Dominion Nuclear Connecticut, Inc.
Millstone Power Station
Rope Ferry Road
Waterford, CT 06385

Dominion

FEB 28 2003

Docket Nos. 50-245
50-336
50-423
B18837

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

Millstone Power Station, Unit Nos. 1, 2 and 3
Annual Report

Pursuant to the provisions of Section 5.7.1 of the Millstone Unit No. 1 Permanently Defueled Technical Specifications (PDTS), Sections 6.9.1.4 and 6.9.1.5 of the Millstone Unit No. 2 Technical Specifications, and Section 6.9.1.2 of the Millstone Unit No. 3 Technical Specifications (TS), this report covers unit activities for the period January 1, 2002, to December 31, 2002.

The annual occupational exposure report for Unit Nos. 1, 2 and 3 is included as Attachment 1. (Millstone Unit No. 1 PDTS 5.7.1, Millstone Unit No. 2 TS 6.9.1.5.a, and Millstone Unit No. 3 TS 6.9.1.2.a)

The results of the steam generator tube inservice inspections performed at Millstone Unit No. 2 in 2002 are included as Attachment 2. (Millstone Unit No. 2 TS 6.9.1.5.b)

There were no exceedances of Technical Specification 3.4.8 at Millstone Unit Nos. 2 or 3 in 2002, therefore, there is no report to be made on reactor coolant specific activity analysis. (Millstone Unit No. 2 TS 6.9.1.5.c and Millstone Unit No. 3 TS 6.9.1.2.b)

There were no challenges to pressurizer power-operated relief valves or safety valves at Unit Nos. 2 or 3 in 2002, nor any failures of these valves to lift or reclose within design basis tolerances. (Millstone Unit No. 2 TS 6.9.1.5.d and Millstone Unit No. 3 TS 6.9.1.2.c)

There are no regulatory commitments contained within this letter.

A001
IE56

Should you have any questions regarding this report, please contact Mr. David W. Dodson at (860) 447-1791, extension 2346.

Very truly yours,

DOMINION NUCLEAR CONNECTICUT, INC.

J. Alan Price
Site Vice President - Millstone

Attachments (2)

cc: H. J. Miller, Region I Administrator
D. G. Holland, NRC Project Manager, Millstone Unit No. 1
J. R. Wray, NRC Inspector, Region I, Millstone Unit No. 1
R. B. Ennis, NRC Senior Project Manager, Millstone Unit No. 2
V. Nerses, NRC Senior Project Manager, Millstone Unit No. 3
Millstone Senior Resident Inspector

Director, Office of Nuclear Regulatory Research
U.S. Nuclear Regulatory Commission
Attention: REIRS Project Manager
Washington, DC 20555

Docket Nos. 50-245
50-336
50-423
B18837

Attachment 1

Millstone Power Station, Unit Nos. 1, 2 and 3

Regulatory Guide 1.16 Report
2002 Occupational Radiation Exposure

Reporting Year : 2002
Unit : 1

Work & Job Function	# Of Personnel Station	# Of Personnel Utility	# Of Personnel Contract	Total Man-mRem Station	Total Man-mRem Utility	Total Man-mRem Contract
Inservice Inspection						
Engineering Staff	0	0	0	0	0	0
Health Physics and Lab	0	0	0	0	0	0
Maint and Construction	0	0	0	0	0	0
Operations	0	0	0	0	0	0
Supv and Office Staff	0	0	0	0	0	0
Refueling Operations						
Engineering Staff	0	0	0	0	0	0
Health Physics and Lab	0	0	0	0	0	0
Maint and Construction	0	0	0	0	0	0
Operations	0	0	0	0	0	0
Supv and Office Staff	0	0	0	0	0	0
Routine Oper and Surv						
Engineering Staff	1	0	0	0	0	0
Health Physics and Lab	52	1	11	89	0	142
Maint and Construction	10	0	10	3	0	6
Operations	1	0	0	1	0	0
Supv and Office Staff	7	0	0	4	0	0
Routine Plant Maint						
Engineering Staff	32	5	15	4	0	13
Health Physics and Lab	10	0	6	23	0	3
Maint and Construction	128	11	327	159	12	109
Operations	85	0	3	119	0	1
Supv and Office Staff	16	1	23	5	0	2
Special Plant Maint						
Engineering Staff	13	5	8	194	0	201
Health Physics and Lab	21	0	9	720	0	885
Maint and Construction	28	3	46	243	61	189
Operations	8	0	1	744	0	0
Supv and Office Staff	7	0	2	23	0	38
Waste Processing						
Engineering Staff	2	0	2	0	0	0
Health Physics and Lab	8	0	10	4	0	9
Maint and Construction	10	5	47	21	0	1
Operations	0	0	0	0	0	0
Supv and Office Staff	3	0	1	0	0	0
Job Totals						
Engineering Staff	48	10	25	198	0	214
Health Physics and Lab	91	1	36	836	0	1039
Maint and Construction	176	19	430	426	73	305
Operations	94	0	4	864	0	1
Supv and Office Staff	33	1	26	32	0	40
Unit 1 Total	442	31	521	2356	73	1599

Note: Report contains electronic dosimeter or PIC dose only

Dose of persons with <100 mRem IS INCLUDED

Unit : 2

Work & Job Function	# Of Personnel Station	# Of Personnel Utility	# Of Personnel Contract	Total Man-mRem Station	Total Man-mRem Utility	Total Man-mRem Contract
Inservice Inspection						
Engineering Staff	111	16	40	1028	246	617
Health Physics and Lab	16	0	26	638	0	468
Maint and Construction	46	5	244	1082	245	43739
Operations	13	0	2	9	0	0
Supv and Office Staff	14	0	4	36	0	21
Refueling Operations						
Engineering Staff	31	6	7	694	12	407
Health Physics and Lab	30	0	39	1243	0	649
Maint and Construction	76	7	117	2896	111	11096
Operations	18	0	1	1231	0	0
Supv and Office Staff	14	1	1	112	3	0
Routine Oper and Surv						
Engineering Staff	147	27	36	662	235	76
Health Physics and Lab	58	2	57	3893	1	3736
Maint and Construction	126	11	165	1453	102	1097
Operations	127	0	6	6661	0	90
Supv and Office Staff	35	7	15	332	0	11
Routine Plant Maint						
Engineering Staff	107	17	39	1768	442	962
Health Physics and Lab	48	0	40	2801	0	4017
Maint and Construction	320	29	880	13553	1084	47087
Operations	47	0	6	318	0	19
Supv and Office Staff	46	7	71	698	204	175
Special Plant Maint						
Engineering Staff	32	6	14	1000	76	233
Health Physics and Lab	35	0	14	1757	0	229
Maint and Construction	101	8	230	8022	61	8021
Operations	17	0	1	392	0	0
Supv and Office Staff	8	0	2	131	0	3
Waste Processing						
Engineering Staff	16	2	3	10	0	0
Health Physics and Lab	46	1	39	771	0	410
Maint and Construction	72	5	137	615	38	205
Operations	17	0	0	35	0	0
Supv and Office Staff	17	3	1	46	0	0
Job Totals						
Engineering Staff	444	74	139	5162	1011	2295
Health Physics and Lab	233	3	215	11103	1	9509
Maint and Construction	741	65	1773	27621	1641	111245
Operations	239	0	16	8646	0	109
Supv and Office Staff	134	18	94	1355	207	210
Unit 2 Total	1791	160	2237	53887	2860	123368

Note: Report contains electronic dosimeter or PIC dose only

Dose of persons with <100 mRem IS INCLUDED

Unit : 3

Work & Job Function	# Of Personnel Station	# Of Personnel Utility	# Of Personnel Contract	Total Man-mRem Station	Total Man-mRem Utility	Total Man-mRem Contract
Inservice Inspection						
Engineering Staff	34	7	20	345	152	1404
Health Physics and Lab	16	0	13	362	0	441
Maint and Construction	38	5	176	1254	628	14077
Operations	0	0	0	0	0	0
Supv and Office Staff	10	1	1	19	0	13
Refueling Operations						
Engineering Staff	33	8	6	489	21	273
Health Physics and Lab	26	0	26	935	0	703
Maint and Construction	71	7	106	1168	10	9675
Operations	24	0	0	538	0	0
Supv and Office Staff	19	1	0	223	0	0
Routine Oper and Surv						
Engineering Staff	147	21	37	371	163	61
Health Physics and Lab	51	1	58	3302	0	3347
Maint and Construction	107	11	99	888	2	702
Operations	102	0	4	3652	0	82
Supv and Office Staff	32	8	14	399	58	241
Routine Plant Maint						
Engineering Staff	152	21	45	1820	42	707
Health Physics and Lab	51	1	38	1302	0	422
Maint and Construction	323	32	837	8033	384	23213
Operations	164	0	14	642	0	18
Supv and Office Staff	67	15	60	786	267	51
Special Plant Maint						
Engineering Staff	29	4	10	147	18	40
Health Physics and Lab	30	0	9	208	0	191
Maint and Construction	124	11	251	1724	127	3882
Operations	39	0	3	363	0	17
Supv and Office Staff	4	1	2	2	0	41
Waste Processing						
Engineering Staff	7	1	1	1	0	0
Health Physics and Lab	37	0	25	578	0	688
Maint and Construction	46	7	80	648	3	495
Operations	3	0	0	1	0	0
Supv and Office Staff	13	0	0	38	0	0
Job Totals						
Engineering Staff	402	62	119	3173	396	2485
Health Physics and Lab	211	2	169	6687	0	5792
Maint and Construction	709	73	1549	13715	1154	52044
Operations	332	0	21	5196	0	117
Supv and Office Staff	145	26	77	1467	325	346
Unit 3 Total	1799	163	1935	30238	1875	60784

Note: Report contains electronic dosimeter or PIC dose only Dose of persons with <100 mRem IS INCLUDED

	------# Of Personnel -------			-------Total Man-mRem-------		
	Station	Utility	Contract	Station	Utility	Contract
Grand Total	4032	354	4693	86481	4808	185751

Note: Report contains electronic dosimeter or PIC dose only

Dose of persons with <100 mRem IS INCLUDED

Docket Nos. 50-245
50-336
50-423
B18837

Attachment 2

Millstone Power Station, Unit No. 2

2002 Steam Generator Tube Inservice Inspection

Steam Generator Tube Inspection

The Millstone Unit 2 steam generator eddy current inspections, conducted at the end of cycle 14, were completed on March 1, 2002. After completion of three cycles of operation, with the new replacement steam generators, no indications of corrosion and only two shallow mechanically induced wear flaws have been identified. Consequently, upon completion of RF14, no steam generator tube repairs or plugging were required or performed.

The inspection included a one hundred percent bobbin probe examination, performed on all tubes (i.e., 8522) in Steam Generator 1. The subject bobbin inspections were performed full length (i.e., cold leg tube end to hot leg tube end), at speeds up to 38 inches per second. Rows 1-15 were tested at lower speeds (i.e., 24 inches per second).

Supplementing the bobbin inspection was an augmented inspection of 57 locations utilizing rotating probes. These inspections included 37 locations of special interest (e.g., hot leg tube sheet areas, bulges, manufacturing burnish marks, dents, and dings) and 20 locations for potential loose parts. The rotating probe utilized included a Plus Point Coil. The Plus Point Coil was chosen because this probe provides superior detection of both circumferential and axial cracks, and has been qualified per the PWR S/G Examination Guidelines, Appendix H, for the detection of cracking mechanisms.

In accordance with Technical Specifications 4.4.5.1.5, the attachments provide a listing of imperfection identified during the inspection. Imperfections are identified as:

> "Means an exception to dimensions, finish, or contour of a tube or sleeve from that required by fabrication drawings or specifications. Eddy-current testing indications below 20% of the nominal tube or sleeve wall thickness, if detectable, may be considered as imperfections."

In accordance with the standards established per NEI 97-06, "Steam Generator Program Guidelines", a Condition Monitoring and Operational Assessment (CMOA) of the Millstone Unit 2 Steam Generators was performed. This evaluation concluded that none of the steam generator performance criteria had been exceeded during cycle 14 operation. The evaluation also established with reasonable assurance that operation of the steam generators, throughout the interval preceding the next examination, will not cause any of the performance criteria to be exceeded.

The bobbin inspection identified 77 non-quantifiable indications, previously identified as manufacturing marks in 1991. When compared with the baseline data there was no change noted in these marks. The only indications of tube degradation identified during RF14 occurred within two tubes. They were identified as 9 percent throughwall wear at fan bar locations (row 40, col 155 and row 140, col 93).

In response to a Loose Parts Monitoring System (LPMS) alarm occurring in Steam Generator 1, on February 11, 2002, prior to RF14, the visual inspection of the secondary side was significantly augmented. It included an extensive visual examination of the top of tubesheet, tubesheet annulus, blowdown holes, and inner bundle. The visual inspection identified only one small object (i.e., foreign material), lodged between tubes R23 C102, R24 C103, R24 C102, and R24 C101. Review of the RF14 ECT data confirmed that a marginal, potential loose part signal was present in 3 tubes. Historical review of prior inspection data, identified that the signal was present in the 1994 and 1997 eddy current inspections results. No associated tube damage exists at these locations. The part was not retrieved and was addressed from a tube integrity standpoint within the CMOA.

Based on a lack of physical evidence confirming that a part which could cause the LPMS alarm was located in the lower secondary side, an upper steam drum inspection was performed. This inspection included an entry into the steam generator and the physical inspection of the secondary deck. Each secondary separator was inspected and a complete visual inspection of the accessible areas above the primary deck was completed. All components were intact.

The final inspection was the upper tube bundle. The water level was raised to 12 inches below the primary deck and a submersible camera, attached to a floating platform, was used. The examination checked the u-bend region at the top of the tube bundle. No abnormalities were identified. Specific attention was paid to the eighth fan bar intersection with tube R140 C93. This tube was identified by ECT with 9% through wall wear at the fan bar location. The inspection found no evidence of unusual support conditions which could have explained the LPMS indication.

Corrective actions to address the LPMS indications included the performance of baseline data acquisition, prior to returning to full power, on the existing channels of LPMS by Westinghouse. That baseline testing enabled the LPMS System Engineer to determine that a loose part was not present, and that the signal had actually been generated by a cable malfunction.

Attachments

Attachment	Title
1	Designations and Acronyms
2	Tube Sheet Map and Listing of all tubes with ADS Indications
3	Tube Sheet Map and Listing of all tubes with BLG Indications
4	Tube Sheet Map and Listing of all tubes with DNG Indications
5	Tube Sheet Map and Listing of all tubes with DNT Indications
6	Tube Sheet Map and Listing of all tubes with DSS Indications
7	Tube Sheet Map and Listing of all tubes with DTS Indications
8	Tube Sheet Map and Listing of all tubes with NQH Indications
9	Tube Sheet Map and Listing of all tubes with NQS Indications
10	Tube Sheet Map and Listing of all tubes with PLP Indications
11	Tube Sheet Map and Listing of all tubes with PTE Indications
12	Tube Sheet Map and Listing of all tubes with TWD Indications
13	Tube Sheet Map and Listing of all tubes with VOL Indications

Attachment 1
Designations and Acronyms

Table 11-1
Allowable Acronyms
(Sheet 1 of 3)

CATEGORY I - NO FURTHER ACTION REQUIRED			
ACRONYM	DESCRIPTION	LOCATION REQUIRED	EXTENT REQUIRED
CUD	Copper Deposit	Y	Y
DEP	Deposit	Y	Y
NDD	No Detectable Degradation (or a blank may be used)	N	Y
NDF*	No Degradation Found	Y	Y
PID	Positive Identification of Defective Tube	Y	Y
PLG	Tube is plugged	N	N
SLG	Sludge	Y	Y

CATEGORY II - RETEST REQUIRED			
ACRONYM	DESCRIPTION	LOCATION REQUIRED	EXTENT REQUIRED
RAD	Retest - Analyst Discretion	N	Y
RBD	Bad Data	N	Y
RIC	Incomplete Test	N	Y
RID	Questionable Encode	N	Y
RFX	Fixture Blocking Access to Tube	N	Y
RND	No Data Acquired	N	N
RRT	Restricted Tube - Retest With Smaller Probe	N	Y
RWS	Retest with Wear Standard	Y	Y

CATEGORY III - DIAGNOSTIC TESTING AND/OR HISTORY REVIEW REQUIRED, REPAIRABLE IF FINAL			
ACRONYM	DESCRIPTION	LOCATION REQUIRED	EXTENT REQUIRED
ADI	Absolute Drift Indication	Y	Y
DDI	Dent With Indication	Y	Y
DEI	Distorted Expansion Indication	Y	Y
DSI	Distorted Support Indication	Y	Y
DTI	Distorted Tubesheet Indication	Y	Y
LPI	Loose Part with Indication	Y	Y
NQI	Non-quantifiable Indication	Y	Y

Table 11-1
Allowable Acronyms

(Sheet 2 of 3)

CATEGORY IV - NON-REPAIRABLE, POST DIAGNOSTIC RESULT OR RESULT OF HISTORICAL REVIEW			
ACRONYM	DESCRIPTION	LOCATION REQUIRED	EXTENT REQUIRED
ADS	Absolute Drift	Y	Y
DDH	Distorted Dent Signal - History	Y	Y
DDS	Distorted Dent Signal	Y	Y
DES	Distorted Expansion Signal	Y	Y
DSS	Distorted Support Signal	Y	Y
DTS	Distorted Tubesheet Signal	Y	Y
LPS	Loose Part Signal - Non-confirming w/RPC	Y	Y
NQH	Non-quantifiable Signal - History	Y	Y
NQS	Non-quantifiable Signal	Y	Y

CATEGORY V - TUBE REPAIR REQUIRED			
ACRONYM	DESCRIPTION	LOCATION REQUIRED	EXTENT REQUIRED
LIG*	Ligament Between Multiple Indications	N	Y
MAI*	Multiple Axial Indications	Y	Y
MCI*	Multiple Circumferential Indications	Y	Y
MMI*	Mix Mode Indication	Y	Y
SAI*	Single Axial Indication	Y	Y
SCI*	Single Circumferential Indication	Y	Y
SVI*	Single Volumetric Indication	Y	Y
MVI*	Multiple Volumetric indication	Y	Y

Table 11-1
Allowable Acronyms

(Sheet 3 of 3)

CATEGORY VI - REVIEW INDICATION, REVIEW HISTORY, DIAGNOSTIC SAMPLING OR ENGINEERING EVALUATION REQUIRED			
ACRONYM	DESCRIPTION	LOCATION REQUIRED	EXTENT REQUIRED
APP	Tube to tube contact (or close proximity) at the apex	Y	Y
BLG	Bulge	Y	Y
DNG	Ding	Y	Y
DNT	Dent	Y	Y
IDC	Inside Diameter Chatter	Y	Y
INF	Previous Indication Not Found	Y	Y
INR	Previous Indication Not Reportable	Y	Y
LAR	Lead Analyst Resolution - Used by the Analyst	Y	Y
OBS	Obstructed Tube	Y	Y
OXP	Over Expansion	Y	Y
NTE	No Tubesheet Expansion	Y	Y
PLP	Possible Loose Part	Y	Y
PRO	Non apex tube to tube contact (or close proximity)	Y	Y
PTE	Partial Tubesheet Expansion	Y	Y
PVN	Permeability Variation	Y	Y
SCR	Scratch	Y	Y
SKR	Skip Roll	Y	Y
TSM	Tube Support Missing	Y	Y
VOL*	Volumetric Indication (For Resolution use only)	Y	Y

***Used only for rotating probe results**

Table 11-2
Allowable Probe Designations

Designator	Description
zzzBOB	Standard Bobbin Coil Probe of 0.zzz" Diameter
zzzRPC	Motorized Rotating Pancake Coil Probe of 0 zzz" Diameter
zzzPROF	8-Coil Profilometry Probe of 0.zzz" Diameter

Table 11-3
Allowable Datum Point Designations

(Sheet 1 of 2)

DESIGNATOR	LOCATION DESCRIPTION	INCHES FROM CLOSEST TUBE END
TEH	Tubesheet Entry Hot Leg	0.0
TSH	Tubesheet Secondary Side Face Hot Leg	22.25
01H	#1 Hot Leg Lattice Grid Support	46.25
02H	#2 Hot Leg Lattice Grid Support	81.375
03H	#3 Hot Leg Lattice Grid Support	123.00
04H	#4 Hot Leg Lattice Grid Support	164.625
05H	#5 Hot Leg Lattice Grid Support	206.25
06H	#6 Hot Leg Lattice Grid Support	247.875
07H	#7 Hot Leg Lattice Grid Support	289 5
TEC	Tubesheet Entry Cold Leg	0.0
TSC	Tubesheet Secondary Side Face Cold Leg	22.25
01C	#1 Cold Leg Lattice Grid Support	46.25
02C	#2 Cold Leg Lattice Grid Support	81.375
03C	#3 Cold Leg Lattice Grid Support	123 00
04C	#4 Cold Leg Lattice Grid Support	164.625
05C	#5 Cold Leg Lattice Grid Support	206 25
06C	#6 Cold Leg Lattice Grid Support	247.875
07C	#7 Cold Leg Lattice Grid Support	289.5

Table 11-3
Allowable Datum Point Designations

(Sheet 2 of 2)

DESIGNATOR	LOCATION DESCRIPTION	INCHES FROM CLOSEST TUBE END
F01	Hot Leg Fan Support (12° From Horizontal)	Variable
F02	Hot Leg Fan Support (47° From Vertical)	Variable
F03	Hot Leg Fan Support (33° From Vertical)	Variable
F04	Hot Leg Fan Support (22° From Vertical)	Variable
F05	Hot Leg Fan Support (12° From Vertical)	Variable
F06	Hot Leg Fan Support (3° From Vertical)	Variable
F07	Cold Leg Fan Support (3° From Vertical)	Variable
F08	Cold Leg Fan Support (12° From Vertical)	Variable
F09	Cold Leg Fan Support (22° From Vertical)	Variable
F10	Cold Leg Fan Support (33° From Vertical)	Variable
F11	Cold Leg Fan Support (47° From Vertical)	Variable
F12	Cold Leg Fan Support (12° From Horizontal)	Variable
TECTEH	Full Length Test - Hot Leg Entry Data Collected From TEC to TEH	N/A
TEHTEC	Full Length Test - Cold Leg Entry Data Collected From TEH to TEC	N/A

Attachment 2
Tubes with ADS Indications

Listing of all Tubes with ADS Indications

QUERY: ADS

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION			EXT	EXT	UTIL 1	UTIL 2	CAL #	LEG	PROBE
26	23	4.14	48	6	ADS		06H	+3.95	TO+18.75	TEC	TEH			25	HOT	610UL
26	53	2.16	46	6	ADS		05C	+12.11	TO+25.58	TEC	TEH	HR		61	HOT	610UL
37	152	2.26	46	6	ADS		04H	+2.06	TO+16.55	TEC	TEH			75	HOT	610UL
37	158	2.02	66	6	ADS		04H	+18 00	TO+37.22	TEC	TEH			75	HOT	610UL
42	9	2.11	43	6	ADS		02C	+22.07	TO+39.18	TEC	TEH			25	HOT	610UL
45	86	3.75	48	6	ADS		07H	-7.40	TO+12.77	TEC	TEH			40	HOT	610UL
46	41	3.10	50	6	ADS		06H	+18.82	TO+35.87	TEC	TEH			23	HOT	610UL
48	157	3.69	53	6	ADS		04H	+20.59	TO+39.38	TEC	TEH			75	HOT	610UL
54	97	3.35	46	6	ADS		05H	+21.02	TO+37.45	TEC	TEH			43	HOT	610UL
62	109	2.10	171	6	ADS		05H	-4.50	TO+10.87	TEC	TEH	HR		43	HOT	610UL
78	33	2.80	58	6	ADS		F02	+2.76	TO+19.54	TEC	TEH			11	HOT	610UL
82	95	2.57	40	6	ADS		F07	+1.81	TO+12.91	TEC	TEH			48	HOT	610UL

Total Tubes : 12
Total Records: 12

Millstone Unit 2
RFO14

ADS Indications

GROUP ADS | TUBES 12

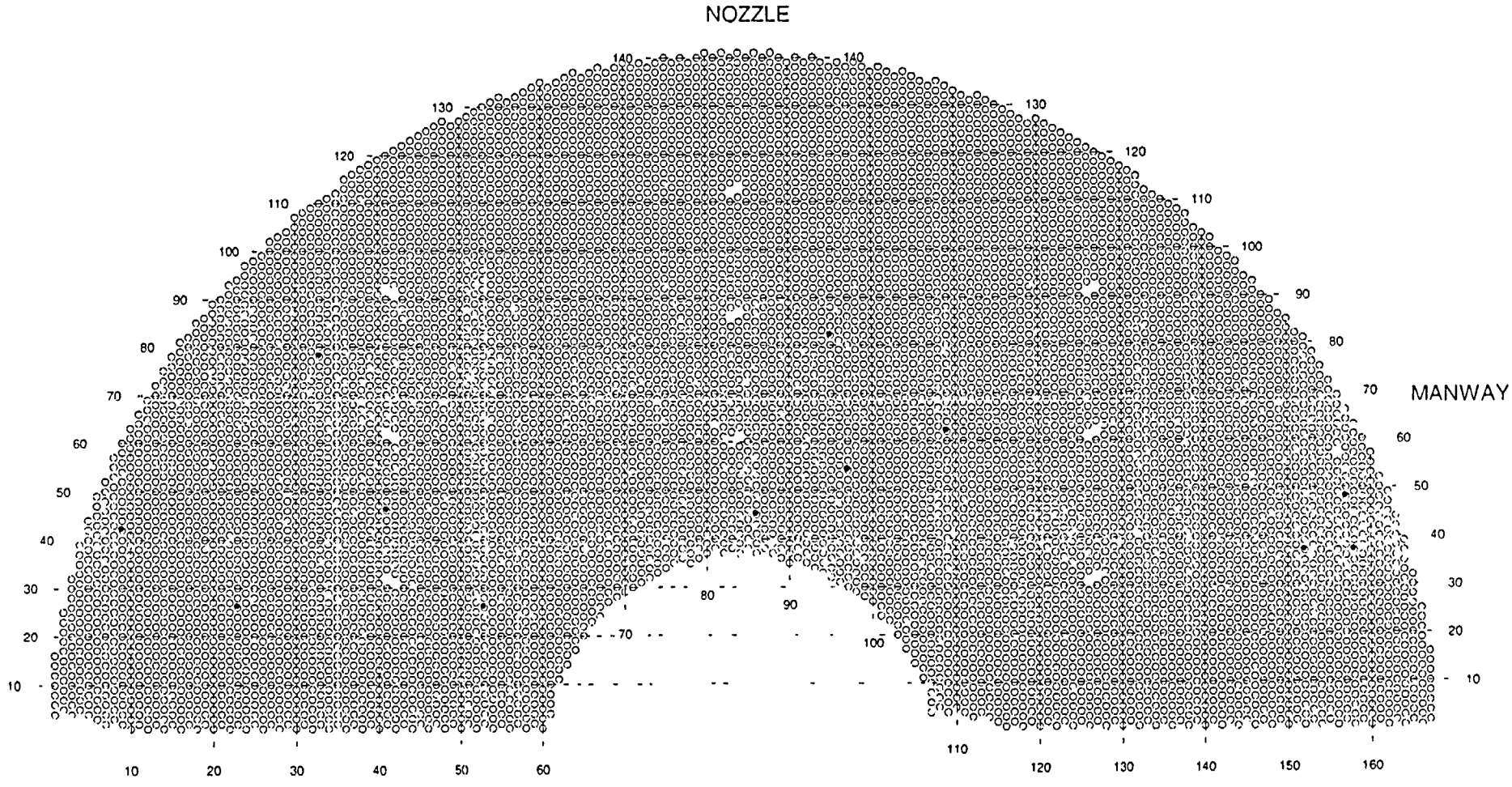
FANP - FDMS map module rev 1.6

S/G 1
HOT
PRIMARY FACE

TOTAL TUBES: 8522
SELECTED TUBES: 12
OUT OF SERVICE (#): 0

SCALE: 0.062214 X
Thu Mar 07 10:05:38 2002

This drawing is the property of Framatome ANP, Inc and is loaned upon condition that it is not to be reproduced or copied, in whole or in part or used for furnishing information to others or for any other purpose detrimental to the interests of Framatome ANP and will be returned upon request



Attachment 3
Tubes with BLG Indications

Listing of all tubes with BLG Indications

BLG Indications

QUERY: BLG

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION		EXT	EXT	UTIL 1	UTIL 2	CAL #	LEG	PROBE
79	144	9.24	2	P 1	BLG		07H	+1.72	TEC	TEH	HR		72	HOT	610UL
91	90	5.11	6	P 1	BLG		07H	+1.65	TEC	TEH	HR		47	HOT	610UL

Total Tubes : 2
Total Records: 2

Millstone Unit 2
RFO14

BLG Indications

FANP - FDMS map module rev 1.6

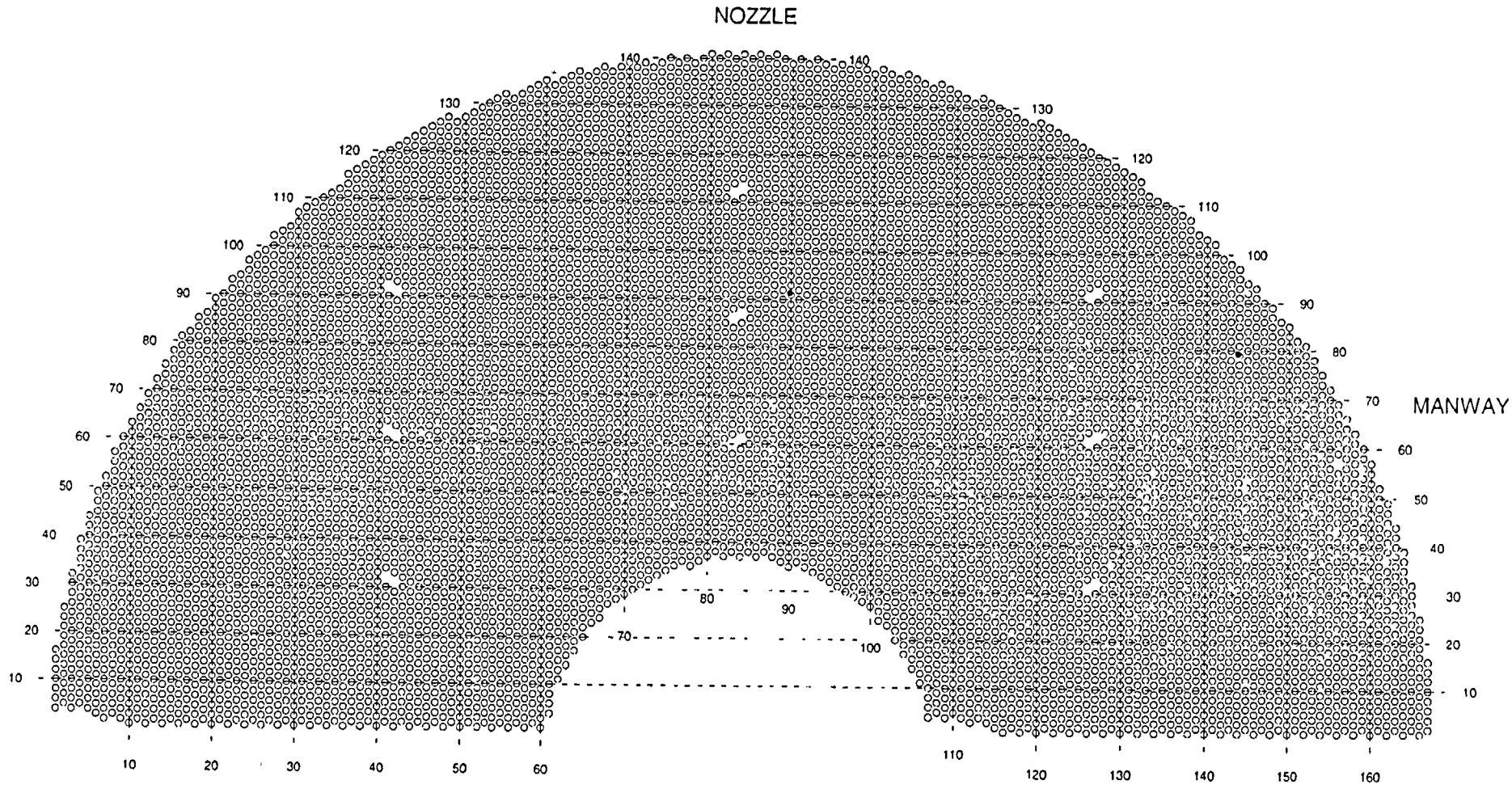
GROUP	TUBES
BLG	2

S/G 1
HOT
PRIMARY FACE

TOTAL TUBES: 8522
SELECTED TUBES: 2
OUT OF SERVICE (#): 0

SCALE: 0.062214 X
Thu Mar 07 10:31:53 2002

This drawing is the property of Framatome ANP Inc and is loaned upon condition that it is not to be reproduced or copied in whole or in part, or used for furnishing information to others, or for any other purpose detrimental to the interests of Framatome ANP and will be returned upon request.



Attachment 4
Tubes with DNG Indications

Listing of all Tubes with DNG Indications

DNG Indications

QUERY: DNG

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION		EXT	EXT	UTIL 1	UTIL 2	CAL #	LEG	PROBE
7	22	8.13	176	1	DNG		06H	+16.47	TEC	TEH			27	HOT	610UL
20	63	4.48	184	1	DNG		F07	+5.24	TEC	TEH			31	HOT	610UL
21	104	4.75	185	1	DNG		F01	+7.91	TEC	TEH			57	HOT	610UL
25	64	6.90	184	1	DNG		F06	+1.99	TEC	TEH			31	HOT	610UL
29	34	3.45	185	1	DNG		01H	+20.13	TEC	TEH			23	HOT	610UL
57	158	4.60	187	1	DNG		F06	+5.68	TEC	TEH			74	HOT	610UL
59	42	3.32	179	1	DNG		TSC	+14.94	TEC	TEH			8	HOT	610UL
60	113	4.21	180	1	DNG		07C	+1.82	TEC	TEH			44	HOT	610UL
69	72	3.86	187	1	DNG		04C	+28.01	TEC	TEH			62	HOT	610UL
103	32	3.49	184	1	DNG		06C	+19.93	TEC	TEH			6	HOT	610UL
114	99	5.27	186	1	DNG		02H	+33.86	TEC	TEH			51	HOT	610UL
132	55	5.25	182	1	DNG		TSC	+0.65	TEC	TEH			3	HOT	610UL
136	63	4.28	186	1	DNG		F02	+3.87	TEC	TEH			3	HOT	610UL

Total Tubes : 13
Total Records: 13

Millstone Unit 2
RFO14

DNG Indications

GROUP DNG

TUBES 13

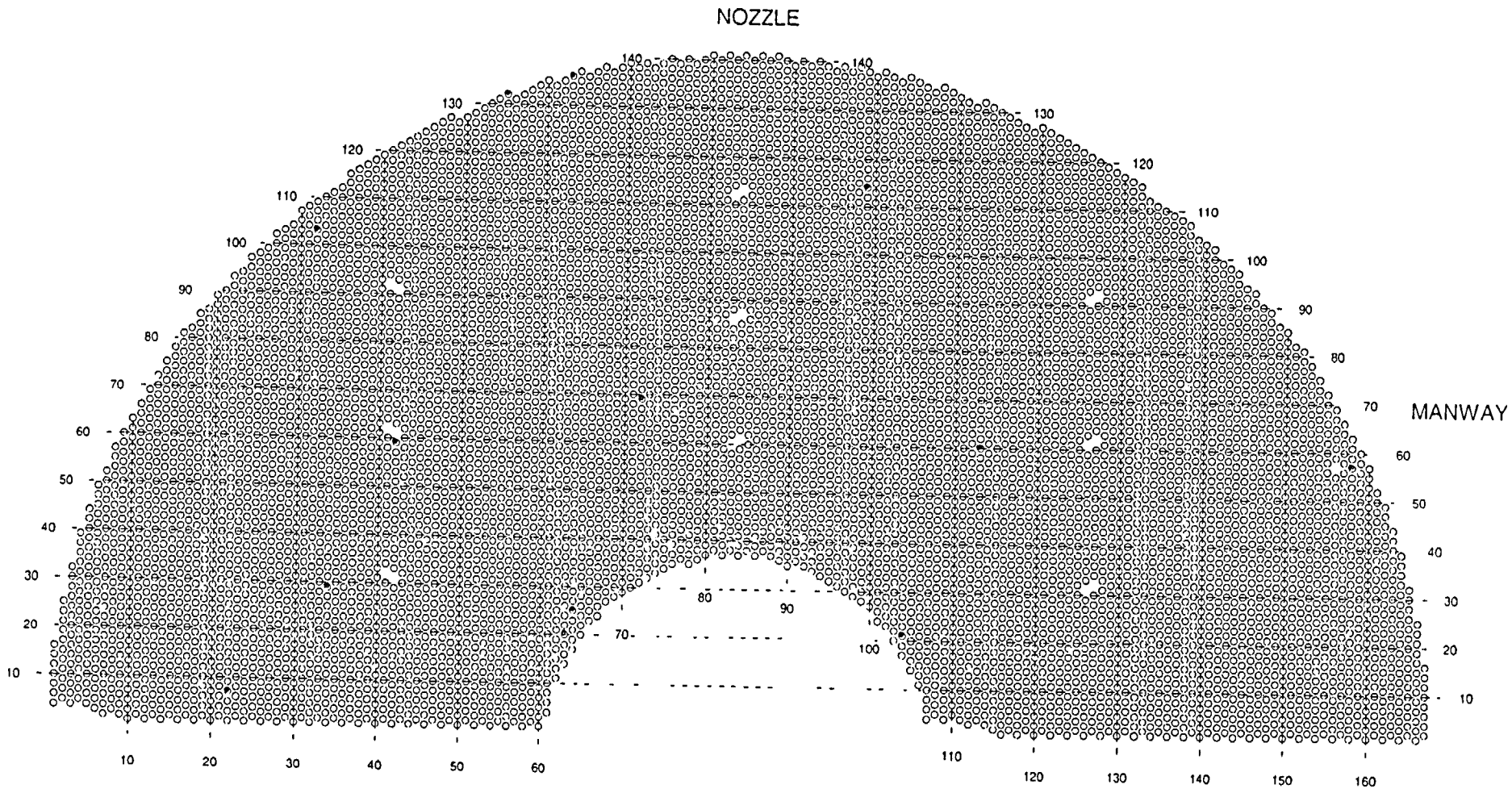
FANP - FDMS map module rev 1.8

S/G 1
HOT
PRIMARY FACE

TOTAL TUBES: 8522
SELECTED TUBES: 13
OUT OF SERVICE (#): 0

SCALE: 0.062214 X
Thu Mar 07 10:36:18 2002

This drawing is the property of Framatome ANP, Inc and is loaned upon condition that it is not to be reproduced or copied in whole or in part or used for furnishing information to others or for any other purpose detrimental to the interests of Framatome ANP and will be returned upon request



Attachment 5
Tubes with DNT Indications

Listing of all Tubes with DNT Indications

DNT Indications

QUERY: DNT

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION		EXT	EXT	UTIL 1	UTIL 2	CAL #	LEG	PROBE
16	167	3.29	178	P 1	DNT		07H	+0.60	TEC	TEH			89	HOT	610UC
20	61	4.25	182	P 1	DNT		F07	-0.30	TEC	TEH			31	HOT	610UL
25	56	3.62	185	P 1	DNT		F05	+0.79	TEC	TEH			31	HOT	610UL
37	108	3 88	183	P 1	DNT		F06	+0.44	TEC	TEH			42	HOT	610UL
48	129	3.33	186	P 1	DNT		F05	+0.25	TEC	TEH			73	HOT	610UL
49	106	3.53	183	P 1	DNT		07C	+1.69	TEC	TEH			42	HOT	610UL
87	52	3.77	184	P 1	DNT		07C	+1.43	TEC	TEH			15	HOT	610UL
108	51	3.70	185	P 1	DNT		07C	+1.55	TEC	TEH			14	HOT	610UL
113	70	3.62	184	P 1	DNT		07C	+1.20	TEC	TEH			20	HOT	610UL

Total Tubes : 9
Total Records: 9

Millstone Unit 2
RFO14

DNT Indictations

GROUP	TUBES
DNT	9

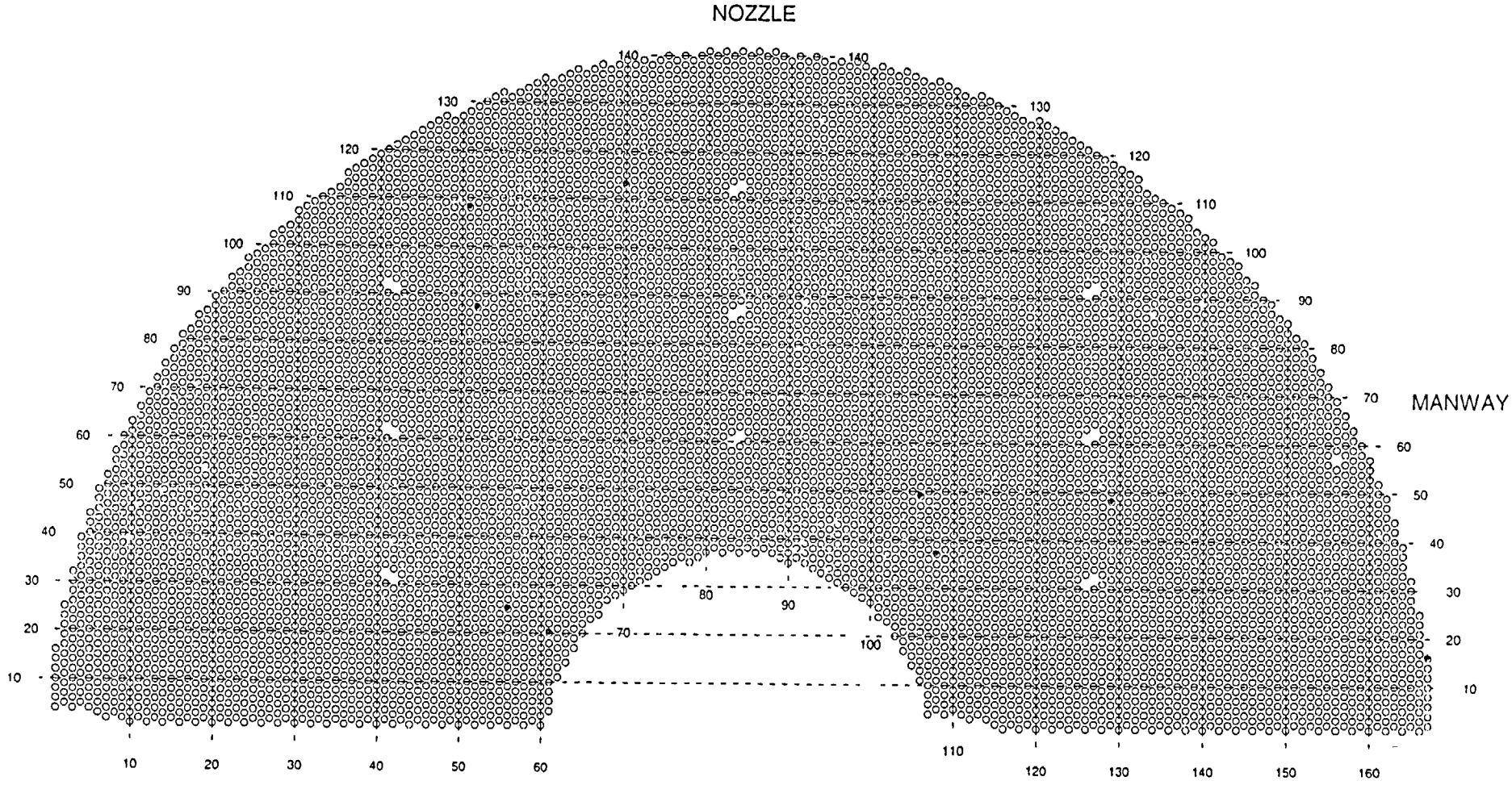
FANP - FDMS map module rev 1.6

S/G 1
HOT
PRIMARY FACE

TOTAL TUBES: 8522
SELECTED TUBES: 9
OUT OF SERVICE (#): 0

SCALE: 0.062214 X
Thu Mar 07 10:41:16 2002

This drawing is the property of Framatome ANP Inc and is loaned upon condition that it is not to be reproduced or copied in whole or in part, or used for furnishing information to others or for any other purpose detrimental to the interests of Framatome ANP and will be returned upon request



Attachment 6
Tubes with DSS Indications

Listing of all Tubes with DSS Indications

DSS Indications

QUERY: DSS

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION		EXT	EXT	UTIL 1	UTIL 2	CAL #	LEG	PROBE
127	80	0.51	27	P 1	DSS		07H	+1.60	TEC	TEH	HR		22	HOT	610UL

Total Tubes : 1
Total Records: 1

Millstone Unit 2
RFO14

DSS Indications

FANP FDMS map module rev 1.6

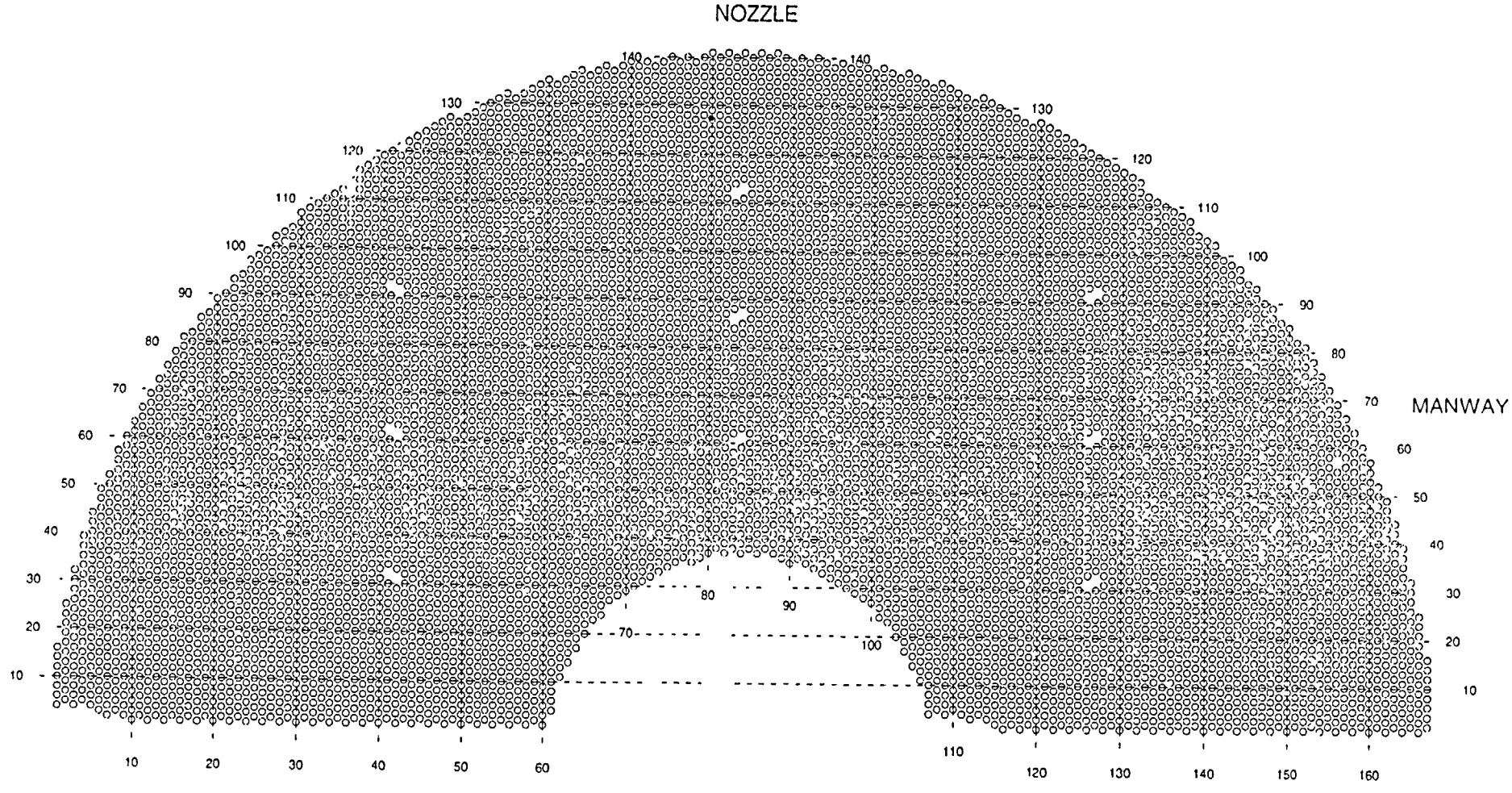
GROUP	TUBES
DSS	1

S/G 1
HOT
PRIMARY FACE

TOTAL TUBES: 8522
SELECTED TUBES: 1
OUT OF SERVICE (#): 0

SCALE: 0.062214 X
Thu Mar 07 10:48:00 2002

This drawing is the property of Framatome ANP, Inc and is loaned upon condition that it is not to be reproduced or copied in whole or in part or used for furnishing information to others or for any other purpose detrimental to the interests of Framatome ANP and will be returned upon request



Attachment 7
Tubes with DTS Indications

Listing of all Tubes with DTS Indications

DTS Indications

QUERY: DTS

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION		EXT	EXT	UTIL 1	UTIL 2	CAL #	LEG	PROBE
2	7	35.84	188	P 1	DTS		TSH	+0.03	TEC	TEH			37	HOT	610UC

Total Tubes : 1
Total Records: 1

Millstone Unit 2
RFO14

DTS Indications

FANP FDMS map module rev 1.6

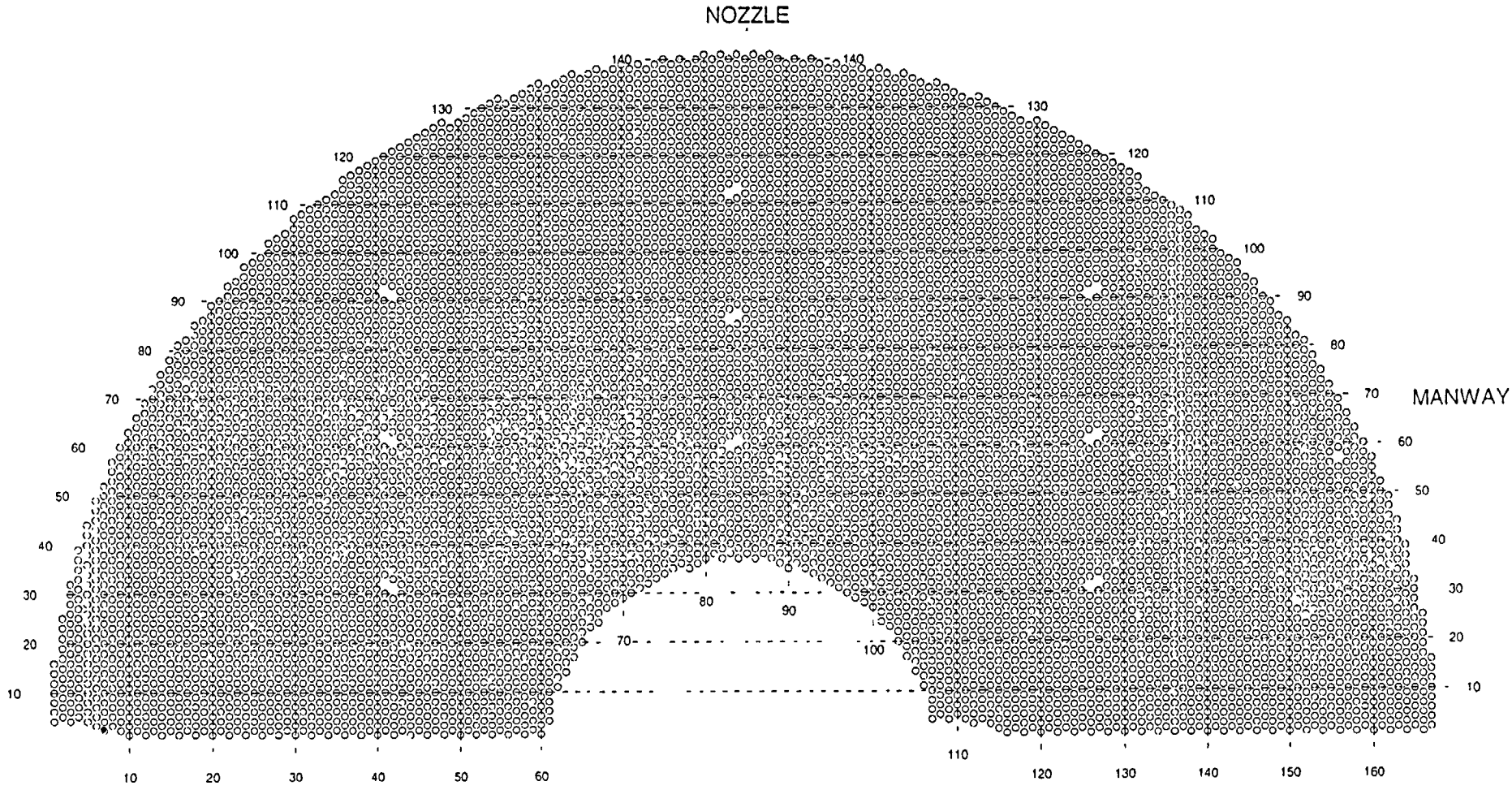
GROUP	TUBES
DTS	1

S/G 1
HOT
PRIMARY FACE

TOTAL TUBES: 8522
SELECTED TUBES: 1
OUT OF SERVICE (#): 0

SCALE: 0.062214 X
Thu Mar 07 11:07:03 2002

This drawing is the property of Framatome ANP, Inc and is loaned upon condition that it is not to be reproduced or copied in whole or in part or used for furnishing information to others or for any other purpose detrimental to the interests of Framatome ANP and will be returned upon request



Attachment 8
Tubes with NQH Indications

Listing of all Tubes with NQH Indications

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LCCATION		EXT	EXT	UTIL 1	UTIL 2	CAL #	LEG	PROBE
3	34	0.38	117	3	NQH		TSH	+13.24	TEC	TEH			37	HOT	610UC
7	48	0.23	87	3	NQH		03C	+37.42	TEC	TEH			33	HOT	610UL
11	46	0.38	89	3	NQH		04C	+21.13	TEC	TEH			32	HOT	610UL
12	109	0.32	104	3	NQH		01H	+18.50	TEC	TEH	HR		57	HOT	610UL
15	154	0.26	95	3	NQH		04H	+25.28	TEC	TEH			87	HOT	610UC
16	149	0.34	86	3	NQH		F07	+7.00	TEC	TEH			87	HOT	610UC
20	135	0.39	124	3	NQH		01C	+23.68	TEC	TEH			87	HOT	610UC
25	160	0.54	115	3	NQH		F06	+5.44	TEC	TEH			89	HOT	610UC
28	115	0.43	116	3	NQH		04C	+12.57	TEC	TEH			44	HOT	610UL
30	37	0.33	122	3	NQH		07H	+7.01	TEC	TEH			23	HOT	610UL
32	163	0.37	98	3	NQH		01C	+25.26	TEC	TEH			81	HOT	610UL
36	161	0.32	110	3	NQH		02H	+9.40	TEC	TEH			81	HOT	610UL
37	8	0.64	113	3	NQH		05C	+35.68	TEC	TEH			25	HOT	610UL
39	138	0.45	114	3	NQH		03C	+5.47	TEC	TEH			76	HOT	610UL
		0.27	110	3	NQH		04H	+14.73	TEC	TEH			76	HOT	610UL
39	146	0.47	109	3	NQH		F07	+3.23	TEC	TEH			76	HOT	610UL
40	95	0.35	70	3	NQH		F05	+5.97	TEC	TEH			41	HOT	610UL
40	163	0.24	104	3	NQH		05H	+24.73	TEC	TEH			81	HOT	610UL
		0.31	115	3	NQH		05H	+23.59	TEC	TEH			81	HOT	610UL
42	151	0.41	112	3	NQH		03H	+19.33	TEC	TEH			76	HOT	610UL
45	162	0.43	112	3	NQH		01C	+4.54	TEC	TEH			81	HOT	610UL
46	33	0.24	92	3	NQH		F04	+6.53	TEC	TEH			23	HOT	610UL
50	33	0.28	109	3	NQH		04H	+20.64	TEC	TEH			23	HOT	610UL
51	16	0.28	94	3	NQH		F05	+5.36	TEC	TEH			13	HOT	610UL
53	68	0.22	116	3	NQH		06C	+26.49	TEC	TEH			62	HOT	610UL
53	72	0.32	117	3	NQH		03C	+23.97	TEC	TEH			62	HOT	610UL
53	144	0.27	107	3	NQH		04H	+21.96	TEC	TEH			71	HOT	610UL
55	80	0.42	104	3	NQH		05H	+32.15	TEC	TEH			65	HOT	610UL
57	68	0.36	115	3	NQH		06C	+25.98	TEC	TEH			62	HOT	610UL
61	138	0.21	84	3	NQH		02H	+24.95	TEC	TEH			71	HOT	610UL
62	73	0.29	123	3	NQH		05C	+37.35	TEC	TEH			62	HOT	610UL
63	110	0.37	113	3	NQH		06H	+25.83	TEC	TEH	HR		43	HOT	610UL
64	37	0.40	111	3	NQH		05H	+31.81	TEC	TEH			8	HOT	610UL
64	115	0.33	82	3	NQH		03H	+10.16	TEC	TEH			44	HOT	610UL
64	135	0.42	93	3	NQH		F05	+3.55	TEC	TEH			72	HOT	610UL
66	13	0.37	100	3	NQH		02C	+24.17	TEC	TEH			13	HOT	610UL
66	101	0.36	101	3	NQH		05C	+36.01	TEC	TEH			43	HOT	610UL
70	47	0.43	92	3	NQH		F07	+0.97	TEC	TEH	HR		9	HOT	610UL
71	110	0.37	117	3	NQH		06C	+2.08	TEC	TEH	HR		43	HOT	610UL
71	152	0.36	100	3	NQH		04C	+12.21	TEC	TEH			74	HOT	610UL
72	75	0.31	113	3	NQH		04H	+12.81	TEC	TEH			62	HOT	610UL
73	48	0.63	104	3	NQH		F10	-0.07	TEC	TEH	HR		8	HOT	610UL
76	69	0.42	90	3	NQH		F06	+4.84	TEC	TEH			63	HOT	610UL
76	97	0.51	80	3	NQH		F09	+9.07	TEC	TEH			43	HOT	610UL
77	72	0.42	118	3	NQH		06H	+10.22	TEC	TEH			62	HOT	610UL
82	85	0.27	101	3	NQH		05C	+37.97	TEC	TEH			46	HOT	610UL
83	76	0.51	71	3	NQH		F06	+4.96	TEC	TEH			21	HOT	610UL
90	47	0.40	120	3	NQH		06H	+37.81	TEC	TEH			5	HOT	610UL
90	91	0.46	70	3	NQH		TSH	+19.01	TEC	TEH			46	HOT	610UL
93	48	0.36	61	3	NQH		02H	+5.95	TEC	TEH			5	HOT	610UL
94	125	0.74	103	3	NQH		F04	+10.87	TEC	TEH			54	HOT	610UL
95	110	0.69	93	3	NQH		F06	-0.46	TEC	TEH	HR		52	HOT	610UL
97	132	0.29	95	3	NQH		04H	+29.03	TEC	TEH			66	HOT	610UL
97	138	0.30	112	3	NQH		02C	+8.22	TEC	TEH			66	HOT	610UL
98	43	0.30	75	3	NQH		F02	+7.92	TEC	TEH			7	HOT	610UL
98	55	0.31	99	3	NQH		01C	+3.24	TEC	TEH			18	HOT	610UL
99	120	0.26	108	3	NQH		06C	+11.77	TEC	TEH			54	HOT	610UL
101	46	0.25	77	3	NQH		03C	+23.21	TEC	TEH			7	HOT	610UL
101	84	0.76	99	3	NQH		F03	+14.94	TEC	TEH			46	HOT	610UL
103	52	0.36	93	3	NQH		F05	+13.22	TEC	TEH			15	HOT	610UL
105	54	0.85	80	3	NQH		F06	+14.69	TEC	TEH			14	HOT	610UL
105	66	0.57	67	3	NQH		TSC	+4.35	TEC	TEH			20	HOT	610UL
105	84	0.34	96	3	NQH		F03	+2.52	TEC	TEH			46	HOT	610UL
107	44	0.52	109	3	NQH		05H	+23.06	TEC	TEH			6	HOT	610UL
108	129	0.66	80	3	NQH		F02	+2.23	TEC	TEH			66	HOT	610UL
112	37	0.51	103	3	NQH		02H	+1.13	TEC	TEH			7	HOT	610UL
		0.28	105	3	NQH		04H	+18.55	TEC	TEH			7	HOT	610UL
112	51	0.32	107	3	NQH		02C	+36.66	TEC	TEH			14	HOT	610UL
113	42	0.43	136	3	NQH		04H	+4.96	TEC	TEH			6	HOT	610UL
116	75	0.27	80	3	NQH		06C	+13.58	TEC	TEH			21	HOT	610UL
117	104	0.24	82	3	NQH		F08	+12.78	TEC	TEH			51	HOT	610UL
118	57	0.38	112	3	NQH		04H	+13.73	TEC	TEH			18	HOT	610UL
118	65	0.34	68	3	NQH		F04	+14.97	TEC	TEH			20	HOT	610UL
119	108	0.58	69	3	NQH		F08	+15.35	TEC	TEH			50	HOT	610UL
119	116	0.44	115	3	NQH		07H	+13.03	TEC	TEH			54	HOT	610UL

Listing of all Tubes with NQH Indications

NQH Indications

QUERY: NQH.qry

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION		EXT	EXT	UTIL 1	UTIL 2	CAL #	LEG	PROBE
128	51	0.26	84	3	NQH		03H	+11.05	TEC	TEH			14	HOT	610UL
134	91	0.21	121	3	NQH		03C	+32.16	TEC	TEH			4	HOT	610UL

Total Tubes : 74
Total Records: 77

Millstone Unit 2
RFO14

NQH Indications

GROUP	TUBES
NQH	74

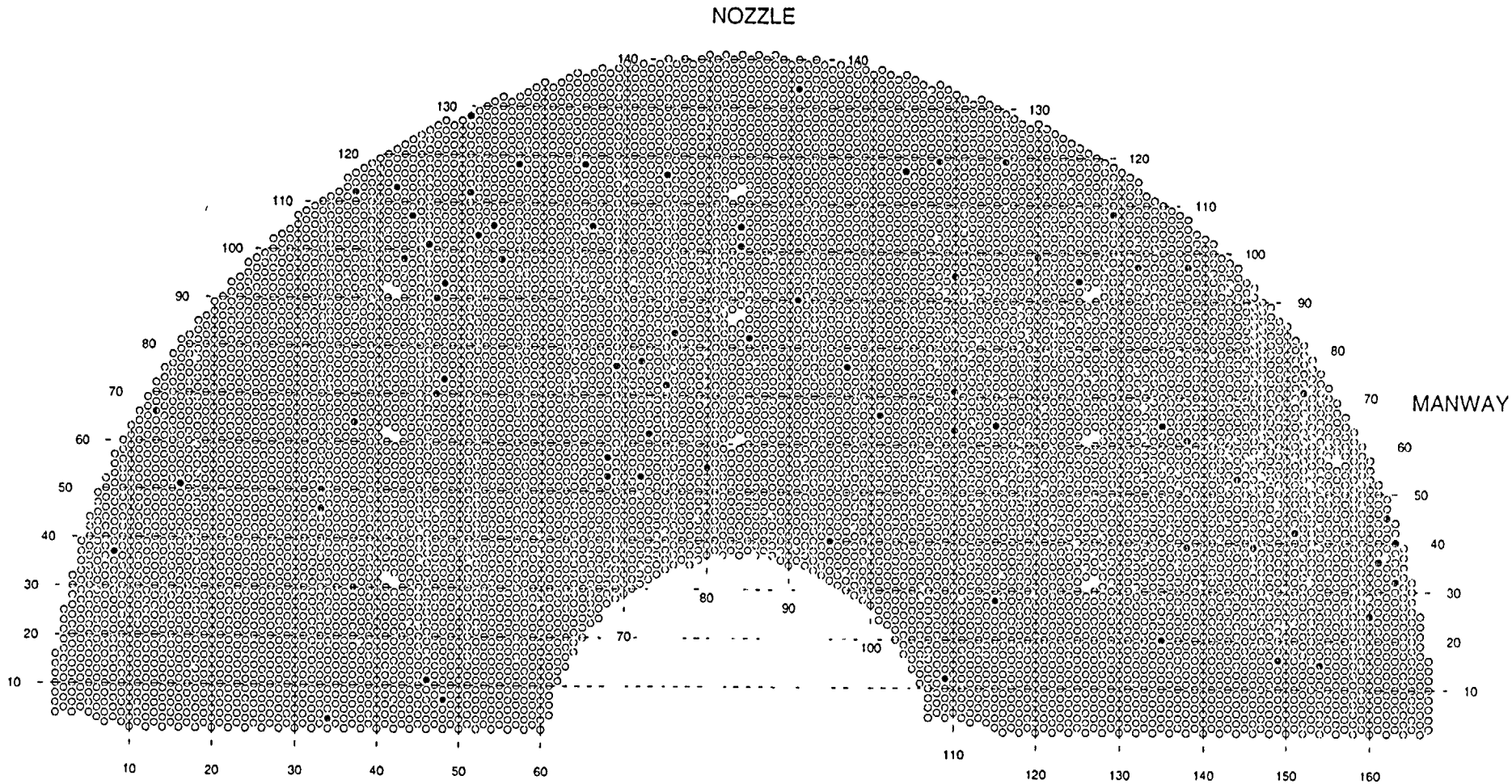
FANP - FDMS map module rev 1.6

S/G 1
HOT
PRIMARY FACE

TOTAL TUBES: 8522
SELECTED TUBES: 74
OUT OF SERVICE (#): 0

SCALE: 0.062214 X
Thu Mar 07 11:52:26 2002

This drawing is the property of Framatome ANP, Inc. and is loaned upon condition that it is not to be reproduced or copied in whole or in part, or used for furnishing information to others, or for any other purpose detrimental to the interests of Framatome ANP and will be returned upon request



Attachment 9
Tubes with NQS Indications

Listing of all Tubes with NQS Indications

NQS Indications

QUERY: NQS

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION		EXT	EXT	UTIL 1	UTIL 2	CAL #	LEG	PROBE
56	107	0.39	118	3	NQS		05H	+35.60	TEC	TEH	HR		42	HOT	610UL
64	143	0.55	79	3	NQS		F09	+4.49	TEC	TEH	HR		72	HOT	610UL
92	145	0.48	99	3	NQS		TSC	+1.34	TEC	TEH			67	HOT	610UL
113	56	0.39	103	3	NQS		07H	+12.66	TEC	TEH	HR		18	HOT	610UL

Total Tubes : 4
Total Records: 4

Millstone Unit 2
RFO14

NQS Indications

GROUP	TUBES
NQS	4

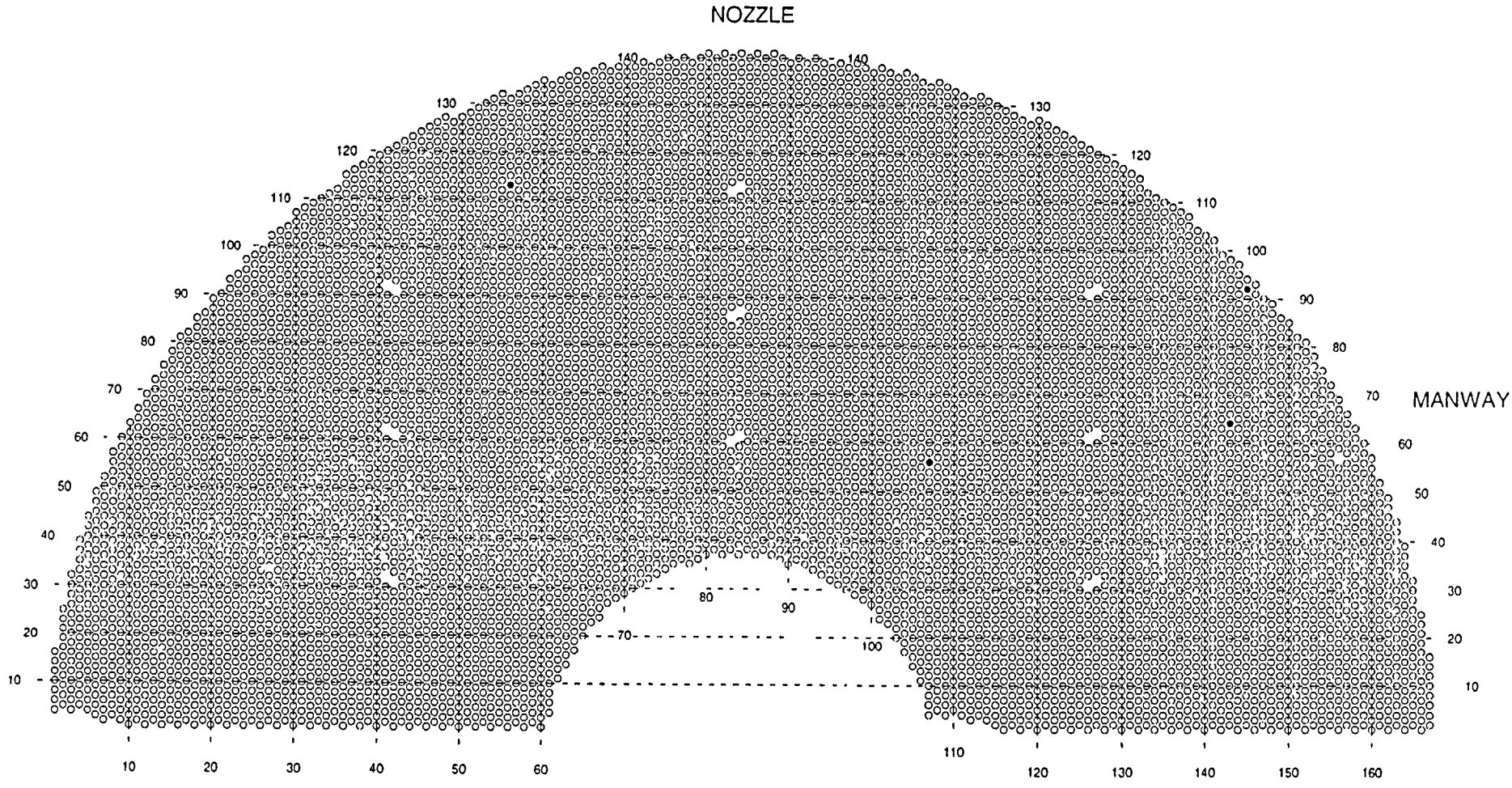
FANP - FDMS map module rev 1.6

S/G 1
HOT
PRIMARY FACE

TOTAL TUBES: 8522
SELECTED TUBES: 4
OUT OF SERVICE (#): 0

SCALE: 0.062214 X
Thu Mar 07 11:53:12 2002

This drawing is the property of Framatome ANP, Inc and is loaned upon condition that it is not to be reproduced or copied in whole or in part or used for furnishing information to others or for any other purpose detrimental to the interests of Framatome ANP and will be returned upon request



Attachment 10
Tubes with PLP Indications

Listing of all Tubes with PLP Indications

PLP Indications

QUERY: PLP

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION		EXT	EXT	UTIL 1	UTIL 2	CAL #	LEG	PROBE
23	102	1.90	48	8	PLP	TSC		+1.05	TEC	TEH			58	HOT	610UL
		0.58	85	11	PLP	TSC		+0.84	TEC	TSC			1	COLD	610PP
24	101	0.47	82	11	PLP	TSC		+0.22	TEC	TSC			1	COLD	610PP
24	103	1.28	36	8	PLP	TSC		+1.21	TEC	TEH			57	HOT	610UL
		0.58	82	11	PLP	TSC		+0.99	TEC	TSC			1	COLD	610PP
25	102	1.58	50	8	PLP	TSC		+0.94	TEC	TEH			57	HOT	610UL
		0.60	84	11	PLP	TSC		+0.57	TEC	TSC			1	COLD	610PP
94	33	0.35	85	11	PLP	TSH		+1.88	TSH	TSH			59	HOT	610PP
		0.53	212	8	PLP	TSH		+2.19	TEC	TEH	HR		7	HOT	610UL
		0.44	208	8	PLP	TSH		+2.04	TEC	TEH	IDOK		25	HOT	610UL
96	33	0.41	84	11	PLP	TSH		+1.96	TSH	TSH			59	HOT	610PP
		0.48	209	8	PLP	TSH		+2.02	TEC	TEH			6	HOT	610UL
		0.53	209	8	PLP	TSH		+2.05	TEC	TEH	IDOK		25	HOT	610UL

Total Tubes : 6
Total Records: 13

Millstone Unit 2
RFO14

PLP Indications

FANP - FDMS map module rev 1.6

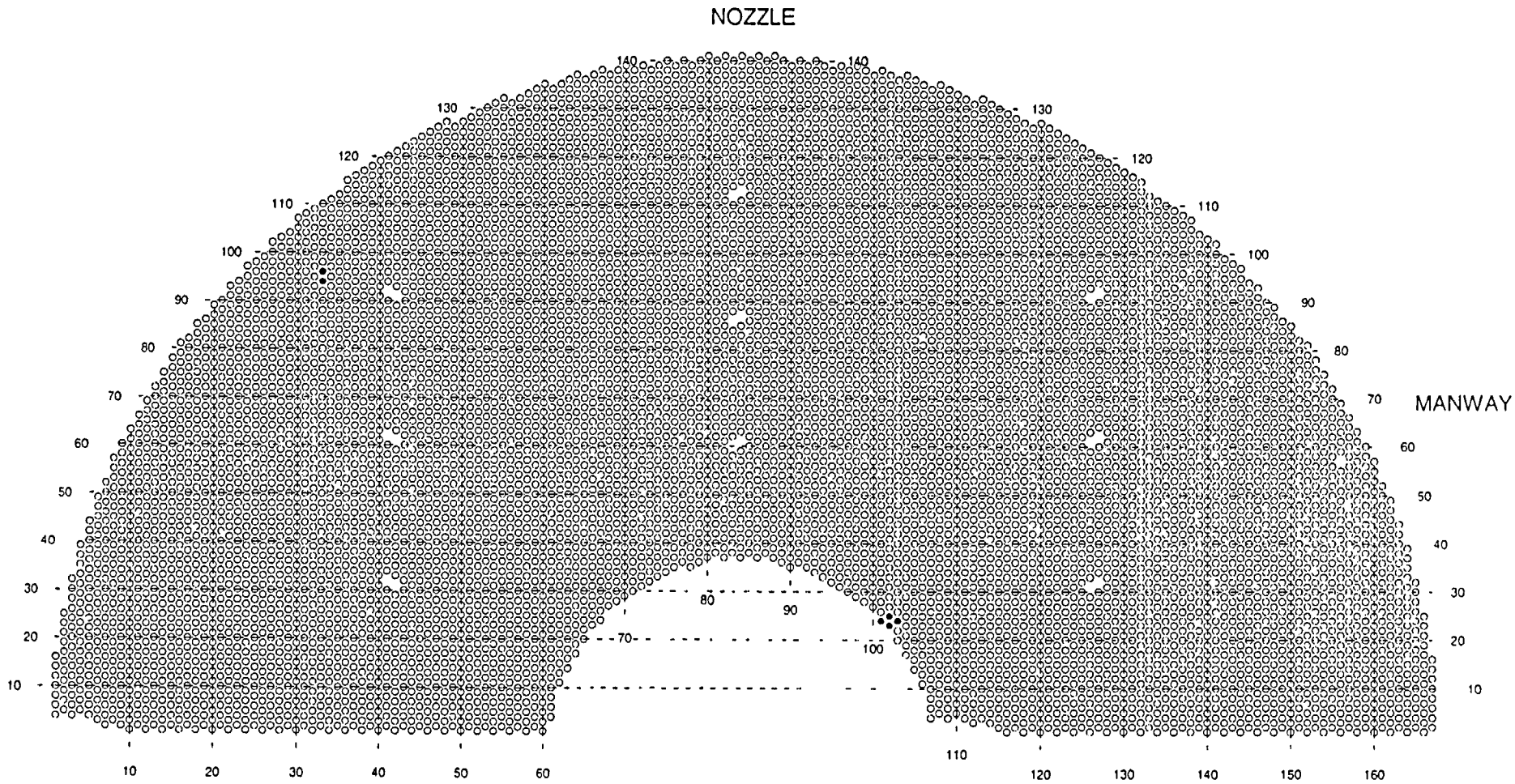
GROUP	TUBES
PLP	6

S/G 1
HOT
PRIMARY FACE

TOTAL TUBES: 8522
SELECTED TUBES: 6
OUT OF SERVICE (#): 0

SCALE: 0.062214 X
Thu Mar 07 11:53:54 2002

This drawing is the property of Framatome ANP Inc and is loaned upon condition that it is not to be reproduced or copied, in whole or in part, or used for furnishing information to others or for any other purpose detrimental to the interests of Framatome ANP and will be returned upon request



Attachment 11
Tubes with PTE Indications

Listing of all Tubes with PTE Indications

PTE Indications

QUERY: PTE

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION		EXT	EXT	UTIL 1	UTIL 2	CAL #	LEG	PROBE
69	14	29.17	189	P 1	PTE		TEH	+11.65	TEC	TEH			12	HOT	610UL

Total Tubes : 1
Total Records: 1

Millstone Unit 2
RFO14

PTE Indications

GROUP PTE

TUBES 1

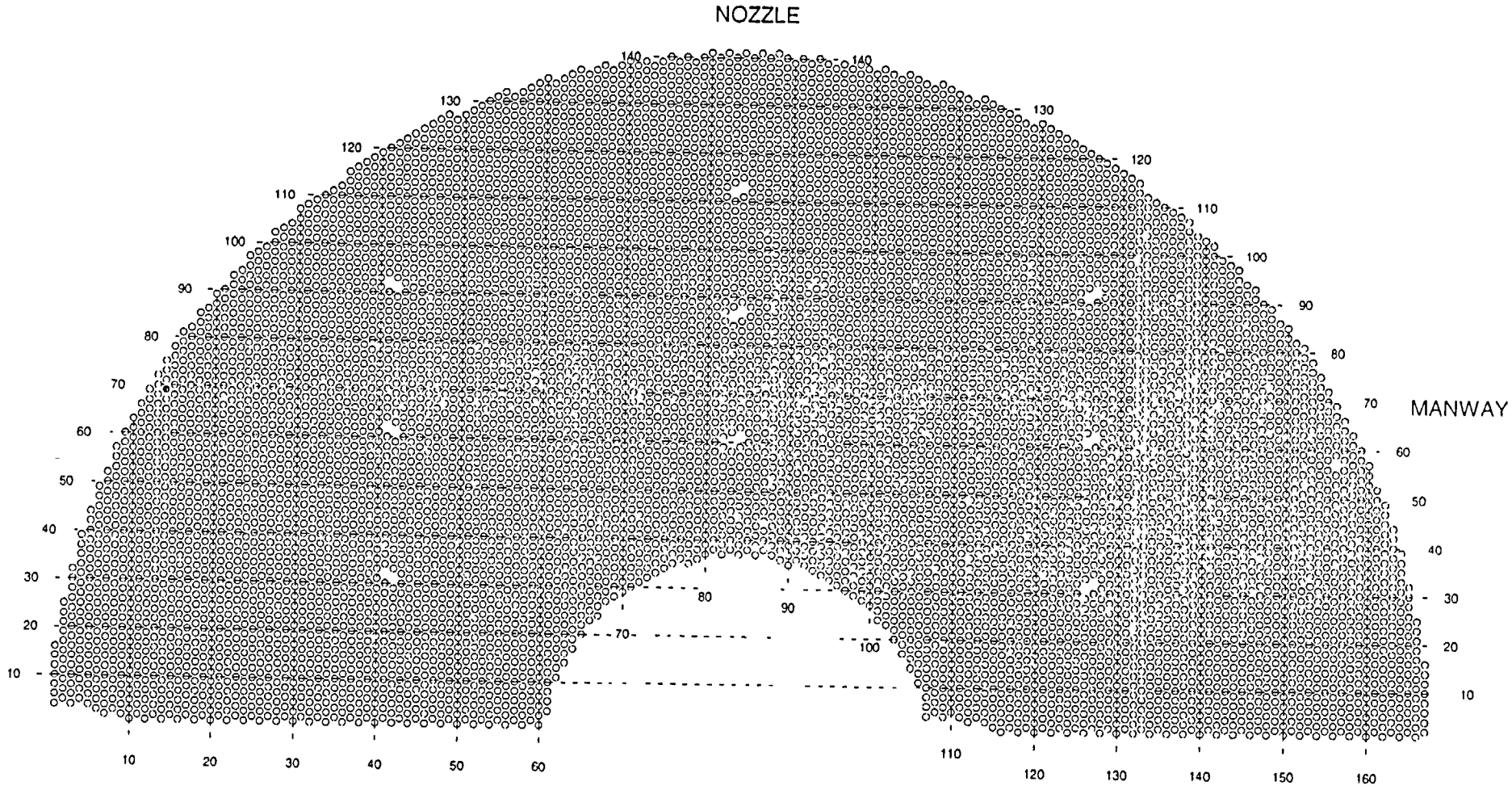
FANP - FDMS map module rev 1.6

S/G 1
HOT
PRIMARY FACE

TOTAL TUBES: 8522
SELECTED TUBES: 1
OUT OF SERVICE (#): 0

SCALE: 0.062214 X
Thu Mar 07 12:15:56 2002

This drawing is the property of Framatome ANP, Inc and is loaned upon condition that it is not to be reproduced or copied in whole or in part, or used for furnishing information to others or for any other purpose detrimental to the interests of Framatome ANP and will be returned upon request



Attachment 12
Tubes with TWD Indications

Listing of all Tubes with TWD Indications

TWD Indications

QUERY: TWD

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION		EXT	EXT	UTIL 1	UTIL 2	CAL #	LEG	PROBE
40	155	0.24	41	P 2	TWD	9	F06	-1.74	TEC	TEH			93	HOT	610UC
140	93	0.31	87	P 2	TWD	9	F08	-0.55	TEC	TEH			56	HOT	610UL

Total Tubes : 2
Total Records: 2

Millstone Unit 2
RFO14

TWD Indications

GROUP	TUBES
TWD	2

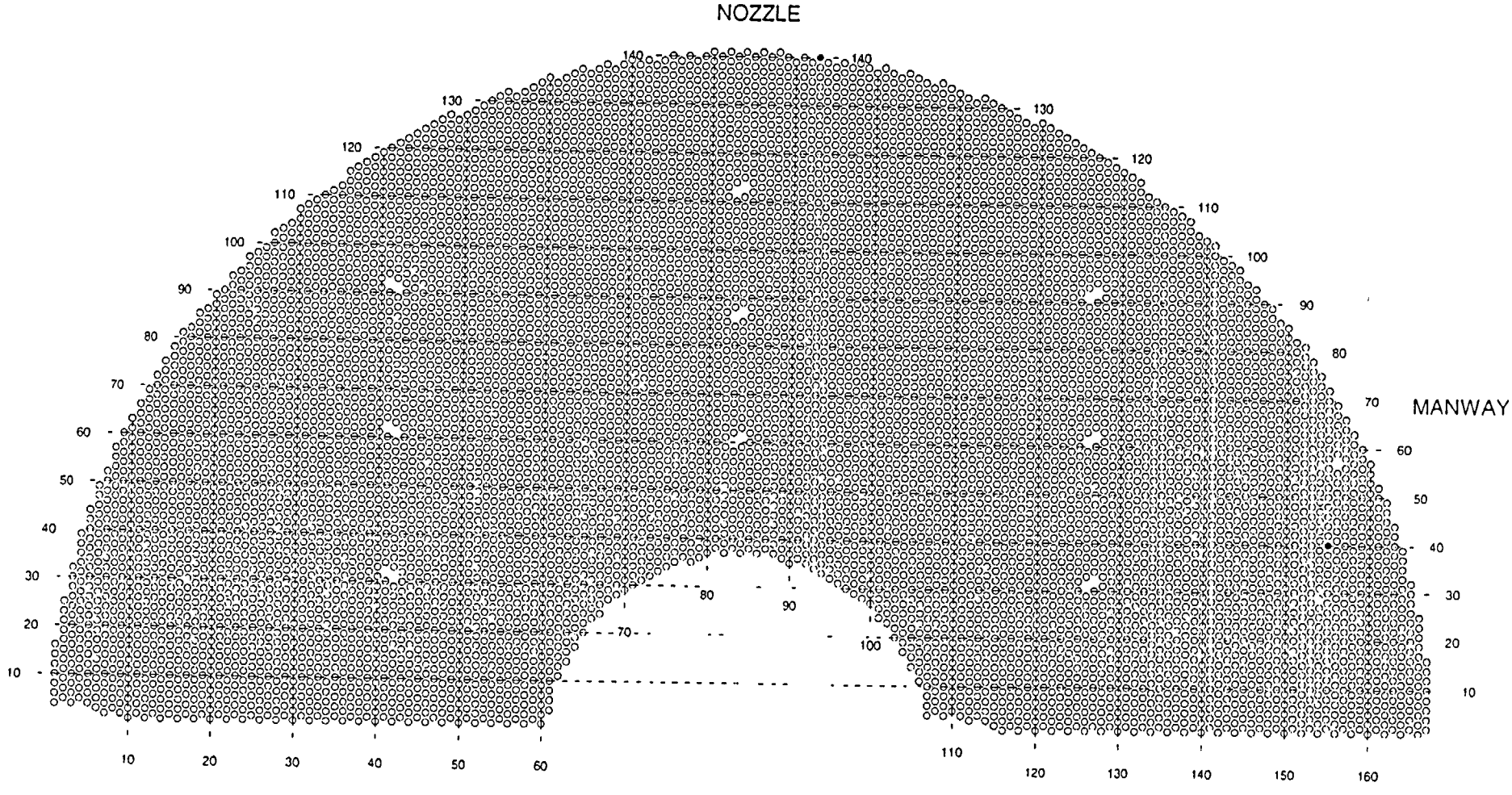
FANP - FDMS map module rev 1.6

S/G 1
HOT
PRIMARY FACE

TOTAL TUBES: 8522
SELECTED TUBES: 2
OUT OF SERVICE (#): 0

SCALE: 0.062214 X
Thu Mar 07 12:17:07 2002

This drawing is the property of Framatome ANP, Inc and is loaned upon condition that it is not to be reproduced or copied in whole or in part, or used for furnishing information to others or for any other purpose detrimental to the interests of Framatome ANP and will be returned upon request



Attachment 13
Tubes with VOL Indications

Listing of all Tubes with VOL Indications

VOL Indications

QUERY: VOL

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION		EXT	EXT	UTIL 1	UTIL 2	CAL #	LEG	PROBE
2	7	0.85	123	2	VOL		TSH	+0.03	TSH	TSH			59	HOT	610PP
56	107	0.89	39	2	VOL		05H	+35.78	05H	06H			59	HOT	610PP
63	110	0.36	60	2	VOL		06H	+26.11	06H	07H			59	HOT	610PP
64	37	0.69	22	2	VOL		05H	+32.24	05H	06H			59	HOT	610PP
90	91	0.65	99	2	VOL		TSH	+18.99	TSH	01H			94	HOT	610PP
92	145	0.62	91	2	VOL		TSC	+1.23	TEC	TSC			2	COLD	610PP
113	56	0.43	78	2	VOL		07H	+12.71	07H	F01			59	HOT	610PP
140	93	0.58	95	1	VOL		F08	-0.62	06C	F08			3	COLD	560PP

Total Tubes : 8
Total Records: 8

Millstone Unit 2
RFO14

VOL Indications

GROUP VOL

TUBES 8

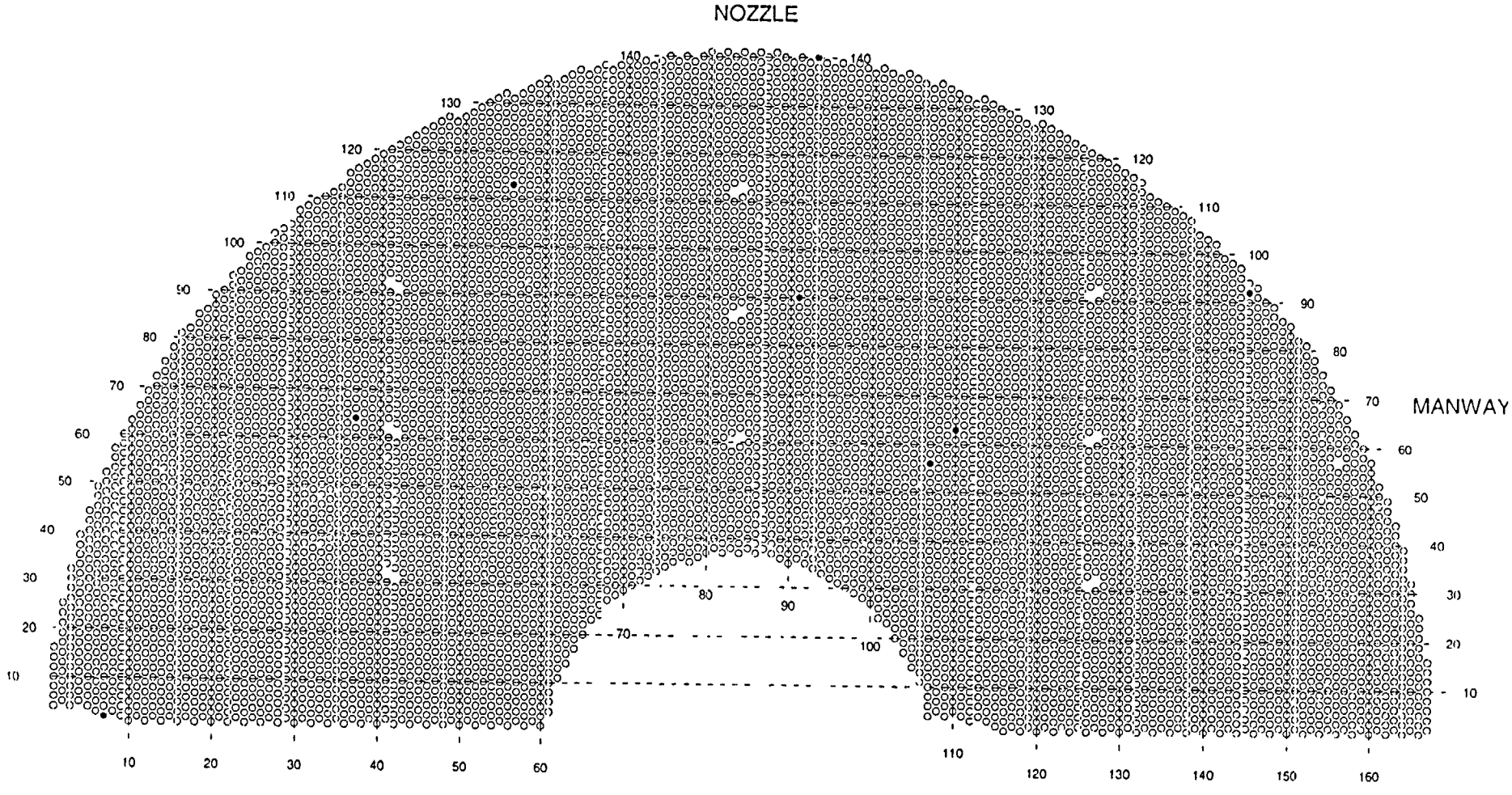
FANP FDMS map module rev 1.6

S/G 1
HOT
PRIMARY FACE

TOTAL TUBES: 8522
SELECTED TUBES: 8
OUT OF SERVICE (#): 0

SCALE: 0.062214 X
Thu Mar 07 12:22:29 2002

This drawing is the property of Framatome ANP, Inc and is loaned upon condition that it is not to be reproduced or copied in whole or in part or used for furnishing information to others or for any other purpose detrimental to the interests of Framatome ANP and will be returned upon request



Millstone Unit 2
RFO14

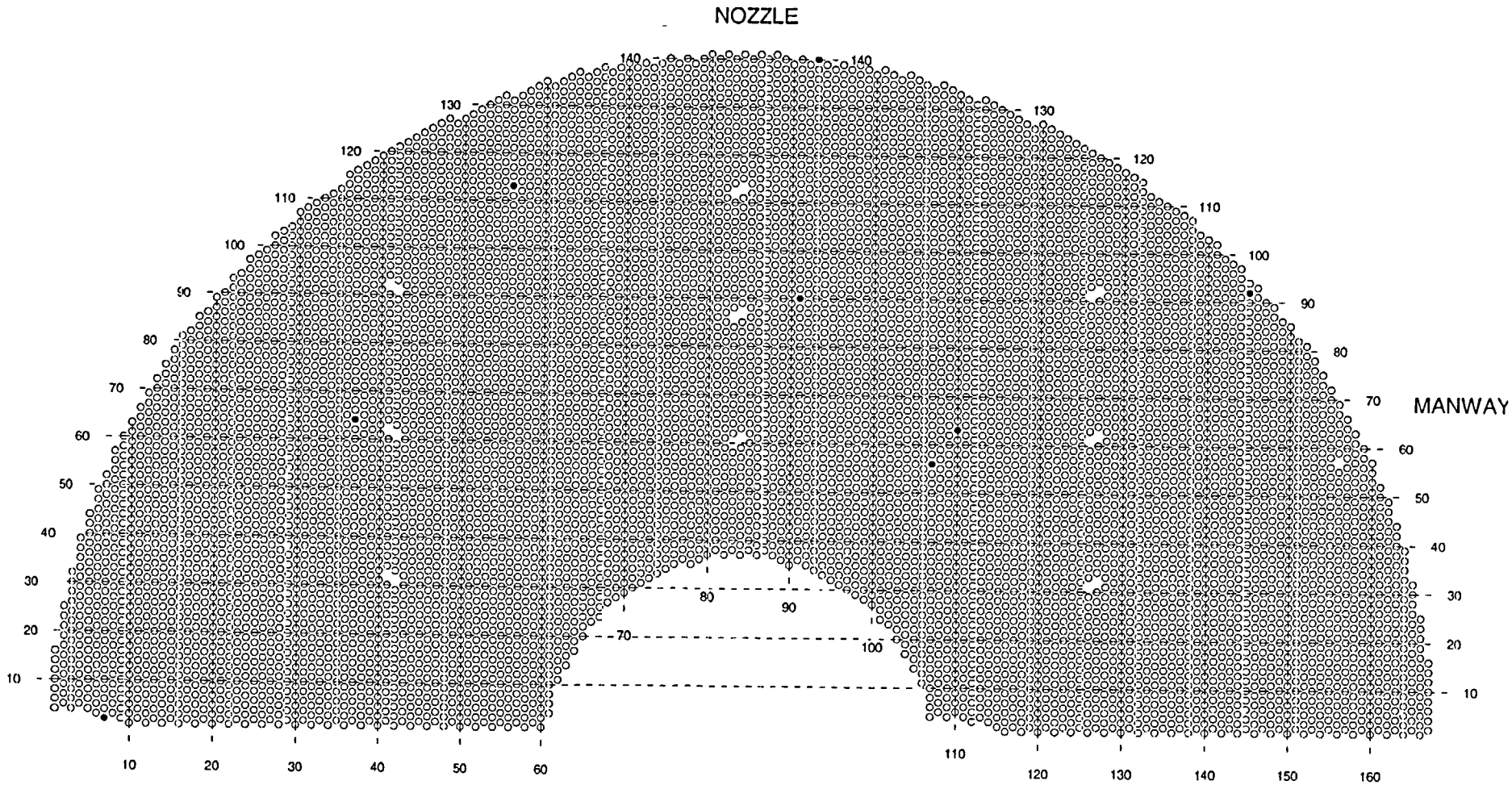
VOL Indications

GROUP	TUBES
VOL	8

FANP - FDMS map module rev 1.6

S/G 1
HOT
PRIMARY FACE

TOTAL TUBES: 8522
SELECTED TUBES: 8
OUT OF SERVICE (#): 0

SCALE: 0.062214 X
Thu Mar 07 12:22:29 2002

This drawing is the property of Framatome ANP, Inc. and is loaned upon condition that it is not to be reproduced or copied, in whole or in part, or used for furnishing information to others or for any other purpose detrimental to the interests of Framatome ANP and will be returned upon request.