2 | .00 | .00 | M2 | 2.55 | | 17 |
| 42 | 101 | TEC | TEH | 560-EB | 22 | AV4 | .00 | .00 | M2 | 1.11 | | 17 |
| 42 | 101 | TEC | TEH | 560-EB | 36 | AV5 | .00 | .00 | M2 | 2.44 | | 17 |
| 45 | 101 | TEC | TEH | 560-EB | 33 | AV4 | .00 | .00 | M2 | 2.05 | | 17 |
| 45 | 101 | TEC | TEH | 560-EB | 15 | AV6 | .00 | .00 | M2 | .63 | | 17 |
| 40 | 102 | TEC | TEH | 560-EB | 19 | AV4 | .00 | .00 | M2 | .82 | | 15 |
| 40 | 102 | TEC | TEH | 560-EB | 15 | AV5 | .00 | .00 | M2 | .63 | | 15 |

TUBES 62

Table 11
(Page 6 of 6)

SG - D AVB PERCENT THRU WALL INDICATIONS

Millstone Unit 3 - RFO 5
INSPECTION: April-95

NEU -D/F
9-May-95 14:33

| ROW | COL | CEB | CEE | PROBE | IND | LOC | INCH1 | INCH2 | CHAN | VOLTS | DEG | TAPE |
|-------------|-----|-----|-----|--------|-----|-----|-------|-------|------|-------|-----|------|
| 42 | 102 | TEC | TEH | 560-EB | 21 | AV2 | .00 | .00 | M2 | .98 | 15 | |
| 42 | 102 | TEC | TEH | 560-EB | 20 | AV3 | .00 | .00 | M2 | .92 | 15 | |
| 42 | 102 | TEC | TEH | 560-EB | 35 | AV4 | .00 | .00 | M2 | 2.18 | 15 | |
| 42 | 102 | TEC | TEH | 560-EB | 26 | AV5 | .00 | .00 | M2 | 1.38 | 15 | |
| 42 | 102 | TEC | TEH | 560-EB | 20 | AV6 | .00 | .00 | M2 | .92 | 15 | |
| 43 | 102 | TEC | TEH | 560-EB | 14 | AV6 | .00 | .00 | M2 | .54 | 15 | |
| 35 | 103 | TEC | TEH | 560-EB | 17 | AV5 | .00 | .00 | M2 | .72 | 15 | |
| 37 | 103 | TEC | TEH | 560-EB | 16 | AV5 | -.14 | .00 | M2 | .65 | 15 | |
| 40 | 103 | TEC | TEH | 560-EB | 12 | AV1 | .00 | .00 | M2 | .47 | 15 | |
| 40 | 103 | TEC | TEH | 560-EB | 22 | AV2 | .00 | .00 | M2 | 1.05 | 15 | |
| 40 | 103 | TEC | TEH | 560-EB | 24 | AV3 | .00 | .00 | M2 | 1.18 | 15 | |
| 40 | 103 | TEC | TEH | 560-EB | 29 | AV4 | .00 | .00 | M2 | 1.56 | 15 | |
| 40 | 103 | TEC | TEH | 560-EB | 27 | AV5 | .00 | .00 | M2 | 1.46 | 15 | |
| 40 | 103 | TEC | TEH | 560-EB | 17 | AV6 | .00 | .00 | M2 | .70 | 15 | |
| 37 | 106 | TEC | TEH | 560-EB | 17 | AV3 | .00 | .00 | M2 | .74 | 13 | |
| 37 | 106 | TEC | TEH | 560-EB | 26 | AV4 | .00 | .00 | M2 | 1.35 | 13 | |
| 37 | 106 | TEC | TEH | 560-EB | 21 | AV5 | .00 | .00 | M2 | .96 | 13 | |
| 35 | 108 | TEC | TEH | 560-EB | 16 | AV3 | .00 | .00 | M2 | .62 | 11 | |
| 35 | 109 | TEC | TEH | 560-EB | 15 | AV4 | .00 | .00 | M2 | .58 | 11 | |
| 29 | 113 | TEC | TEH | 560-EB | 11 | AV2 | -.06 | .00 | M2 | .38 | 7 | |
| 29 | 113 | TEC | TEH | 560-EB | 13 | AV5 | -.10 | .00 | M2 | .47 | 7 | |
| 28 | 114 | TEC | TEH | 560-EB | 29 | AV2 | .00 | .00 | M2 | 1.52 | 7 | |
| 28 | 114 | TEC | TEH | 560-EB | 14 | AV5 | .00 | .00 | M2 | .52 | 7 | |
| 30 | 114 | TEC | TEH | 560-EB | 19 | AV6 | .13 | .00 | M2 | .78 | 7 | |
| 26 | 115 | TEC | TEH | 560-EB | 15 | AV1 | .00 | .00 | M2 | .57 | 7 | |
| 27 | 115 | TEC | TEH | 560-EB | 14 | AV6 | .00 | .00 | M2 | .49 | 7 | |
| 28 | 115 | TEC | TEH | 560-EB | 33 | AV1 | .03 | .00 | M2 | 1.88 | 7 | |
| 24 | 117 | TEC | TEH | 560-EB | 16 | AV1 | .00 | .00 | M2 | .58 | 5 | |
| TOTAL TUBES | | | | | | | | | | | 76 | |

Table 12

(Page 1 of 3)

HISTORICAL ECT RESULTS FOR AVB FLAWS $\geq 20\%$ TW IN 1995
(BASED ON 1995 RE-ANALYSIS OF DATA)

STEAM GENERATOR D

| ROW | COL | AVB LOCATION | EXAMINATION DATE | | |
|-----|-----|-----------------|------------------|---------|---------|
| | | | NOV '87 | FEB '91 | MAY '95 |
| 43 | 23 | AV3 | NDD | 22% | 23% |
| | | AV5 | 24% | 25% | 31% |
| 41 | 26 | AV5 | NT | 25% | 28% |
| | | AV6 | NT | 18% | 29% |
| 32 | 38 | AV5 | NT | 21% | 29% |
| 41 | 39 | AV5 | NT | 22% | 23% |
| 36 | 45 | AV2 | NT | 16% | 31% |
| | | AV3 | NT | 14% | 39% |
| | | AV4 | NT | 14% | 40% |
| | | AV5 | NT | 24% | 44% |
| | | AV6 | NT | 13% | 21% |
| 51 | 45 | AV1 | NT | 13% | 28% |
| | | AV2 | NT | 11% | 27% |
| | | AV3 | NT | 25% | 40% |
| | | AV4 | NT | 28% | 42% |
| | | AV5 | NT | 27% | 51% |
| | | AV6 | NT | 33% | 49% |
| 51 | 46 | AV2 | NT | 25% | 28% |
| | | AV3 | NT | 21% | 33% |
| | | AV4 | NT | 28% | 42% |
| | | AV5 | NT | 23% | 23% |
| | | AV6 | NT | 22% | 39% |
| 54 | 46 | AV3 | NT | 18% | 26% |
| | | AV4 | NT | 14% | 21% |
| | | AV5 | NT | 14% | 20% |
| 41 | 51 | AV2 | NT | 23% | 27% |
| | | AV3 | NT | 25% | 38% |
| | | AV4 | NT | 33% | 52% |
| | | AV5 | NT | 24% | 35% |
| | | AV6 | NT | 20% | 33% |
| 41 | 57 | AV2 | NT | 22% | 25% |
| | | AV3 | NT | 27% | 37% |
| | | AV4 | NT | 19% | 28% |
| | | AV5 | NT | 24% | 37% |
| 43 | 58 | AV4 | NT | 24% | 26% |
| 49 | 62 | AV3 | NT | 18% | 20% |
| 55 | 63 | AV2 | NT | 22% | 24% |

Table 12
(Page 2 of 3)

| ROW | COL | AVB LOCATION | EXAMINATION DATE | | |
|-----|-----|-----------------|------------------|---------|---------|
| | | | NOV '87 | FEB '91 | MAY '95 |
| | | AV3 | NT | 31% | 43% |
| | | AV4 | NT | 31% | 45% |
| | | AV5 | NT | 32% | 56% |
| | | AV6 | NT | 36% | 48% |
| 49 | 66 | AV2 | NT | 20% | 25% |
| 51 | 68 | AV2 | NT | NDD | 26% |
| | | AV4 | NT | 25% | 35% |
| | | AV5 | NT | 22% | 33% |
| | | AV6 | NT | 24% | 28% |
| 43 | 69 | AV3 | NT | 26% | 34% |
| | | AV4 | NT | 25% | 28% |
| | | AV5 | NT | 24% | 22% |
| 52 | 70 | AV2 | NT | 25% | 22% |
| | | AV3 | NT | 31% | 30% |
| | | AV4 | NT | 28% | 30% |
| | | AV5 | NT | 22% | 21% |
| 55 | 70 | AV4 | 17% | 22% | 21% |
| | | AV5 | 20% | 26% | 31% |
| | | AV6 | NDD | 21% | 23% |
| 43 | 75 | AV4 | NT | 22% | 21% |
| | | AV5 | NT | 23% | 22% |
| 57 | 78 | AV2 | NDD | 25% | 37% |
| | | AV3 | NDD | 25% | 33% |
| | | AV4 | NDD | 24% | 24% |
| | | AV5 | NDD | 19% | 36% |
| 51 | 81 | AV4 | NT | 30% | 41% |
| | | AV5 | NT | 30% | 42% |
| | | AV6 | NT | 22% | 25% |
| 55 | 84 | AV5 | NDD | 19% | 22% |
| 54 | 88 | AV5 | NDD | 23% | 26% |
| | | AV6 | 28% | 36% | 36% |
| 52 | 89 | AV2 | NT | 21% | 30% |
| | | AV3 | NT | 27% | 39% |
| | | AV4 | NT | 33% | 41% |
| 52 | 90 | AV2 | NT | 35% | 58% |
| | | AV3 | NT | 17% | 36% |
| | | AV4 | NT | 33% | 47% |
| | | AV5 | NT | 27% | 29% |
| 43 | 91 | AV2 | NT | 29% | 39% |
| | | AV3 | NT | NDD | 24% |
| | | AV4 | NT | 18% | 29% |
| 48 | 95 | AV3 | NT | 29% | 55% |
| | | AV4 | NT | 19% | 27% |
| | | AV5 | NT | 32% | 40% |
| | | AV6 | NT | 21% | 21% |

Table 12
(Page 3 of 3)

| ROW | COL | AVB LOCATION | EXAMINATION DATE | | |
|-----|-----|-----------------|------------------|---------|---------|
| | | | NOV '87 | FEB '91 | MAY '95 |
| 42 | 96 | AV5 | NT | 24% | 36% |
| 40 | 99 | AV4 | NT | NDD | 24% |
| | | AV5 | NT | 26% | 30% |
| 47 | 99 | AV4 | 17% | 19% | 22% |
| | | AV5 | 16% | 21% | 29% |
| | | AV6 | 22% | 28% | 30% |
| 42 | 100 | AV3 | NT | 27% | 30% |
| | | AV4 | NT | 23% | 24% |
| | | AV5 | NT | 29% | 59% |
| | | AV6 | NT | NDD | 22% |
| 42 | 101 | AV2 | NT | 24% | 37% |
| | | AV4 | NT | 18% | 22% |
| | | AV5 | NT | 21% | 36% |
| 45 | 101 | AV4 | 22% | 24% | 33% |
| 42 | 102 | AV2 | NT | 18% | 21% |
| | | AV3 | NT | 19% | 20% |
| | | AV4 | NT | 23% | 35% |
| | | AV5 | NT | 28% | 26% |
| | | AV6 | NT | 17% | 20% |
| 40 | 103 | AV2 | NT | 26% | 22% |
| | | AV3 | NT | 23% | 24% |
| | | AV4 | NT | 21% | 29% |
| | | AV5 | NT | 20% | 27% |
| 37 | 106 | AV4 | NT | 24% | 26% |
| | | AV5 | NT | 22% | 21% |
| 28 | 114 | AV2 | 16% | 28% | 29% |
| 28 | 115 | AV1 | 20% | 29% | 33% |

NT: No Test

NDD: No Detectable Degradation

Table 13

SG - D HOT LEG PERCENT THRU WALL INDICATIONS

Millstone Unit 3 - RFO 5
INSPECTION: April-95

NEU -D/F
9-May-95 14:33

```

+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|ROW  COL  CEB CEE PROBE  IND LOC INCH1      INCH2      CHAN VOLTS  DEG TAPE|
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|ROW  COL  CEB CEE PROBE  IND LOC INCH1      INCH2      CHAN VOLTS  DEG TAPE|
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+

```

Table 14

SG - D COLD LEG PERCENT THRU WALL INDICATIONS

Millstone Unit 3 - RFO 5
INSPECTION: April-95

NEU -D/F
9-May-95 14:34

| ROW | COL | CEB | CEE | PROBE | IND | LOC | INCH1 | INCH2 | CHAN | VOLTS | DEG | TAPE | |
|------|-----|-----|-----|--------|-----|-----|-------|-------------|------|-------|-----|------|---|
| 52 | 53 | TEC | TEH | 560-EB | 20 | TSC | .76 | .00 | 1 | .40 | 148 | 85 | |
| 52 | 54 | TEC | TEH | 560-EB | 8 | TSC | .34 | .00 | 1 | 1.98 | 158 | 85 | |
| 1 | 122 | 08C | TEH | 520-EJ | 90 | 08C | 1.80 | .00 | 1 | 13.88 | 59 | 111 | |
| ROW | COL | CEB | CEE | PROBE | IND | LOC | INCH1 | INCH2 | CHAN | VOLTS | DEG | TAPE | |
| PAGE | | | | | | | 1 | TOTAL TUBES | | | | | 3 |

Figure 1 - S/G 'B' - Bobbin Inspection Map

HOT LEG

Millstone 3 - RFO 5

NEU-B SERIES F

05-07-1995 02:06 HRS.

SUPERTUBIN

E : 4099 TUBE TESTED TEC-TEH

8 : 122 TUBE TESTED 08H-TEH

08H-TEC

Δ : 16 TUBE TESTED TEC-TEH
(UNSCHEDULED)

□ : 3 PLUGGED TUBE

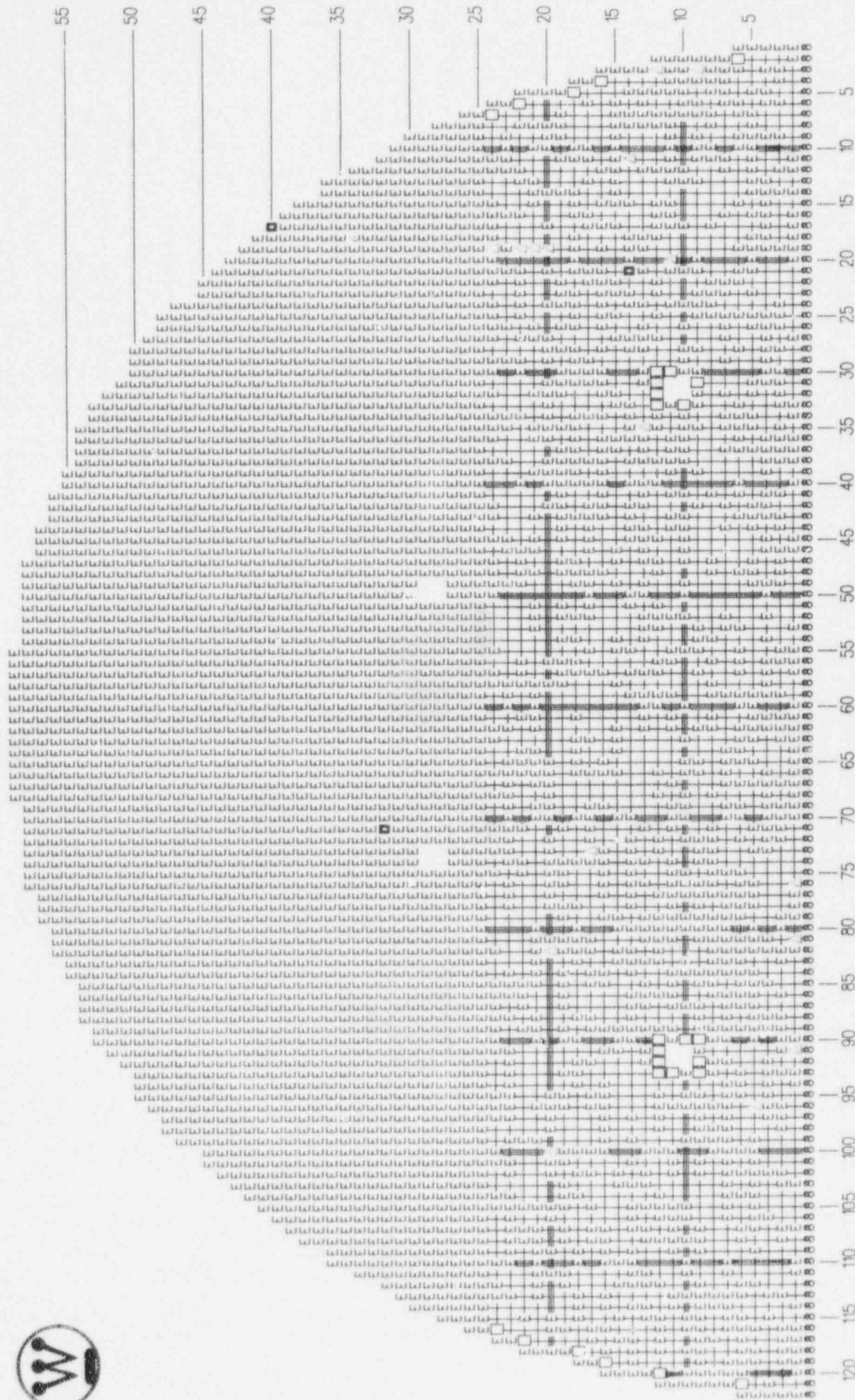


Figure 2 - S/G 'B' - Cecho Inspection Map

T : 532 TEST TSH +12 INCHES THRU TEH
 □ : 2 PLUGGED TUBE

HOT LEG
 Millstone 3 - RFO 5
 NEU-B SERIES F

05-05-1995 08:01 HRS.
 SUPERTUBIN

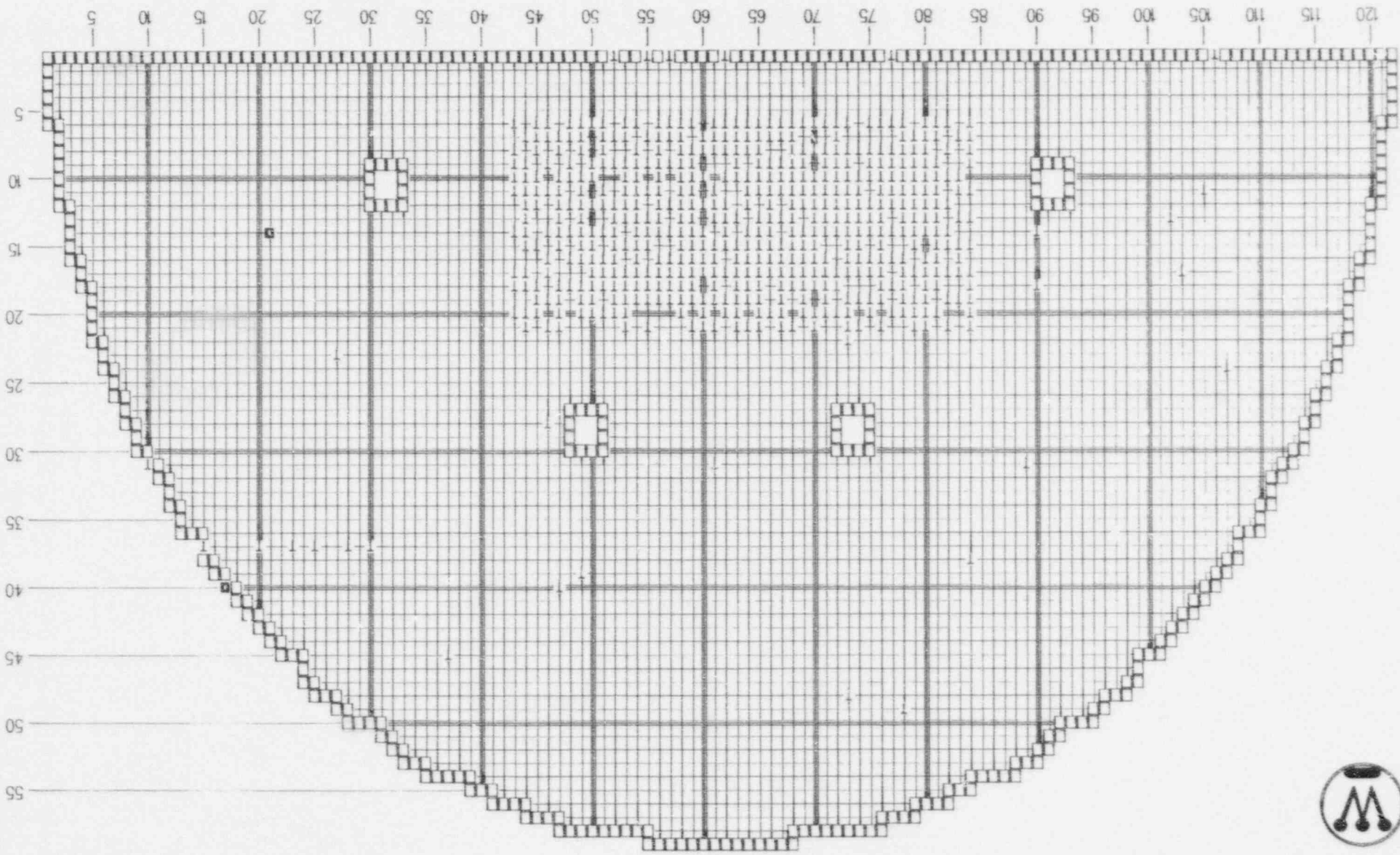


Figure 3 - S/G 'B' - RPC Inspection Map

HOT LEG

Millstone 3 - RFO 5

NEU-B SERIES F

05-06-1995

11:26 HRS.

SUPERTUBIN

T : 3 TEST TOP OF TUBESHEET $\pm 3''$

□ : 2 PLUGGED TUBE

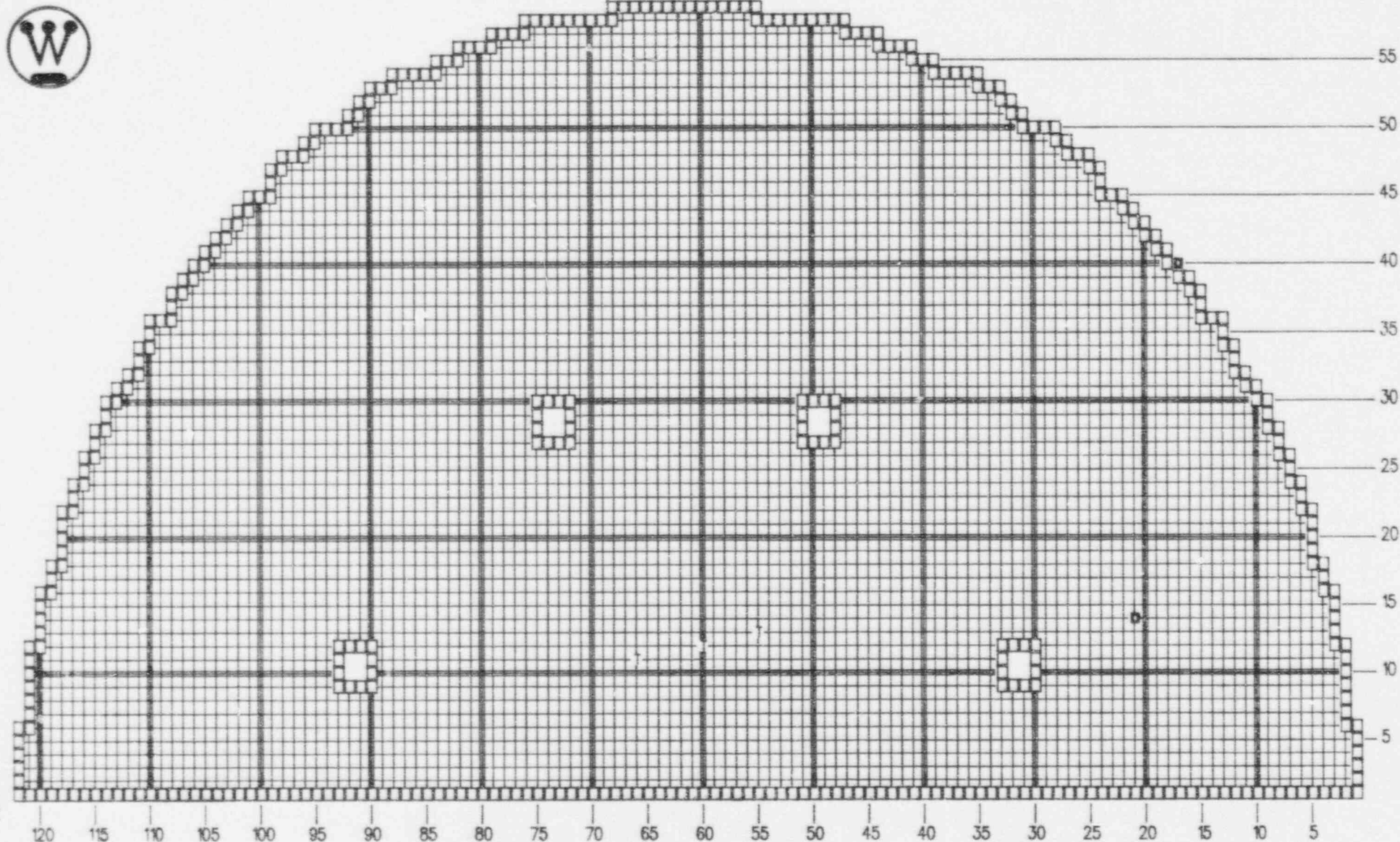


Figure 4 - S/G 'B' - Tube Repair History Map (Includes RFO5)

POST RFO 5

Millstone 3 - RFO 5

NEU-B SERIES F

05-08-1995

10:31 HRS.

SUPERTUBIN

A : 2 02/84; MP (FABRICATION)

B : 1 05/95; MP HL & CL NX7252HK
INITIAL PLUG PRESERVICE - 6/85

C : 1 05/95; MP NX7252HK

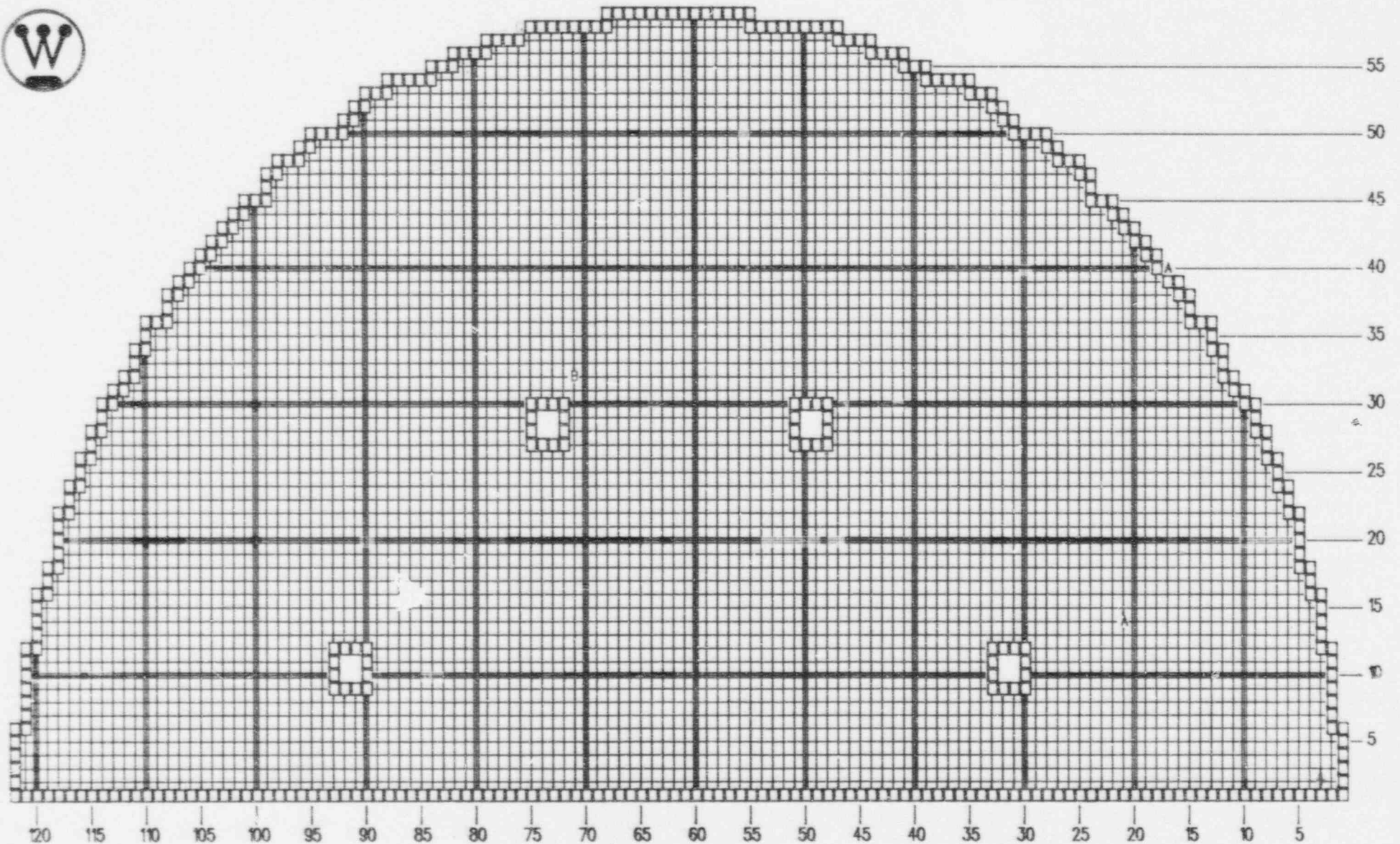


Figure 5 - S/G 'B' - Tubes With % Through Wall $\geq 11\%$ Growth

FROM RFO 3 REANALYSIS
 Millstone 3 - RFO 5

NEU-B SERIES F

05-09-1995

17:31 HRS.

SUPERTUBIN

TECH SPEC SUMMARY

D : 5 DEGRADED TUBE

& : 1 DEGRADED/DEFECTIVE TUBE

□ : 3 PLUGGED TUBE

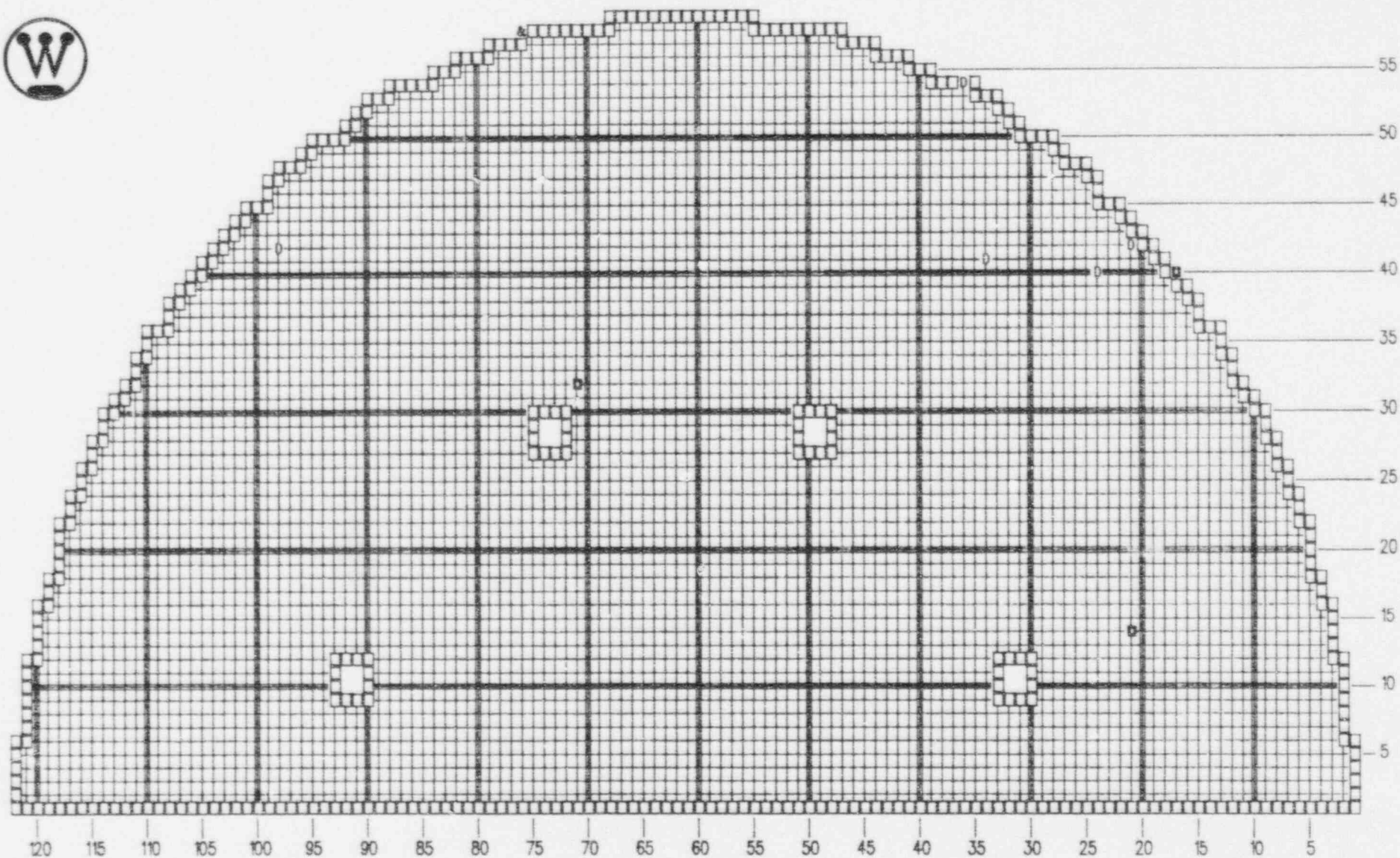


Figure 6 - S/G 'B' - Through Wall Indication Distribution Map (Hot and Cold Legs)

MOST SEVERE INDICATION PER TUBE

Millstone 3 - RFO 5

NEU-B SERIES F

05-07-1995

14:30 HRS.

SUPERTUBIN

NO % CALLS AT HOT LEG OR COLD 4 : 1 40-49% INDICATION
LEG LOCATIONS

■ : 3 PLUGGED TUBE

PERCENT DISTRIBUTION - AVB's

1 : 13 <20% INDICATION

2 : 10 20-29% INDICATION

3 : 1 30-39% INDICATION

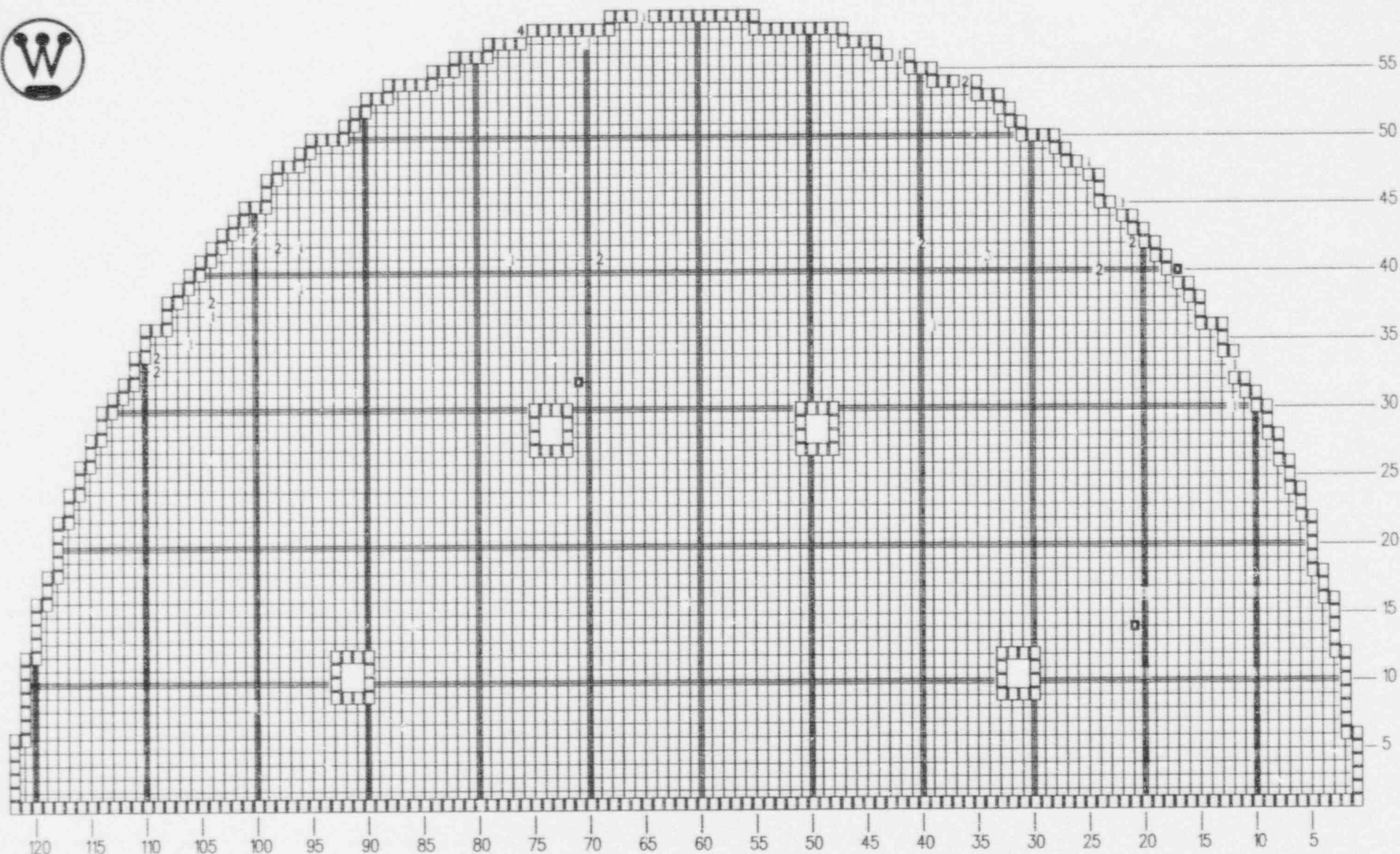


Figure 7 - S/G 'D' - Bobbin Inspection Map

HUI LEG

Millstone 3 - RFO 5

NEU-D SERIES F

05-09-1995

11:15 HRS.

SUPERTUBIN

E : 4100 TUBE TESTED TEC-TEH

8 : 121 TUBE TESTED 08H-TEH

Δ : 14 TUBE TESTED TEC-TEH (UNSCHEDULED)

▽ : 1 TUBE TESTED 08H-TEH (UNSCHEDULED)

PLUG REMOVAL TUBES

S : 1 TUBE TESTED TSC-TEH

U : 1 TUBE TESTED 08C-TEH

■ : 5 PLUGGED TUBE

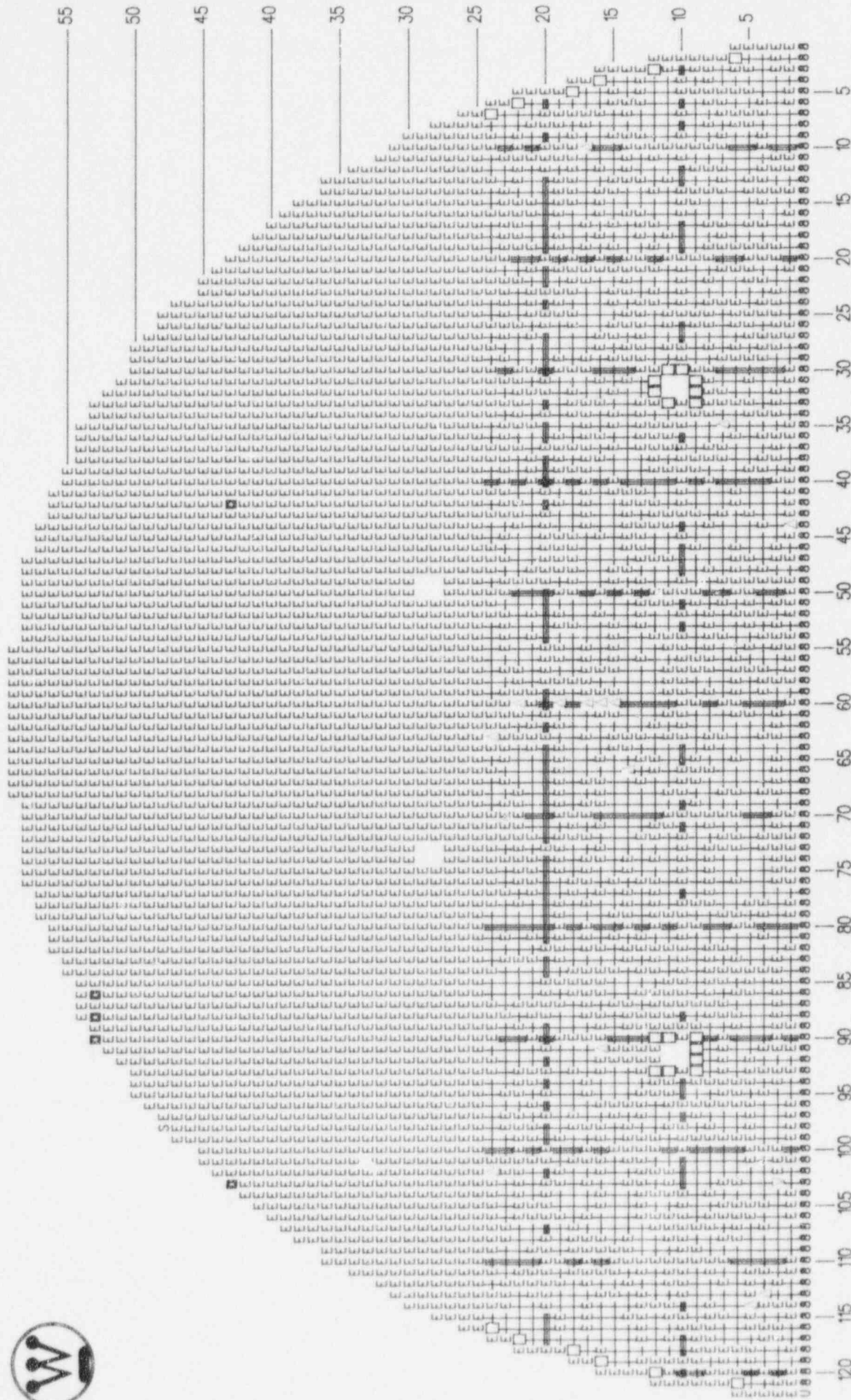


Figure 8 - S/G 'D' - Cecco Inspection Map

T : 516 TEST TSH +12 INCHES THRU TEH
 □ : 5 PLUGGED TUBE

NEU-D SERIES F

SUPERTUBIN

08:30 HRS.

05-04-1995

Milestone 3 - RFO 5

HOT LEG

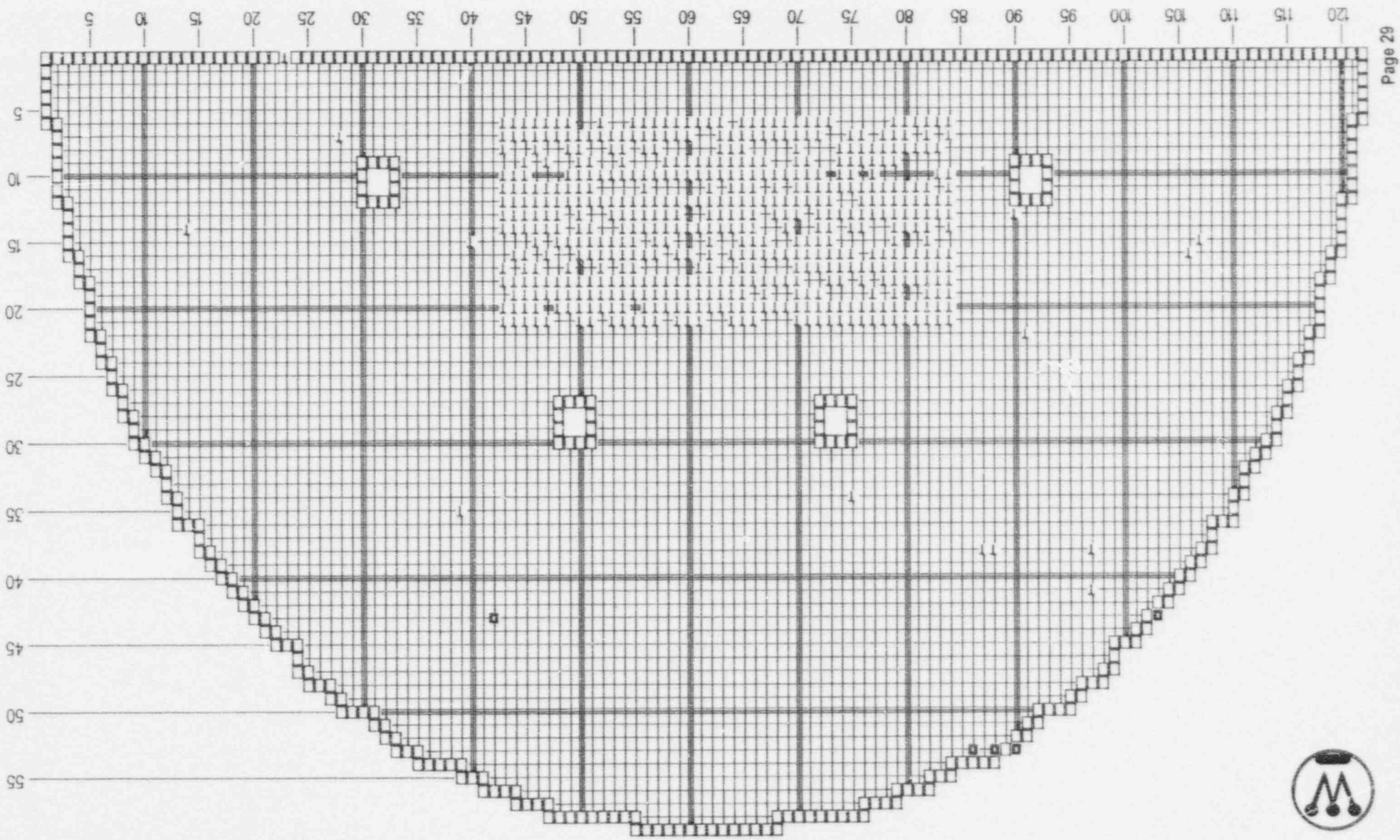


Figure 9 - S/G 'D' - RPC Inspection Map

HOT LEG
Millstone 3 - RFO 5

05-06-1995

11:45 HRS.

SUPERTUBIN

T : 4 TEST TSH \pm 3 INCHES

■ : 5 PLUGGED TUBE

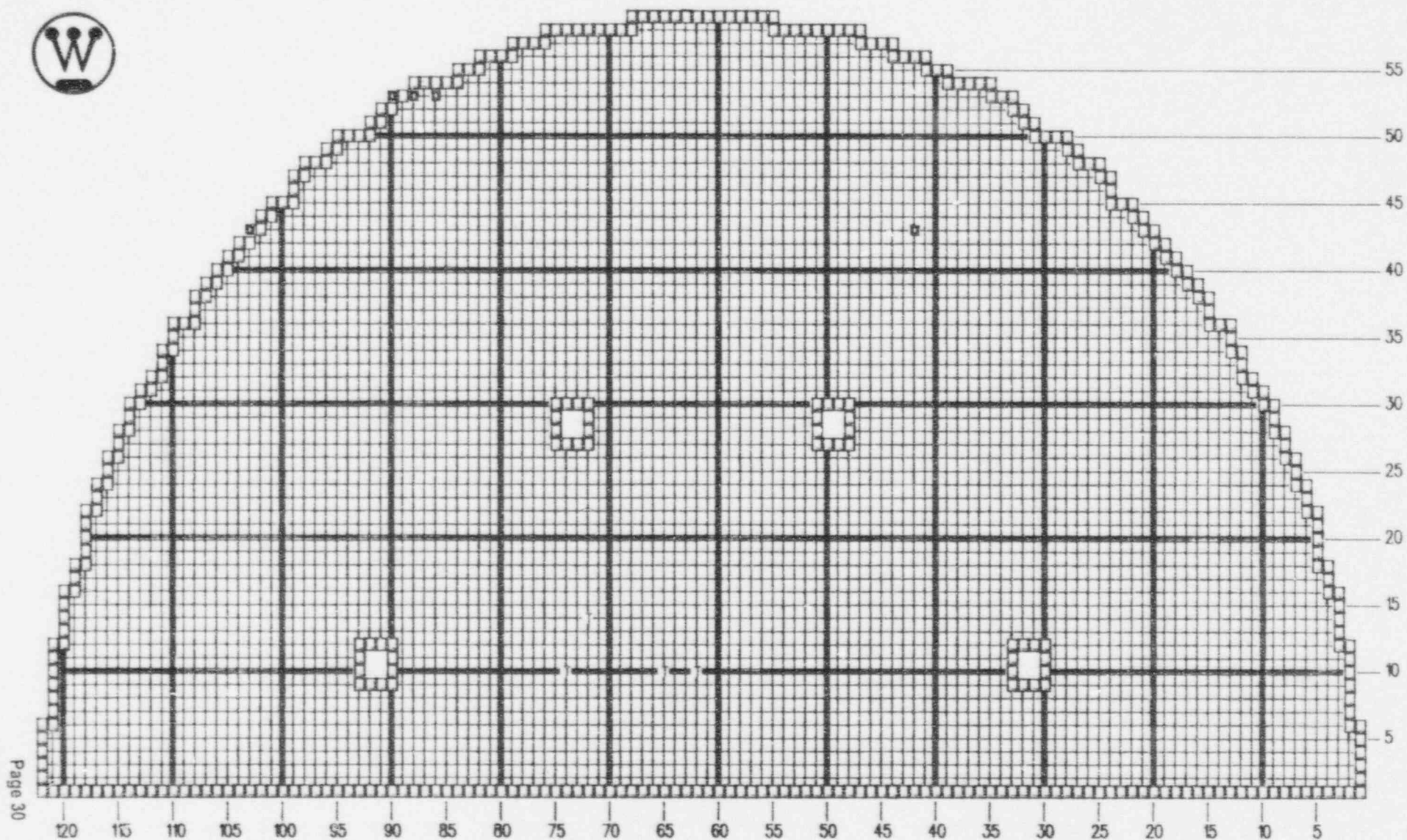


Figure 10 - S/G 'D' - Tube Repair History Map (Includes RFO5)

POST RFO 5

Millstone 3 - RFO 5

NEU-D SERIES F

05-09-1995

10:05 HRS.

SUPERTUBIN



A : 1 05/95; MP HL & CL NX7252HK
INITIAL PLUG PRESERVICE - 2/85

D : 10 05/95; MP HL & CL NX7252HK
RFO5 NX7252HK = 1690

B : 1 05/95; MP HL & CL NX7252HK
INITIAL PLUG W MP - 6/87

C : 5 11/91; BSW MP (R90)

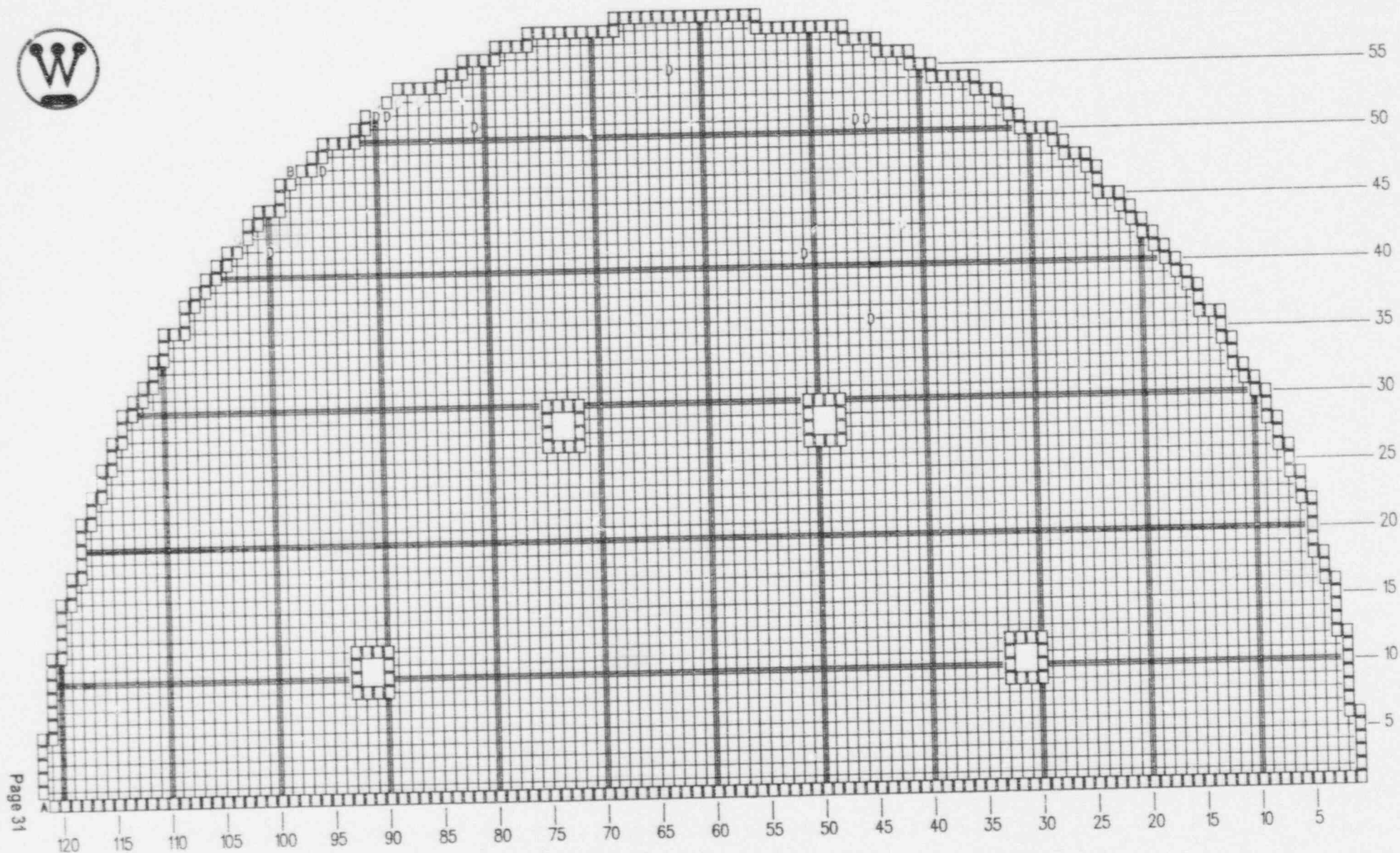


Figure 11 - S/G 'D' - Tubes With % Through Wall $\geq 11\%$ Growth

FROM RFO 3 REANALYSIS
 Millstone 3 - RFO 5

NEU-D SERIES F

05-09-1995

17:25 HRS.

SUPERTUBIN

TECH SPEC SUMMARY

D : 11 DEGRADED TUBE

& : 9 DEGRADED/DEFECTIVE TUBE

■ : 5 PLUGGED TUBE

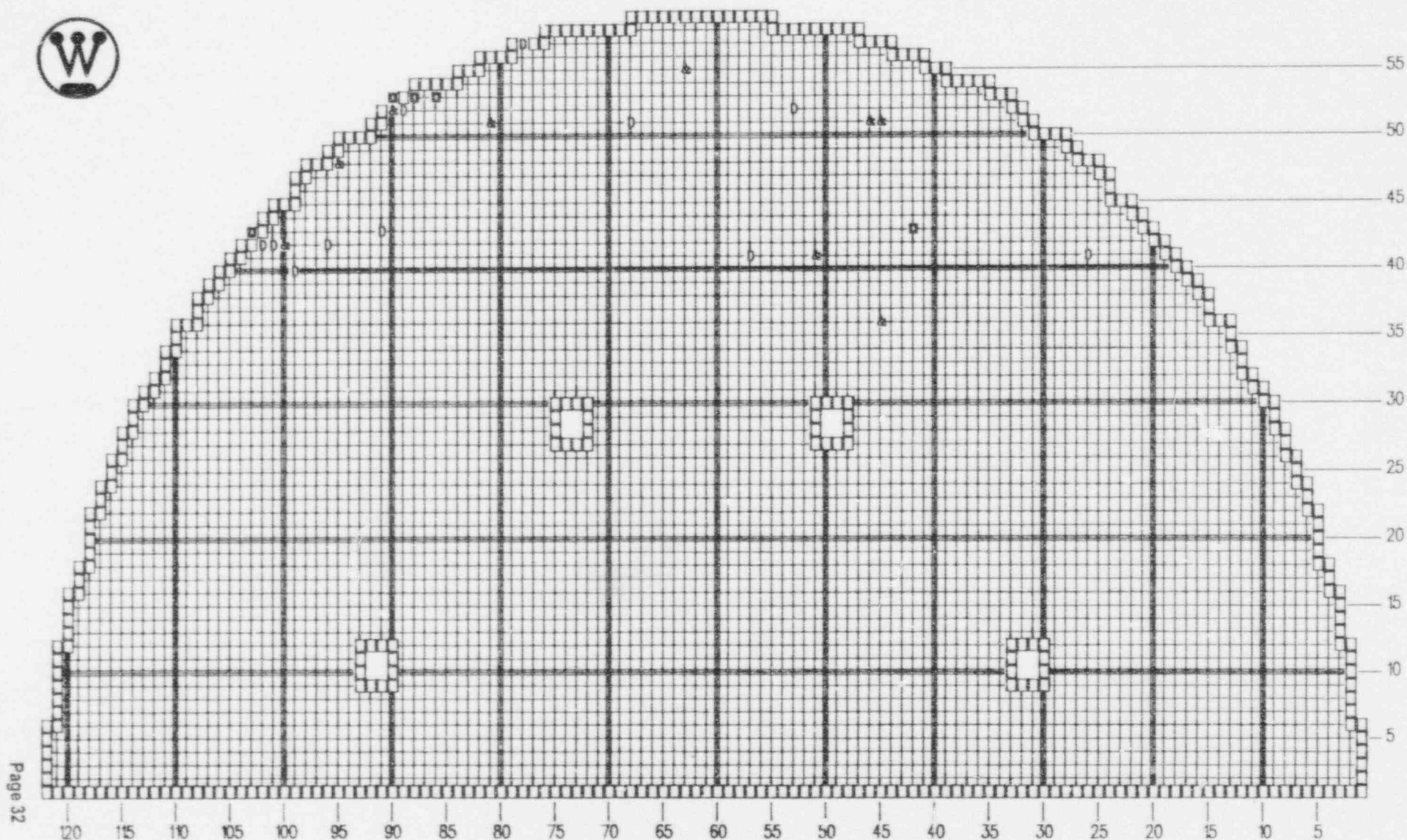


Figure 12 - S/G 'D' - Through Wall Indication Distribution Map (Hot Leg)

■ : 5 PLUGGED TUBE

MOST SEVERE PER TUBE / PER SIDE

Millstone 3 - RFO 5

NEU-D SERIES F

1 : 37 <20% INDICATION
2 : 12 20-29% INDICATION
3 : 16 30-39% INDICATION
4 : 4 40-49% INDICATION
5 : 6 50-59% INDICATION
7 : 1 70-79% INDICATION

05-09-1995

18:25 HRS.

SUPERTUBIN

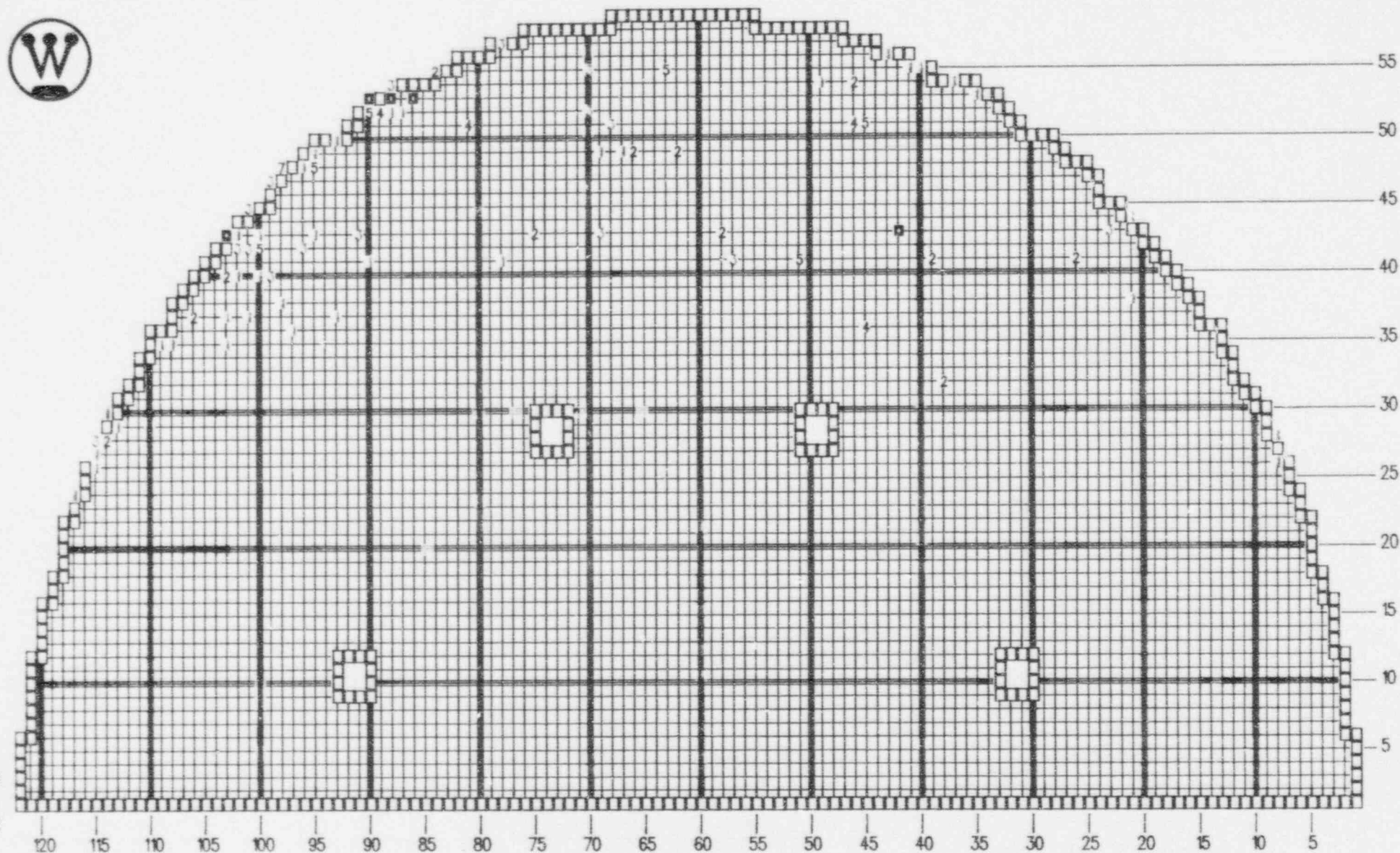


Figure 13 - S/G 'D' - Through Wall Indication Distribution Map (Cold Leg)

■ : 5 PLUGGED TUBE

MOST SEVERE PER TUBE / PER SIDE

Millstone 3 - RFO 5

NEU-D SERIES F

1 : 1 <20% INDICATION

2 : 1 20-29% INDICATION

9 : 1 90-100% INDICATION

DEPLUGGED TUBE EC DATA

05-09-1995

18:20 HRS.

SUPERTUBIN

