GE Nuclear Energy

General Electric Company
175 Curtner Avenue, San Jose, CA 95125

July 13, 1992

MFN No. 148-92
Docket No. STN 52-001
SLK-9284

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

Attention: Robert C. Pierson, Director
Standardization and Non-Power Reactor Project Directorate

Subject: **Submittal of Amendment 21, 11x17 Foldout Drawings, to GE's ABWR SSAR**

Reference: Submittal of Amendment 21 to GE's ABWR SSAR, MFN No. 141-92

Enclosed are thirty-four (34) copies of selected sections of the 11x17 drawings identified for later delivery in the above reference. The following chapters are included in the submittal: Chapter 1, *Introduction and General Description of Plant*, Chapter 5, *Reactor Coolant System and Connected Systems*, Chapter 8, *Electric Power*, Chapter 9, *Auxiliary Systems*, Chapter 12, *Radiation Protection*, of the Standard Safety Analysis Report (SSAR) for the Advanced Boiling Water Reactor (ABWR).

Please note that all or parts of the following sections contain information that is designated as General Electric Company proprietary information: 7.3, 7.6, 7.7, 8.3, 9A.4, 11.2, 12.3. The proprietary information drawings are being submitted under separate cover.

Sincerely,

R. C. Mitchell

R. C. Mitchell, Acting Manager
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D050
1/1A

200001

ABWR SSAR

Amendment 21 - Page change instruction

The following pages (11X17 fold out drawings) have been changed, please make the specified changes in your SSAR. Pages are listed as page pairs (front & back). Bold page numbers represent a page that has been changed by Amendment 21.

REMOVE PAGE No.	ADD PAGE No.
Chapter 1	
1.2-18, 18a	1.2-**18, 18a**
1.2-19b, 20	1.2-19b, **20**
1.2-21, 22	1.2-**21, 22**
1.2-23, 24	1.2-**23, 24**
1.2-25, 26	1.2-**25, 26**
1.2-27, 28	1.2-**27, 28**
1.2-32, 33	1.2-**32, 33**
1.2-34, 35	1.2-**34, 35**
1.2-36, 37	1.2-**36, 37**
1.2-38	1.2-**38**
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1.2-48, 49	1.2-**48, 49**
1.2-50, 51	1.2-**50, 51**
1.2-52, 53	1.2-**52, 53**
Chapter 5	
5.1-5, 6	5.1-**5, 6**
5.2-46, 47	5.2-**46, 47**
5.2-50, 51	5.2-**50**, 51
5.4-61, 62	5.4-**61, 62**
Chapter 8	
Add	8.2-**7, 8**
Add	8.2-**9, 10**
Add	8.2-**11, 12**
Add	8.2-**13**
Chapter 9	
9.2-45, 45.1	9.2-**45, 45.1**
9.2-45.2	9.2-**45.2**

REMOVE PAGE No.	ADD PAGE No.
Chapter 12	
12.3-18, 19	12.3-**18, 19**
12.3-20, 21	12.3-**20, 20a**
Add	12.3-**20b, 21**
12.3-22, 23	12.2-**22, 23**
12.3-24, 25	12.3-**24, 25**
12.3-26, 27	12.3-**26, 27**
12.3-28, 29	12.3-**28, 29**
12.3-30, 31	12.3-**30, 30a**
Add	12.3-**30b, 31**
12.3-32, 33	12.3-**32, 33**
12.3-34, 35	12.3-**34, 35**
12.3-36, 37	12.3-**36, 37**
12.3-63, 64	12.3-**63, 64**
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12.3-67	12.3-**67**
12.3-69	12.3-**69**
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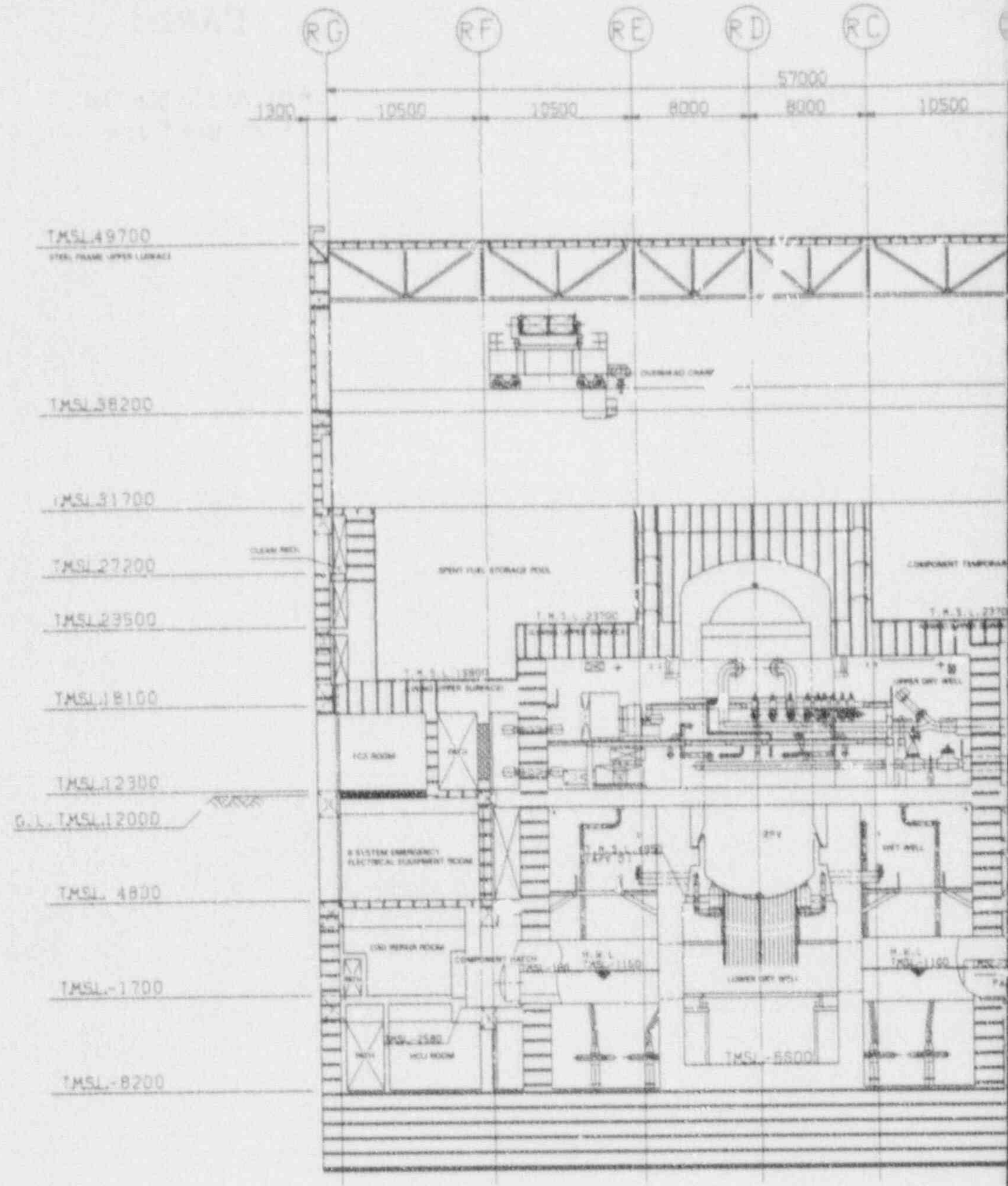
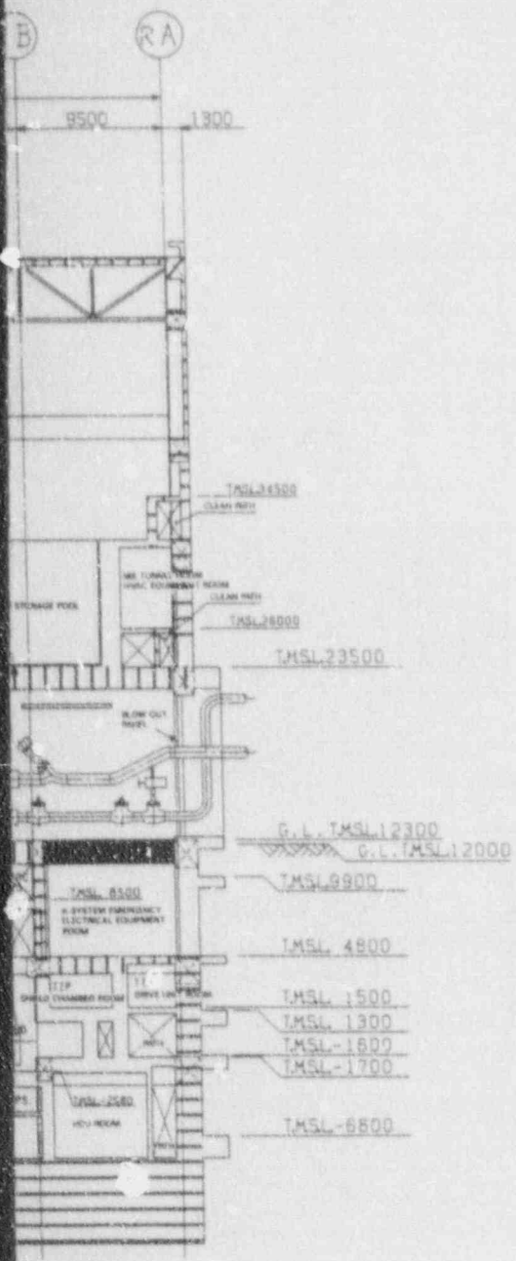
12.3-72, 73	12.3-**72, 73**
12.3-74, 75	12.3-**74, 75**
12.3-76, 77	12.3-**76, 77**
12.3-78	12.3-**78**
12.3-83, 84	12.3-**83**



RG
RF
RE
RD
RC
57000
1300
10500
10500
8000
8000
10500
TMSL.49700
TMSL.38200
TMSL.31700
TMSL.27200
TMSL.23500
TMSL.18100
TMSL.12300
G.L. TMSL.12000
TMSL. 4800
TMSL.-1700
TMSL.-8200
TMSL.-6600

A-< SECTION



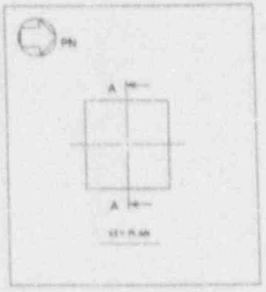


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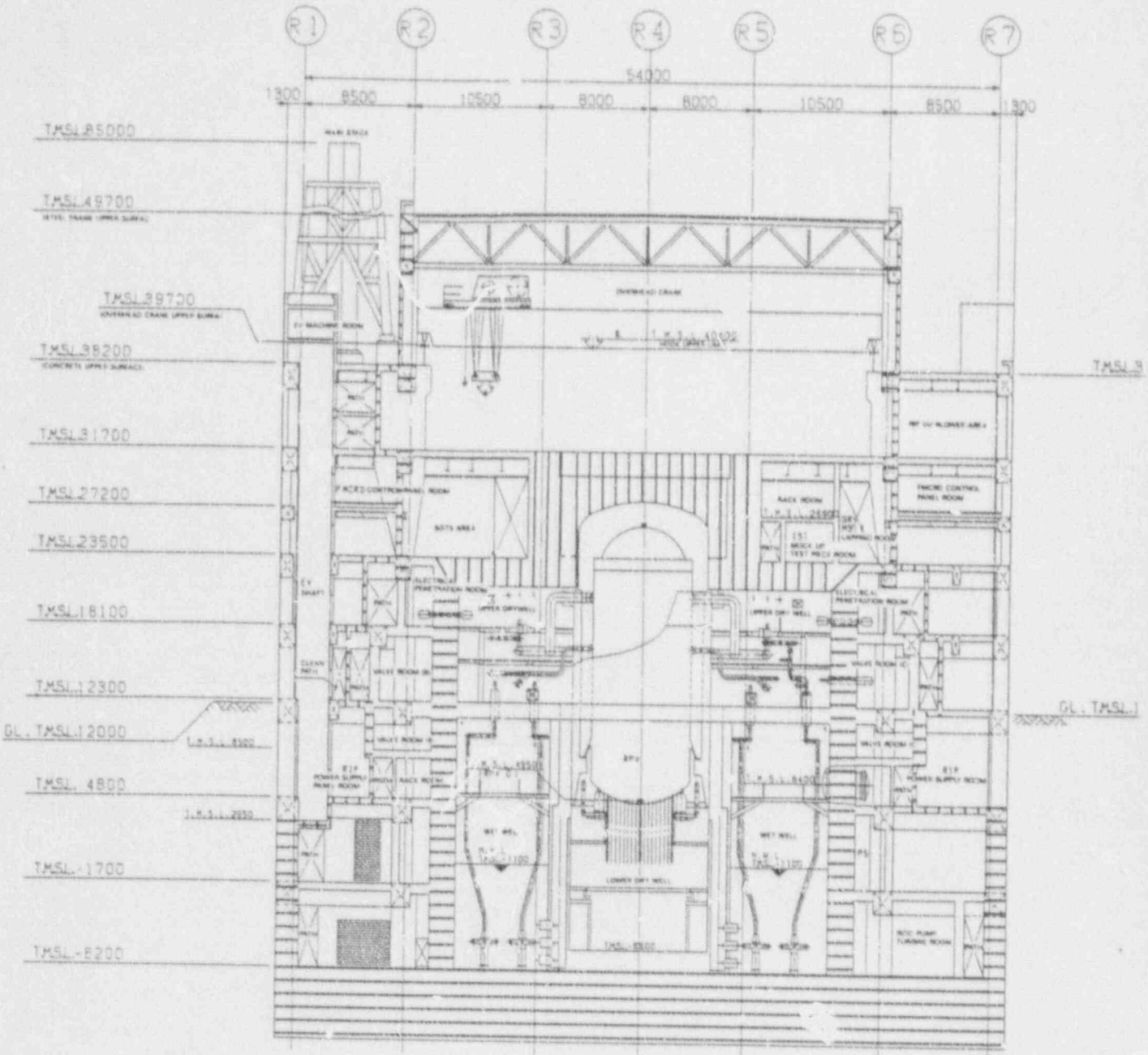
Figure 1.2-2 REACTOR BUILDING, ARRANGEMENT ELEVATION, SECTION 0/180°



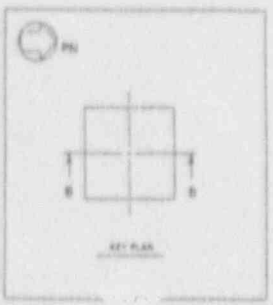
B-B SECTION

Figure

Amendme

SI
APERTURE
CARD

Also Available On
Aperture Card



SL-38200

SL-12000

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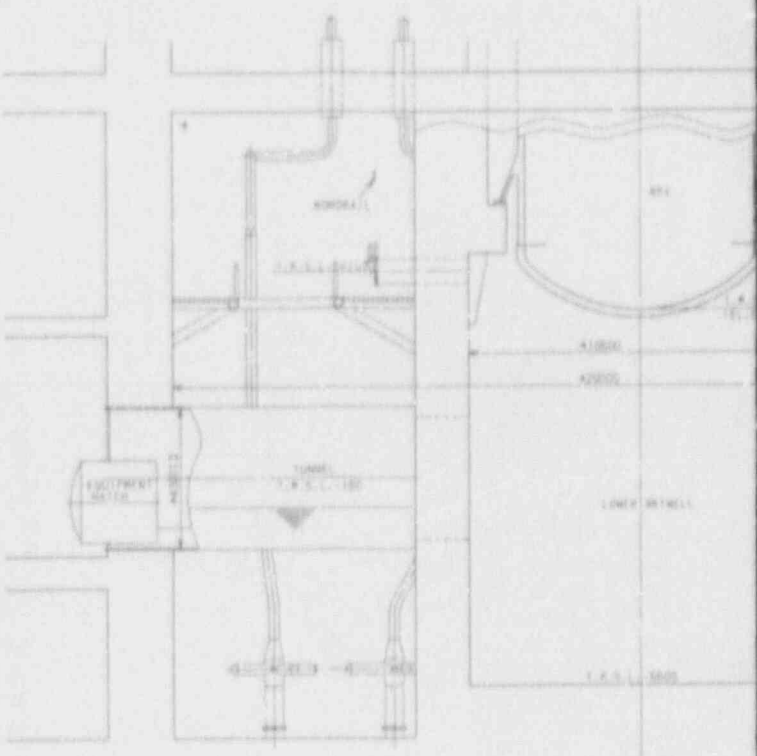
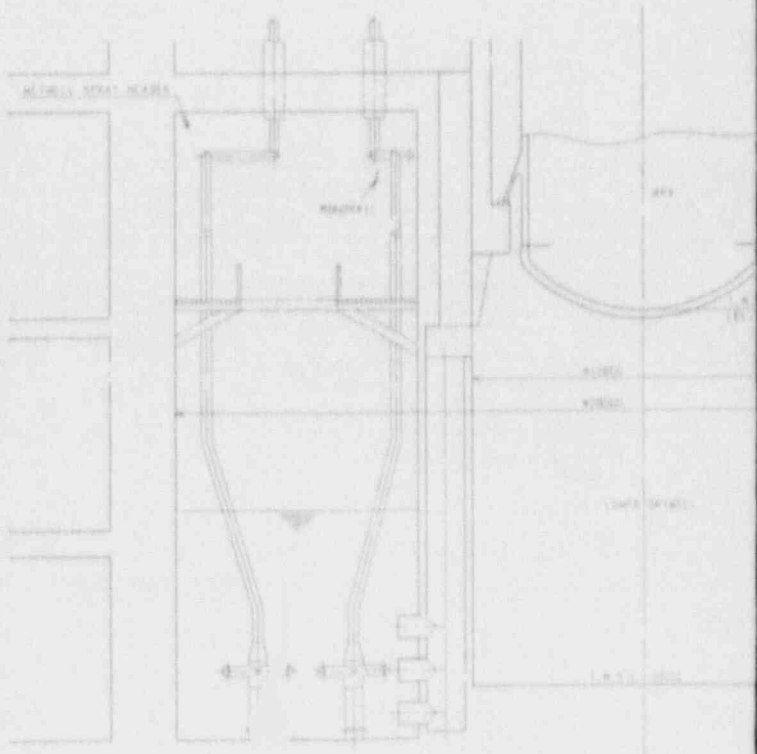
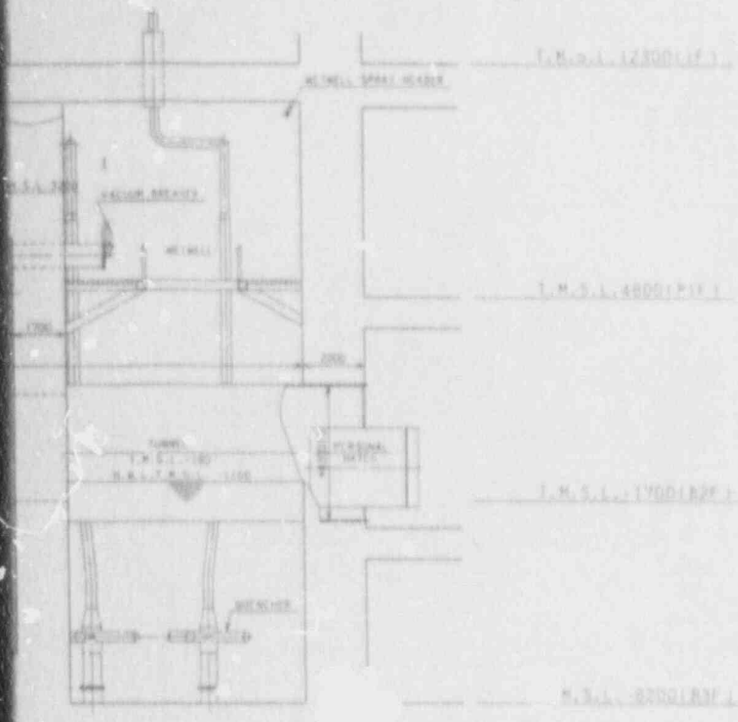
e 1.2-2a REACTOR BUILDING, ARRANGEMENT ELEVATION, SECTION 270/90°



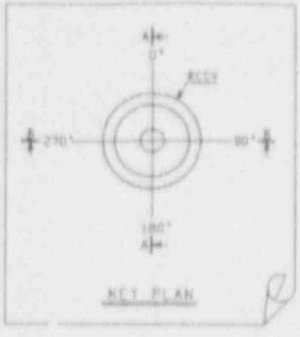
A-A

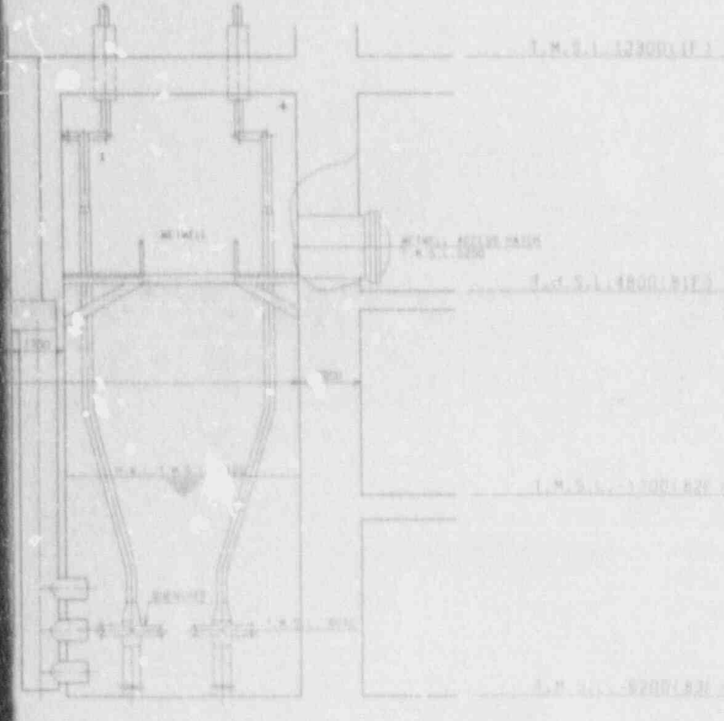




SI
APERTURE
CARD

Also Available On
Aperture Card





REMARKS

EQUIPMENT
WETWELL
WETWELL SPRAY HEADER
VACUUM BREAKER
LOWER DRYWELL
TUNNEL
PERSONNEL HATCH
EQUIPMENT HATCH
QUENCHER

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89-112-02

Figure 1.2-3c WETWELL, ARRANGEMENT ELEVATION SECTIONS A-A & B-B

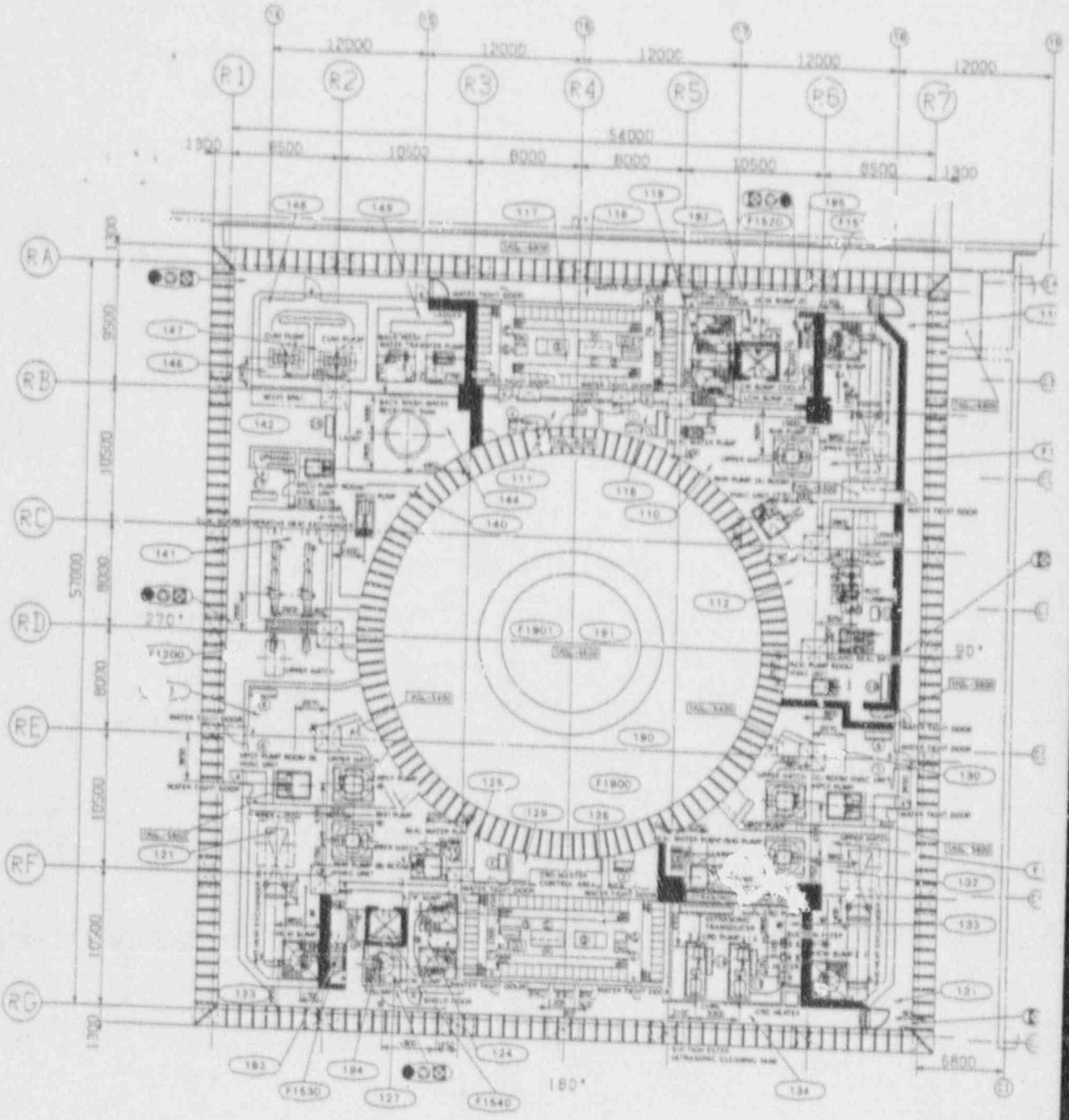
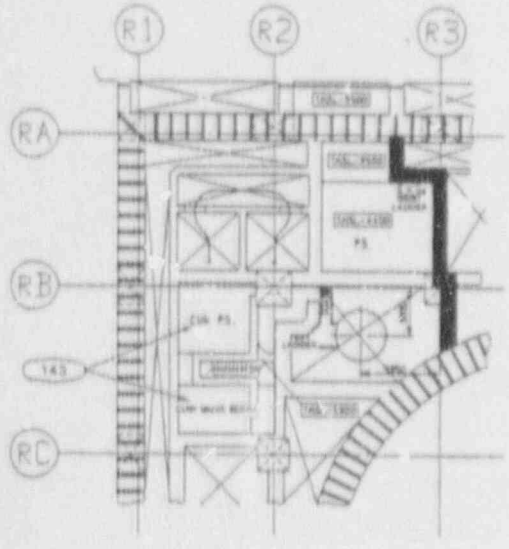


Figure 1



(REMARKS)
EQUIPMENT
RHR PUMP (A)
RHR PUMP (B)
RHR PUMP (C)
RHR HX (A)
RHR HX (B)
RHR HX (C)
HPCF PUMP (B)
HPCF PUMP (C)
CUW NON-RE HX
CUW PUMP
CUW BACK WASH TRANSFER PUMP
CUW BACK WASH TANK
CRD PUMP
SUCTION FILTER
RCIC PUMP
RCIC TURBINE

FIRE PROTECTION SYMBOLS

(F1901) FIRE AREA NUMBER
a. LEFT HAND DIGIT IS BOTTOM FLOOR NUMBER STARTING WITH 1 = ELEVATION (-) 8200
b. SECOND DIGIT FROM LEFT IS THE ELECTRICAL DIVISION NUMBER

(135) ROOM NUMBER

HOSE RACK

PORTABLE EXTINGUISHER

STANDPIPE

3-HOUR RATED FIRE BARRIER (WALL)

RATED FIRE BARRIER (FLOOR)

3-HOUR FIRE RATED DOOR

SECONDARY CONTAINMENT BOUNDARIES (2-HOUR RATED FIRE BARRIER)

SPRINKLER SYSTEM

= + +

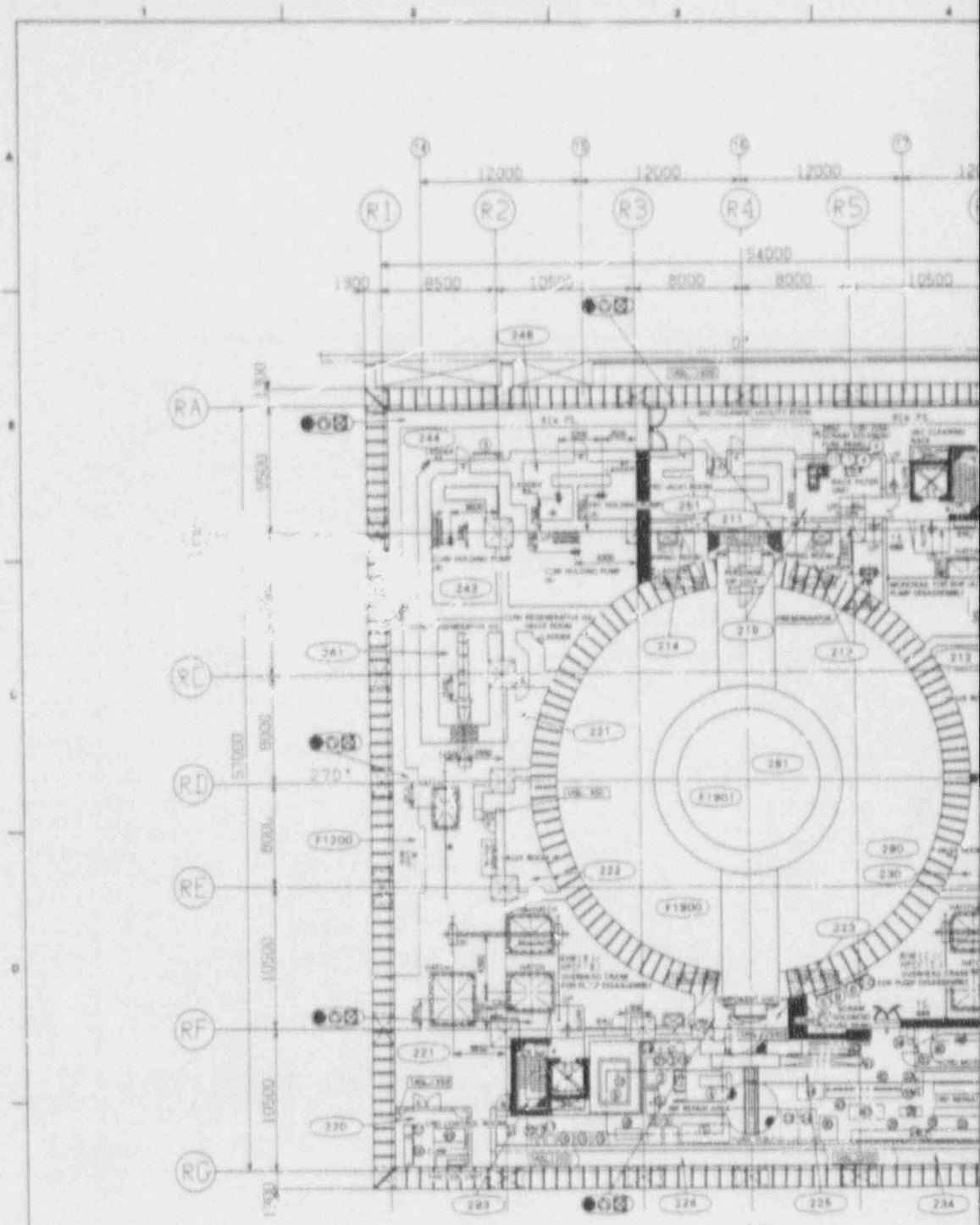
NO.	RACK LIST	RACK NAME
H22-P001A	1.	CORE FLOW (A) INSTRUMENT RACK
C	2.	CORE FLOW (B) INSTRUMENT RACK
B	3.	CORE FLOW (C) INSTRUMENT RACK
D	4.	CORE FLOW (D) INSTRUMENT RACK
H22-P002A	5.	RHR SYSTEM (A) INSTRUMENT RACK
B	6.	RHR SYSTEM (B) INSTRUMENT RACK
C	7.	RHR SYSTEM (C) INSTRUMENT RACK
H22-P003B	8.	HIGH PRESSURE CORE SPRAY SYSTEM (B) INSTRUMENT RACK
C	9.	HIGH PRESSURE CORE SPRAY SYSTEM (C) INSTRUMENT RACK
H22-P004	10.	REACTOR CORE ISOLATION COOLING SYSTEM INSTRUMENT RACK
H22-P005	11.	REACTOR CORE ISOLATION COOLING SYSTEM TURBINE INSTRUMENT RACK
H22-P006	12.	CONTROL ROD DRIVE HYDRAULIC SYSTEM INSTRUMENT RACK
H22-P006A	13.	CRD PUMP (A) INSTRUMENT RACK
H22-P006B	14.	CRD PUMP (B) INSTRUMENT RACK
H22-P007	15.	REACTOR COOLANT CLEAN-UP SYSTEM INSTRUMENT RACK
	16.	NOT USED
H22-P009	17.	SUPPRESSION POOL DISCHARGE SYSTEM SAMPLING RACK
H22-P008	18.	RHR HEAT EXCHANGER EXIT SAMPLING RACK

A. ACCUMULATOR INSTALLATION REMOVAL TRANSPORTATION DOLLY
B. ACCUMULATOR DISASSEMBLY ASSEMBLY DOLLY
C. ACCUMULATOR WORKING BENCH
D. SCRAM VALVE SCRAM PILOT VALVE WORKING BENCH
E. SCRAM PILOT VALVE TEST FACILITY
F. PUMP UNIT
G. GENERAL PURPOSE WORKING BENCH
H. TOOL BOX

REMARK (COMMON)

1. CURB HEIGHT IS H + 75, UNLESS OTHERWISE PECIFIED IF THEY ARE SPECIFIED, THE HEIGHTS ARE AS FOLLOWS:
   (a) a IS H + 200
   (b) b IS H + 100
   (c) FOR OTHERS, REFER TO THE HEIGHTS SHOWN ON DRAWINGS
2. EACH SYMBOL MARKS MEAN AS FOLLOWS:
   (a) GRATING
   (b) CHECKER PLATE
   (c) CONCRETE BLOCK
   (d) ① THIS SHOWS INSTRUMENTATION RACK NUMBER THAT CORRESPONDS TO RACK LIST
   (e) FRONT OF PANEL AND RACK
   FRONT
   (f) PULL SPACE FOR MAINTENANCE
   (g) HANDRAIL
   (h) MONORAIL
   (i) EV ELEVATOR
   (j) PS PIPE SPACE
   (k) DS HVAC DUCT SPACE
   (l) TS CABLE TRAY SPACE
   (m) NL NORMAL LOCK DOOR
   (n) STEEL SHIELDING DOOR
   (o) CURB
   (p) PP PHYSICAL PROTECTION
3. SOLID COLORED AREAS CONTAIN SAFETY-RELATED EQUIPMENT OF THE ELECTRICAL DIVISION ASSIGNMENT INDICATED BELOW:
   DIVISION 1
   DIVISION 2
   DIVISION 3
   DIVISION 4
4. AREAS CROSS HATCHED WITH COLORS PRIMARILY CONTAIN NON SAFETY-RELATED EQUIPMENT BUT ARE NOT SEPARATED BY FIRE BARRIERS FROM AN ADJACENT AREA CONTAINING SAFETY-RELATED EQUIPMENT OF THE SAME DIVISION AS FOR THE COLOR OF THE CROSS HATCH.

Figure 1.2-4 REACTOR BUILDING, ARRANGEMENT PLAN AT ELEVATION -8200mm

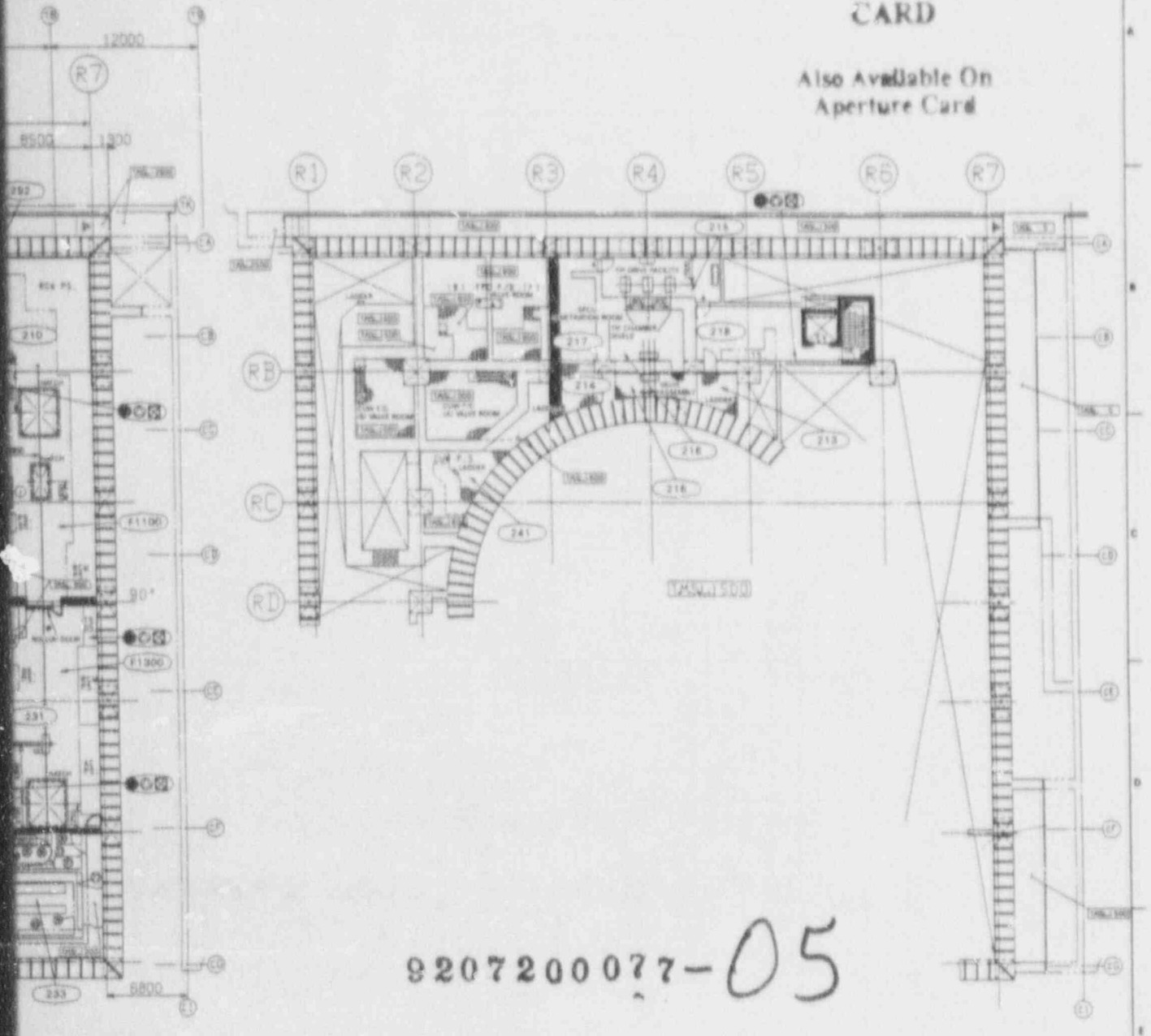


(REMARKS)

EQUIPMENT	
CUW RE HX	
CUW F/D VALVE ROOM	
RIP MAINTENANCE AREA	
FMCRD MAINTENANCE AREA	
CRD CONTROL ROOM	

RACK LIST

		NO.	RACK NAME
E61	H22-P010	1.	REACTOR CORE ISOLATION COOLING SYSTEM (STEAM SYSTEM) INSTRUMENT RACK
G41	H22-P011	2.	RCIC F/D SOLENOID OPERATED VALVE RACK
G31	H22-P012A	3.	CUW F/D SOLENOID OPERATED VALVE RACK A
G31	H22-P012B	3.	CUW F/D SOLENOID OPERATED VALVE RACK B
C71	H22-P065A	4.	SCRAM SOLENOID FUSE PANEL
C71	H22-P055B	5.	SCRAM SOLENOID FUSE PANEL
C71	H22-P055C	6.	SCRAM SOLENOID FUSE PANEL
C71	H22-P055D	7.	SCRAM SOLENOID FUSE PANEL
C71	H22-P055E	8.	SCRAM SOLENOID FUSE PANEL
C71	H22-P055F	9.	SCRAM SOLENOID FUSE PANEL
C71	H22-P055G	10.	SCRAM SOLENOID FUSE PANEL
C71	H22-P055H	11.	SCRAM SOLENOID FUSE PANEL



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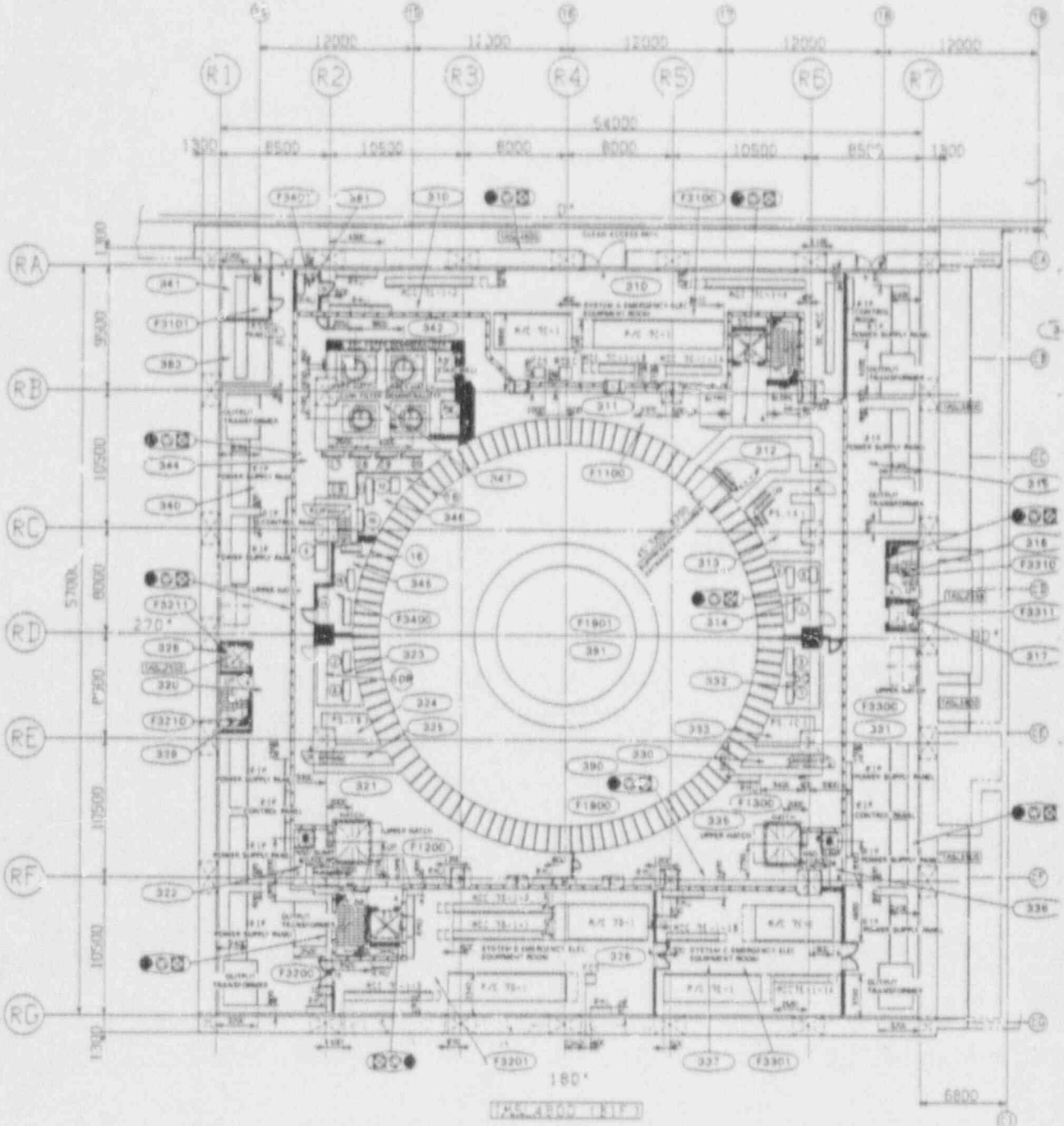
1. MOTOR ASSEMBLY/ DISASSEMBLY AREA
2. MOTOR DISASSEMBLY PARTS AREA
3. SPARE PARTS TOOL STORAGE RACK
4. MOTOR TEMPORARY PLACE
5. MOTOR CARRYING DOLLY AREA
6. DECONTAMINATION ELECTRICAL TEST TANK
7. WORK BENCH
8. MOVABLE TOOL TABLE
9. SPARE MOTOR STORAGE AREA
10. OVERHEAD CRANE HOOK REACH
11. CHANGING SPACE
12. PUMP TANK FOR WASHING
13. STRETCH TUBE NUT HANDLING TOOL STORAGE AREA
14. SECOND SEAL HANDLING TOOL STORAGE AREA
15. BOTTOM CLOSE FLANGE STORAGE AREA
16. MAIN FLANGE STAND TOOL STORAGE AREA
17. AUX COVER HANDLING TOOL STORAGE AREA
18. MOTOR CONTAINER TEMPORARY PLACE
19. HANDLING TOOL CONTROL BOX STORAGE AREA
20. HANDLING TOOL HYDRAULIC UNIT STORAGE AREA
21. COUPLING STAND HANDLING TOOL STORAGE AREA
22. CRD STORAGE TANK
23. ULTRASONIC CLEANING TANK
24. ULTRASONIC TRANSDUCER
25. CRD DISASSEMBLY CLEANING TANK
26. CRD WORK TABLE
27. BALL NUT DECENT TEST TABLE
28. SPOOL PIECE WORK TABLE
29. SPOOL PIECE STORAGE TANK
30. SEAL HOUSING TEST FACILITY
31. PARTS TEMPORARY PLACE
32. TOOL RACK
33. STORAGE RACK
34. MOVABLE PARTS TABLE
35. MOTOR UNIT WORK TABLE
36. MOTOR TEST FACILITY
37. BRAKE SYNCHRO TEST FACILITY
38. MOTOR STORAGE RACK
39. OVERHEAD CRANE REACH LIMIT
40. MONORAIL
41. RIP TEMPORARY PLACE
42. MOTOR BRACKET TEMPORARY PLACE
43. CRD CART STORAGE AREA
44. MOTOR UNIT SPOOL PIECE DOLLY STORAGE AREA
45. ATTACHMENT STORAGE AREA
46. CRD STORAGE AREA
47. SPOOL PIECE STORAGE AREA
48. MOTOR SPARE PARTS AREA
49. CRD REPLACEMENT FACILITY CONTROL PANEL
50. CRD REPLACEMENT FACILITY DRIVE PANEL
51. CRD REPLACEMENT FACILITY PRINTER

Figure 1.2-5 REACTOR BUILDING, ARRANGEMENT PLAN AT ELEVATION -1700mm

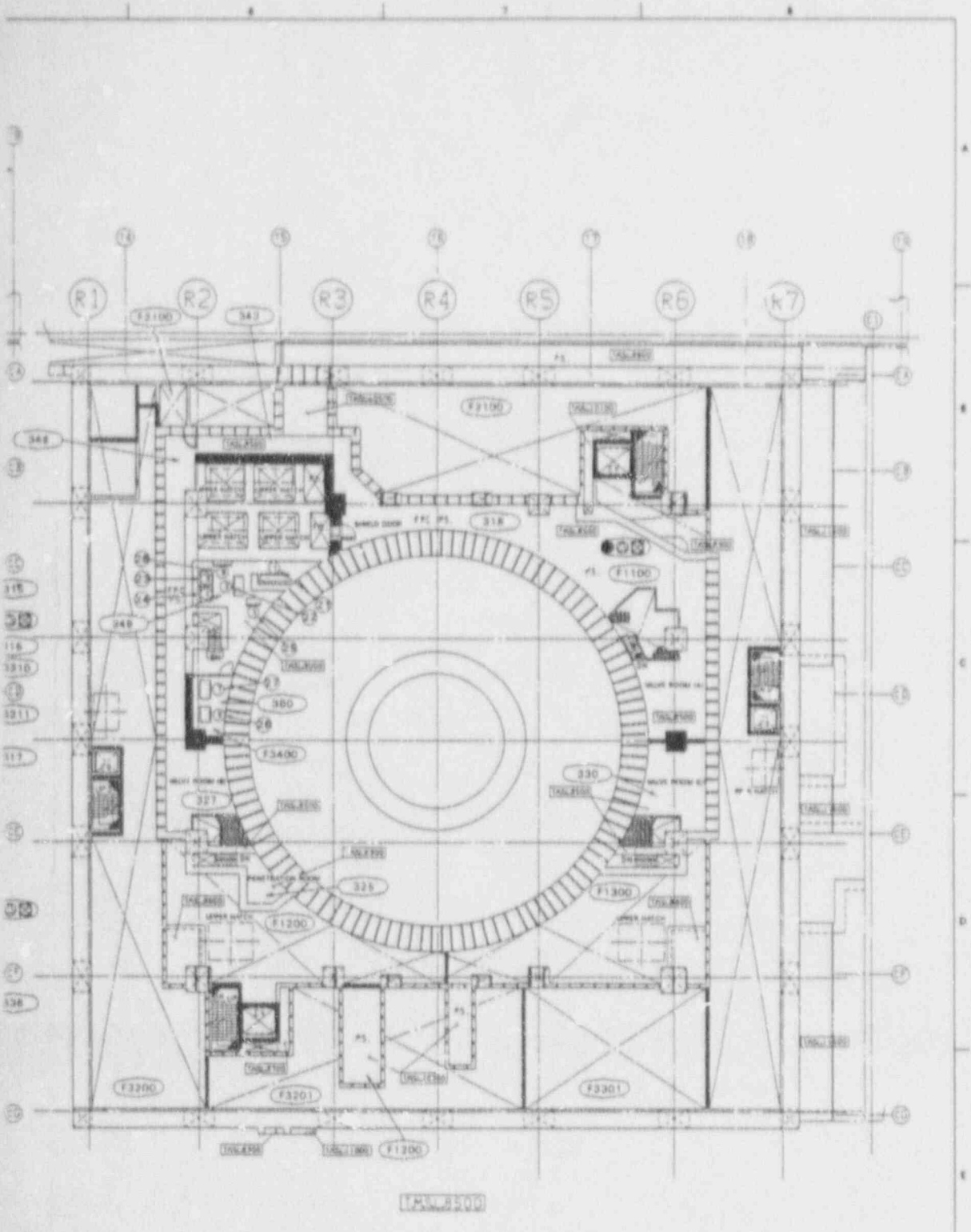


		NO.	RACK LIST
B31	H22-P013A	1.	REACTOR SYSTEM (I) INSTRUMENT RACK
B31	H22-P013B	2.	REACTOR SYSTEM (II) INSTRUMENT RACK
B31	H22-P013C	3.	REACTOR SYSTEM (III) INSTRUMENT RACK
B31	H22-P013D	4.	REACTOR SYSTEM (IV) INSTRUMENT RACK
B31	H22-P014A	5.	MAIN STEAM FLOW (I) INSTRUMENT RACK
B31	H22-P014B	6.	MAIN STEAM FLOW (II) INSTRUMENT RACK
B31	H22-P014C	7.	MAIN STEAM FLOW (III) INSTRUMENT RACK
B31	H22-P014D	8.	MAIN STEAM FLOW (IV) INSTRUMENT RACK
E31	H22-P015A	9A.	LEAK DETECTION SYSTEM (A) INSTRUMENT RACK
E31	H22-P015C	9C.	LEAK DETECTION SYSTEM (C) INSTRUMENT RACK
E31	H22-P015B	10B.	LEAK DETECTION SYSTEM (B) INSTRUMENT RACK
E31	H22-P015D	10D.	LEAK DETECTION SYSTEM (D) INSTRUMENT RACK
		12.	REACTOR WATER SAMPLING TRANSMITTER PANEL
G41	H22-P016	13.	FPC FD SAMPLING TRANSMITTER

		NO.	RACK LIST
G41	H22-P017	14.	FPC FD MAIN VALVE RACK
G41	H22-P018	15.	FPC FD CONDUCTIVITY METER RACK
G41	H22-P019	16.	FPC FD SAMPLING HOOD
G41	H22-P028	17.	FPC F/D INSTRUMENT RACK (B)
G41	H22-P027	18.	FPC F/D INSTRUMENT RACK (A)
G31	H22-P030	19.	CUW F/D INSTRUMENT RACK (B)
G31	H22-P029	20.	CUW F/D INSTRUMENT RACK (A)
P51	H22-P020	21.	REACTOR WATER SAMPLING COOLER RACK
P51	H22-P021	22.	REACTOR WATER SAMPLE DEPRESSURIZATION RACK
P51	H22-P022	23.	REACTOR WATER pH METER RACK
P51	H22-P023	24.	REACTOR WATER DISSOLVED OXYGEN METER
P51	H22-P024	25.	REACTOR WATER CONDUCTIVITY METER RACK
P51	H22-P025A	26.	REACTOR WATER SAMPLING HOOD
P51	H22-P035	27.	REACTOR WATER GRAB SAMPLING RACK
P51	H22-P026	28.	PAS RELATED AO VALVE RACK

Figure 1.2-

Amendment



2-6 REACTOR BUILDING, ARRANGEMENT PLAN AT ELEVATION 4800/8500mm

(See Figure 1.2-22)

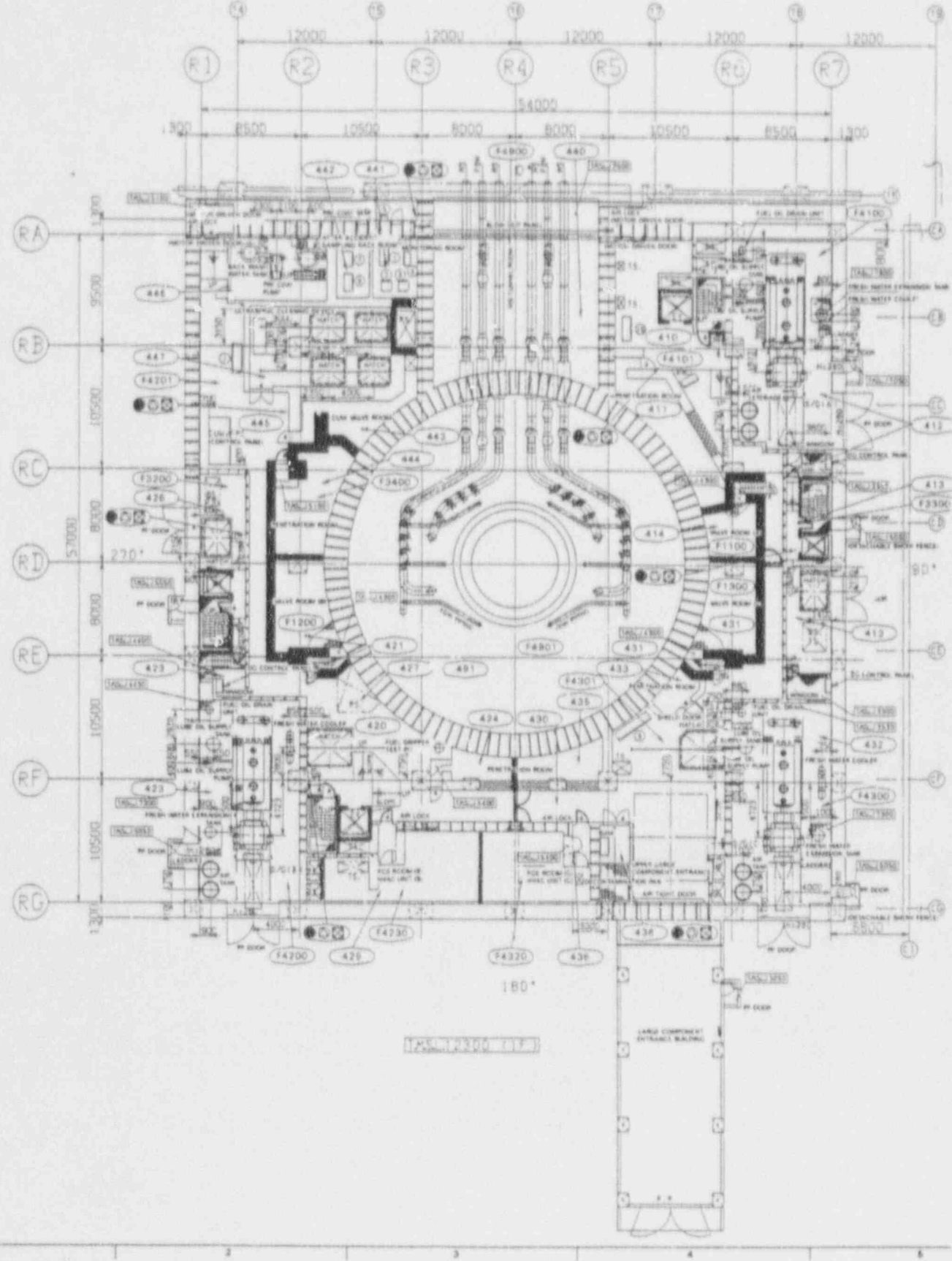

R1
R2
R3
R4
R5
R6
R7
RA
RB
RC
RD
RE
RF
RG
54000
12000
8500
10500
8000
270°
180°
90°

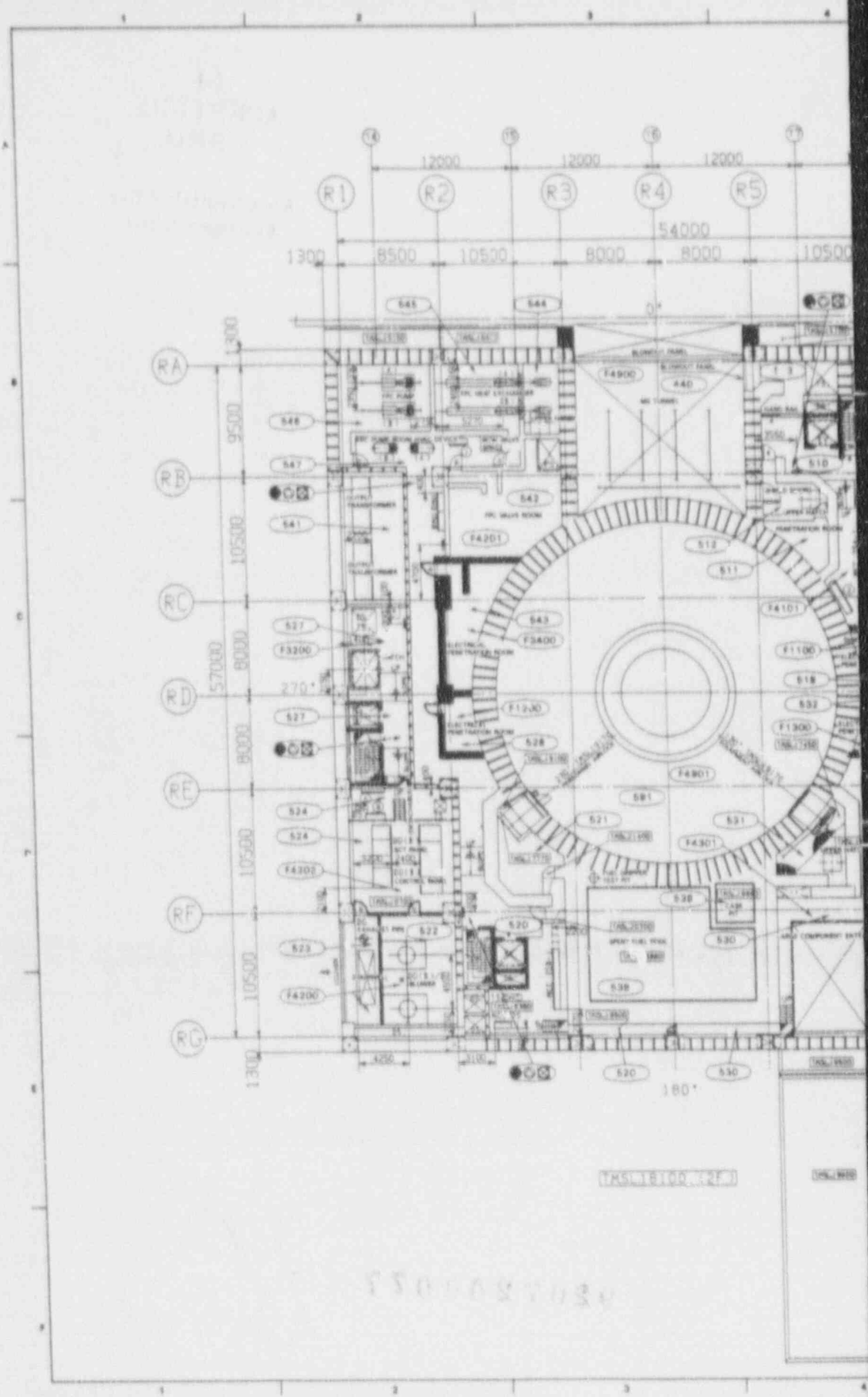
Figure 1.

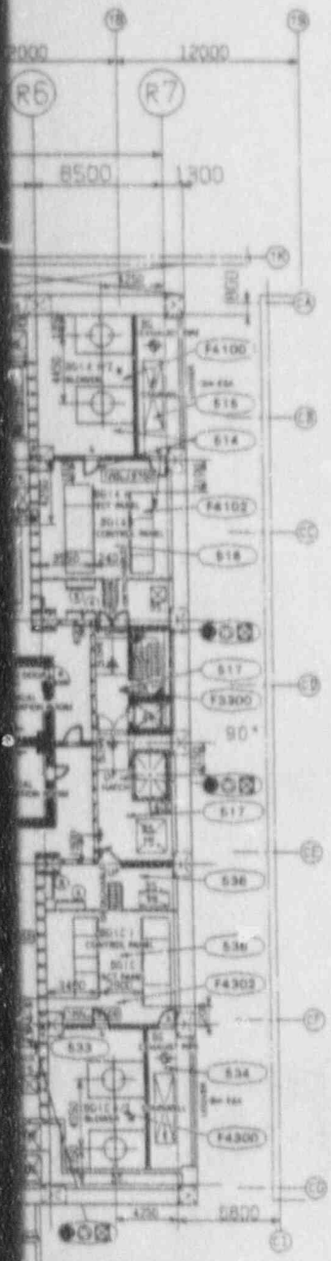
REMARKS
EQUIPMENT
PRE COAT PUMP
FUEL HANDLING MACHINE TEST PIT

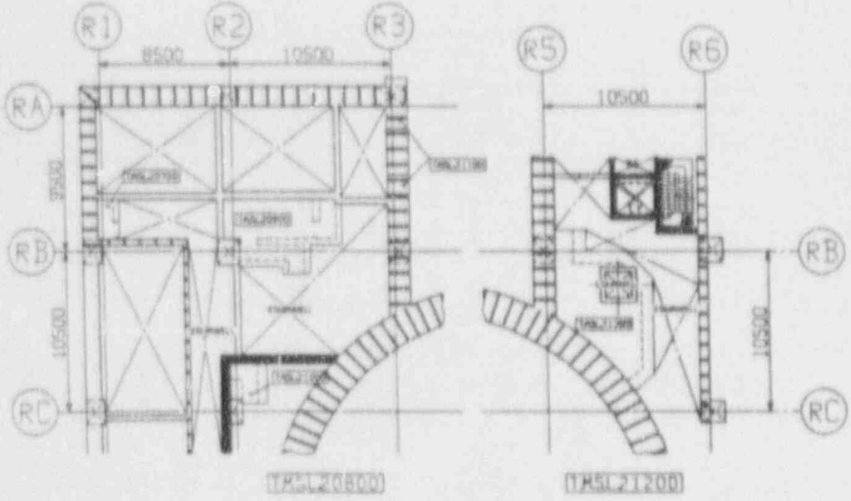
INSTRUMENT RACK LIST

NO.	NAME
H23-P031	1. POST ACCIDENT SAMPLE TRANSFER RACK
H23-P032	2. POST ACCIDENT SAMPLE RECOVERY RACK
H23-P033	3. POST ACCIDENT SAMPLING LOCAL OPERATING PANEL
H23-P034	4. STANDBY GAS TREATMENT SYSTEM OFF GAS RADIATION MONITOR SAMPLE RACK
H22-P035	5. STANDBY GAS TREATMENT SYSTEM OFF GAS RADIATION MONITOR GAS SAMPLER RACK (A)
H22-P036	6. STANDBY GAS TREATMENT SYSTEM OFF GAS RADIATION MONITOR GAS SAMPLER RACK (B)
H22-P037	7. STANDBY GAS TREATMENT SYSTEM OFF GAS RADIATION MONITOR PARTICULATE IODINE SAMPLE RACK
H22-P038	8. STANDBY GAS TREATMENT SYSTEM OFF GAS RADIATION MONITOR PARTICULATE IODINE SAMPLE RACK OPERATING PANEL
H22-P039	9. CONTAINMENT VESSEL PRESSURE, LEAK TEST RACK
H22-P040	10. REACTOR CONTAINMENT VESSEL DEW POINT RECORDER RACK

1.2-8 REACTOR BUILDING, ARRANGEMENT PLAN AT ELEVATION 12300mm


R1
R2
R3
R4
R5
54000
12000
12000
12000
1300
8500
10500
8000
8000
10500
RA
RB
RC
RD
RE
RF
RG
9500
10500
57000
8000
8000
10500
10500
1300
0°
270°
180°





INSTRUMENT RACK LIST

	NO.	RACK NAME
H22-P042	1	FUEL POOL COOLING CLEANUP SYSTEM INSTRUMENT RACK
H22-P041	2	MSIV LEAK TEST INSTRUMENT RACK

FOAM FIRE EXTINGUISHER LIST

NO.	RACK NAME
A	FOAM LIQUID TANK
B	FOAM INJECTION EQUIPMENT

(REMARKS)
EQUIPMENT

FPC HX
FPC PUMP
FUEL HANDLING MACHINE TEST PIT
SPENT FUEL STORAGE POOL
CASK PIT
D/G(A) CONTROL PANEL
D/G(B) CONTROL PANEL
D/G(C) CONTROL PANEL
DG(A)/Z SUPPLY FAN
DG(B)/Z SUPPLY FAN
DG(C)/Z SUPPLY FAN

Figure 1.2-9 REACTOR BUILDING, ARRANGEMENT PLAN AT ELEVATION 18100mm

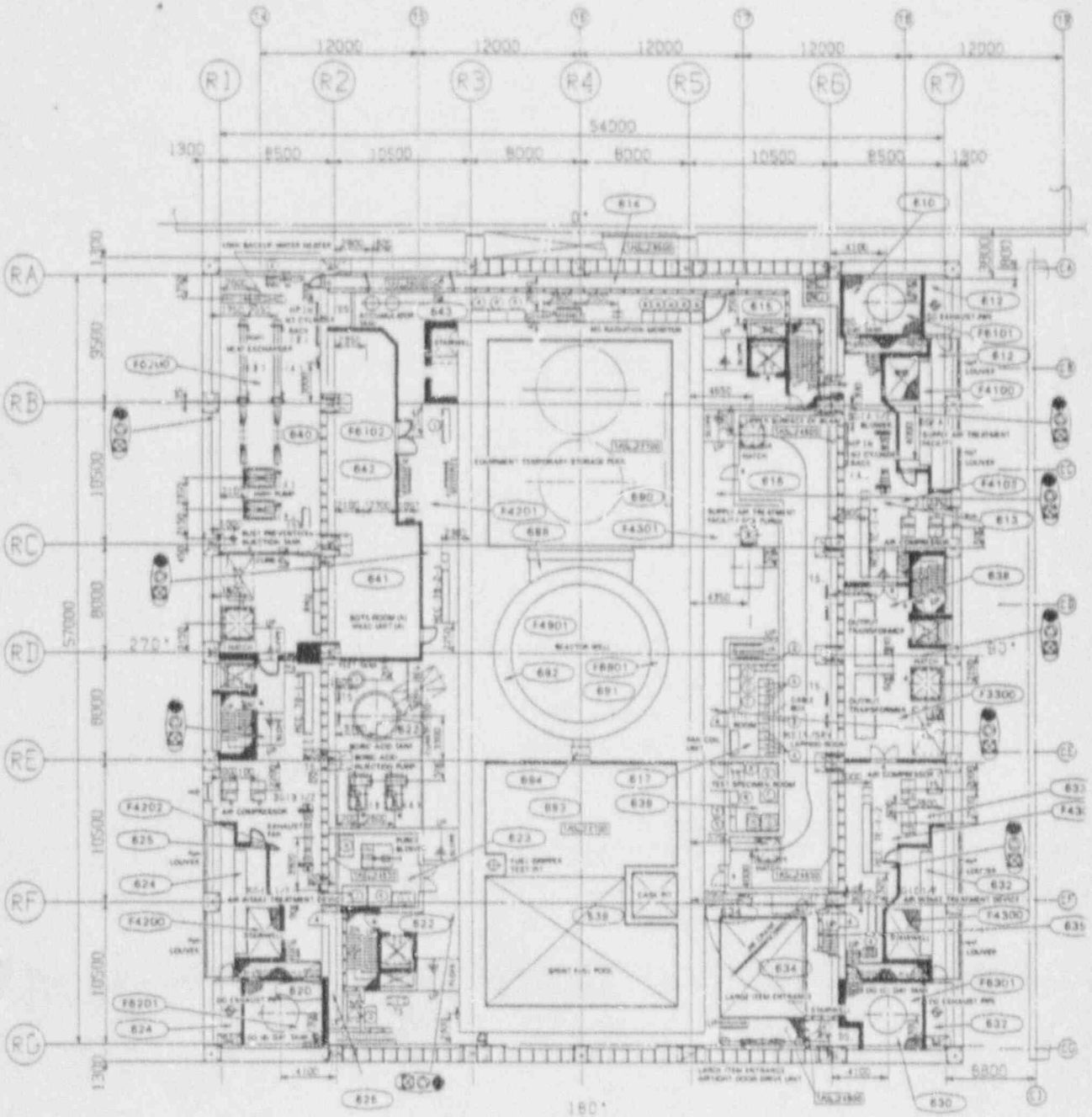


Figure 1.

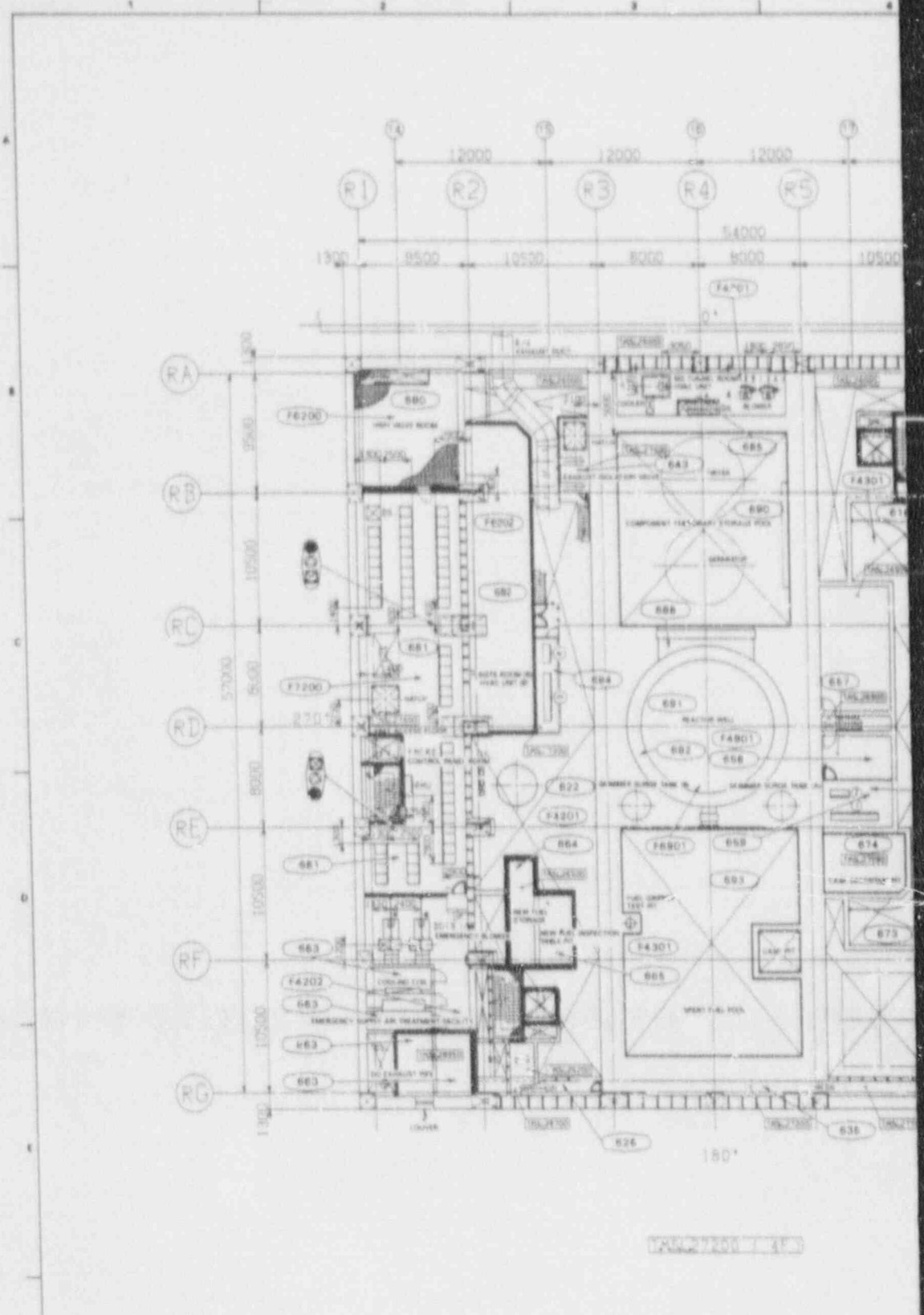
Amendmen

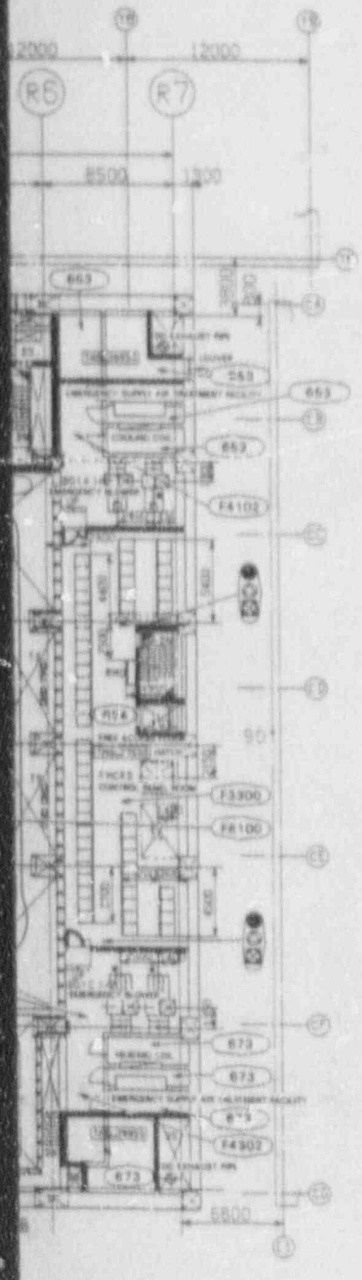
		INSTRUMENT RACK NO.	RACK NAME
C41	H22-P043	1.	STANDBY GAS TREATMENT SYSTEM INSTRUMENT RACK
D23	H22-P044A	2.	CONTAINMENT VESSEL ATMOSPHERE MONITOR CALIBRATION GAS CYLINDER RACK A
D23	H22-P044B	3.	CONTAINMENT VESSEL ATMOSPHERE MONITOR CALIBRATION GAS CYLINDER RACK B

(SI BUILDING AND AUXILIARY FACILITIES

NO.	FACILITY NAME	QTY	(REMARKS) EQUIPMENT
A	CONTROL DATA COLLECTION EQUIPMENT	6	D/S PIT
B	STABILIZED POWER SUPPLY SYSTEM	1	CASK PIT
C	DESK	3	SPENT FUEL STORAGE POOL
D	STORAGE	2	ISI INSPECTION ROOM
E	CALIBRATION TEST PIECE FOR M/S NOZZLE CORNER	1	SGTS FILTER TRAIN
F	CALIBRATION TEST PIECE FOR NOZZLE CORNER	1	SGTS FAN
G	CALIBRATION TEST PIECE FOR NOZZLE CORNER	1	SLC PUMP
H	CALIBRATION TEST PIECE FOR NOZZLE CORNER	1	SLC TANK
J	RPV SHELL ADJUST TEST FACILITY	1	SLC TEST TANK
K	RPV BOTTOM PLATE ADJUST TEST FACILITY	1	DG (A) DAY TANK
L	RPV NOZZLE ADJUST TEST FACILITY	1	DG (B) DAY TANK
M	PIPING ADJUST TEST FACILITY	1	DG (C) DAY TANK
N	ISI DEVICE STORAGE	5	HWH PUMP
P	ISI DEVICE STORAGE	3	HWH HX
Q	RPV CALIBRATION TEST PIECE STORAGE	1	
R	RPV CONSUMABLE MATERIALS AND CALIBRATION TEST PIECE STORAGE	2	
S	PIPING CALIBRATION TEST PIECE STORAGE	3	

.2-10 REACTOR BUILDING, ARRANGEMENT PLAN AT ELEVATION 23500mm


R1
R2
R3
R4
R5
RA
RB
RC
RD
RE
RF
RG
12000
54000
180°



RACK LIST

NO.	RACK NAME
003 020-C053A	1. CONTAINMENT VESSEL ATMOSPHERE MONITOR RACK (A)
003 020-C054A	2. CONTAINMENT VESSEL ATMOSPHERE MONITOR CALIBRATION RACK (A)
003 020-C053B	3. CONTAINMENT VESSEL ATMOSPHERE MONITOR RACK (B)
003 020-C054B	4. CONTAINMENT VESSEL ATMOSPHERE MONITOR CALIBRATION RAC (B)

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CARD

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Aperture Card

(REMARKS)
EQUIPMENT
D/S PIT
CASK PIT
SPENT FUEL STORAGE POOL
CASK WASHDOWN PIT
FMCRD PANEL ROOM
NEW FUEL STORAGE PIT
NEW FUEL INSPECTION PIT

9207200077-

Figure 1.2-11 REACTOR BUILDING, ARRANGEMENT PLAN AT ELEVATION 27000mm

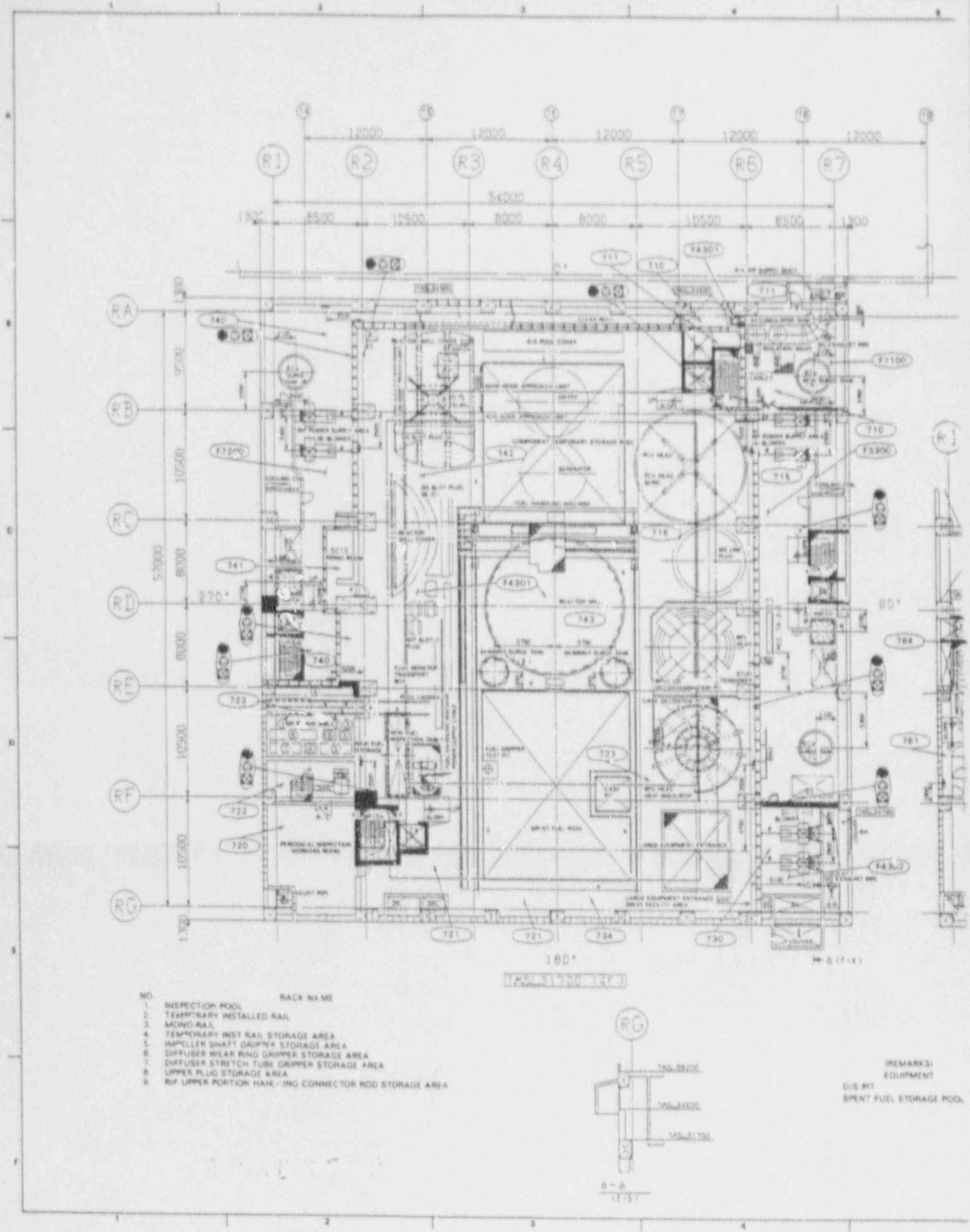
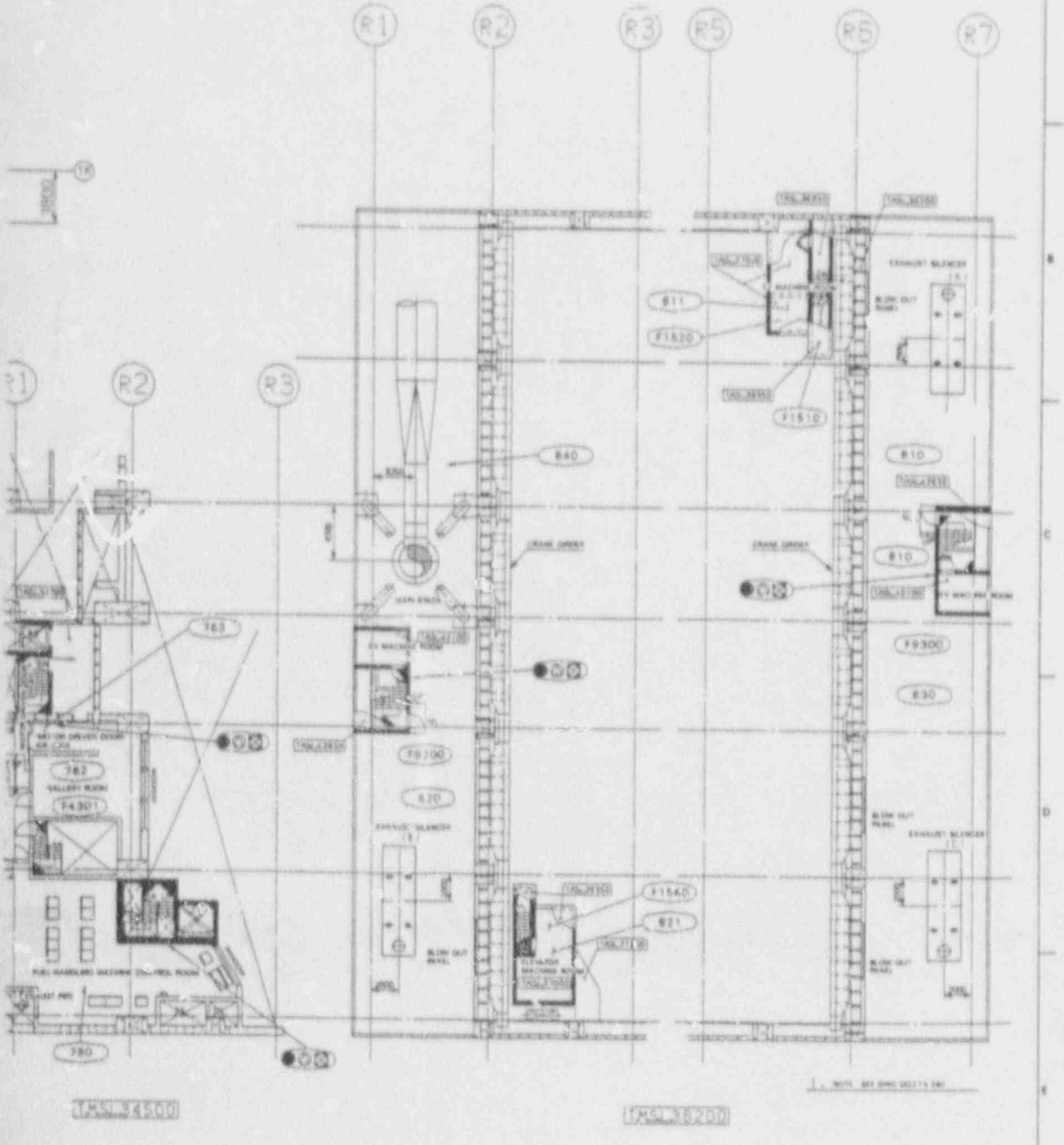


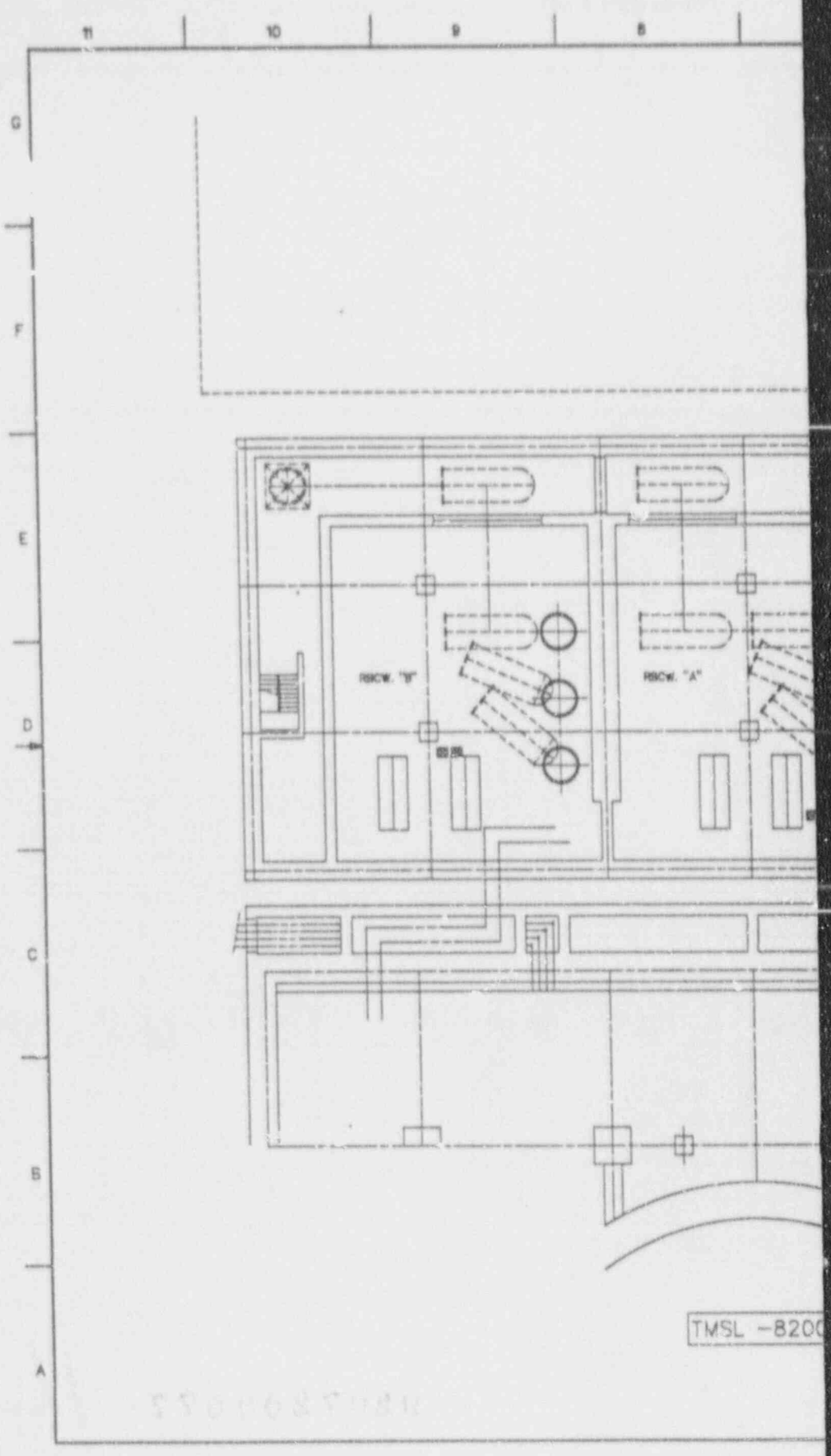
Figure 1.

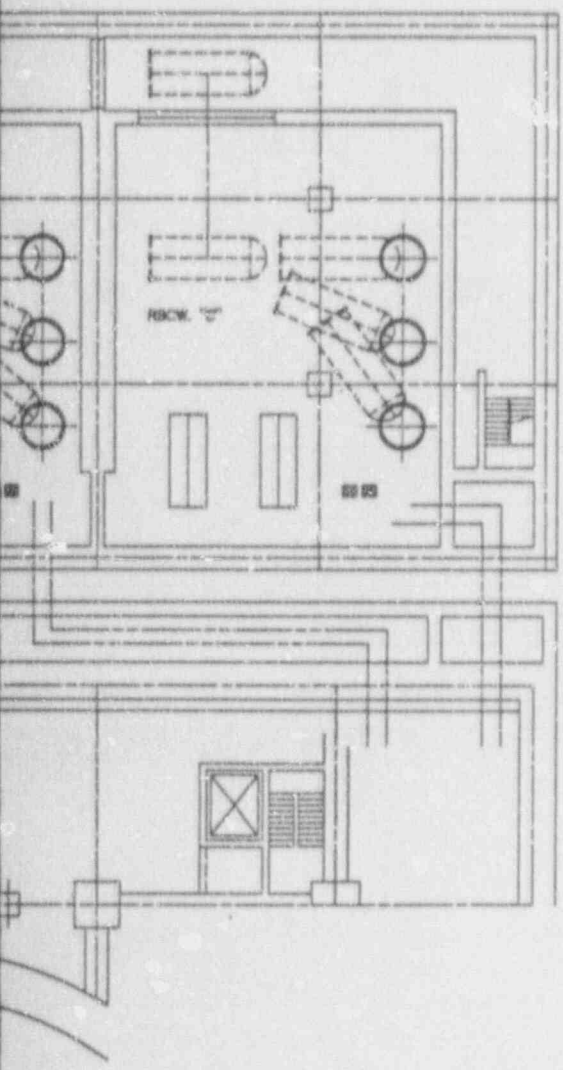
Amendmer



9207200077-12

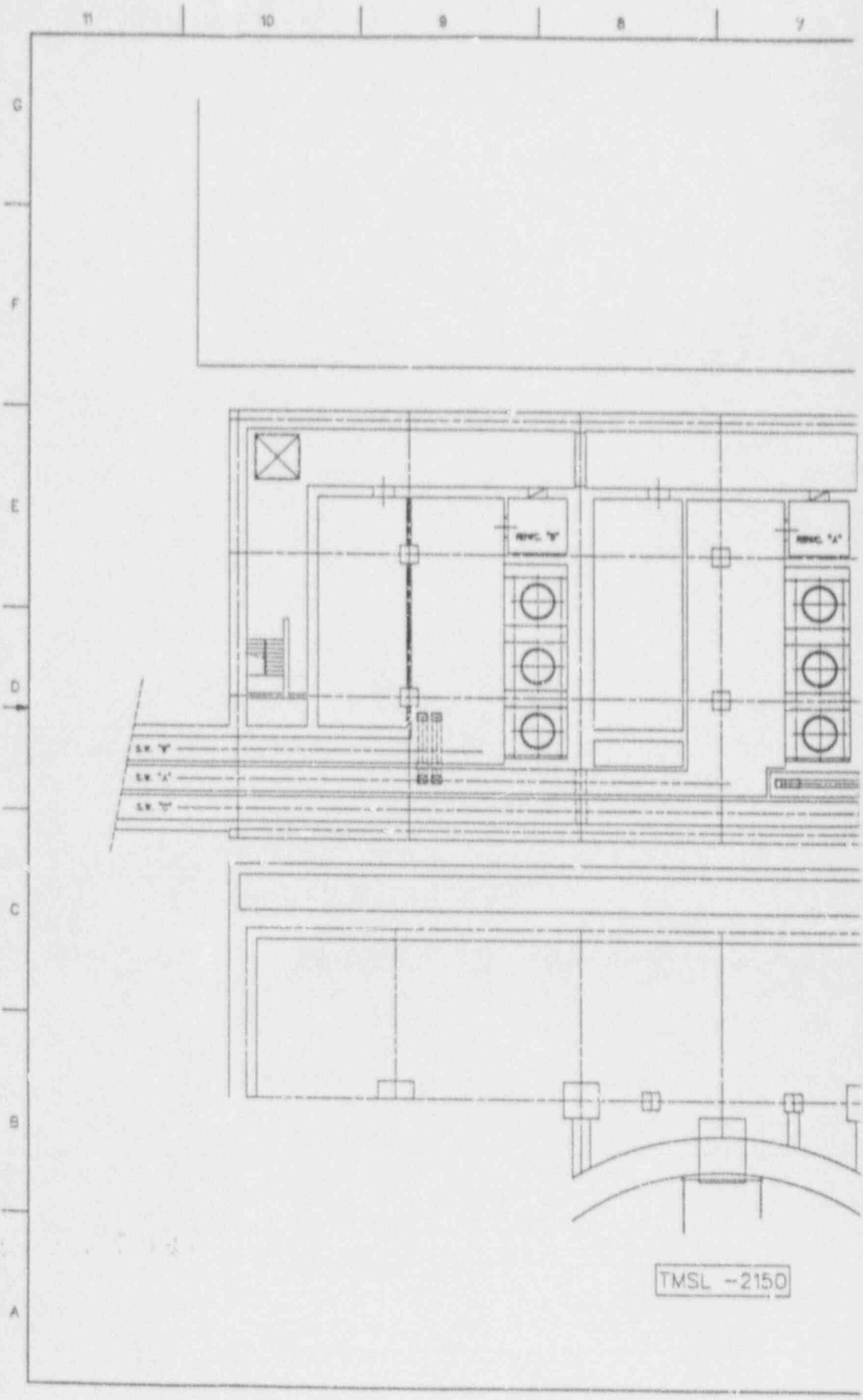
1.2-12 REACTOR, BUILDING ARRANGEMENT AT PLAN ELEVATION 31700mm

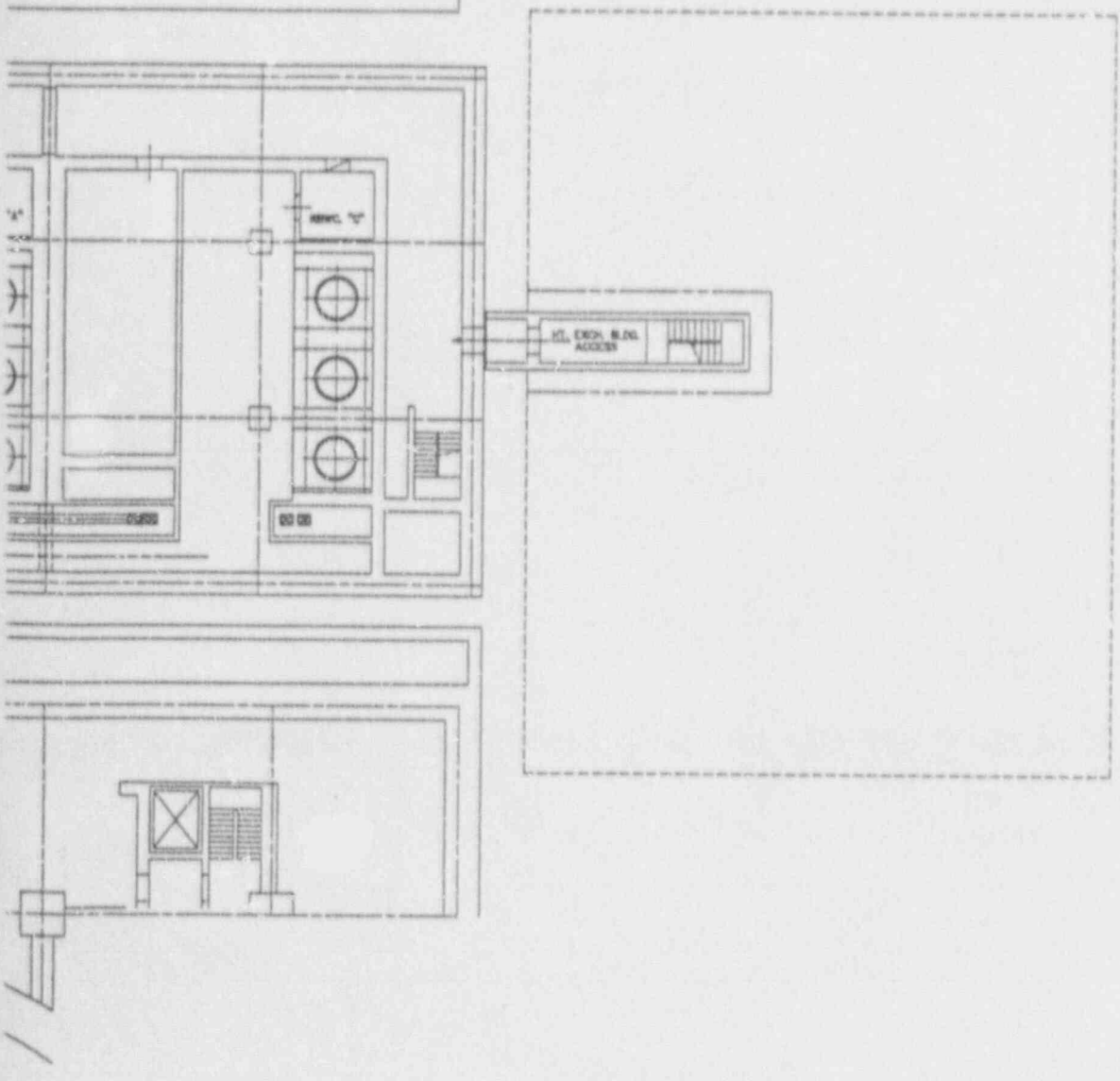

11
10
9
8
G
F
E
D
C
B
A
RBCW. "B"
RBCW. "A"
TMSL -8200



91-120-03

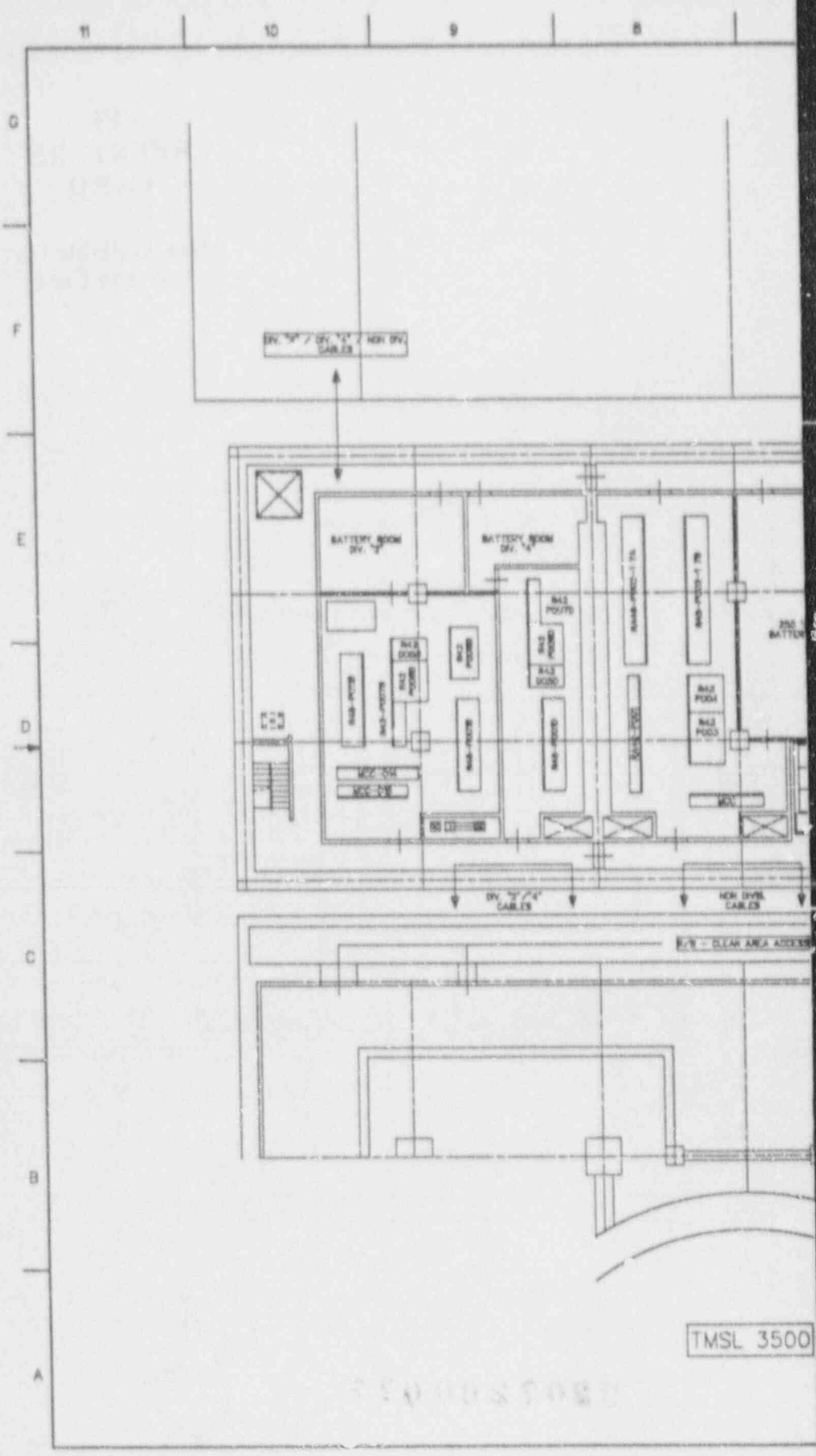
Figure 1.2-16 CONTROL AND SERVICE BUILDING, ARRANGEMENT PLAN AT ELEVATION -8200mm

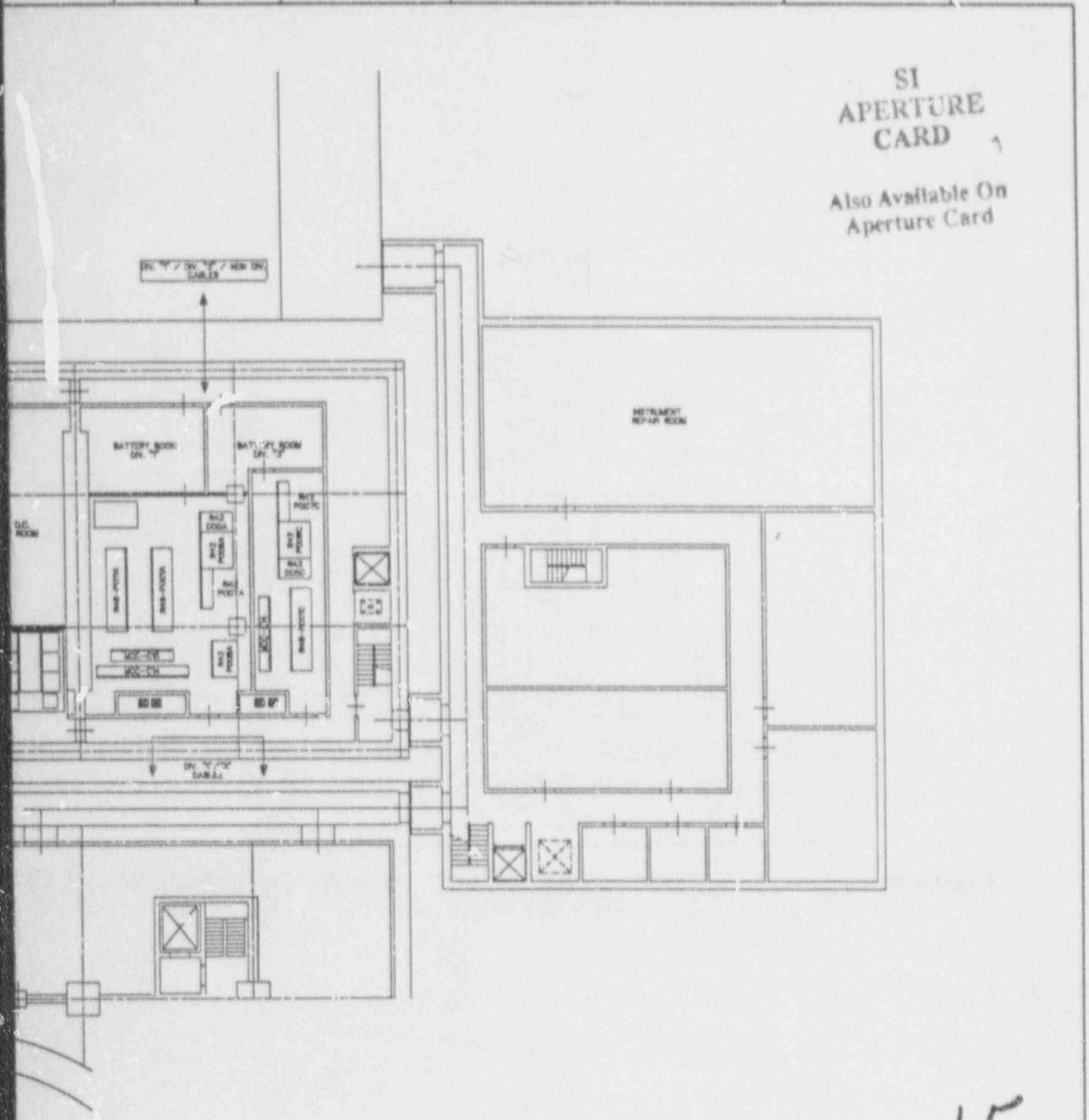

11
10
9
8
7
G
F
E
D
C
B
A
RPVC. "B"
RPVC. "A"
S.R. "B"
S.R. "A"
S.R. "C"
TMSL -2150



91-120-04

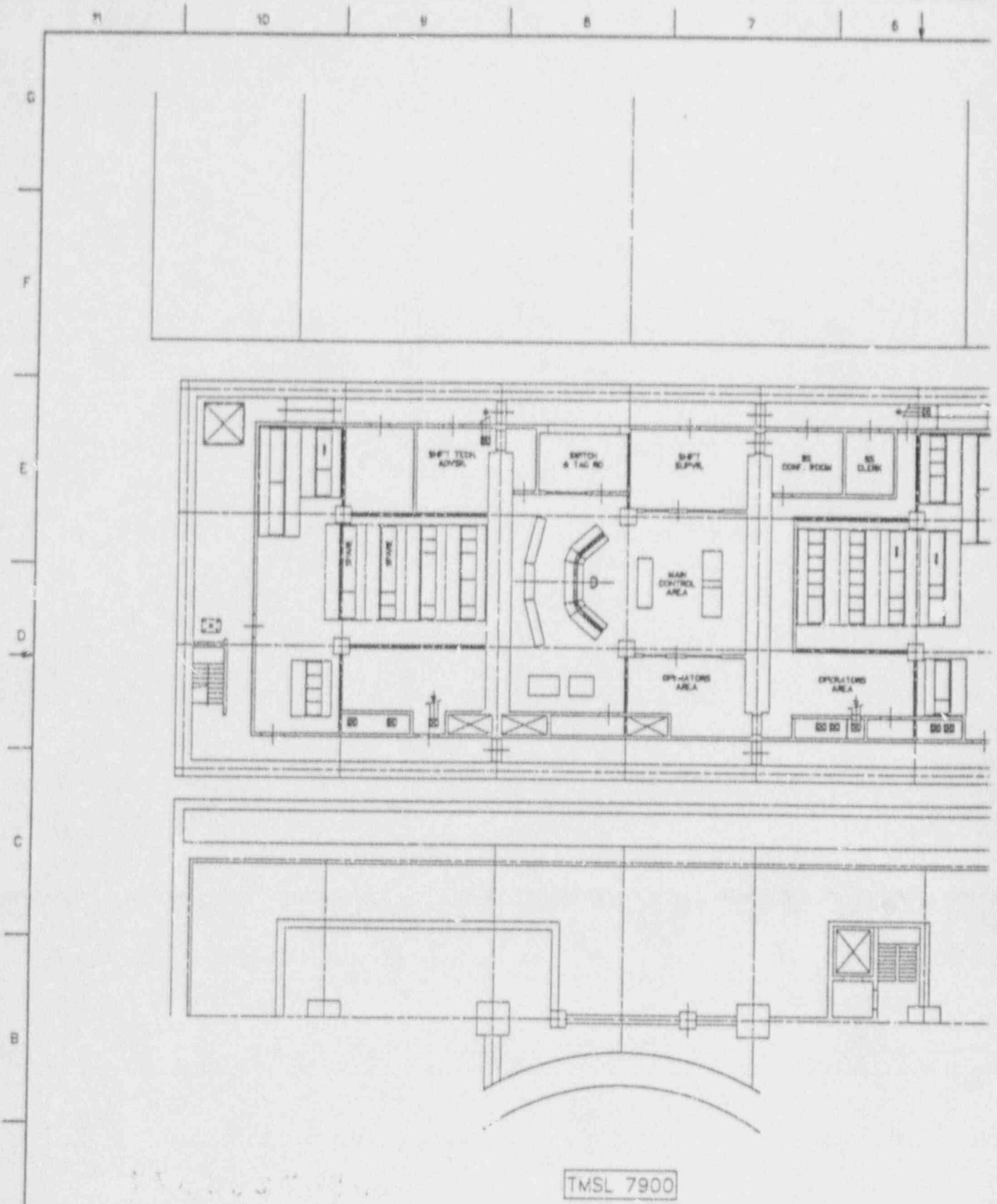
Figure 1.2-17 CONTROL AND SERVICE BUILDING, ARRANGEMENT PLAN AT ELEVATION -2150mm

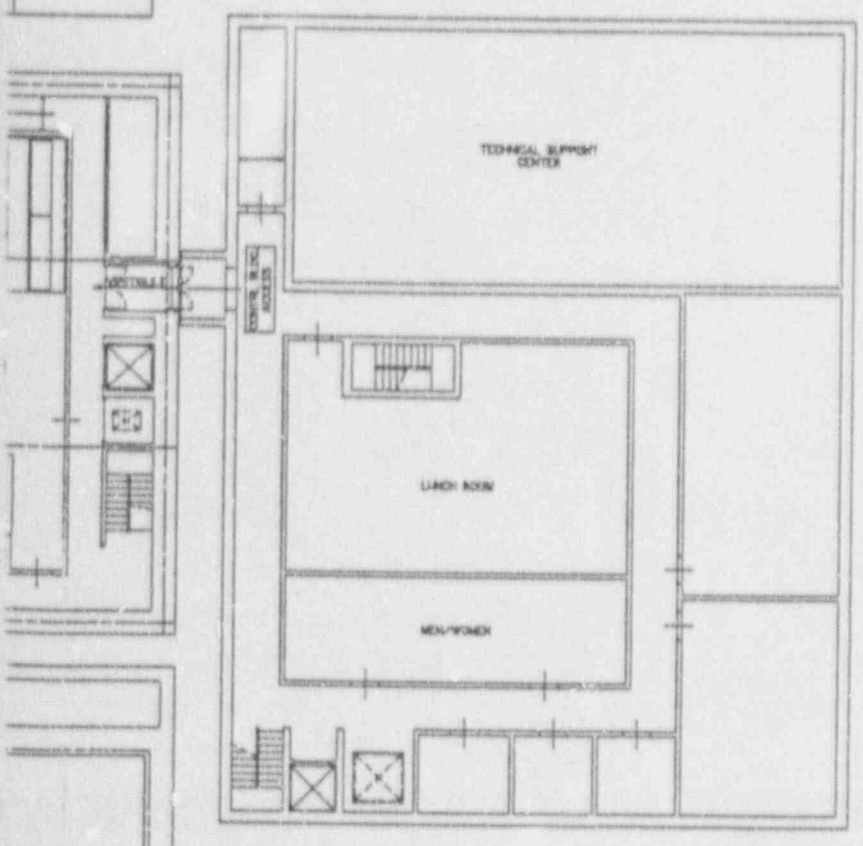

11
10
9
8
G
F
E
D
C
B
A
BATTERY ROOM DIV. "B"
BATTERY ROOM DIV. "A"
DIV. "A" / DIV. "B" / NON DIV. CABLES
DIV. "A" / "B" CABLES
NON DIVIS. CABLES
TMSL 3500



91-120-05

Figure 1.2-18 CONTROL AND SERVICE BUILDING, ARRANGEMENT PLAN AT ELEVATION 3500mm

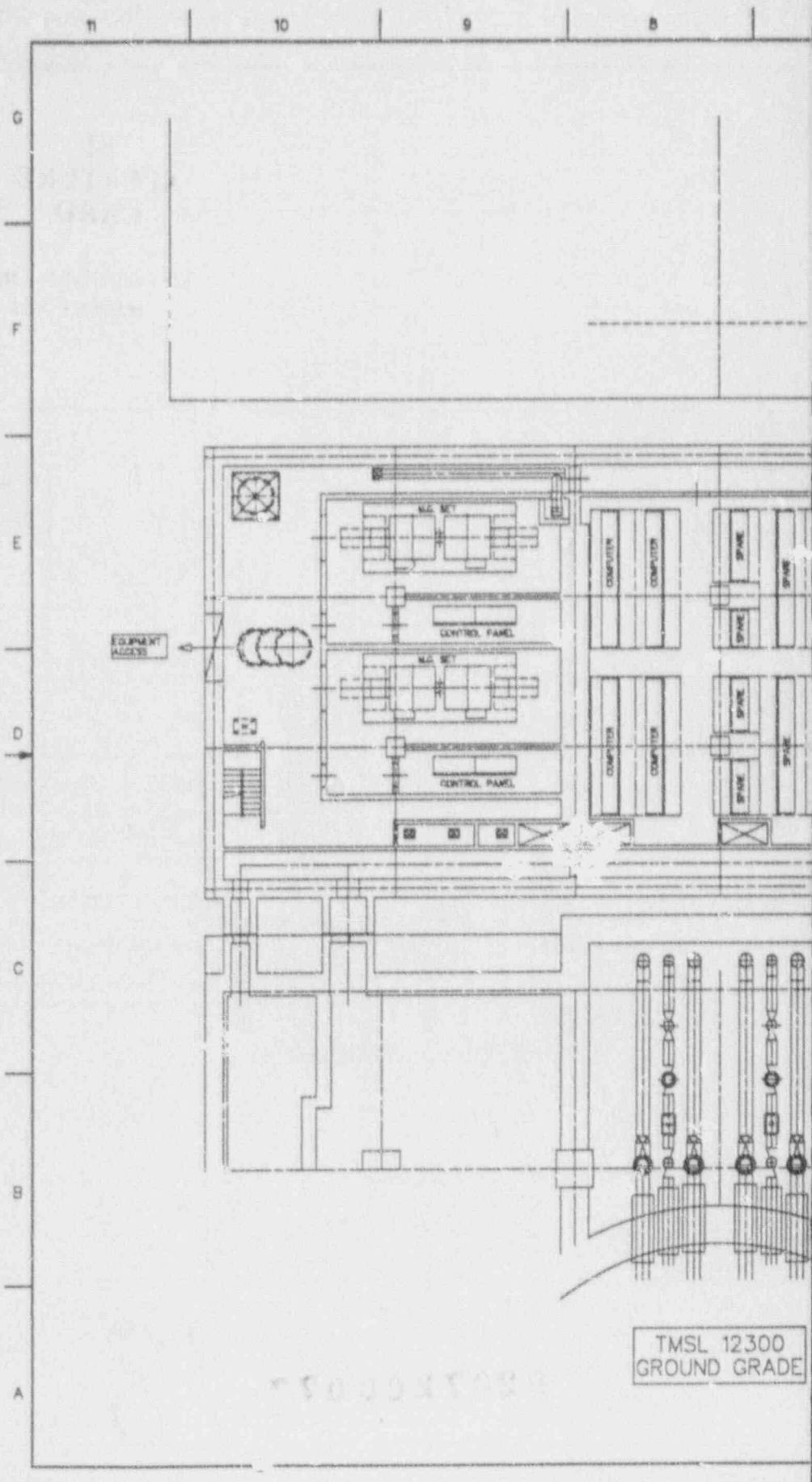

11
10
9
8
7
6
G
F
E
D
C
B
A
SHIFT TECH. ADVISR.
SHIFT SUPVR.
SPARE
SPARE
MAIN CONTROL AREA
OPERATORS AREA
OPERATORS AREA
TMSL 7900

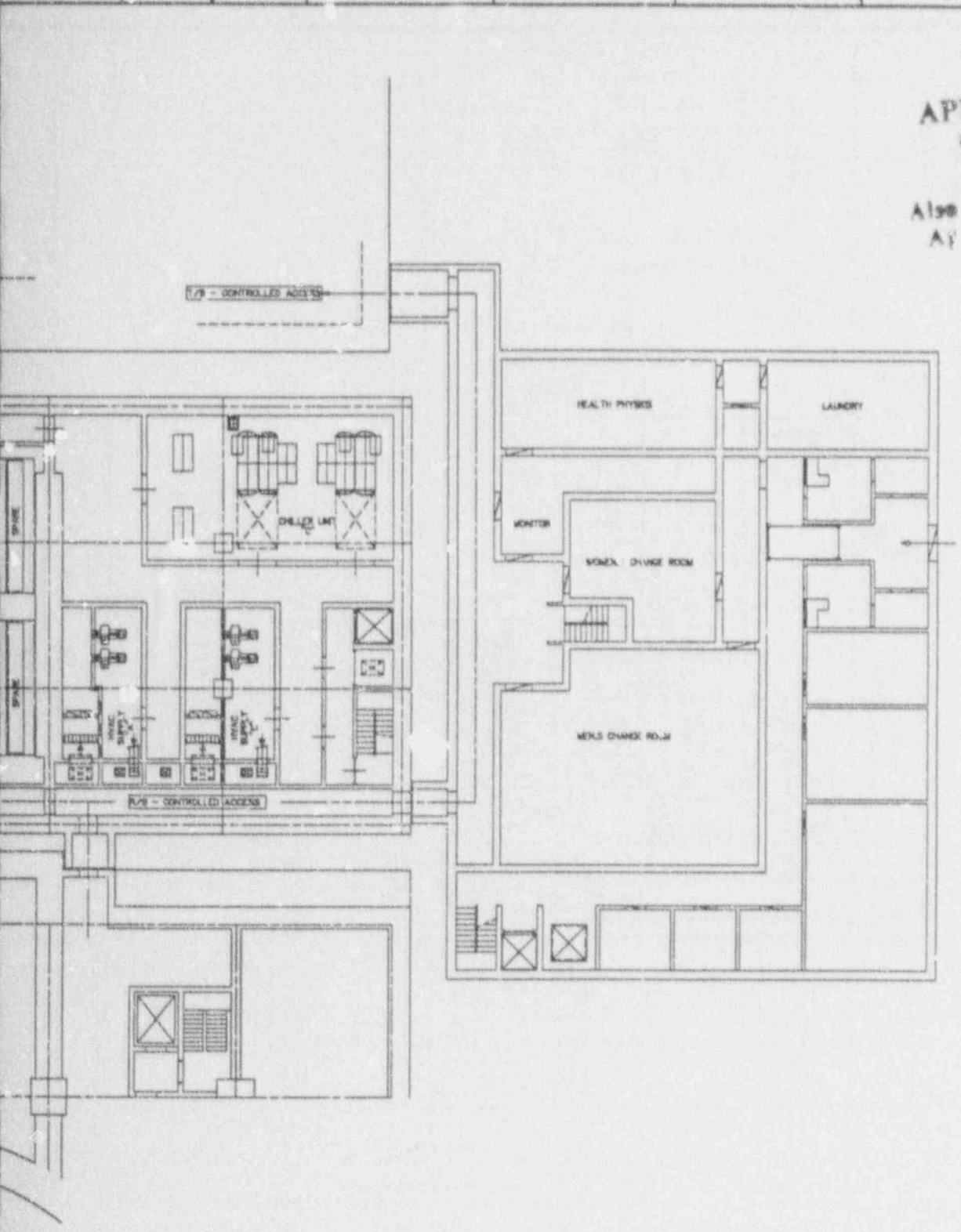


9207200077-16

91-120-06

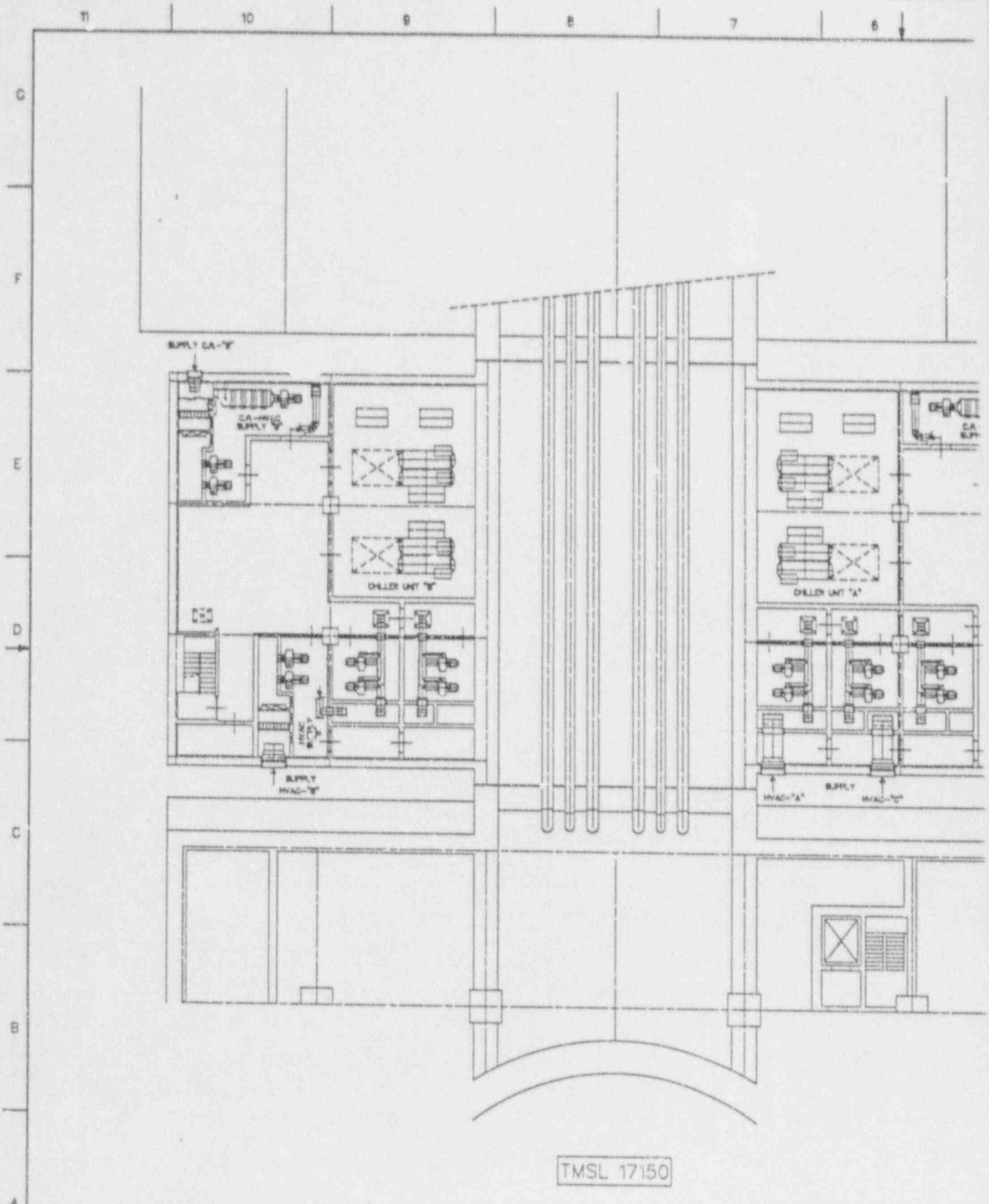
Figure 1.2-19 CONTROL AND SERVICE BUILDING, ARRANGEMENT PLAN AT ELEVATION 7900mm


11
10
9
8
G
F
E
D
C
B
A
EQUIPMENT ACCESS
M.C. SET
CONTROL PANEL
M.C. SET
CONTROL PANEL
COMPUTER
COMPUTER
SPARE
SPARE
COMPUTER
COMPUTER
SPARE
SPARE
TMSL 12300
GROUND GRADE

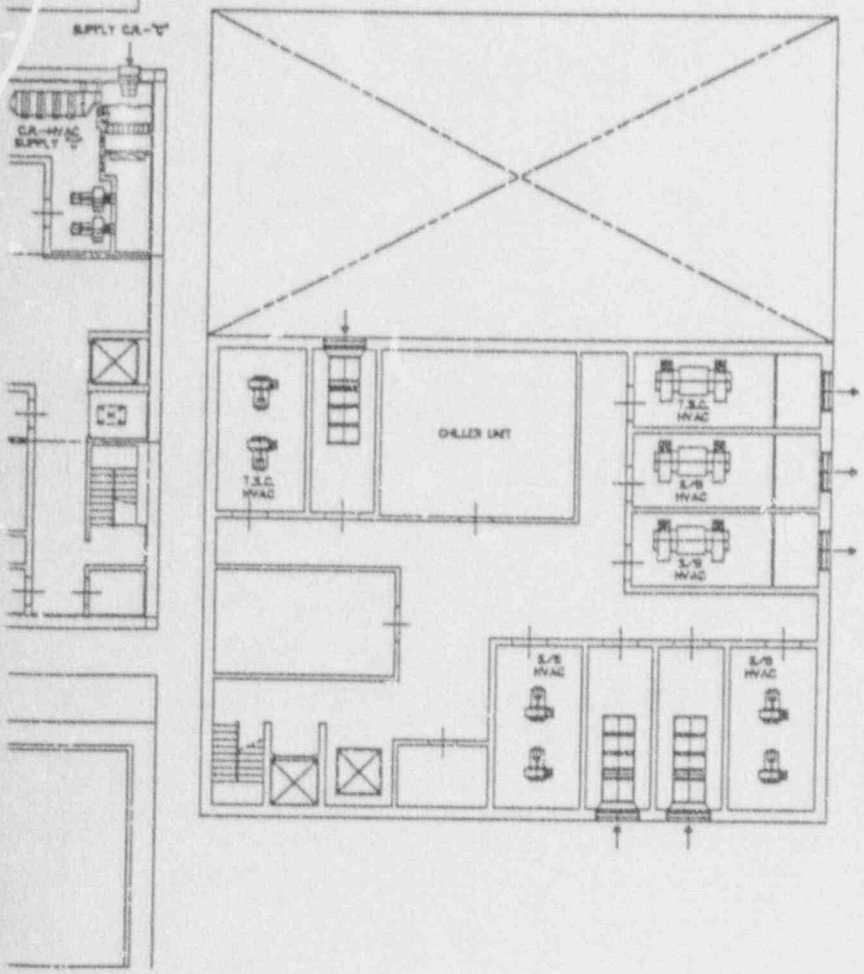


91-120-07

Figure 1.2-20 CONTROL AND SERVICE BUILDING, ARRANGEMENT PLAN AT ELEVATION 12300mm

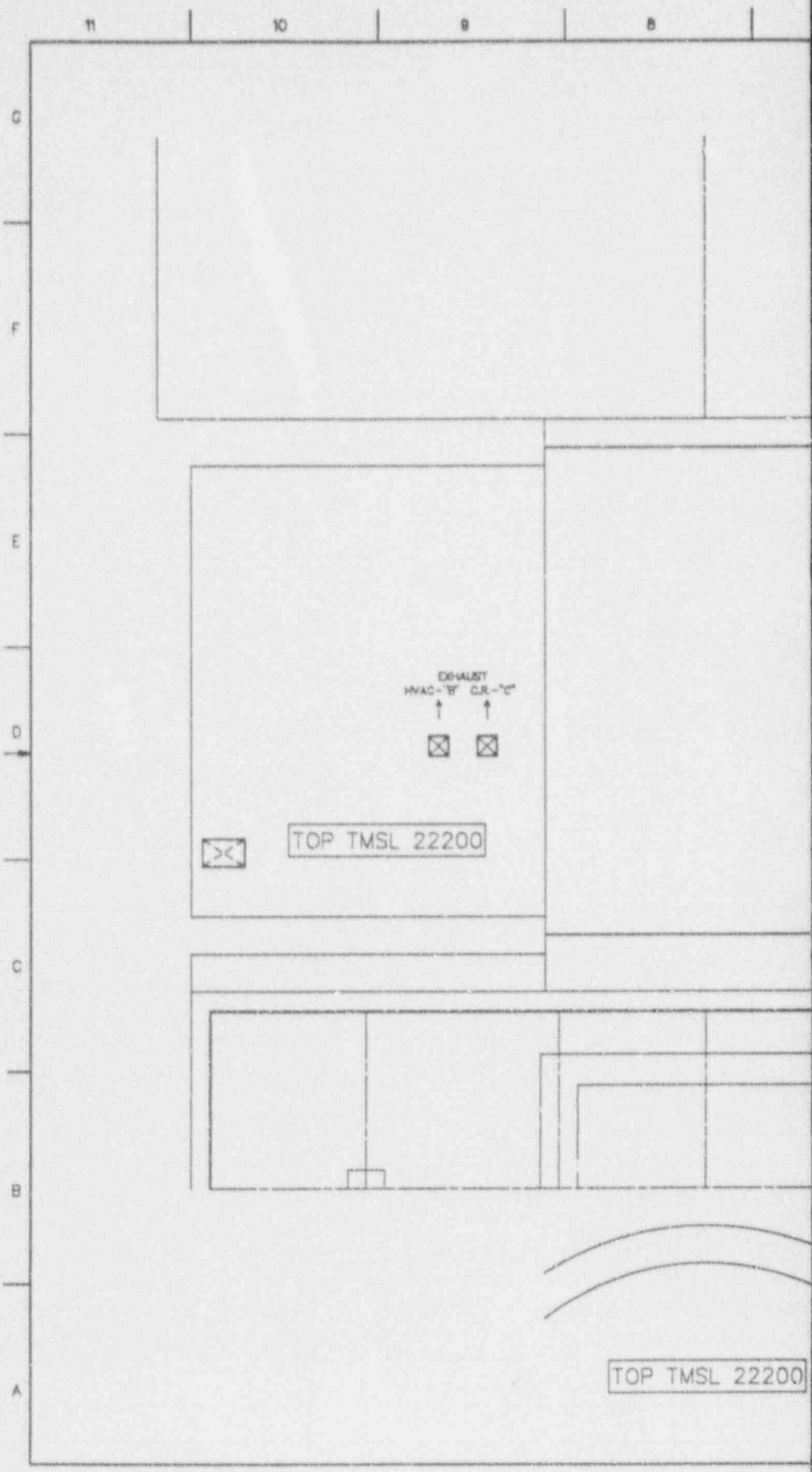

11
10
9
8
7
6
G
F
E
D
C
B
A
SUPPLY CA-"B"
CA-HVAC SUPPLY
CHILLER UNIT "B"
CHILLER UNIT "A"
SUPPLY HVAC-"B"
SUPPLY
HVAC-"A"
HVAC-"C"
TMSL 17150

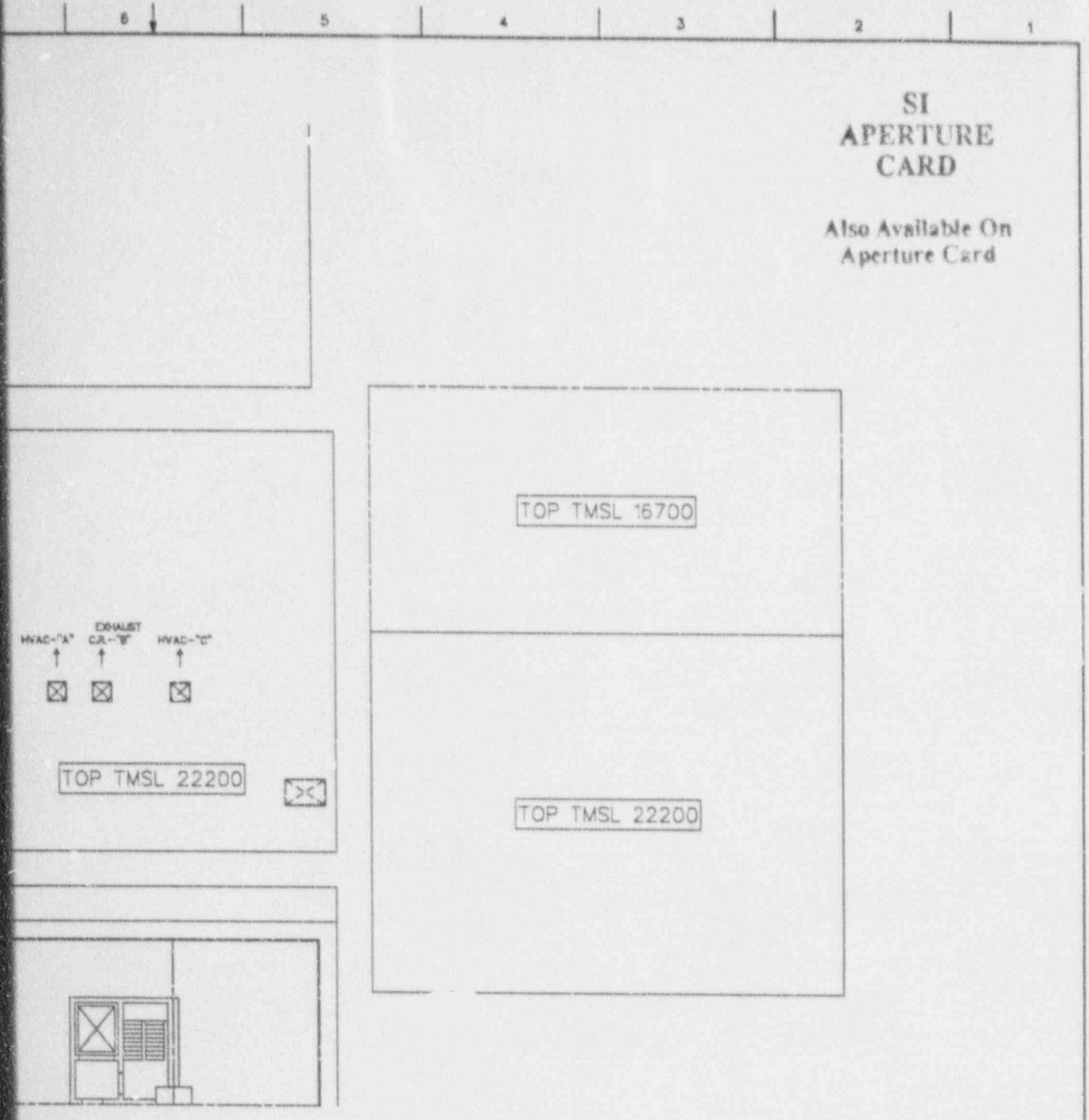
5 4 3 2 1



91-120-08

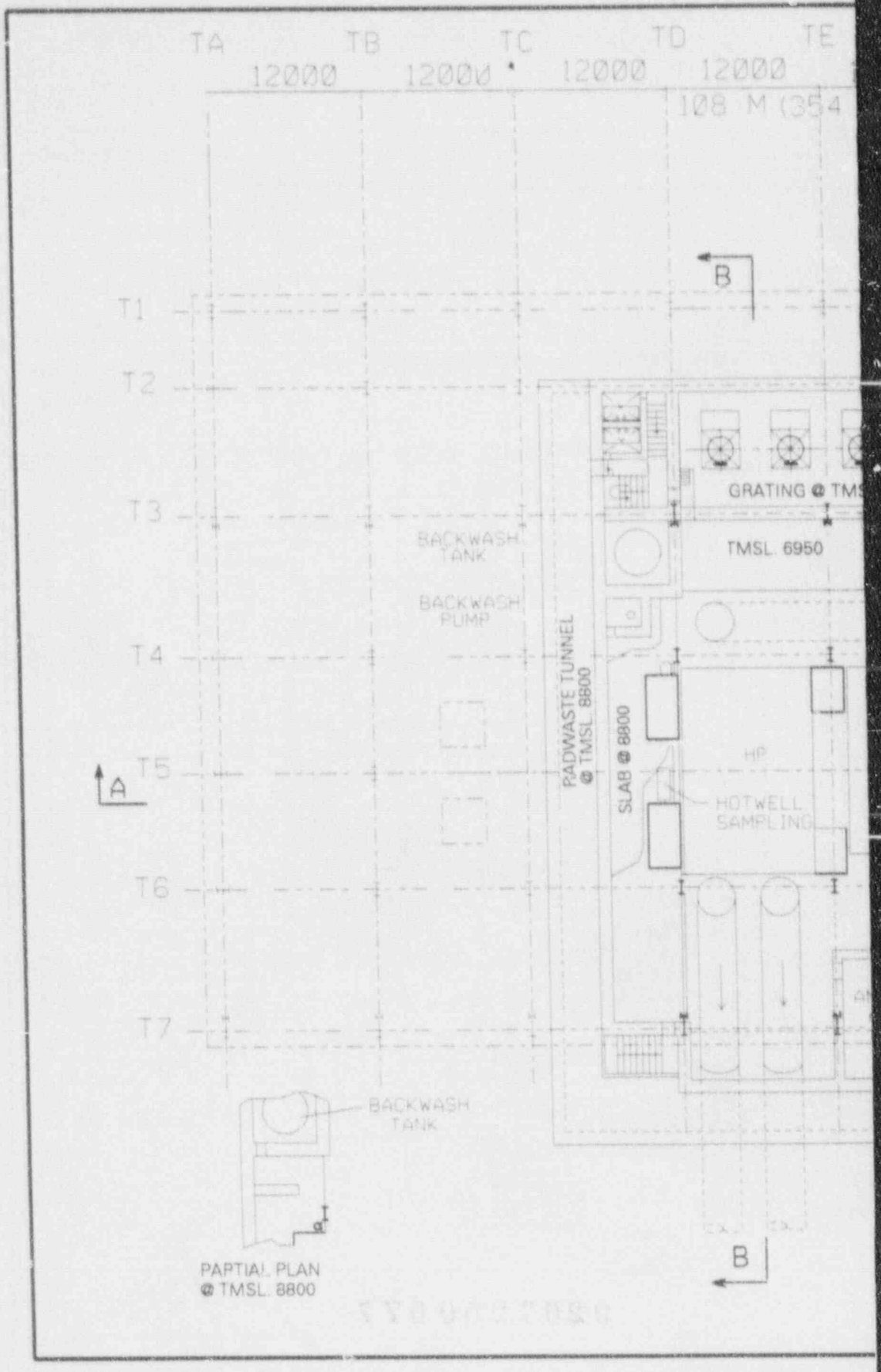
Figure 1.2-21 CONTROL AND SERVICE BUILDING, ARRANGEMENT PLAN AT ELEVATION 17150mm


11
10
9
8
G
F
E
D
C
B
A
EXHAUST
HVAC - "B" C.R. - "C"
TOP TMSL 22200
TOP TMSL 22200



91-120-09

Figure 1.2-22 CONTROL AND SERVICE BUILDING, ARRANGEMENT PLAN AT ELEVATION 22200mm


TA
TB
TC
TD
TE
12000
12000
12000
12000
108 M (354
T1
T2
T3
T4
T5
T6
T7
A
B
B
GRATING @ TMS
TMSL. 6950
BACKWASH TANK
BACKWASH PUMP
RADWASTE TUNNEL @ TMSL. 8800
SLAB @ 8800
HP
HOTWELL SAMPLING
BACKWASH TANK
PAPTIAL PLAN @ TMSL. 8800

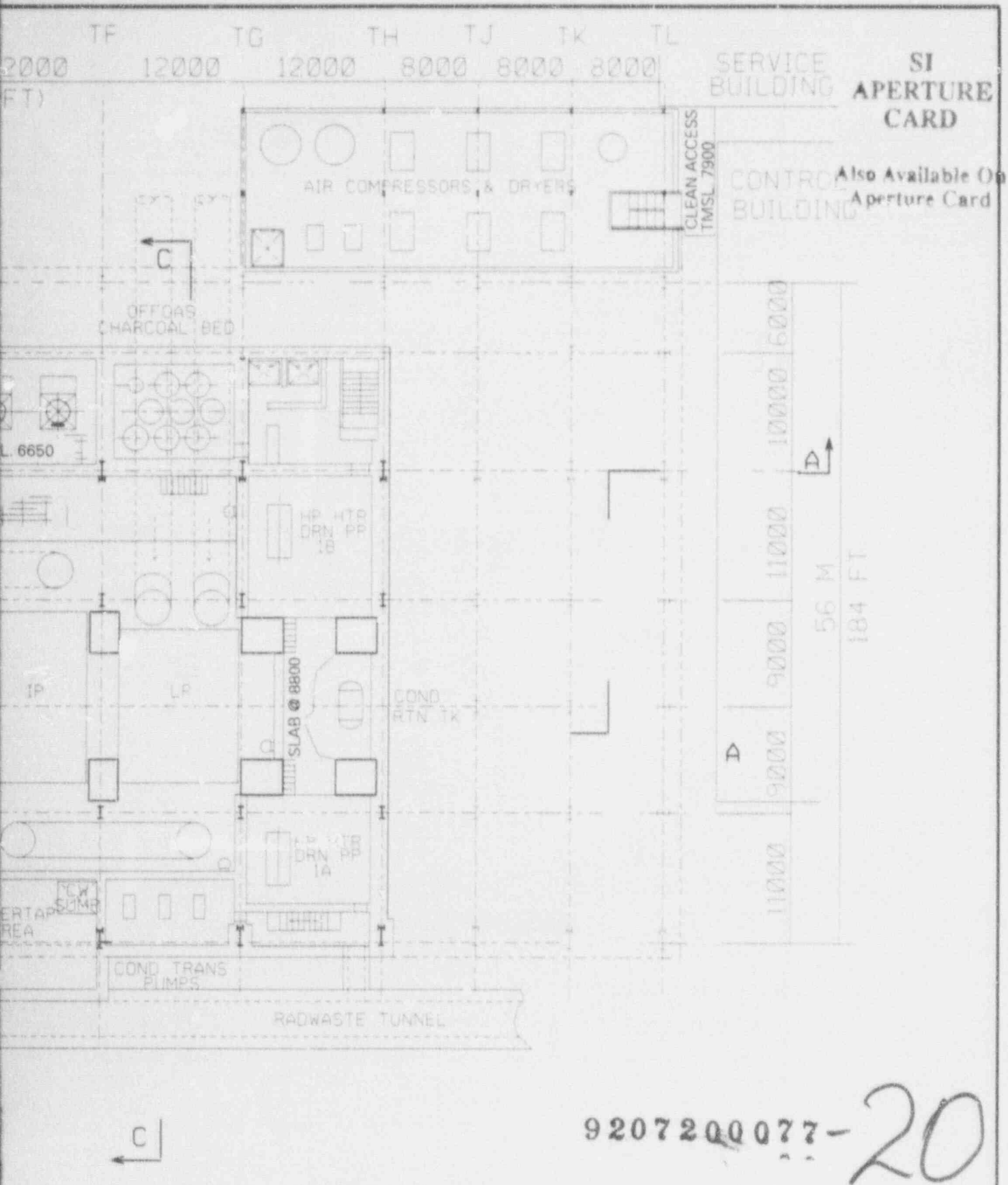


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Figure 1.2–24 TURBINE BUILDING, GENERAL ARRANGEMENT AT ELEVATION 5300mm

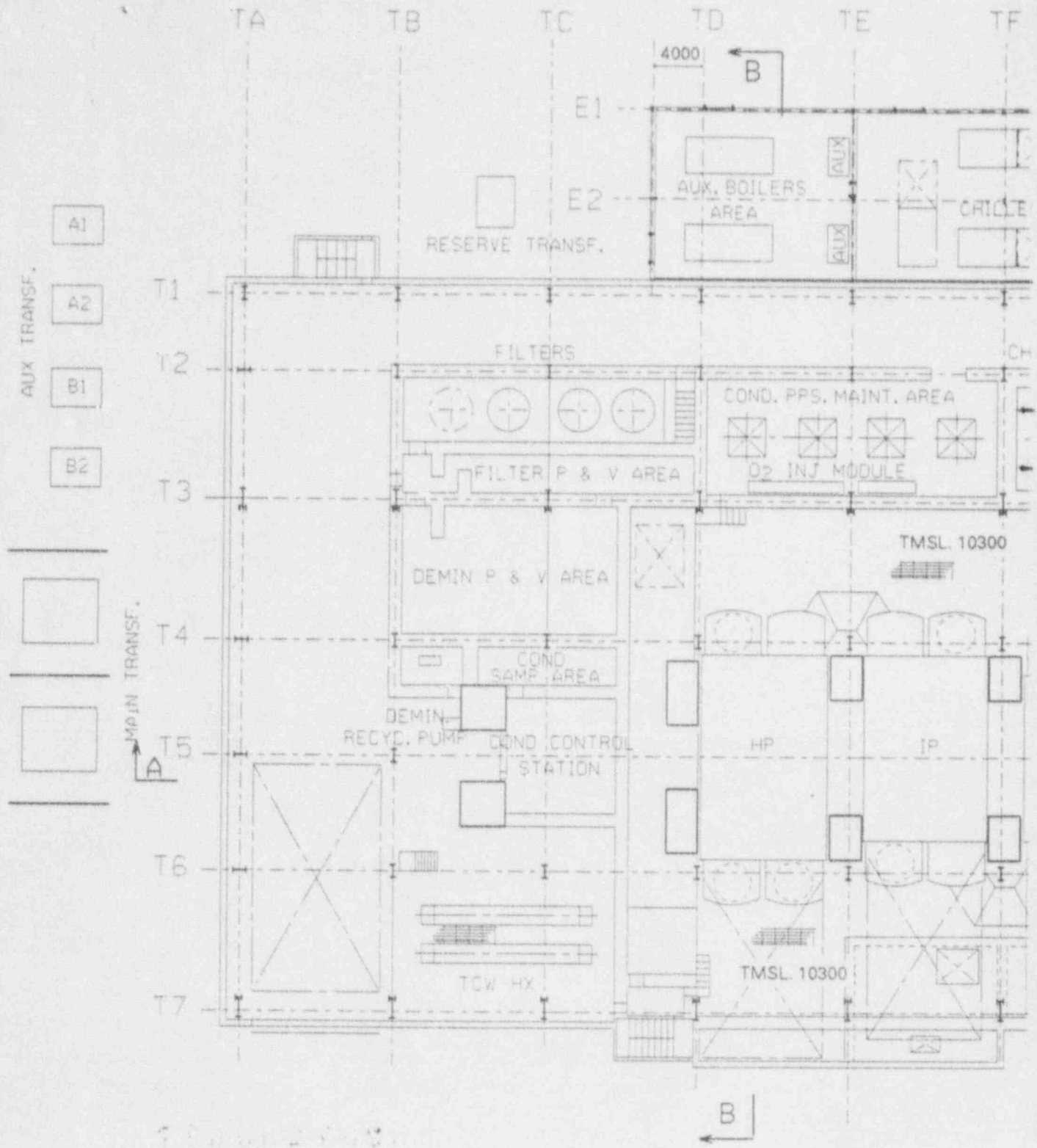
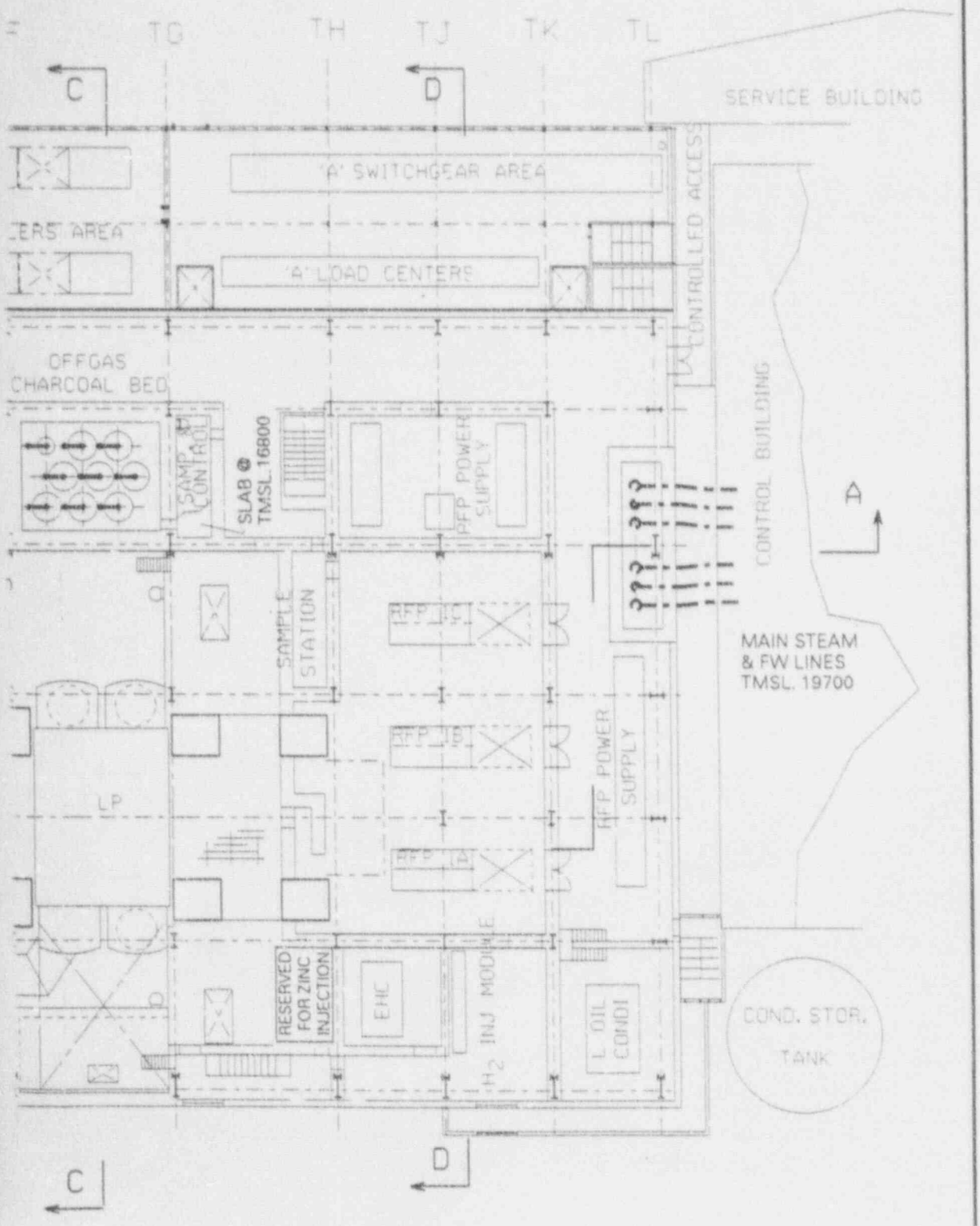

TA
TB
TC
TD
TE
TF
4000
B
E1
E2
AUX. BOILERS AREA
AUX
AUX
CHILLE
RESERVE TRANSF.
A1
A2
B1
B2
AUX TRANSF.
T1
T2
T3
T4
T5
T6
T7
FILTERS
COND. PPS. MAINT. AREA
FILTER P & V AREA
O2 INJ MODULE
TMSL. 10300
DEMIN P & V AREA
MAIN TRANSF.
A
COND SAMP. AREA
DEMIN. RECYC. PUMP
COND CONTROL STATION
HP
IP
TCW HX
TMSL. 10300
B

Figure 1



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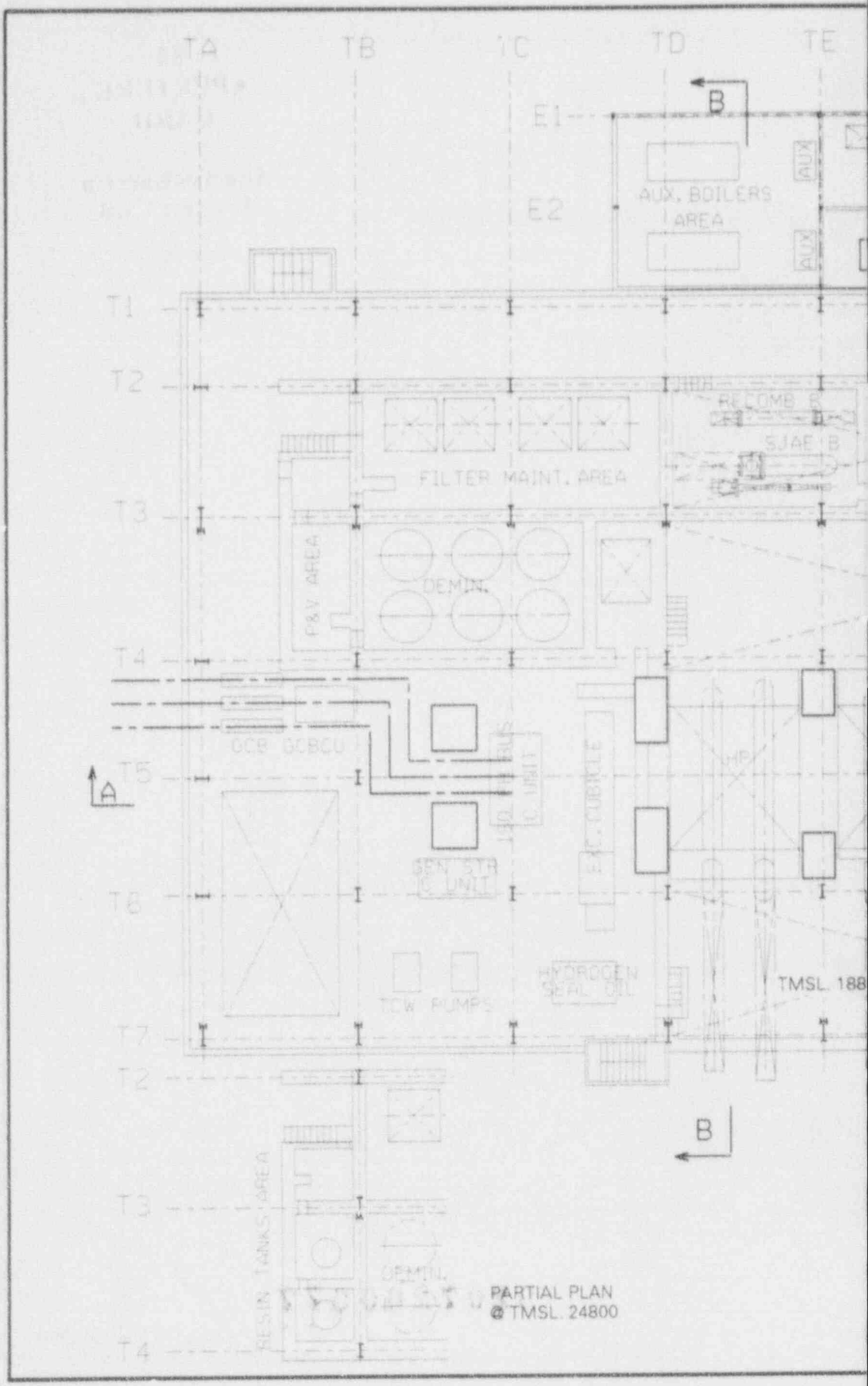
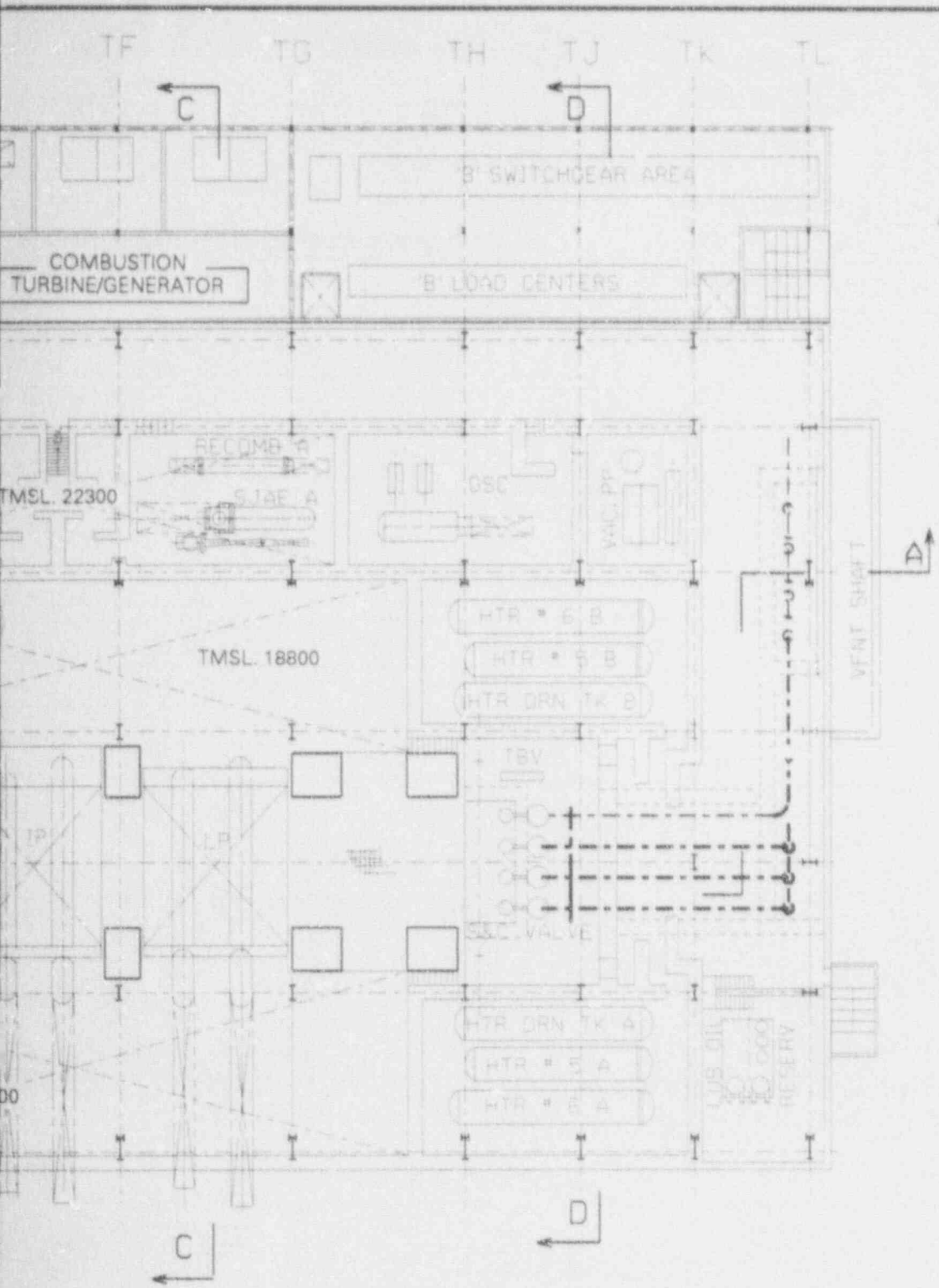
e 1.2–25 TURBINE BUILDING, GENERAL ARRANGEMENT AT ELEVATION 12300mm



PARTIAL PLAN
@ TMSL. 24800



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CARD

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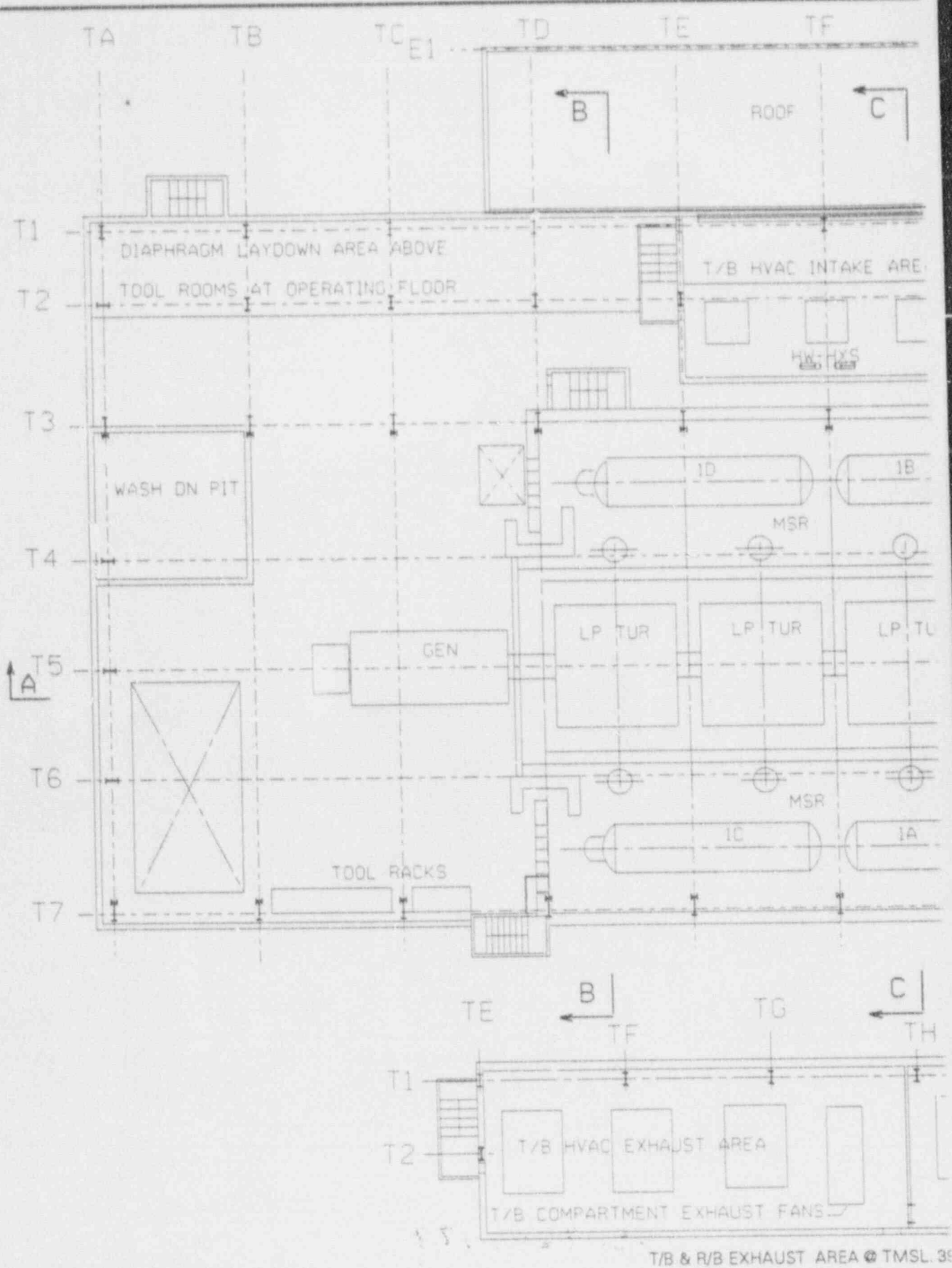
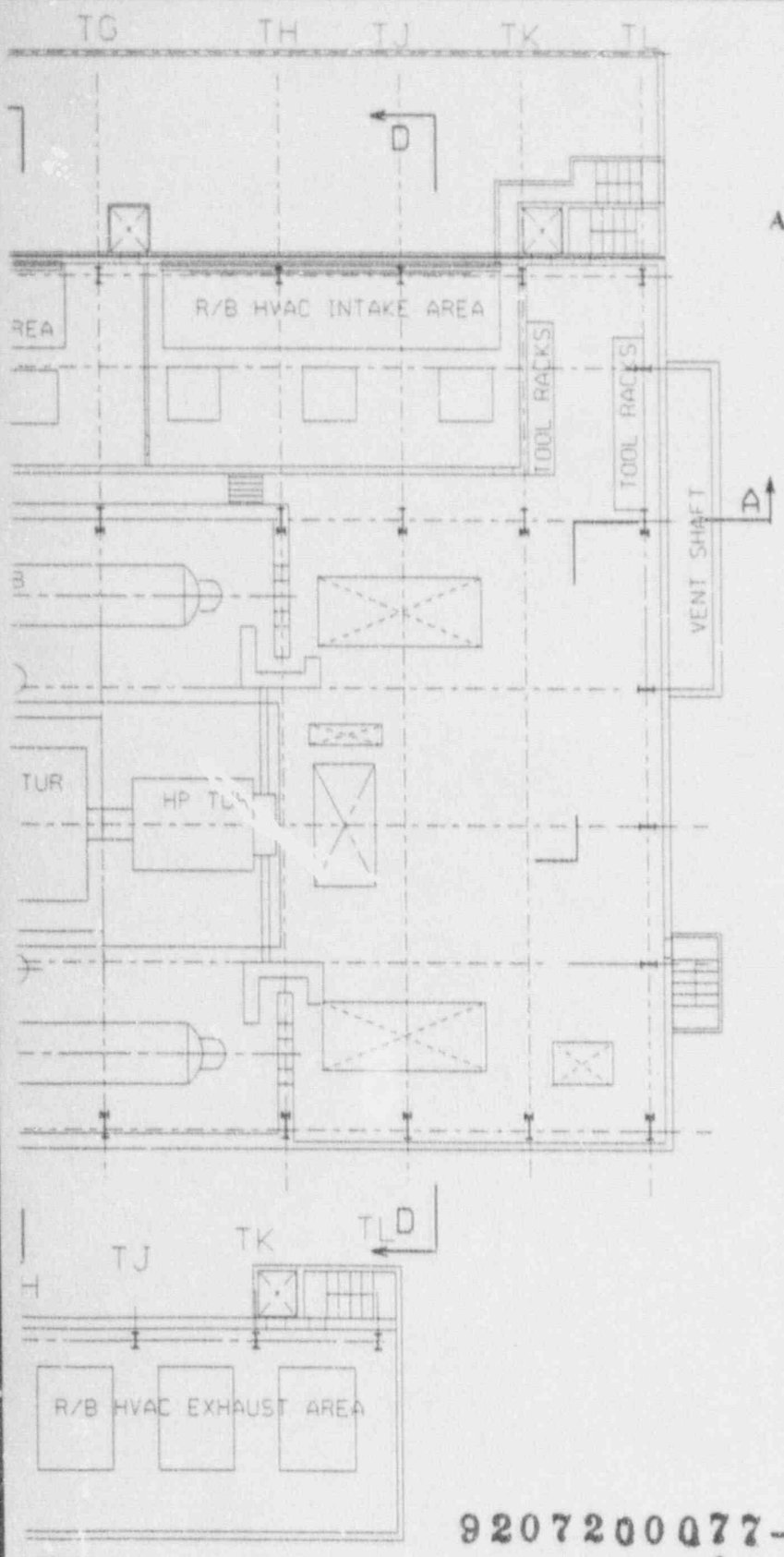
92-195-03

Figure 1.2–26 TURBINE BUILDING, GENERAL ARRANGEMENT AT ELEVATION 20300mm


TA
TB
TC
E1
TD
TE
TF
B
ROOF
C
T1
DIAPHRAGM LAYDOWN AREA ABOVE
T2
TOOL ROOMS AT OPERATING FLOOR
T/B HVAC INTAKE ARE
HW HYS
T3
WASH DN PIT
1D
1B
MSR
T4
LP TUR
LP TUR
LP TU
GEN
A
T5
T6
MSR
1C
1A
TOOL RACKS
T7
TE
B
TF
TG
C
TH
T1
T2
T/B HVAC EXHAUST AREA
T/B COMPARTMENT EXHAUST FANS
T/B & R/B EXHAUST AREA @ TMSL. 3

Figure



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CARD

Also Available On
Aperture Card

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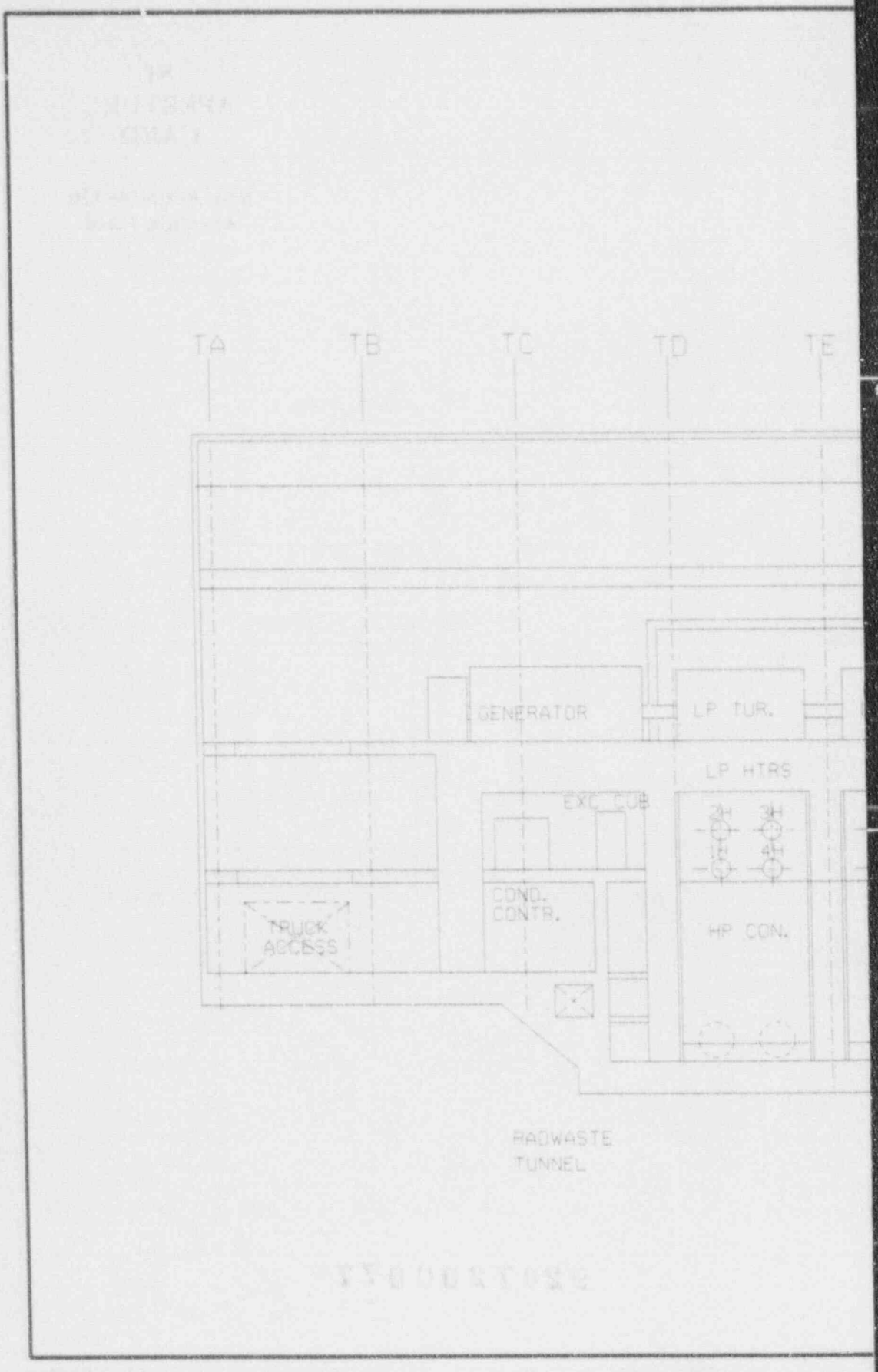
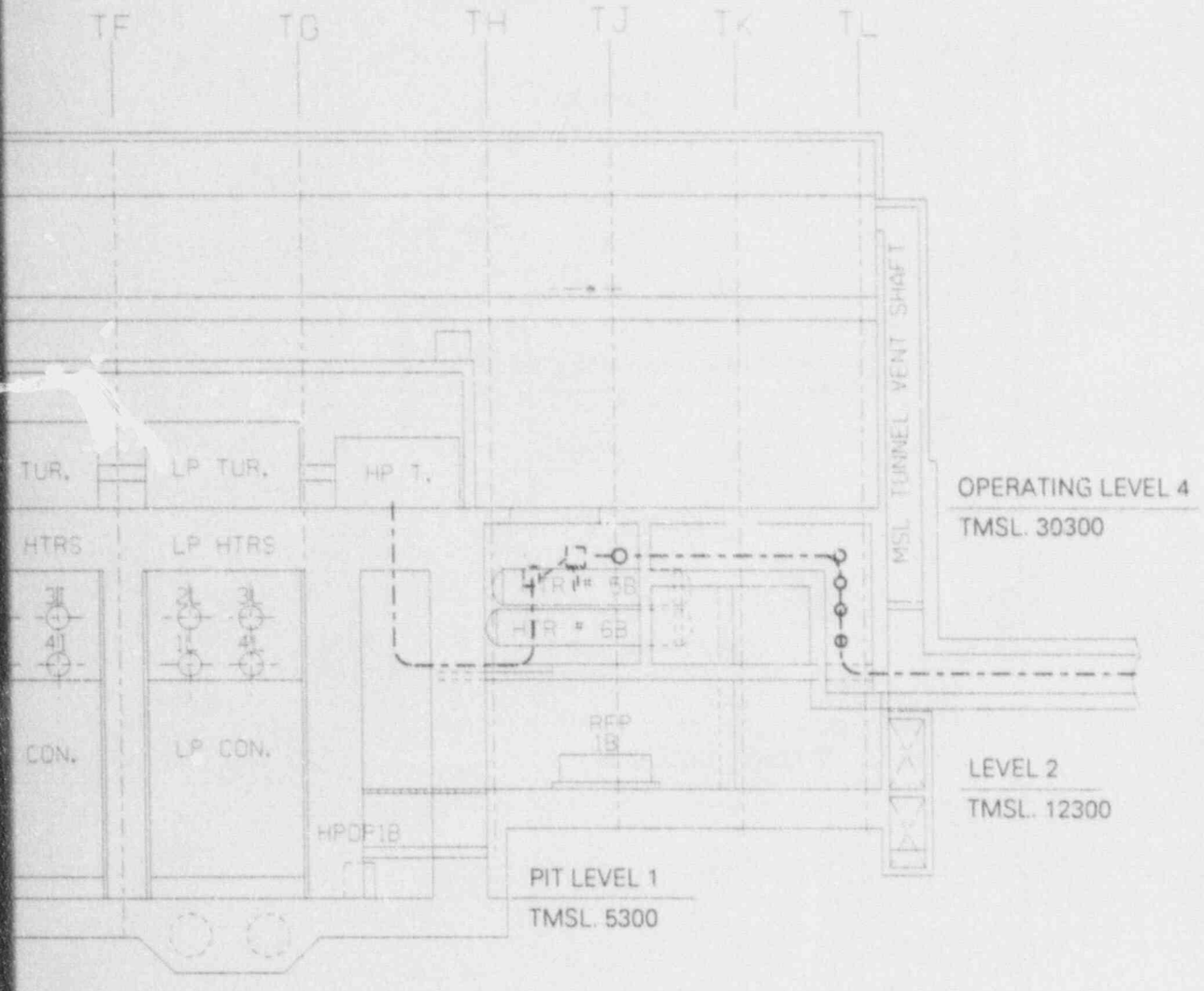
39000

92-195-04

ure 1.2–27 TURBINE BUILDING, GENERAL ARRANGEMENT AT ELEVATION 30300mm

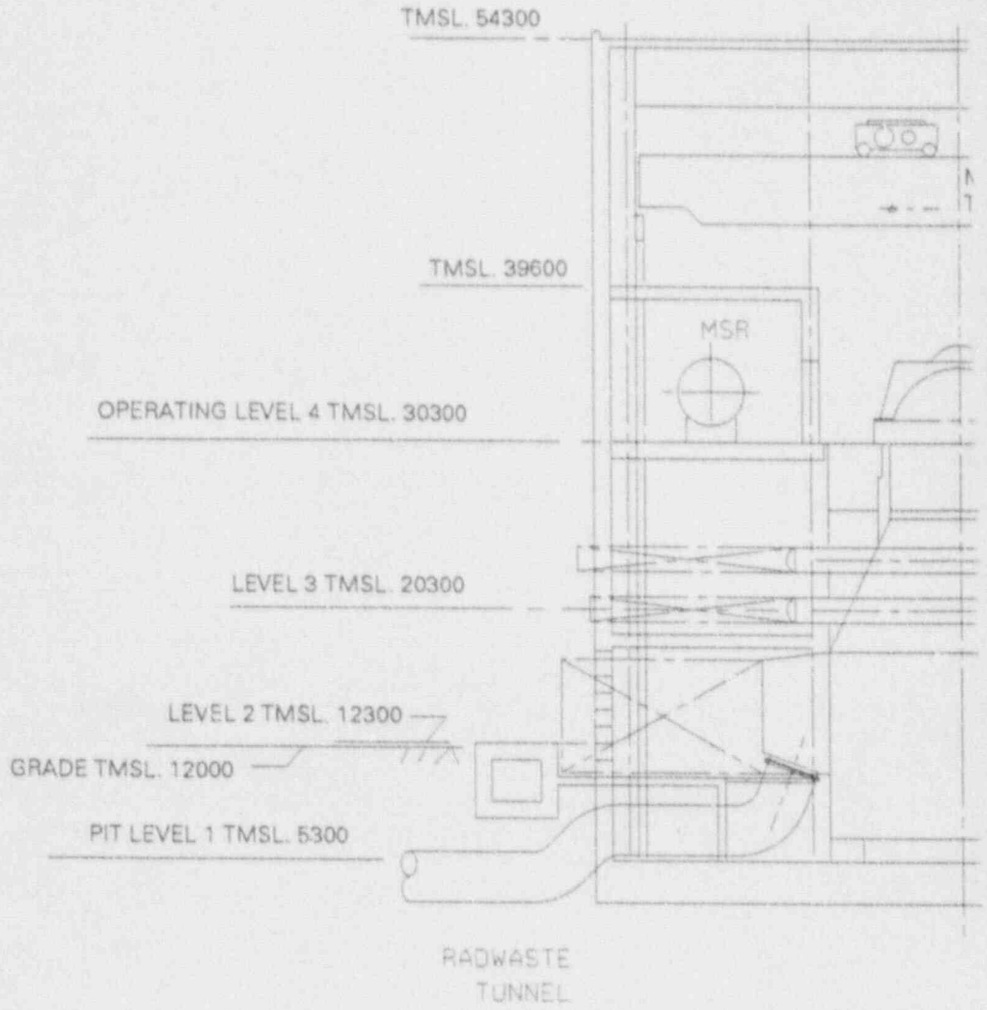

TA
TB
TC
TD
TE
GENERATOR
LP TUR.
LP HTRS
EXC. CUB
2H
3H
4H
COND.
CONTR.
HP CON.
TRUCK
ACCESS
RADWASTE
TUNNEL



9207200077-24

92-195-05

Figure 1.2–28 TURBINE BUILDING, GENERAL ARRANGEMENT, LONGITUDINAL SECTION A–A


TMSL. 54300
TMSL. 39600
MSR
OPERATING LEVEL 4 TMSL. 30300
LEVEL 3 TMSL. 20300
LEVEL 2 TMSL. 12300
GRADE TMSL. 12000
PIT LEVEL 1 TMSL. 5300
RADWASTE
TUNNEL

Fig

An

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APERTURE
CARD

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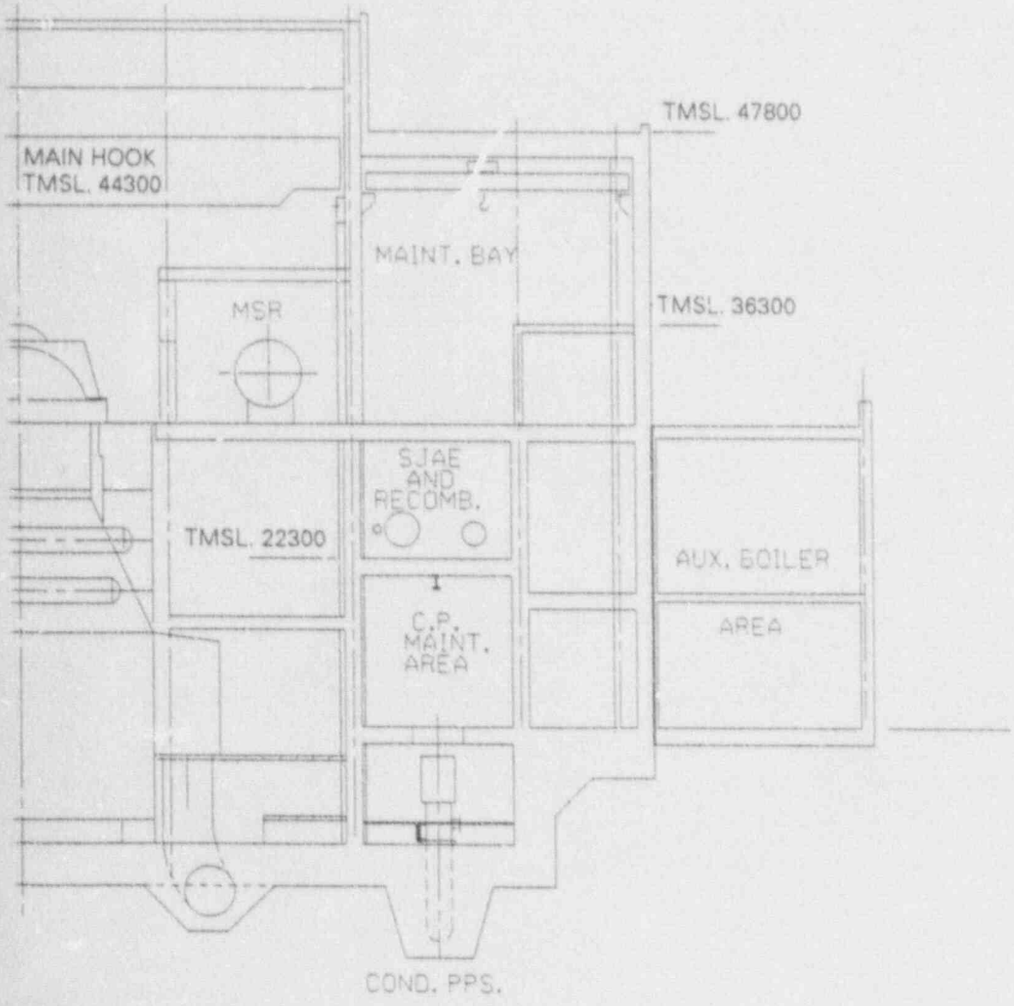
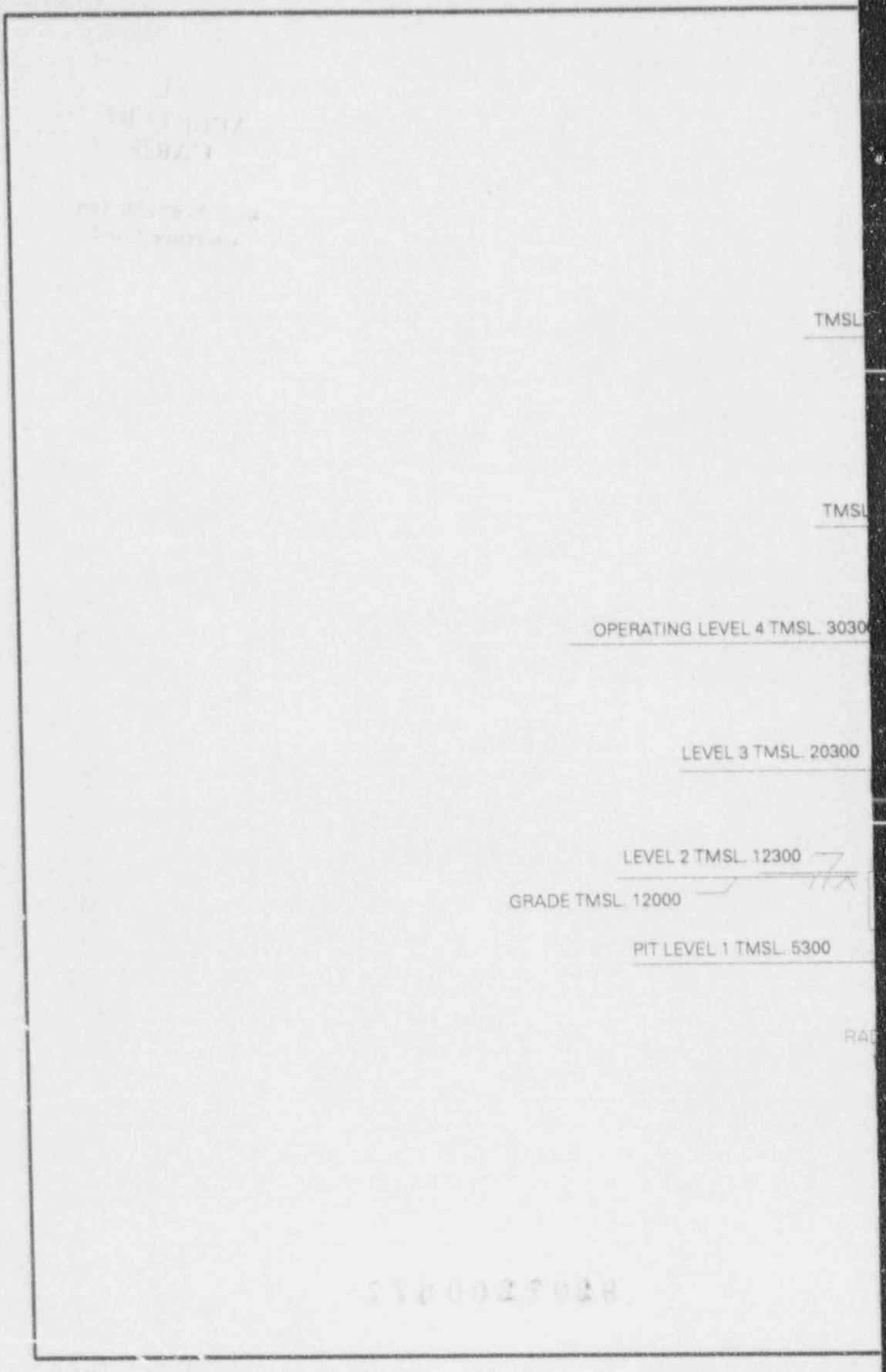
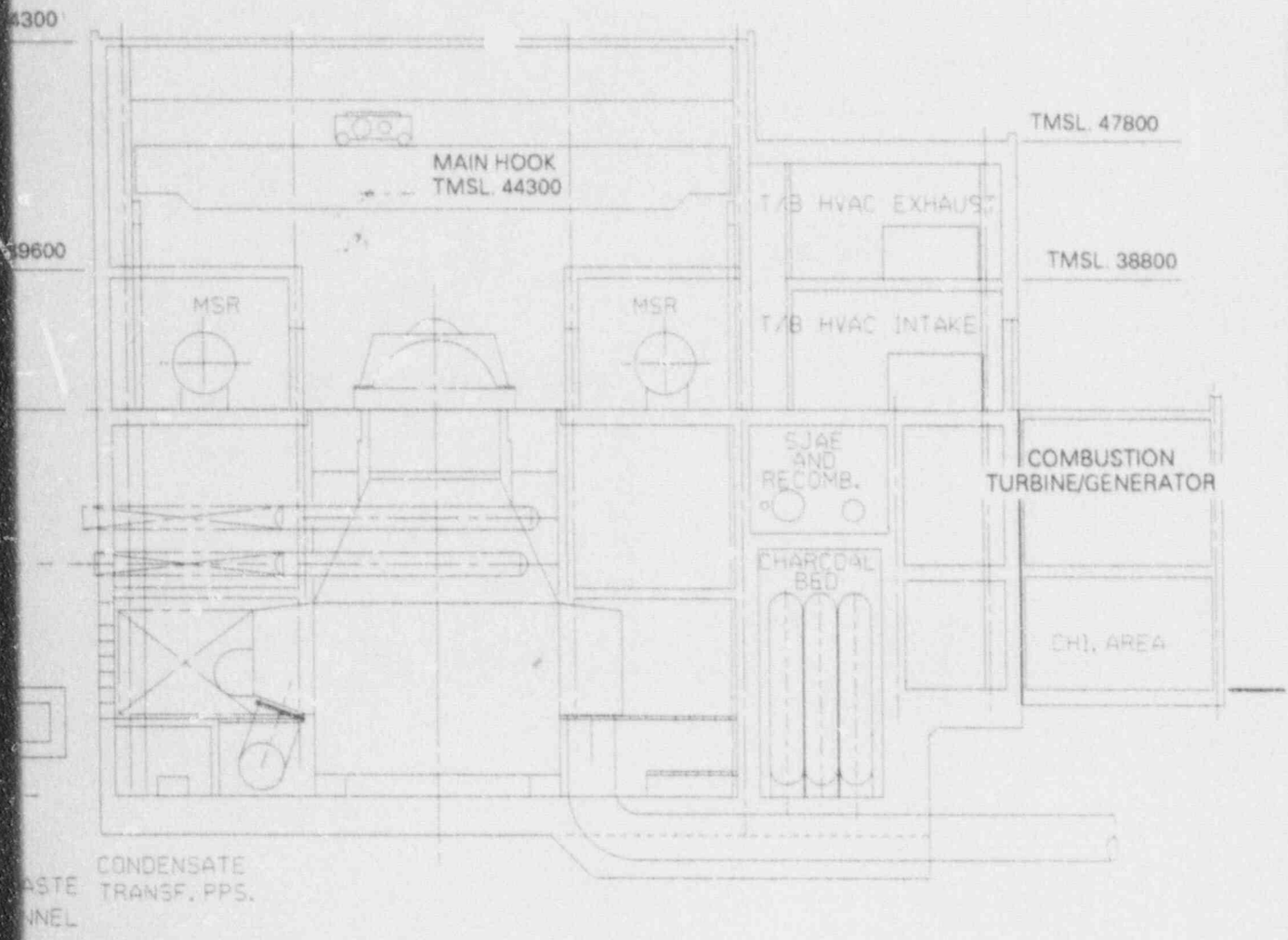


9207200077-25

92-195-06

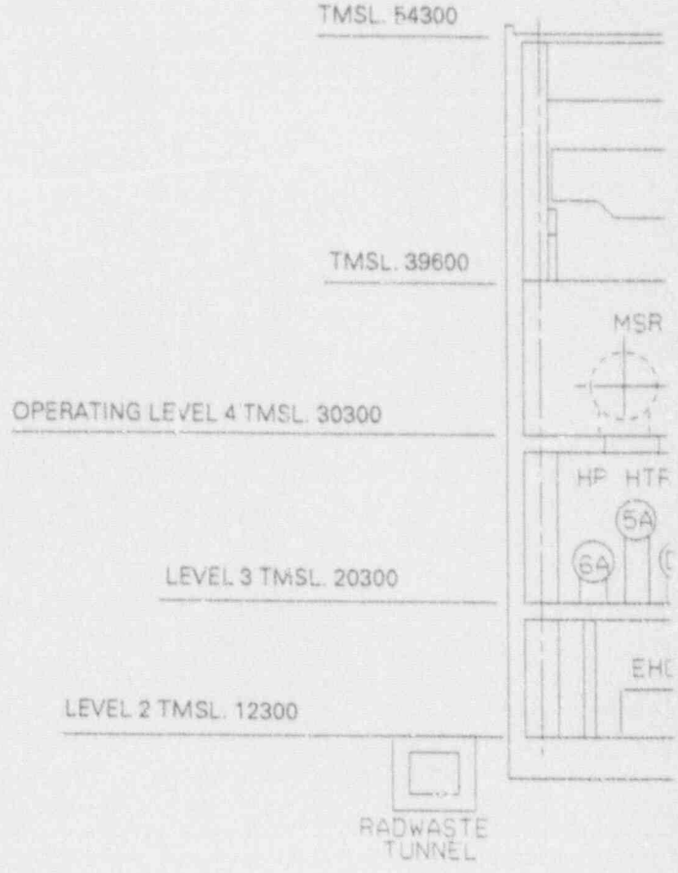
Figure 1.2–29 TURBINE BUILDING, GENERAL ARRANGEMENT, CROSS SECTION B–B


TMSL
TMSL
OPERATING LEVEL 4 TMSL. 3030
LEVEL 3 TMSL. 20300
LEVEL 2 TMSL. 12300
GRADE TMSL. 12000
PIT LEVEL 1 TMSL. 5300



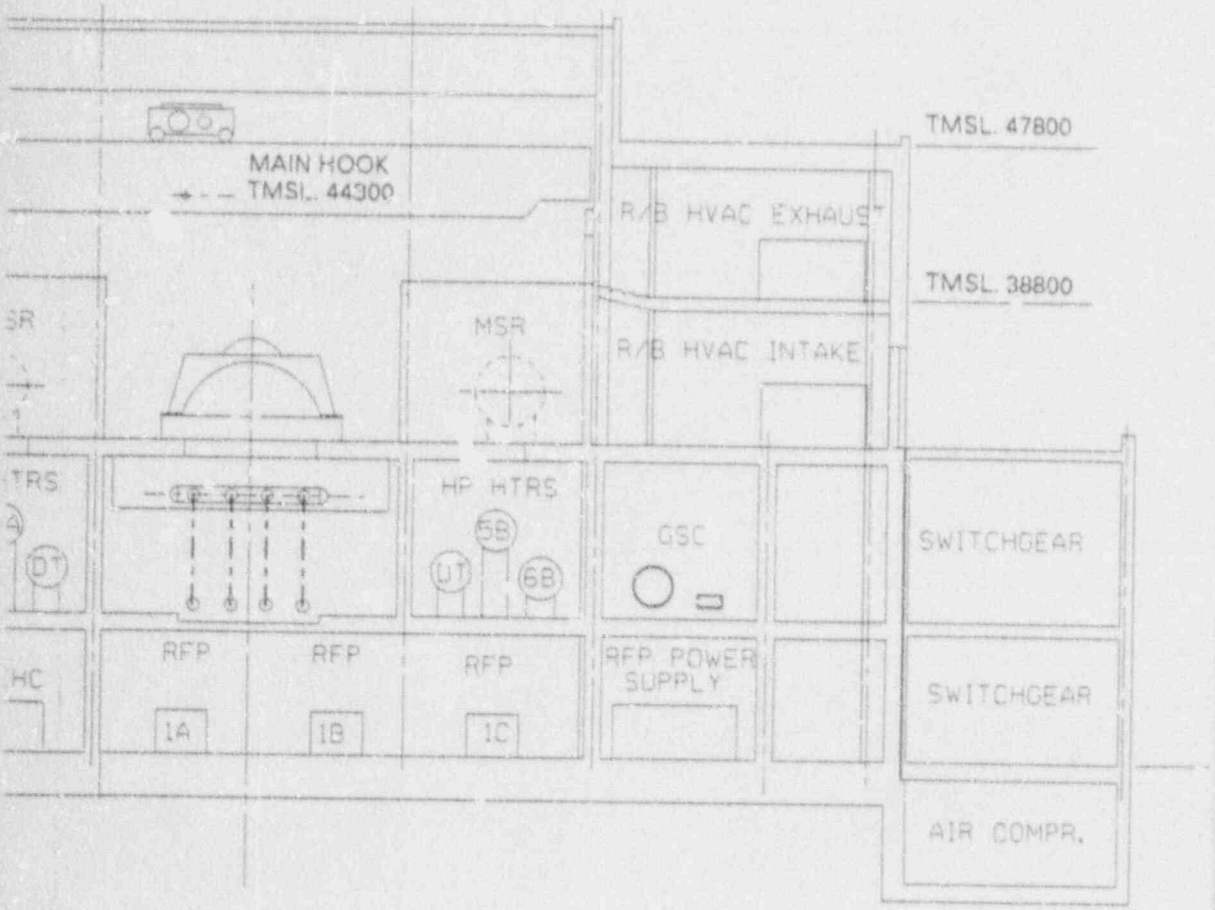
92-195-07

Figure 1.2–30 TURBINE BUILDING, GENERAL ARRANGEMENT, CROSS SECTION C–C


TMSL. 54300
TMSL. 39600
MSR
OPERATING LEVEL 4 TMSL. 30300
HP HTF
5A
6A
LEVEL 3 TMSL. 20300
EHC
LEVEL 2 TMSL. 12300
RADWASTE
TUNNEL

Fig

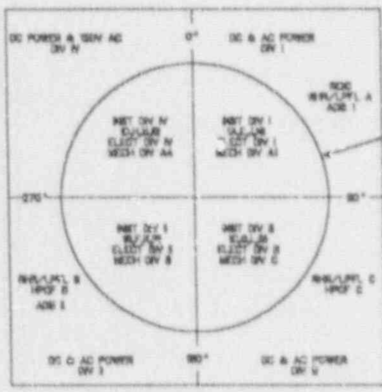
Arr



92-195-08

Figure 1.2-31 TURBINE BUILDING, GENERAL ARRANGEMENT, CROSS SECTION D-D

14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6



ORIENTATION OF THE NUCLEAR BOILER SYSTEM
INSTRUMENTS TO MEET SEPARATION REQUIREMENTS
(INCLUDES ASSOCIATED INSTRUMENT BUFFS AND ECCS LOCATIONS)

NOTES

1. ENCLOSED EQUIPMENT AND COMPONENTS ARE TYPICAL FOR THE OTHER STEAMLINES AND HAVE THE SAME PART NUMBERS UNLESS OTHERWISE NOTED.
   EXAMPLE: 1008 B ON LINE "B"
   EXAMPLE: 1008 B ON LINE "C"

2. SEE REFERENCE DOCUMENT AS FOR THE SIZE OF THE INLET FLANGE FOR THE SAFETY RELIEF VALVES SRVS.

3. PIPE SIZES SHOWN ON THIS DRAWING ARE APPROXIMATE EXCEPT AT POINTS OF CONNECTION WITH THE SUPPLIED EQUIPMENT OR PIPING. THE PIPING DESIGNER SHALL CHECK AND ADJUST PIPING SIZE IN ACCORDANCE WITH HIS PIPING LAYOUT FOR CONFORMANCE WITH THE NUCLEAR BOILER SYSTEM DESIGN SPECIFICATION B21-4010 AND PROCESS DIAGRAM B21-1010.

4. THE BLOCK VALVE F102 MAY NOT BE PROVIDED IF A SHUTOFF VALVE IS SUPPLIED WITH THE LEVEL TRANSMITTER LT004. IF THE BLOCKING SHUT-OFF VALVE IS PART OF LT004, THE DESIGN PRESSURE FOR THIS INSTRUMENT LINE IS 87.9 KG/CM² G ALL THE WAY TO LT004.

5. TO BE CONNECTED IS TO THE STRAIGHT RUN OF PIPE DOWNSTREAM OF F008 WITH UPSTREAM AND DOWNSTREAM STRAIGHT LENGTH FROM THE TAP TO GIVE AS ACCURATE A PRESSURE MEASUREMENT AS FEASIBLE. TAPS TO MEET ASME PTC 6 1964 "STEAM TURBINE" PARAGRAPH 4.74.

6. AN EXPANSION LEG SHALL BE PROVIDED IN THE INSTRUMENT LINE BETWEEN THE CONDENSING POT D011 AND THE WATER TIGHT PENETRATION IN THE REFUELING BELLOWS. THE EXPANSION LEG AND PIPING INSTALLATION SHALL BE DESIGNED TO ALLOW FOR THE MAXIMUM CHANGE OF VESSEL LENGTH WITH TEMPERATURE TO AVOID OVERSTRESSING THE PIPING AT THE SEAL OR DAMAGE TO THE INSULATION AROUND THE VESSEL. ELEVATION "A" SHALL BE AT OR ABOVE THE CENTERLINE OF THE RPV HEAD VENT LINE. THE INSTRUMENT LINE FROM ELEVATION "A" TO ELEVATION "B" SHALL BE SLOPED CONTINUOUSLY UPWARD ≥ 1/50 AND BE KEPT AS SHORT AS PRACTICAL. THE INSTRUMENT LINE SHALL BE KEPT INSULATED FROM THE CONNECTION WITH THE RPV HEAD VENT LINE TO THE CONDENSING POT. THE INSULATION SHALL HAVE A MAXIMUM CONDUCTANCE OF 0.000088 KCAL/HR-CM² -°C.

7. PROVISIONS FOR INSTRUMENT LINE ISOLATION SHALL BE IN ACCORDANCE WITH SUPPORTING DOCUMENTS 3 & 4. ONE ORIFICE SHALL BE INSTALLED IN EACH INSTRUMENT LINE CONNECTED TO THE REACTOR COOLANT PRESSURE BOUNDARY (RCPB). ORIFICE SIZE IS 6.4mm AND MAXIMUM NUMBER OF ORIFICES PER LINE IS ONE.

8. VALVE MOTOR OPERATORS AND PILOT SOLENOIDS ARE AC OPERATED UNLESS OTHERWISE SPECIFIED.

9. THE CONDENSING CHAMBER SHALL CONSIST OF A 40A X 20A PIPE "TEE" AND EXTENSION PIPE WITH CAP WHICH IS CLOSE COUPLED TO 50A REACTOR VESSEL INSTRUMENT NOZZLE BY A 50A TO 40A REDUCER. THE RUN OF THE "TEE" SHALL BE LEVEL IN THE HORIZONTAL PLANE FOR ALL CONDITIONS WITHIN 3mm. THE 20A BRANCH CONNECTION TO THE "TEE" SHALL BE LOCATED VERTICALLY AND EXTEND DOWNWARD. THE 20A PIPE SHALL HAVE A DOWNWARD SLOPE ≥ 1/25 WITH A TOTAL VERTICAL DROP TO THE CONTAINMENT WALL NOT TO EXCEED 3.0 METERS PRIOR TO PENETRATING THE CONTAINMENT WALL. THE 20A PIPE SHALL BE REDUCED ... FLEXIBILITY SHALL BE PROVIDED IN THE 20A AND 20A PIPE SUCH THAT THE CONDENSING CHAMBER MOVES WITH THE REACTOR VESSEL AS IT THERMALLY EXPANDS AND CONTRACTS. THERMAL EXPANSION SHALL NOT CHANGE THE ELEVATION OF THE 40A X 20A TEE WITH RESPECT TO THE RPV INSTRUMENT NOZZLE BY MORE THAN 3mm. THE CONDENSING CHAMBER TEES AND THE 20A AND 20A PIPES FROM IT TO THE INSTRUMENTATION SHALL NOT BE INSULATED.

   AN ACCEPTABLE ALTERNATE IS TO USE A CONVENTIONAL CONDENSING POT IN PLACE OF THE 40A X 20A PIPE TEE AND EXTENSION PIPE WITH CAP.

10. LOCATE THE TEE AS CLOSE AS POSSIBLE TO REACTOR VESSEL.

11. THE MAXIMUM OPERATING PRESSURE AND TEMPERATURE FOR THE PORTION OF THE MAIN STEAM LINE DRAIN LINE HEADER DOWNSTREAM OF THE MOTOR OPERATED VALVES BETWEEN F0?? AND F0?? AND THE RESTRICTING ORIFICE D008 AND D007 TO BE DETERMINED BY THE DESIGNERS OF THE MAIN CONDENSER SYSTEM.

12. LOCATE THE DRAIN LINE 20A-NB-542 AND ASSOCIATED EQUIPMENT FOR DETECTING THE LEAKAGE AS CLOSE AS PRACTICAL TO THE RPV.

13. FOR DETAILS, SEE B11-0021 & 0026.

14. THERMAL SLEEVE IS SHOWN AS ONE POSSIBLE METHOD OF ACCOMMODATING ΔT BETWEEN RCIC/RHR/CUW AND FEEDWATER STREAMS. OTHER METHODS WHICH MEET APPLICABLE CODE REQUIREMENTS MAY BE USED.

15. SPRING CLOSING CHECK VALVE, SPRING ACTUATOR HELD IN OPEN POSITION BY AIR PRESSURE DURING NORMAL OPERATION. IF NO OTHER CHECK VALVE BETWEEN THE REACTOR AND THE FEEDWATER PUMPS IS DESIGNED TO CLOSE PRIOR TO APPRECIABLE FLOW REVERSAL, F003 SHOULD BE INTERLOCKED TO DUMP AIR PRESSURE AUTOMATICALLY IN THE EVENT ALL FEEDWATER PUMPS TRIP.

16. TRANSITION FROM 200A TO 300A PIPING TO BE DETERMINED BY THE PLANT ARRANGEMENT OF THE SRV DISCHARGE LINES.

17. THE LICENSING BASIS FOR THE SRV DISCHARGE LINE IS SEISMIC CLASS II. THE DESIGN BASIS FOR THE SRV DISCHARGE LINE IS SEISMIC CLASS SSE.

18. NOT USED

19. WHEN ALL FEEDWATER FLOW IS THROUGH A LOW FLOW FEEDWATER CONTROL VALVE, ONE FEEDWATER LINE TO THE REACTOR VESSEL IS TO BE SHUT-OFF TO MINIMIZE THERMAL CYCLING OF THE FEEDWATER NOZZLES ON THE RPV. WITH BOTH FEEDWATER LINES OPEN, FLOW MAY OSCILLATE BETWEEN THE TWO LINES DUE TO THE PARTIALLY OPEN CHECK VALVE.

20. ROUTE THE PIPE THROUGH THE MANHOLE IN BETWEEN THE DRYWELL AND THE RPV FLANGE.

21. WATER LEVEL INSTRUMENTS FOR VARIOUS RANGES ARE C... STATED BELOW. ALL WATER LEVEL SWITCH SETPOINTS ... IE, THE ANALYSES ARE PERFORMED WITH THE SWITCH ... UNCERTAINTY INCLUDED. THE CONTAINMENT BUILDING TE... ASSUMED TO BE 28.7 °C.

   A. FUEL ZONE: THE INSTRUMENTS ARE CALIBRATED FOR ... WATER AND STEAM CONDITIONS AT 0 kg/cm² g IN TH... DRYWELL WITH NO PUMP FLOW.

   B. WIDE RANGE: THE INSTRUMENTS ARE CALIBRATED FOR ... IN THE VESSEL, 57.2 °C IN THE DRYWELL AND ?? ... SUB-COOLING BELOW THE MIDDLE WATER LEVEL NOZ...

   C. NARROW RANGE (SAFEGUARDS AND FEEDWATER): THE ... ARE CALIBRATED FOR SATURATED WATER AND STEAM ... 73.08 kg/cm² g IN THE VESSEL AND 57.2 °C IN THE ...

   D. SHUTDOWN: THE INSTRUMENT IS CALIBRATED FOR SAT... AT 0 kg/cm² IN THE VESSEL AND 28.7 °C IN THE DR...

22. THE TEMPERATURE ELEMENT MPL B21-TE020 MAY BE LO... RPV HEAD VENT LINE BETWEEN THE MOTOR-OPERATED ... B21-F008 AND B21-F009 PROVIDING THE FOLLOWING COND... SATISFIED. THE TEMPERATURE ELEMENT MPL B21-TE032 ... BE INFLUENCED BY THE POTENTIALLY HIGH TEMPERATURE ... OF THE MOTOR-OPERATED VALVE MPL B21-F008 WHEN ... LEAKAGE THROUGH THE MOTOR-OPERATED VALVE(S) B21-...

23. UNLESS OTHERWISE INDICATED, ALL REFERENCED MPL ARE...

24. SEE MAIN STEAM PIPING DESIGN SPECIFICATION B21-0003 ... FOR THE SPECIAL DESIGN REQUIREMENTS WHICH ARE APPL... TO THE PIPING BETWEEN THE STEAM LINE INBOARD AND O... CONTAINMENT ISOLATION VALVES.

25. SEE FEEDWATER PIPING DESIGN SPECIFICATION B21-0010 ... FOR THE SPECIAL DESIGN REQUIREMENTS WHICH ARE APPL... TO THE PIPING BETWEEN THE FEEDWATER LINE INBOARD A... CONTAINMENT ISOLATION VALVES.

26. OPERATION OF 2 OF 2 MANUAL SWITCHES IS REQUIRED FO... OPERATION OF THE 8 SRV'S USED FOR THE ADS.

27. SEE SUPPORTING DOCUMENT 1 FOR SYSTEM IDENTIFICATION... AT INTERCONNECTIONS.

28. PNEUMATIC SUPPLY FROM REFERENCE DOCUMENT 33.

29. THE CONDENSING CHAMBER SHALL CONSIST OF A 20A X ... ELBOW WHICH IS CLOSE-COUPLED TO THE MAIN STEAM L... RESTRICTOR INSTRUMENT LINE TAPS. THE RUN OF 20A INS... FROM THE TAP ON THE MAIN STEAM LINE FLOW RESTRICT... SHALL BE LEVEL IN THE HORIZONTAL PLANE WITHIN 0.00 ... CONDITIONS. THE 20A INSTRUMENT LINE CONNECTION TO T... BE LOCATED VERTICALLY AND EXTEND DOWNWARD. THE ... HAVE A DOWNWARD SLOPE ≥ 1/25A PRIOR TO PENETRATI... CONTAINMENT WALL. THE 20A PIPE SHALL BE REDUCED ... SHALL BE PROVIDED IN THE 20A AND 20A PIPE SUCH THA... CHAMBER MOVES WITH THE RPV AS IT THERMALLY EXPAN...

30. INSULATE WITH INSULATION THAT HAS A MAXIMUM CONDUC... 0.000088 KCAL/HR-CM² -°C. THE INSULATION SHALL EX... THE INSTRUMENT LINE TAP TO WITHIN 0.1 CM OF THE DOW... EXTENDING INSTRUMENT LINE OR CONNECTION WITH THE EL... WHICHEVER IS APPLICABLE. THE HORIZONTAL INSTRUMENT ... TAP TO THE JUNCTION WITH THE DOWNWARD EXTENDING ... LINE OR CONNECTION WITH THE ELBOW WHICHEVER IS APP... SHOULD BE LESS THAN ONE (1) METER.

31. THE MOTOR-OPERATED VALVES ABOVE MPL B21-F007A... WATER (CUW) SYSTEM INJECTION LINES TO THE FEEDWATE... BE DELETED IF THE RPV FEEDWATER NOZZLE FATIGUE ... THE CUW SYS FEEDWATER LINE SELECTION FEATURE.

32. THE THERMAL SLEEVE SHOWN MAY BE DELETED IF THE ... ANALYSIS SHOWS THAT IT IS NOT REQUIRED.

33. SEE REFERENCE DOCUMENT 3 FOR THE INSTRUMENT SETP... REQUIREMENTS.

34. FOR INTERFACE CONNECTIONS, SEE THE SRV EQUIPMENT ... SPECIFICATION SUPPORT DRAWING MPL F008 AND F009.

35. FOR VENT AND DRAIN LINES OPEN TO THE ATMOSPHERE, ... DOWNSTREAM OF THE OUTBOARD SHUT-OFF VALVE, THE ... FOLLOWING BOUNDARY CONDITIONS APPLY:

   MAXIMUM OPERATING PRESSURE – 0 atg
   MAXIMUM OPERATING TEMPERATURE – 66 °C
   DESIGN CODE AND QUALITY CLASS – 7D
   SEISMIC CLASS – C

36. PIPING DESIGN SPECIFICATION AS FOLLOWS:
   A. MAXIMUM OPERATING PRESSURE – SEE SPECIFIC BOUN...
   B. MAXIMUM OPERATING TEMPERATURE – SEE SPECIFIC B...
   C. MATERIAL – SEE TABLE 8
   D. PIPING THICKNESS – SEE TABLE 8
   E. DESIGN CLASS – SEE SPECIFIC BOUNDARIES ON DRAW...
   F. QUALITY CLASS – SEE SPECIFIC BOUNDARIES ON DRA...
   G. SEISMIC CLASS – SEE SPECIFIC BOUNDARIES ON DRAW...
   H. FLUID – SEE TABLE 8

37. THE RELIEF VALVE F208 IS NOT REQUIRED IF INTERNAL PR... IS PROVIDED WITHIN LT004 TO LIMIT THE DIFFERENTIAL PR... ACROSS THE SENSING ELEMENT.

38. THE INSTRUMENT LINES SHALL BE SEISMIC CLASS As FROM ... THE LAST ANCHOR POINT TO THE PRESSURE TRANSMITTER... PT008 AND PT301.

39. PROVIDES INTERFACE BETWEEN SEISMIC AND NON-SEISMIC PIPING.

40. THE MAXIMUM OPERATING TEMPERATURE OF THE FEEDWAT... LINE FROM THE SEISMIC INTERFACE TO THE UPSTREAM SID... OF THE MOTOR OPERATED VALVE MPL B21-F001 SHALL B... DETERMINED BY THE DESIGNER OF THE FEEDWATER SYSTE...

K
J
I
H
G
F
E
D
C
B
A

Figu

REFERENCE DOCUMENT UNDER THE FOLLOWING IDENTIFIER ARE TO BE USED IN CONJUNCTION WITH THIS DRAWING.

		MFL NO.
1.	WATER QUALITY REQUIREMENTS	A15-3040
2.	REACTOR PRESSURE VESSEL SYSTEM, ED	B11-B030
3.	NUCLEAR BOILER SYS, P&ID DATA	B21-1010
4.	NUCLEAR BOILER SYSTEM, P&ID	B21-1020
5.	NUCLEAR BOILER SYSTEM, ED	B21-1030
6.	NOT USED	----------
7.	NOT USED	----------
8.	NOT USED	----------
9.	CONTROL ROD DRIVE SYSTEM, P&ID	C12-1010
10.	REACTOR RECIRCULATION SYSTEM, P&ID	B31-1010
11.	FEEDWATER CONTROL SYSTEM, ED	C31-1030
12.	FEEDWATER CONTROL SYSTEM, ED	C31-1040
13.	REMOTE SHUTDOWN SYSTEM, ED	C61-1040
14.	REACTOR PROTECTION SYSTEM, ED	C71-1040
15.	RECIRCULATION FLOW CONTROL SYS, ED	D81-1030
16.	RECIRCULATION FLOW CONTROL SYS, ED	D81-1040
17.	RESIDUAL HEAT REMOVAL SYSTEM, P&ID	E51-1010
18.	RESIDUAL HEAT REMOVAL SYSTEM, ED	E51-1030
19.	HIGH PRESSURE CORE FLOODER SYSTEM, ED	E22-1030
20.	LEAK DETECTION AND ISOLATION SYSTEM, ED	E31-1030
21.	LEAK DETECTION AND ISOLATION SYSTEM, ED	E31-1040
22.	REACTOR CORE ISOLATION COOLING SYSTEM, P&ID	E51-1010
23.	REACTOR CORE ISOLATION COOLING SYSTEM, ED	E51-1030
24.	REACTOR WATER CLEANUP SYS, P&ID	G31-1010
25.	LIQUID WASTE, RADWASTE SYSTEM, P&ID	K17-1010
26.	LOW CONDUCTIVITY WASTE, RADWASTE SYSTEM, P&ID	K17-1010
27.	TURBINE MAIN STEAM SYSTEM, P&ID	N11-1010
28.	CONDENSATE AND FEEDWATER SYSTEM, P&ID	N21-1010
29.	TURBINE CONTROL SYSTEM, ED	N33-1030
30.	TURBINE CONTROL SYSTEM, ED	N33-1040
31.	STEAM BYPASS & PRESSURE CONTROL SYS, ED	D33-1040
32.	MAIN CONDENSER	N61-1?0
33.	INSTRUMENT AIR SYSTEM, P&ID	P52-1010
34.	HIGH PRESS NITROGEN GAS SUPPLY SYS, P&ID	P64-1010
35.	VALVE WALK/LEAKAGE TREATMENT, RADWASTE SYS, P&ID	K17-1?10
36.	SAMPLING SYSTEM, P&ID	P31-1010
37.	NOT USED	----------
38.	NOT USED	----------
39.	ATMOSPHERIC CONTROL SYSTEM P&ID	T?1-1?10
40.	MAIN STEAM PIPING EQUIPMENT REQUIREMENTS SPECIFICATION SUPPORT DRAWING	B21-0001

X DENOTES THAT THIS COMPONENT IS PART OF AN ASSEMBLY WHERE THE ENTIRE ASSEMBLY HAS ONE MFL NUMBER.

** REFERENCE INFORMATION TO BE PROVIDED AS INTERFACE. DOES NOT AFFECT THE QUALITY INFORMATION SHOWN ON THIS DRAWING OR ITS VERIFICATION.

SUPPORTING DOCUMENTS	MFL NO.
1. NUCLEAR PLANT SYSTEM STRUCTURE	A15-3010
2. PIPING AND INSTRUMENT SYMBOLS	A15-3030
3. GROUP CLASSIFICATION AND CONTAINMENT ISOLATION DIAGRAM	A15-1030
4. PROCESS INSTRUMENTATION REQUIREMENT SPEC	A15-3030

MFL NO. B21-1010

92-170-01

5.1-3 NUCLEAR BOILER SYSTEM P&ID (Sheet 1 of 11)

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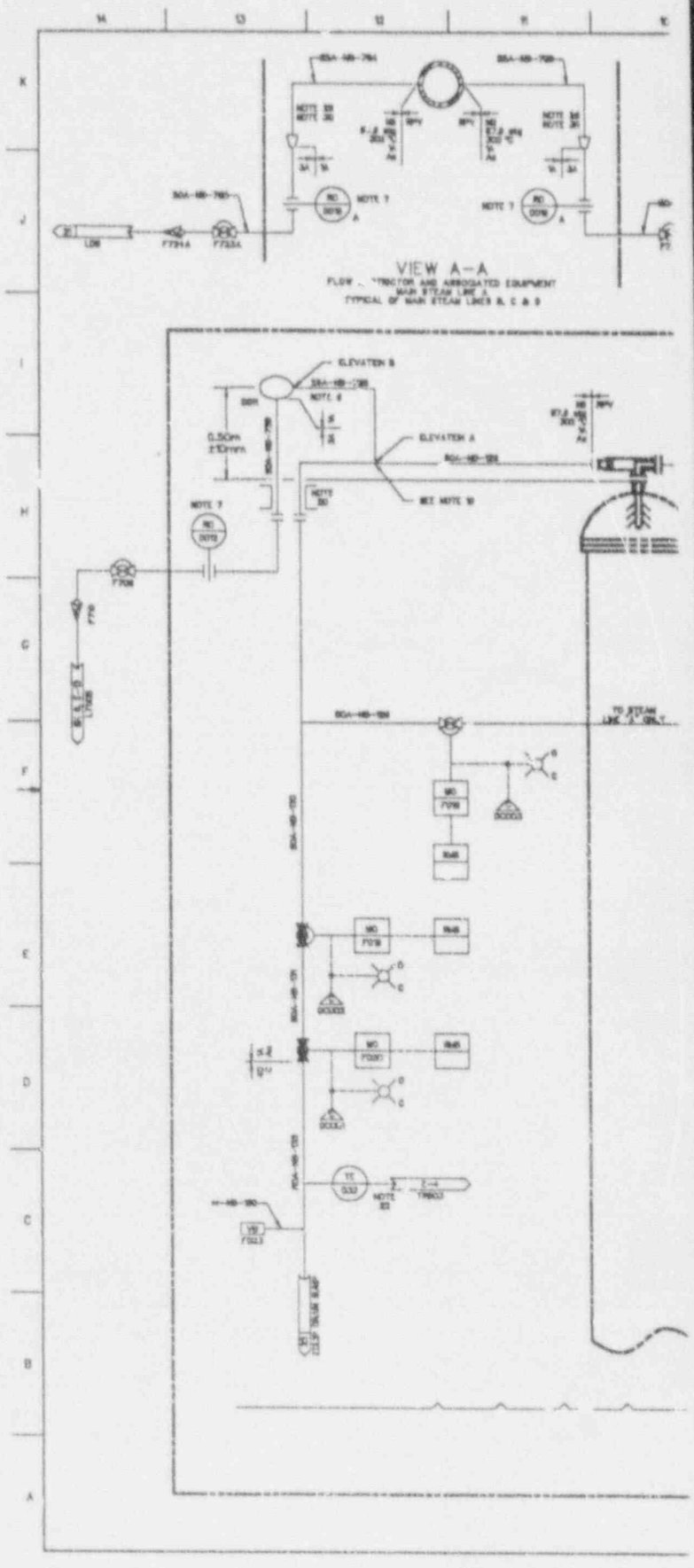


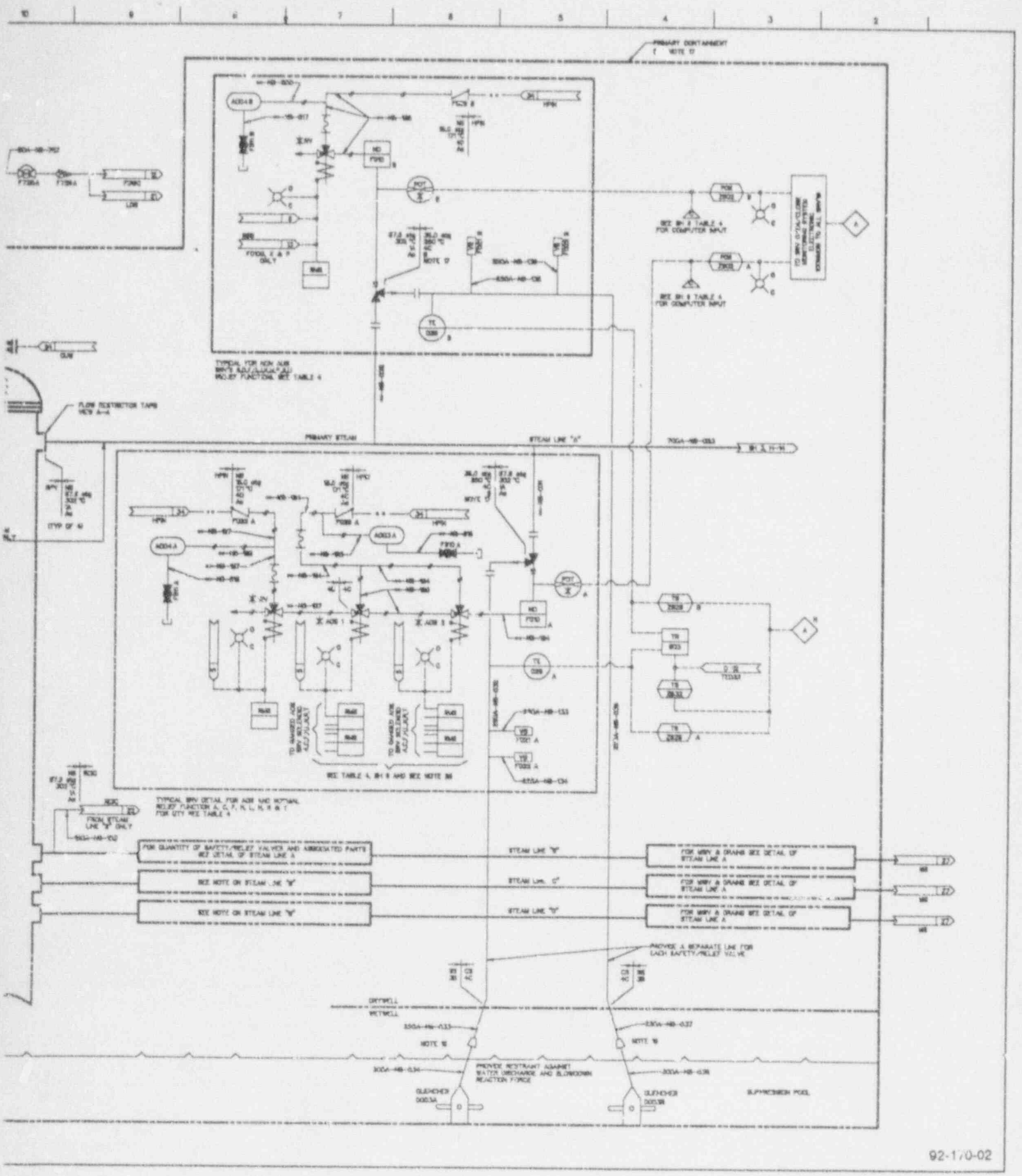
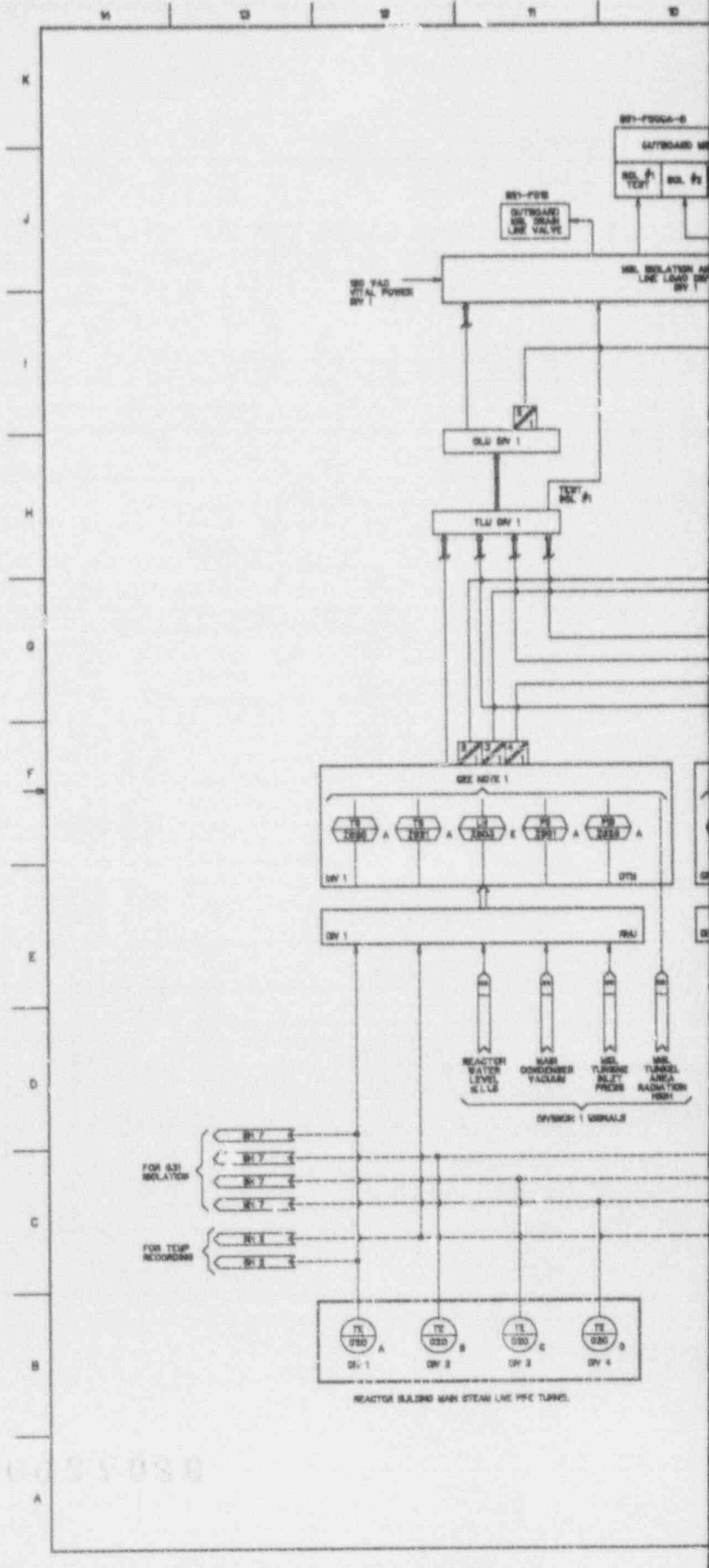
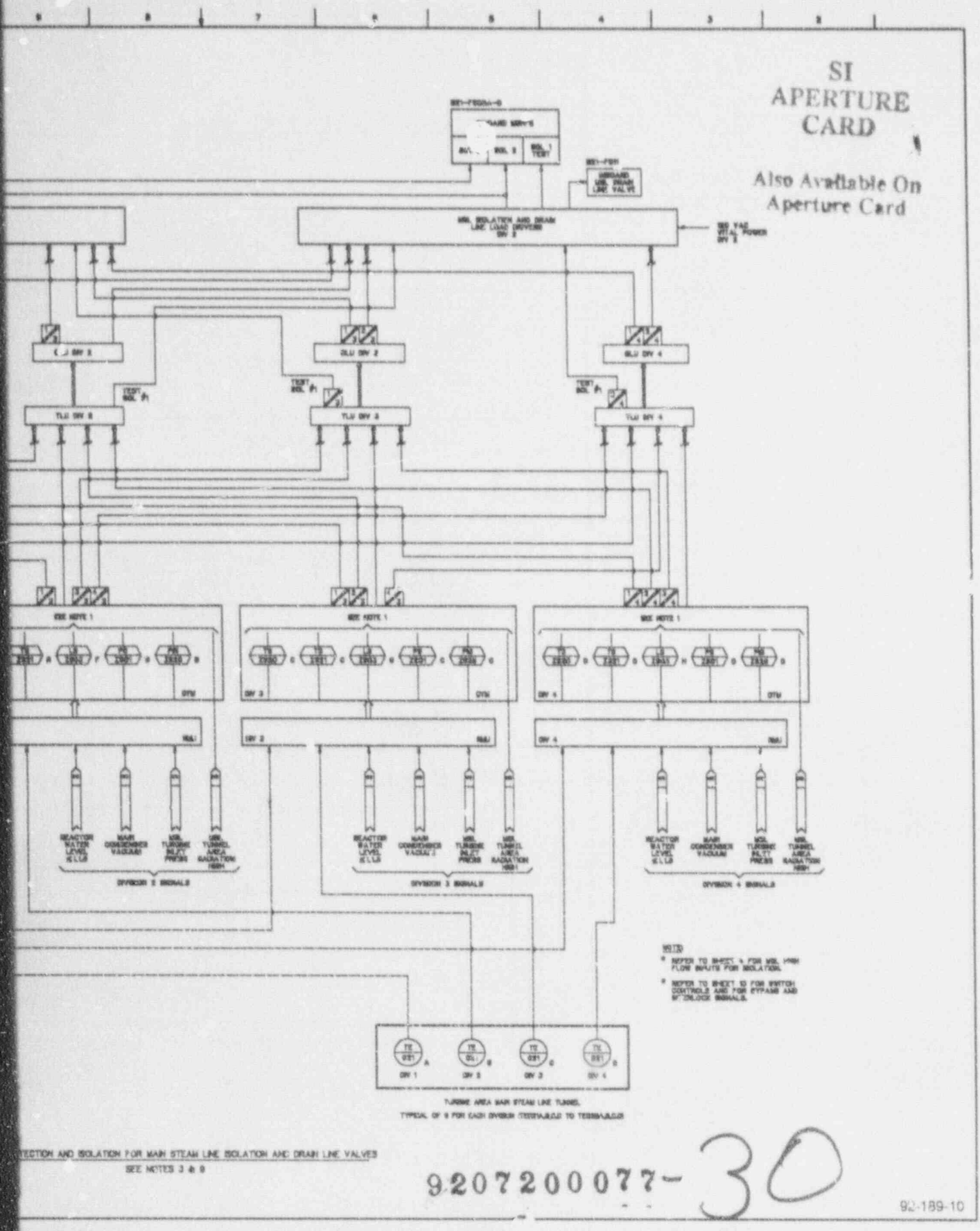


Figure 5.1-3 NUCLEAR BOILER SYSTEM P&ID (Sheet 2 of 11)


SLU DIV 1
TLU DIV 1
SEE NOTE 1
DIV 1
REACTOR WATER LEVEL (L-2)
MAIN CONDENSER VACUUM
MSL TUNNEL AREA RADIATION HIGH
FOR ISOLATION
FOR TEMP. RECORDING
DIV 1
DIV 2
DIV 3
DIV 4



TECTION AND ISOLATION FOR MAIN STEAM LINE ISOLATION AND DRAIN LINE VALVES
SEE NOTES 3 & 9

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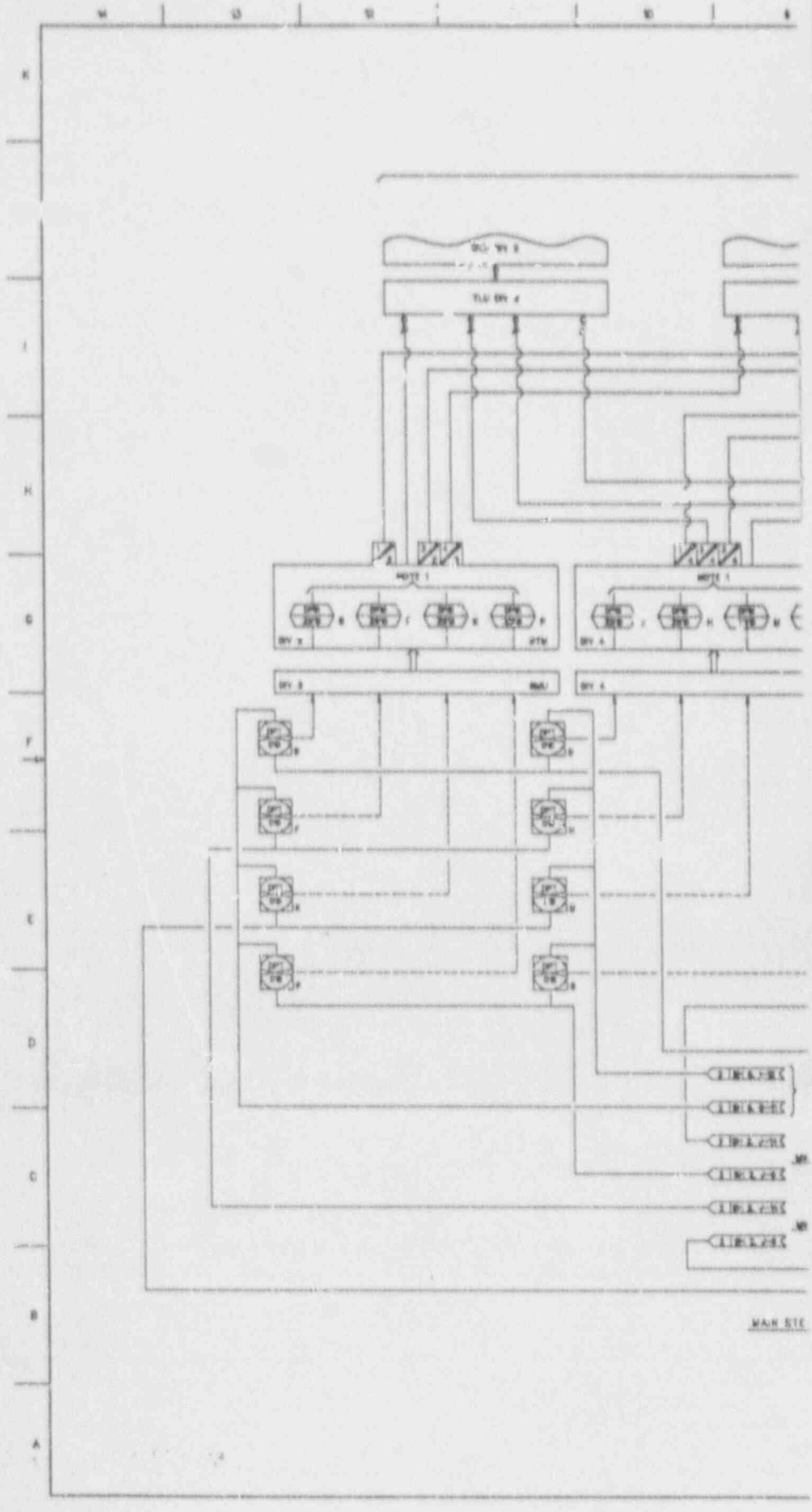
Figure 5.2–8 LEAK DETECTION AND ISOLATION SYSTEM IED (Sheet 3 of 10)



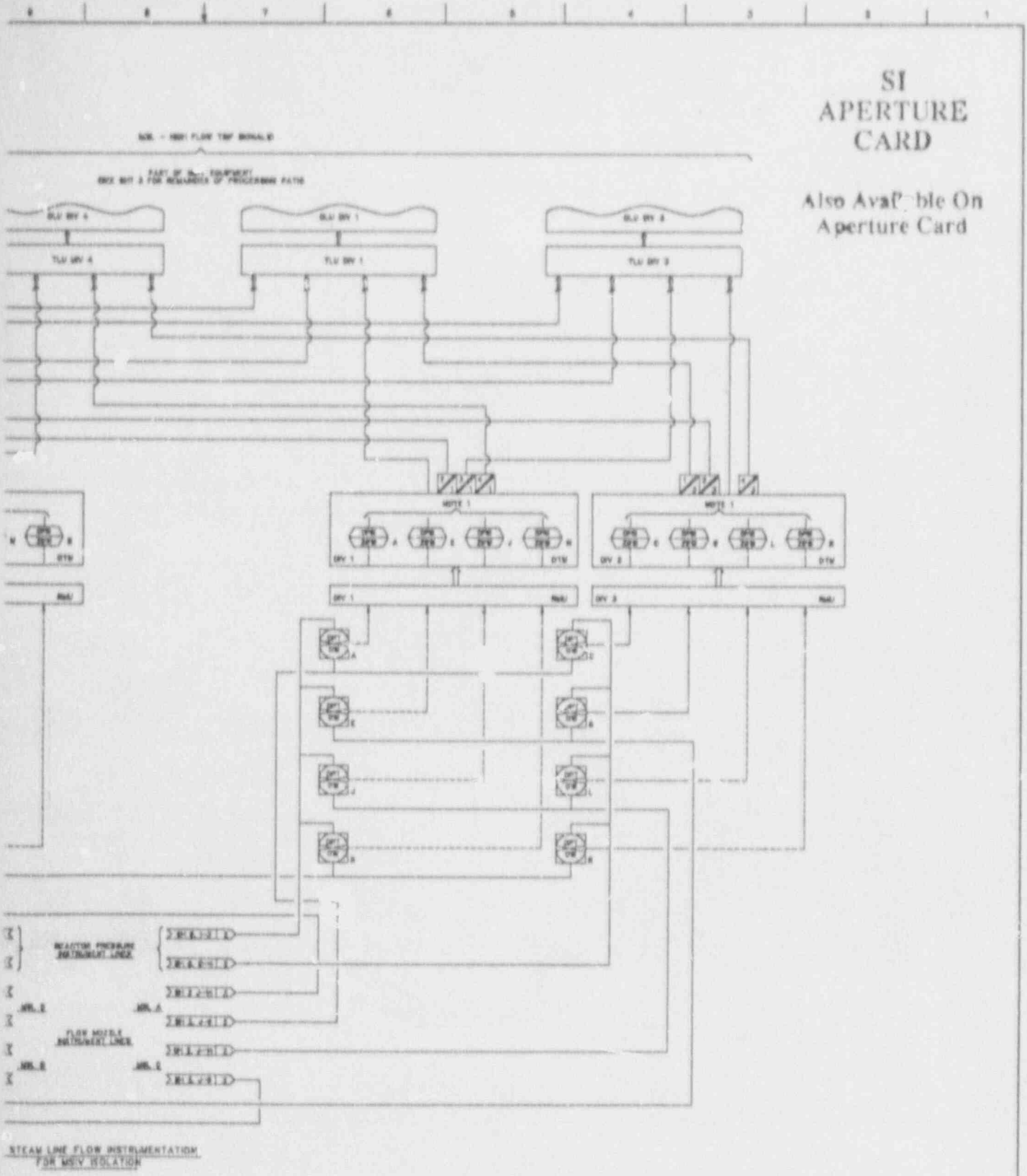


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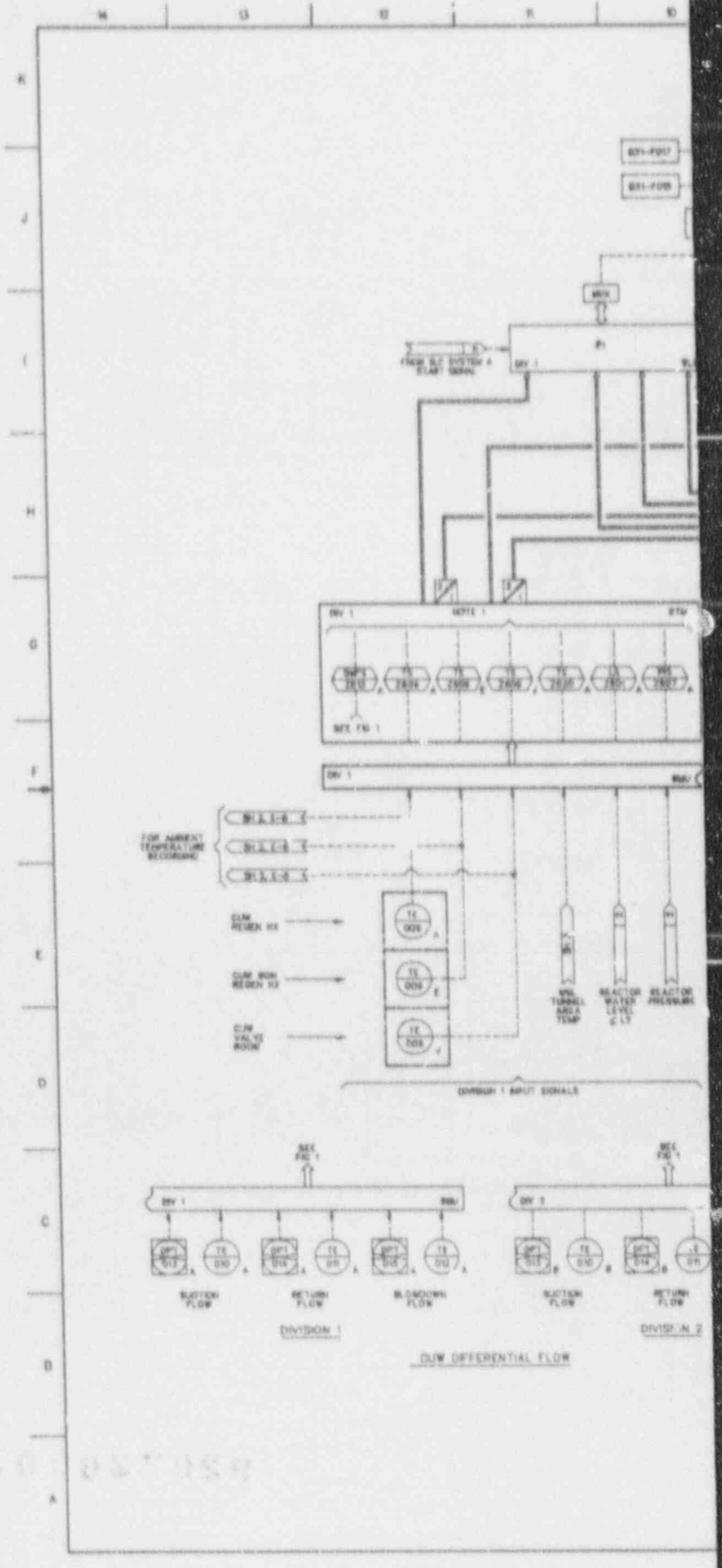
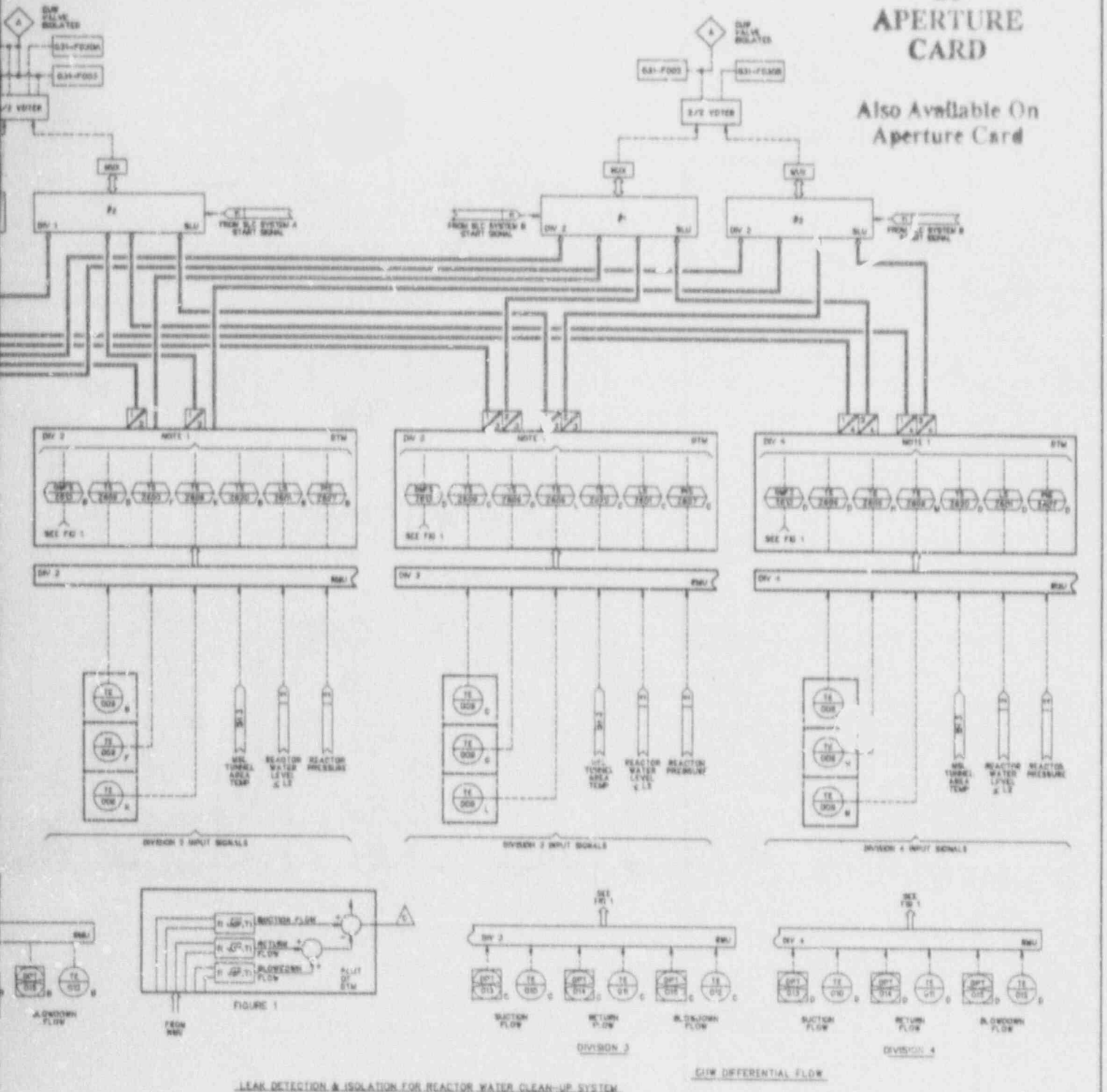
Figure 5.2–8 LEAK DETECTION AND ISOLATION SYSTEM IED (Sheet 4 of 10)


DIVISION 1 INPUT SIGNALS
SUCTION FLOW
RETURN FLOW
BLOWDOWN FLOW
SUCTION FLOW
RETURN FLOW
DIVISION 1
DIVISION 2
DUW DIFFERENTIAL FLOW



LEAK DETECTION & ISOLATION FOR REACTOR WATER CLEAN-UP SYSTEM
SEE NOTES 3 & 9

NOTE: REFER TO SHEET 10 FOR SWITCH CONTROLS AND BYPASS SIGNALS.

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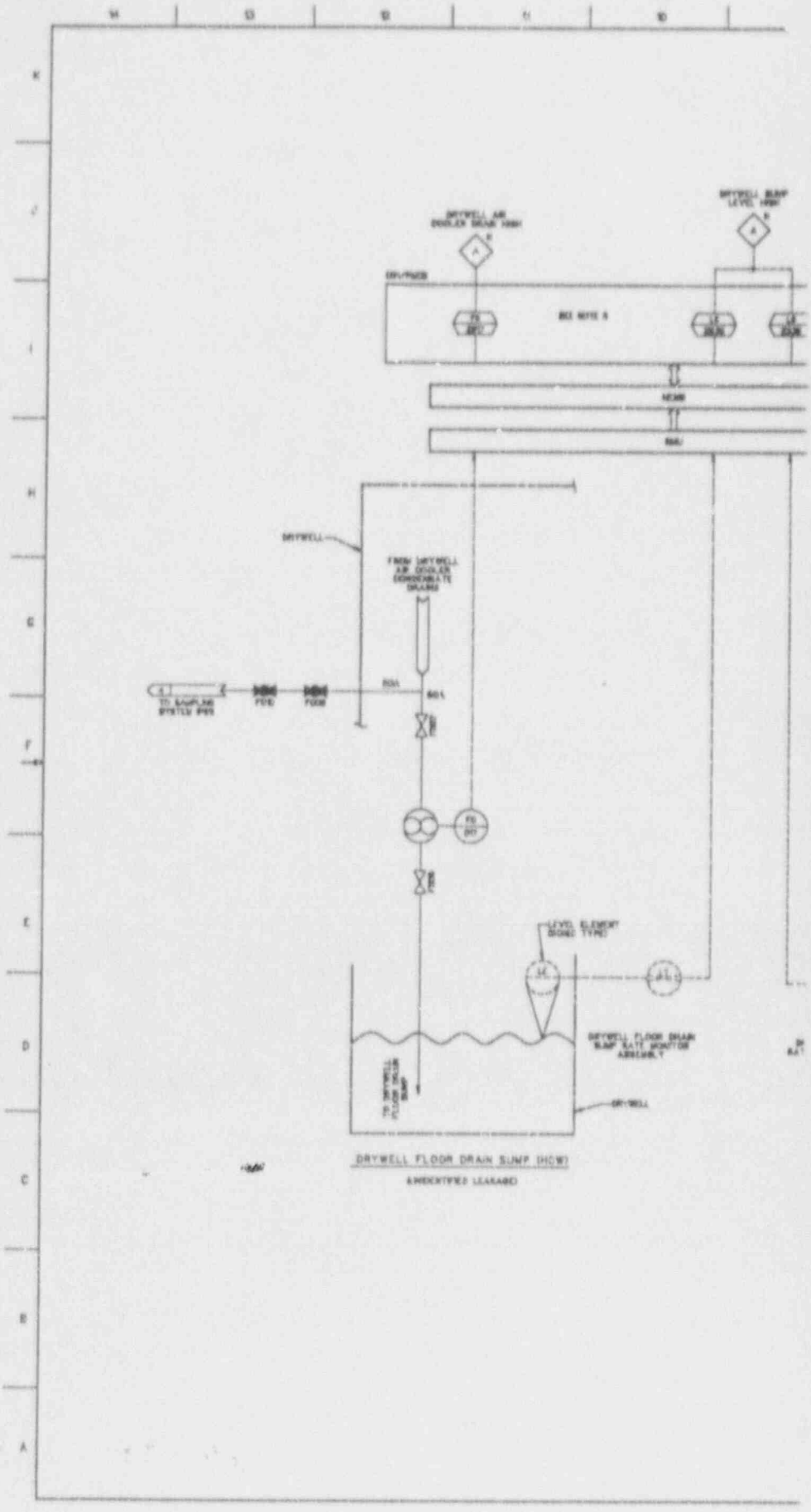
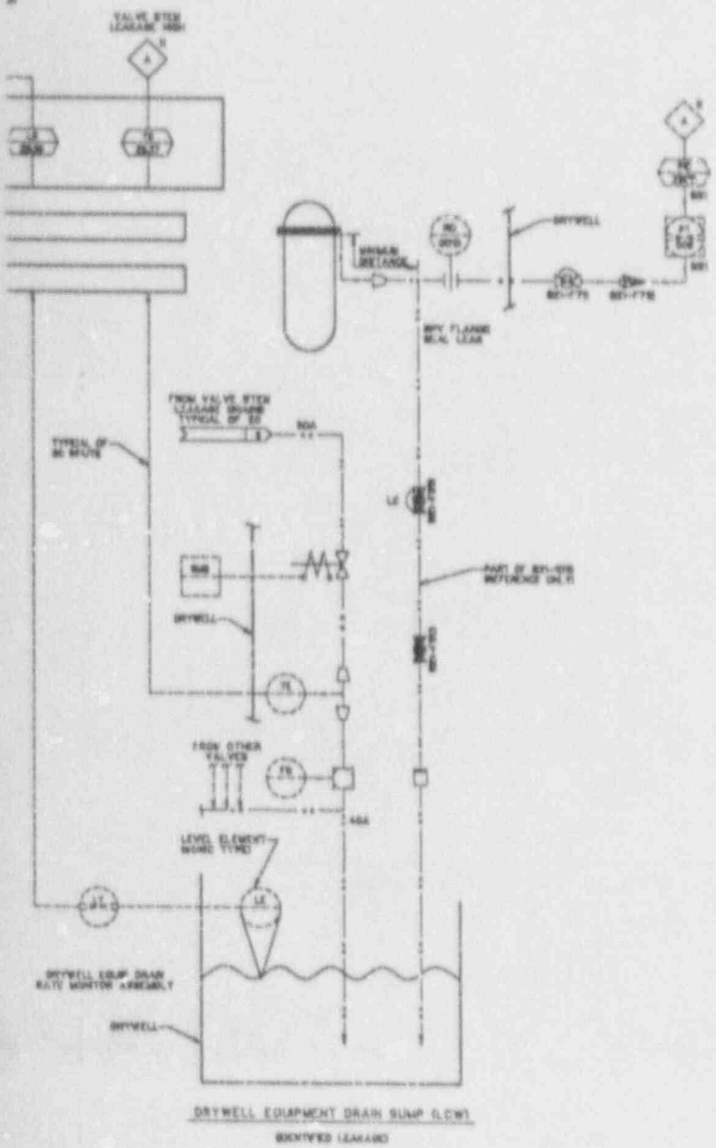
92-189-09

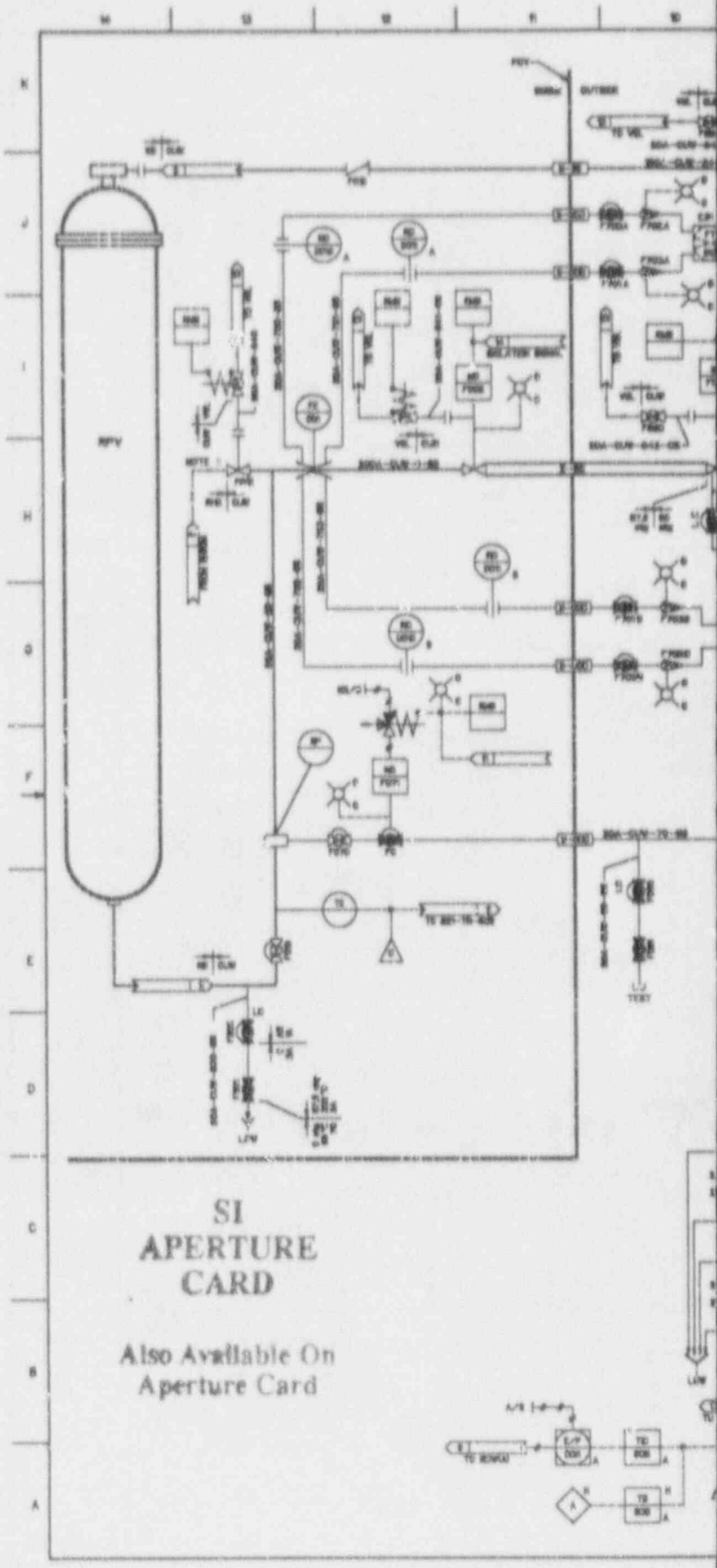
Figure 5.2-8 LEAK DETECTION AND ISOLATION SYSTEM IED (Sheet 7 of 10)


DRYWELL
LEVEL ELEMENT
(SIGNAL TYPE)
DRYWELL FLOOR DRAIN
SUMP RATE MONITOR
ASSEMBLY
DRYWELL
DRYWELL FLOOR DRAIN SUMP (HCW)
(UNIDENTIFIED LEAKAGE)



92-073-23

Figure 5.2–8 LEAK DETECTION AND ISOLATION SYSTEM IED (Sheet 8 of 10)



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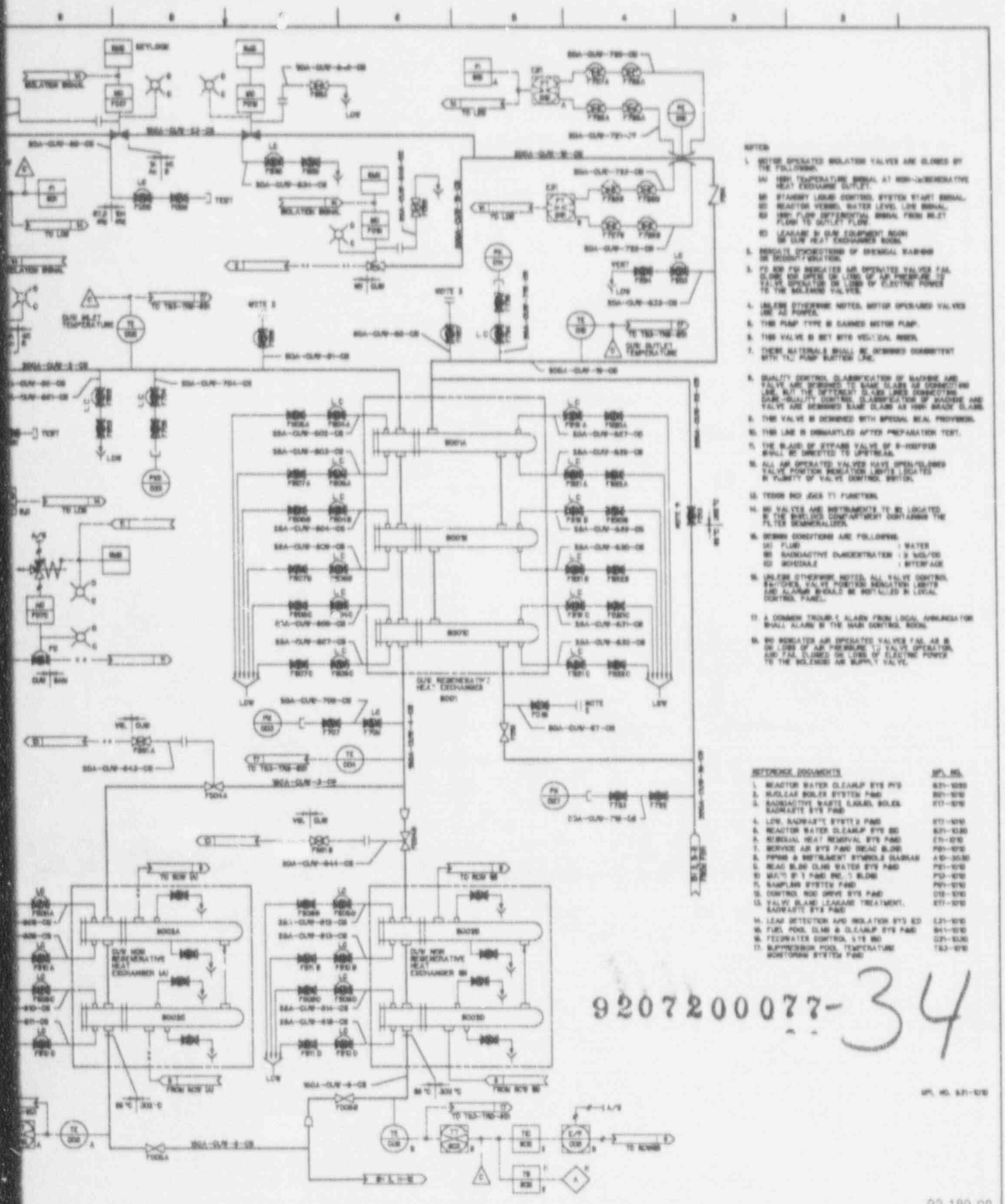

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Figure 5.4–12 REACTOR WATER CLEANUP SYSTEM P&ID (Sheet 1 of 3)

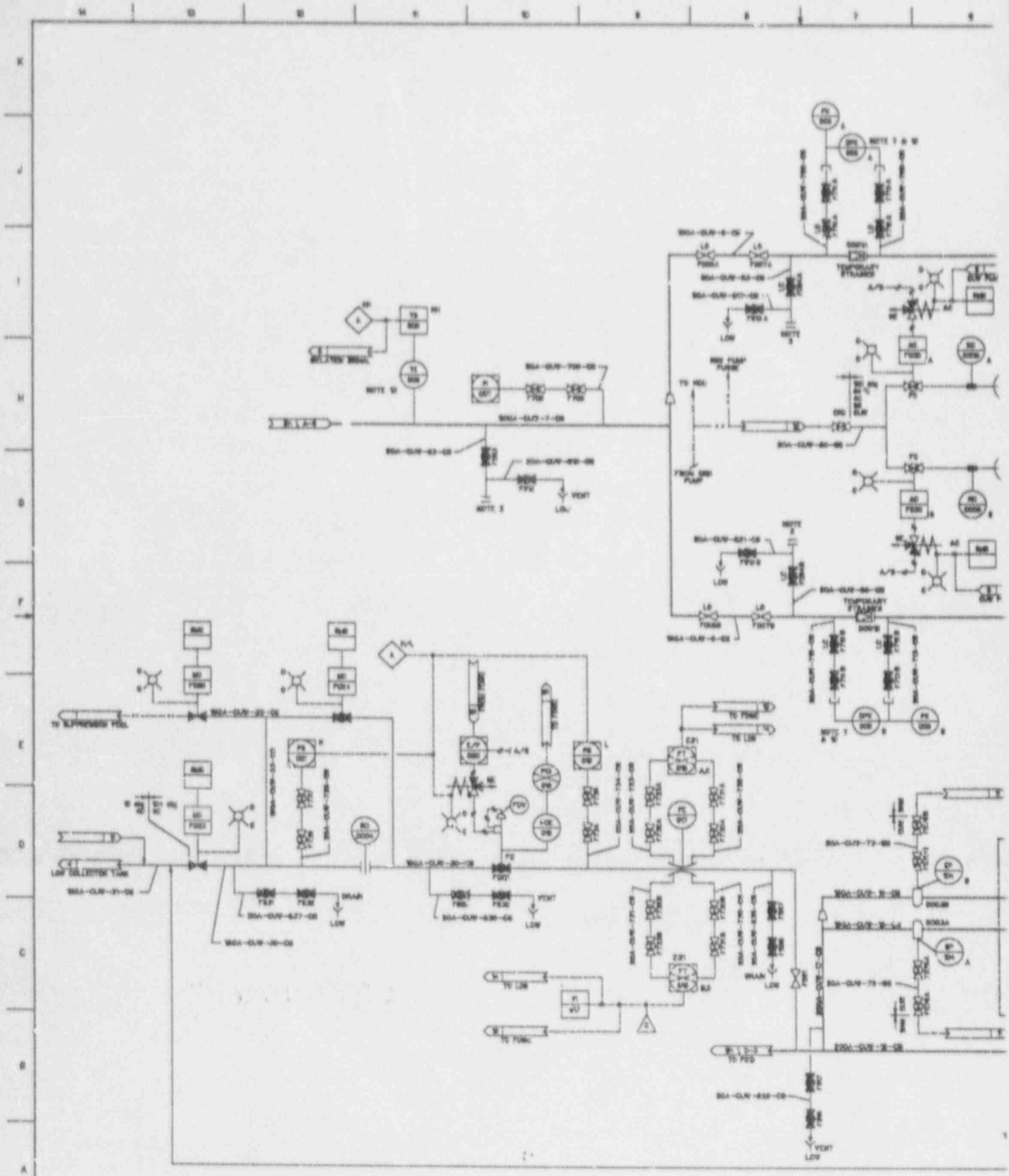
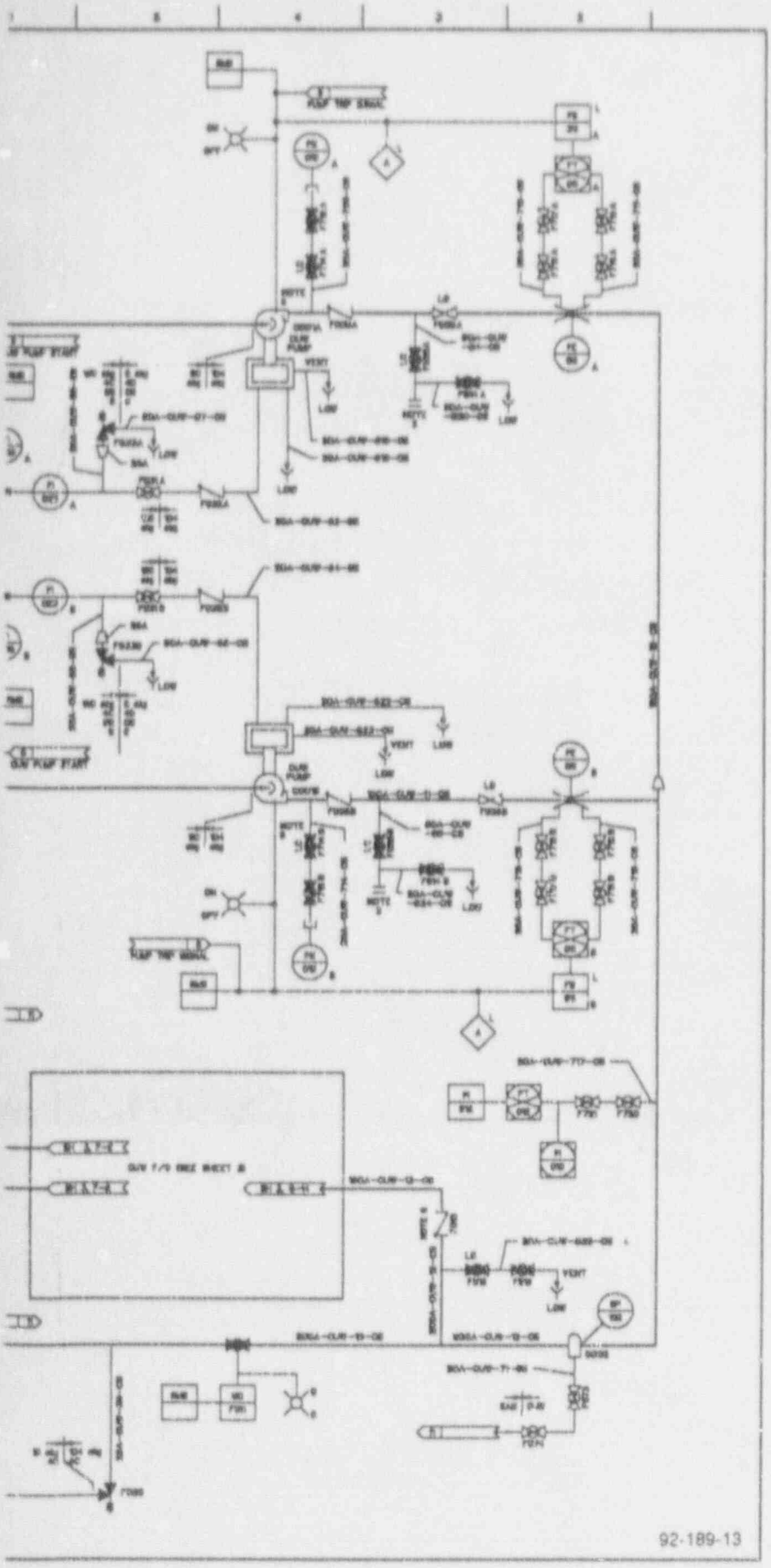


Figure 5.4–1:



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-12 REACTOR WATER CLEANUP SYSTEM P&ID (Sheet 2 of 3)

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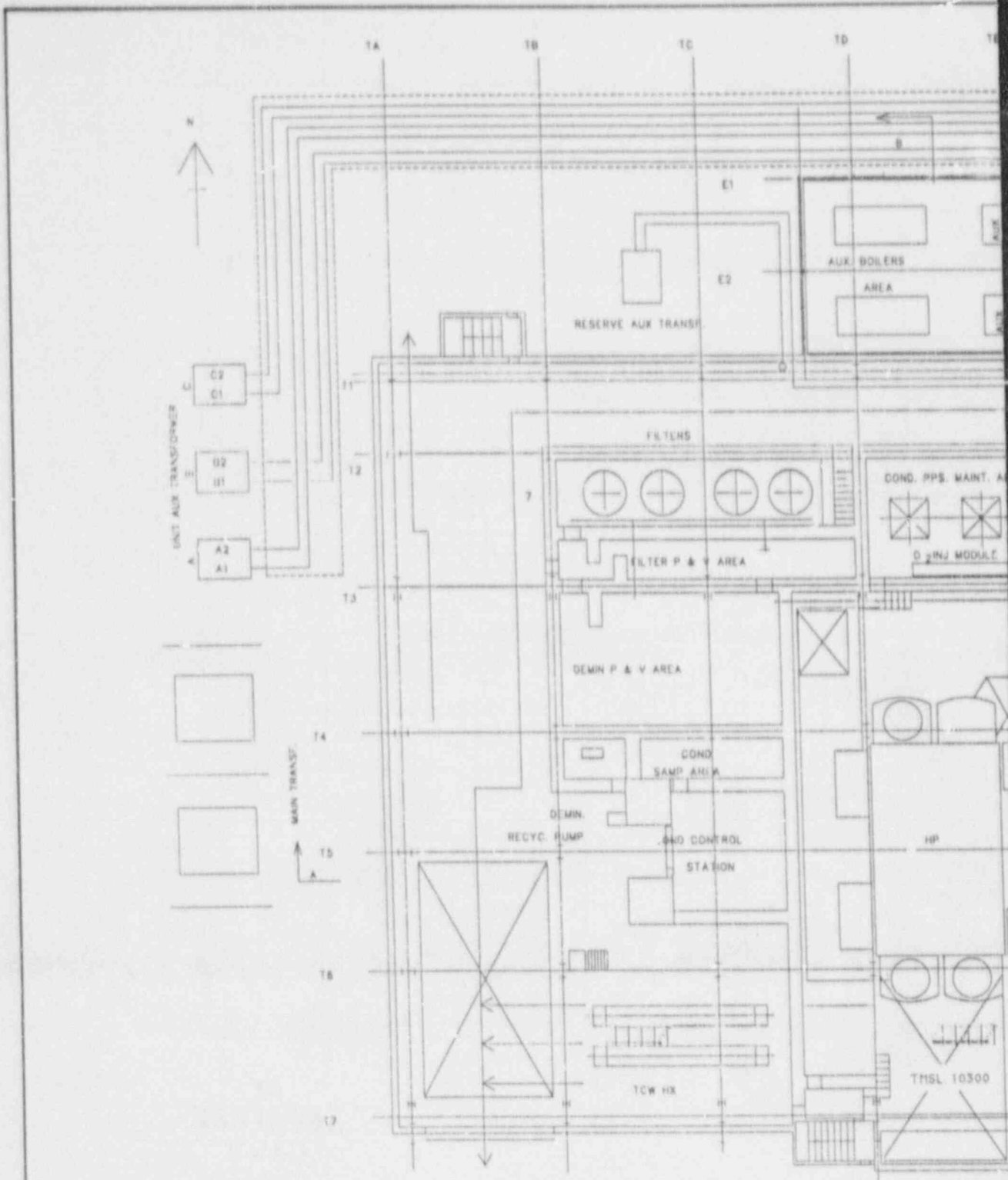
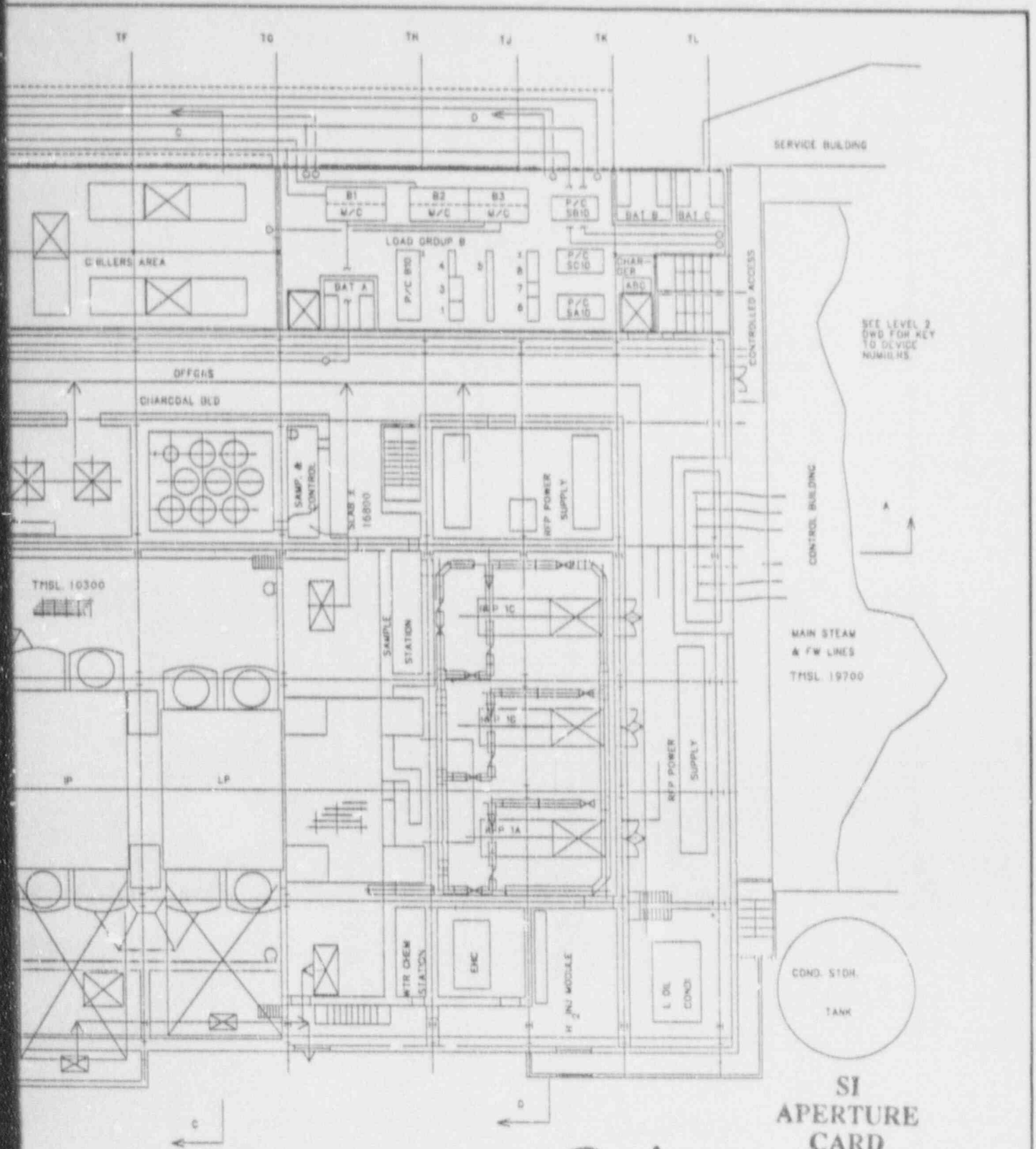


LEGENDS:

1. CHARGER
2. BLANK
3. 125VDC MAIN DISTRIBUTION PANEL
4. 125VDC MCC
5. MCC A330 (B330, C330)
   11 BACK TO BACK DOUBLE STACKS;
   66 CUBICLES AT AVERAGE OF 3
   CUBICLES PER STACK
6. 120 VAC UPS
7. VOLTAGE REGULATING TRANSFORMER (INSIDE POWER)
8. 120 VAC DISTRIBUTION PANELS
- —O— = SPLICE CONNECTION GOING DOWN



NE BUILDING
LOOR - LEVEL 2
12300mm

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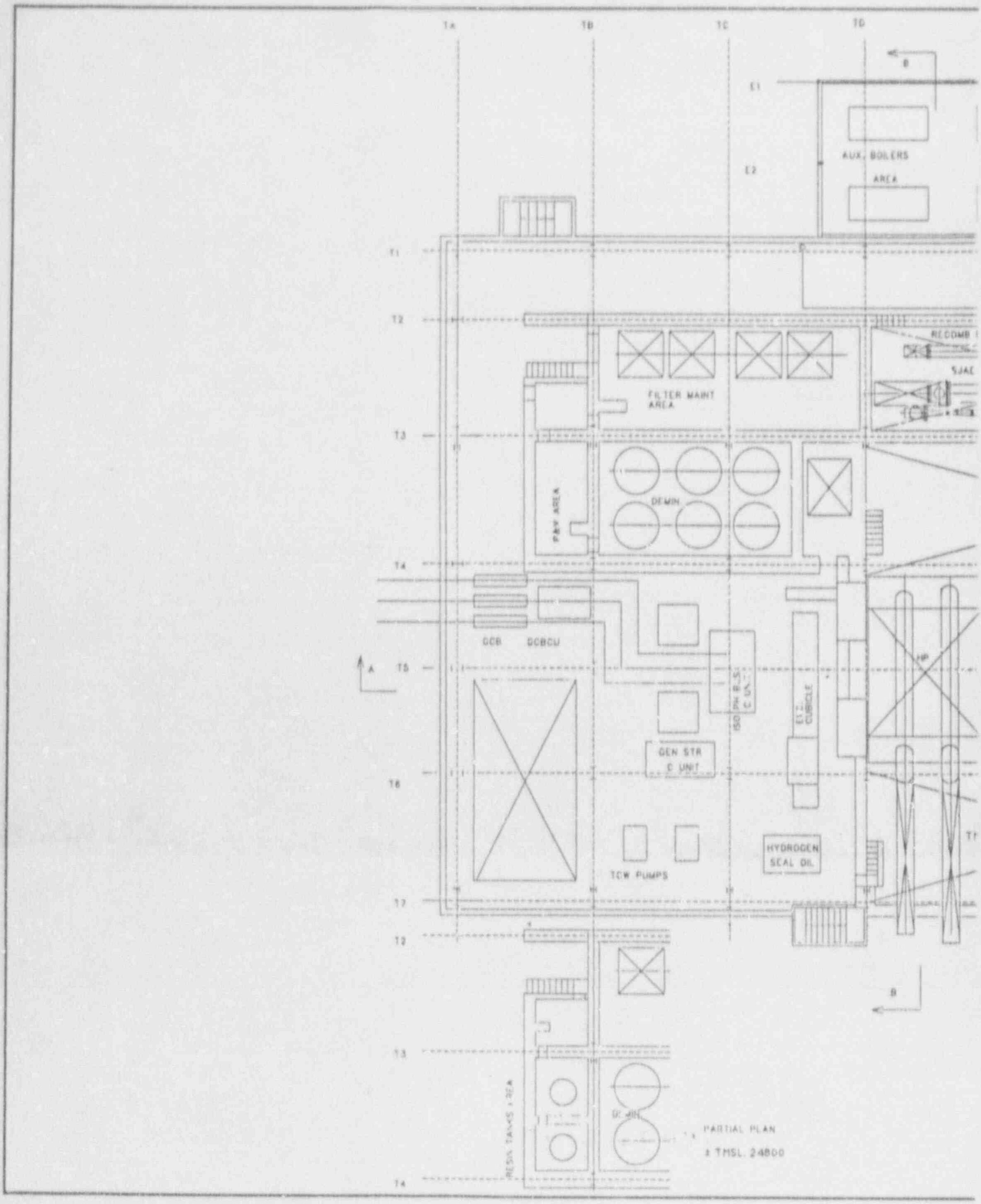
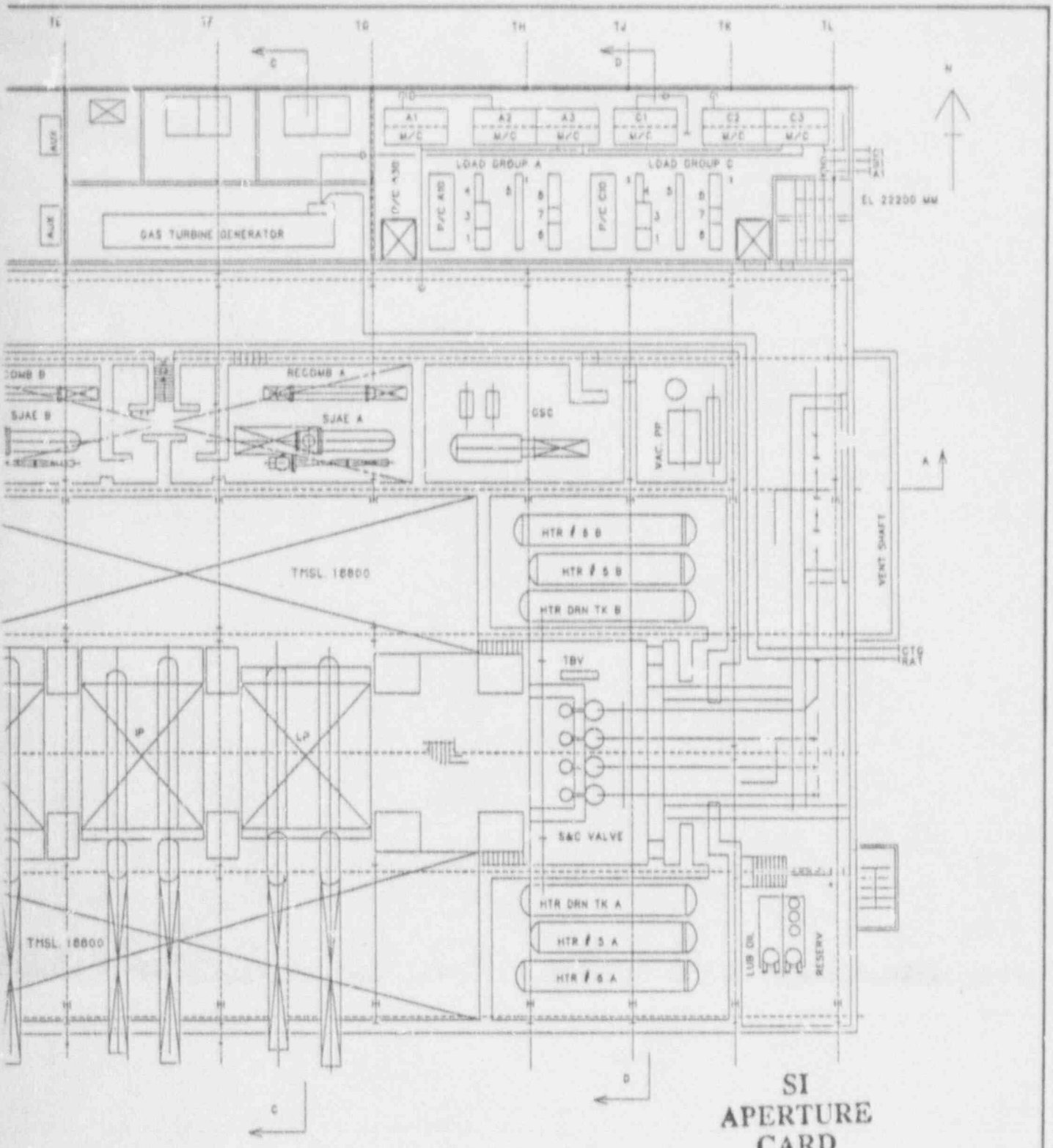
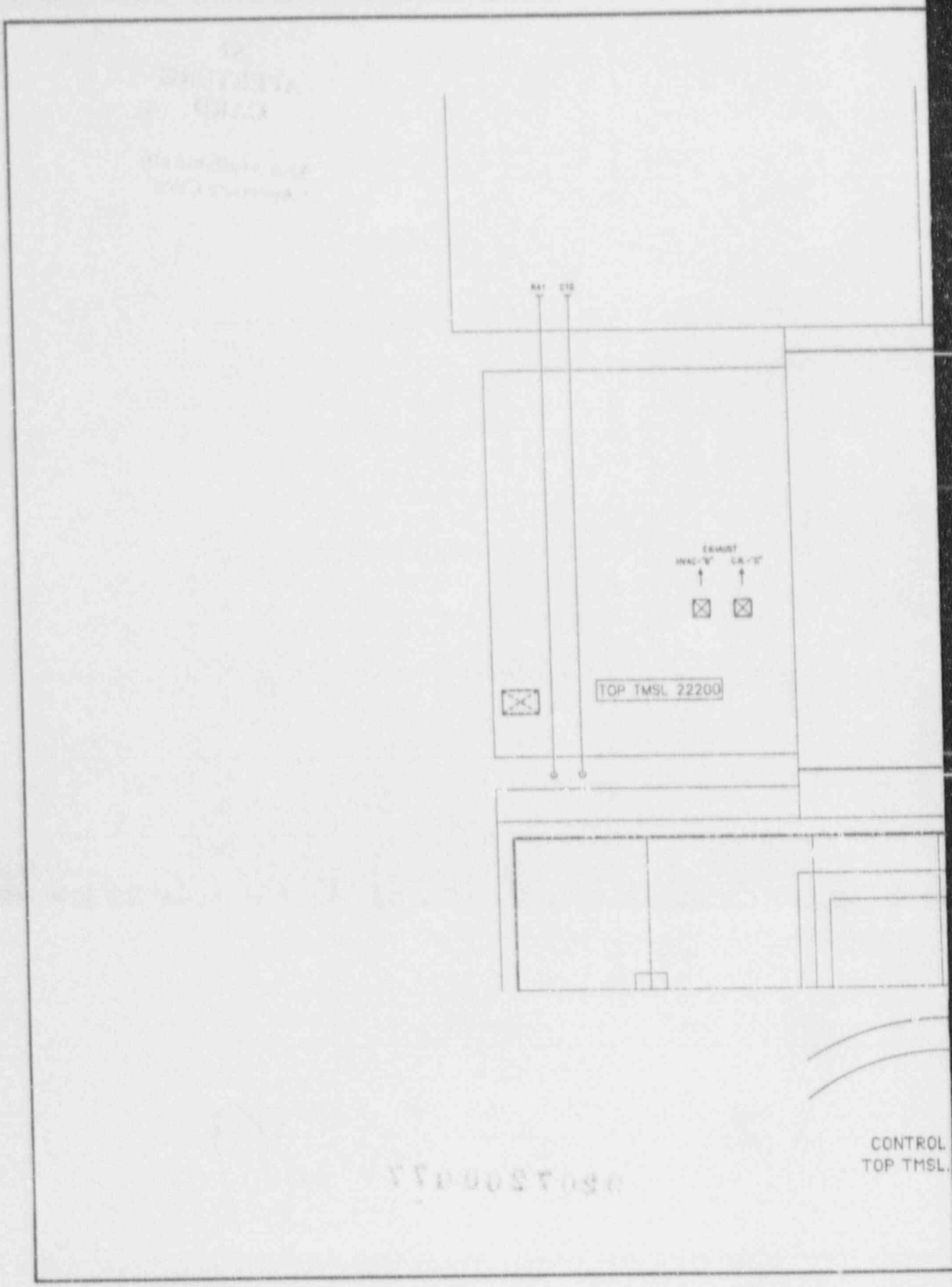
Figure 8.2–1 POWER DISTRIBUTION SYSTEM ROUTING DIAGRAM
(Sheet 1 of 7)

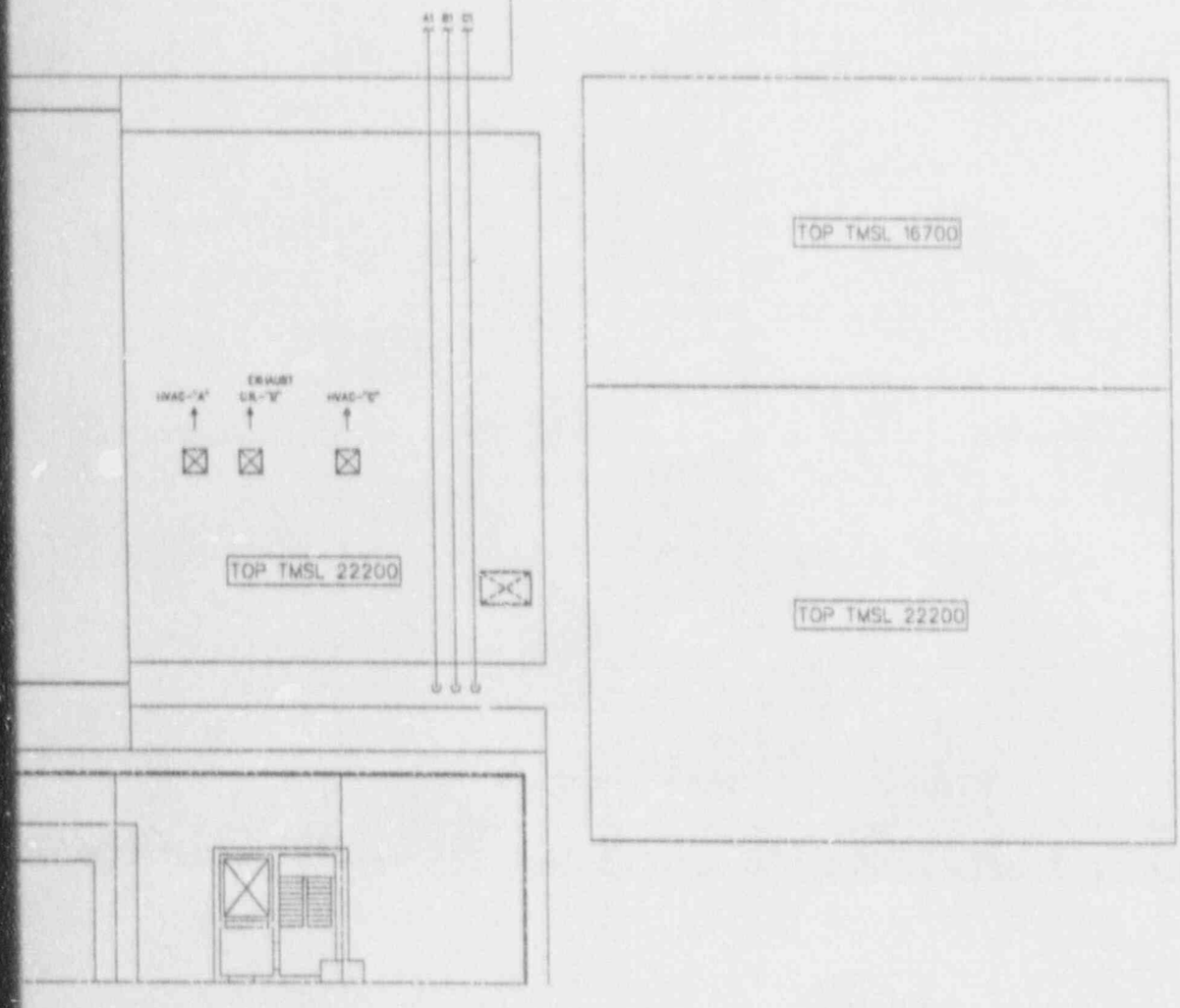

TA
TB
TC
TD
E1
E2
AUX. BOILERS
AREA
T1
T2
T3
T4
T5
T6
T7
RECOMB
SJAE
FILTER MAINT
AREA
DEMIN
P&W AREA
DCB
DCBCU
A
B
HP
GEN STR
C UNIT
HYDROGEN
SEAL OIL
TCW PUMPS
PARTIAL PLAN
TMSL. 24800



02-189-02

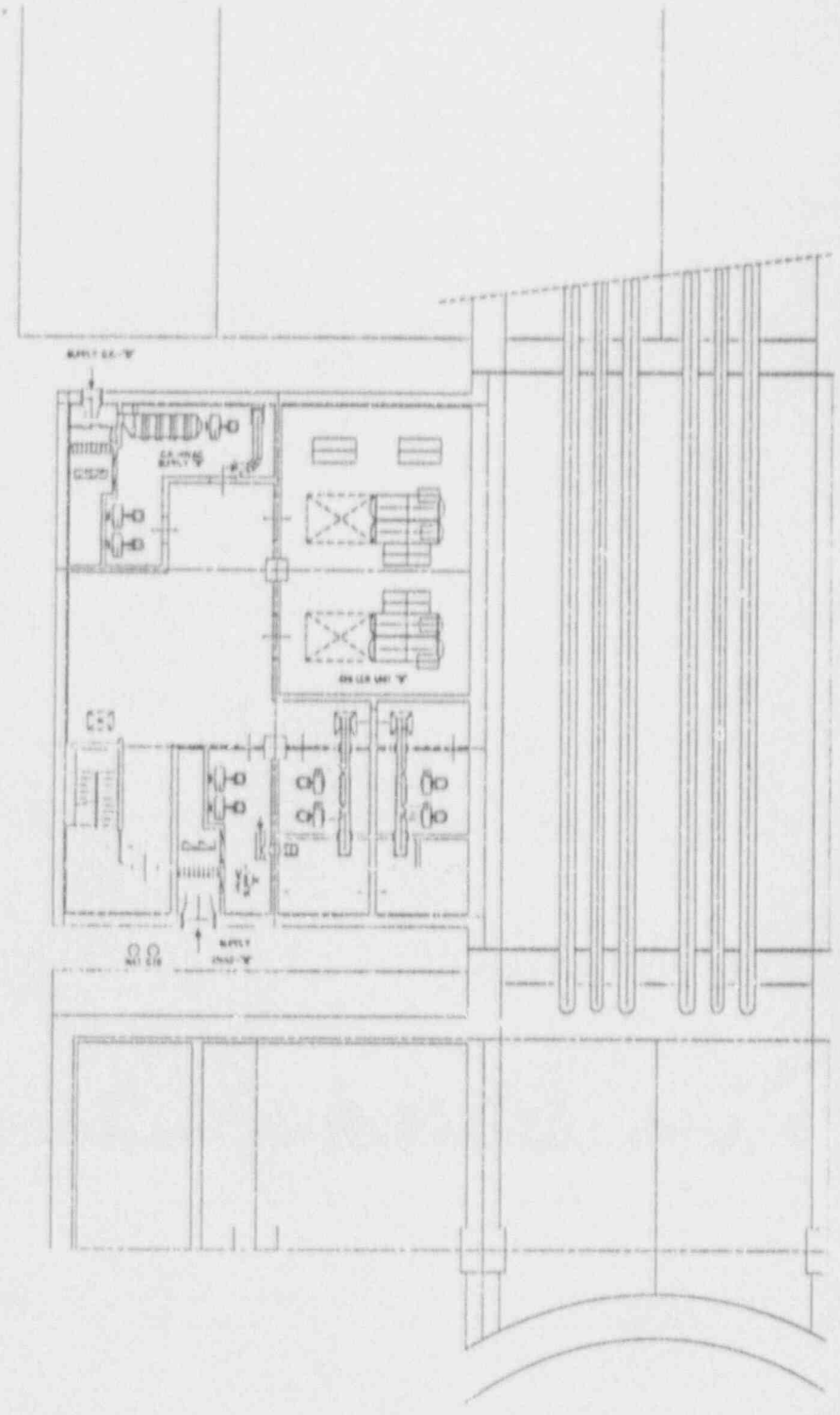
Figure 8.2-1 POWER DISTRIBUTION SYSTEM ROUTING DIAGRAM
(Sheet 2 of 7)


RA1
CTG
EXHAUST
HVAC-"B"
C.R.-"B"
TOP TMSL 22200
CONTROL
TOP TMSL.

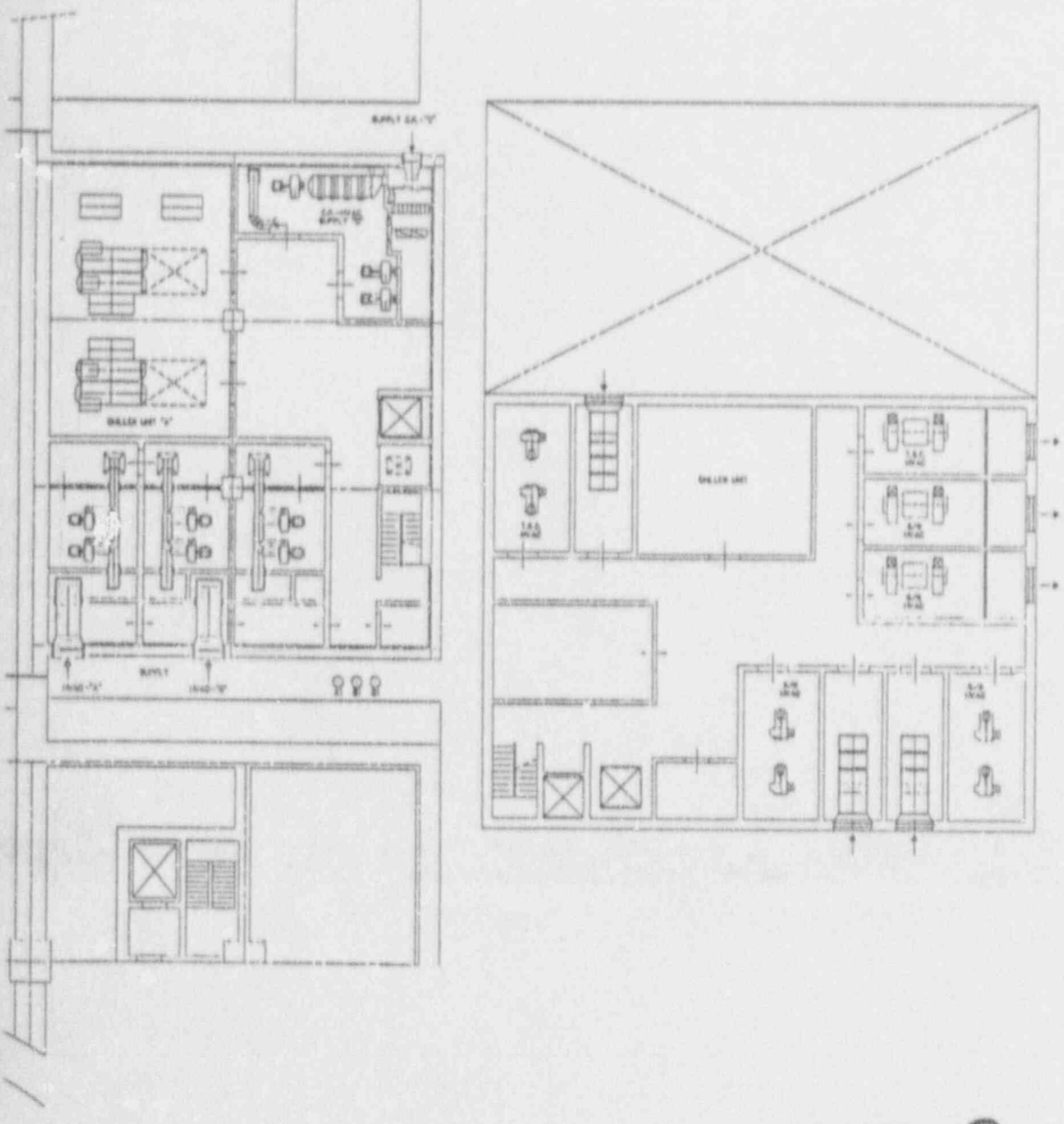


92-189-03

Figure 8.2–1 POWER DISTRIBUTION SYSTEM ROUTING DIAGRAM
(Sheet 3 of 7)

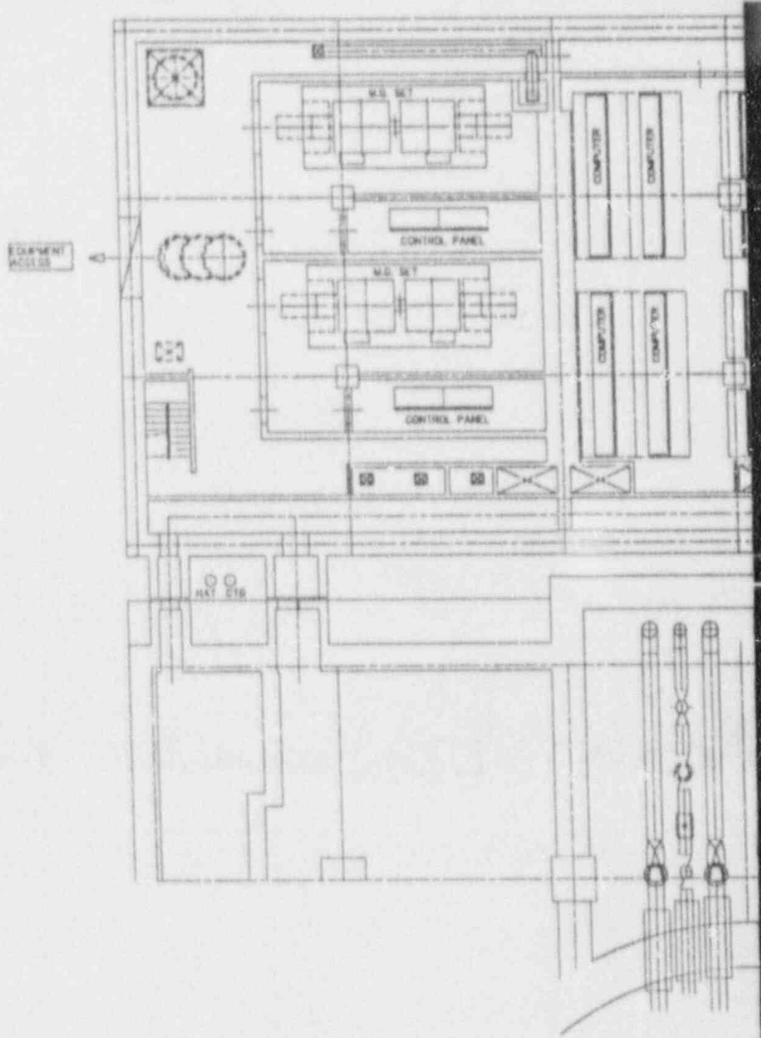


CONTROL BUILDING
TMSL. 17150mm

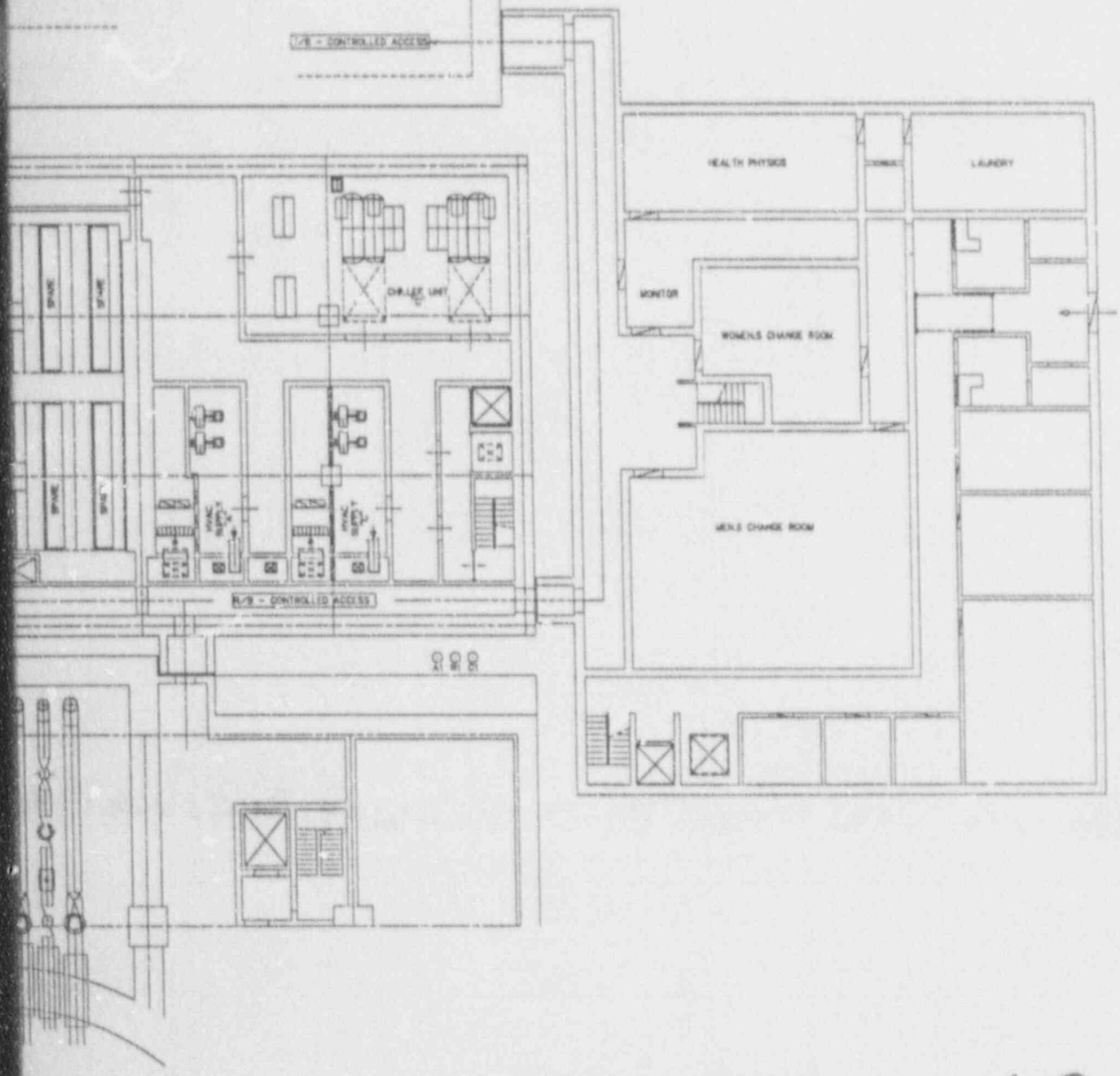


92-189-04

Figure 8.2–1 POWER DISTRIBUTION SYSTEM ROUTING DIAGRAM
(Sheet 4 of 7)



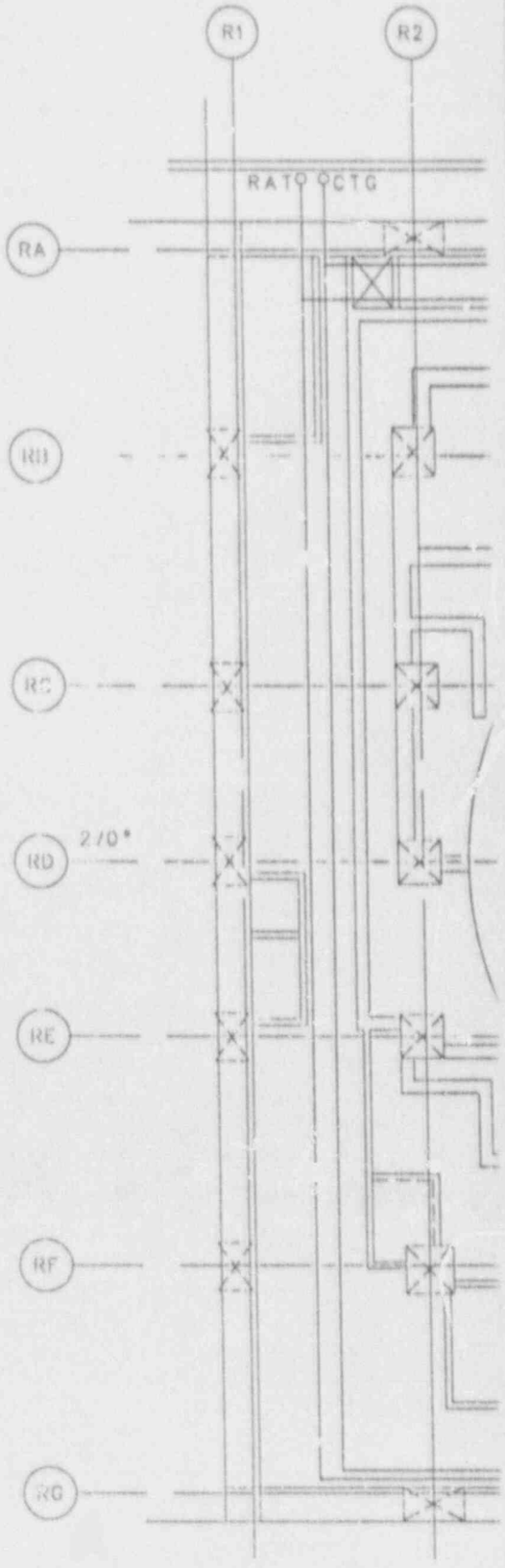
CONTROL
GROUND
TMSL. 1



UILDING
RADE
00mm

92-1P9-05

Figure 8.2–1 POWER DISTRIBUTION SYSTEM ROUTING DIAGRAM
(Sheet 5 of 7)


R1
R2
RATO OCTG
RA
RB
RC
RD
210°
RE
RF
RG

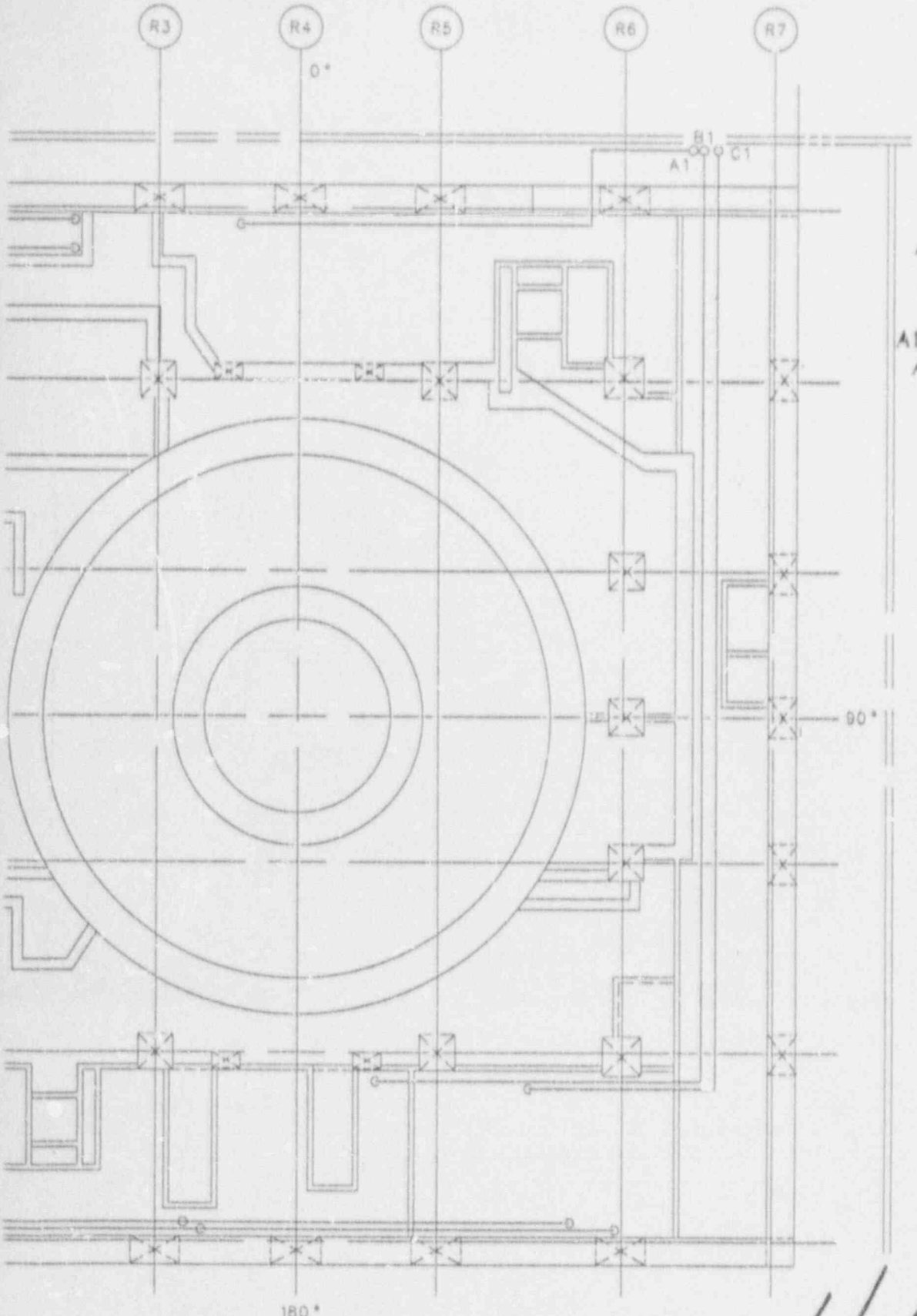
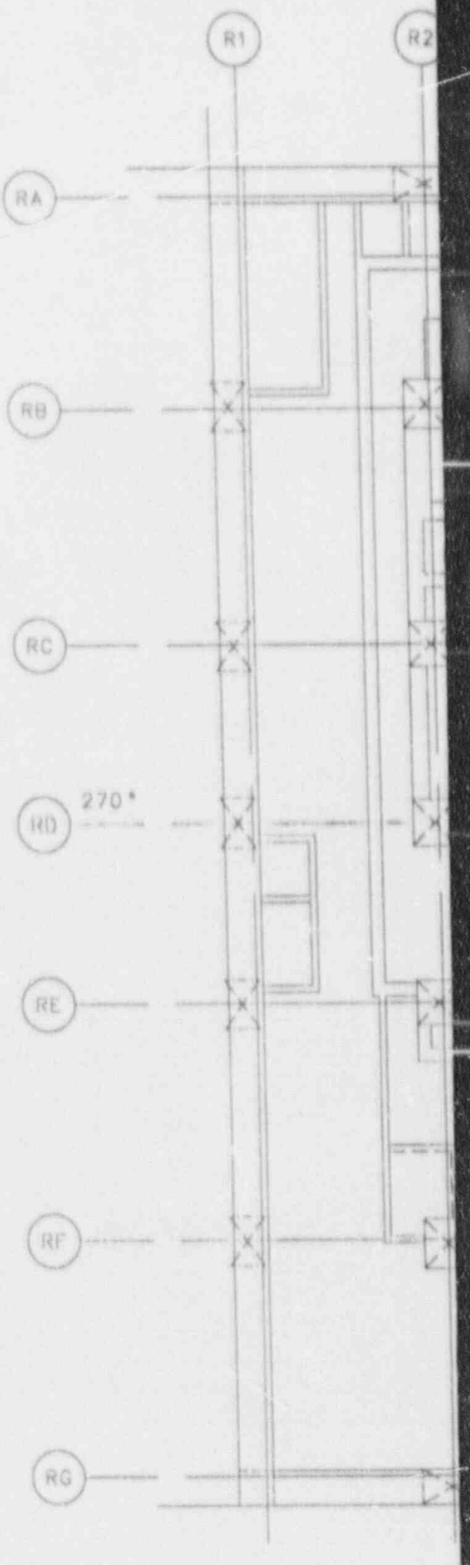
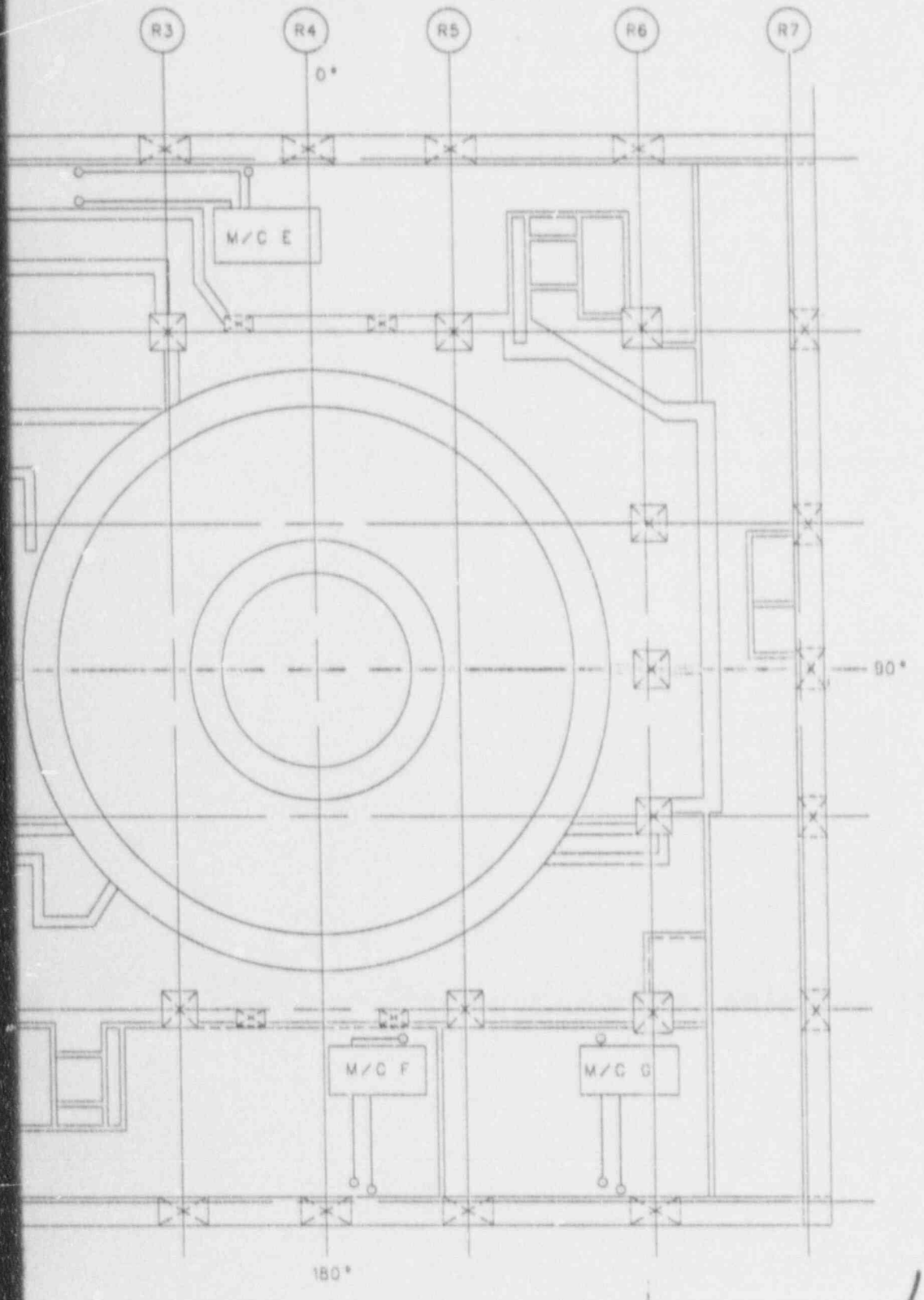


Figure 8.2–1 POWER DISTRIBUTION SYSTEM ROUTING DIAGRAM
(Sheet 6 of 7)


R1
R2
RA
RB
RC
RD
270°
RE
RF
RG

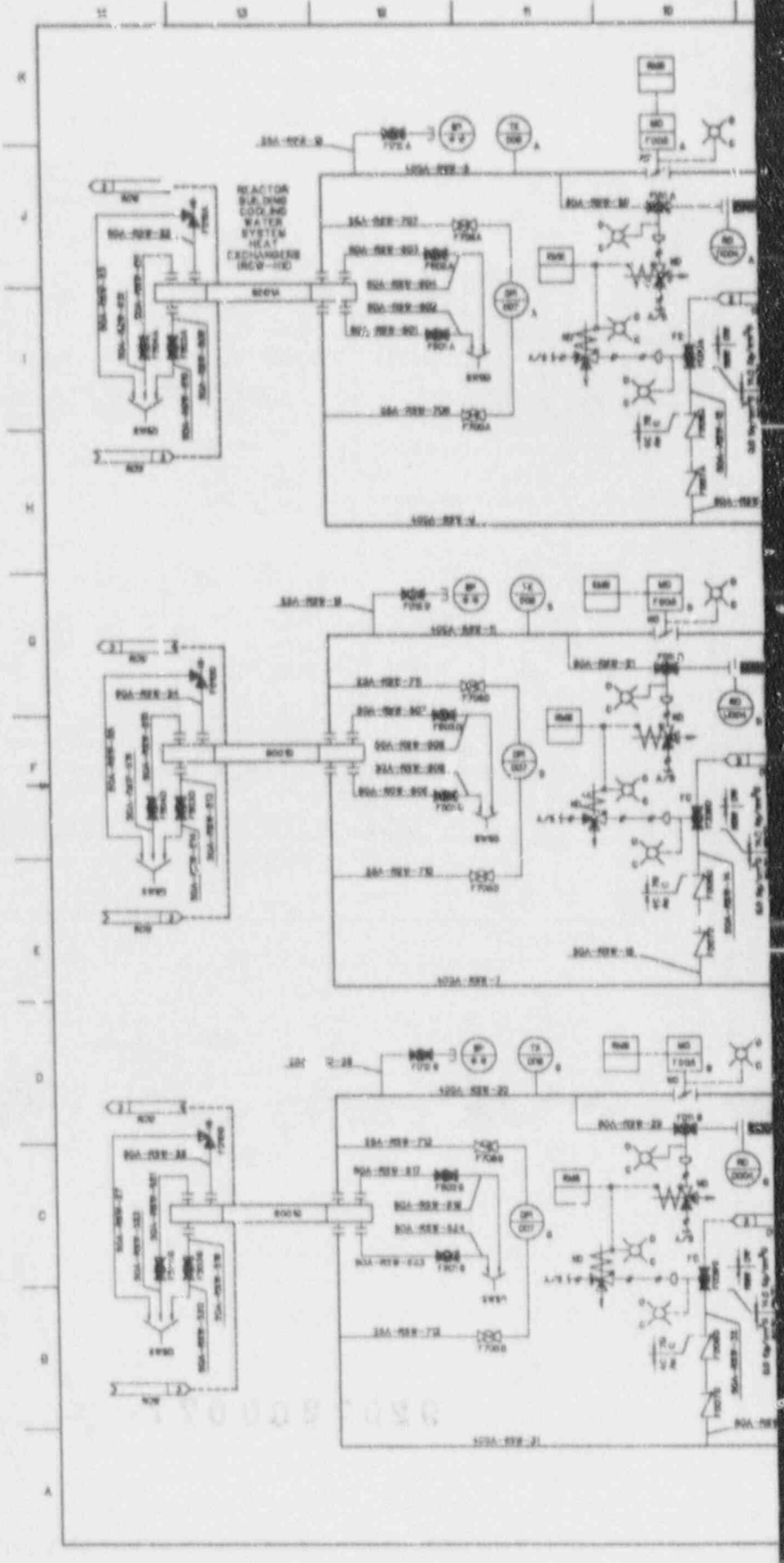


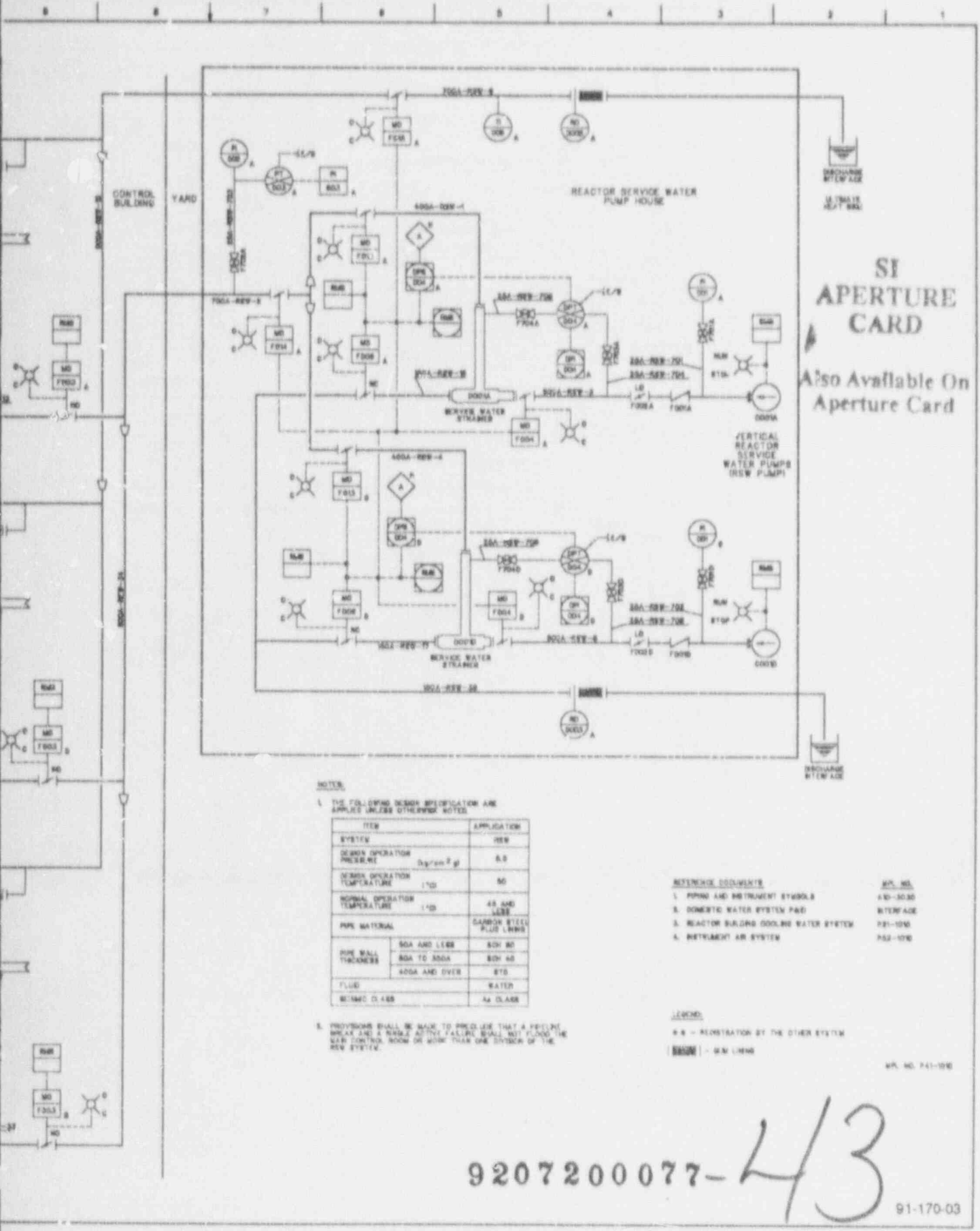
SI
APERTURE
CARD

Also Available On
Aperture Card

9207200077-42

Figure 8.2–1 POWER DISTRIBUTION SYSTEM ROUTING DIAGRAM
(Sheet 7 of 7)

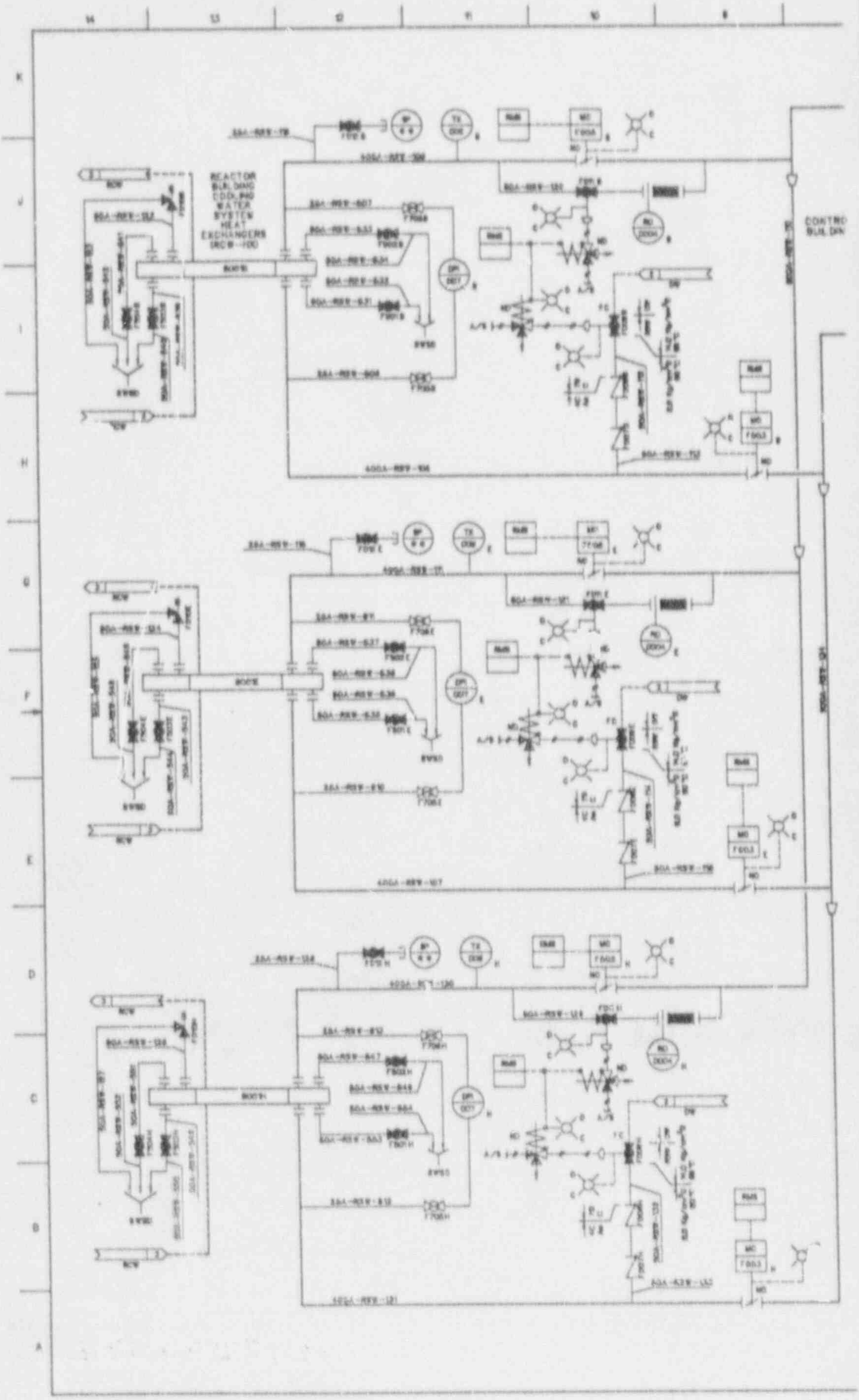

REACTOR BUILDING CLOSED WATER SYSTEM HEAT EXCHANGERS (RCW-110)

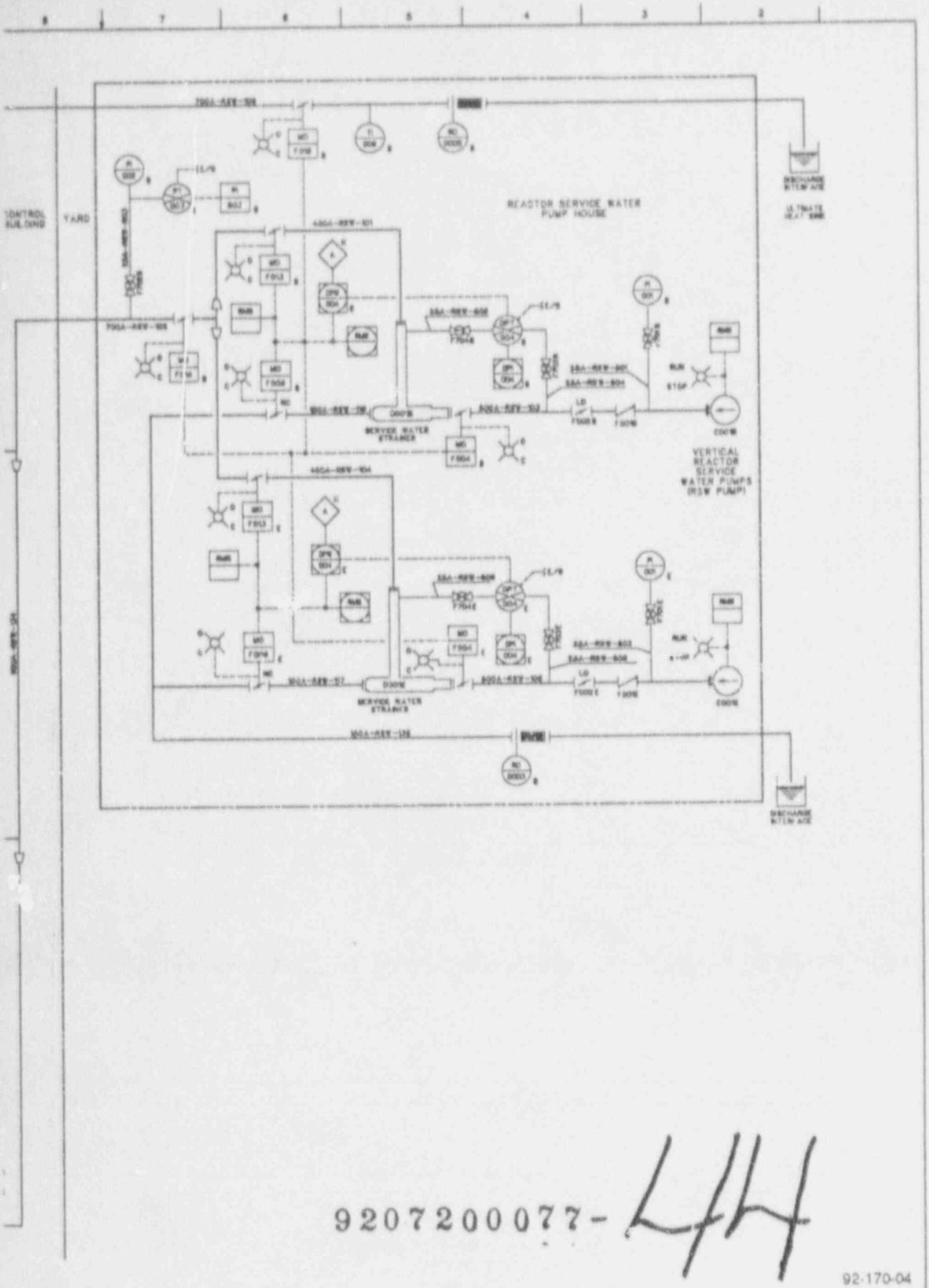


9207200077-43

Figure 9.2–7 REACTOR SERVICE WATER P&ID (Sheet 1 of 3)

A
S


REACTOR
BUILDING
COOLING
WATER
SYSTEM
HEAT
EXCHANGERS
CONTRO
BUILDIN



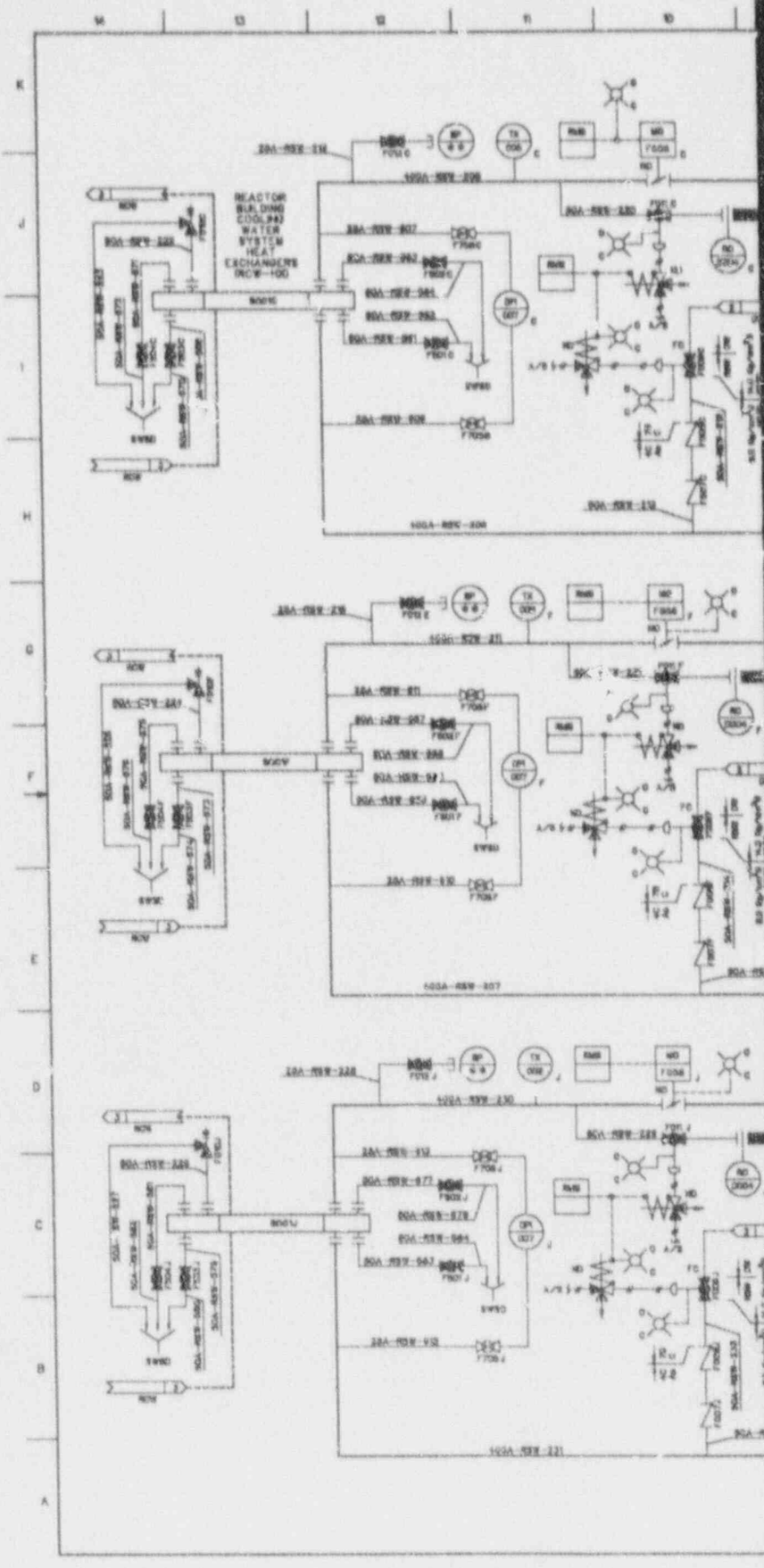
SI
APERTURE
CARD

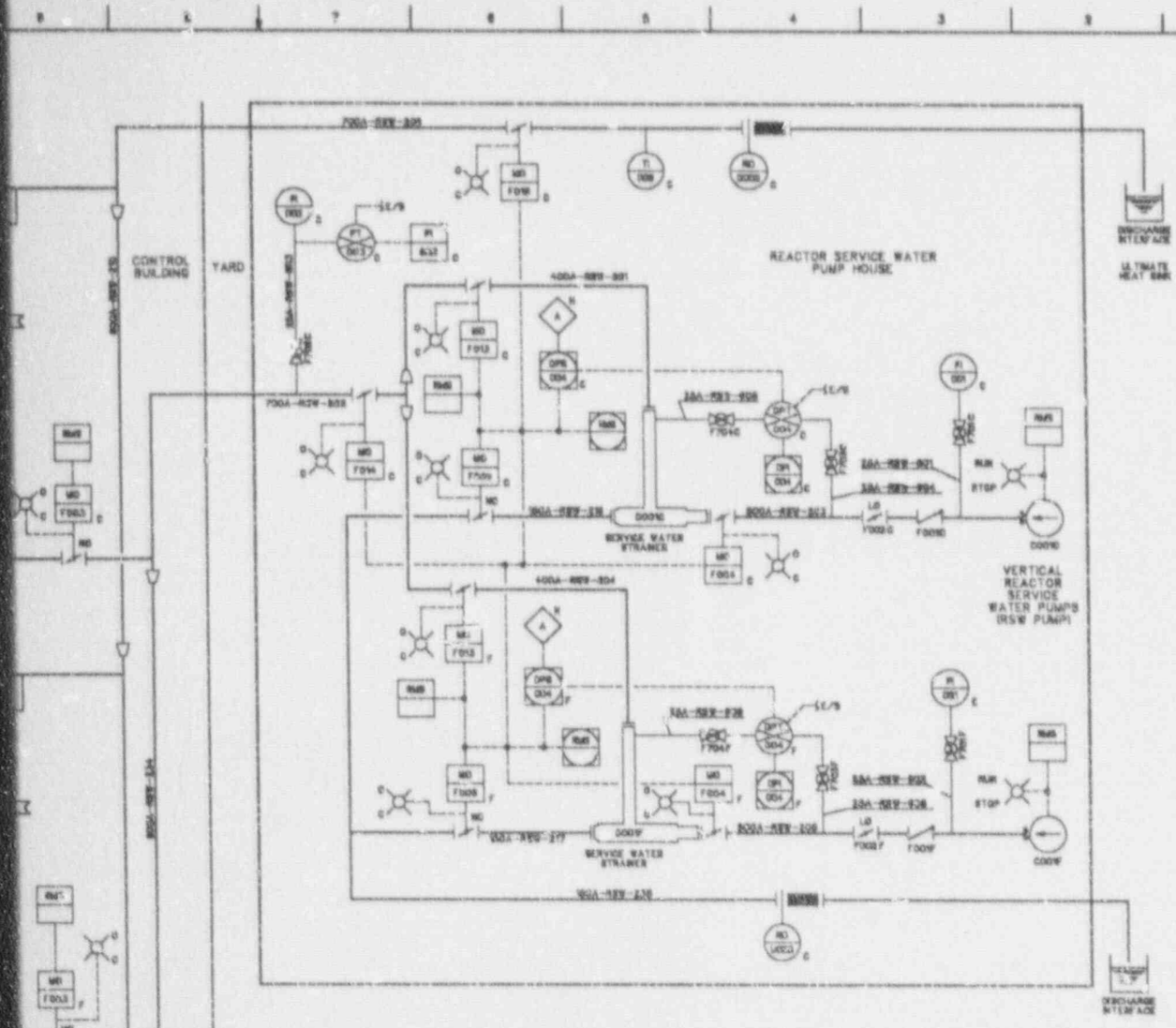
Also Available On
Aperture Card

9207200077-

92-170-04

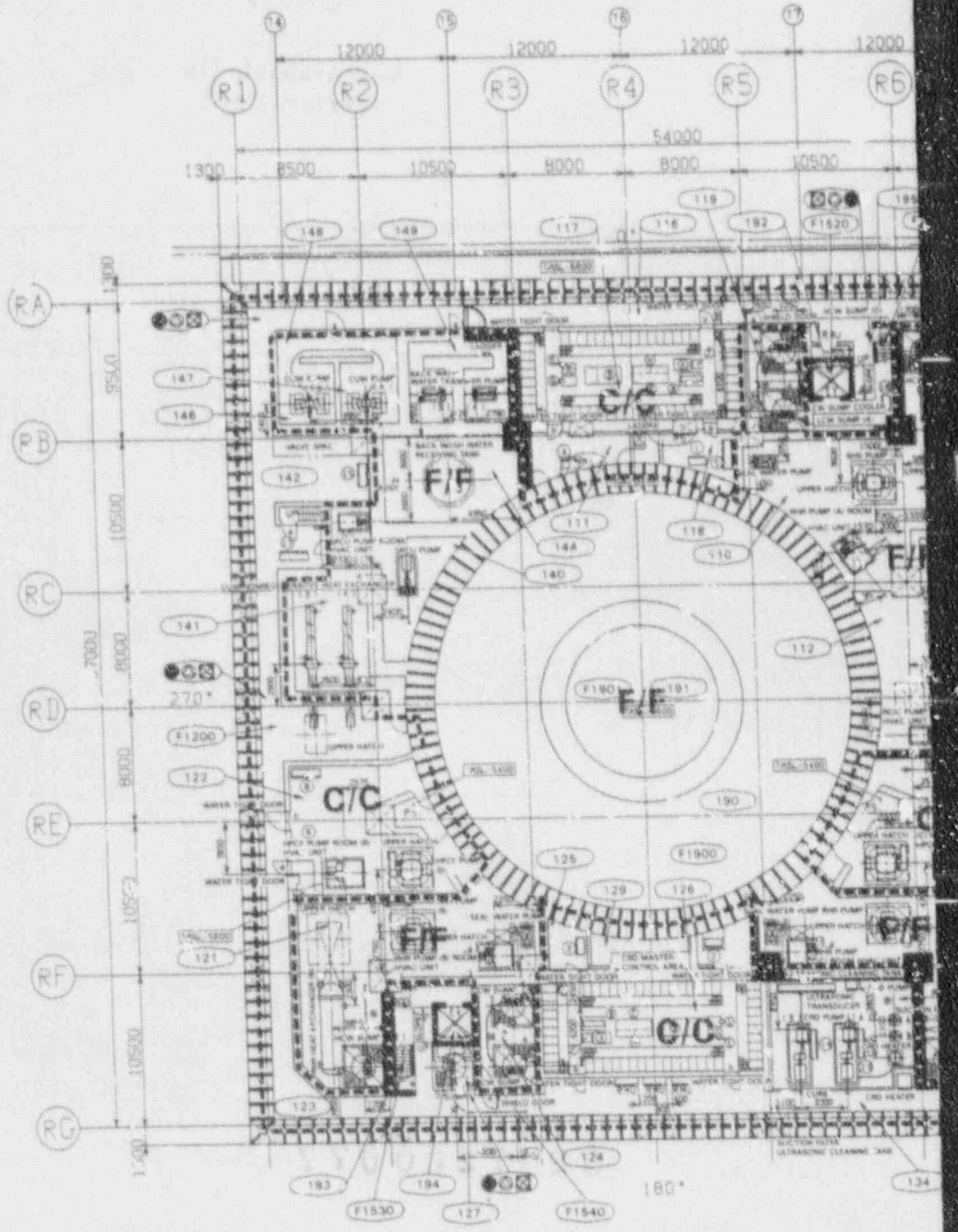
Figure 9.2–7 REACTOR SERVICE WATER P&ID (Sheet 2 of 3)

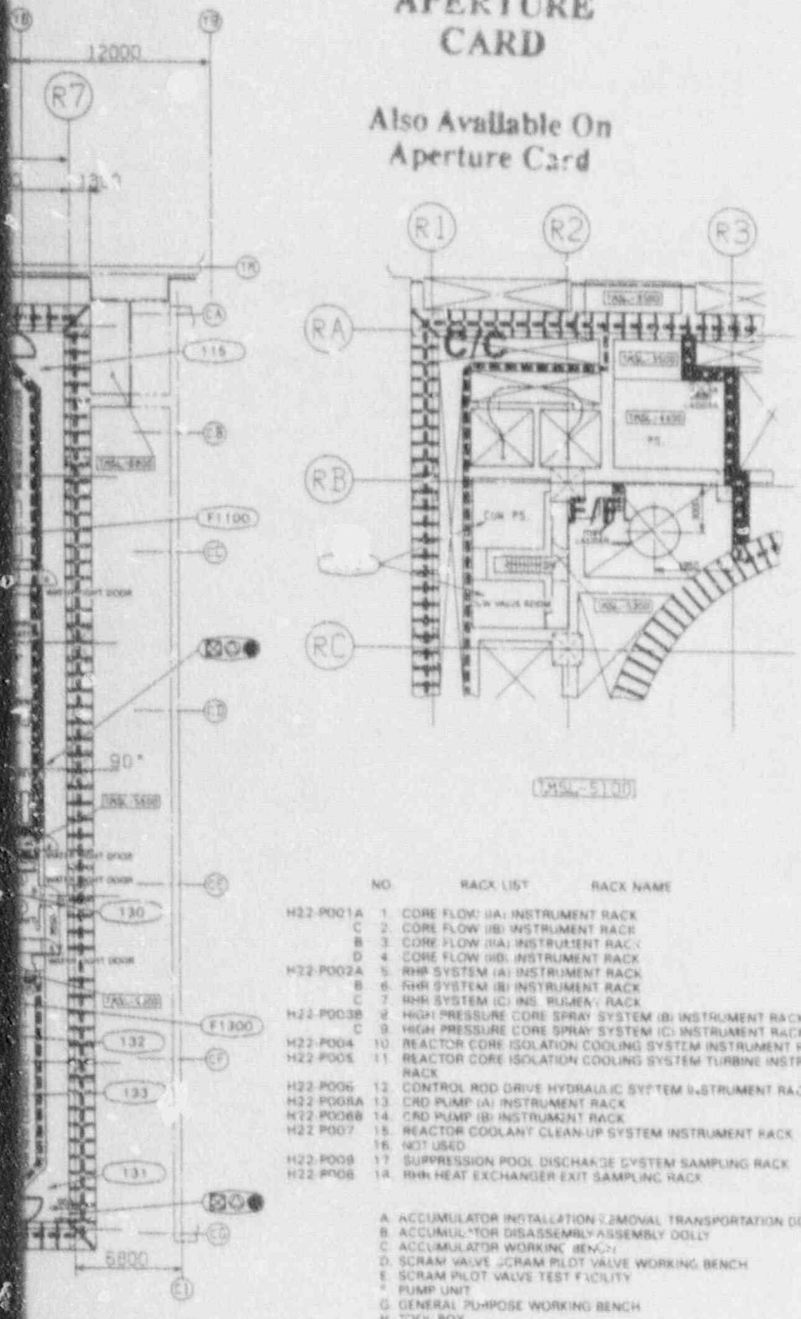

REACTOR BUILDING COOLING WATER SYSTEM HEAT EXCHANGERS INLOW-100



92-170-05

Figure 9.2–7 REACTOR SERVICE WATER P&ID (Sheet 3 of 3)


R1
R2
R3
R4
R5
R6
RA
RB
RC
RD
RE
RF
RG
12000
54000
C/C
F/F
270°
180°



NO.	RACK LIST	RACK NAME
H22-P001A	1.	CORE FLOW (IA) INSTRUMENT RACK
C	2.	CORE FLOW (IB) INSTRUMENT RACK
B	3.	CORE FLOW (IIA) INSTRUMENT RACK
D	4.	CORE FLOW (IIB) INSTRUMENT RACK
H22-P002A	5.	RHR SYSTEM (A) INSTRUMENT RACK
B	6.	RHR SYSTEM (B) INSTRUMENT RACK
C	7.	RHR SYSTEM (C) INSTRUMENT RACK
H22-P003B	8.	HIGH PRESSURE CORE SPRAY SYSTEM (B) INSTRUMENT RACK
C	9.	HIGH PRESSURE CORE SPRAY SYSTEM (C) INSTRUMENT RACK
H22-P004	10.	REACTOR CORE ISOLATION COOLING SYSTEM INSTRUMENT RACK
H22-P005	11.	REACTOR CORE ISOLATION COOLING SYSTEM TURBINE INSTRUMENT RACK
H22-P006	12.	CONTROL ROD DRIVE HYDRAULIC SYSTEM INSTRUMENT RACK
H22-P008A	13.	CRD PUMP (A) INSTRUMENT RACK
H22-P008B	14.	CRD PUMP (B) INSTRUMENT RACK
H22-P007	15.	REACTOR COOLANT CLEAN-UP SYSTEM INSTRUMENT RACK
	16.	NOT USED
H22-P009	17.	SUPPRESSION POOL DISCHARGE SYSTEM SAMPLING RACK
H22-P008	18.	RHR HEAT EXCHANGER EXIT SAMPLING RACK

A. ACCUMULATOR INSTALLATION/REMOVAL TRANSPORTATION DOLLY
B. ACCUMULATOR DISASSEMBLY/ASSEMBLY DOLLY
C. ACCUMULATOR WORKING BENCH
D. SCRAM VALVE, SCRAM PILOT VALVE WORKING BENCH
E. SCRAM PILOT VALVE TEST FACILITY
*. PUMP UNIT
G. GENERAL PURPOSE WORKING BENCH
H. TOOL BOX

FULL POWER/SHUTDOWN
RADIATION LEVELS IN
MREM/HOUR
A ≤ 0.6
B < 1
C < 5
D < 25
E < 100
F ≥ 100

(REMARKS)
EQUIPMENT
RHR PUMP (A)
RHR PUMP (B)
RHR PUMP (C)
RHR HX (A)
RHR HX (B)
RHR HX (C)
HPCF PUMP (B)
HPCF PUMP (C)
CUW NON RE HX
CUW PUMP
CUW BACK WASH TRANSFER PUMP
CUW BACK WASH TANK
CRD PUMP
SUCTION FILTER
RCIC PUMP
RCIC TURBINE

FIRE PROTECTION SYMBOLS

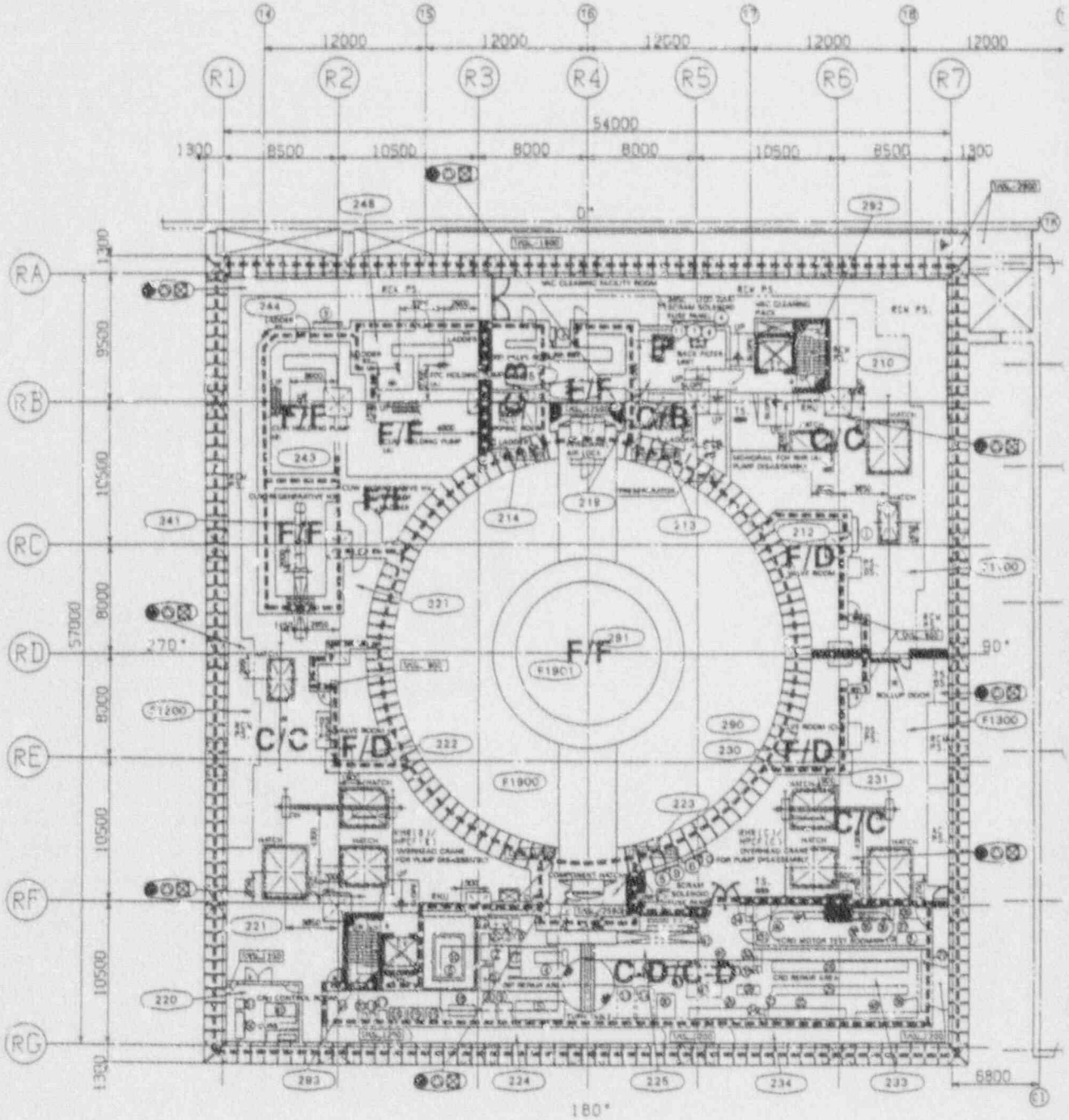
- F1901 — FIRE AREA NUMBER
  - a. LEFT HAND DIGIT IS BOTTOM FLOOR NUMBER STARTING WITH 1 = ELEVATION (-) 8200
  - b. SECOND DIGIT FROM LEFT IS THE ELECTRICAL DIVISION NUMBER
- 135 — ROOM NUMBER
- HOSE RACK
- PORTABLE EXTINGUISHER
- STANDPIPE
- 3-HOUR RATED FIRE BARRIER (WALL)
- RATED FIRE BARRIER (FLOOR)
- 3-HOUR FIRE RATED DOOR
- SECONDARY CONTAINMENT BOUNDARIES (3-HOUR RATED FIRE BARRIER)
- SPRINKLER SYSTEM
- [redacted]

REMARK (COMMON)

1. CURB HEIGHT IS H = 75, UNLESS OTHERWISE SPECIFIED. IF THEY ARE SPECIFIED, THE HEIGHTS ARE AS FOLLOWS
   (a) a IS H = 200
   (b) b IS H = 100
   (c) FOR OTHERS, REFER TO THE HEIGHTS SHOWN ON DRAWINGS
2. EACH SYMBOL MARKS MEAN AS FOLLOWS
   (a) GRATING
   (b) CHECKER PLATE
   (c) CONCRETE BLOCK
   (d) ① THIS SHOWS INSTRUMENTATION RACK NUMBER THAT CORRESPONDS TO RACK LIST
   (e) FRONT OF PANEL AND RACK
   FRONT
   (f) PULL SPACE FOR MAINTENANCE
   (g) HANDRAIL
   (h) MONORAIL
   (i) EV ELEVATOR
   (j) PS PIPE SPACE
   (k) DS HVAC DUCT SPACE
   (l) TS CABLE TRAY SPACE
   (m) NL NORMAL LOCK DOOR
   (n) STEEL SHIELDING DOOR
   (o) CURB
   (p) PP PHYSICAL PROTECTION
3. SOLID COLORED AREAS CONTAIN SAFETY-RELATED EQUIPMENT OF THE ELECTRICAL DIVISION ASSIGNMENT INDICATED BELOW
   - DIVISION 1
   - DIVISION 2
   - DIVISION 3
   - DIVISION 4
4. AREAS CROSS HATCHED WITH COLORS PRIMARILY CONTAIN NON SAFETY-RELATED EQUIPMENT BUT ARE NOT SEPARATED BY FIRE BARRIERS FROM AN ADJACENT AREA CONTAINING SAFETY-RELATED EQUIPMENT OF THE SAME DIVISION AS FOR THE COLOR OF THE CROSS HATCH

92-230-05

Figure 12.3–1 REACTOR BUILDING RADIATION ZONE MAP FOR FULL POWER AND SHUTDOWN OPERATION AT ELEVATION –8200mm (B3F)



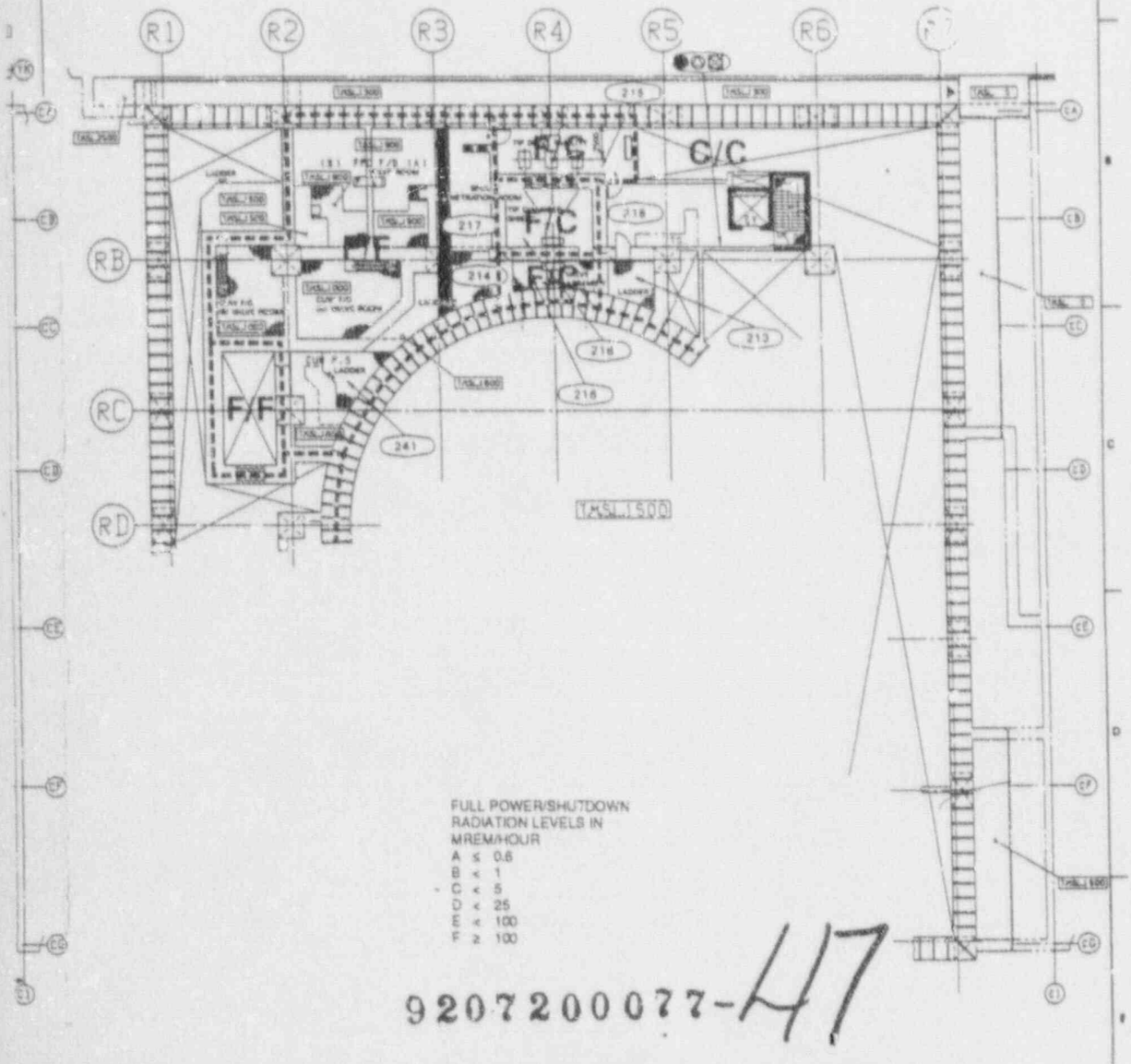
TMSL-1700 (B2F)

(REMARKS)

EQUIPMENT	
CUW RE HX	
CUW F/D VALVE ROOM	
RIP MAINTENANCE AREA	
FPC F/D MAINTENANCE AREA	
CRD CONTROL ROOM	

RACK LIST

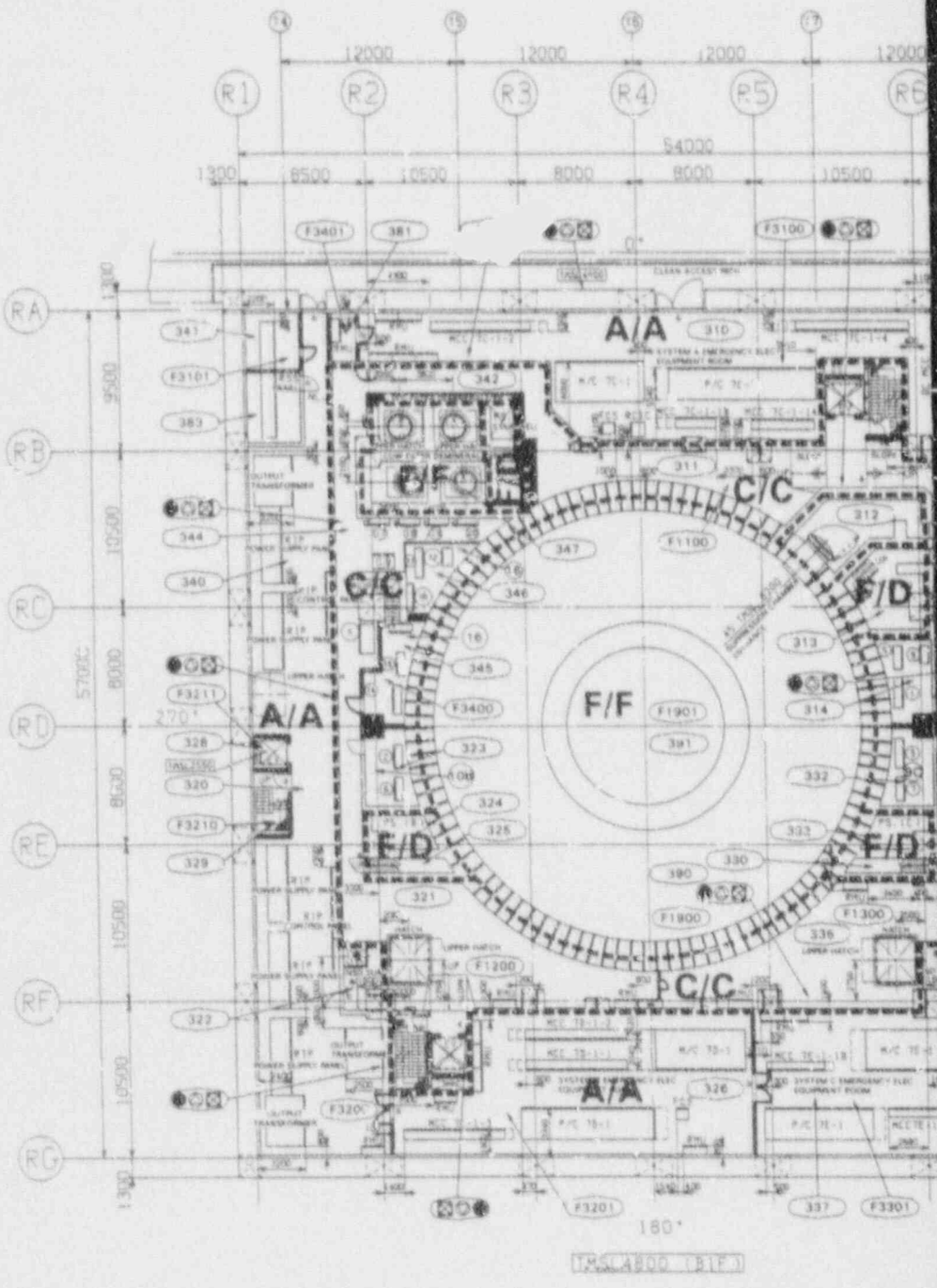
		NO	RACK NAME
E51	H22-P010	1.	REACTOR CORE ISOLATION COOLING SYSTEM (STEAM SYSTEM) INSTRUMENT RACK
G41	H22-P011	2.	FPC F/D SOLENOID OPERATED VALVE RACK
G31	H22-P012A	3.	CUW F/D SOLENOID OPERATED VALVE RACK A
G31	H22-P012B	3.	CUW F/D SOLENOID OPERATED VALVE RACK B
C71	H22-P055A	4.	SCRAM SOLENOID FUSE PANEL
C71	H22-P055B	5.	SCRAM SOLENOID FUSE PANEL
C71	H22-P055C	6.	SCRAM SOLENOID FUSE PANEL
C71	H22-P055D	7.	SCRAM SOLENOID FUSE PANEL
C71	H22-P055E	8.	SCRAM SOLENOID FUSE PANEL
C71	H22-P055F	9.	SCRAM SOLENOID FUSE PANEL
C71	H22-P055G	10.	SCRAM SOLENOID FUSE PANEL
C71	H22-P055H	11.	SCRAM SOLENOID FUSE PANEL



1. MOTOR ASSEMBLY/ DISASSEMBLY AREA
2. MOTOR DISASSEMBLY PARTS AREA
3. SPARE PARTS TOOL STORAGE RACK
4. MOTOR TEMPORARY PLACE
5. MOTOR CARRYING DOLLY AREA
6. DECONTAMINATION ELECTRICAL TEST TANK
7. WORK BENCH
8. MOVABLE TOOL TABLE
9. SPARE MOTOR STORAGE AREA
10. OVERHEAD CRANE HOOK REACH
11. CHANGING SPACE
12. PUMP TANK FOR WASHING
13. STRETCH TUBE NUT HANDLING TOOL STORAGE AREA
14. SECOND SEAL HANDLING TOOL STORAGE AREA
15. BOTTOM CLOSE FLANGE STORAGE AREA
16. MAIN FLANGE STAND TOOL STORAGE AREA
17. AUX COOLER HANDLING TOOL STORAGE AREA
18. MOTOR CONTAINER TEMPORARY PLACE
19. HANDLING TOOL CONTROL BOX STORAGE AREA
20. HANDLING TOOL HYDRAULIC UNIT STORAGE AREA
21. COUPLING STAND HANDLING TOOL STORAGE AREA
22. CRD STORAGE TANK
23. ULTRASONIC CLEANING TANK
24. ULTRASONIC TRANSDUCER
25. CRD DISASSEMBLY CLEANING TANK
26. CRD WORK TABLE
27. BALL NUT DECENT TEST TABLE
28. SPOOL PIECE WORK TABLE
29. SPOOL PIECE STORAGE TANK
30. SEAL HOUSING TEST FACILITY
31. PARTS TEMPORARY PLACE
32. TOOL RACK
33. STORAGE RACK
34. MOVABLE PARTS TABLE
35. MOTOR UNIT WORK TABLE
36. MOTOR TEST FACILITY
37. BRAKE-SYNCHRO TEST FACILITY
38. MOTOR STORAGE RACK
39. OVERHEAD CRANE REACH LIMIT
40. MONORAIL
41. RIP TEMPORARY PLACE
42. MOTOR BRACKET TEMPORARY PLACE
43. CRD CART STORAGE AREA
44. MOTOR UNIT SPOOL PIECE DOLLY STORAGE AREA
45. ATTACHMENT STORAGE AREA
46. CRD STORAGE AREA
47. SPOOL PIECE STORAGE AREA
48. MOTOR SPARE PARTS AREA
49. CRD REPLACEMENT FACILITY CONTROL PANEL
50. CRD REPLACEMENT FACILITY DRIVE PANEL
51. CRD REPLACEMENT FACILITY PRINTER

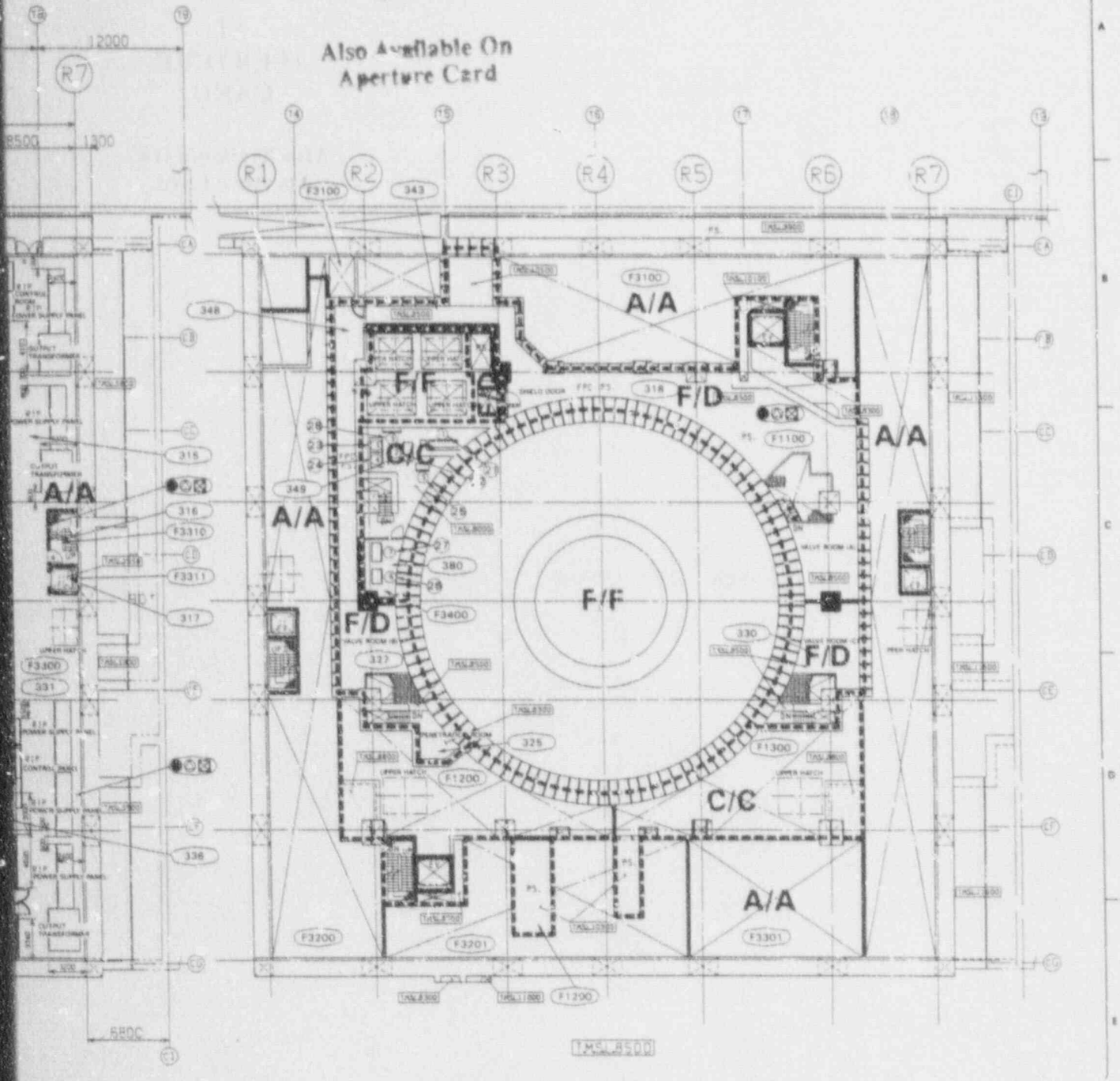
92-230-06

Figure 12.3--2 REACTOR BUILDING RADIATION ZONE MAP FOR FULL POWER AND SHUTDOWN OPERATION AT ELEVATION –1700mm (B2F)



		NO.	RACK LIST
B31	H22-P013A	1.	REACTOR SYSTEM (I) INSTRUMENT RACK
B31	H22-P013B	2.	REACTOR SYSTEM (II) INSTRUMENT RACK
B31	H22-P013C	3.	REACTOR SYSTEM (III) INSTRUMENT RACK
B31	H22-P013D	4.	REACTOR SYSTEM (IV) INSTRUMENT RACK
B31	H22-P014A	5.	MAIN STEAM FLOW (I) INSTRUMENT RACK
B31	H22-P014B	6.	MAIN STEAM FLOW (II) INSTRUMENT RACK
B31	H22-P014C	7.	MAIN STEAM FLOW (III) INSTRUMENT RACK
B31	H22-P014D	8.	MAIN STEAM FLOW (IV) INSTRUMENT RACK
E31	H22-P015A	9A.	LEAK DETECTION SYSTEM (A) INSTRUMENT RACK
E31	H22-P015C	9C.	LEAK DETECTION SYSTEM (C) INSTRUMENT RACK
E31	H22-P015B	10B.	LEAK DETECTION SYSTEM (B) INSTRUMENT RACK
E31	H22-P015D	10D.	LEAK DETECTION SYSTEM (D) INSTRUMENT RACK
		12.	REACTOR WATER SAMPLING TRANSMITTER PANEL
G41	H22-P016	13.	FPC FD SAMPLING TRANSMITTER

		NO.	RACK LIST
G41	H22-P017	14.	FPC FD MAIN VA
G41	H22-P018	15.	FPC FD COND. CT
G41	H22-P019	16.	FPC FD SAMPLING
G41	H22-P026	17.	FPC F/D INSTRUM
G41	H22-P027	18.	FPC F/D INSTRUM
G31	H22-P030	19.	CUW F/D INSTRUM
G31	H22-P029	20.	CUW F/D INSTRUM
P91	H22-P020	21.	REACTOR WATER
P91	H22-P021	22.	REACTOR WATER
P91	H22-P022	23.	REACTOR WATER
P91	H22-P023	24.	REACTOR WATER
P91	H22-P024	25.	REACTOR WATER
P91	H22-P025A	26.	REACTOR WATER
P91	H22-P025	27.	REACTOR WATER
P91	H22-P036	28.	PAS RELATED AO



METER RACK
RACK (B)
RACK (A)
RACK (B)
RACK (A)
PLING COOLER RACK
PLE DEPRESSURIZATION RACK
ETER RACK
OXVED OXYGEN METER
UCTIVITY METER RACK
PLING HOOD
SAMPLING RACK
E RACK

(REMARKS)
EQUIPMENT
EMERGENCY ELECTRIC ROOM (A)
EMERGENCY ELECTRIC ROOM (B)
EMERGENCY ELECTRIC ROOM (C)
RSS PANEL
RP PANEL

FULL POWER/SHUTDOWN
RADIATION LEVELS IN
MREM/HOUR
A ≤ 0.6
B < 1
C < 5
D < 25
E < 100
F ≥ 100

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92-230-03

Figure 12.3–3 REACTOR BUILDING RADIATION ZONE MAP FOR FULL POWER AND SHUTDOWN OPERATION AT ELEVATION 4800/8500mm (B1F)

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APERTURE
CARD

Also Available On
Aperture Card

Figure 12.3-4 - Deleted

SI
APERTURE
CARD

Also Available On
Aperture Card

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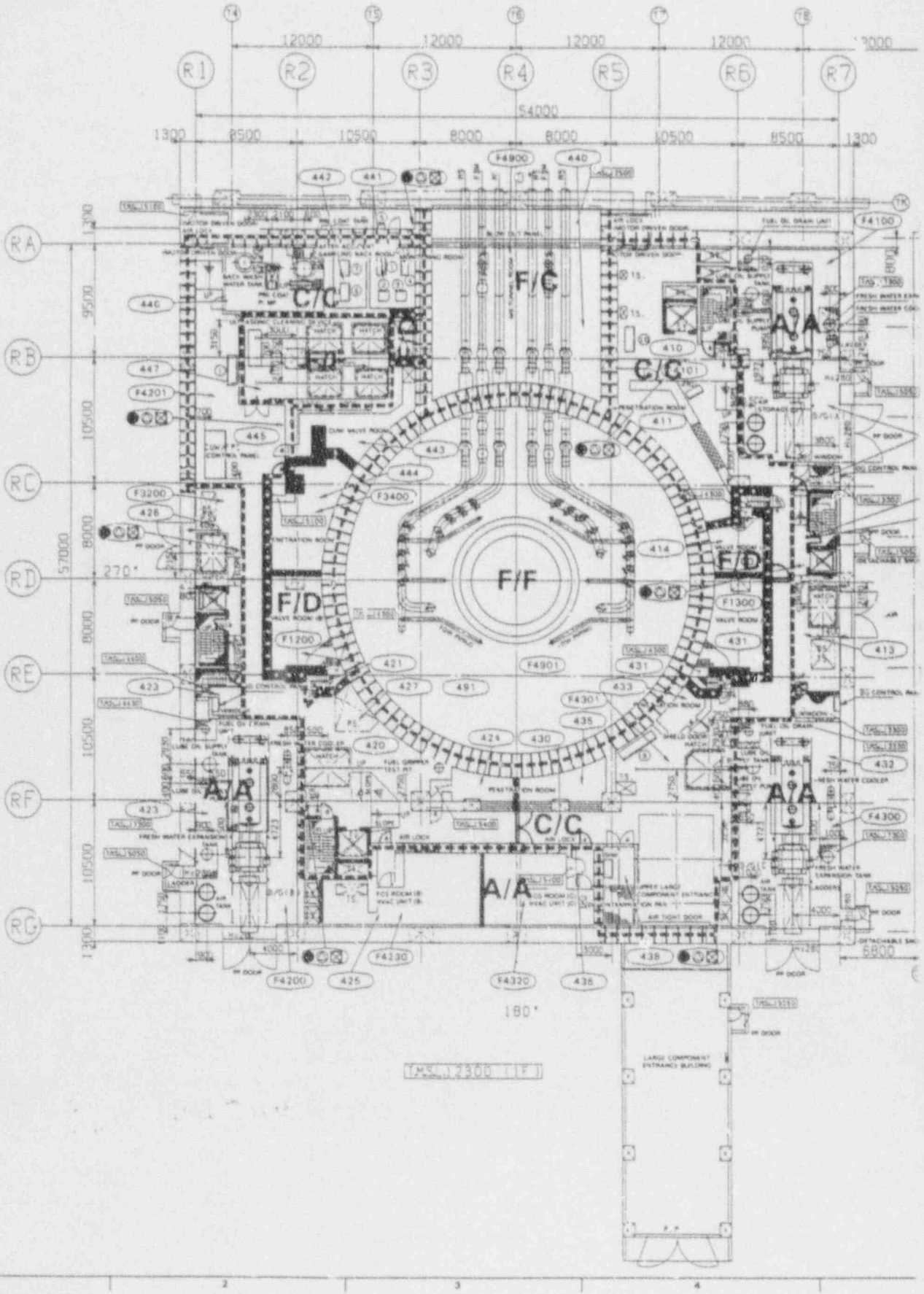
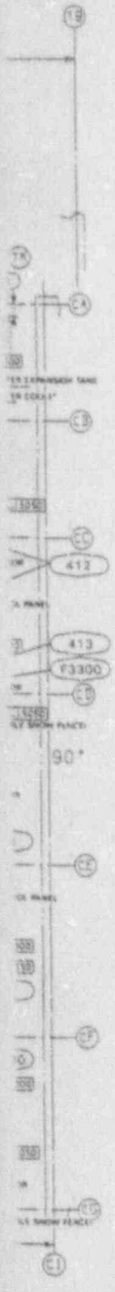

R1
R2
R3
R4
R5
R6
R7
54000
RA
RB
RC
RD
RE
RF
RG
F/C
C/C
A/A
F/D
F/F
270°
180°



(REMARKS)
EQUIPMENT
PRE COAT PUMP
FUEL HANDLING MACHINE TEST PIT

INSTRUMENT RACK LIST

NO.	NAME
H22-P031	1. POST ACCIDENT SAMPLE TRANSFER RACK
H22-P032	2. POST ACCIDENT SAMPLE RECOVERY RACK
H22-P033	3. POST ACCIDENT SAMPLING LOCAL OPERATING PANEL
H22-P034	4. STANDBY GAS TREATMENT SYSTEM OFF GAS RADIATION MONITOR SAMPLE RACK
H22-P035	5. STANDBY GAS TREATMENT SYSTEM OFF GAS RADIATION MONITOR GAS SAMPLER RACK (A)
H22-P036	6. STANDBY GAS TREATMENT SYSTEM OFF GAS RADIATION MONITOR GAS SAMPLER RACK (B)
H22-P037	7. STANDBY GAS TREATMENT SYSTEM OFF GAS RADIATION MONITOR PARTICULATE IODINE SAMPLE RACK
H22-P038	9. STANDBY GAS TREATMENT SYSTEM OFF GAS RADIATION MONITOR PARTICULATE IODINE SAMPLE RACK OPERATING PANEL
H22-P039	8. CONTAINMENT VESSEL PRESSURE, LEAK TEST RACK
H22-P040	10. REACTOR CONTAINMENT VESSEL DEW POINT RECORDER RACK

FULL POWER/SHUTDOWN
RADIATION LEVELS IN
MREM/HR

A	≤ 0.6
B	< 1
C	< 5
D	< 25
E	< 100
F	≥ 100

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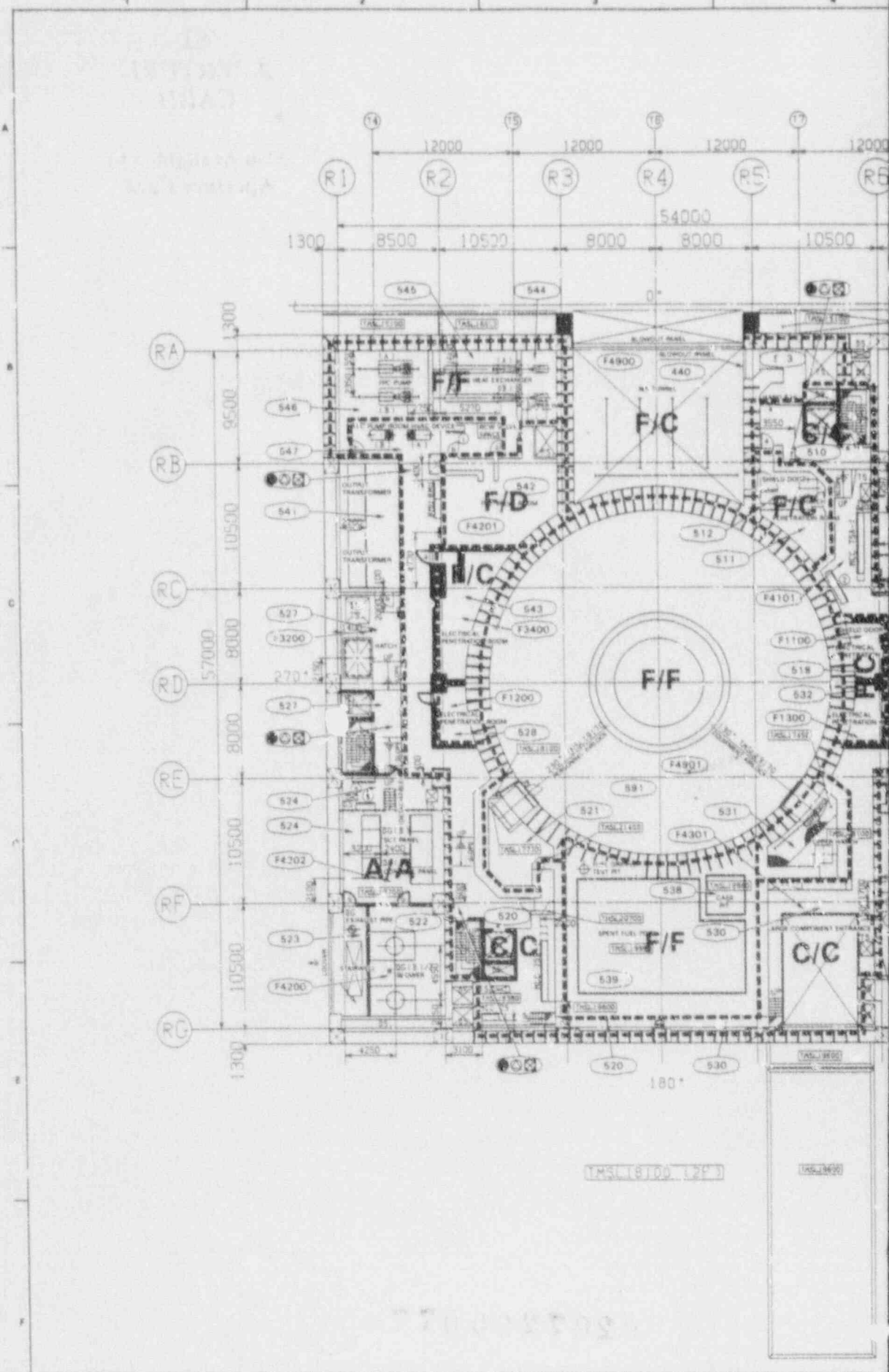
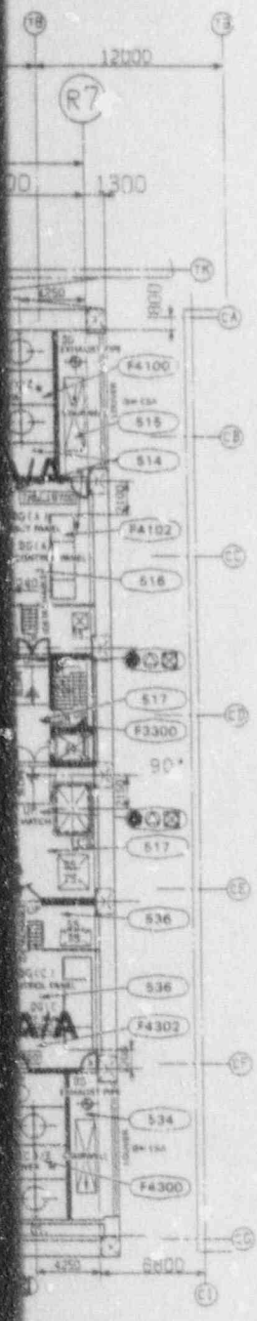
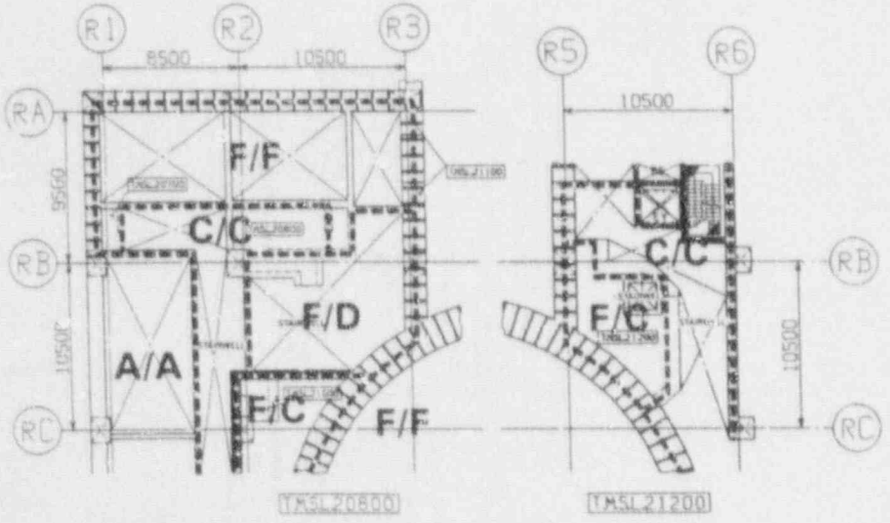
92-230-02

Figure 12.3–5 REACTOR BUILDING RADIATION ZONE MAP FOR FULL POWER AND SHUTDOWN OPERATION AT ELEVATION 12300mm (1F)


R1
R2
R3
R4
R5
R6
54000
12000
8500
10500
8000
RA
RB
RC
RD
RE
RF
RG
F/F
F/C
F/D
C/C
A/A
180°
270°





INSTRUMENT RACK LIST

NO.		RACK NAME
H22-P042	1	FUEL POOL COOLING CLEANUP SYSTEM INSTRUMENT RACK
H22-P041	2	MSIV LEAK TEST INSTRUMENT RACK

FOAM FIRE EXTINGUISHER LIST

NO.	RACK NAME
A	FOAM LIQUID TANK
B	FOAM INJECTION EQUIPMENT

(REMARKS)
EQUIPMENT

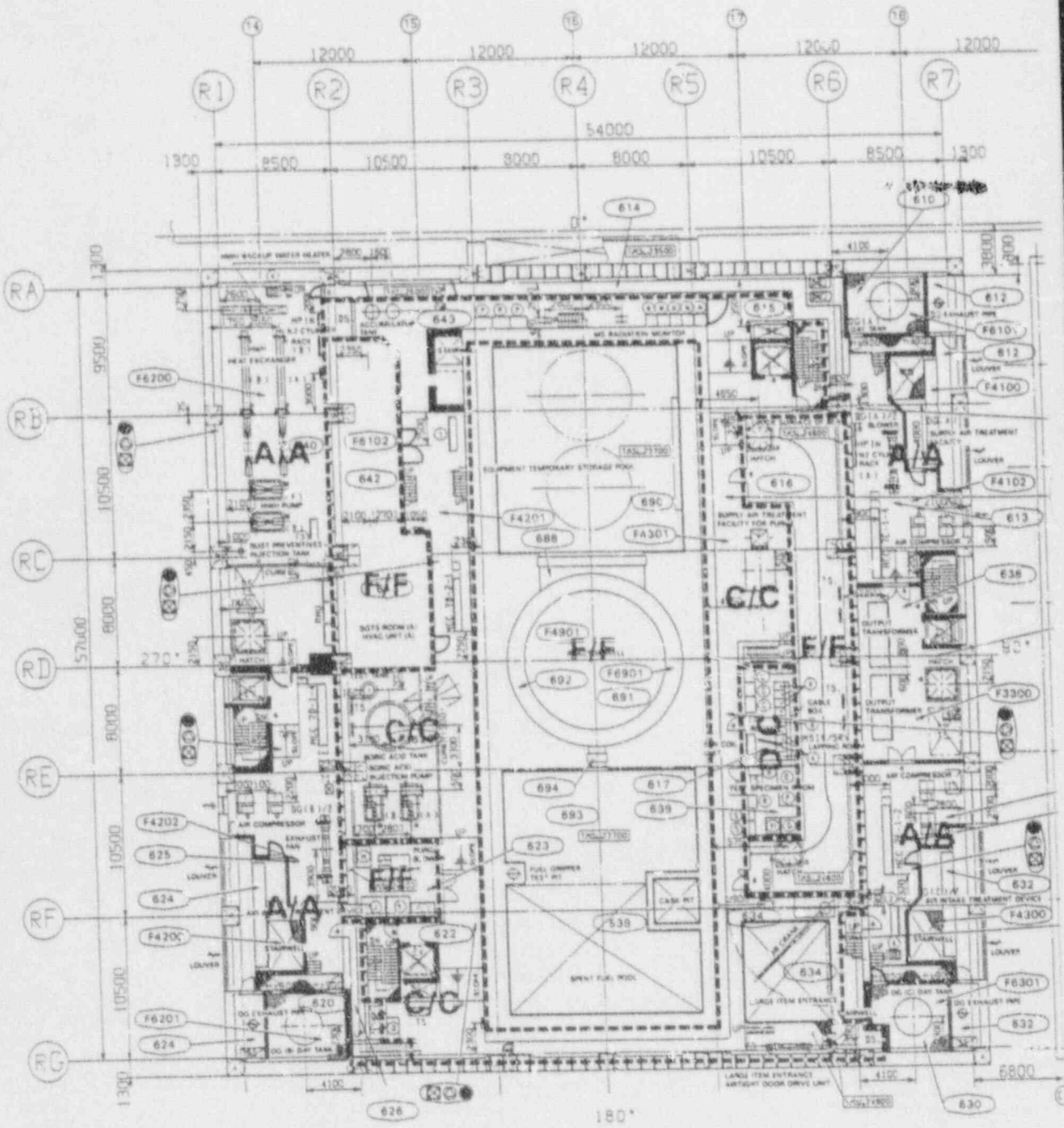
FPC HX
FPC PUMP
FUEL HANDLING MACHINE TEST PIT
SPENT FUEL STORAGE POOL
CASK PIT
D/G(A) CONTROL PANEL
D/G(B) CONTROL PANEL
D/G(C) CONTROL PANEL
DG(A)/Z SUPPLY FAN
DG(B)/Z SUPPLY FAN
DG(C)/Z SUPPLY FAN

FULL POWER/SHUTDOWN
RADIATION LEVELS IN
MREM/HOUR
A ≤ 0.6
B < 1
C < 5
D < 25
E < 100
F ≥ 100

9207200077-52

92-230-01

Figure 12.3–6 REACTOR BUILDING RADIATION ZONE MAP FOR FULL POWER AND SHUTDOWN OPERATION AT ELEVATION 18100mm (2F)



T.M.S.L. 23500 (3F)

INSTRUMENT RACK

		NO.	RACK NAME
C41	H22-P043	1.	STANDBY GAS TREATMENT SYSTEM INSTRUMENT RACK
D23	H22-P044A	2.	CONTAINMENT VESSEL ATMOSPHERE MONITOR CALIBRATION GAS CYLINDER RACK A
D23	H22-P044B	3.	CONTAINMENT VESSEL ATMOSPHERE MONITOR CALIBRATION GAS CYLINDER RACK B

ISI ROOM AND AUXILIARY FACILITIES

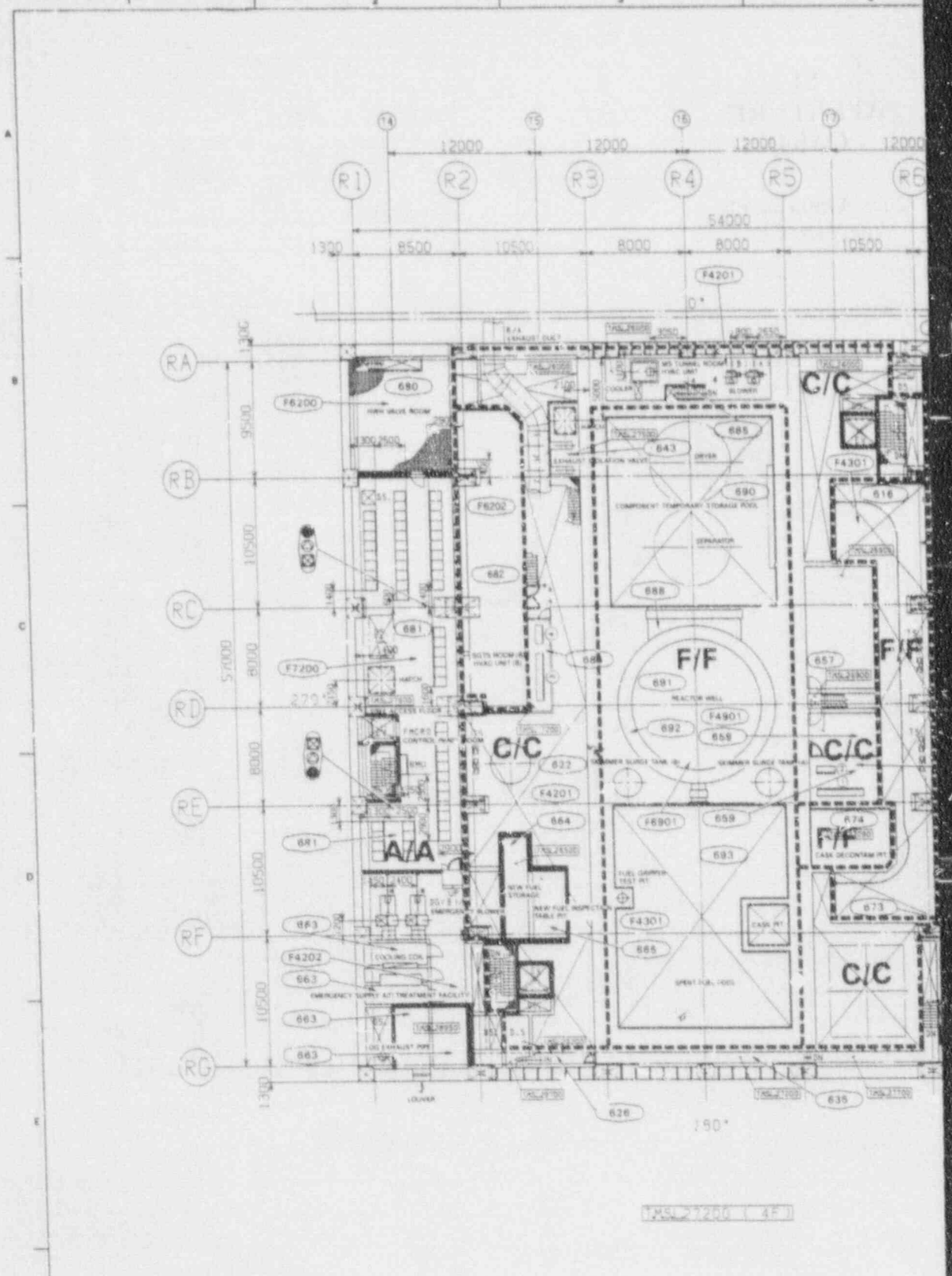
NO.	FACILITY NAME	QTY	(REMARKS) EQUIPMENT
A	CONTROL DATA COLLECTION EQUIPMENT	6	D/S PIT
B	STABILIZED POWER SUPPLY SYSTEM	1	CASK PIT
C	DESK	3	SPENT FUEL STORAGE POOL
D	STORAGE	2	ISI INSPECTION ROOM
E	CALIBRATION TEST PIECE FOR M/S NOZZLE CORNER	1	SGTS FILTER TRAIN
F	CALIBRATION TEST PIECE FOR NOZZLE CORNER	1	SGTS FAN
G	CALIBRATION TEST PIECE FOR NOZZLE CORNER	1	SLC PUMP
H	CALIBRATION TEST PIECE FOR NOZZLE CORNER	1	SLC TANK
J	RPV SHELL ADJUST TEST FACILITY	1	SLC TEST TANK
K	RPV BOTTOM PLATE ADJUST TEST FACILITY	1	DG (A) DAY TANK
L	RPV NOZZLE ADJUST TEST FACILITY	1	DG (B) DAY TANK
M	PIPING ADJUST TEST FACILITY	1	DG (C) DAY TANK
N	ISI DEVICE STORAGE	5	HWH PUMP
P	ISI DEVICE STORAGE	3	HWH FIX
Q	RPV CALIBRATION TEST PIECE STORAGE	1	
R	RPV CONSUMABLE MATERIALS AND CALIBRATION TEST PIECE STORAGE	2	
S	PIPING CALIBRATION TEST PIECE STORAGE	2	

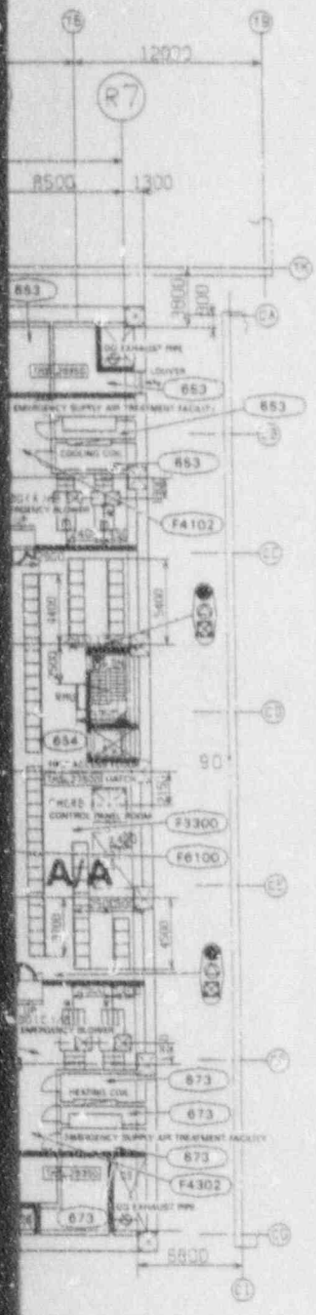
FULL POWER/SHUTDOWN
RADIATION LEVELS IN
MREM/HOUR
A ≤ 0.6
B < 1
C < 5
D < 25
E < 100
F ≥ 100

9207200077-53

92-230-04

Figure 12.3-7 REACTOR BUILDING RADIATION ZONE MAP FOR FULL POWER AND SHUTDOWN OPERATION AT ELEVATION 23500mm (3F)


R1
R2
R3
R4
R5
R6
RA
RB
RC
RD
RE
RF
RG
12000
54000
F/F
C/C
A/A
180°



RACK LIST

NO.		RACK NAME
D23 D22-C053A	1.	CONTAINMENT VESSEL ATMOSPHERE MONITOR RACK (A)
D23 D22-C054A	2.	CONTAINMENT VESSEL ATMOSPHERE MONITOR CALIBRATION RACK (A)
D23 D22-C053B	3.	CONTAINMENT VESSEL ATMOSPHERE MONITOR RACK (B)
D23 D22-C054B	4.	CONTAINMENT VESSEL ATMOSPHERE MONITOR CALIBRATION RACK (B)

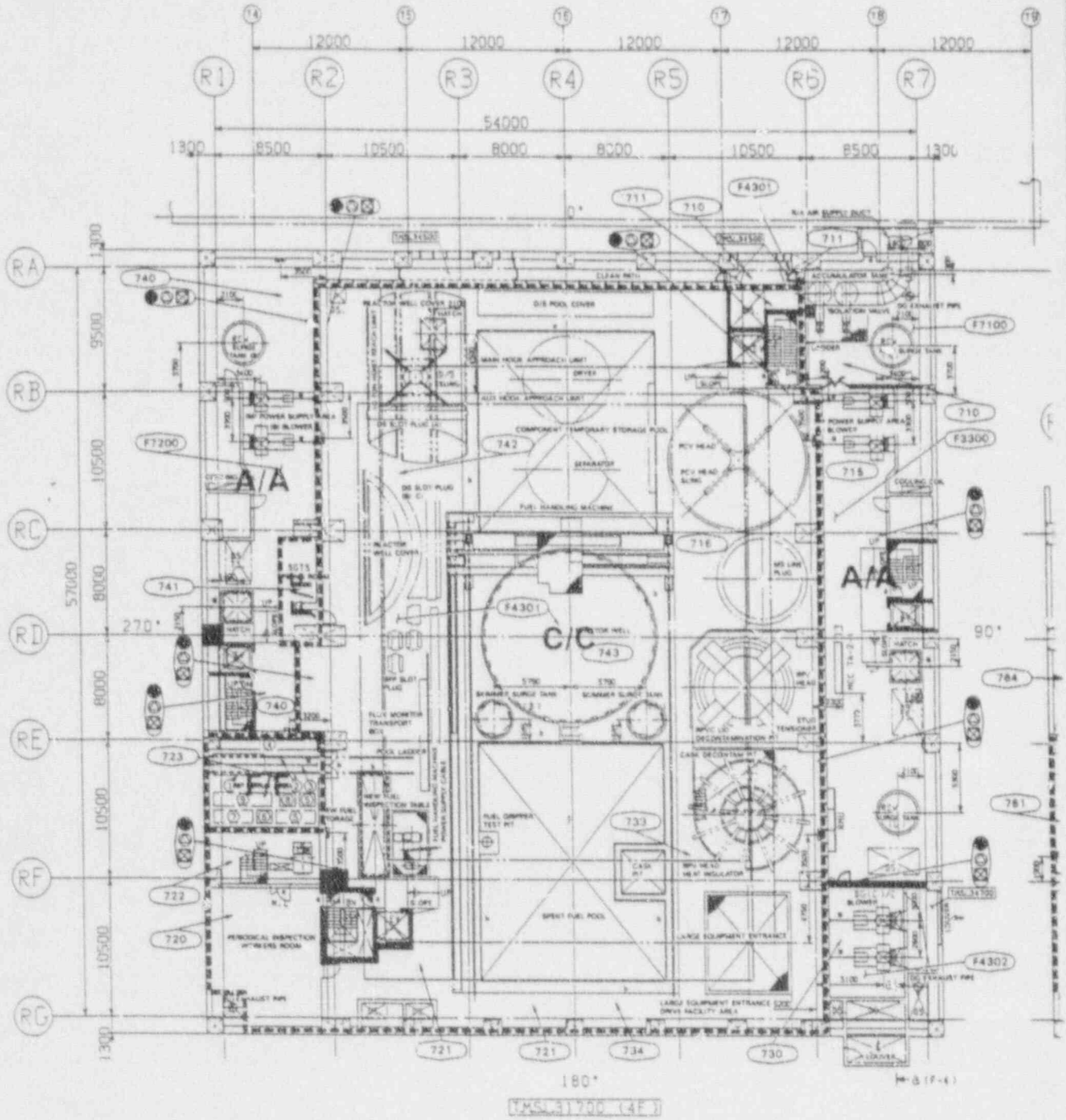
(REMARKS) EQUIPMENT
D/S PIT
CASK PIT
SPENT FUEL STORAGE POOL
CASK WASHDOWN PIT
FMCRD PANEL ROOM
NEW FUEL STORAGE PIT
NEW FUEL INSPECTION PIT

FULL POWER/SHUTDOWN RADIATION LEVEL IN MREM/HOUR
A ≤ 0.6
B < 1
C < 5
D < 25
E < 100
F ≥ 100

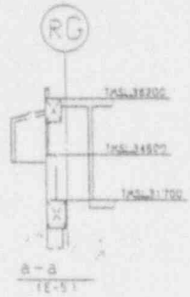
9207200077-54

92-230-07

Figure 12.3--8 REACTOR BUILDING RADIATION ZONE MAP FOR FULL POWER AND SHUTDOWN OPERATION AT ELEVATION 27200mm (4F)



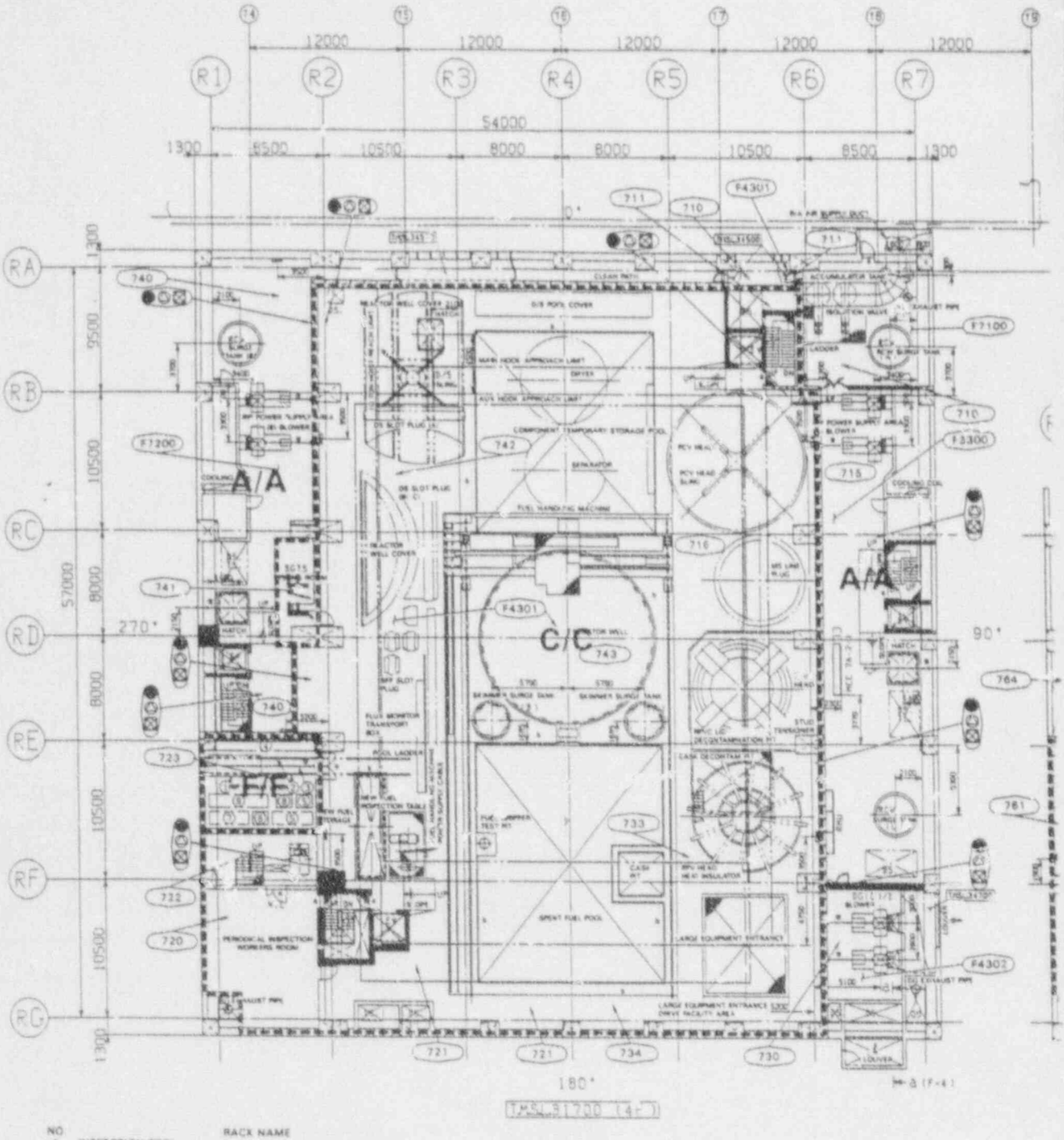
NO.	RACK NAME
1.	INSPECTION POOL
2.	TEMPORARY INSTALLED RAIL
3.	MONO-RAIL
4.	TEMPORARY INST RAIL STORAGE AREA
5.	IMPELLER SHAFT GRIPPER STORAGE AREA
6.	DIFFUSER WEAR RING GRIPPER STORAGE AREA
7.	DIFFUSER STRETCH TUBE GRIPPER STORAGE AREA
8.	UPPER PLUG STORAGE AREA
9.	RIP UPPER PORTION HANDLING CONNECTOR ROD STORAGE AREA



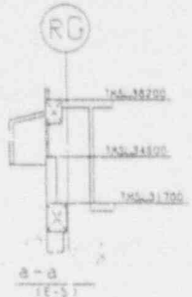
8 – 8
(E-5)

(REMARKS)
EQUIPMENT
D/S PIT
SPENT FUEL STORAGE P

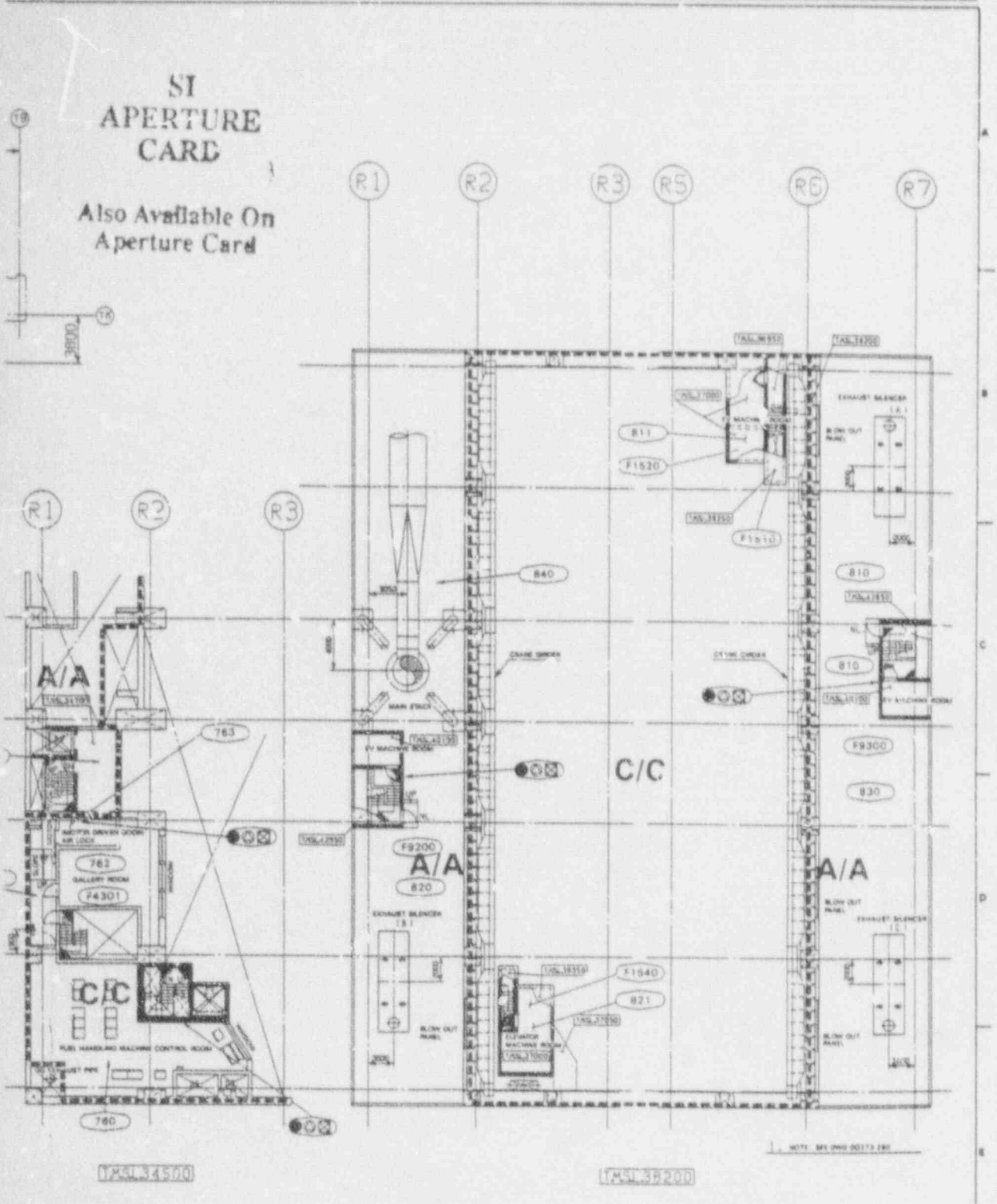
A
St



NO	RACK NAME
1.	INSPECTION POOL
2.	TEMPORARY INSTALLED RAIL
3.	MONO-RAIL
4.	TEMPORARY INST RAIL STORAGE AREA
5.	IMPELLER SHAFT GRIPPER STORAGE AREA
6.	DIFFUSER WEAR RING GRIPPER STORAGE AREA
7.	DIFFUSER STRETCH TUBE GRIPPER STORAGE AREA
8.	UPPER PLUG STORAGE AREA
9.	RIP UPPER PORTION HANDLING CONNECTOR ROD STORAGE AREA



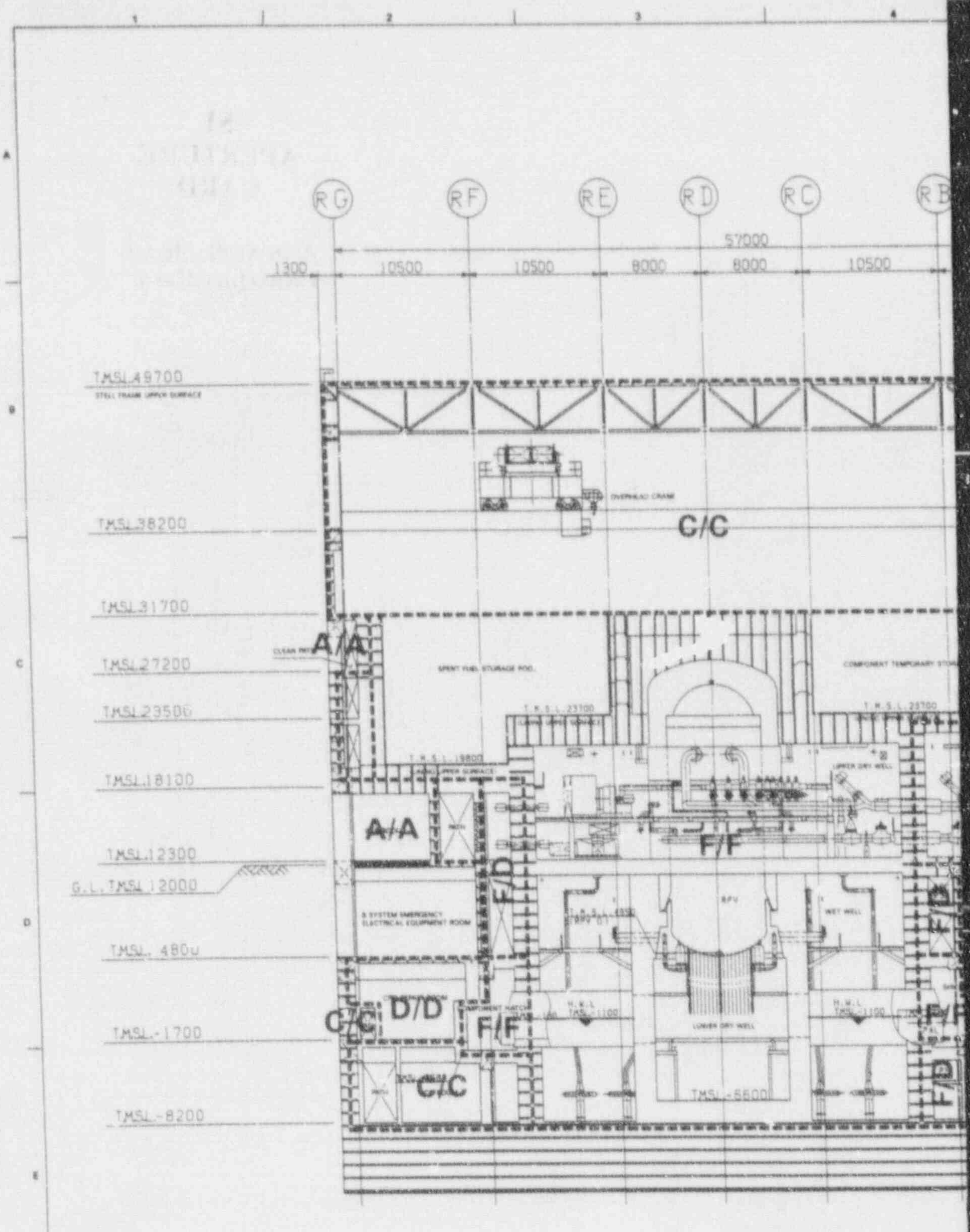
(REMARKS)
EQUIPMENT
DIS PIT
SPENT FUEL STORAGE P



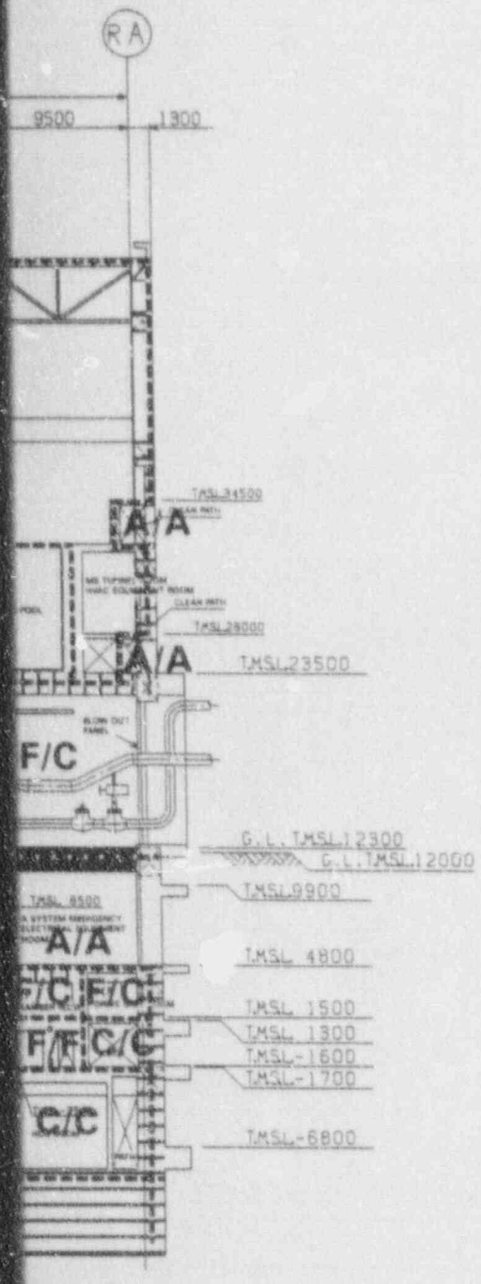
FULL POWER/SHUTDOWN
RADIATION LEVELS IN
MREM/HOUR
A ≤ 0.6
B < 1
C < 5
D < 25
E < 100
F ≥ 100

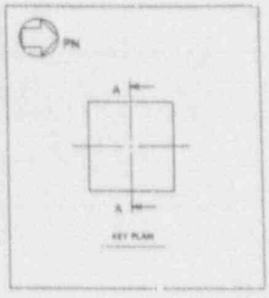
92-230-08

Figure 12.3–8 REACTOR BUILDING RADIATION ZONE MAP FOR FULL POWER AND SHUTDOWN OPERATION AT ELEVATION 31700mm (4FM)


RG
RF
RE
RD
RC
RB
57000
1300
10500
10500
8000
8000
10500
TMSL.49700
TMSL.38200
TMSL.31700
TMSL.27200
TMSL.23500
TMSL.18100
TMSL.12300
G.L.TMSL.12000
TMSL. 4800
TMSL.-1700
TMSL.-8200
OVERHEAD CRANE
C/C
A/A
SPENT FUEL STORAGE POOL
A/A
F/F
F/D
B SYSTEM EMERGENCY ELECTRICAL EQUIPMENT ROOM
RPV
WET WELL
F/D
C/C
D/D
F/F
C/C
LOWER DRY WELL
TMSL.-6600
F/D
F/F

A-A SECTION





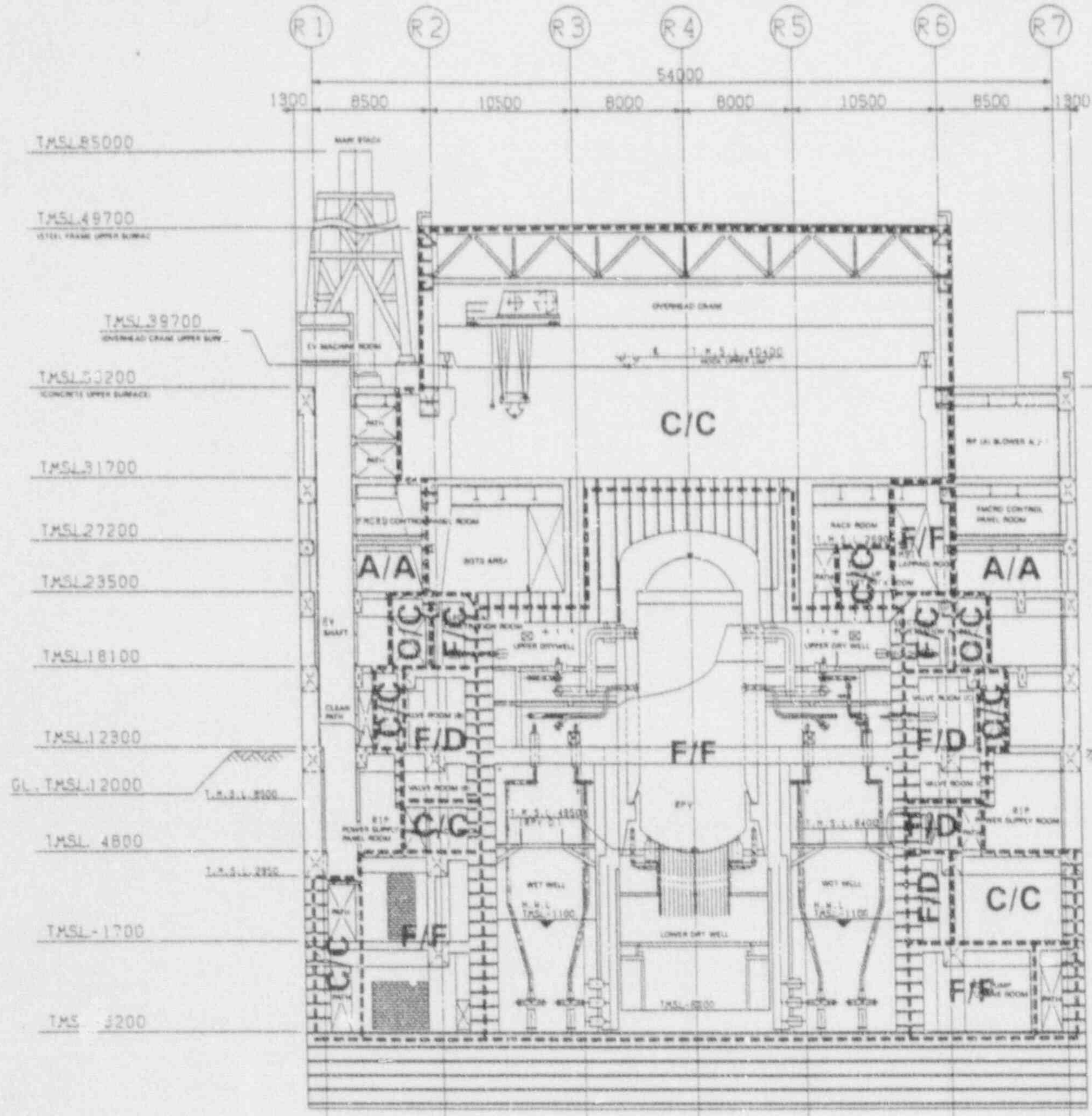
NOTE
1. SEE DWG 1QE173 290

FULL POWER/SHUTDOWN
RADIATION LEVELS IN
MREM/HOUR
A ≤ 0.6
B < 1
C < 5
D < 25
E < 100
F ≥ 100

9207200077-56

92-230-09

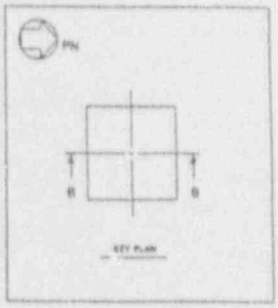
Figure 12.3–10 REACTOR BUILDING RADIATION ZONE MAP FOR FULL POWER AND SHUTDOWN OPERATION AT CROSS SECTIC.. VIEW A–A


R1
R2
R3
R4
R5
R6
R7
54000
1300
8500
10500
8000
8000
10500
8500
1300
TMSL85000
TMSL49700
TMSL39700
TMSL31700
TMSL27200
TMSL23500
TMSL18100
TMSL12300
GL. TMSL12000
TMSL 4800
TMSL-1700
C/C
A/A
F/F
C/C
A/A
O/C
F/C
F/C
O/C
C/C
F/D
F/F
F/D
O/C
C/C
F/D
F/D
C/C
F/F
C/C
F/F
OVERHEAD CRANE
RPV
WET WELL
LOWER DRY WELL
UPPER DRYWELL

B-B SECTION

SI
APERTURE
CARD

Also Available On
Aperture Card



NOTE
1. [illegible]

TMSL 38200

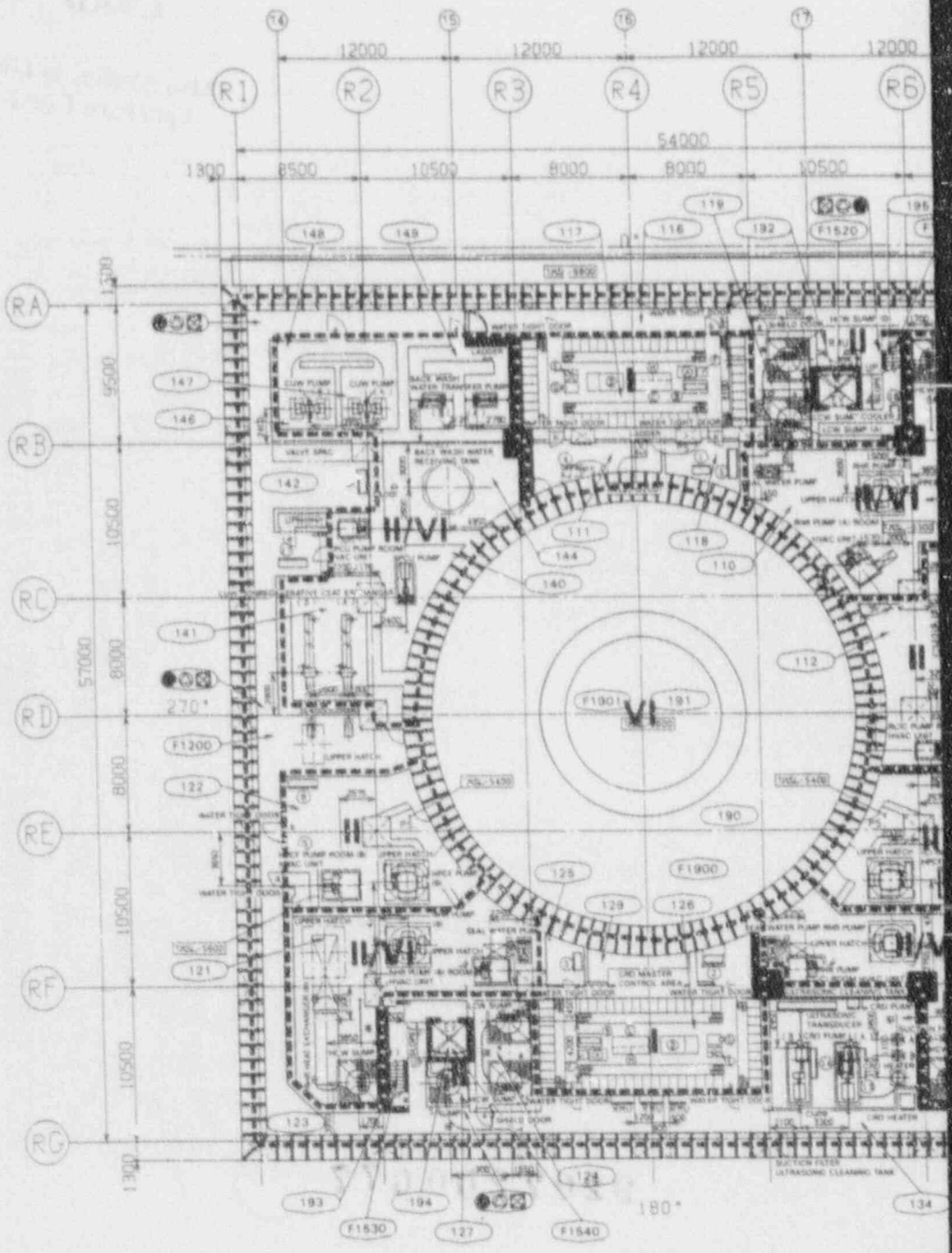
FULL POWER/SHUTDOWN
RADIATION LEVELS IN
MREM/HOUR
A ≤ 0.6
B < 1
C < 5
D < 25
E < 100
F ≥ 100

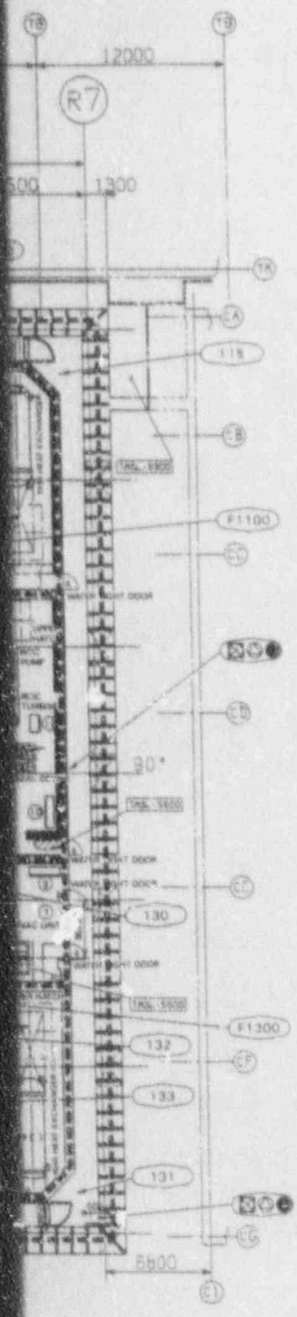
TMSL 12000

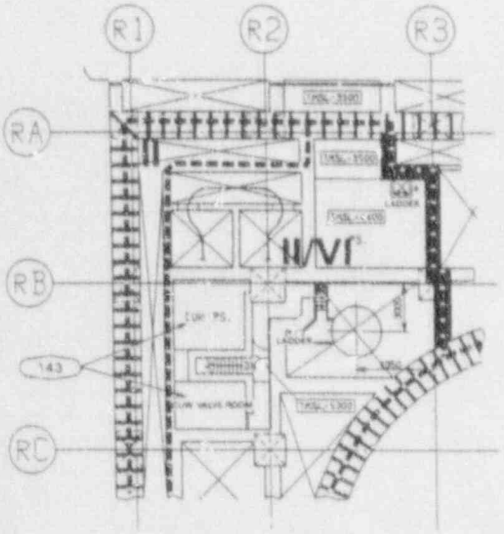
9207200077-57

92-230-10

Figure 12.3–11 REACTOR BUILDING RADIATION ZONE MAP FOR FULL POWER AND SHUTDOWN OPERATION CROSS SECTION VIEW B–B


12000
12000
12000
12000
R1
R2
R3
R4
R5
R6
54000
1300
8500
10500
8000
8000
10500
RA
RB
RC
RD
RE
RF
RG
57000
9500
10500
8000
8000
10500
1300
270°
180°
II/VI
VI
II
TMSL-8200 (B3F)





TMSL-5100

	NO.	RACK LIST	RACK NAME
H23-P001A	1.	CORE FLOW (IA) INSTRUMENT RACK	
C	2.	CORE FLOW (IB) INSTRUMENT RACK	
B	3.	CORE FLOW (IIA) INSTRUMENT RACK	
D	4.	CORE FLOW (IIB) INSTRUMENT RACK	
H22-P002A	5.	RHR SYSTEM (A) INSTRUMENT RACK	
B	6.	RHR SYSTEM (B) INSTRUMENT RACK	
C	7.	RHR SYSTEM (C) INSTRUMENT RACK	
H22-P003B	8.	HIGH PRESSURE CORE SPRAY SYSTEM (B) INSTRUMENT RACK	
C	9.	HIGH PRESSURE CORE SPRAY SYSTEM (C) INSTRUMENT RACK	
H22-P004	10.	REACTOR CORE ISOLATION COOLING SYSTEM INSTRUMENT RACK	
H22-P005	11.	REACTOR CORE ISOLATION COOLING SYSTEM TURBINE INSTRUMENT RACK	
H22-P006	12.	CONTROL ROD DRIVE HYDRAULIC SYSTEM INSTRUMENT RACK	
H22-P006A	13.	CRD PUMP (A) INSTRUMENT RACK	
H22-P006B	14.	CRD PUMP (B) INSTRUMENT RACK	
H22-P007	15.	REACTOR COOLANT CLEAN-UP SYSTEM INSTRUMENT RACK	
	16.	NOT USED	
H22-P009	17.	SUPPRESSION POOL DISCHARGE SYSTEM SAMPLING RACK	
H22-P008	18.	RHR HEAT EXCHANGER EXIT SAMPLING RACK	

A. ACCUMULATOR INSTALLATION REMOVAL TRANSPORTATION DOLLY
B. ACCUMULATOR DISASSEMBLY ASSEMBLY DOLLY
C. ACCUMULATOR WORKING BENCH
D. SCRAM VALVE SCRAM PILOT VALVE WORKING BENCH
E. SCRAM PILOT VALVE TEST FACILITY PUMP UNIT
G. GENERAL PURPOSE WORKING BENCH
H. TOOL BOX

ZONE	DOSE RATE (R/HR)
I	< 0.5
II	< 5.0
III	< 50
IV	< 500
V	< 5000
VI	> 5000

DOSE I/DOSE II

DOSE I – IF UNIT NOT USED DURING DEGRADED CORE ACCIDENT
DOSE II – IF USED WITH DEGRADED CORE ACCIDENT

(REMARKS)
EQUIPMENT

RHR PUMP (A)
RHR PUMP (B)
RHR PUMP (C)
RHR HX (A)
RHR HX (B)
RHR HX (C)
[illegible] PUMP (B)
[illegible] PUMP (C)
[illegible] NON RE HX
CUW PUMP
CUW BACK WASH TRANSFER PUMP
CUW BACK WASH TANK
CRD PUMP
SUCTION FILTER
RCIC PUMP
RCIC TURBINE

FIRE PROTECTION SYMBOLS

(F1901) FIRE AREA NUMBER
a. LEFT HAND DIGIT IS BOTTOM FLOOR NUMBER STARTING WITH 1 = ELEVATION -11800
b. SECOND DIGIT FROM LEFT IS THE ELECTRICAL DIVISION NUMBER

(135) ROOM NUMBER

HOSE RACK

PORTABLE EXTINGUISHER

STANDPIPE

3-HOUR RATED FIRE BARRIER (WALL)

RATED FIRE BARRIER (FLOOR)

3-HOUR FIRE RATED DOOR

SECONDARY CONTAINMENT BOUNDARIES (3-HOUR RATED FIRE BARRIER)

SPRINKLER SYSTEM

REMARK (COMMON)

1. CURB HEIGHT IS H = 75, UNLESS OTHERWISE SPECIFIED IF THEY ARE SPECIFIED, THE HEIGHTS ARE AS FOLLOWS
(a) a IS H = 200
(b) b IS H = 100
(c) FOR OTHERS, REFER TO THE HEIGHTS SHOWN ON DRAWINGS

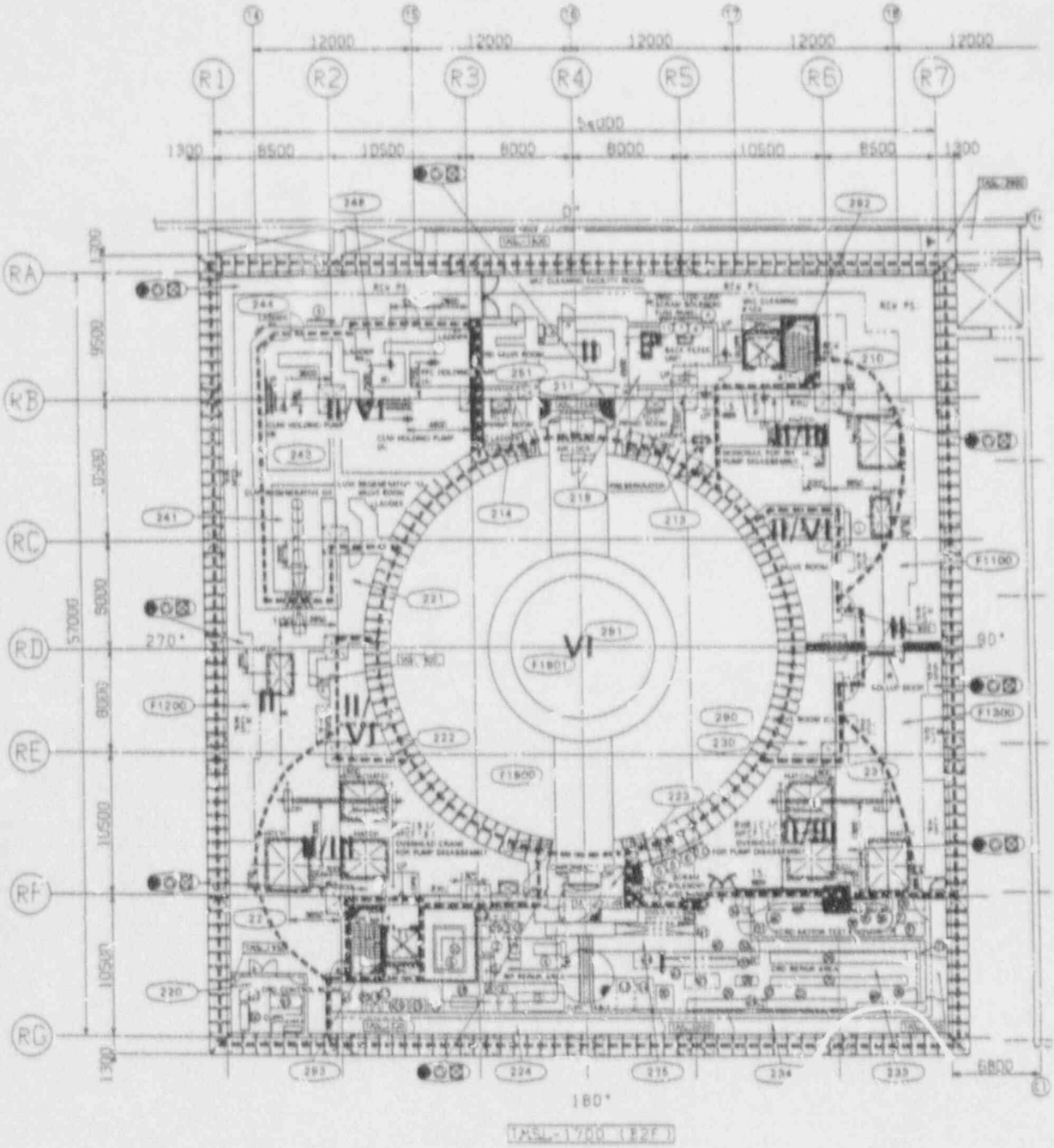
2. EACH SYMBOL MARKS MEAN AS FOLLOWS
(a) GRATING
(b) CHECKER PLATE
(c) CONCRETE BLOCK
(d) THIS SHOWS INSTRUMENTATION RACK NUMBER THAT CORRESPONDS TO RACK LIST
(e) FRONT OF PANEL AND RACK
FRONT
(f) PULL SPACE FOR MAINTENANCE
(g) HANDRAIL
(h) MONORAIL
(i) EV ELEVATOR
(j) PS PIPE SPACE
(k) DS HVAC DUCT SPACE
(l) TS CABLE TRAY SPACE
(m) NL NORMAL LOCK DOOR
(n) STEEL SHIELDING DOOR
(o) CURB
(p) PP PHYSICAL PROTECTION

3. SOLID COLORED AREAS CONTAIN SAFETY RELATED EQUIPMENT OF THE ELECTRICAL DIVISION ASSIGNMENT INDICATED BELOW:
DIVISION 1
DIVISION 2
DIVISION 3
DIVISION 4

4. AREAS CROSS HATCHED WITH COLORS PRIMARILY CONTAIN NON SAFETY RELATED EQUIPMENT BUT ARE NOT SEPARATED BY FIRE BARRIERS FROM AN ADJACENT AREA CONTAINING SAFETY RELATED EQUIPMENT OF THE SAME DIVISION AS FOR THE COLOR OF THE CROSS HATCH

92-230-11

Figure 12.3–12 REACTOR BUILDING RADIATION ZONE MAP POST LOCA AT ELEVATION –8200mm (B3F)



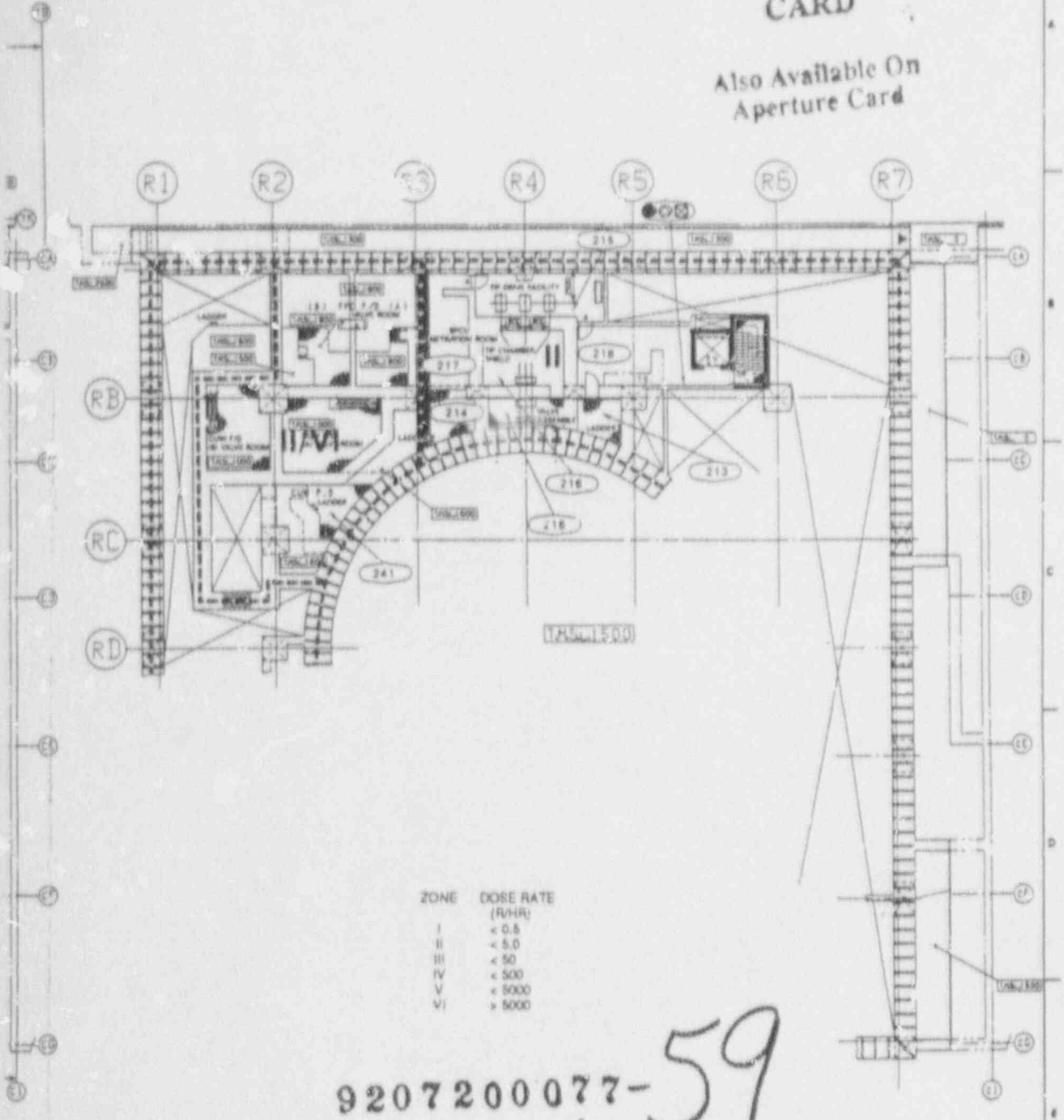
(MSL-1700 (B2F)

(REMARKS)

EQUIPMENT	
CUW RE HX	
CUW F/D VALVE ROOM	
RIP MAINTENANCE AREA	
FMCRD MAINTENANCE AREA	
CRD CONTROL ROOM	

RACK LIST

		NO.	RACK NAME
E51	H22-P010	1.	REACTOR CORE ISOLATION COOLING SYSTE (STEAM SYSTEM) INSTRUMENT RACK
041	H22-P011	2.	RPC F/D SOLENOID OPERATED VALVE RACK
031	H22-P012A	3.	CUW F/D SOLENOID OPERATED VALVE RACK A
031	H22-P013B	4.	CUW F/D SOLENOID OPERATED VALVE RACK B
C71	H22-P056A	4.	SCRAM SOLENOID FUSE PANEL
C71	H22-P056B	5.	SCRAM SOLENOID FUSE PANEL
C71	H22-P056C	6.	SCRAM SOLENOID FUSE PANEL
C71	H22-P056D	7.	SCRAM SOLENOID FUSE PANEL
C71	H22-P056E	8.	SCRAM SOLENOID FUSE PANEL
C71	H22-P056F	9.	SCRAM SOLENOID FUSE PANEL
C71	H22-P056G	10.	SCRAM SOLENOID FUSE PANEL
C71	H22-P056H	11.	SCRAM SOLENOID FUSE PANEL

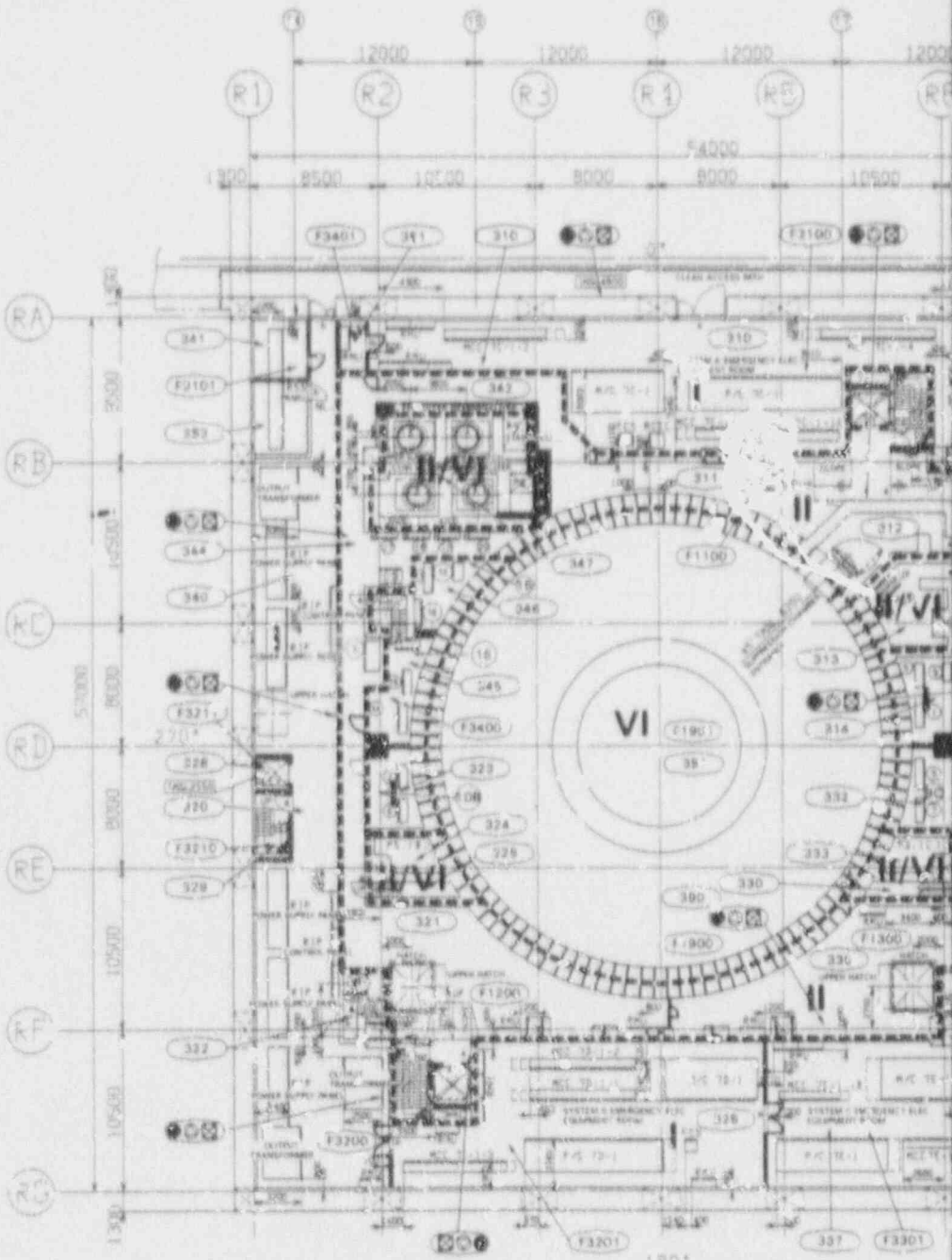


ZONE	DOSE RATE (R/HR)
I	< 0.5
II	< 5.0
III	< 50
IV	< 500
V	< 5000
VI	> 5000

1. MOTOR ASSEMBLY/ DISASSEMBLY AREA
2. MOTOR DISASSEMBLY PARTS AREA
3. SPARE PARTS TOOL STORAGE RACK
4. MOTOR TEMPORARY PLACE
5. MOTOR CARRYING DOLLY AREA
6. DECONTAMINATION ELECTRICAL TEST TANK
7. WORK BENCH
8. MOVABLE TOOL TABLE
9. SPARE MOTOR STORAGE AREA
10. OVERHEAD CRANE HOOK REACH
11. CHANGING SPACE
12. PUMP TANK FOR WASHING
13. STRETCH TUBE NUT HANDLING TOOL STORAGE AREA
14. SECOND SEAL HANDLING TOOL STORAGE AREA
15. BOTTOM CLOSE FLANGE STORAGE AREA
16. MAIN FLANGE STAND TOOL STORAGE AREA
17. ALIX COVER HANDLING TOOL STORAGE AREA
18. MOTOR CONTAINER TEMPORARY PLACE
19. HANDLING TOOL CONTROL BOX STORAGE AREA
20. HANDLING TOOL HYDRAULIC UNIT STORAGE AREA
21. COUPLING STAND HANDLING TOOL STORAGE AREA
22. CRD STORAGE TANK
23. ULTRASONIC CLEANING TANK
24. ULTRASONIC TRANSDUCER
25. CRD DISASSEMBLY CLEANING TANK
26. CRD WORK TABLE
27. BALL NUT DECENT TEST TABLE
28. SPOOL PIECE WORK TABLE
29. SPOOL PIECE STORAGE TANK
30. SEAL HOUSING TEST FACILITY
31. PARTS TEMPORARY PLACE
32. TOOL RACK
33. STORAGE RACK
34. MOVABLE PARTS TABLE
35. MOTOR UNIT WORK TABLE
36. MOTOR TEST FACILITY
37. BRAKE SYNCHRO TEST FACILITY
38. MOTOR STORAGE RACK
39. OVERHEAD CRANE REACH LIMIT
40. MONORAIL
41. RIP TEMPORARY PLACE
42. MOTOR BRACKET TEMPORARY PLACE
43. CRD CART STORAGE AREA
44. MOTOR UNIT SPOOL PIECE DOLLY STORAGE AREA
45. ATTACHMENT STORAGE AREA
46. CRD STORAGE AREA
47. SPOOL PIECE STORAGE AREA
48. MOTOR SPARE PARTS AREA
49. CRD REPLACEMENT FACILITY CONTROL PANEL
50. CRD REPLACEMENT FACILITY DRIVE PANEL
51. CRD REPLACEMENT FACILITY PRINTER

92-230-12

Figure 12.3–13 REACTOR BUILDING RADIATION ZONE MAP POST LOCA AT ELEVATION –1700mm (B2F)



		NO.	RACK LIST
B31	H22-P013A	1.	REACTOR SYSTEM (I) INSTRUMENT RACK
B31	H22-P013B	2.	REACTOR SYSTEM (II) INSTRUMENT RACK
B31	H22-P013C	3.	REACTOR SYSTEM (III) INSTRUMENT RACK
B31	H22-P013D	4.	REACTOR SYSTEM (IV) INSTRUMENT RACK
B31	H22-P014A	5.	MAIN STEAM FLOW (I) INSTRUMENT RACK
B31	H22-P014B	6.	MAIN STEAM FLOW (II) INSTRUMENT RACK
B31	H22-P014C	7.	MAIN STEAM FLOW (III) INSTRUMENT RACK
B31	H22-P014D	8.	MAIN STEAM FLOW (IV) INSTRUMENT RACK
E31	H22-P015A	9A.	LEAK DETECTION SYSTEM (A) INSTRUMENT RACK
E31	H22-P015C	9C.	LEAK DETECTION SYSTEM (C) INSTRUMENT RACK
E31	H22-P015B	10B.	LEAK DETECTION SYSTEM (B) INSTRUMENT RACK
E31	H22-P015D	10D.	LEAK DETECTION SYSTEM (D) INSTRUMENT RACK
		12.	REACTOR WATER SAMPLING TRANSMITTER PANEL
G41	H22-P016	13.	FPC FD SAMPLING TRANSMITTER

		NO.	RACK LIST
G41	H22-P017	14.	FPC FD MAIN VA
G41	H22-P018	15.	FPC FD CONDUC
G41	H22-P019	16.	FPC FD SAMPLIN
G41	H22-P028	17.	FPC FD INSTRUM
G41	H22-P027	18.	FPC FD INSTRUM
G31	H22-P030	19.	C.W F/D INSTRU
G31	H22-P031	20.	C.W F/D INSTRU
P91	H22-P020	21.	REACTOR WATER
P91	H22-P021	22.	REACTOR WATER
P91	H22-P022	23.	REACTOR WATER
P91	H22-P023	24.	REACTOR WATER
P91	H22-P024	25.	REACTOR WATER
P91	H22-P025A	26.	REACTOR WATER
P91	H22-P025	27.	REACTOR WATER
P91	H22-P026	28.	PAS RELATED AD

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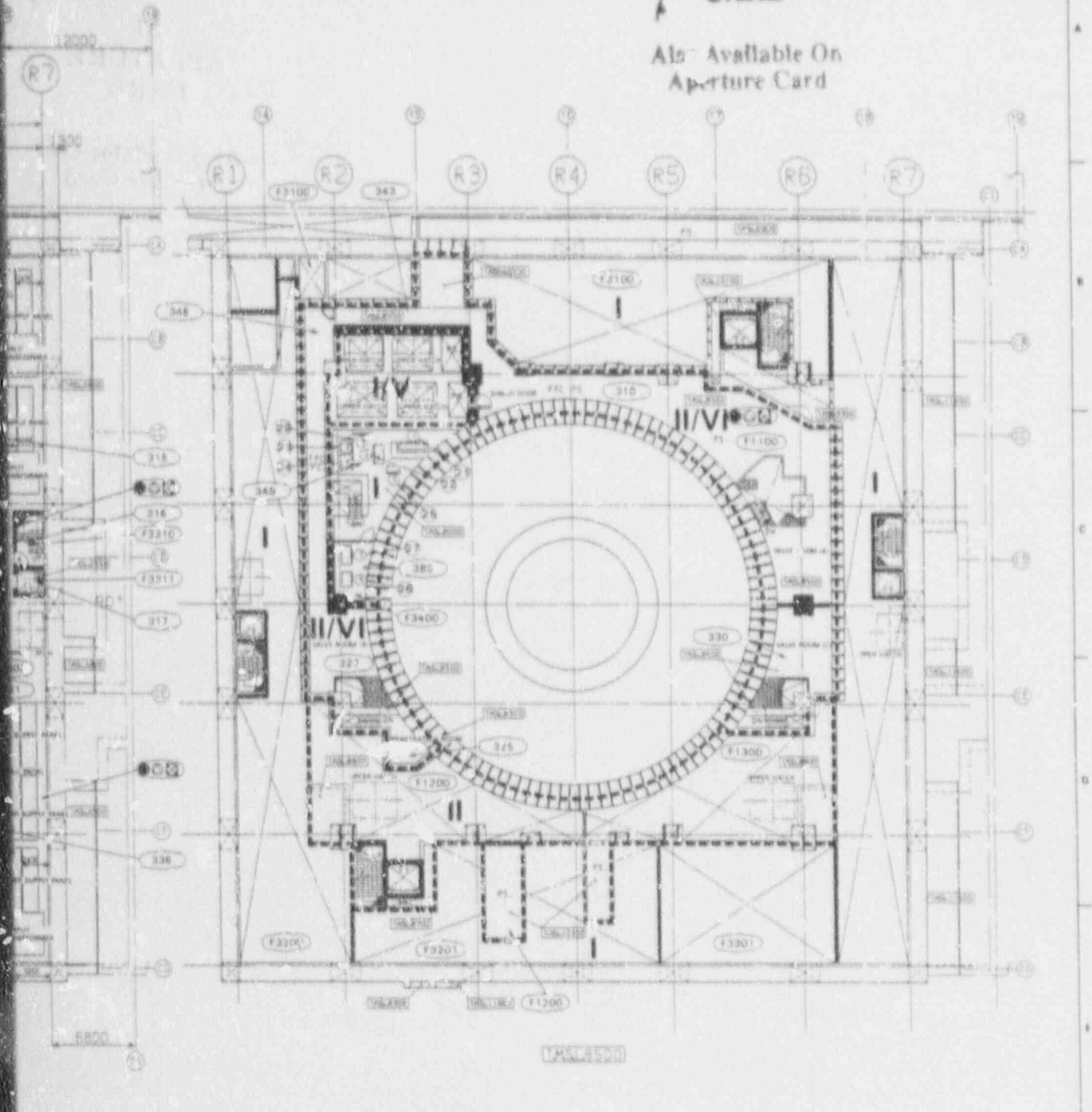

REMARKS:
EQUIPMENT
EMERGENCY ELECTRIC ROOM (A)
EMERGENCY ELECTRIC ROOM (B)
EMERGENCY ELECTRIC ROOM (C)
RPS PANEL
RIP PANEL

ZONE	DOSE RATE (R/HR)
I	< 0.5
II	< 5.0
III	< 50
IV	< 500
V	< 5000
VI	> 5000

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92-230-13

Figure 12.3–14 REACTOR BUILDING RADIATION ZONE MAP POST LOCA AT ELEVATION 4800mm/8500mm (B1F)

Figure 12.3-15 - Deleted

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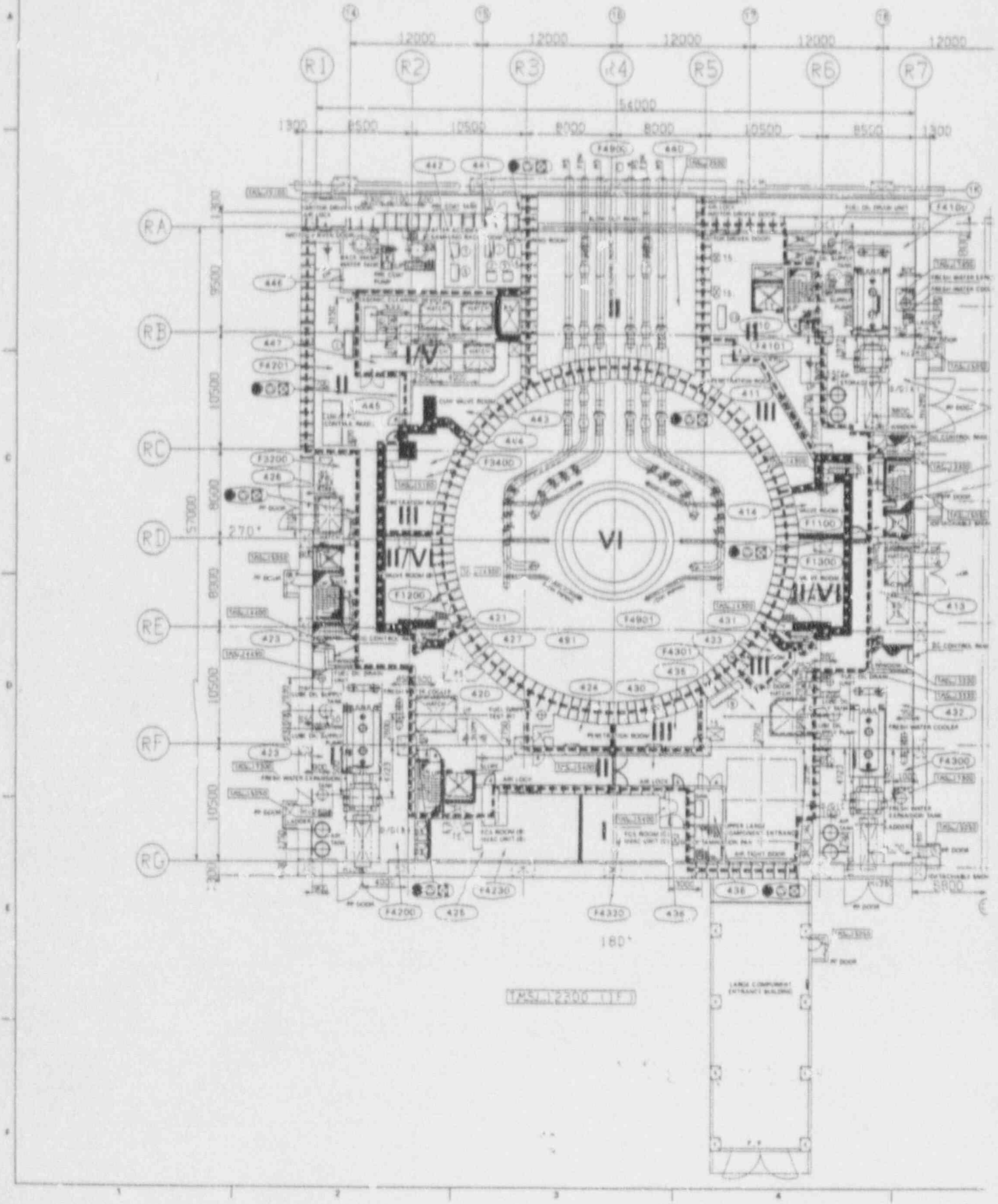
R1
R2
R3
R4
R5
R6
R7
RA
RB
RC
RD
RE
RF
RG
12000
54000
270°
180°
VI

(REMARKS)
EQUIPMENT
PRE COAT PUMP
FUEL HANDLING MACHINE TEST PIT

INSTRUMENT RACK LIST

	NO.	NAME
H22-P031	1.	POST ACCIDENT SAMPLE TRANSFER RACK
H22-P032	2.	POST ACCIDENT SAMPLE RECOVERY RACK
H22-P033	3.	POST ACCIDENT SAMPLING LOCAL OPERATING PANEL
H22-P034	4.	STANDBY GAS TREATMENT SYSTEM OFF GAS RADIATION MONITOR SAMPLE RACK
H22-P035	5.	STANDBY GAS TREATMENT SYSTEM OFF GAS RADIATION MONITOR GAS SAMPLER RACK (A)
H22-P036	6.	STANDBY GAS TREATMENT SYSTEM OFF GAS RADIATION MONITOR GAS SAMPLER RACK (B)
H22-P037	7.	STANDBY GAS TREATMENT SYSTEM OFF GAS RADIATION MONITOR PARTICULATE IODINE SAMPLE RACK
H22-P038	8.	STANDBY GAS TREATMENT SYSTEM OFF GAS RADIATION MONITOR PARTICULATE IODINE SAMPLE RACK OPERATING PANEL
H22-P039	9.	CONTAINMENT VESSEL PRESSURE, LEAK TEST RACK
H22-P040	10.	REACTOR CONTAINMENT VESSEL DEW POINT RECORDER RACK

ZONE	DOSE RATE (R/HR)
I	< 0.5
II	< 5.0
III	< 50
IV	< 500
V	< 5000
VI	> 5000

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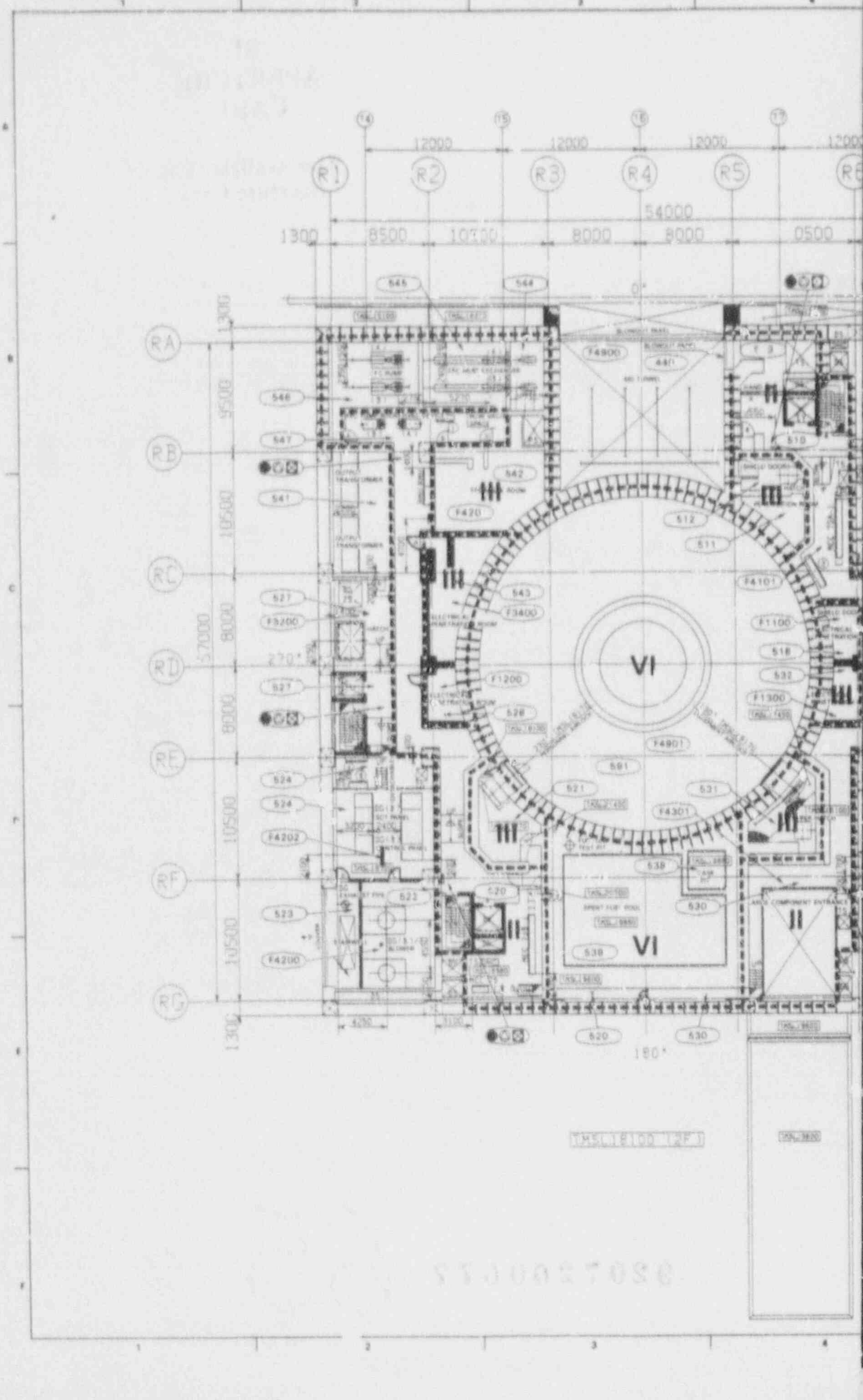
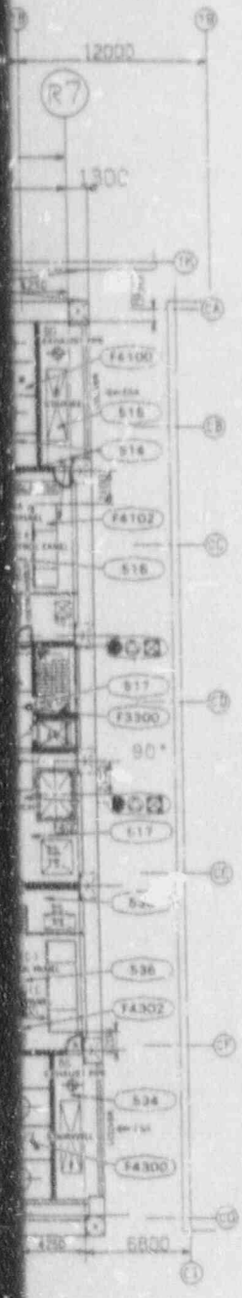
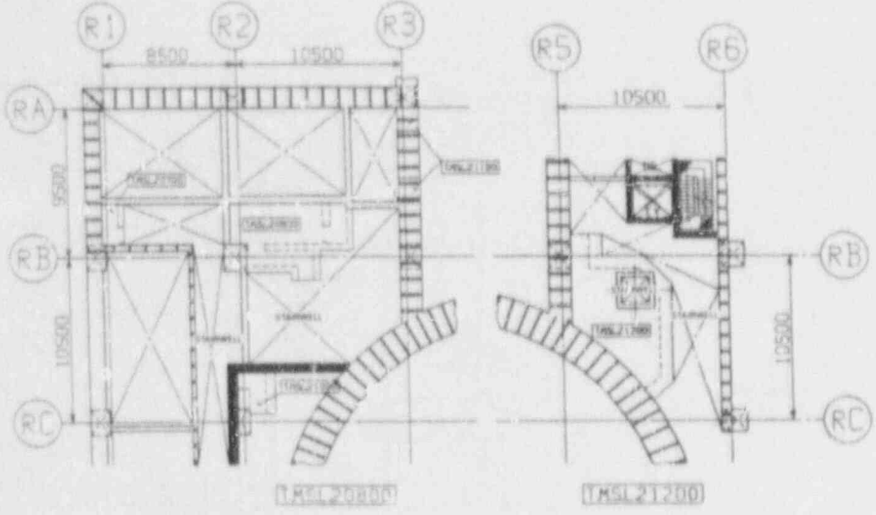
92-230-14

Figure 12.3–16 REACTOR BUILDING RADIATION ZONE MAP POST I OCA AT ELEVATION 12300mm (1F)


R1
R2
R3
R4
R5
RA
RB
RC
RD
RE
RF
RG
12000
54000
57000
1300
8500
10700
8000
9500
10500
0°
90°
180°
270°
VI
II
545
544
546
547
541
542
543
527
524
523
522
520
521
528
511
512
518
532
531
530
538
539
591
510
F4900
F4200
F4202
F3200
F3400
F4101
F1100
F1200
F1300
F4901
F4301
F420





INSTRUMENT RACK LIST

NO.	RACK NAME
H22-P042 1	FUEL POOL COOLING CLEAN-UP SYSTEM INSTRUMENT RACK
H22-P041 2	MSIV LEAK TEST INSTRUMENT RACK

FOAM FIRE EXTINGUISHER LIST

NO.	RACK NAME
A	FOAM LIQUID TANK
B	FOAM INJECTION EQUIPMENT

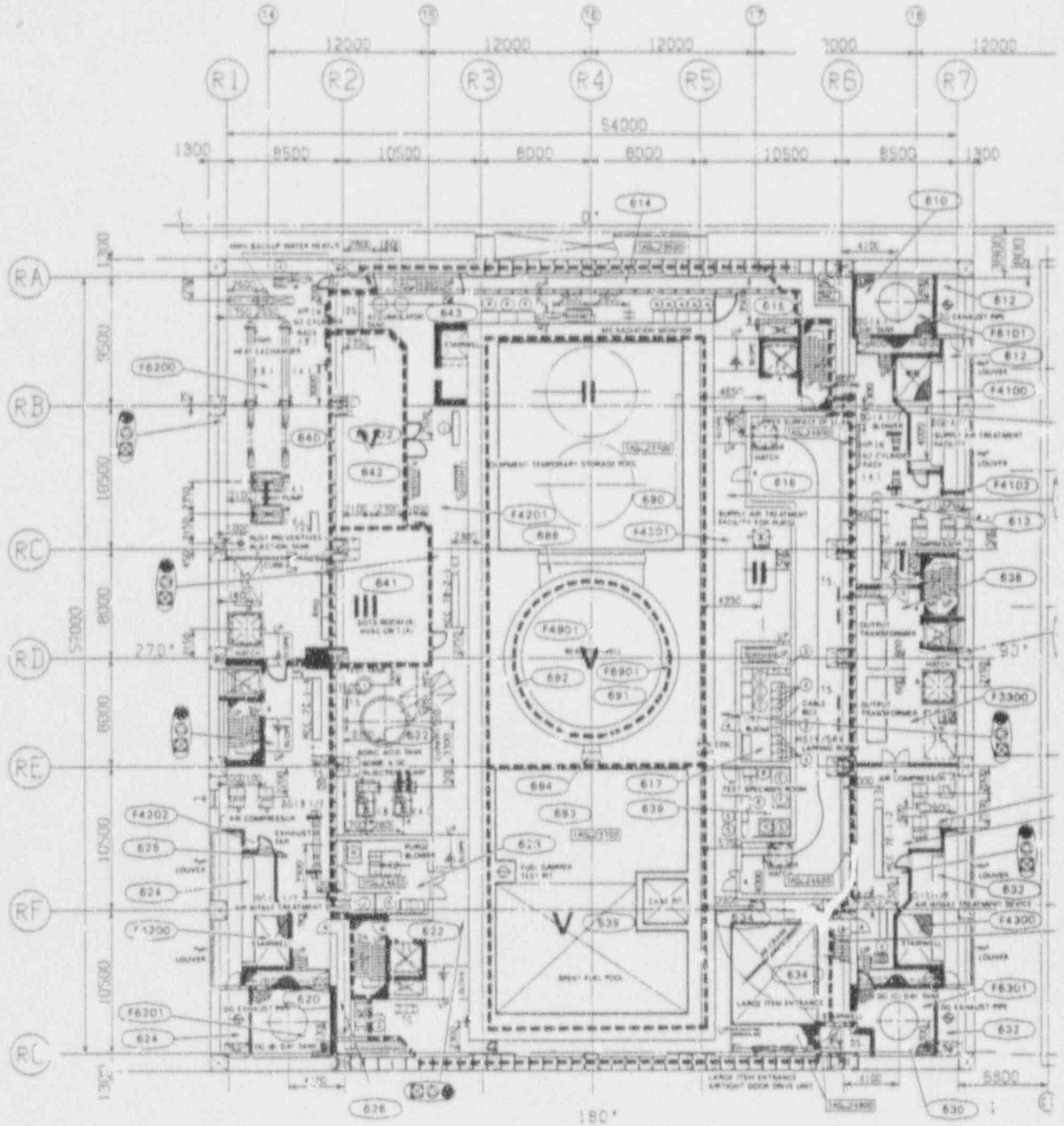
(REMARKS)
EQUIPMENT

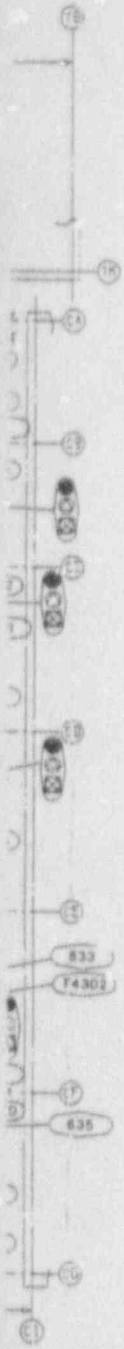
FPC HX
FPC PUMP
FUEL HANDLING MACHINE TEST PIT
SPENT FUEL STORAGE POOL
CASK PIT
D/G(A) CONTROL PANEL
D/G(B) CONTROL PANEL
D/G(C) CONTROL PANEL
DG(A)/Z SUPPLY FAN
DG(B)/Z SUPPLY FAN
DG(C)/Z SUPPLY FAN

ZONE	DOSE RATE (R/HR)
I	< 0.5
II	< 5.0
III	< 50
IV	< 500
V	< 5000
VI	> 5000

92-230-15

Figure 12.3–17 REACTOR BUILDING RADIATION ZONE MAP POST LOCA AT ELEVATION 18100mm (2F)


R1
R2
R3
R4
R5
R6
R7
RA
RB
RC
RD
RE
RF
RC
54000
12000
12000
12000
7000
12000
1300
8500
10500
8000
8000
10500
8500
1300
57000
9500
10500
8000
8000
10500
10500
1300
0°
90°
180°
270°
T.M.S.L. 23500 (3F)



		NO.	INSTRUMENT RACK RACK NAME
C41	H22-P042	1.	STANDBY GAS TREATMENT SYSTEM INSTRUMENT RACK
D21	H22-P044A	2.	CONTAINMENT VESSEL ATMOSPHERE MONITOR CALIBRATION GAS CYLINDER RACK A
D23	H12-P044B	3.	CONTAINMENT VESSEL ATMOSPHERE MONITOR CALIBRATION GAS CYLINDER RACK B

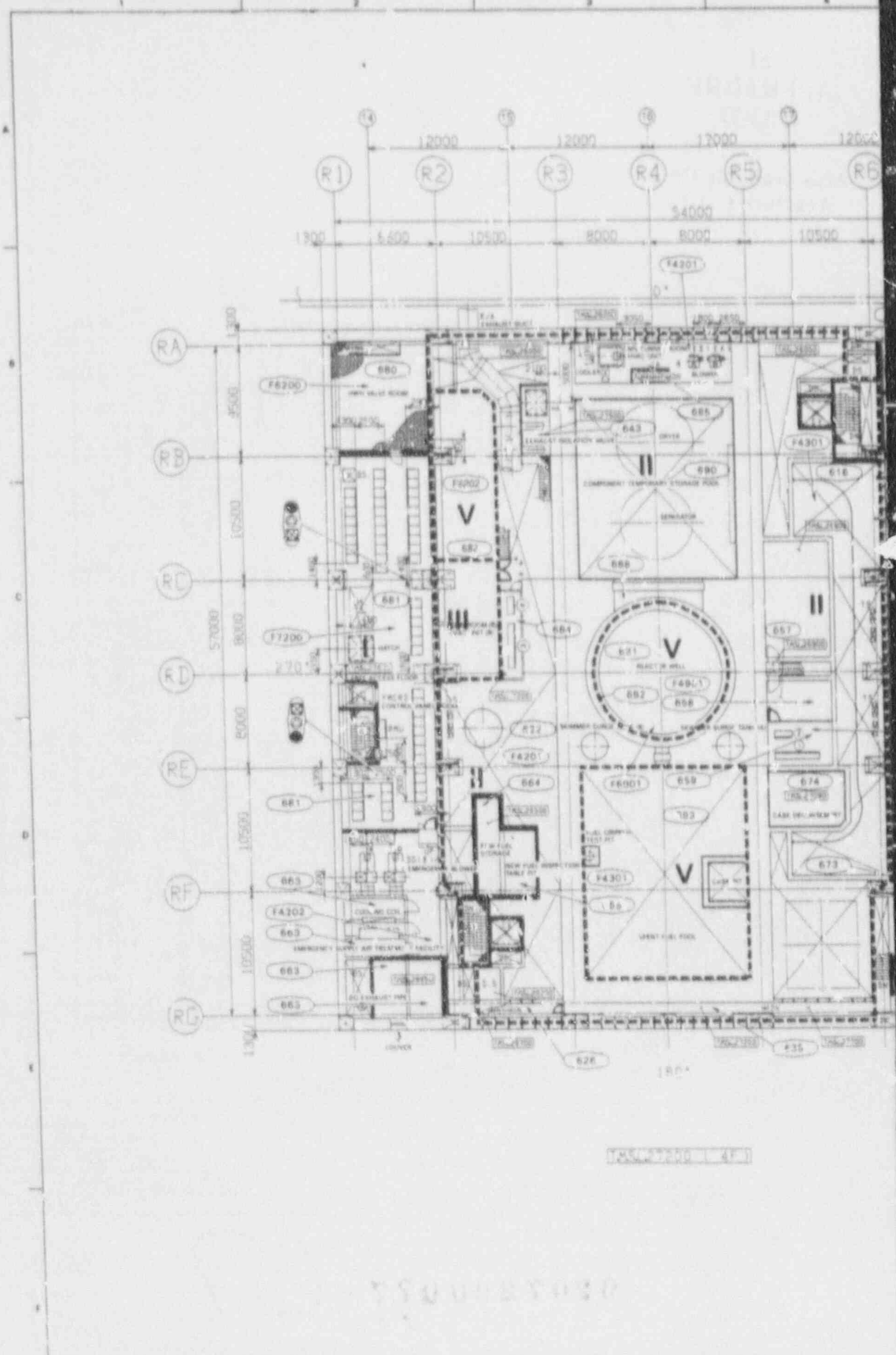
ISI ROOM AND AUXILIARY FACILITIES

NO.	FACILITY NAME	QTY	(REMARKS) EQUIPMENT
A	CONTROL DATA COLLECTION EQUIPMENT	8	D/S PIT
B	STABILIZED POWER SUPPLY SYSTEM	1	CASK PIT
C	DESK	3	SPENT FUEL STORAGE POOL
D	STORAGE	2	ISI INSPECTION ROOM
E	CALIBRATION TEST PIECE FOR N-1S NOZZLE CORNER	1	SGTS FILTER TRAIN
F	CALIBRATION TEST PIECE FOR NOZZLE CORNER	1	SGTS FAN
G	CALIBRATION TEST PIECE FOR NOZZLE CORNER	1	SLC PUMP
H	CALIBRATION TEST PIECE FOR NOZZLE CORNE	1	SLC TANK
J	RPV SHELL ADJUST TEST FACILITY	1	SLC TEST TANK
K	RPV BOTTOM PLATE ADJUST TEST FACILITY	1	DG (A) DAY TANK
L	RPV NOZZLE ADJUST TEST FACILITY	1	DG (B) DAY TANK
M	PIPING ADJUST TEST FACILITY	1	DG (C) DAY TANK
N	ISI DEVICE STORAGE	5	HWH PUMP
P	ISI DEVICE STORAGE	3	HWH HX
Q	RPV CALIBRATION TEST PIECE STORAGE	1	
R	RPV CONSUMABLE MATERIALS AND CALIBRATION TEST PIECE STORAGE	2	
S	PIPING CALIBRATION TEST PIECE STORAGE	2	

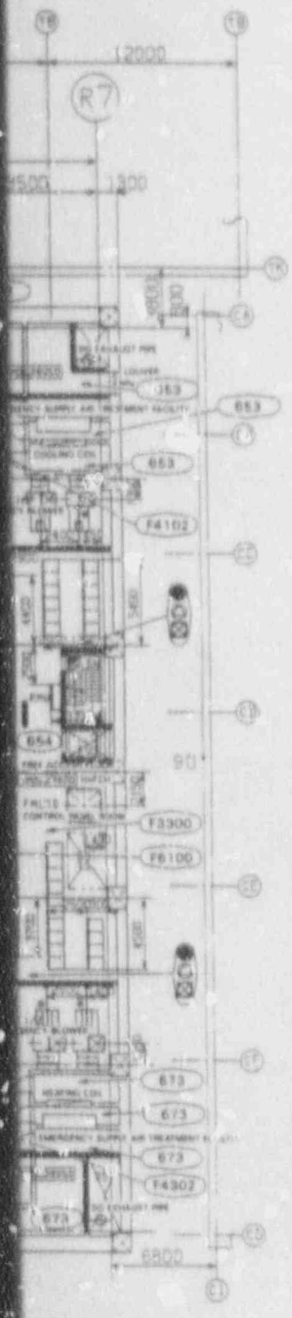
ZONE	DOSE RATE (R/HR)
I	< 0.5
II	< 5.0
III	< 50
IV	< 500
V	< 5000
VI	> 5000

92-230-16

Figure 12.3–18 REACTOR BUILDING RADIATION ZONE MAP POST LOCA AT ELEVATION 23500mm (3F)



R1
R2
R3
R4
R5
R6
RA
RB
RC
RD
RE
RF
RG
12000
54000
1300
5600
10500
8000
57000
4500
0°
90°
180°
270°
F4301
F6200
F7200
F4202
COMPONENT TEMPORARY STORAGE POOL
REACTOR WELL
SPENT FUEL POOL
EMERGENCY SUPPLY AIR TREATMENT FACILITY
CONTROL ROD DRIVE
TMSL27200 4F



RACK LIST

NO	RACK NAME
D23 D22-C053A	1 CONTAINMENT VESSEL ATMOSPHERE MONITOR RACK (A)
D23 D22-C054A	2 CONTAINMENT VESSEL ATMOSPHERE MONITOR CALIBRATION RACK (A)
D23 D22-C053B	3 CONTAINMENT VESSEL ATMOSPHERE MONITOR RACK (B)
D23 D22-C054B	4 CONTAINMENT VESSEL ATMOSPHERE MONITOR CALIBRATION RACK (B)

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(REMARKS)
EQUIPMENT

D/S PIT
CASK PIT
SPENT FUEL STORAGE POOL
CASK WASHDOWN PIT
FMCRD PANEL ROOM
NEW FUEL STORAGE PIT
NEW FUEL INSPECTION PIT

ZONE	DOSE RATE (R/HR)
I	< 0.5
II	< 5.0
III	< 50
IV	< 500
V	< 5000
VI	> 5000

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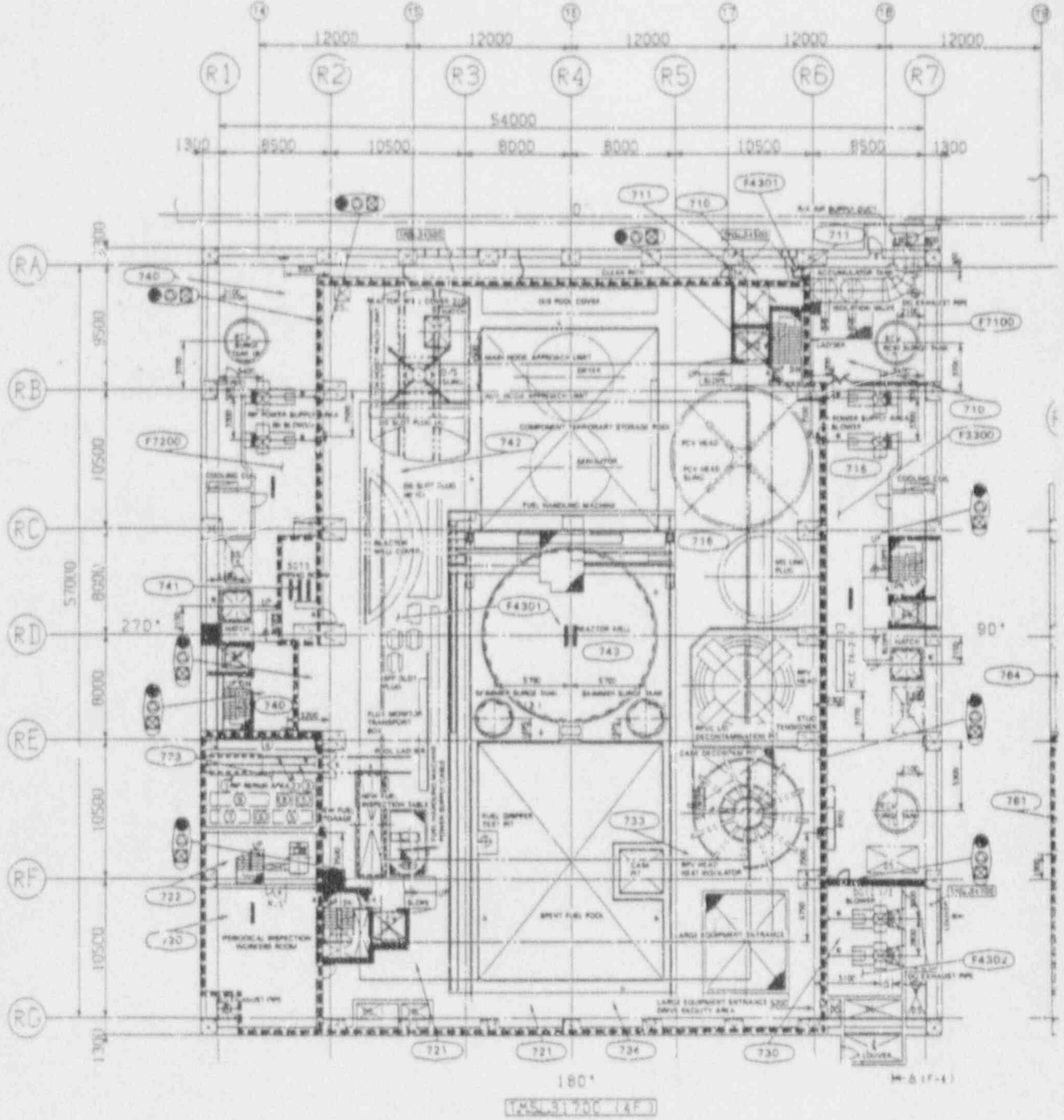
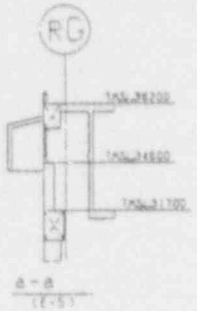
92-230-17

Figure 12.3–19 REACTOR BUILDING RADIATION ZONE MAP POST LOCA AT ELEVATION 27200mm (4F)

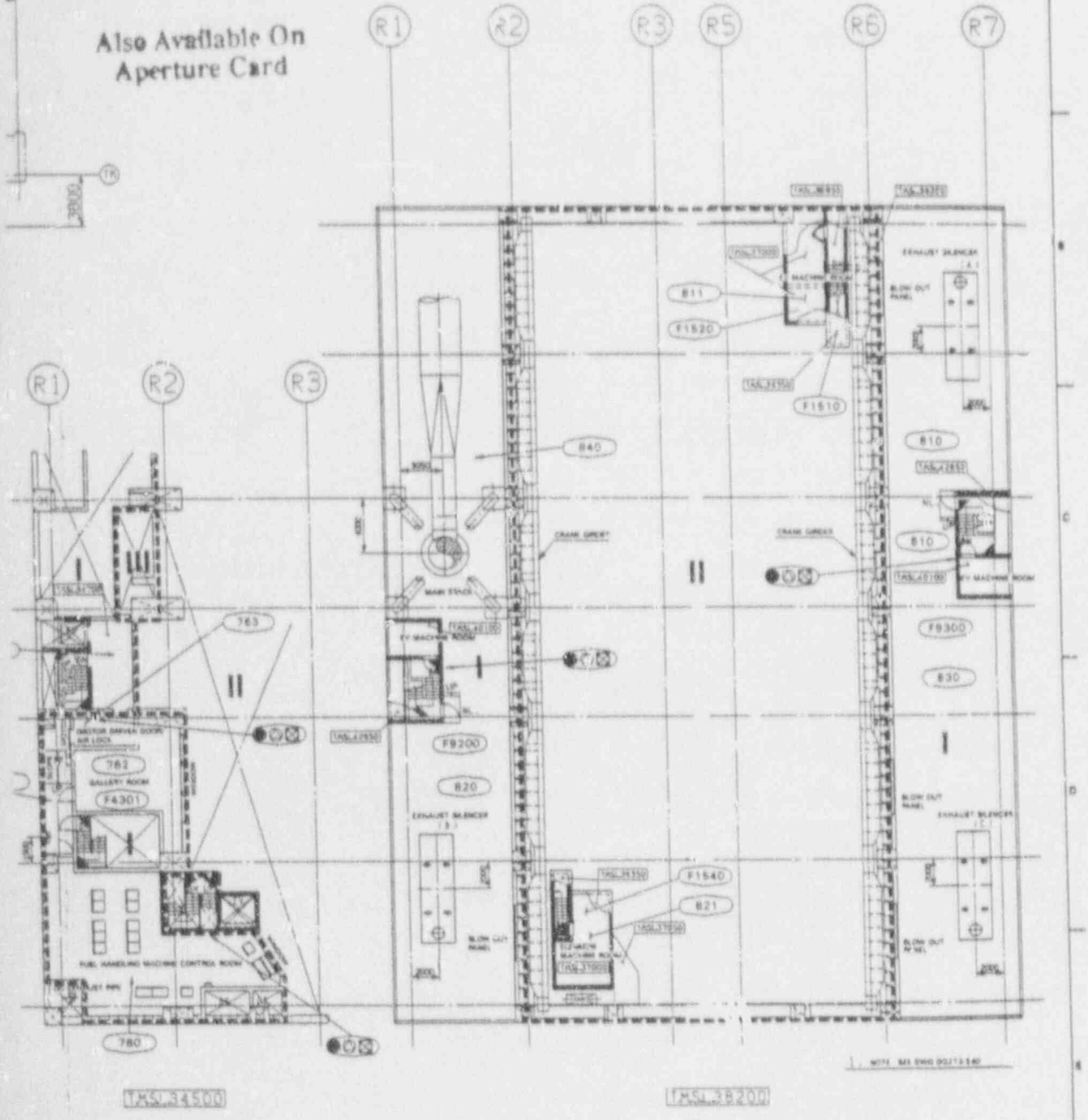


NO	RACK NAME
1	INSPECTION POOL
2	TEMPORARY INSTALLED RAIL
3	MONO-RAIL
4	TEMPORARY INST RAIL STORAGE AREA
5	IMPELLER SHAFT CLIPPER STORAGE AREA
6	DIFFUSER WEAR RING GRIPPER STORAGE AREA
7	DIFFUSER STRETCH TUBE GRIPPER STORAGE AREA
8	UPPER PLUG STORAGE AREA
9	R/P UPPER PORTION HANDLING CONNECTOR ROD STORAGE AREA



A – A
(E-5)

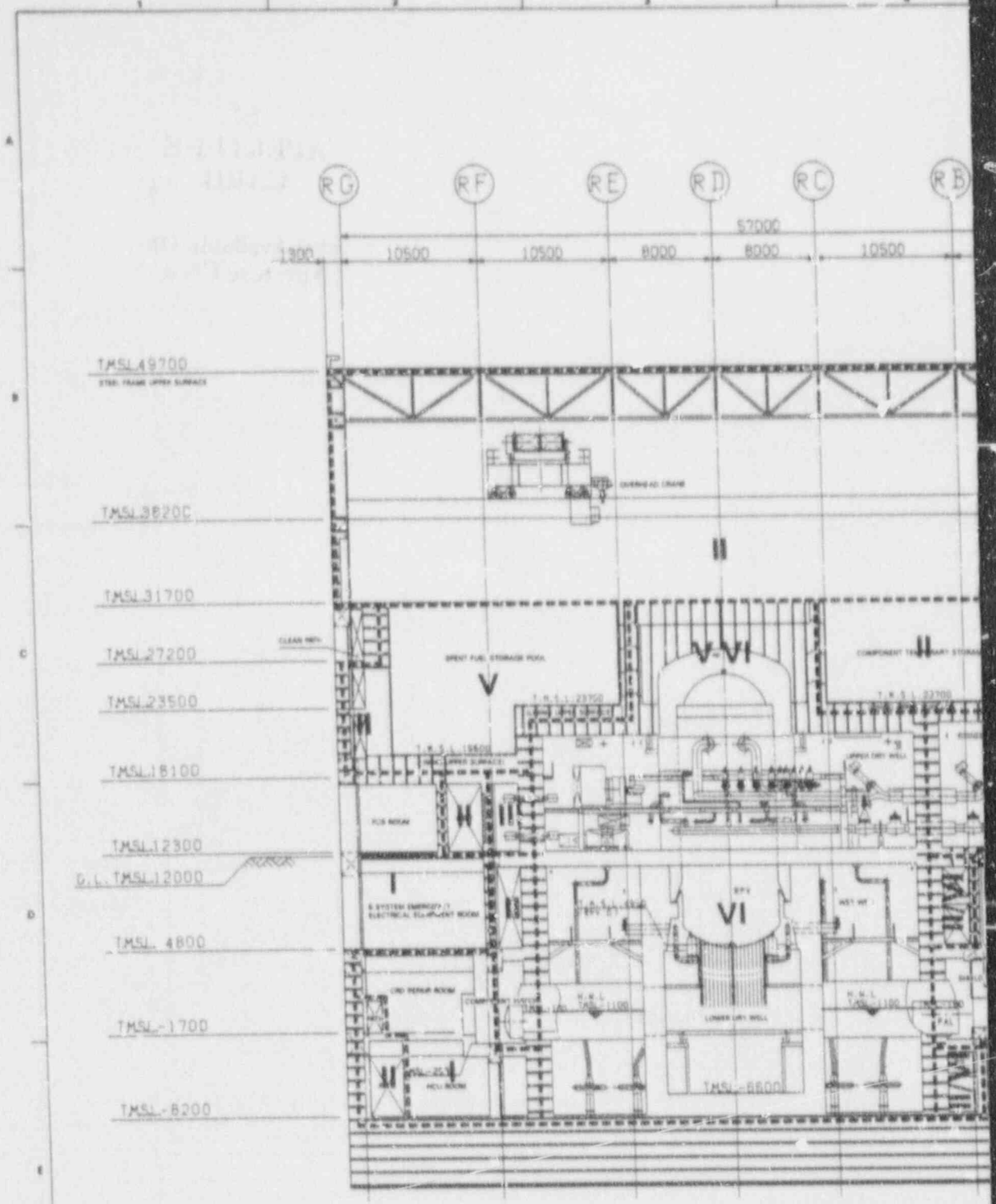
(REMARKS)
EQUIPMENT
D/S PIT
SPENT FUEL STORAGE



ZONE	DOSE RATE (R/HR)
I	< 0.5
II	< 5.0
III	< 50
IV	< 500
V	< 5000
VI	> 5000

92-230-18

Figure 12.3–20 REACTOR BUILDING RADIATION ZONE MAP POST LOCA AT ELEVATION 31700mm (4FM)


RG
RF
RE
RD
RC
RB
57000
1300
10500
10500
8000
8000
10500
TMSL 49700
TMSL 38200
TMSL 31700
TMSL 27200
TMSL 23500
TMSL 18100
TMSL 12300
D.L. TMSL 12000
TMSL 4800
TMSL -1700
TMSL -8200
V
V-VI
II
I
VI
OVERHEAD CRANE
SPENT FUEL STORAGE POOL
FUEL ROOM
CRD REPAIR ROOM
HCU ROOM
UPPER DRY WELL
LOWER DRY WELL
TMSL -8800

A-A SECTION

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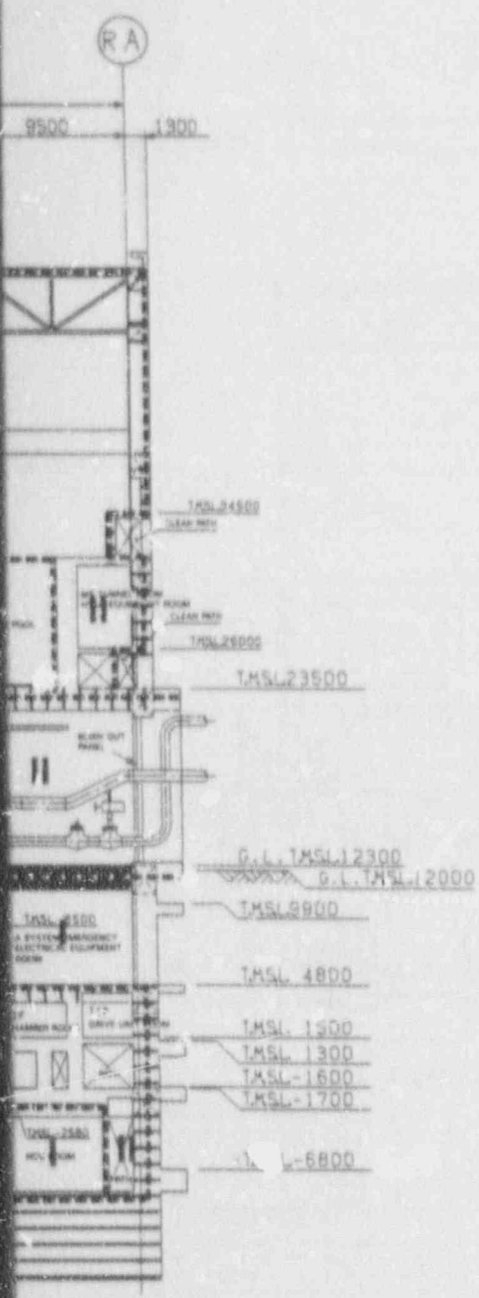

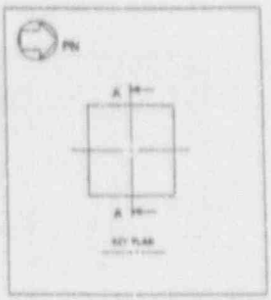

ZONE	DOSE RATE (R/HR)
I	< 0.5
II	< 5.0
III	< 50
IV	< 500
V	< 5000
VI	> 5000

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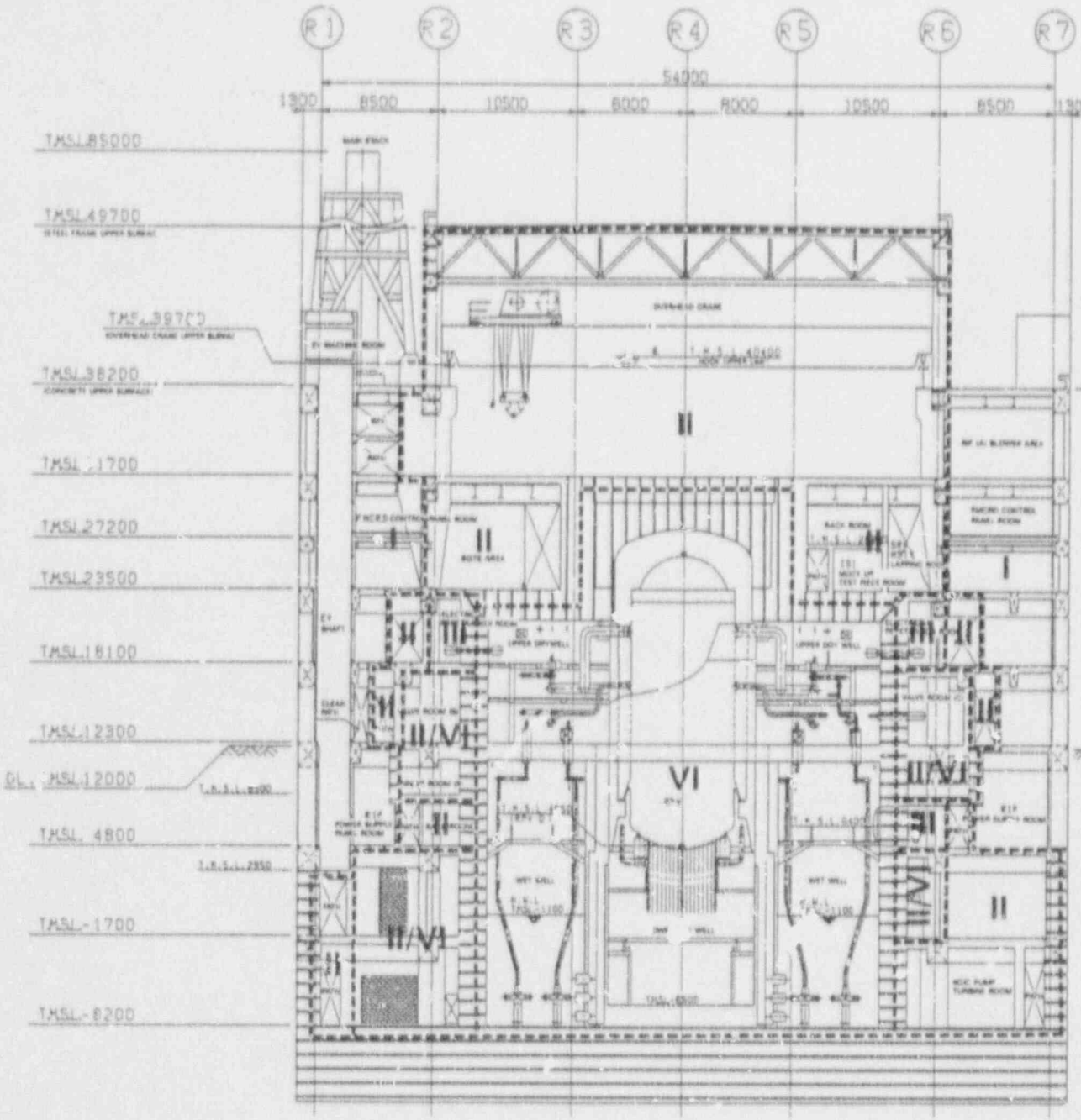
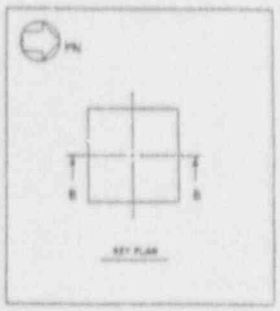
92-230-19

Figure 12.3–21 REACTOR BUILDING RADIATION ZONE MAP POST LOCA AT CROSS SECTION A–A


R1
R2
R3
R4
R5
R6
R7
54000
1300
8500
10500
8000
8000
10500
8500
1300
TMSL 85000
TMSL 49700
TMSL 38200
TMSL 27200
TMSL 23500
TMSL 18100
TMSL 12300
GL. MSL 12000
TMSL 4800
TMSL -1700
TMSL -8200
II
VI
II/VI
III/VI

B-B SECTION



TMSL 38200

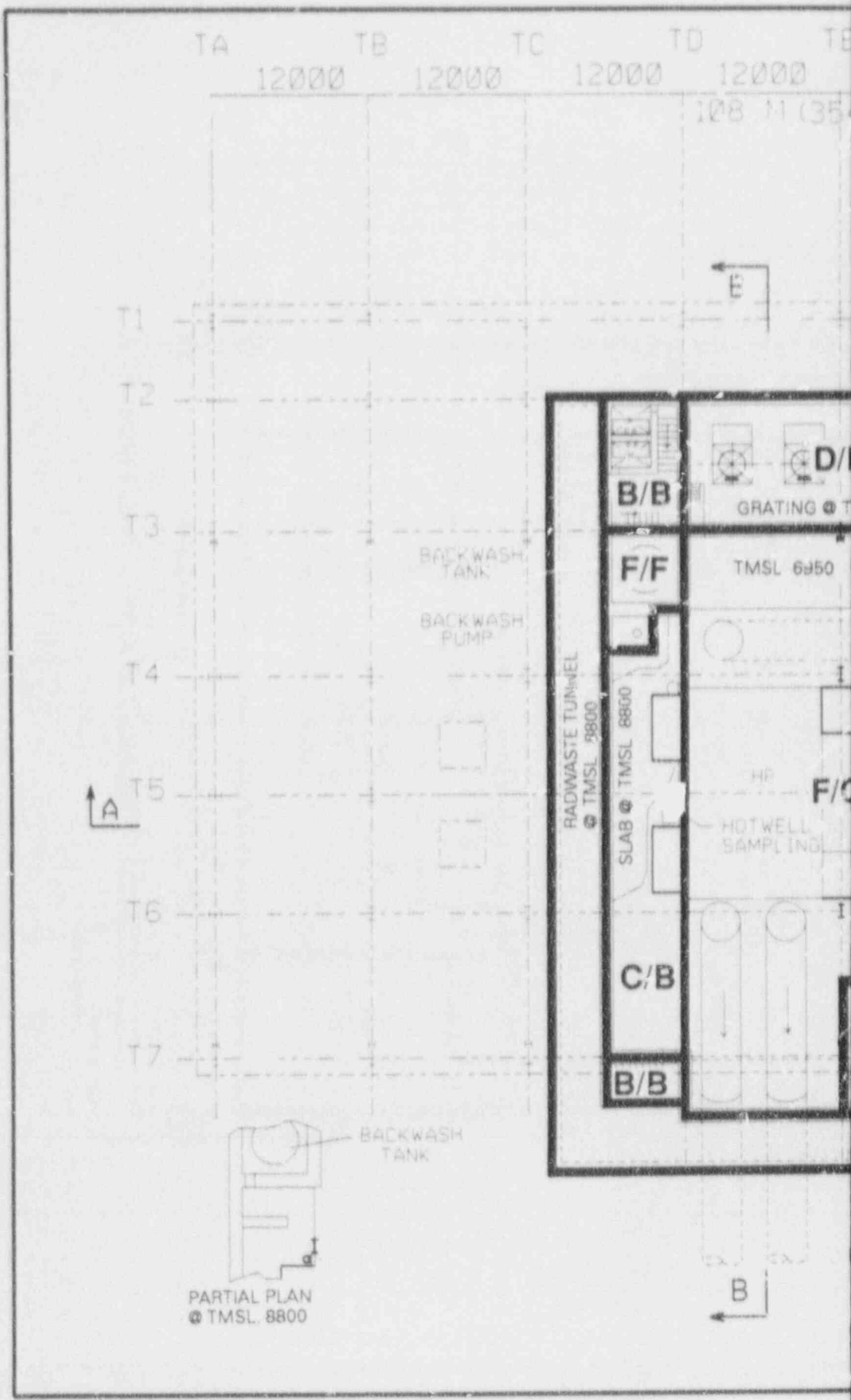
NOTE

ZONE	DOSE RATE (R/HR)
I	< 0.5
II	< 5.0
III	< 50
IV	< 500
V	< 5000
VI	> 5000

TMSL 12000

92-230-20

Figure 12.3–22 REACTOR BUILDING RADIATION ZONE MAP POST LOCA AT CROSS SECION B–B


TA
TB
TC
TD
12000
12000
12000
12000
T1
T2
T3
T4
T5
T6
T7
E
A
B
B/B
F/F
C/B
B/B
BACKWASH TANK
BACKWASH PUMP
RADWASTE TUNNEL @ TMSL 8800
SLAB @ TMSL 8800
TMSL 6950
GRATING @
HP
HOTWELL SAMPLING
BACKWASH TANK
PARTIAL PLAN @ TMSL. 8800

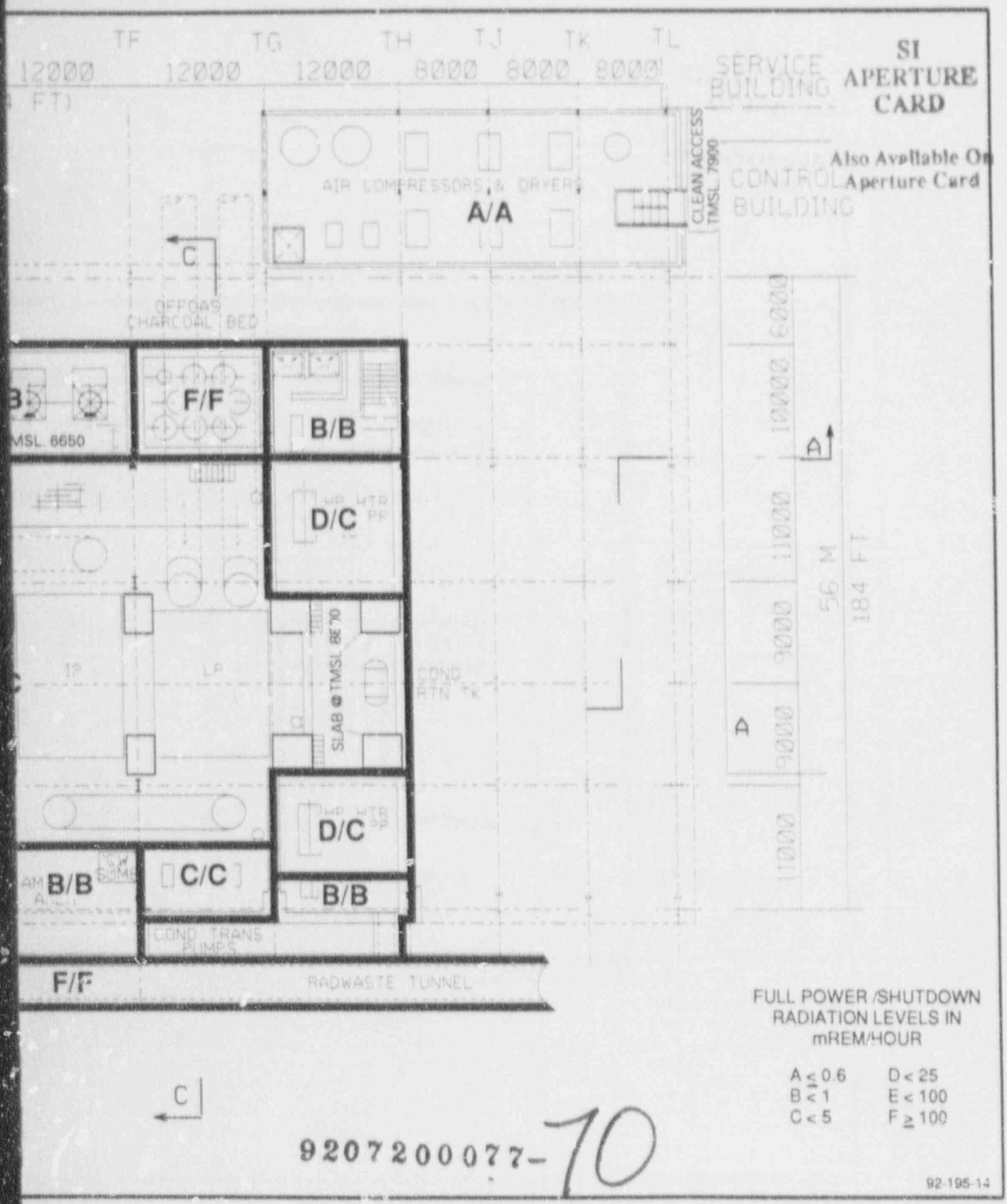


Figure 12.3- 49 TURBINE BUILDING RADIATION ZONE AT ELEVATION 5300mm

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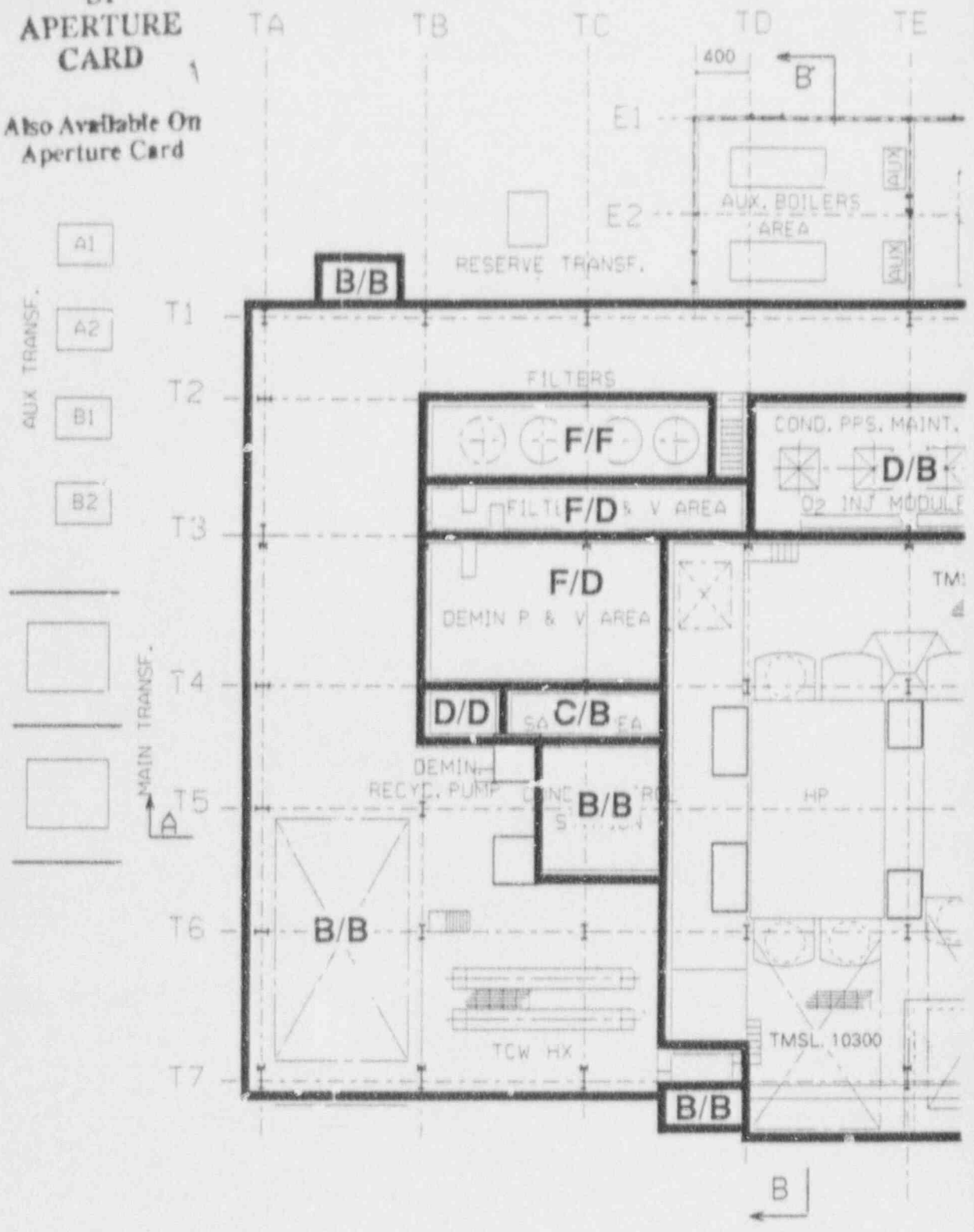


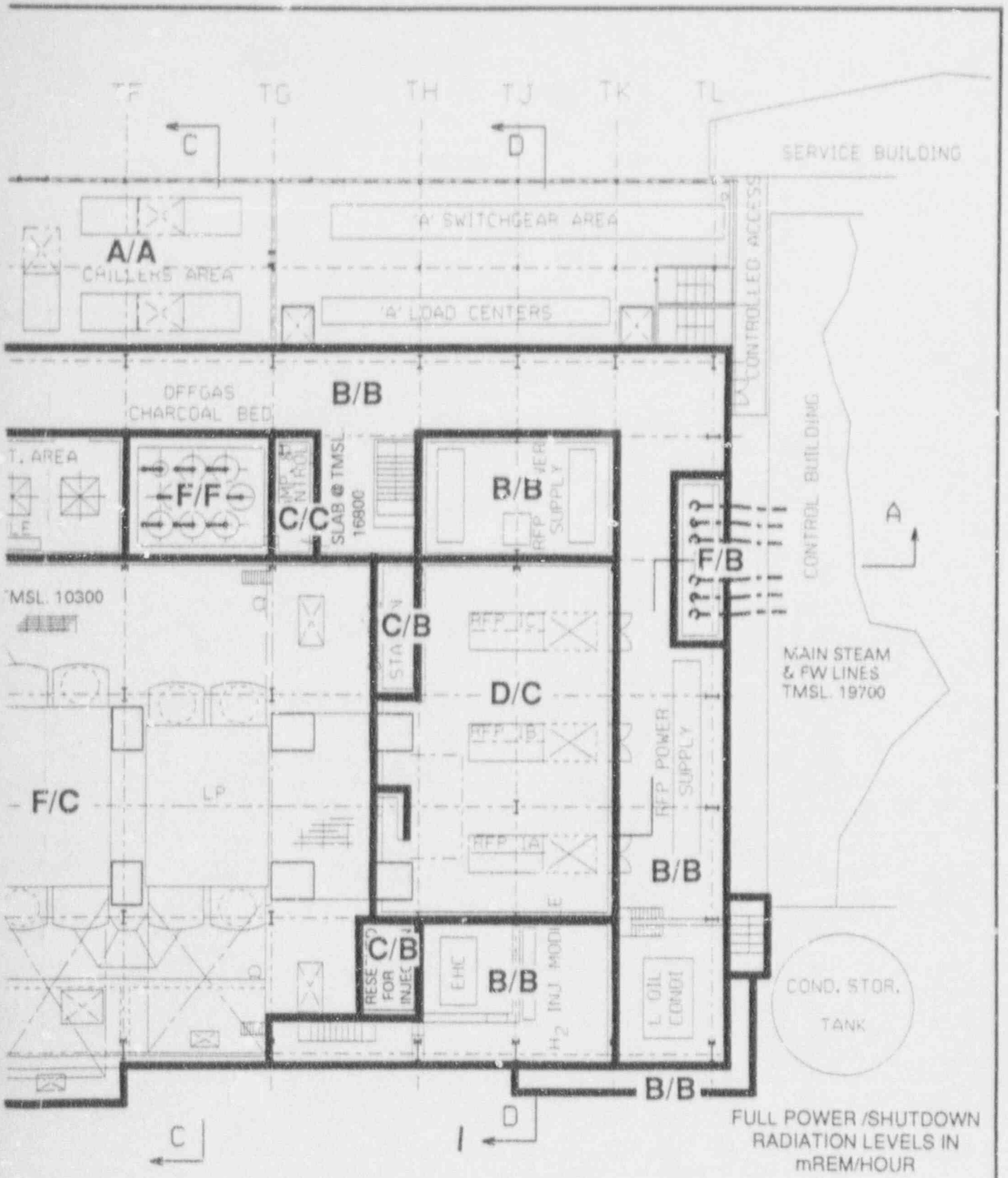
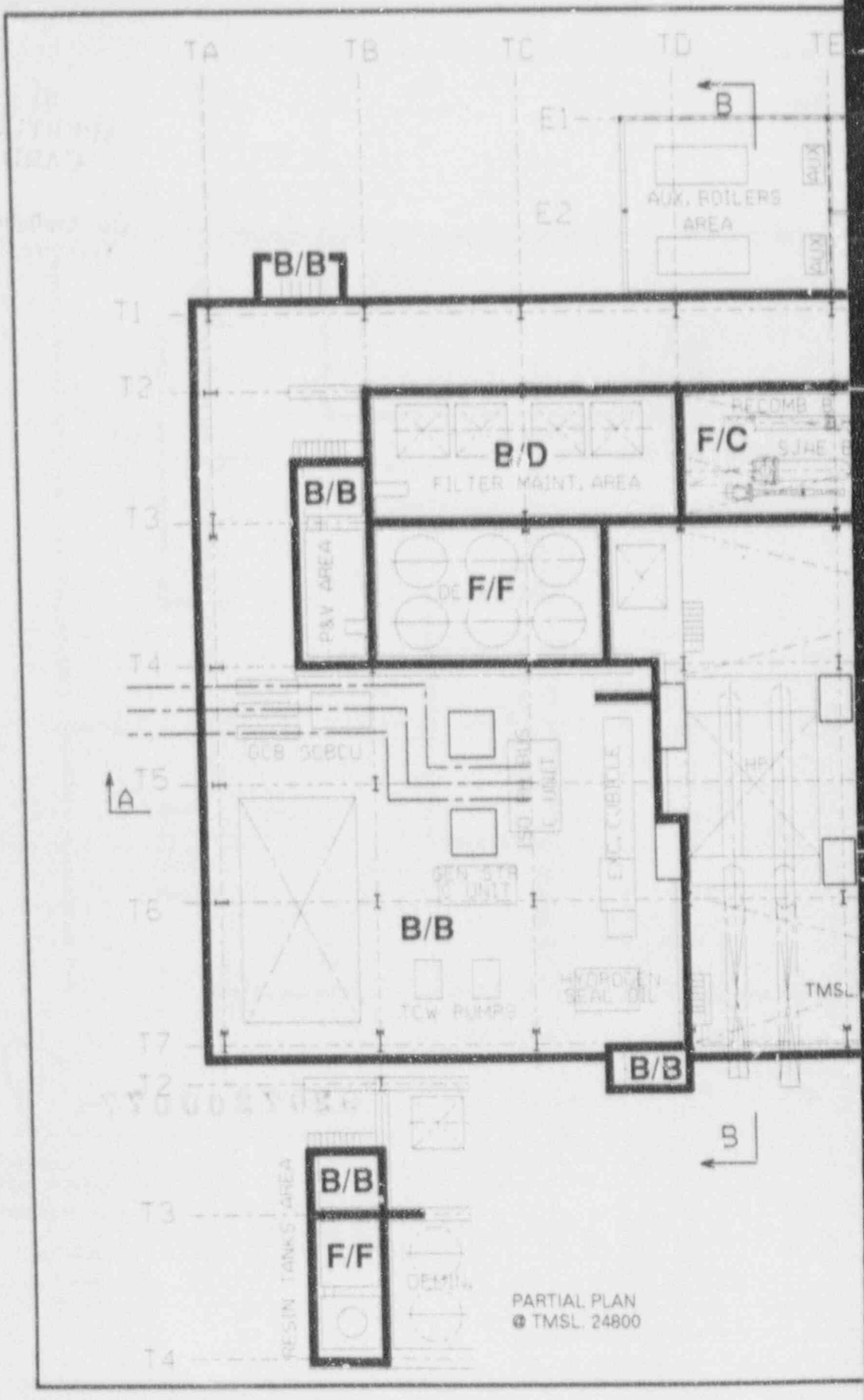
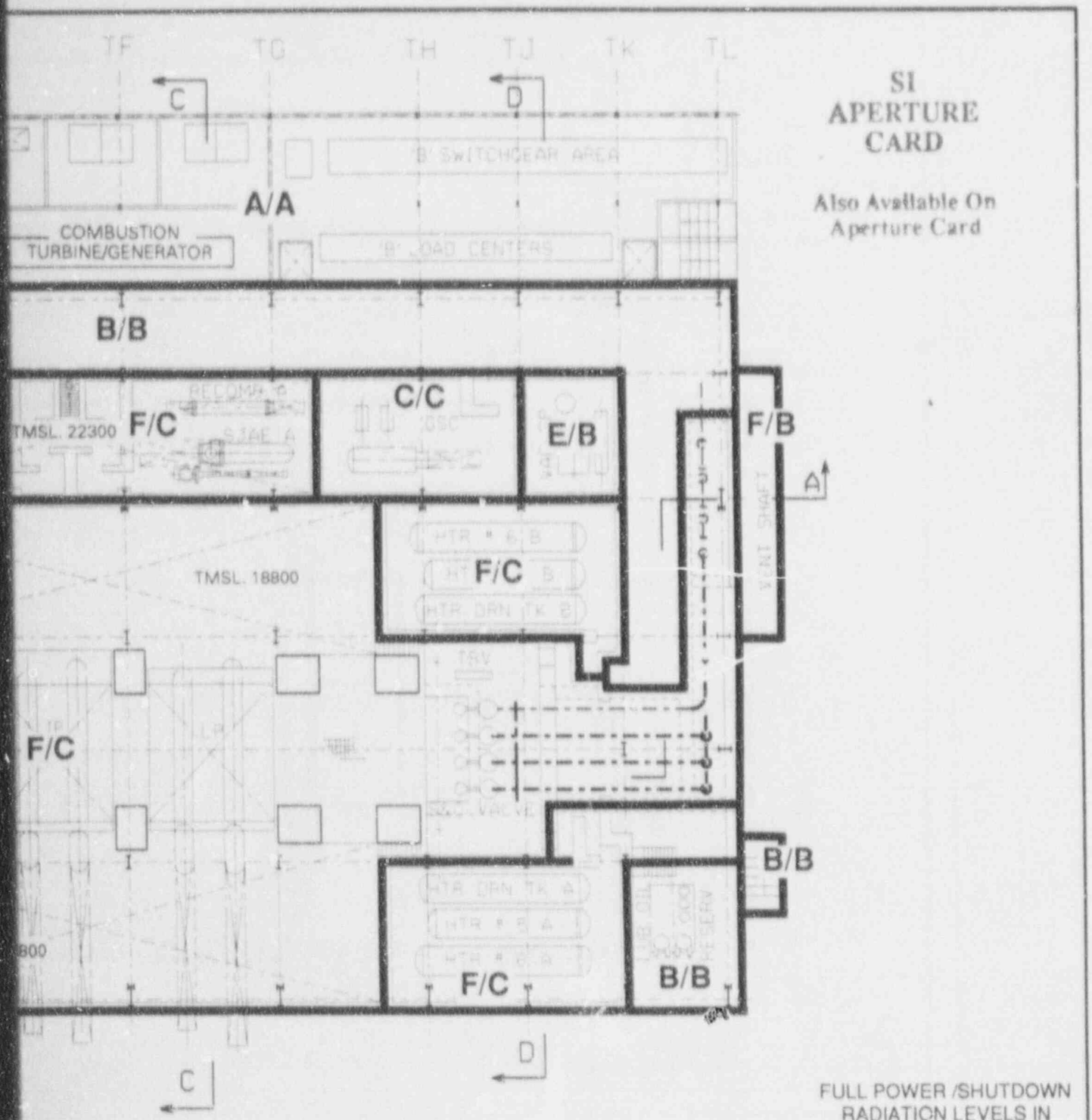


Figure 12.3–50 TURBINE BUILDING RADIATION ZONE AT ELEVATION 12300mm



PARTIAL PLAN
@ TMSL. 24800



SI
APERTURE
CARD

Also Available On
Aperture Card

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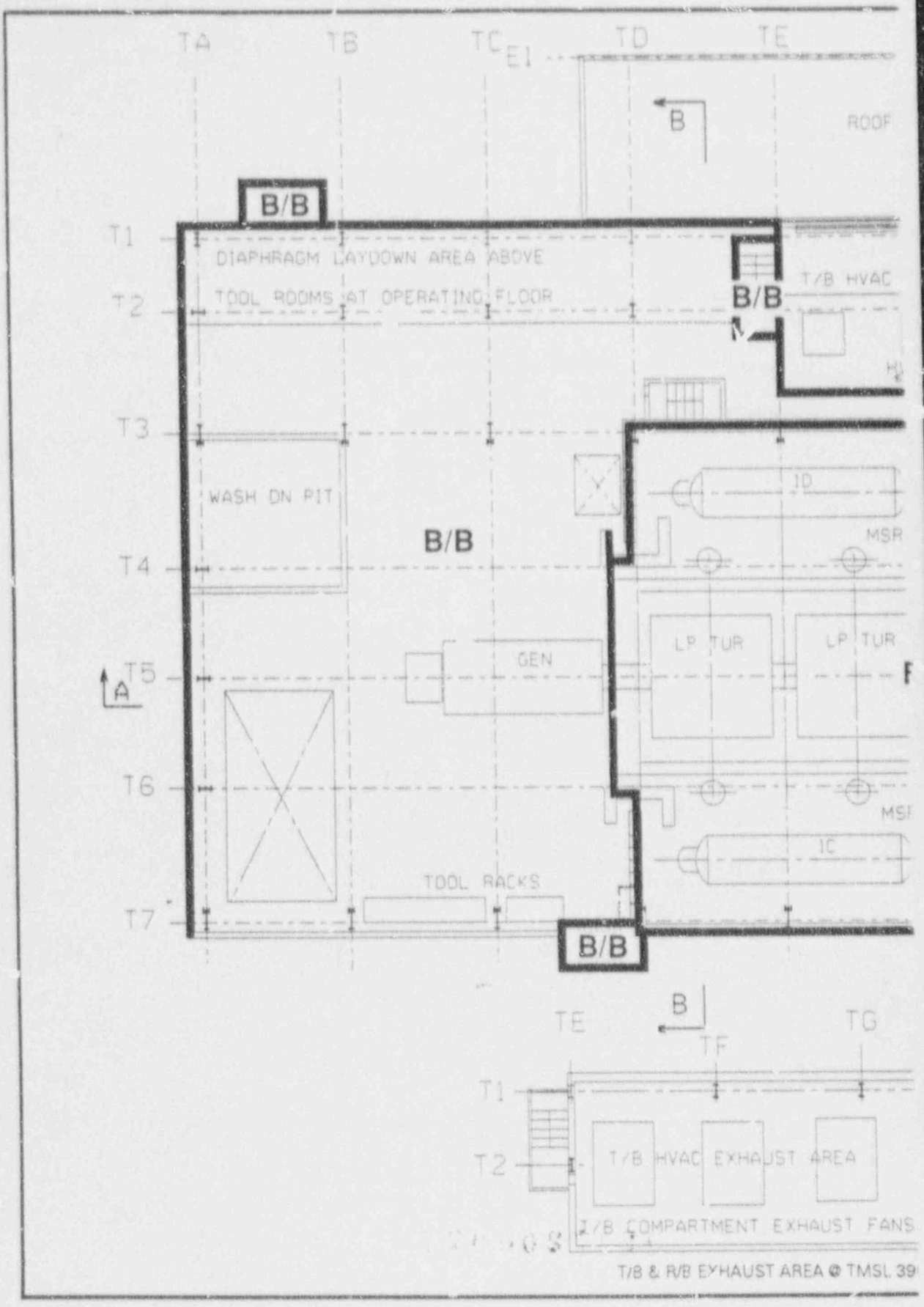
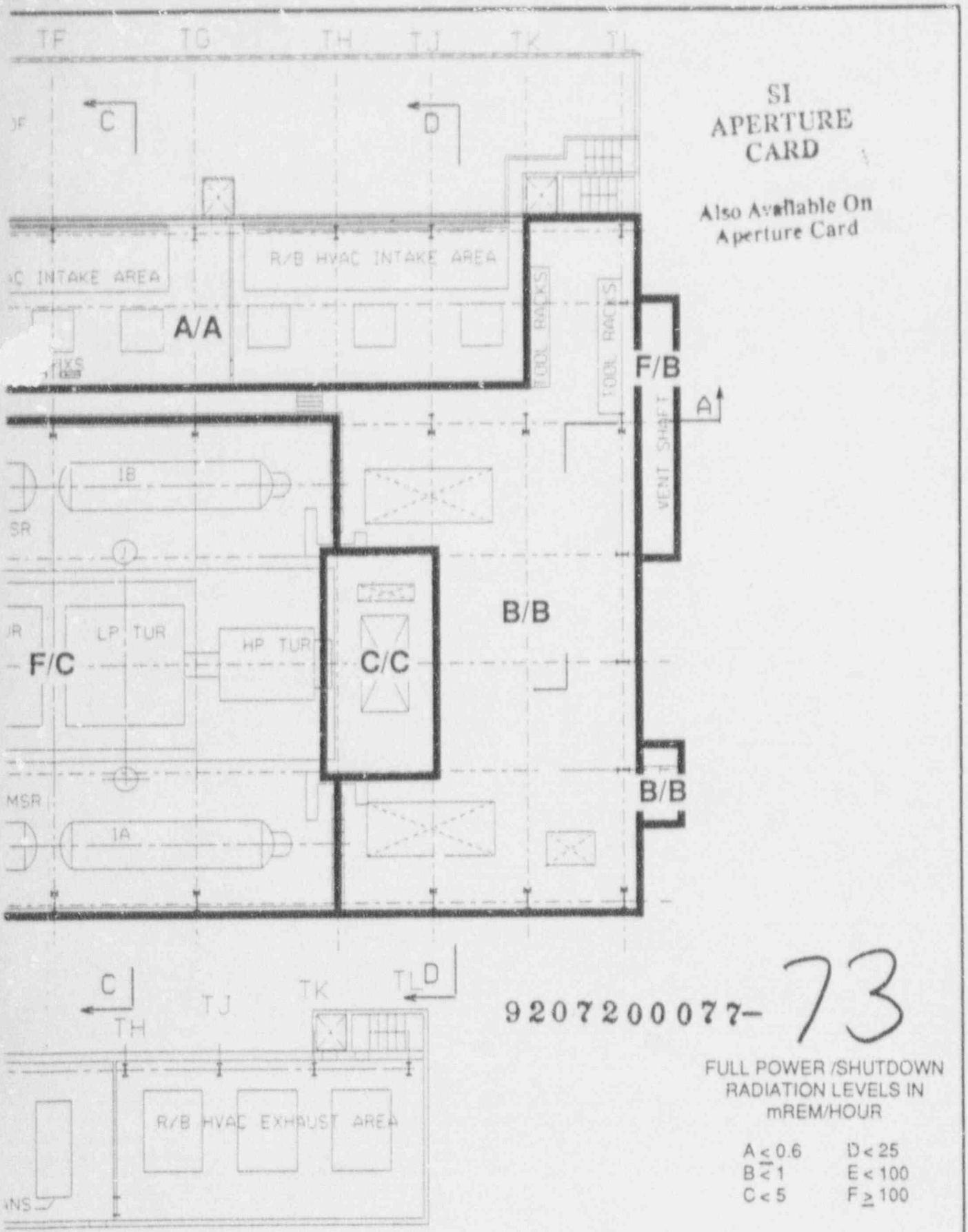
Figure 12.3–51 TURBINE BUILDING RADIATION ZONE AT ELEVATION 20300mm



T/B & R/B EXHAUST AREA @ TMSL 39

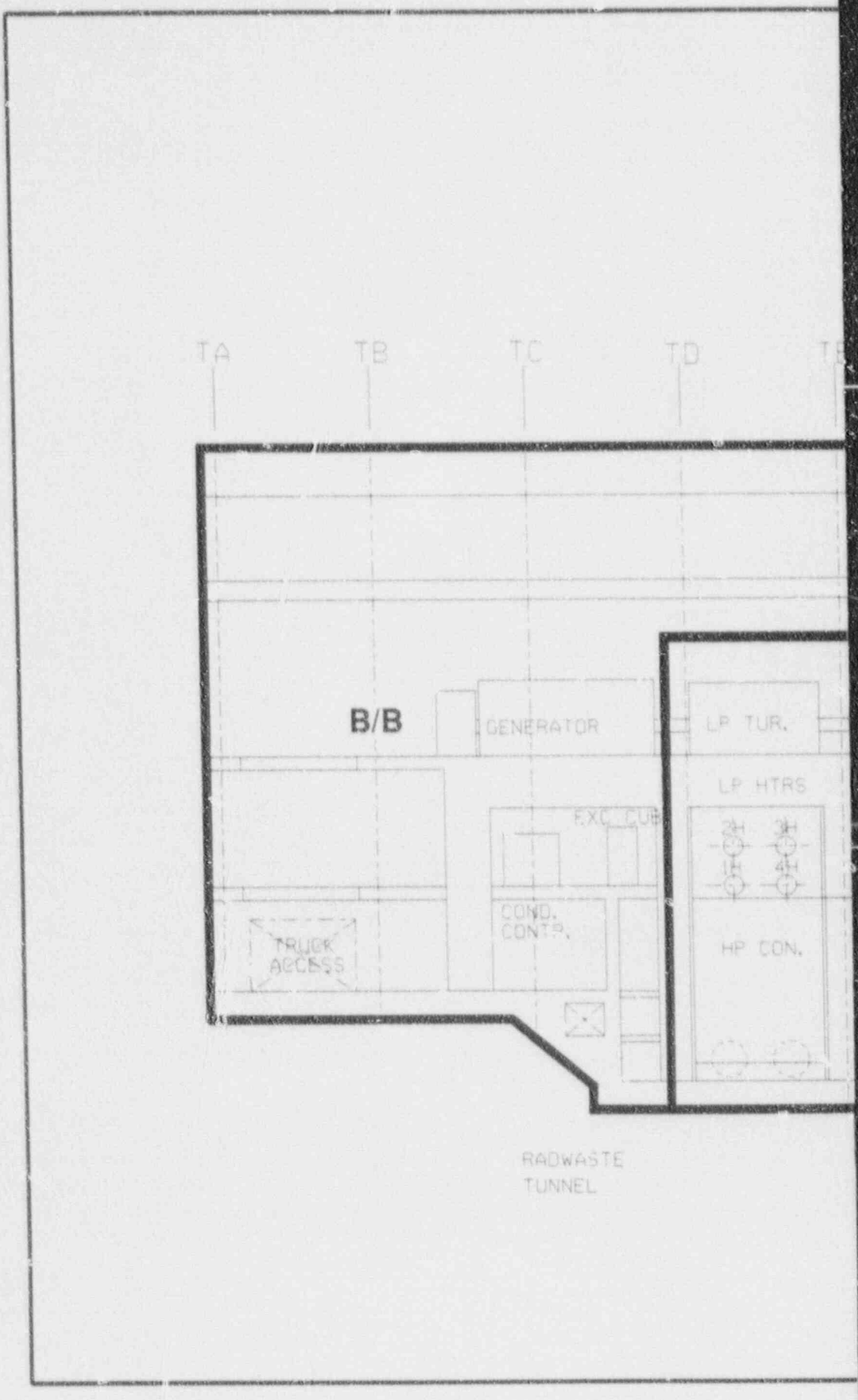


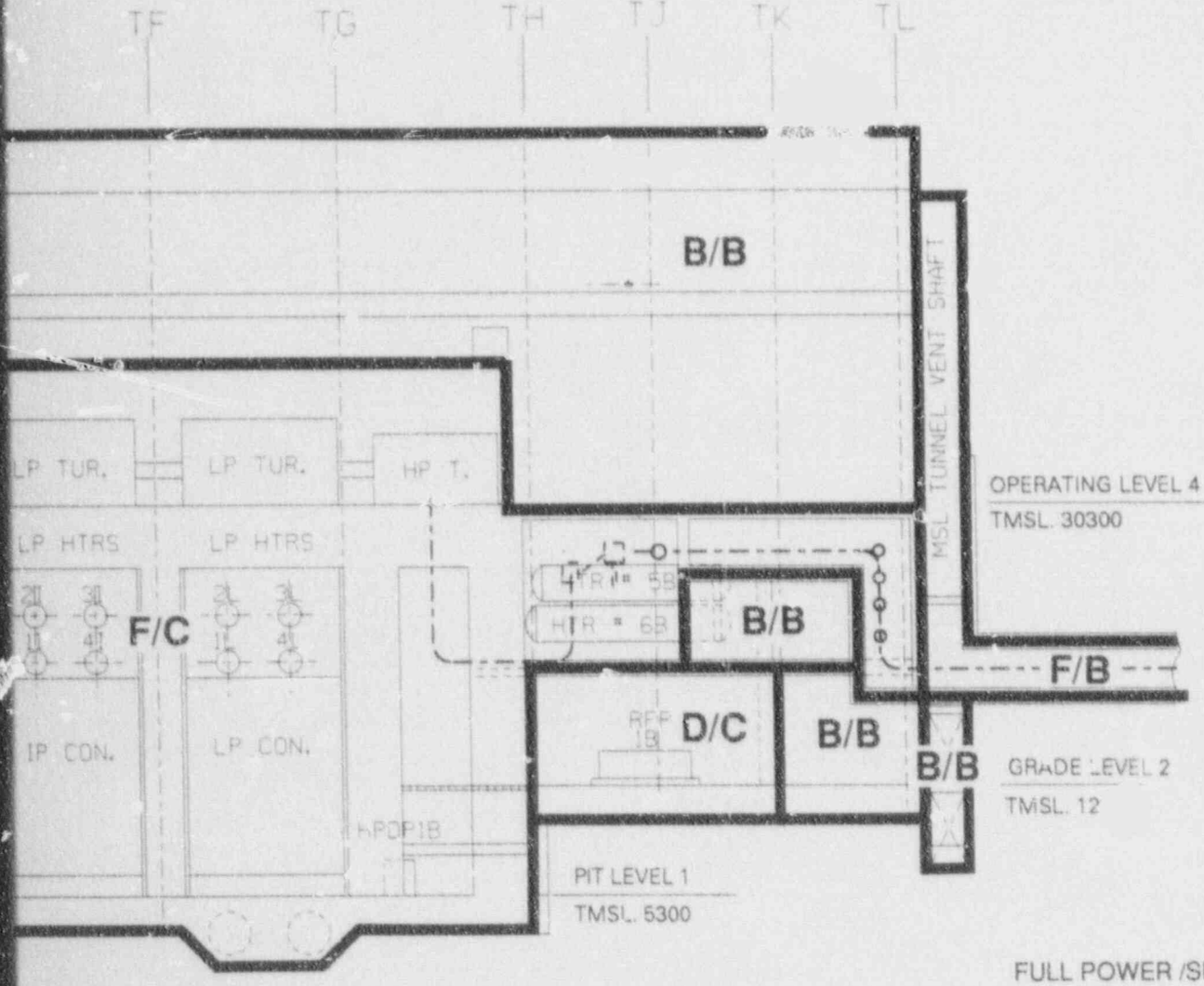
9207200077- 73

FULL POWER /SHUTDOWN
RADIATION LEVELS IN
mREM/HOUR

A ≤ 0.6	D < 25
B ≤ 1	E < 100
C < 5	F ≥ 100

Figure 12.3-52 TURBINE BUILDING RADIATION ZONE AT ELEVATION 30300mm


TA
TB
TC
TD
B/B
GENERATOR
LP TUR.
LP HTRS
EXC. CUB.
2H
3H
1H
4H
COND.
CONTR.
TRUCK
ACCESS
HP CON.
RADWASTE
TUNNEL



FULL POWER /SHUTDOWN
RADIATION LEVELS IN
mREM/HOUR

A ≤ 0.6	D < 25
B < 1	E < 100
C < 5	F ≥ 100

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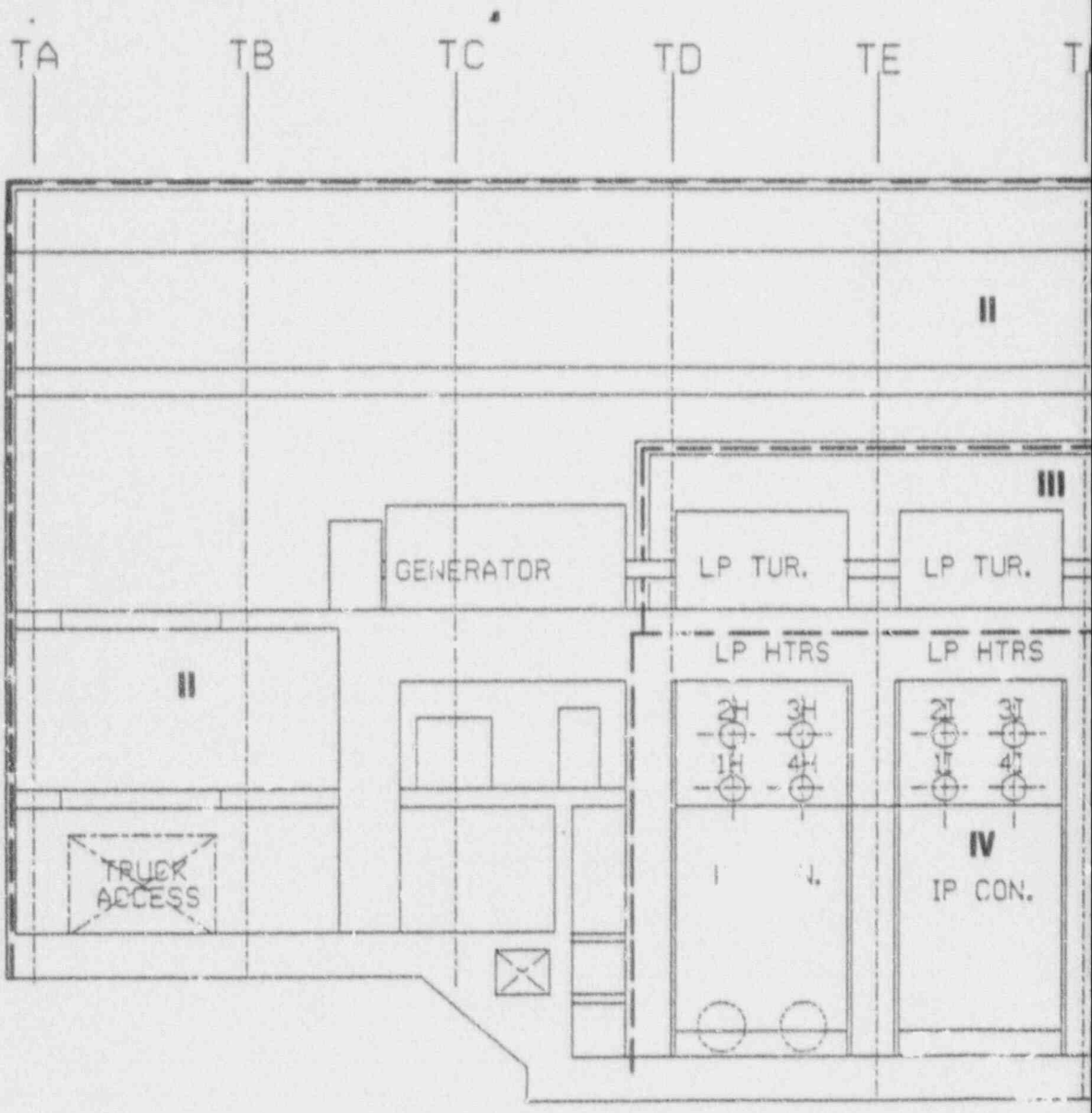
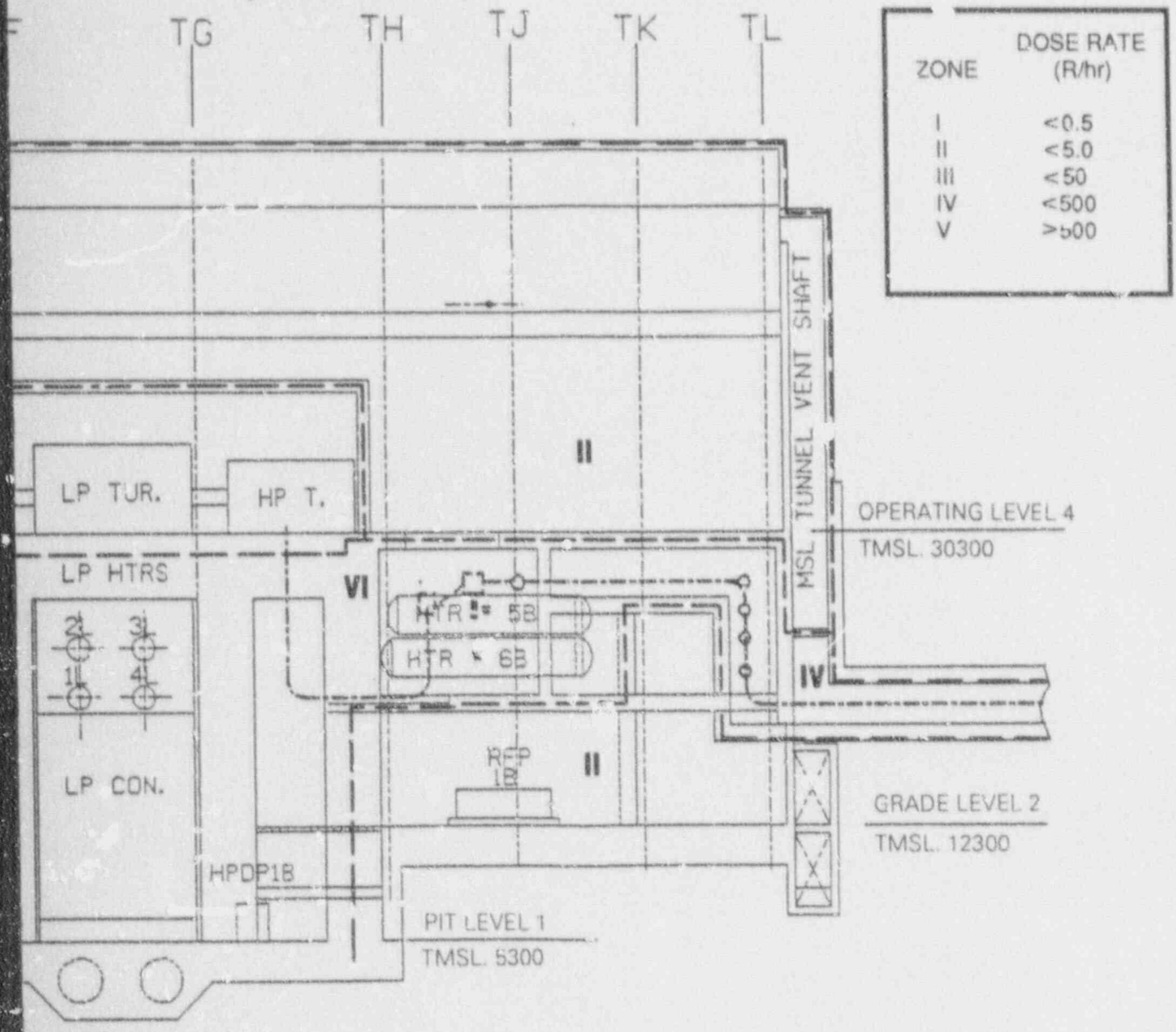
92-195-19

Figure 12.3–53 TURBINE BUILDING RADIATION ZONE AT NORMAL OPERATION LONGITUDINAL SECTION AA


TA
TB
TC
TD
TE
II
III
GENERATOR
LP TUR.
LP TUR.
LP HTRS
LP HTRS
II
TRUCK ACCESS
IV
IP CON.



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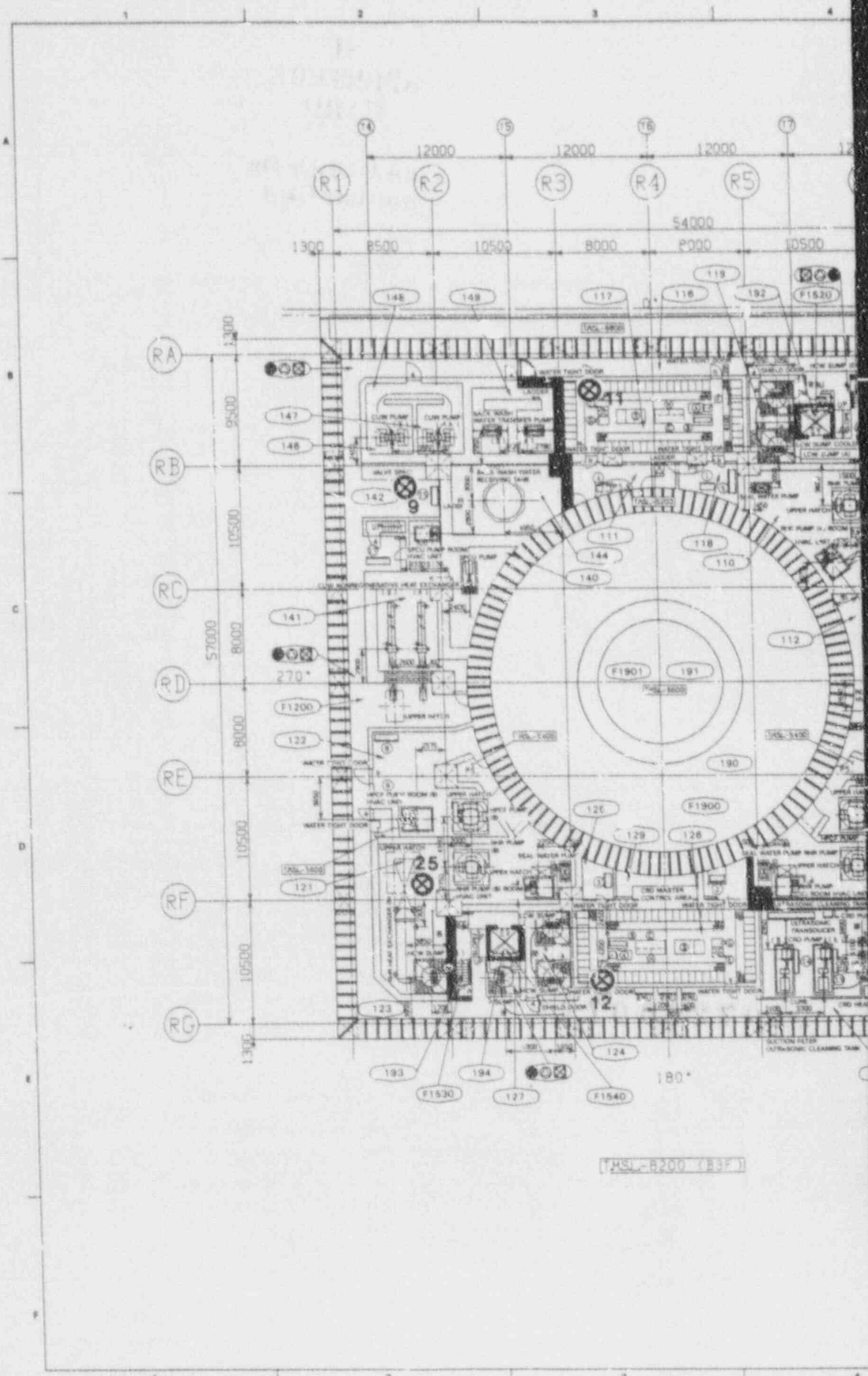
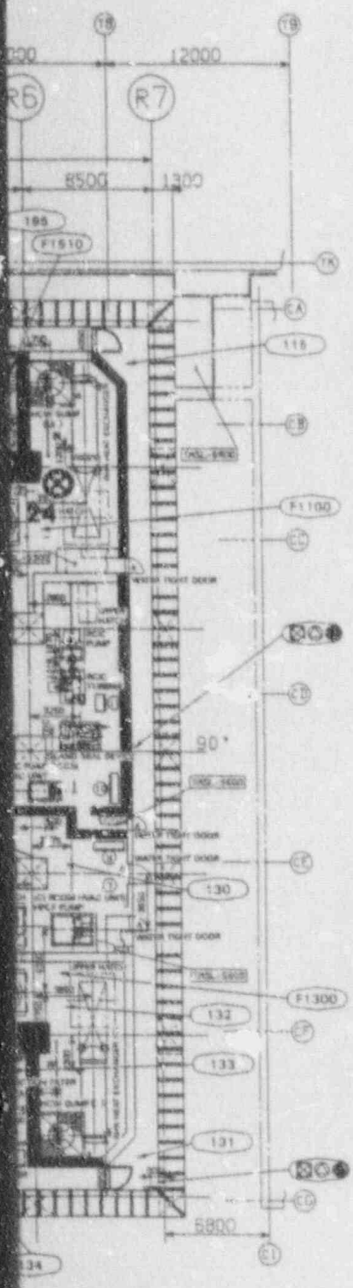
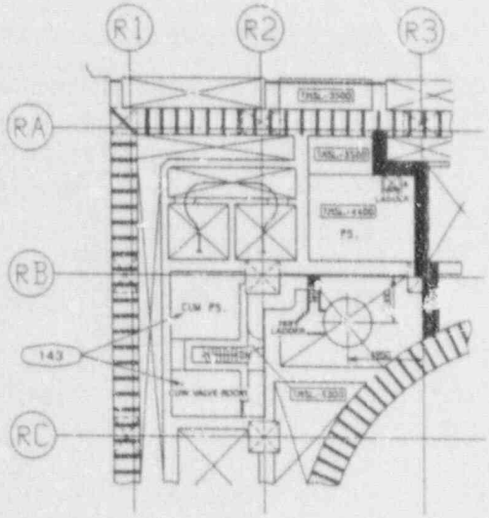
92-195-18

Figure 12.3–55 TURBINE BUILDING RADIATION ZONE, POST-LOCA, LONGITUDINAL SECTION A–A


R1
R2
R3
R4
R5
RA
RB
RC
RD
RE
RF
RG
12000
12000
12000
54000
57000
270°
180°
CRD MASTER CONTROL AREA
WATER TIGHT DOOR
UPPER HATCH
ULTRASONIC TRANSDUCER
THSL-8200 (B3F)





NO.	RACK LIST	RACK NAME
H22-P001A	1.	CORE FLOW (IA) INSTRUMENT RACK
C	2.	CORE FLOW (IB) INSTRUMENT RACK
B	3.	CORE FLOW (IIA) INSTRUMENT RACK
D	4.	CORE FLOW (IIB) INSTRUMENT RACK
H22-P002A	5.	RHR SYSTEM (A) INSTRUMENT RACK
B	6.	RHR SYSTEM (B) INSTRUMENT RACK
C	7.	RHR SYSTEM (C) INSTRUMENT RACK
H22-P003B	8.	HIGH PRESSURE CORE SPRAY SYSTEM (B) INSTRUMENT RACK
C	9.	HIGH PRESSURE CORE SPRAY SYSTEM (C) INSTRUMENT RACK
H22-P004	10.	REACTOR CORE ISOLATION COOLING SYSTEM INSTRUMENT RACK
H22-P005	11.	REACTOR CORE ISOLATION COOLING SYSTEM TURBINE INSTRUMENT RACK
H22-P006	12.	CONTROL ROD DRIVE HYDRAULIC SYSTEM INSTRUMENT RACK
H22-P006A	13.	CRD PUMP (A) INSTRUMENT RACK
H22-P006B	14.	CRD PUMP (B) INSTRUMENT RACK
H22-P007	15.	REACTOR COOLANT CLEAN-UP SYSTEM INSTRUMENT RACK
	16.	NOT USED
H22-P008	17.	SUPPRESSION POOL DISCHARGE SYSTEM SAMPLING RACK
H22-P004	18.	RHR HEAT EXCHANGER EXIT SAMPLING RACK

A. ACCUMULATOR INSTALLATION-REMOVAL TRANSPORTATION DOLLY
B. ACCUMULATOR DISASSEMBLY-ASSEMBLY DOLLY
C. ACCUMULATOR WORKING BENCH
D. SCRAM VALVE-SCRAM PILOT VALVE WORKING BENCH
E. SCRAM PILOT VALVE TEST FACILITY
F. PUMP UNIT
G. GENERAL PURPOSE WORKING BENCH
H. TOOL BOX

(REMARKS)
EQUIPMENT
RHR PUMP (A)
RHR PUMP (B)
RHR PUMP (C)
RHR HX (A)
RHR HX (B)
RHR HX (C)
HPCF PUMP (B)
HPCF PUMP (C)
CUW NON RE HX
CUW PUMP
CUW BACK WASH TRANSFER PUMP
CUW BACK WASH TANK
CRD PUMP
SUCTION FILTER
RCIC PUMP
RCIC TURBINE

FIRE PROTECTION SYMBOLS

F1.301 FIRE AREA NUMBER
a. LEFT HAND DIGIT IS BOTTOM FLOOR NUMBER STARTING WITH 1 = ELEVATION (-) 8200
b. SECOND DIGIT FROM LEFT IS THE ELECTRICAL DIVISION NUMBER

135 ROOM NUMBER

HOSE RACK

PORTABLE EXTINGUISHER

STANDPIPE

3-HOUR RATED FIRE BARRIER (WALL)

RATED FIRE BARRIER (FLOOR)

3-HOUR FIRE RATED DOOR

SECONDARY CONTAINMENT BOUNDARIES (3-HOUR RATED FIRE BARRIER)

SPRINKLER SYSTEM

REMARK (COMMON)
1. CURB HEIGHT IS H = 75, UNLESS OTHERWISE SPECIFIED IF THEY ARE SPECIFIED, THE HEIGHTS ARE AS FOLLOWS
(a) a IS H = 200
(b) b IS H = 100
(c) FOR OTHERS, REFER TO THE HEIGHTS SHOWN ON DRAWINGS

2. EACH SYMBOL MARKS MEAN AS FOLLOWS
(a) GRATING
(b) CHECKER PLATE
(c) CONCRETE BLOCK
(d) (X) THIS SHOWS INSTRUMENTATION RACK NUMBER THAT CORRESPONDS TO RACK LIST
(e) FRONT OF PANEL AND RACK
FRONT
(f) PULL SPACE FOR MAINTENANCE
(g) HANDRAIL
(h) MONORAIL
(i) EV ELEVATOR
(j) PS PIPE SPACE
(k) DS HVAC DUCT SPACE
(l) TS CABLE TRAY SPACE
(m) NL NORMAL LOCK DOOR
(n) STEEL SHIELDING DOOR
(o) CURB
(p) PP PHYSICAL PROTECTION

3. SOLID COLORED AREAS CONTAIN SAFETY-RELATED EQUIPMENT OF THE ELECTRICAL DIVISION ASSIGNMENT INDICATED BELOW:
DIVISION 1
DIVISION 2
DIVISION 3
DIVISION 4

4. AREAS CROSS HATCHED WITH COLORS PRIMARILY CONTAIN NON SAFETY-RELATED EQUIPMENT BUT ARE NOT SEPARATED BY FIRE BARRIERS FROM AN ADJACENT AREA CONTAINING SAFETY-RELATED EQUIPMENT OF THE SAME DIVISION AS FOR THE COLOR OF THE CROSS HATCH.

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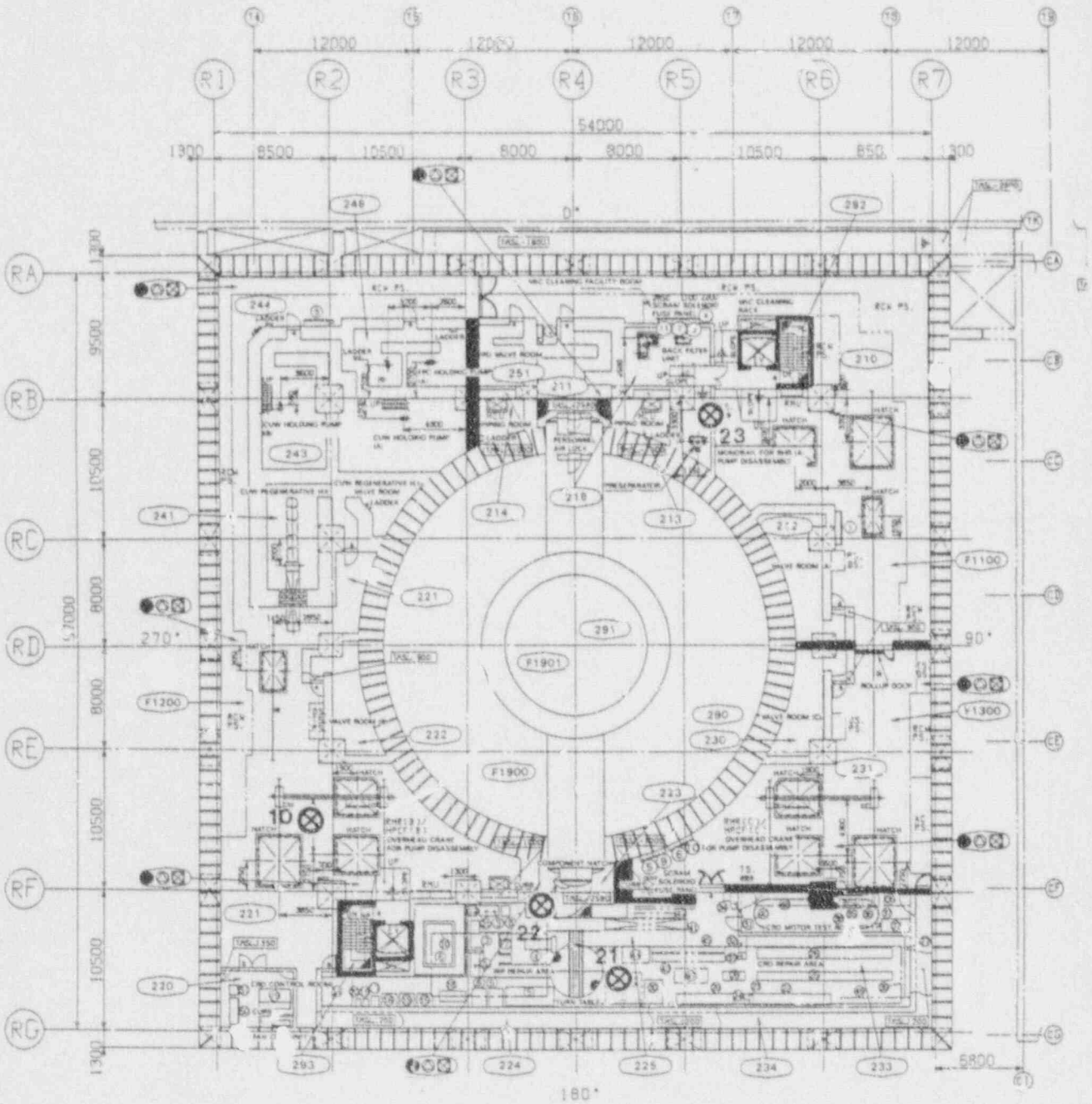
Figure 12.3-56 REACTOR BUILDING, AREA RADIATION MONITORS, -8?00mm



MSL-1700 (B2F)

(REMARKS)
EQUIPMENT

CUW RE HX	
CUW F/D VALVE ROOM	
RIP MAINTENANCE AREA	
FMCRD MAINTENANCE AREA	
CRD CONTROL ROOM	

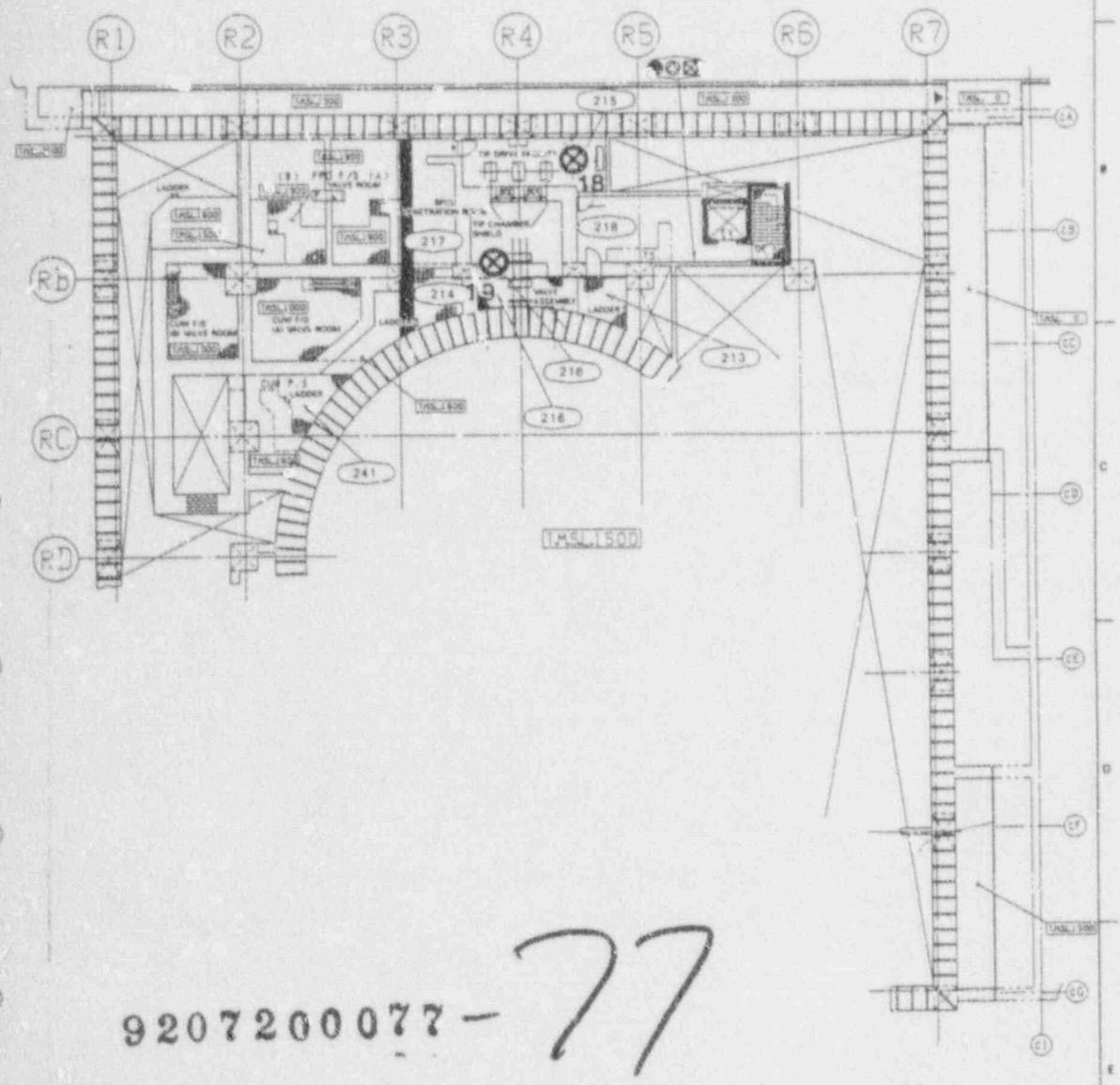
RACK LIST

		NO.	RACK NAME
E51	H22-P011	1.	REACTOR CORE ISOLATION COOLING SYSTEM (STEAM SYSTEM) INSTRUMENT RACK
G41	H22-P011	2.	FPC F/D SOLENOID OPERATED VALVE RACK
G31	H22-P012A	3.	CUW F/D SOLENOID OPERATED VALVE RACK A
G31	H22-P012B	3.	CUW F/D SOLENOID OPERATED VALVE RACK B
C71	H22-P055A	4.	SCRAM SOLENOID FUSE PANEL
C71	H22-P055B	5.	SCRAM SOLENOID FUSE PANEL
C71	H22-P055C	6.	SCRAM SOLENOID FUSE PANEL
C71	H22-P055D	7.	SCRAM SOLENOID FUSE PANEL
C71	H22-P055E	8.	SCRAM SOLENOID FUSE PANEL
C71	H22-P055F	9.	SCRAM SOLENOID FUSE PANEL
C71	H22-P055G	10.	SCRAM SOLENOID FUSE PANEL
C71	H22-P055H	11.	SCRAM SOLENOID FUSE PANEL

1. MOTOR DISAS
2. MOTOR AREA
3. SPARE RACK
4. MOTOR
5. MOTOR
6. DECON ELECTR
7. WORK
8. MOVAB
9. SPARE
10. OVERH REACH
11. CHANG
12. PUMP

Figu

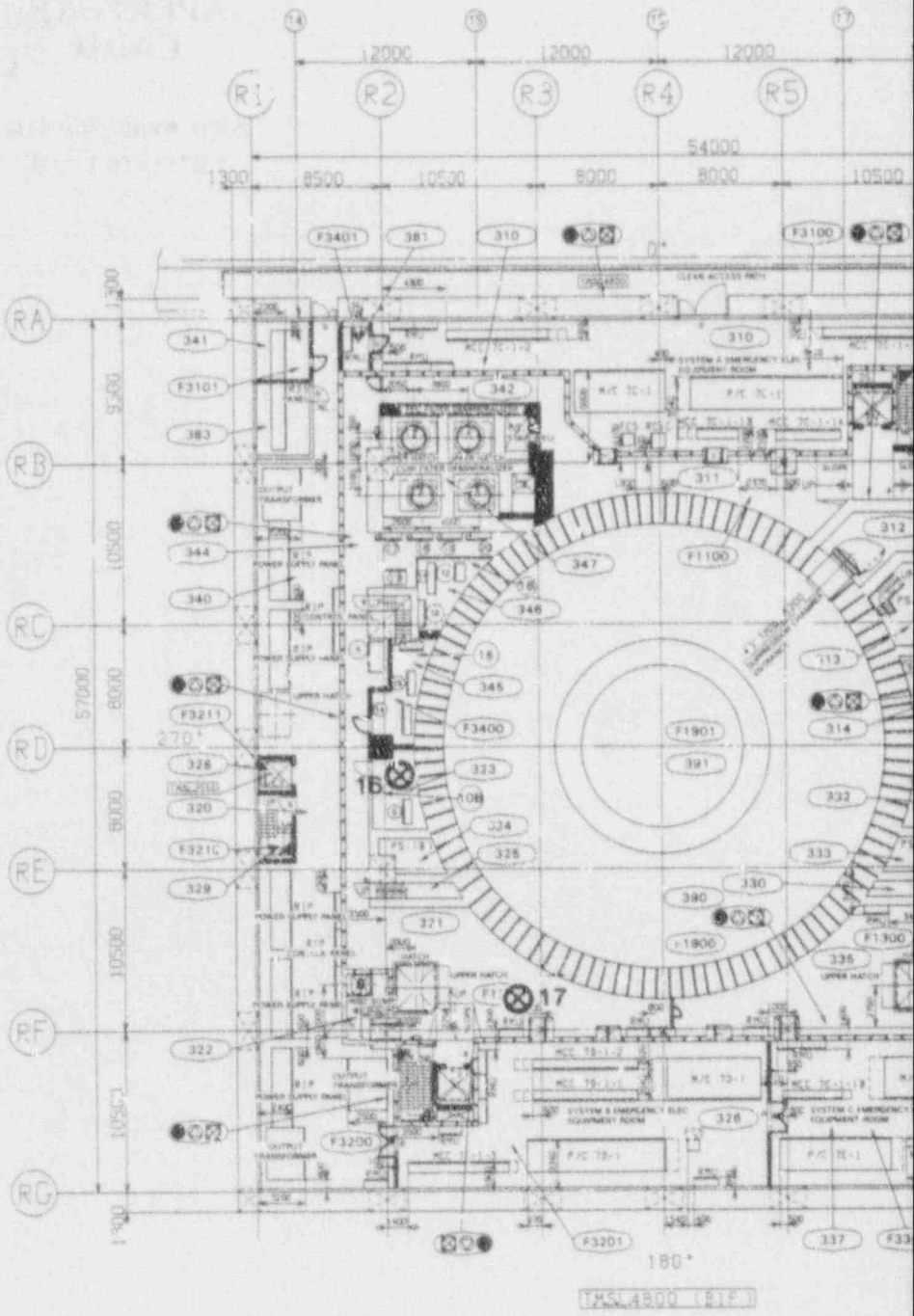
Amendm



MOTOR ASSEMBLY/ DISASSEMBLY AREA
MOTOR DISASSEMBLY PARTS AREA
SPARE PARTS TOOL STORAGE RACK
MOTOR TEMPORARY PLACE
MOTOR CARRYING DOLLY AREA
DECONTAMINATION
ELECTRICAL TEST TANK
WORK BENCH
MOVABLE TOOL TABLE
SPARE MOTOR STORAGE AREA
OVERHEAD CRANE HOOK REACH
CHANGING SPACE
PUMP TANK FOR WASHING

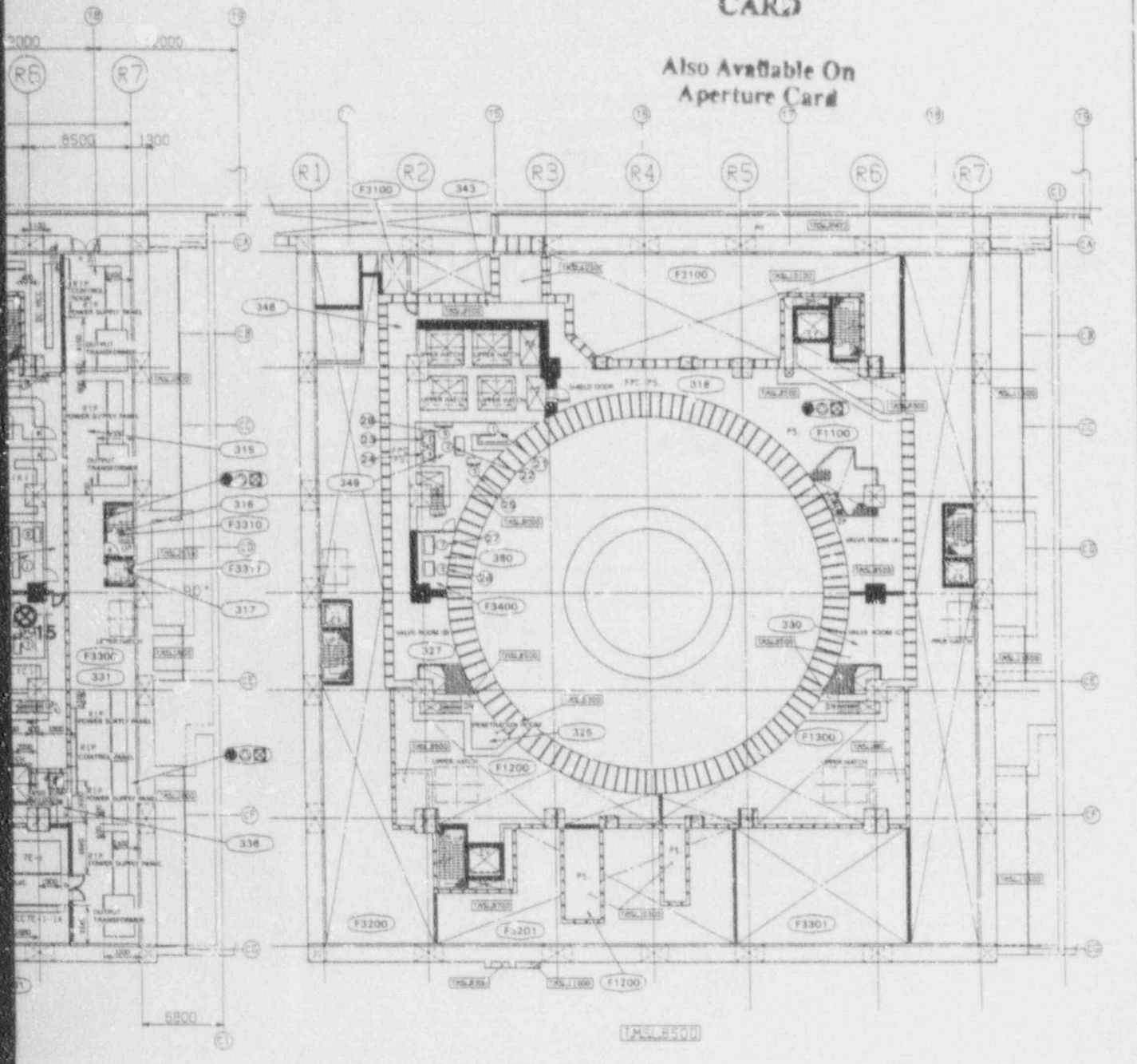
13. STRETCH TUBE NUT HANDLING TOOL STORAGE AREA
14. SECOND SEAL HANDLING TOOL STORAGE AREA
15. BOTTOM CLOSE FLANGE STORAGE AREA
16. MAIN FLANGE STAND TOOL STORAGE AREA
17. AUX COVER HANDLING TOOL STORAGE AREA
18. MOTOR CONTAINER TEMPORARY PLACE
19. HANDLING TOOL CONTROL BOX STORAGE AREA
20. HANDLING TOOL HYDRAULIC UNIT STORAGE AREA
21. COUPLING STAND HANDLING TOOL STORAGE AREA
22. CRD STORAGE TANK
23. ULTRASONIC CLEANING TANK
24. ULTRASONIC TRANSDUCER
25. CRD DISASSEMBLY CLEANING TANK
26. CRD WORK TABLE
27. BALL-NUT DECENT TEST TABLE
28. SPOOL PIECE WORK TABLE
29. SPOOL PIECE STORAGE TANK
30. SEAL HOUSING TEST FACILITY
31. PARTS TEMPORARY PLACE
32. TOOL RACK
33. STORAGE RACK
34. MOVABLE PARTS TABLE
35. MOTOR UNIT WORK TABLE
36. MOTOR TEST FACILITY
37. BRAKE-SYNCHRO TEST FACILITY
38. MOTOR STORAGE RACK
39. OVERHEAD CRANE REACH LIMIT
40. MONORAIL
41. RIP TEMPORARY PLACE
42. MOTOR BRACKET TEMPORARY PLACE
43. CRD CART STORAGE AREA
44. MOTOR UNIT SPOOL PIECE DOLLY STORAGE AREA
45. ATTACHMENT STORAGE AREA
46. CRD STORAGE AREA
47. SPOOL PIECE STORAGE AREA
48. MOTOR SPARE PARTS AREA
49. CRD REPLACEMENT FACILITY CONTROL PANEL
50. CRD REPLACEMENT FACILITY DRIVE PANEL
51. CRD REPLACEMENT FACILITY PRINTER

Figure 12.3-57 REACTOR BUILDING, AREA RADIATION MONITORS, 1700mm AND 1500mm



		NO.	RACK LIST
B31	H22-P013A	1.	REACTOR SYSTEM (I) INSTRUMENT RACK
B31	H22-P013B	2.	REACTOR SYSTEM (II) INSTRUMENT RACK
B31	H22-P013C	3.	REACTOR SYSTEM (III) INSTRUMENT RACK
B31	H22-P013D	4.	REACTOR SYSTEM (IV) INSTRUMENT RACK
B31	H22-P014A	5.	MAIN STEAM FLOW (I) INSTRUMENT RACK
B31	H22-P014B	6.	MAIN STEAM FLOW (II) INSTRUMENT RACK
B31	H22-P014C	7.	MAIN STEAM FLOW (III) INSTRUMENT RACK
B31	H22-P014D	8.	MAIN STEAM FLOW (IV) INSTRUMENT RACK
E31	H22-P015A	9A.	LEAK DETECTION SYSTEM (A) INSTRUMENT RACK
E31	H22-P015C	9C.	LEAK DETECTION SYSTEM (C) INSTRUMENT RACK
E31	H22-P015B	10B.	LEAK DETECTION SYSTEM (B) INSTRUMENT RACK
E31	H22-P015D	10D.	LEAK DETECTION SYSTEM (D) INSTRUMENT RACK
		12.	REACTOR WATER SAMPLING TRANSMITTER PANEL
G41	H22-P016	13.	FPC FD SAMPLING TRANSMITTER

		NO.	RACK LIST
G41	H22-P017	14.	FPC FD MA
G41	H22-P018	15.	FPC FD CO
G41	H22-P019	16.	FPC FD SA
G41	H22-P028	17.	FPC F/D IN
G41	H22-P027	18.	FPC F/D IN
G31	H22-P030	19.	CUW F/D I
G31	H22-P029	20.	CUW F/D I
P91	H22-P020	21.	REACTOR
P91	H22-P021	22.	REACTOR
P91	H22-P022	23.	REACTOR
P91	H22-P023	24.	REACTOR
P91	H22-P024	25.	REACTOR
P91	H22-P025A	26.	REACTOR
P91	H22-P025	27.	REACTOR
P91	H22-P026	28.	PAS RELAT



N VALVE RACK
NDUCTIVITY METER RACK
MPLING HOOD
STRUMENT RACK (B)
STRUMENT RACK (A)
NSTRUMENT RACK (B)
NSTRUMENT RACK (A)
WATER SAMPLING COOLER RACK
WATER SAMPLE DEPRESSURIZATION RACK
WATER pH METER RACK
WATER DISSOLVED OXYGEN METER
WATER CONDUCTIVITY METER RACK
WATER SAMPLING HOOD
WATER GRAB SAMPLING RACK
ED AO VALVE RACK

(REMARKS)
EQUIPMENT
EMERGENCY ELECTRIC ROOM (A)
EMERGENCY ELECTRIC ROOM (B)
EMERGENCY ELECTRIC ROOM (C)
RSS PANEL
RIP PANEL

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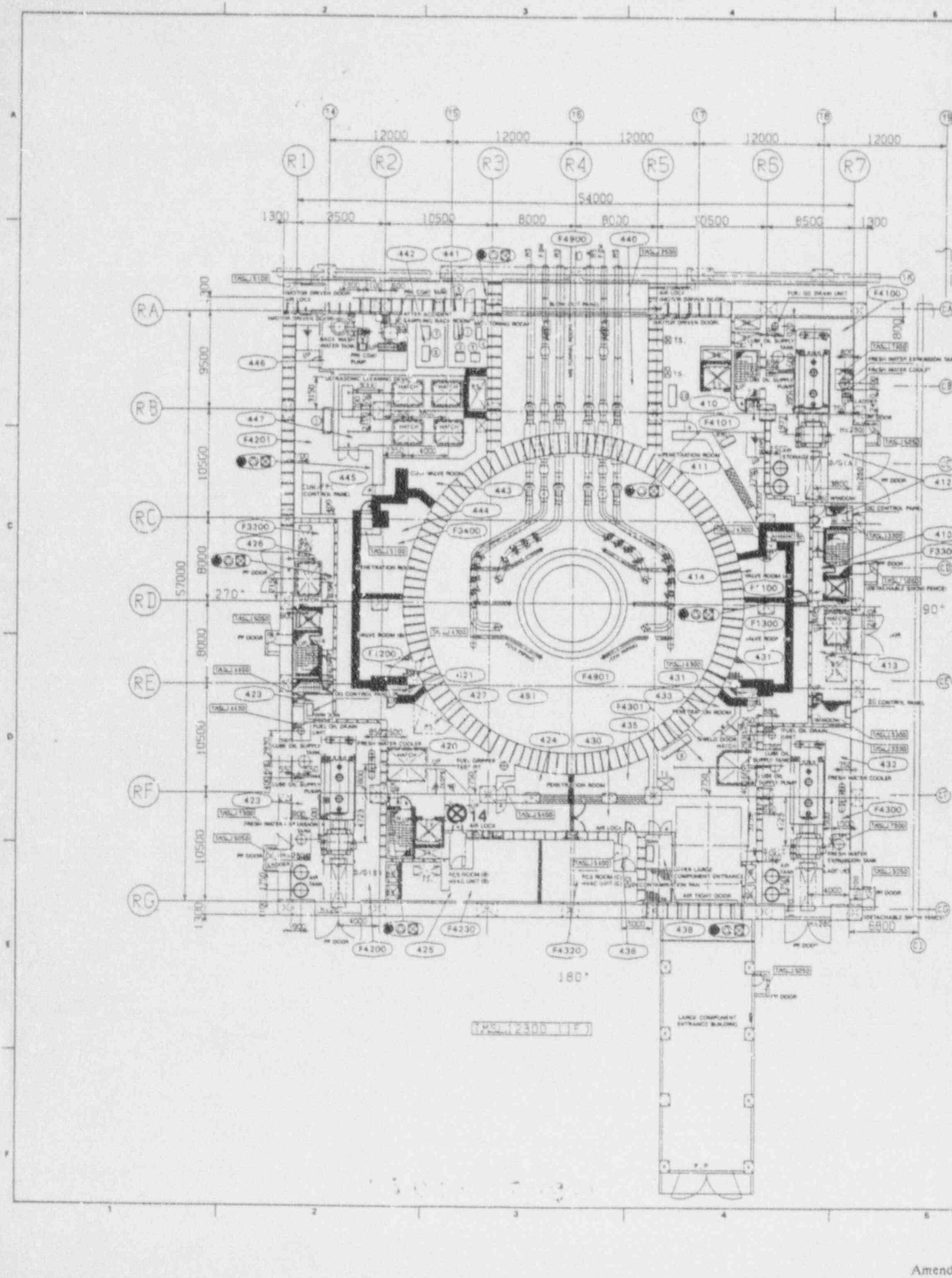
Figure 12.3-58 REACTOR BUILDING, AREA RADIATION MONITORS, 4800mm


R1
R2
R3
R4
R5
R6
R7
RA
RB
RC
RD
RE
RF
RG
12000
12000
12000
12000
12000
54000
1300
8500
10500
8000
8000
10500
8500
1300
57000
9500
10500
8000
8000
10500
10500
270°
90°
180°
F4900
F4100
F4101
F4201
F3200
F3400
F3300
F1200
F1300
F4901
F4301
F4300
F4200
F4230
F4320
PENETRATION ROOM
VALVE ROOM
LARGE COMPONENT ENTRANCE BUILDING
TMSL 12300 (1F)

SI
APERTURE
CARD

Also Available On
Aperture Card

(REMARKS)
EQUIPMENT
PRE COAT PUMP
FUEL HANDLING MACHINE TEST PIT

INSTRUMENT RACK LIST

	NO.	NAME
H22-P0[illegible]	1.	POST ACCIDENT SAMPLE TRANSFER RACK
H22-P032	2.	POST ACCIDENT SAMPLE RECOVERY RACK
H22-P033	3.	POST ACCIDENT SAMPLING LOCAL OPERATING PANEL
H22-P034	4.	STANDBY GAS TREATMENT SYSTEM OFF GAS RADIATION MONITOR SAMPLE RACK
H22-P035	5.	STANDBY GAS TREATMENT SYSTEM OFF GAS RADIATION MONITOR GAS SAMPLER RACK (A)
H22-P036	6.	STANDBY GAS TREATMENT SYSTEM OFF GAS RADIATION MONITOR GAS SAMPLER RACK (B)
H22-P037	7.	STANDBY GAS TREATMENT SYSTEM OFF GAS RADIATION MONITOR PARTICULATE IODINE SAMPLE RACK
H22-P038	8.	STANDBY GAS TREATMENT SYSTEM OFF GAS RADIATION MONITOR PARTICULATE IODINE SAMPLE RACK OPERATING PANEL
H22-P039	9.	CONTAINMENT VESSEL PRESSURE, LEAK TEST RACK
H22-P040	10.	REACTOR CONTAINMENT VESSEL DEW POINT RECORDER RACK

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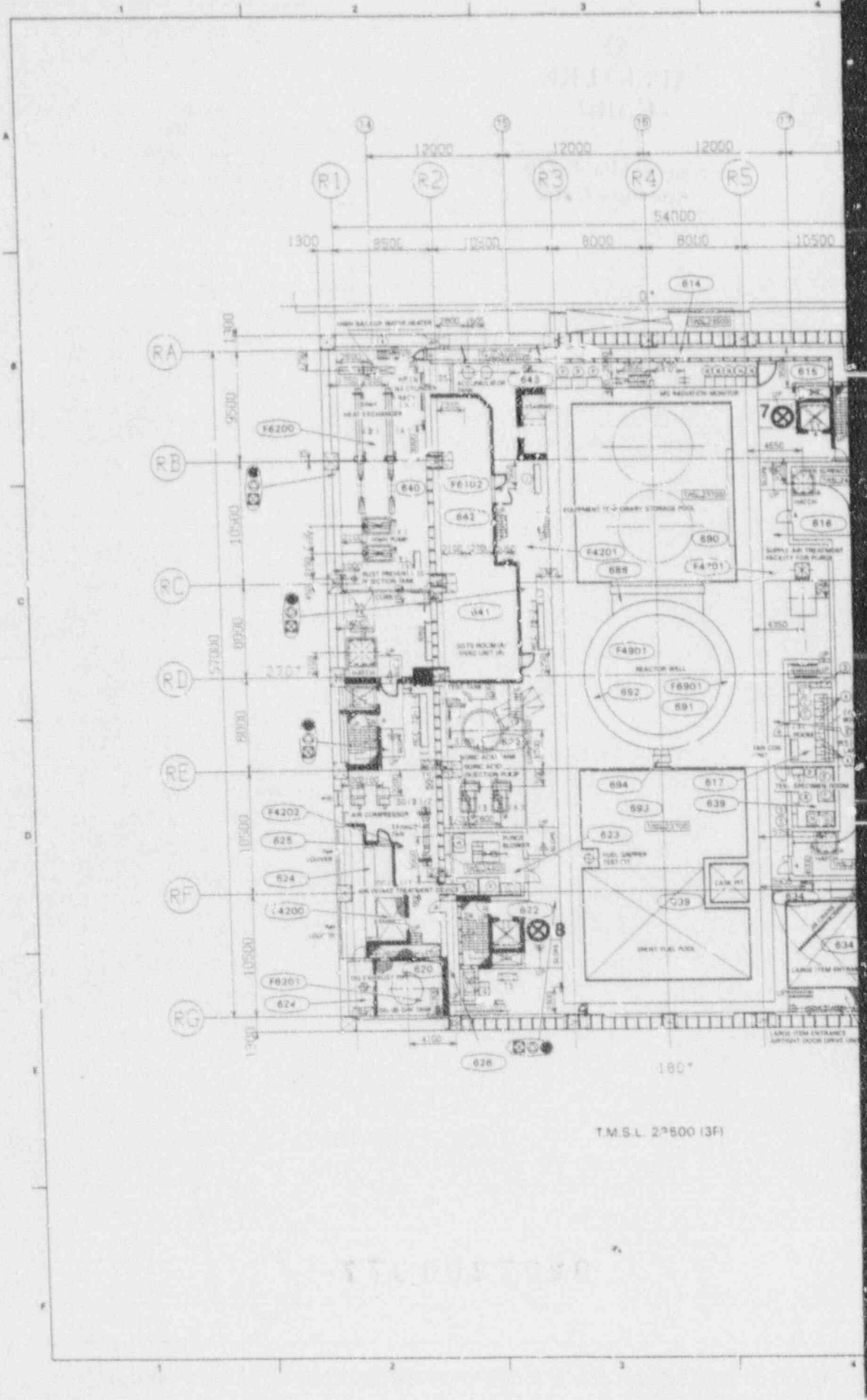
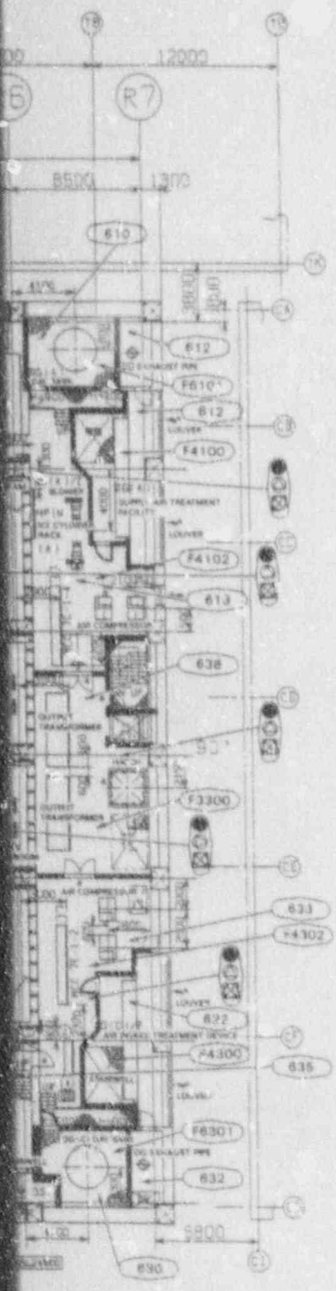
Figure 12.3-59 REACTOR BUILDING, AREA RADIATION MONITORS, 12300mm


R1
R2
R3
R4
R5
RA
RB
RC
RD
RE
RF
RG
54000
180°
T.M.S.L. 23500 (3F)



		NO.	INSTRUMENT RACK RACK NAME
C41	H22-P043	1.	STANDBY GAS TREATMENT SYSTEM INSTRUMENT RACK
D23	H22-P044A	2.	CONTAINMENT VESSEL ATMOSPHERE MONITOR CALIBRATION GAS CYLINDER RACK A
D23	H22-P044B	3.	CONTAINMENT VESSEL ATMOSPHERE MONITOR CALIBRATION GAS CYLINDER RACK B

ISI ROOM AND AUXILIARY FACILITIES			
NO.	FACILITY NAME	QTY	REMARKS EQUIPMENT
A	CONTROL DATA COLLECTION EQUIPMENT	8	D/S Pit
B	STABILIZED POWER SUPPLY SYSTEM	1	CASK PIT
C	DESF	3	SPENT FUEL STORAGE POOL
D	STORAGE	2	ISI INSPECTION ROOM
E	CALIBRATION TEST PIECE FOR M/S NOZZLE CORNER	1	SGTS FILTER TRAIN
F	CALIBRATION TEST PIECE FOR NOZZLE CORNER	1	SGTS FAN
G	CALIBRATION TEST PIECE FOR NOZZLE CORNER	1	SLC PUMP
H	CALIBRATION TEST PIECE FOR NOZZLE CORNER	1	SLC TANK
J	RPV SHELL ADJUST TEST FACILITY	1	SLC TEST TANK
K	RPV BOTTOM PLATE ADJUST TEST FACILITY	1	DG (A) DAY TANK
L	RPV NOZZLE ADJUST TEST FACILITY	1	DG (B) DAY TANK
M	PIPING ADJUST TEST FACILITY	1	DG (C) DAY TANK
N	ISI DEVICE STORAGE	3	HWH PUMP
P	ISI DEVICE STORAGE	1	HWH HX
Q	RPV CALIBRATION TEST PIECE STORAGE	2	
R	RPV CONSUMABLE MATERIALS AND CALIBRATION TEST PIECE STORAGE		
S	PIPING CALIBRATION TEST PIECE STORAGE		

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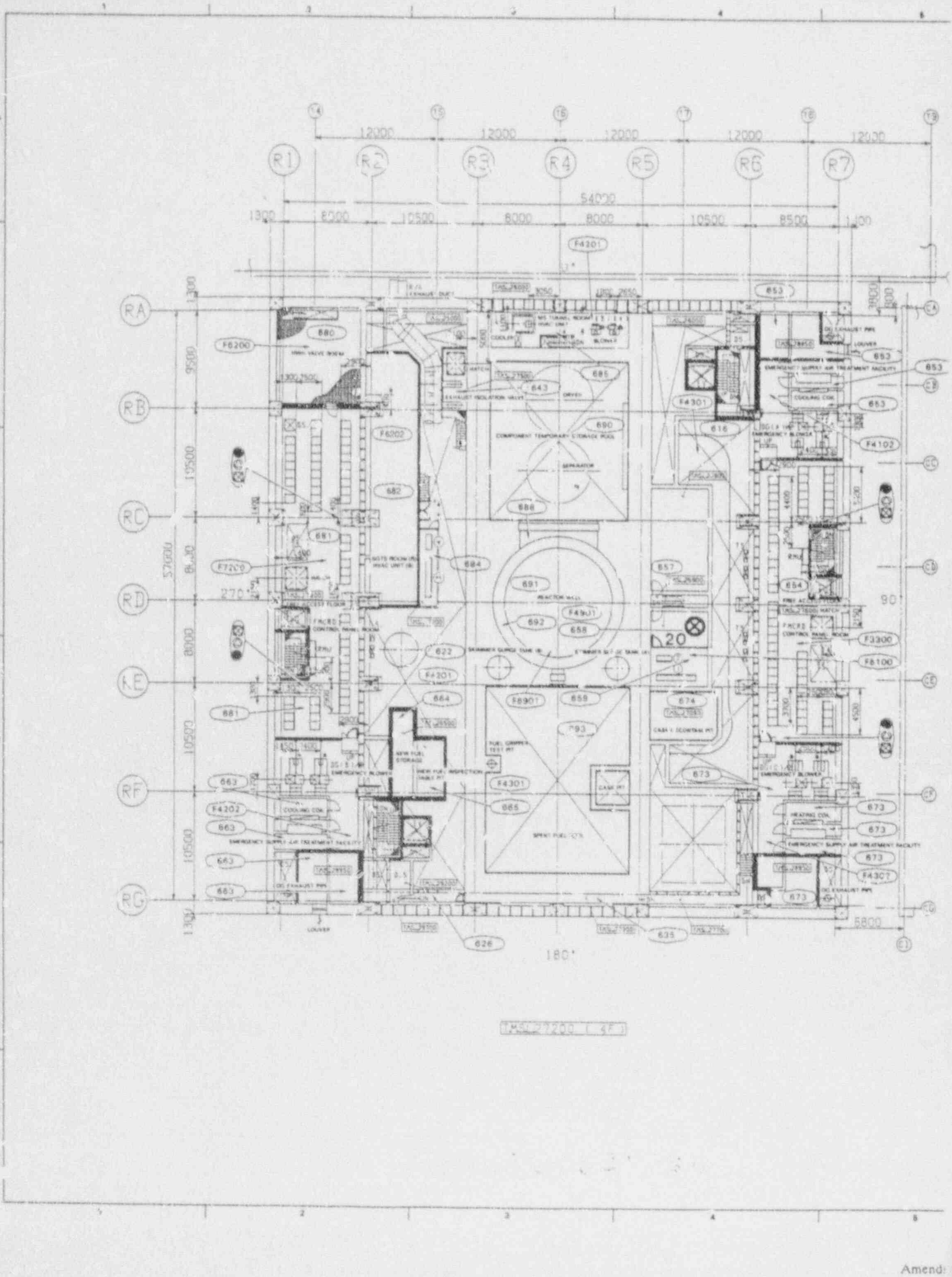
Figure 12.3-60 REACTOR BUILDING, AREA RADIATION MONITORS, 23500mm


R1
R2
R3
R4
R5
R6
R7
RA
RB
RC
RD
RE
RF
RG
12000
12000
12000
12000
12000
12000
54000
57000
1300
8000
10500
8000
8000
10500
8500
1100
9500
10500
8000
10500
10500
270°
90°
180°
F4201
F6200
F6202
F7200
F4301
F4102
F3300
F6100
F4202
F4307
F8901
880
882
881
681
683
684
685
686
690
691
692
658
659
616
653
654
657
673
674
622
626
635
643
664
665
MAIN VALVE ROOM
COMPONENT TEMPORARY STORAGE POOL
REACTOR WELL
SEPARATOR
DRYER
NEW FUEL STORAGE
SPENT FUEL POOL
FUEL GRAPPLE TEST PIT
CASK PIT
COOLING COIL
HEATING COIL
EMERGENCY BLOWER
EMERGENCY SUPPLY AIR TREATMENT FACILITY
DG EXHAUST PIPE
LOUVER
EXHAUST ISOLATION VALVE
TMSL 27200 (4F)

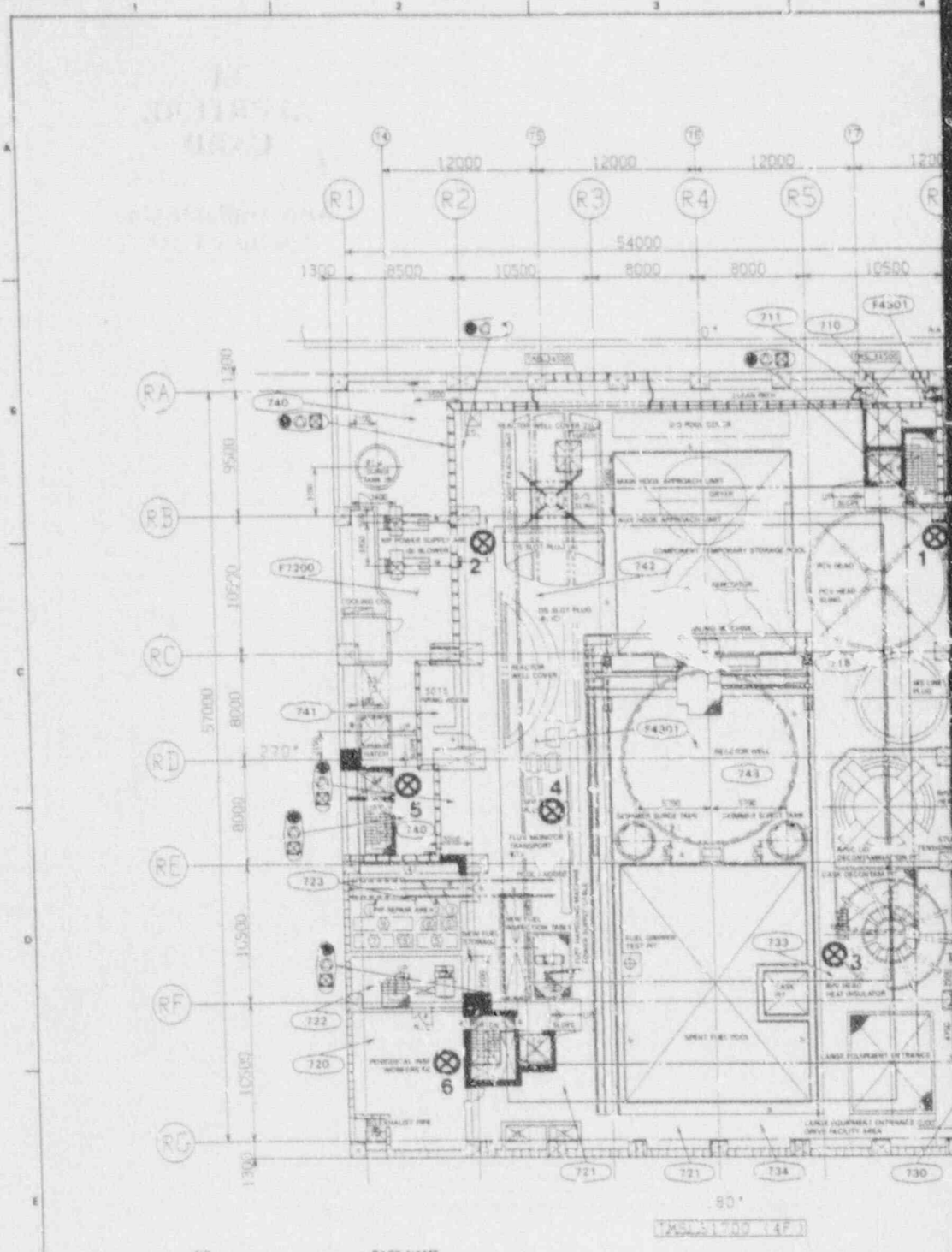
RACK LIST

	NO.	RACK NAME
D23 D22-C053A	1.	CONTAINMENT VESSEL ATMOSPHERE MONITOR RACK (A)
D23 D22-C054A	2.	CONTAINMENT VESSEL ATMOSPHERE MONITOR CALIBRATION RACK (A)
D23 D22-C053B	3.	CONTAINMEN. VESSEL ATMOSPHERE MONITOR RACK (B)
D23 D22-C054B	4.	CONTAINMENT VESSEL ATMOSPHERE MONITOR CALIBRATION RACK (B)

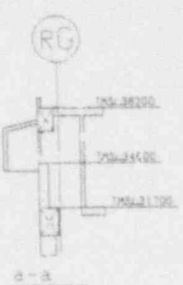
(REMARKS)
EQUIPMENT

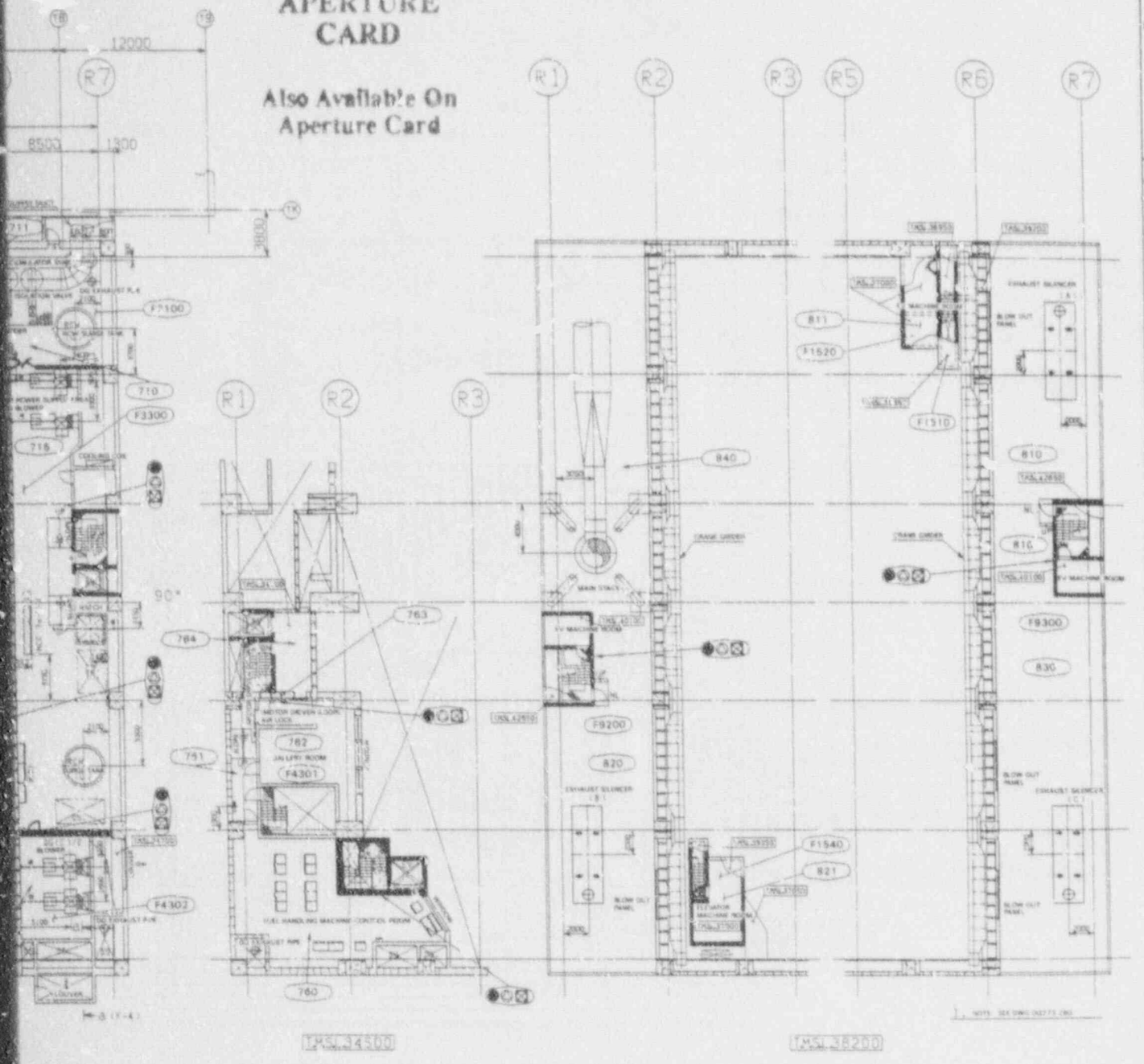
D/S PIT
CASK PIT
SPENT FUEL STORAGE POOL
CASK WASHDOWN PIT
FMCRD PANEL ROOM
NEW FUEL STORAGE PIT
NEW FUEL INSPECTION PIT

Figure 12.3-61 REACTOR BUILDING, AREA RADIATION MONITORS, 27200mm



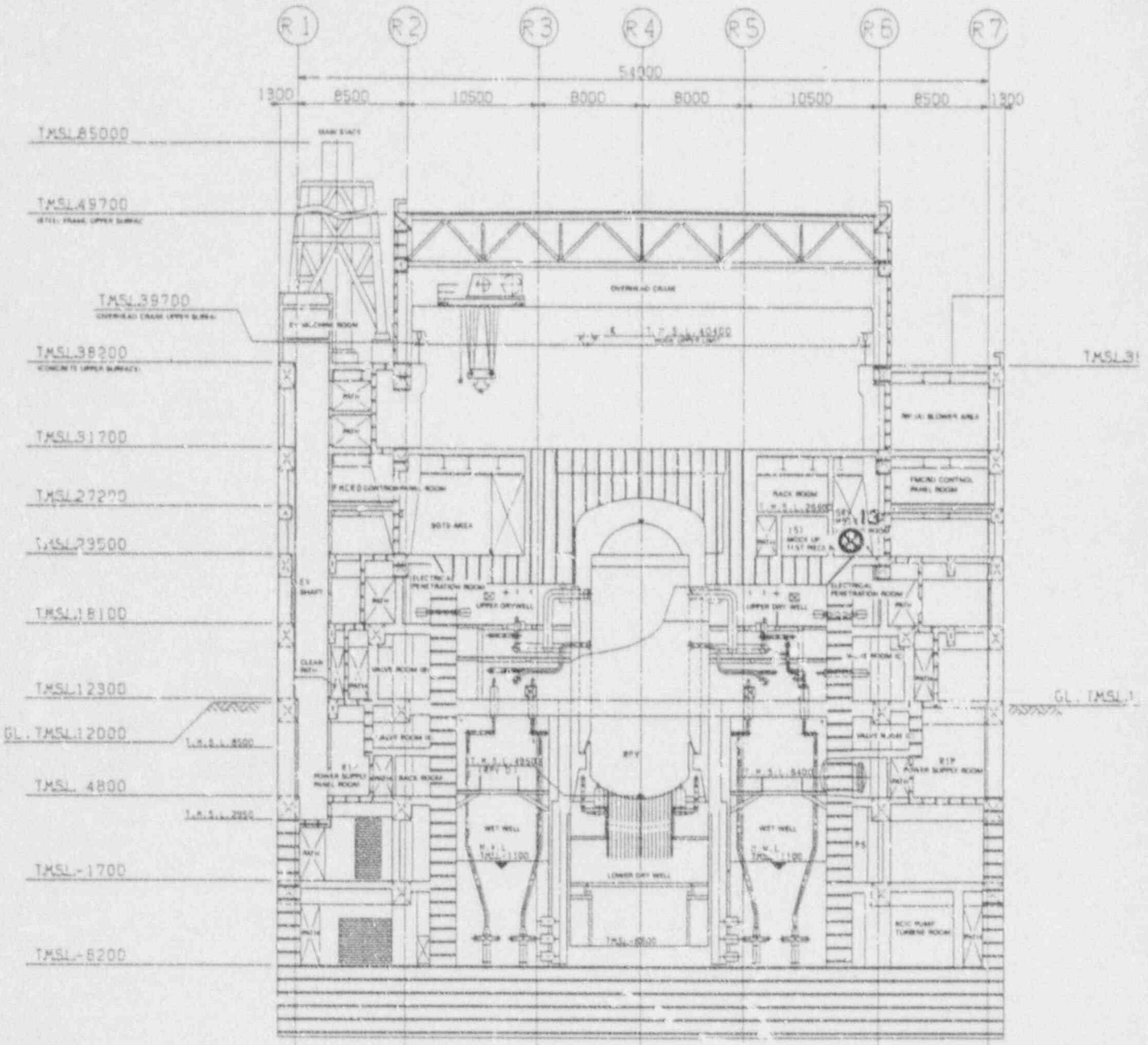
NO	RACK NAME
1	INSPECTION POOL
2	TEMPORARY INSTALLED RAIL
3	MONO-RAIL
4	TEMPORARY INST RAIL STORAGE AREA
5	IMPELLER SHAFT GRIPPER STORAGE AREA
6	DIFFUSER WEAR RING GRIPPER STORAGE AREA
7	DISPOSER STRETCH TUBE GRIPPER STORAGE AREA
8	UPPER PLUG STORAGE AREA
9	RIP UPPER PORTION HANDLING CONNECTOR ROD STORAGE AREA





(REMARKS)
EQUIPMENT
D/S PIT
SPENT FUEL STORAGE POOL

Figure 12.3-62 REACTOR BUILDING, AREA RADIATION MONITORS, 31700mm


R1
R2
R3
R4
R5
R6
R7
54000
1300
8500
10500
8000
8000
10500
8500
1300
T.M.S.L.85000
T.M.S.L.49700
T.M.S.L.39700
T.M.S.L.38200
T.M.S.L.31700
T.M.S.L.27200
T.M.S.L.23500
T.M.S.L.18100
T.M.S.L.12300
G.L. T.M.S.L.12000
T.M.S.L. 4800
T.M.S.L.-1700
T.M.S.L.-6200
T.M.S.L.31
G.L. T.M.S.L.1
OVERHEAD CRANE
RACK ROOM
UPPER DRYWELL
LOWER DRY WELL
WET WELL
RPV
VALVE ROOM
ELECTRICAL PENETRATION ROOM

B-B SECTION

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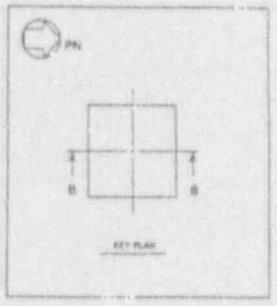
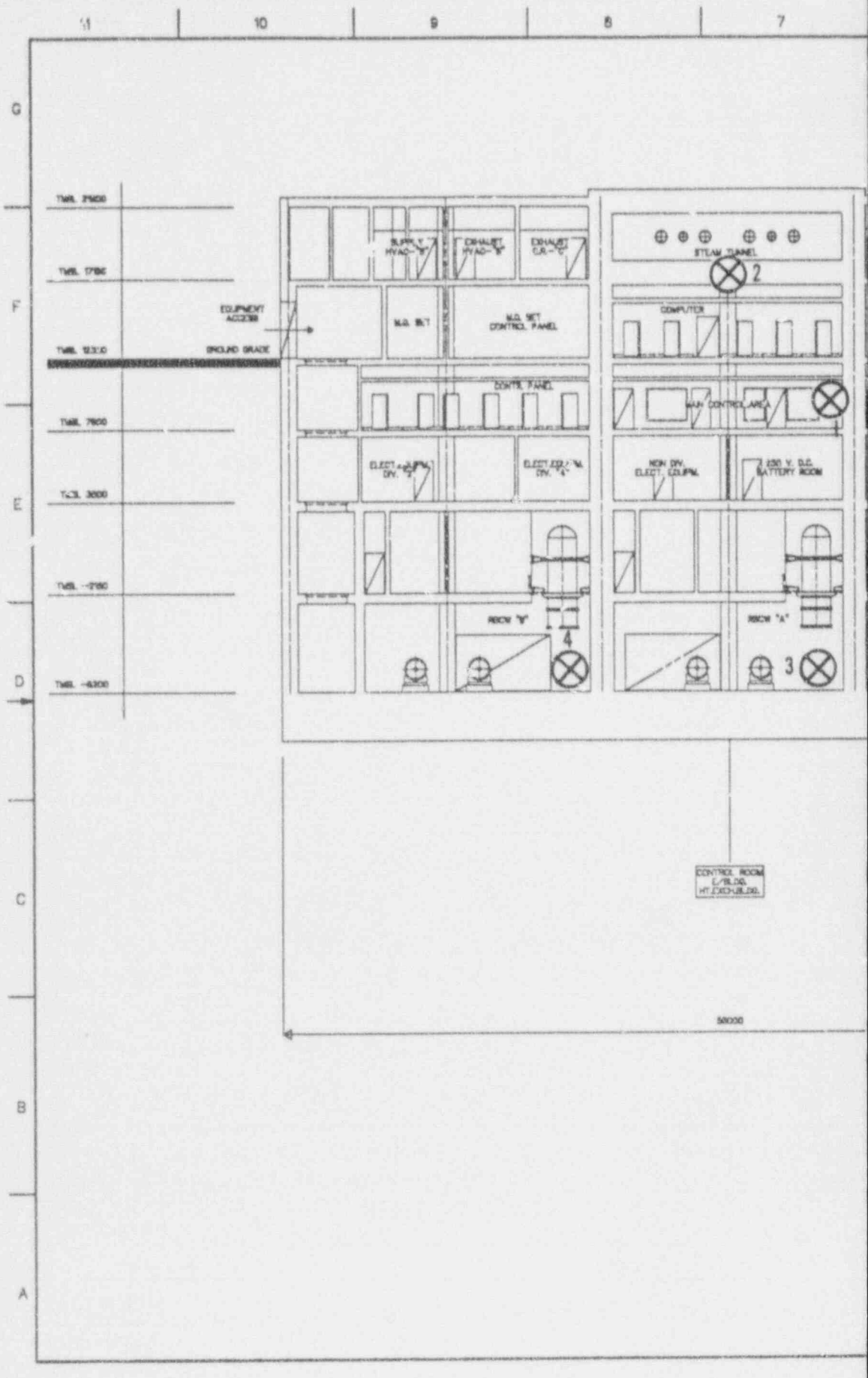


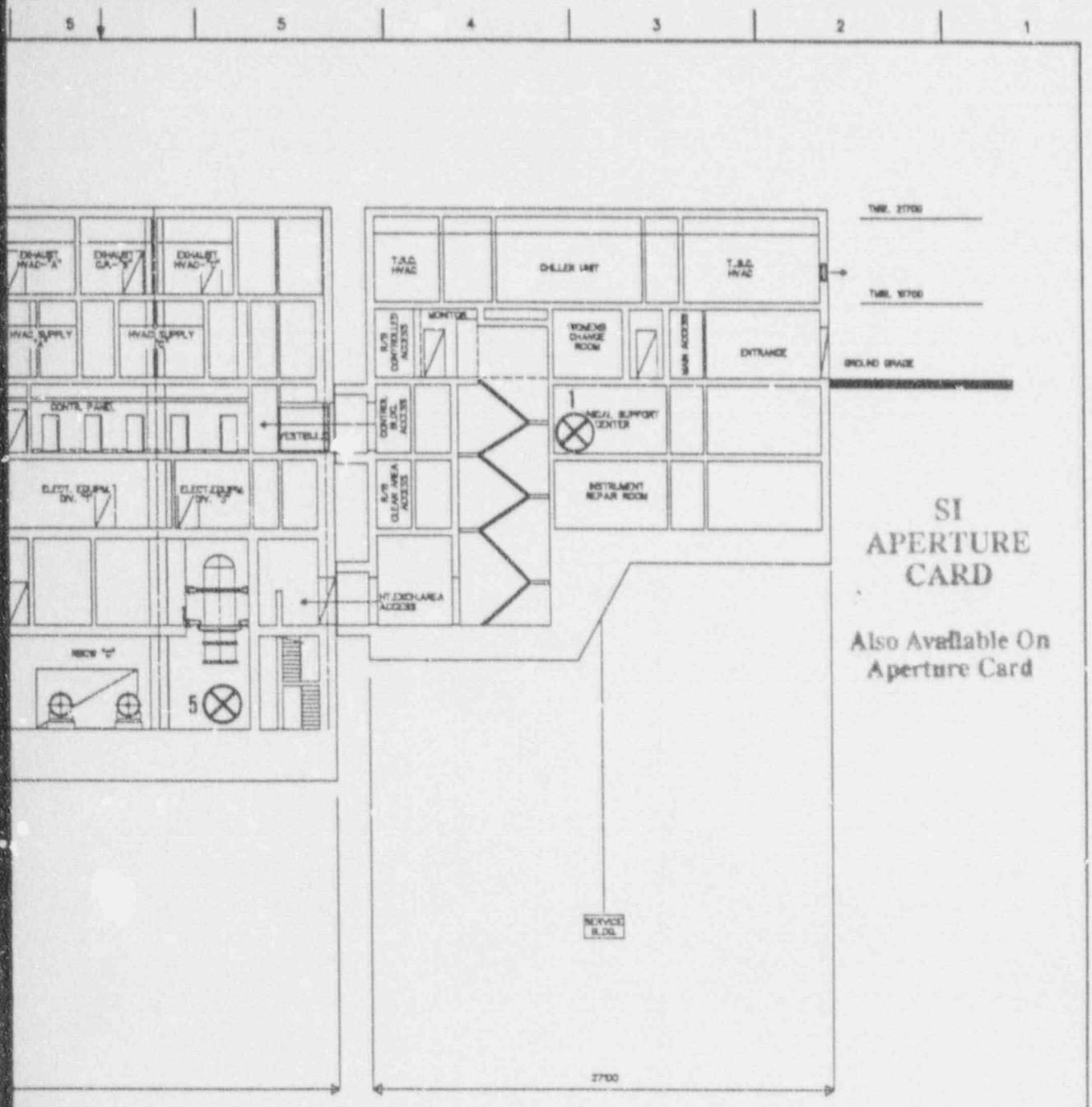
L38200

L12000

9207200077-83

Figure 12.3-3 REACTOR BUILDING, AREA RADIATION MONITORS, SECTION 270°/90°


11
10
9
8
7
G
F
E
D
C
B
A
EQUIPMENT ACCESS
ENGLAND GRADE
EXHAUST H.V.A.C. "B"
EXHAUST E.R. "C"
M.G. SET
M.G. SET CONTROL PANEL
COMPUTER
CONTR. PANEL
MAIN CONTROL AREA
NON DIV. ELECT. EQUIPM.
250 V. D.C. BATTERY ROOM
STEAM TUNNEL
2
3
4
RBCW "B"
RBCW "A"
CONTROL ROOM
50000



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APERTURE
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9207200077-84

92-195-09

Figure 12.3–64 CONTROL AND SERVICE BUILDINGS, AREA RADIATION MONITORS

Figure 12.3–69 (DELETED)