

Appendix 6B. Figures

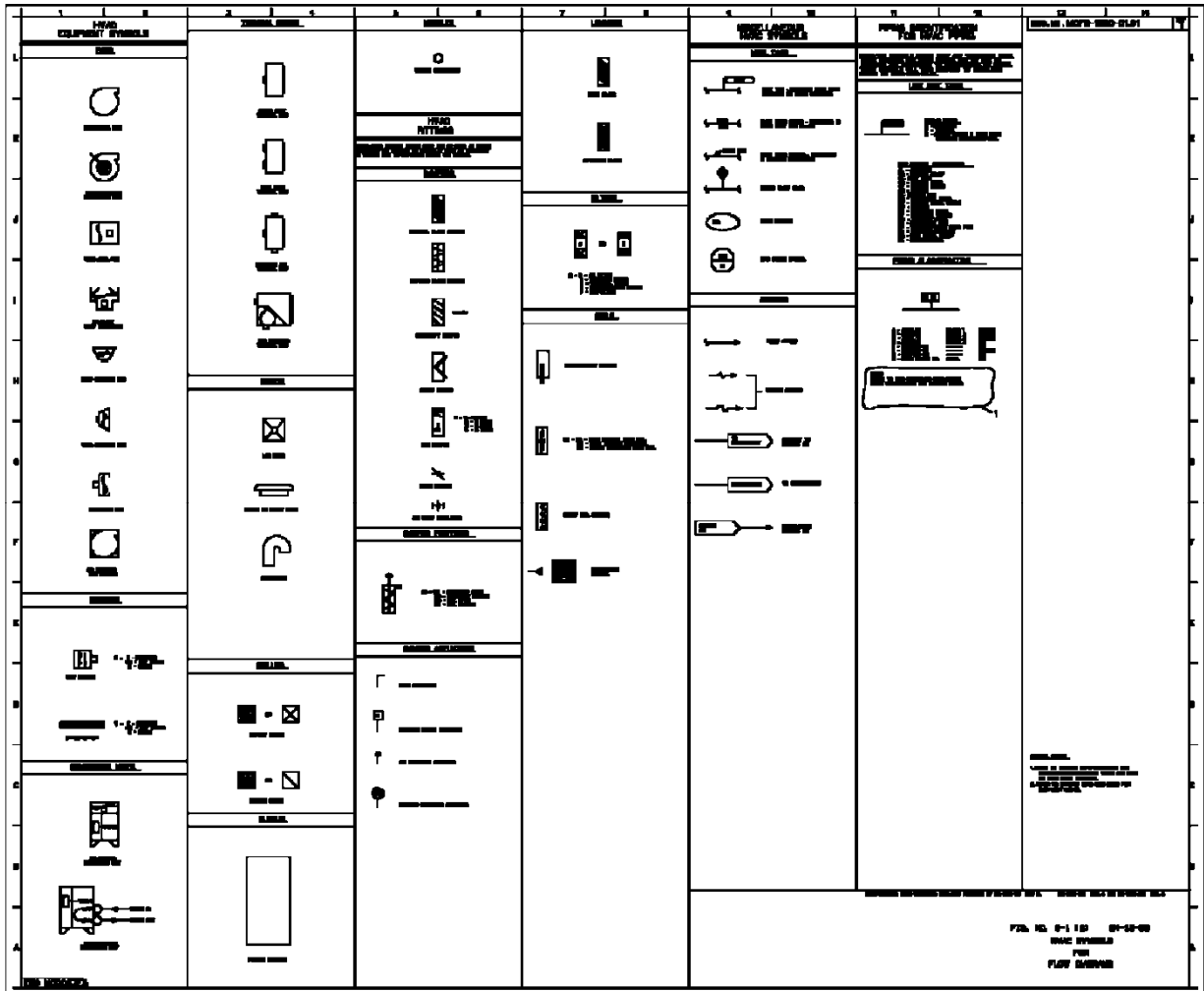


Figure 6-2. Symbols and System Abbreviations for Flow Diagrams

INSTRUMENT SYMBOLY		INSTRUMENT FUNCTION CODES		PIPE SPECIFICATION AND INSULATION SYMBOLY		MISC. NOTES AND REFERENCES		SYSTEM NAMES AND ABBREVIATIONS		SYSTEM NAMES AND ABBREVIATIONS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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Figure 6-4. Sensitivity of Pressure to Air Compression Ratio

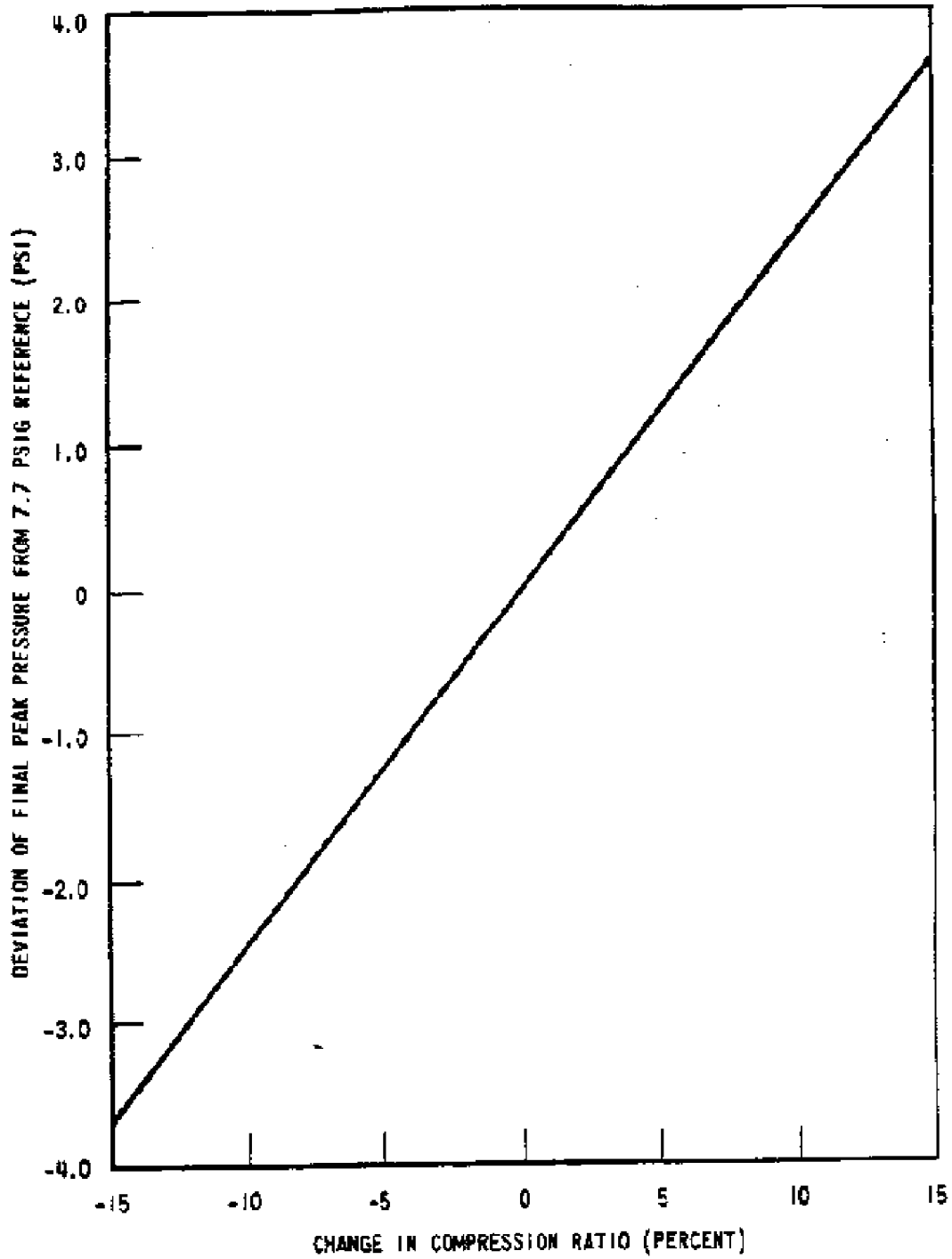


Figure 6-5. Steam Concentration in a Vertical Distribution Channel

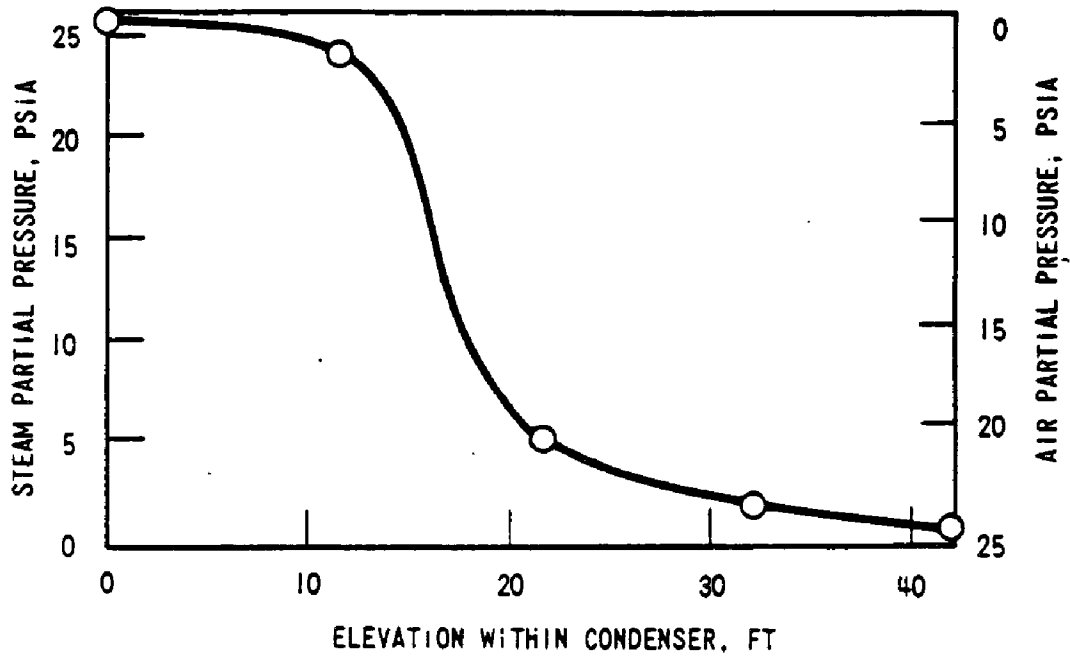


Figure 6-6. Peak Compression Pressure Versus Compression Ratio

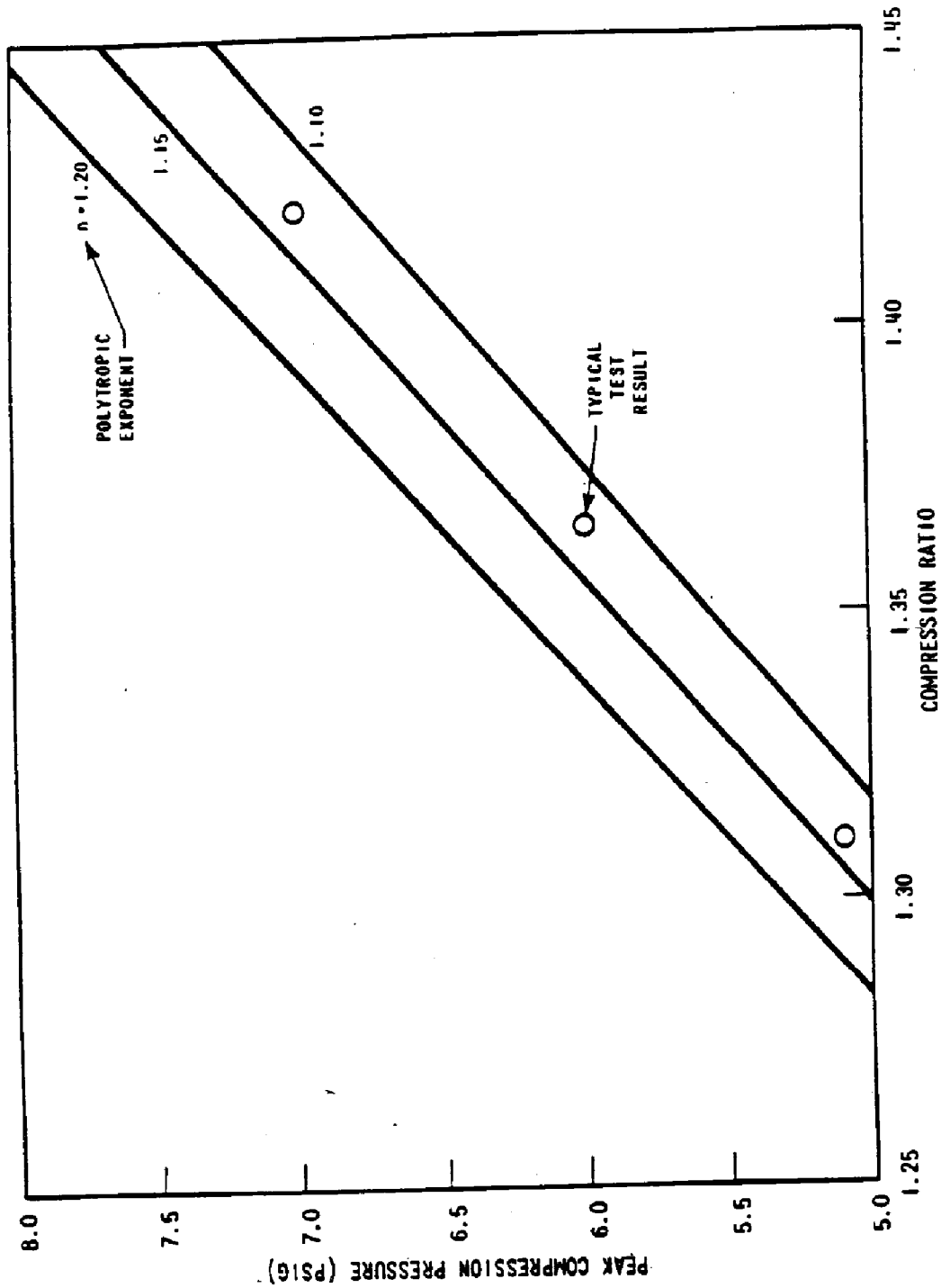


Figure 6-7. Upper Compartment Compression Pressure Versus Energy Release for Tests at 100% and 200% of Initial DBA Blowdown Rate

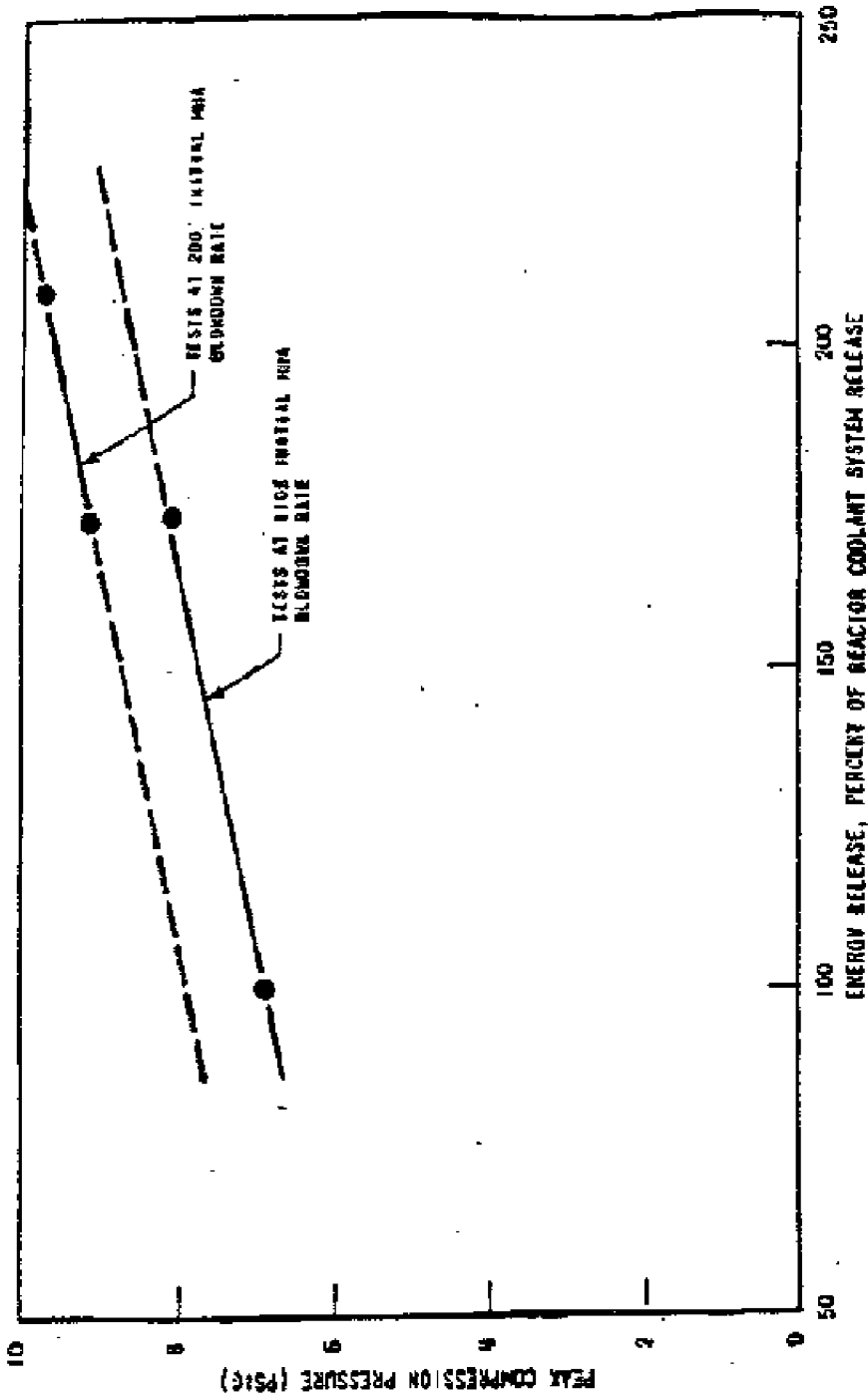


Figure 6-8. Peak Containment Pressure Transient - Pressure

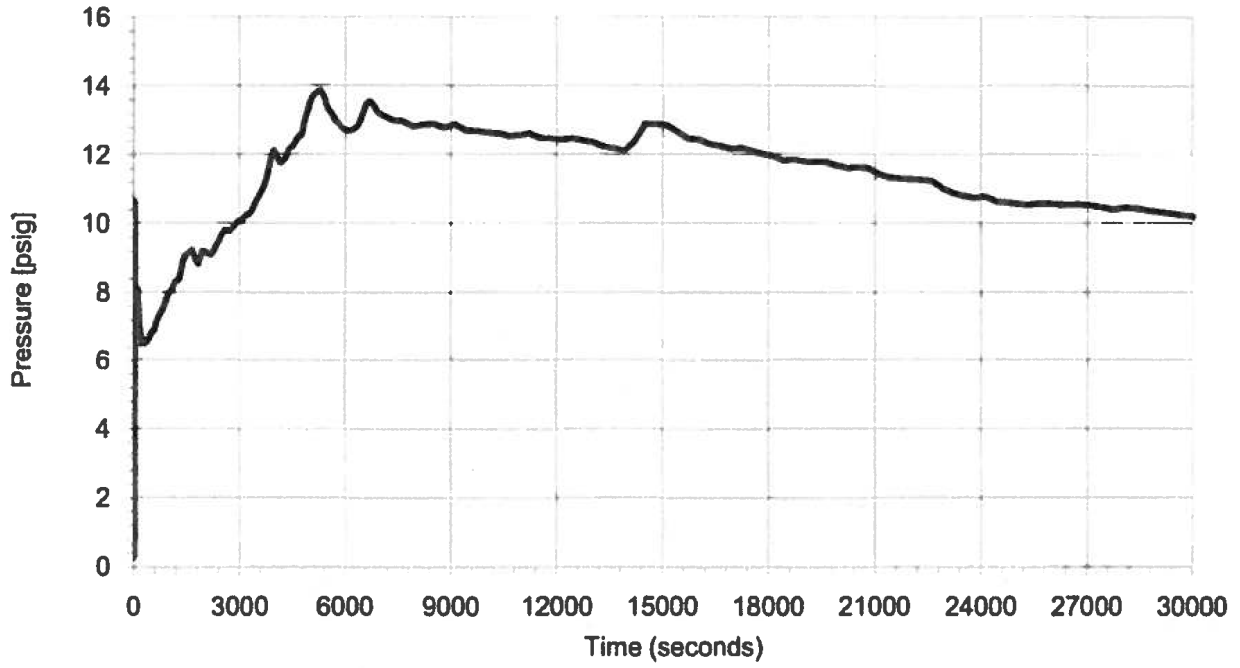


Figure 6-9. Peak Containment Pressure Transient - Upper Containment Temperature

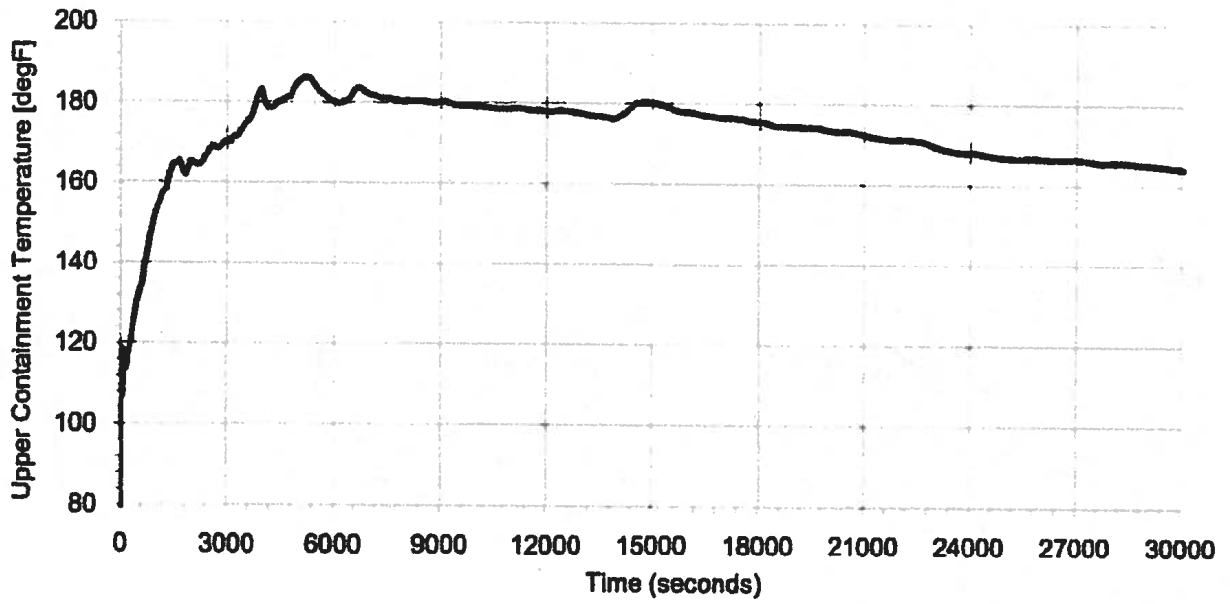


Figure 6-10. Peak Containment Pressure Transient - Lower Containment Temperature

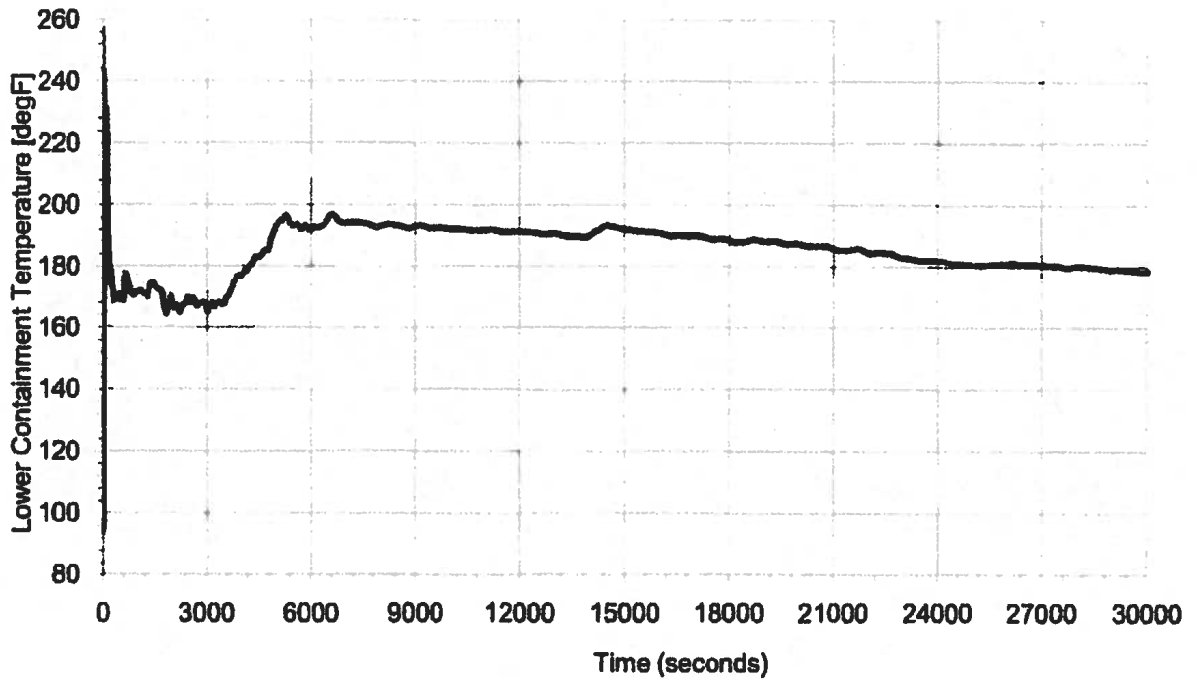


Figure 6-11. Peak Containment Pressure Transient - Sump Temperature

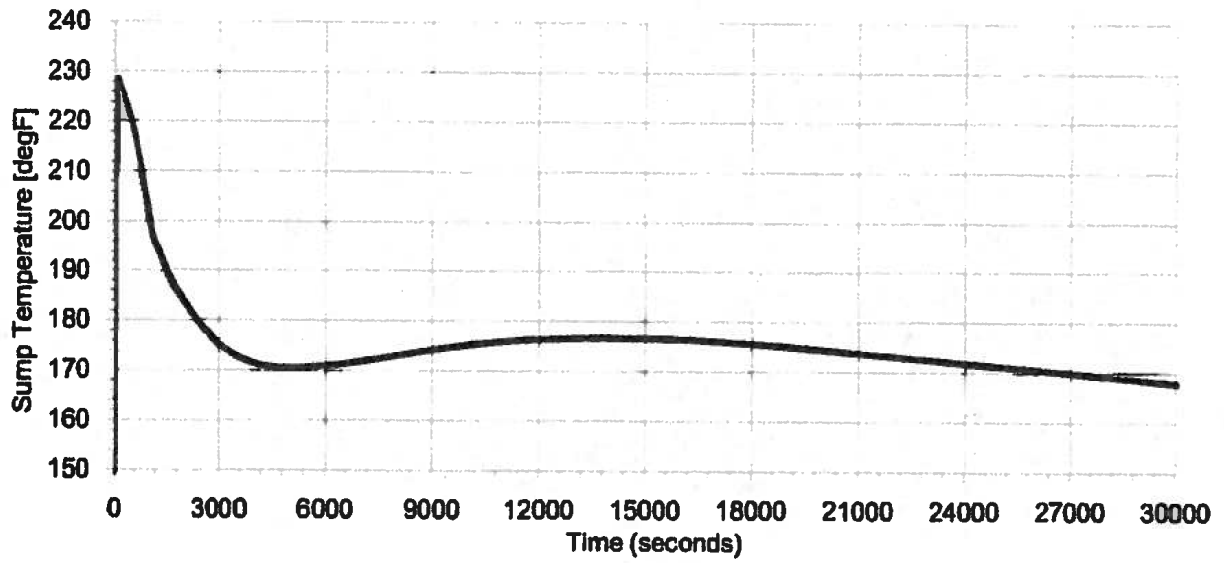


Figure 6-12. Peak Containment Pressure Transient - Ice Melted

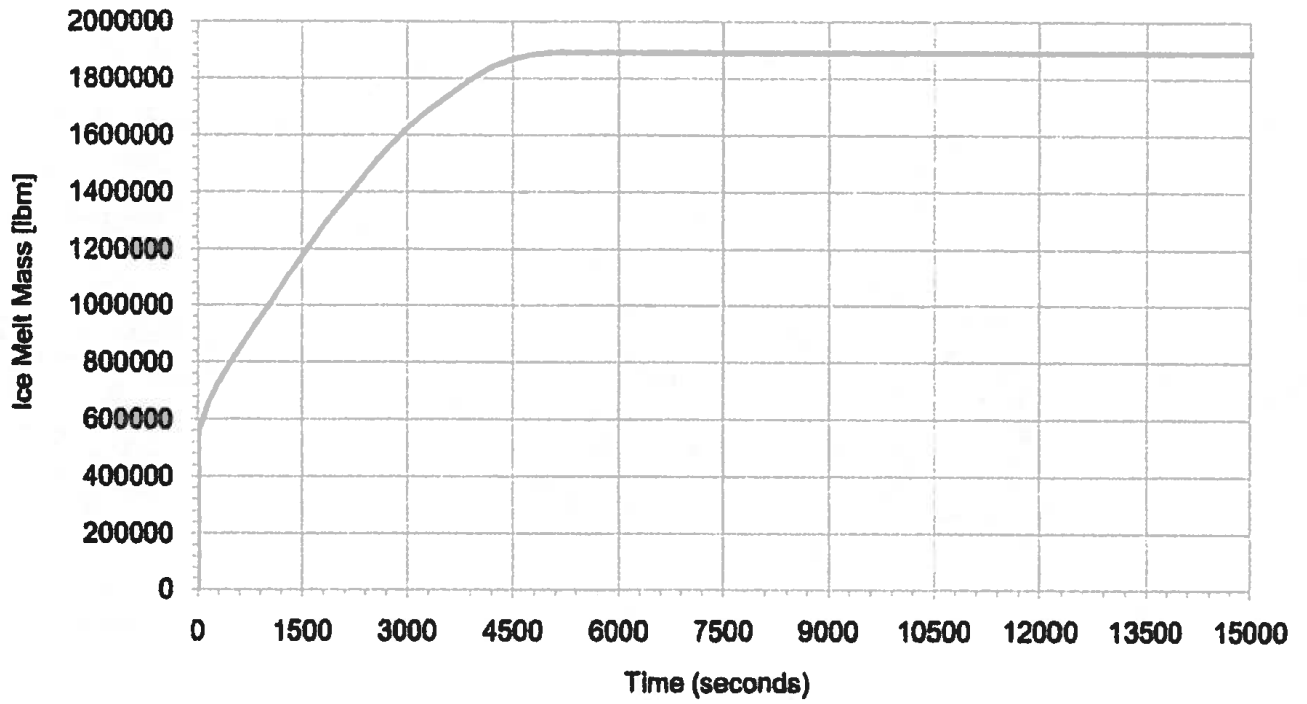


Figure 6-13. Containment Spray Return Drains From Air Return Fan Pits

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Figure 6-14. Containment Spray Return Drains From Refueling Canal

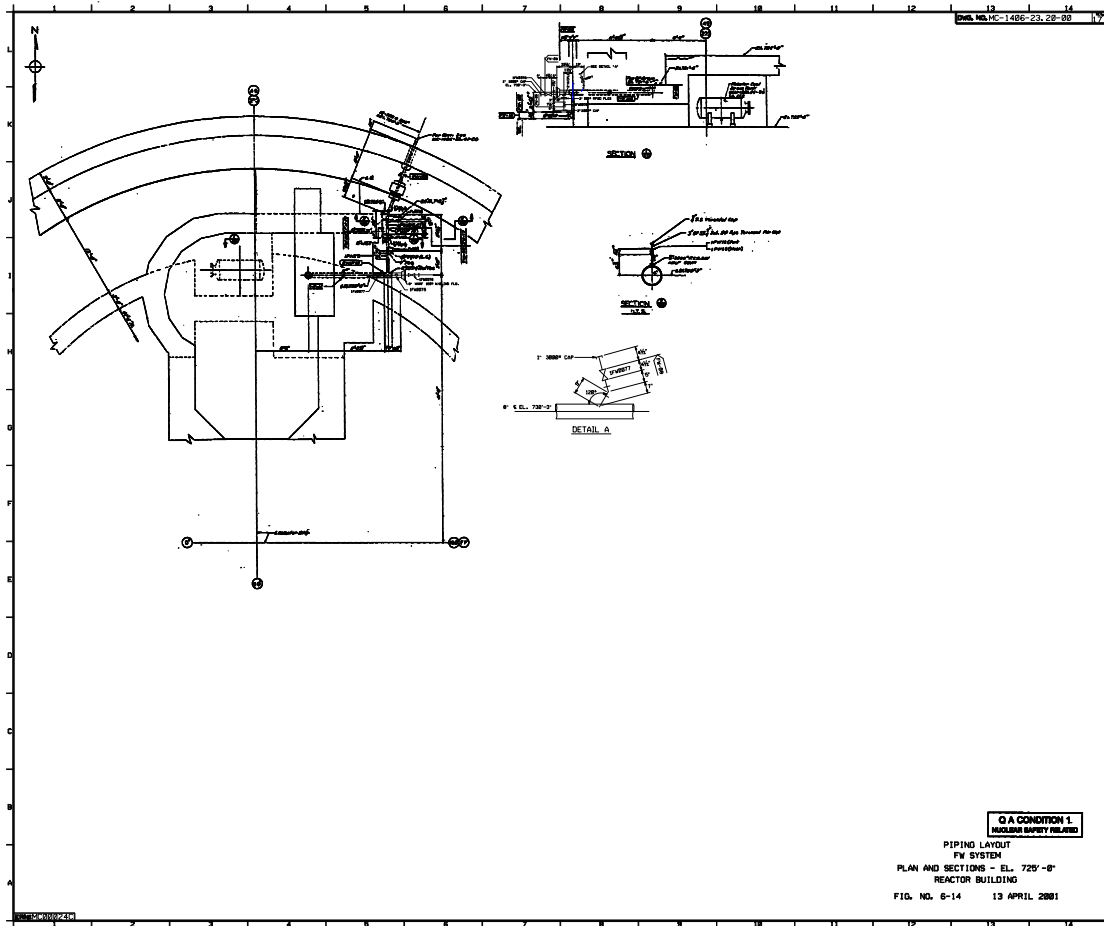
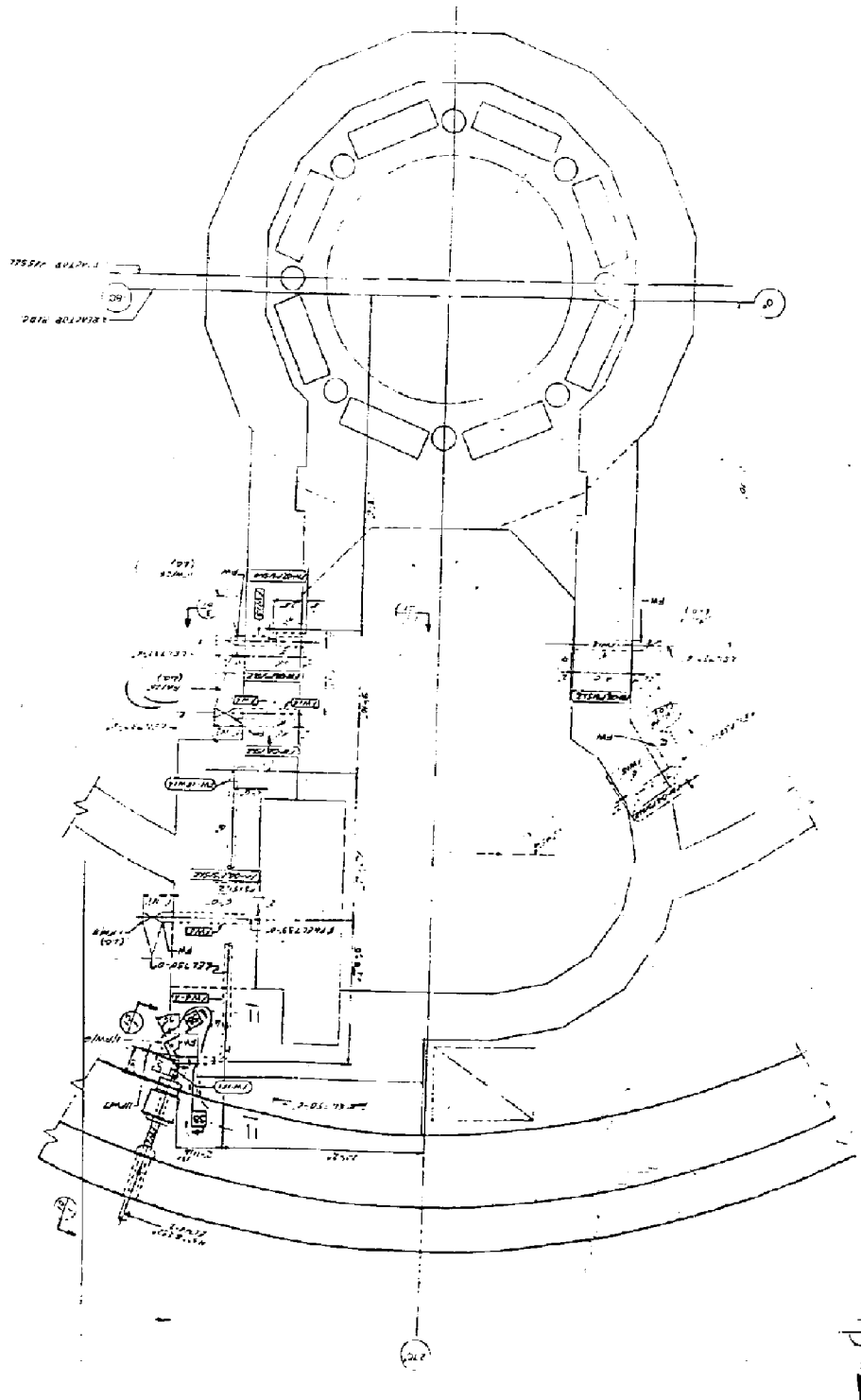
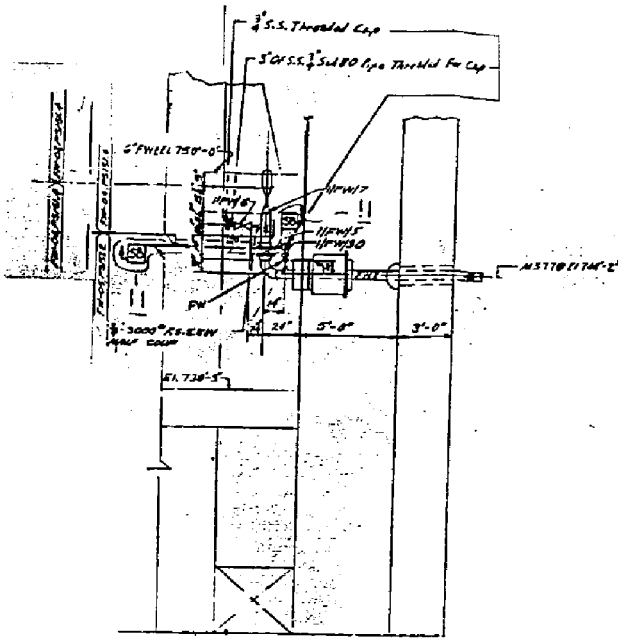
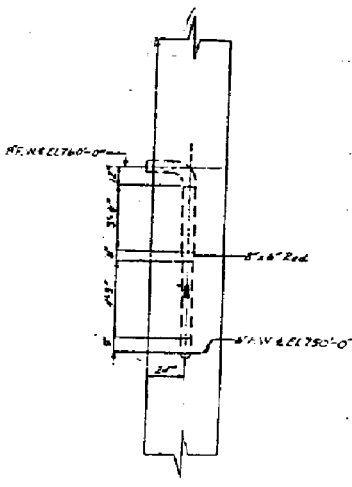


Figure 6-15. Containment Spray Return Drains From Refueling Canal





SECTION 1/61



SECTION 3/51

Figure 6-16. Ice Melted Versus Energy Release for Tests at Different Blowdown Rates

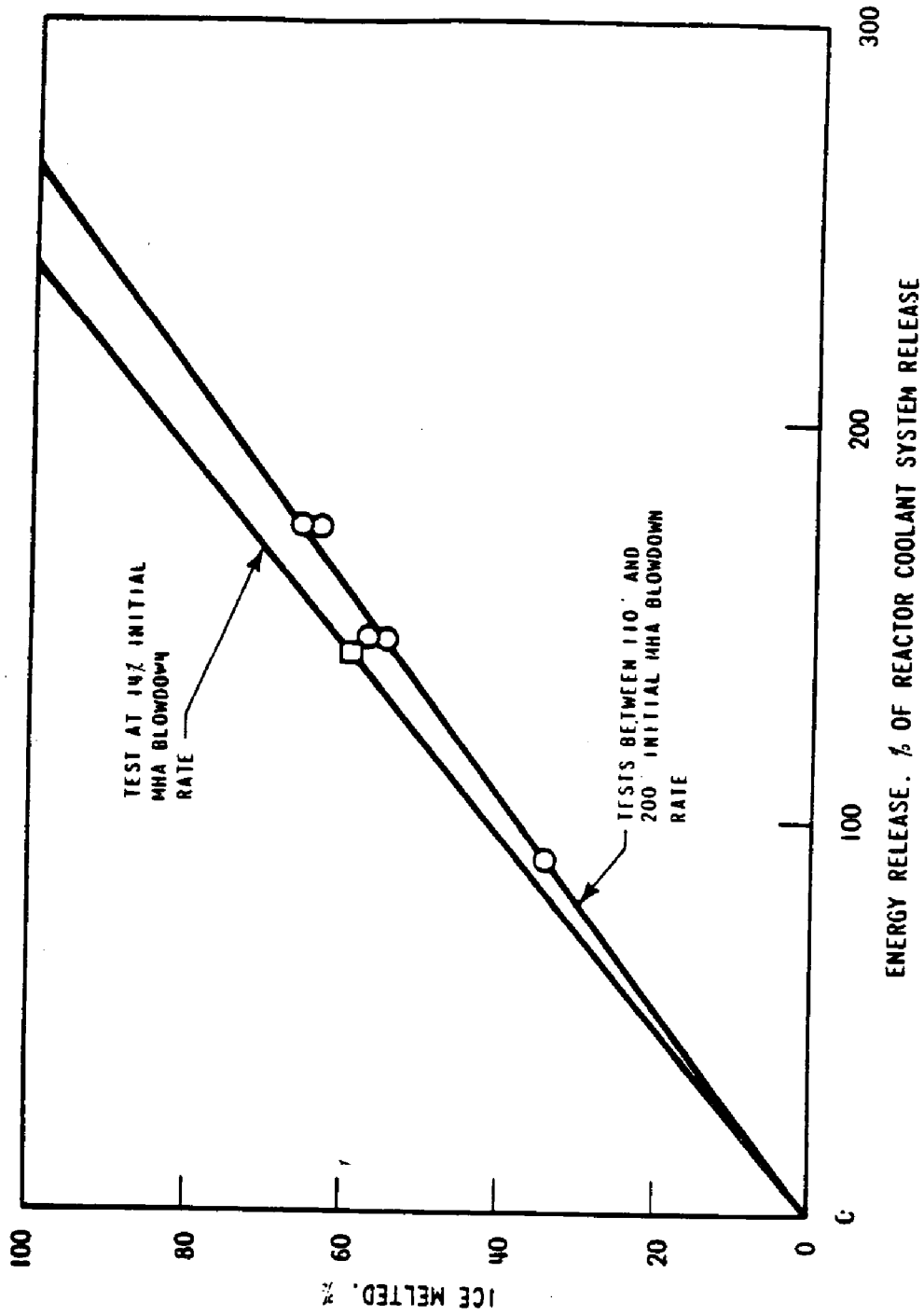


Figure 6-17. Upper Compartment Peak Compression Pressure Versus Blowdown Rate for Tests With .75% Energy Release

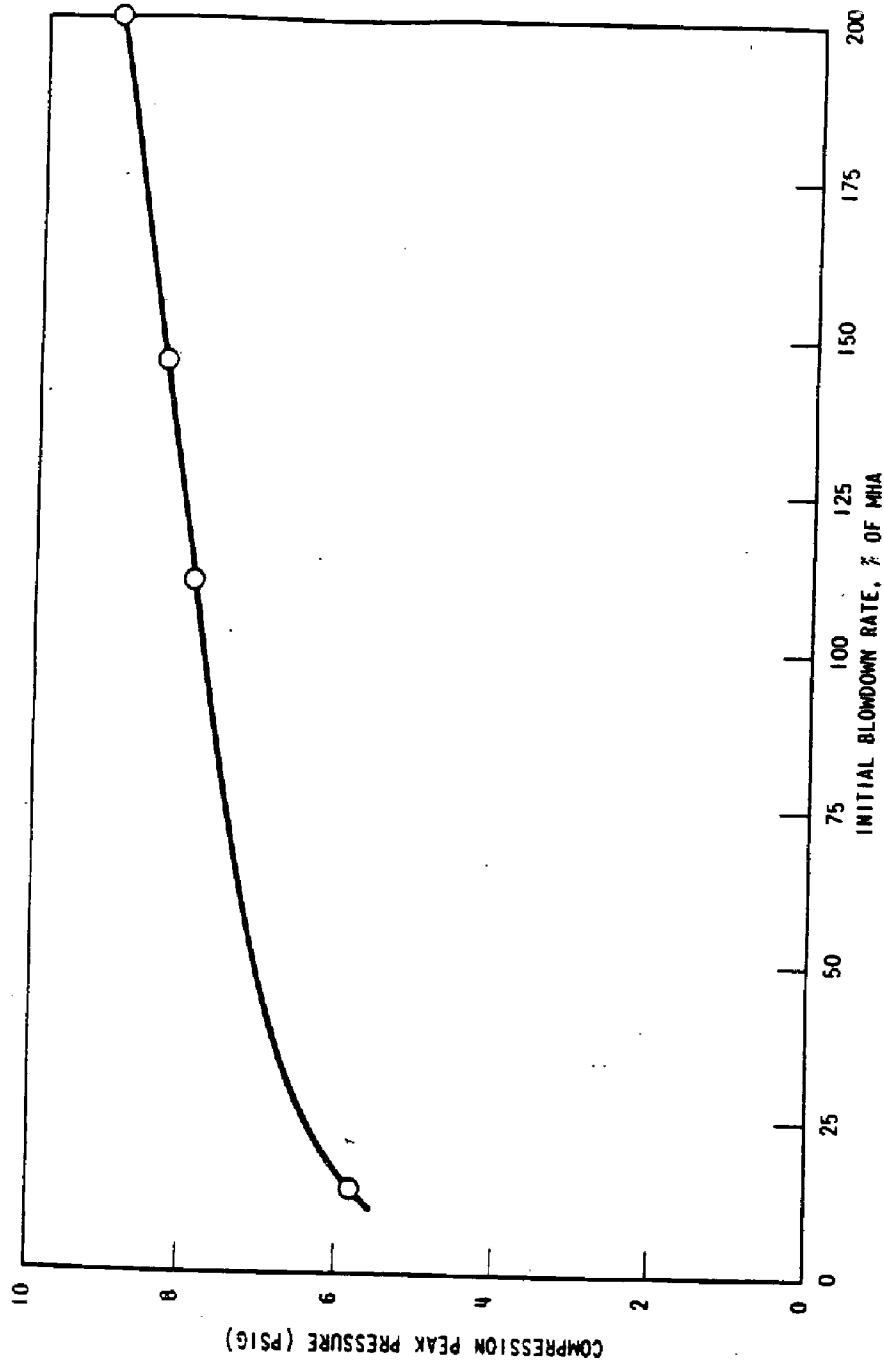


Figure 6-18. Peak Reverse Differential Pressure Transient

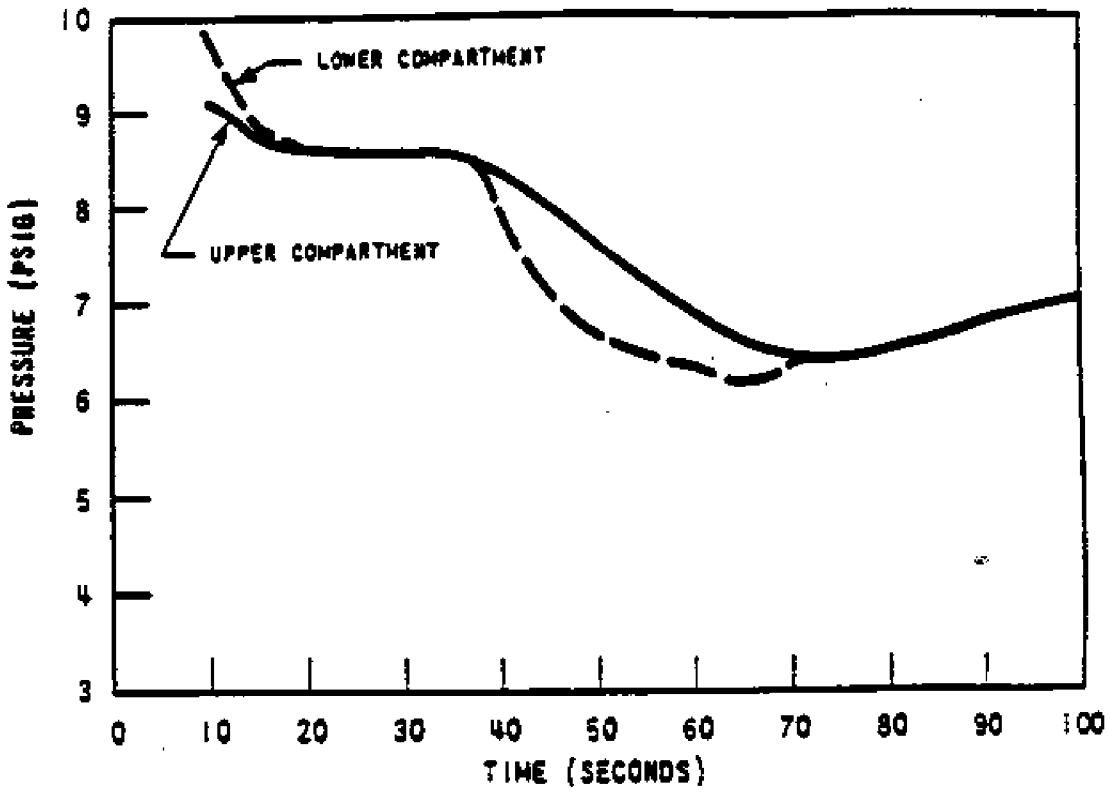


Figure 6-19. Peak Reverse Differential Pressure Transient

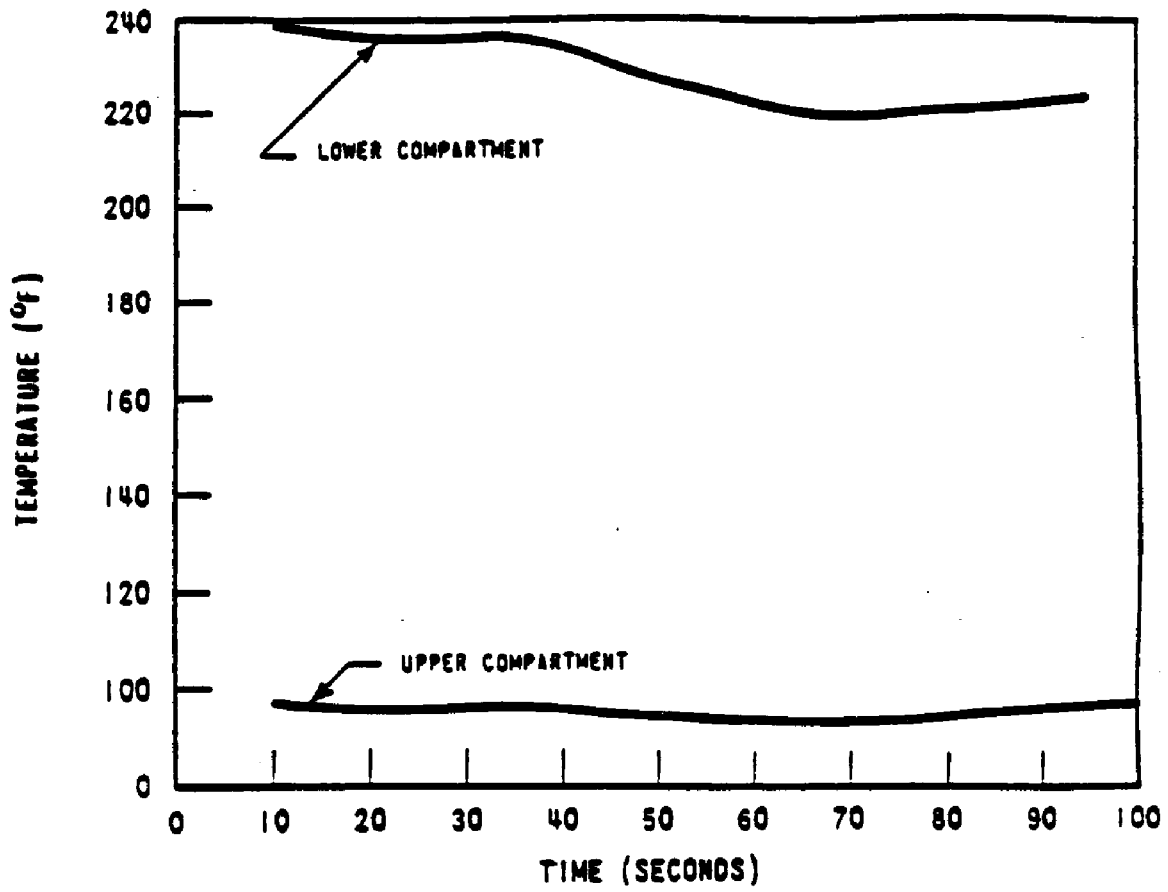


Figure 6-20. Peak Reverse Differential Pressure Transient Assuming Enhanced Lower Compartment Heat Transfer

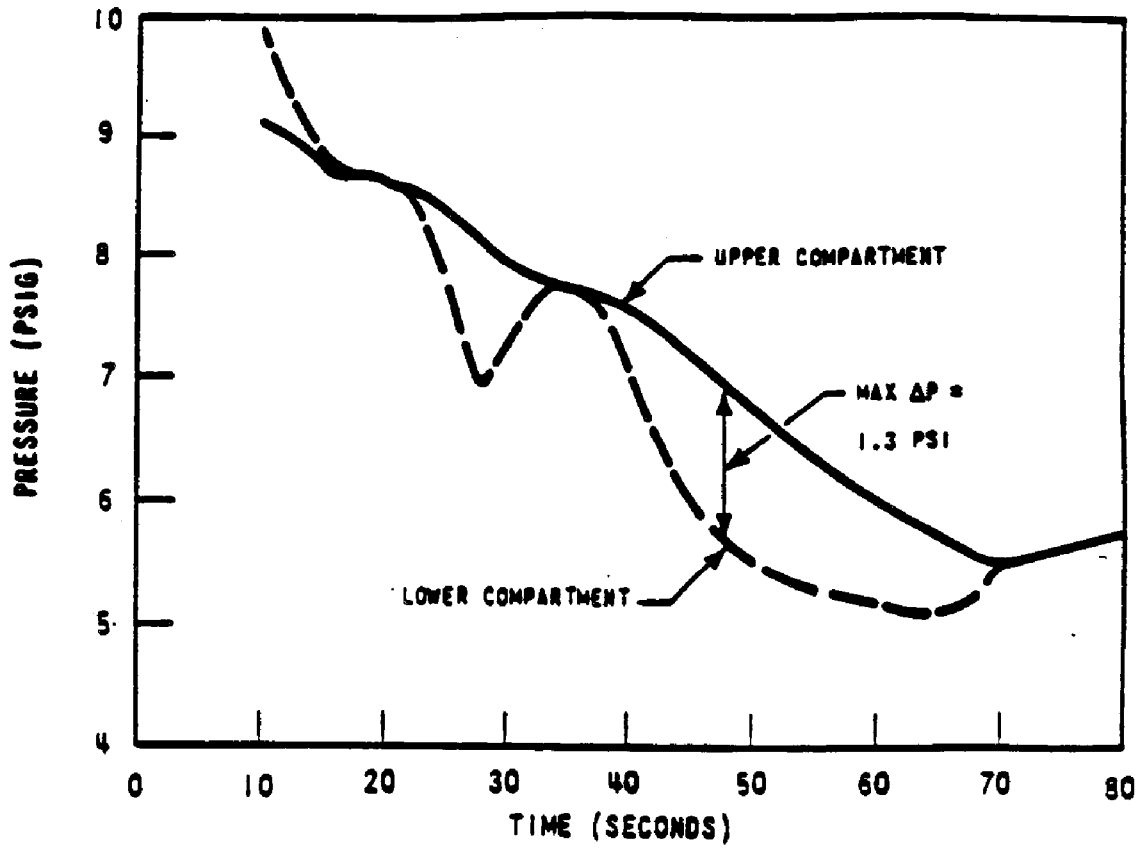


Figure 6-21. Peak Reverse Differential Pressure Transient Assuming Enhanced Lower Compartment Heat Transfer

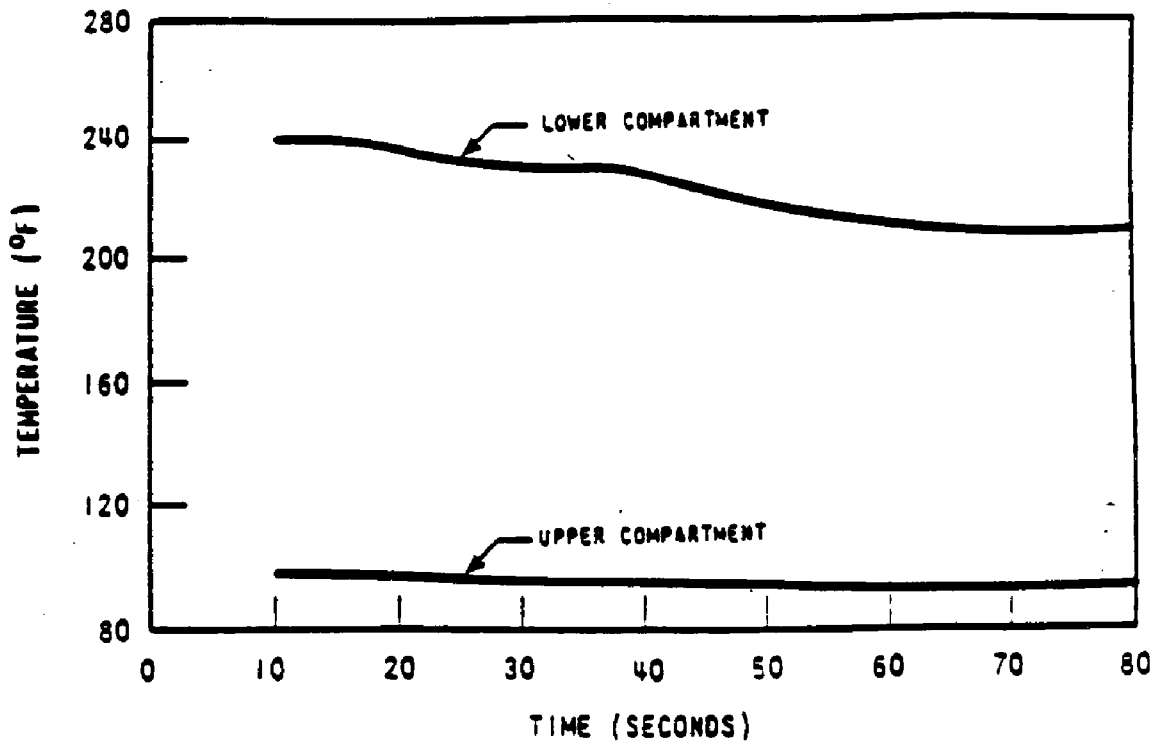


Figure 6-22. Pressure Increase Versus Deck Area From Deck Leakage Tests

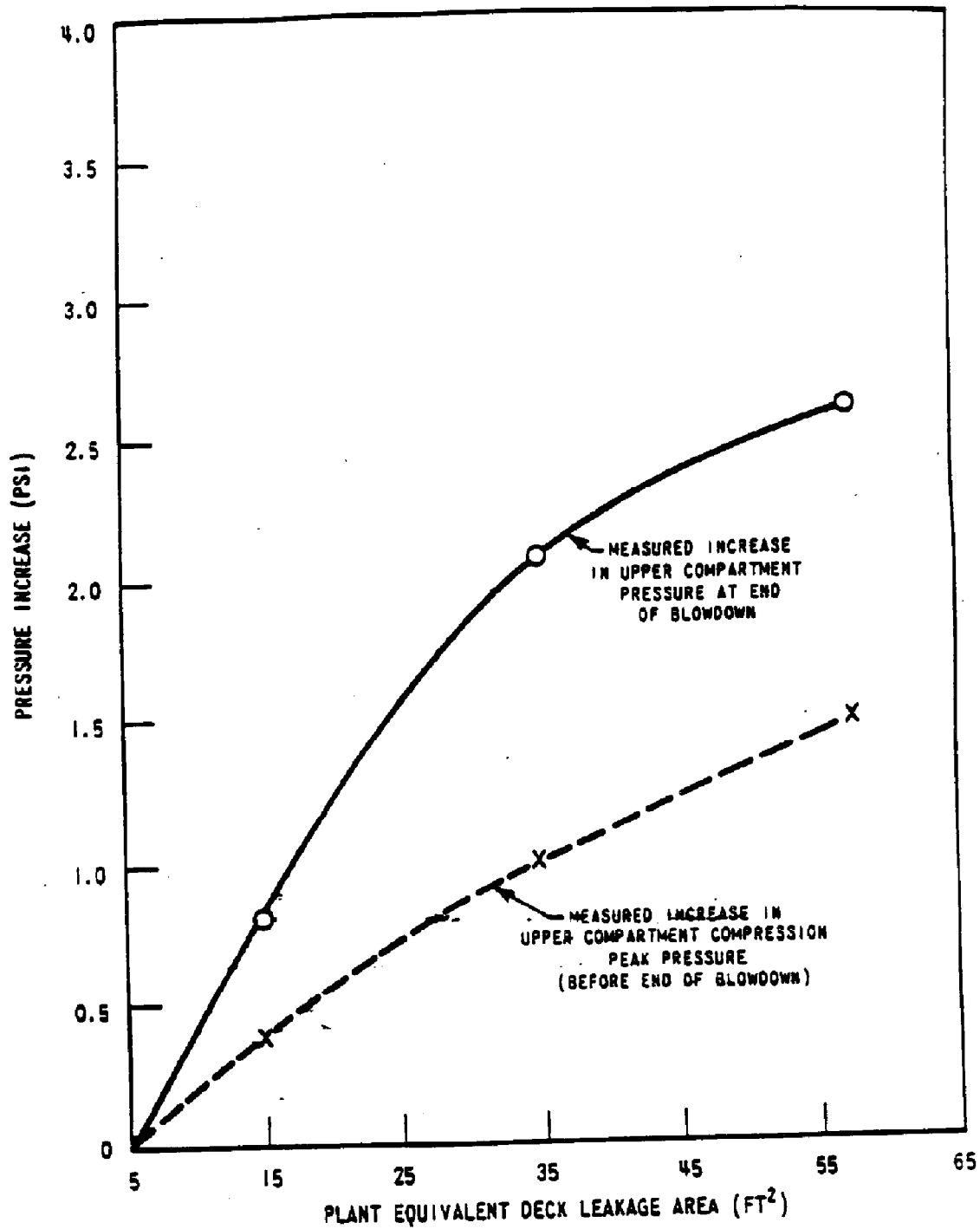


Figure 6-23. Energy Release at Time of Compression Peak Pressure From Full-Scale Section Tests With 1-Foot Diameter Baskets

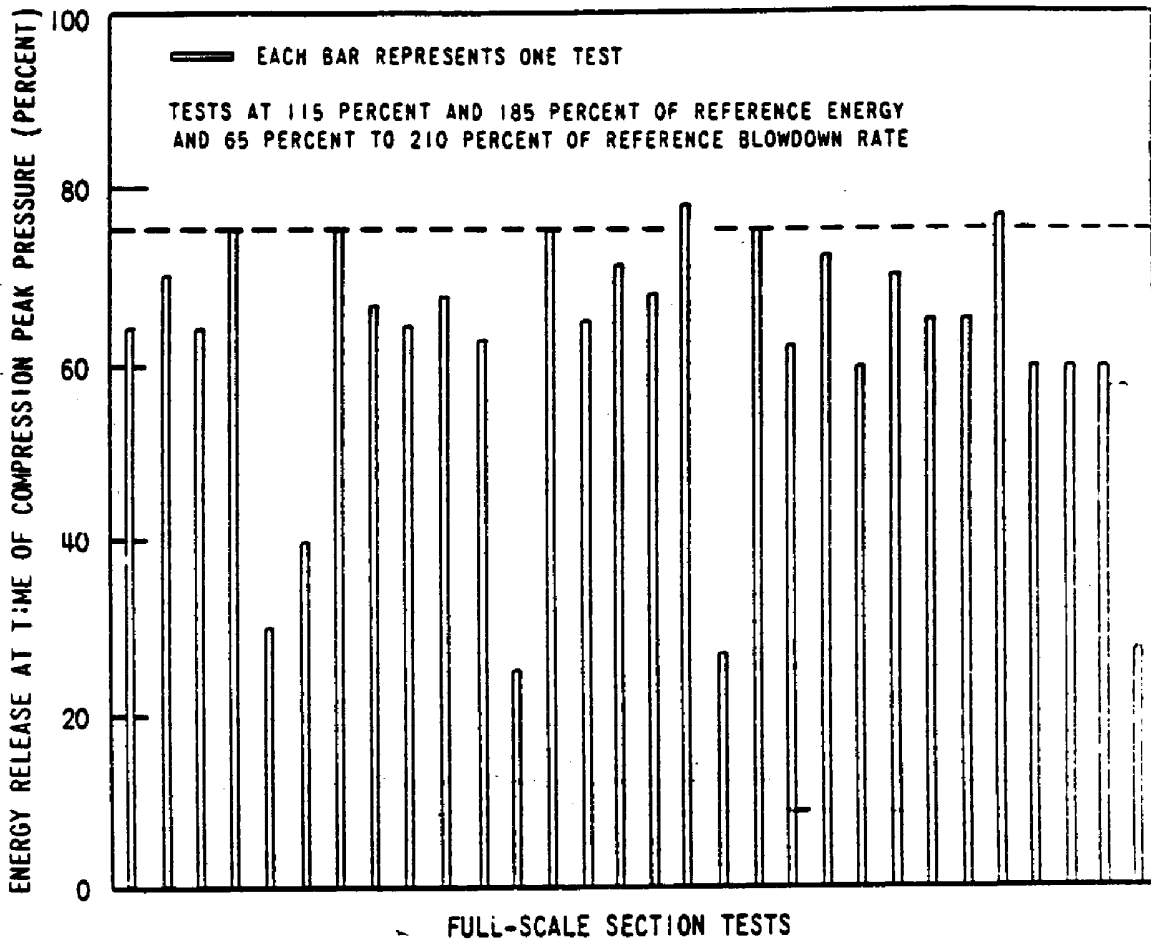


Figure 6-24. Peak Containment Temperature Transient - Lower Containment Temperature

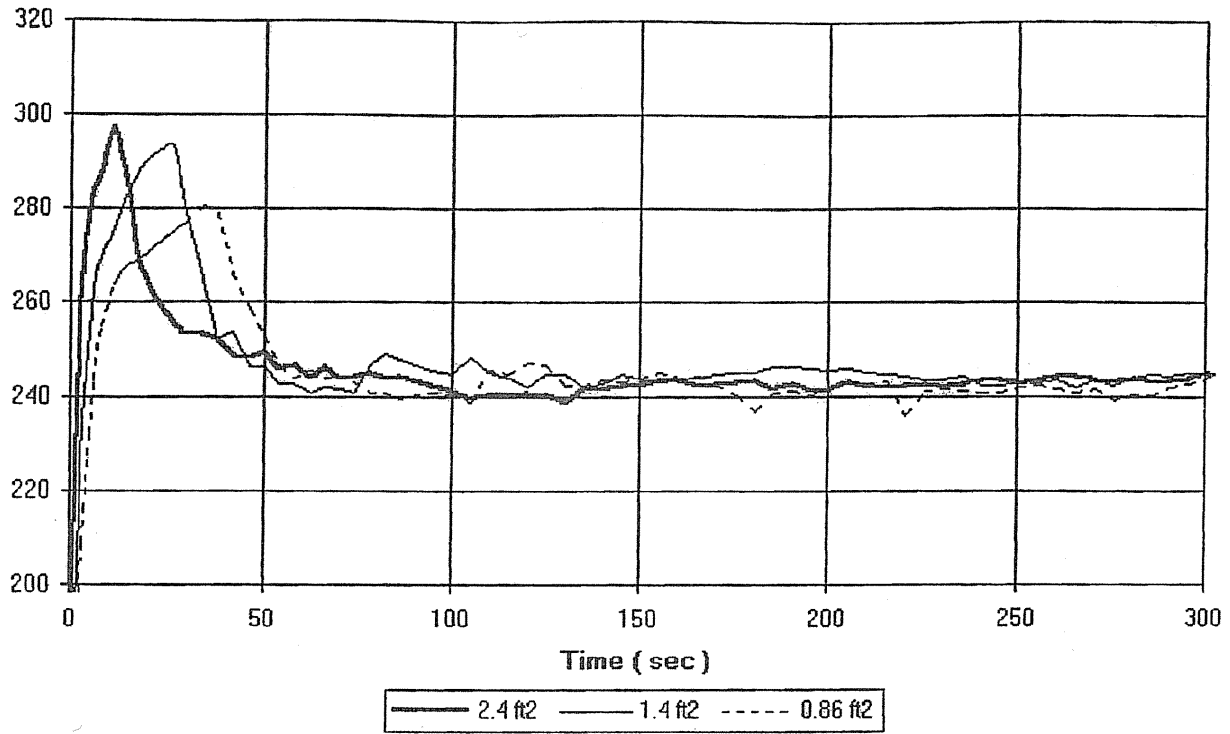


Figure 6-25. Peak Containment Temperature Transient - Break Compartment Temperature

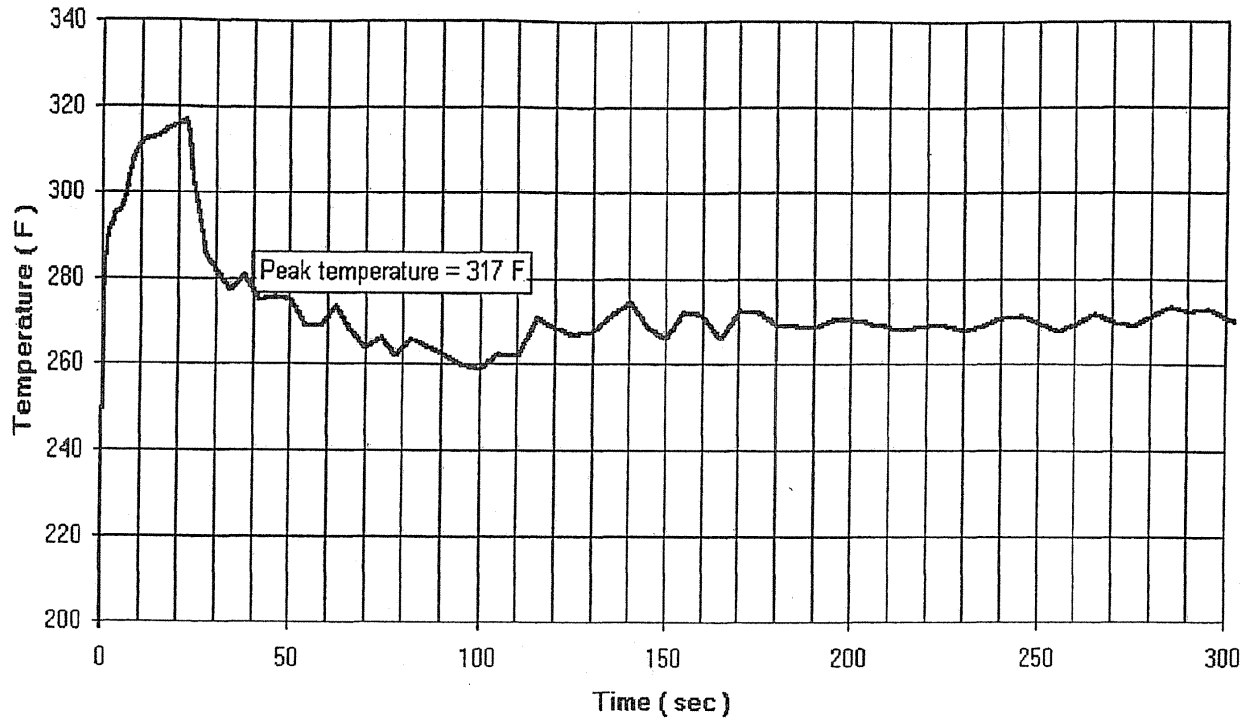


Figure 6-26. Deleted Per 1998 Update.

Figure 6-27. Upper and Lower Compartment Pressure Transient for Worst Case, Break Compartment (Element 1) Having a DEHL Break

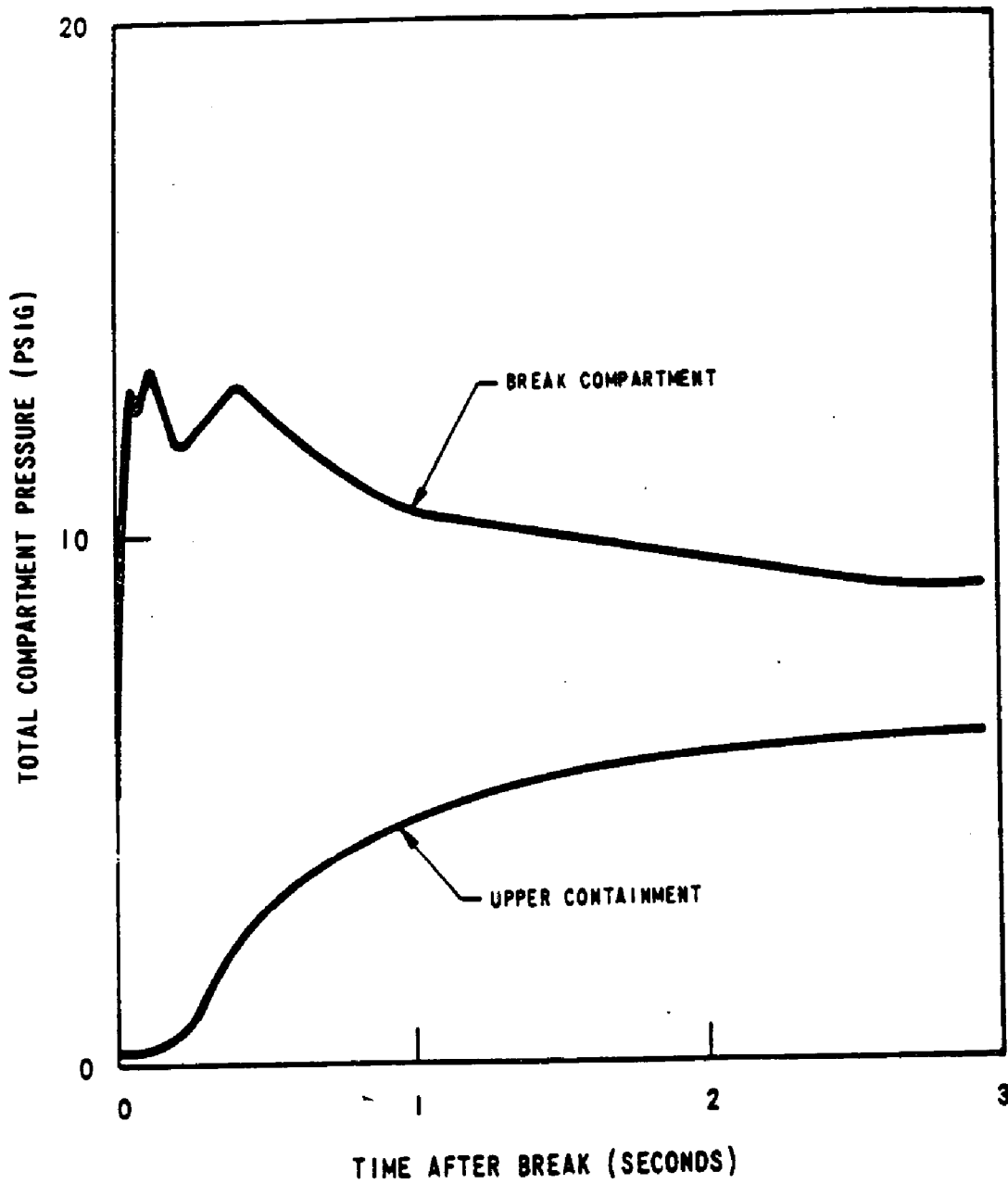


Figure 6-28. Upper and Lower Compartment Pressure Transient for Worst Case Break Compartment (Element 1) Having A DECL Break

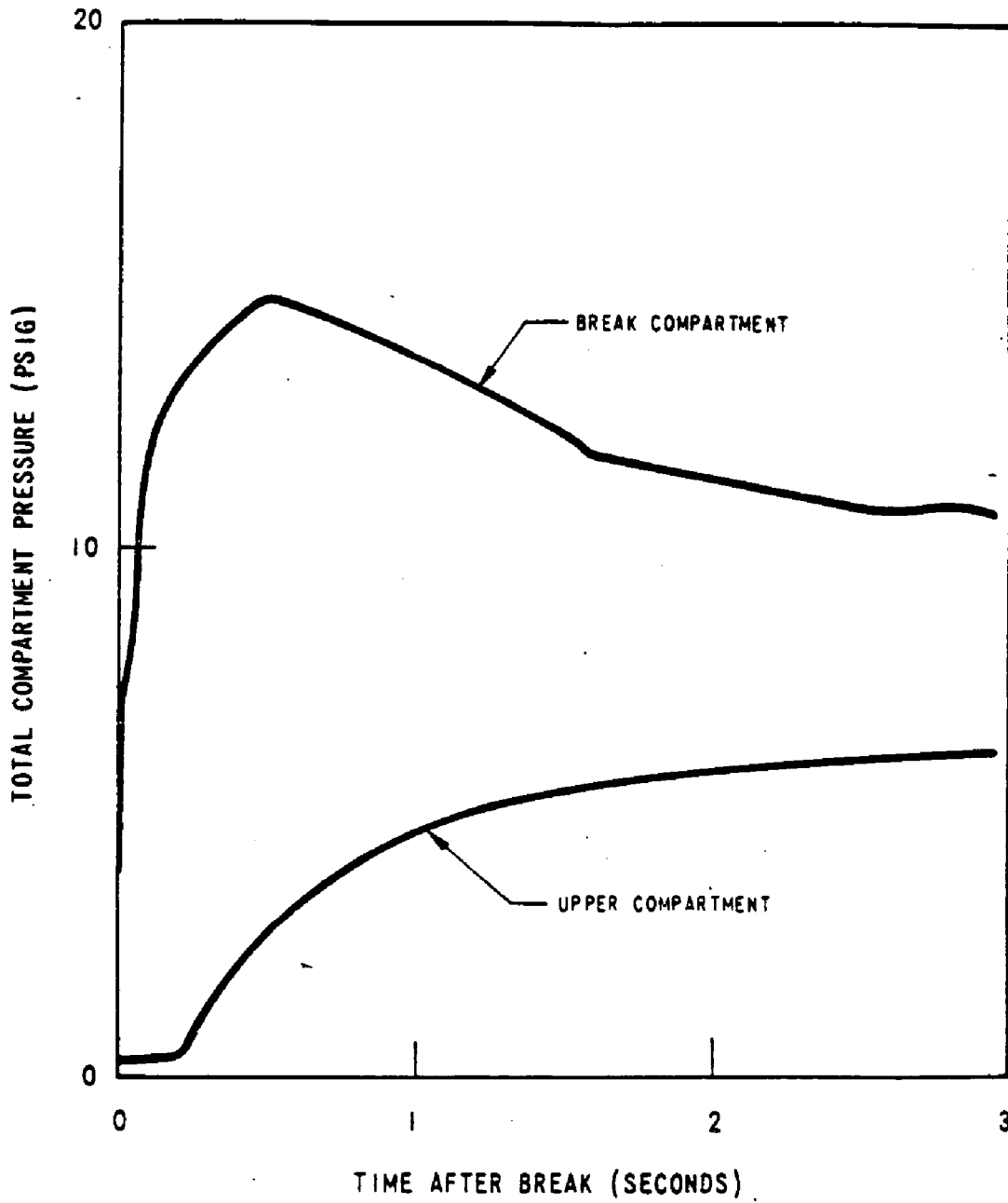


Figure 6-29. Plan at Equipment Rooms Elevation

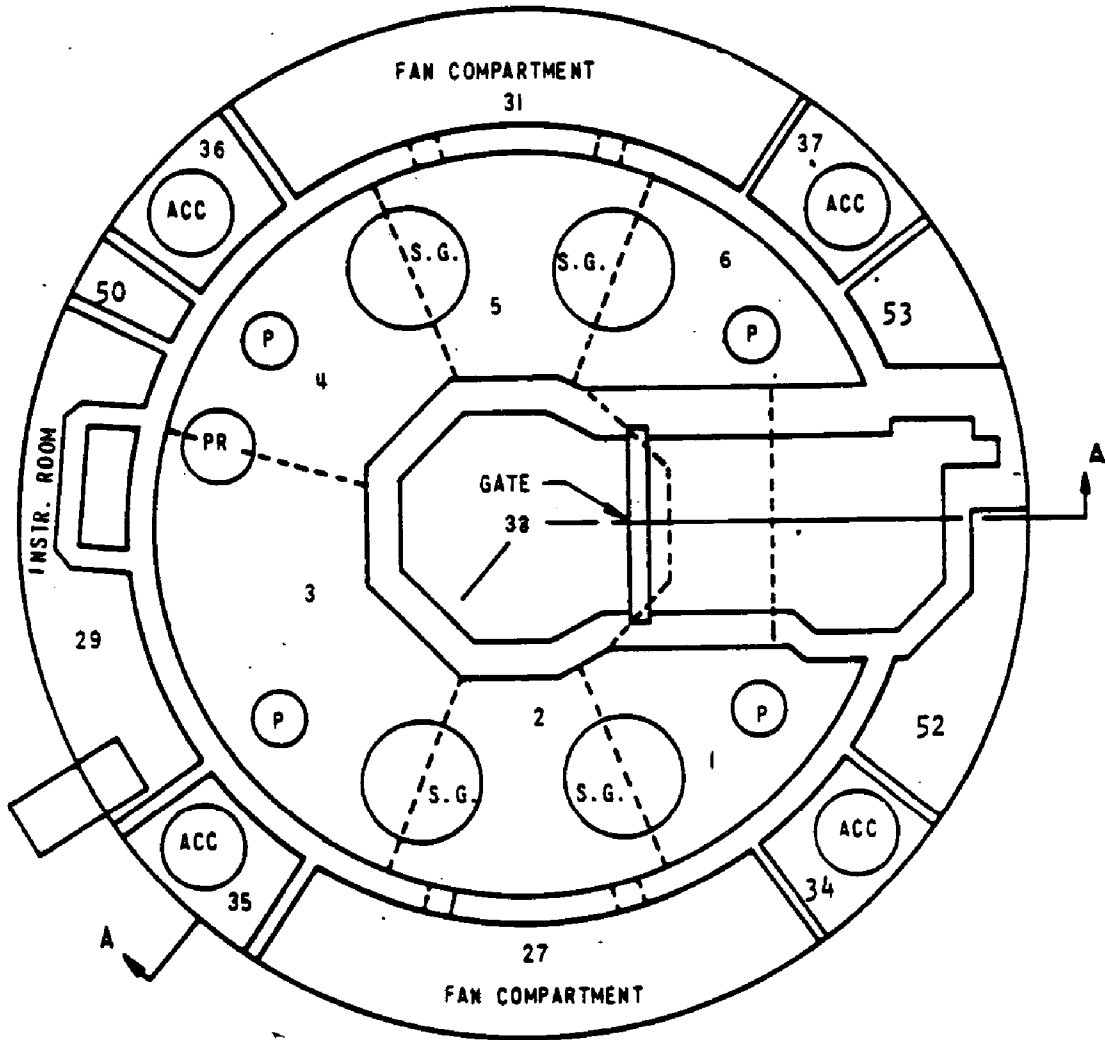


Figure 6-30. Containment Section View

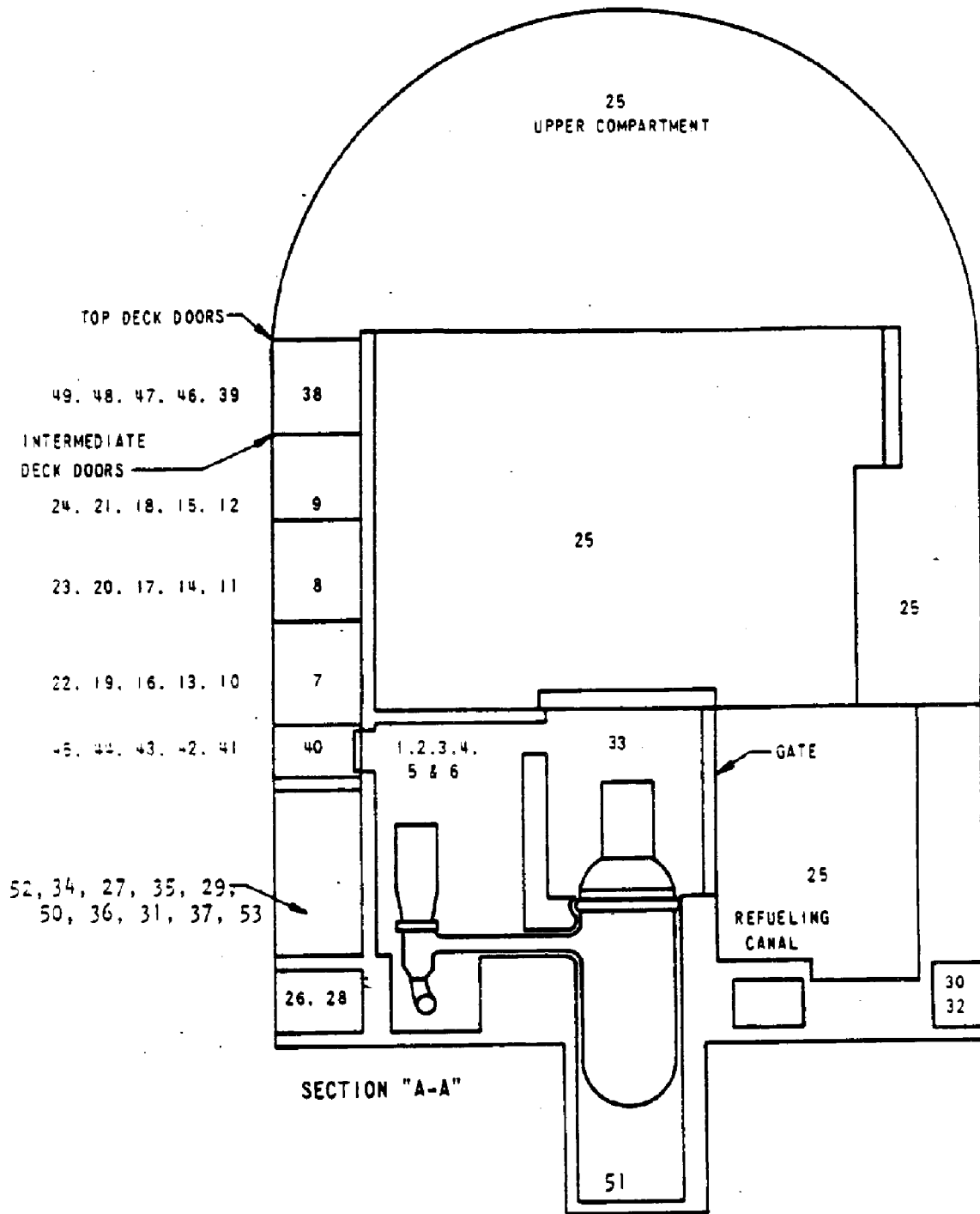


Figure 6-31. Plan View at Ice Condenser Elevation - Ice Condenser Compartments

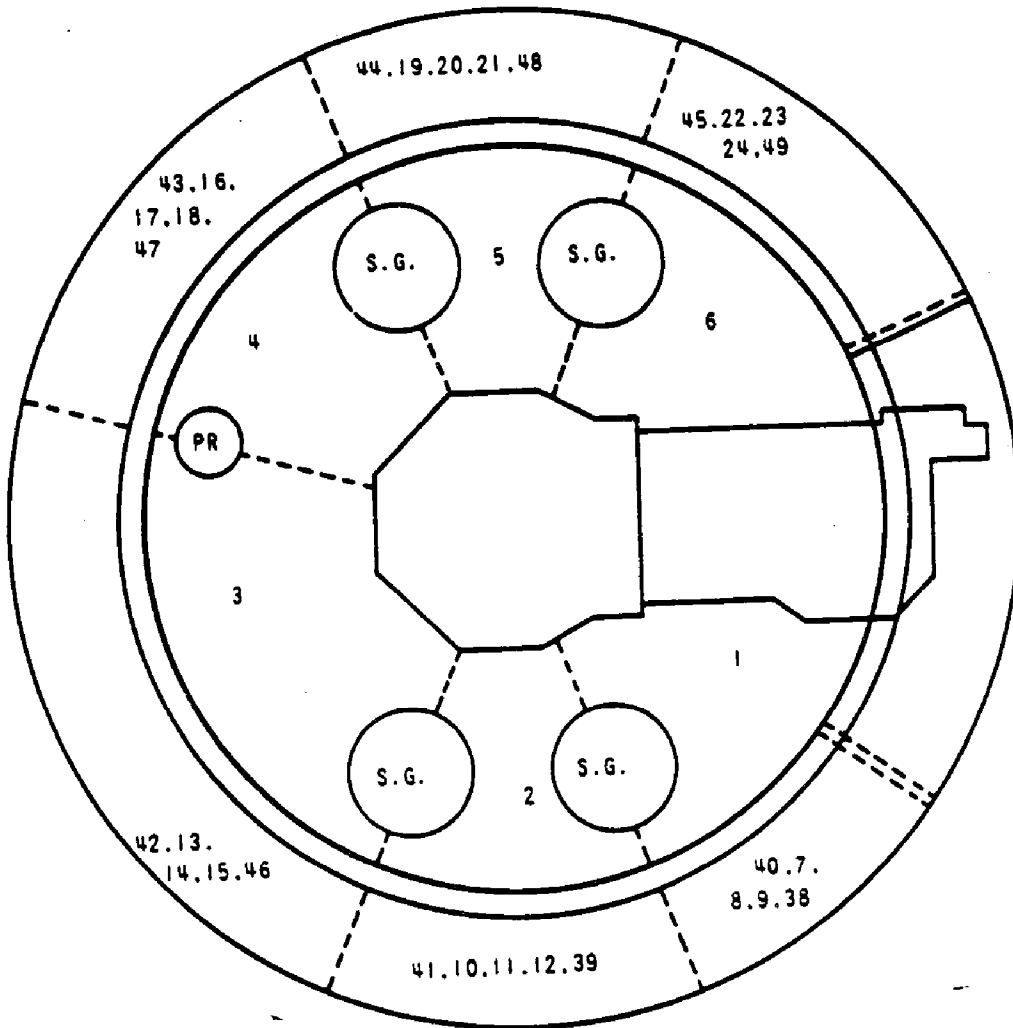


Figure 6-32. Layout of Containment Shell

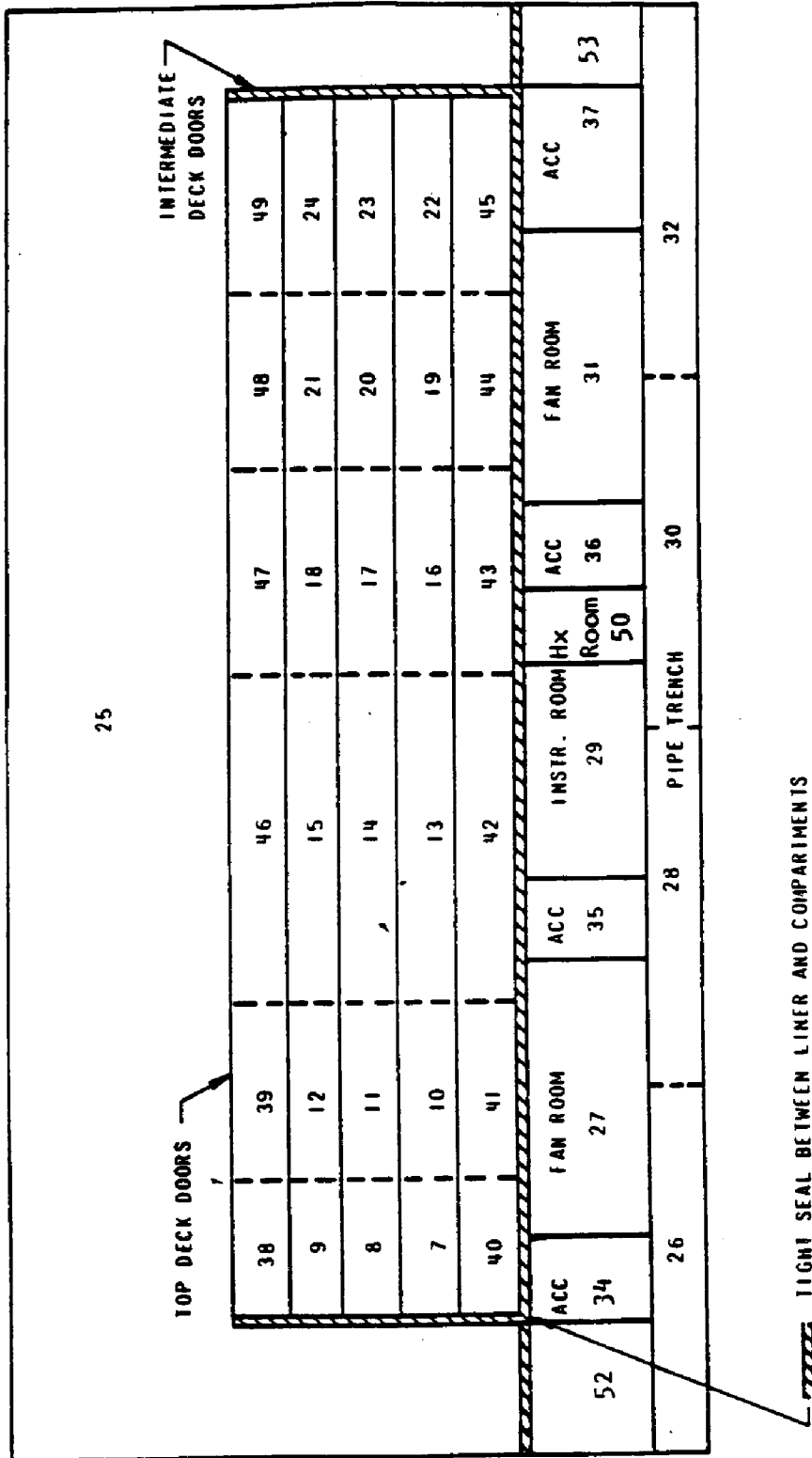


Figure 6-33. TMD Code Network

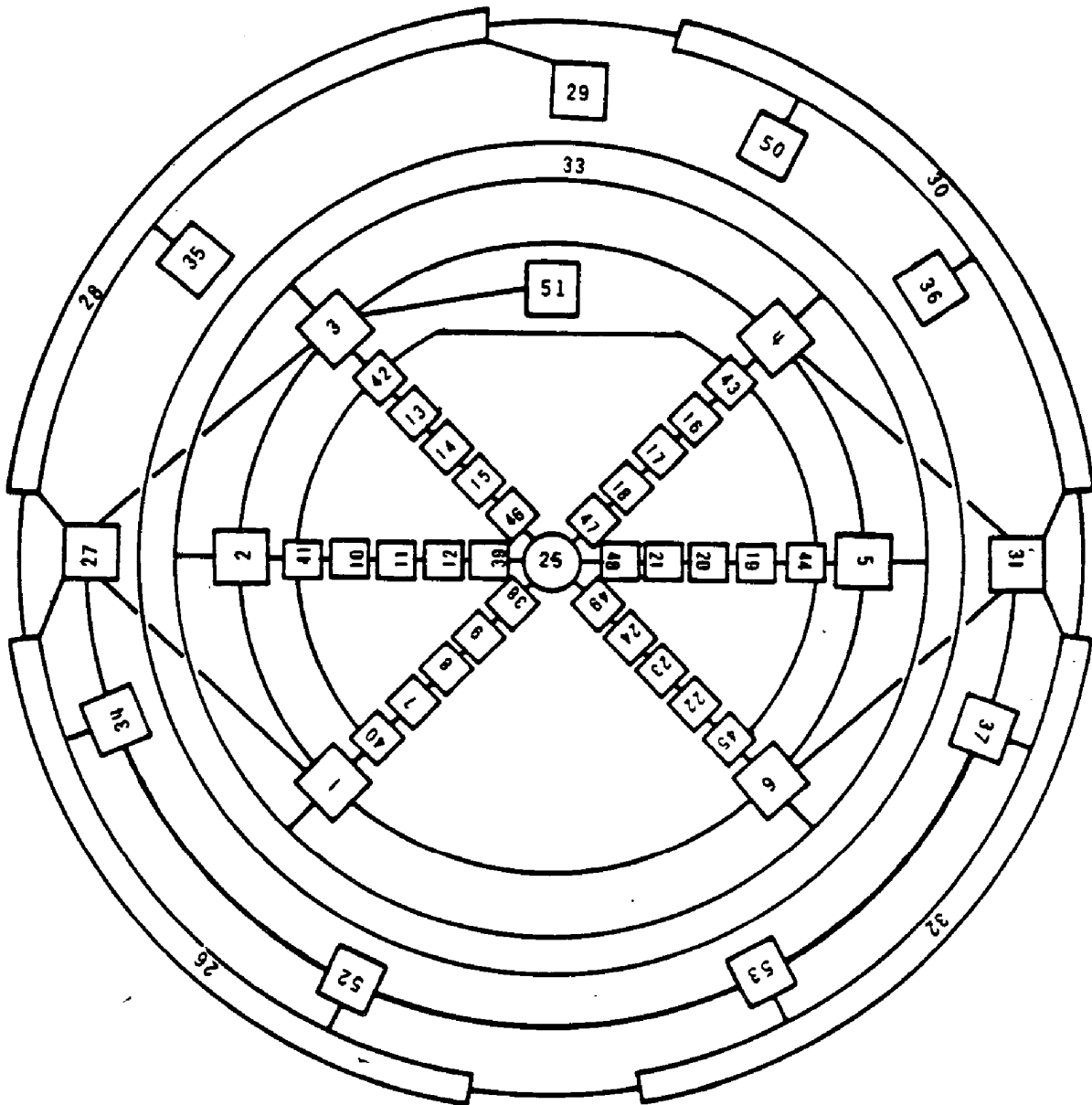


Figure 6-34. Nine Volume Nodalization of the Steam Generator Enclosure

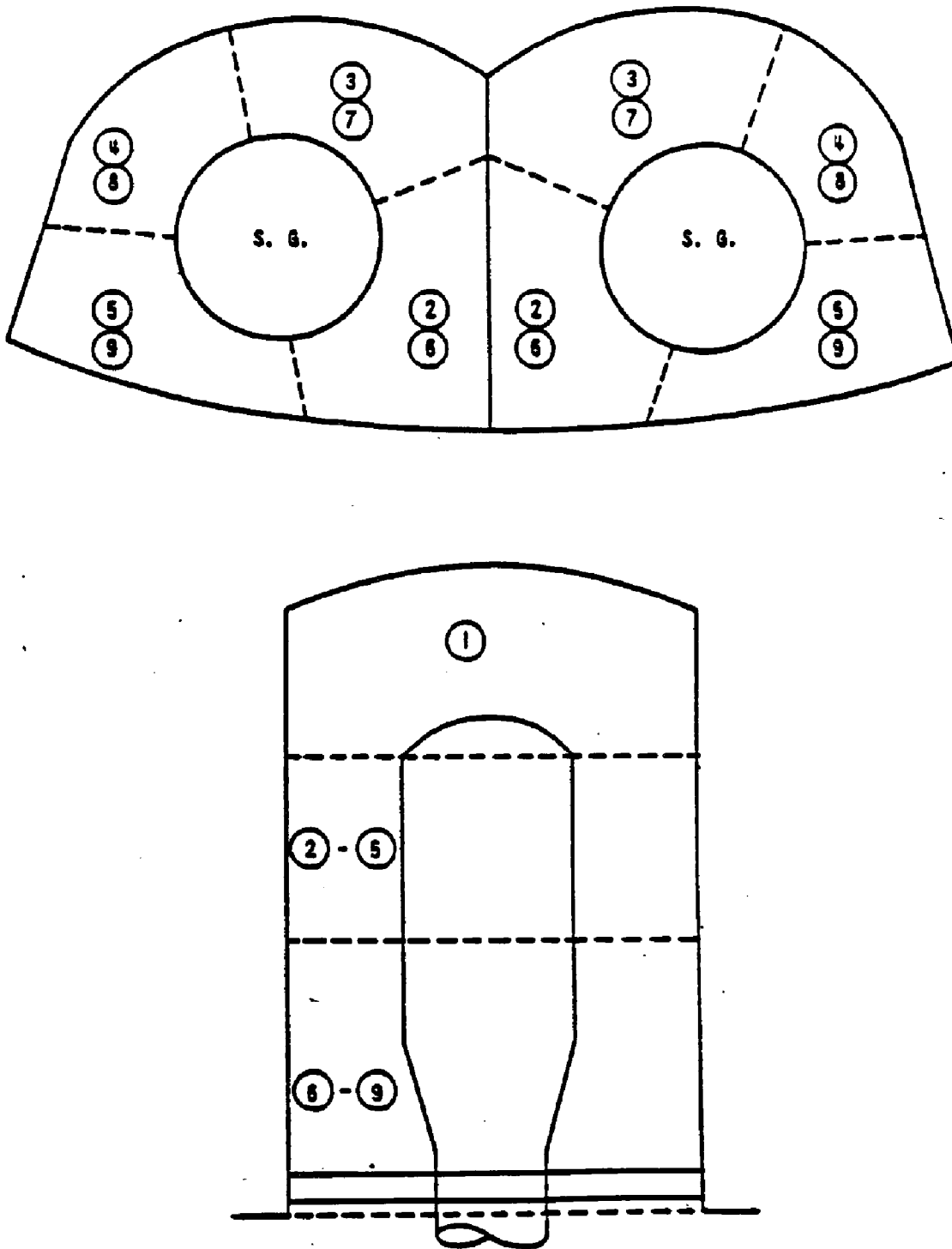


Figure 6-35. Illustration of Choked Flow Characteristics

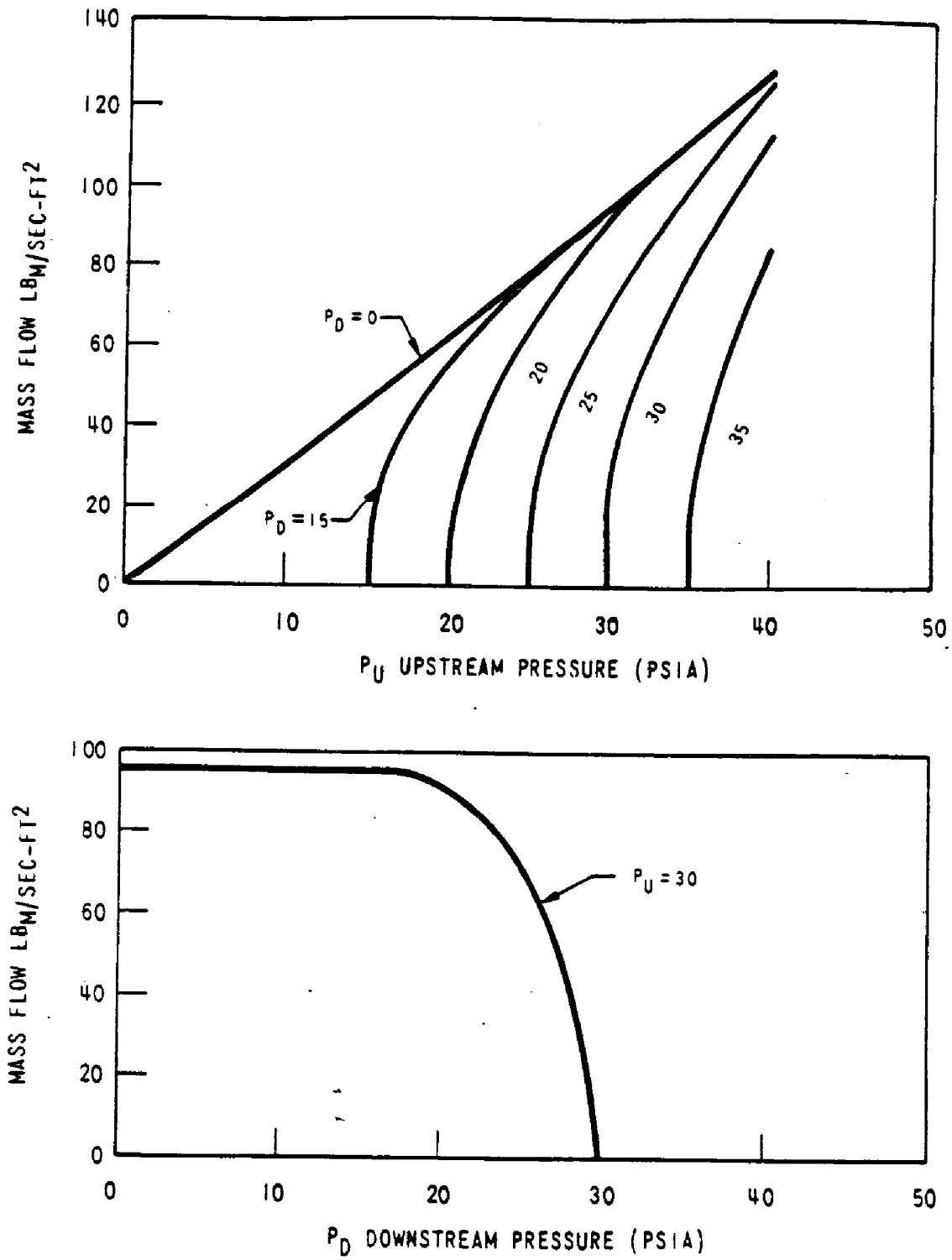


Figure 6-36. Double Ended Steam Line Break in Steam Generator Enclosure

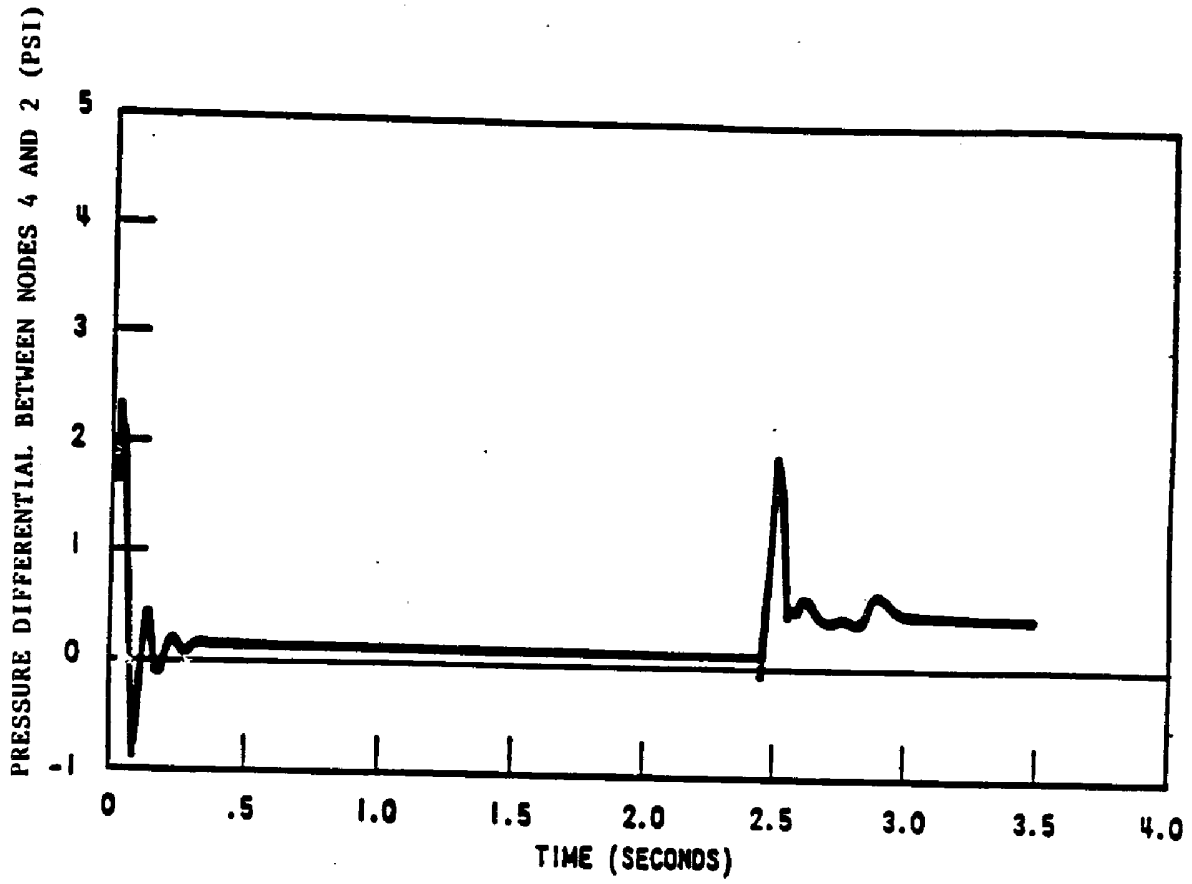


Figure 6-37. Double Ended Steam Line Break in Steam Generator Enclosure

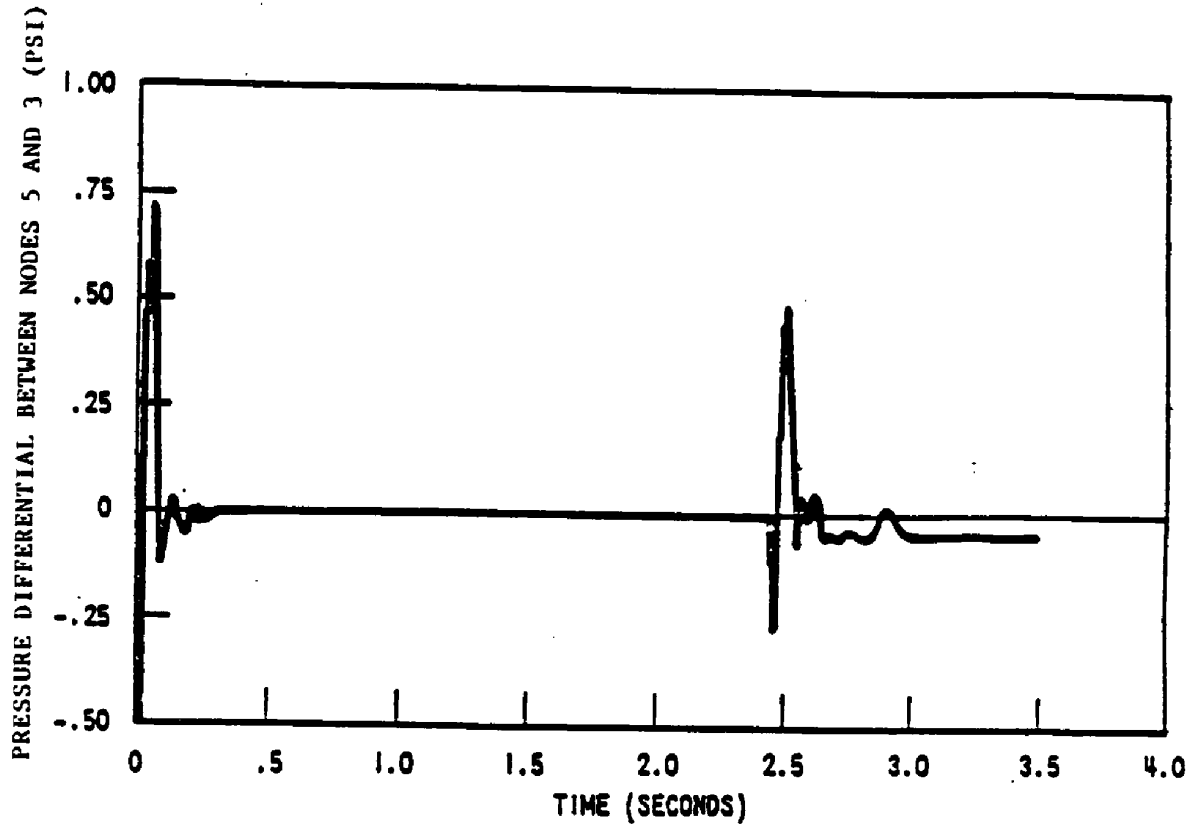


Figure 6-38. Double Ended Steam Line Break in Steam Generator Enclosure

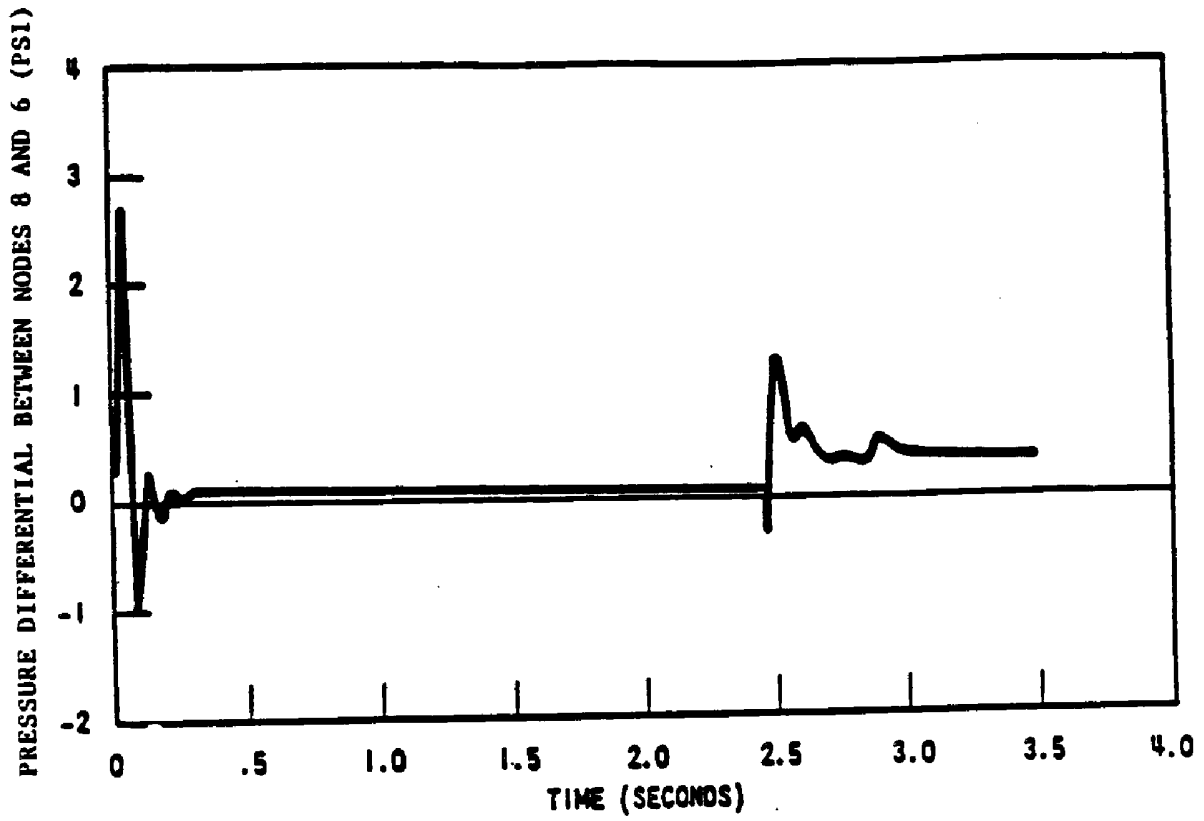


Figure 6-39. Double Ended Steam Line Break in Steam Generator Enclosure

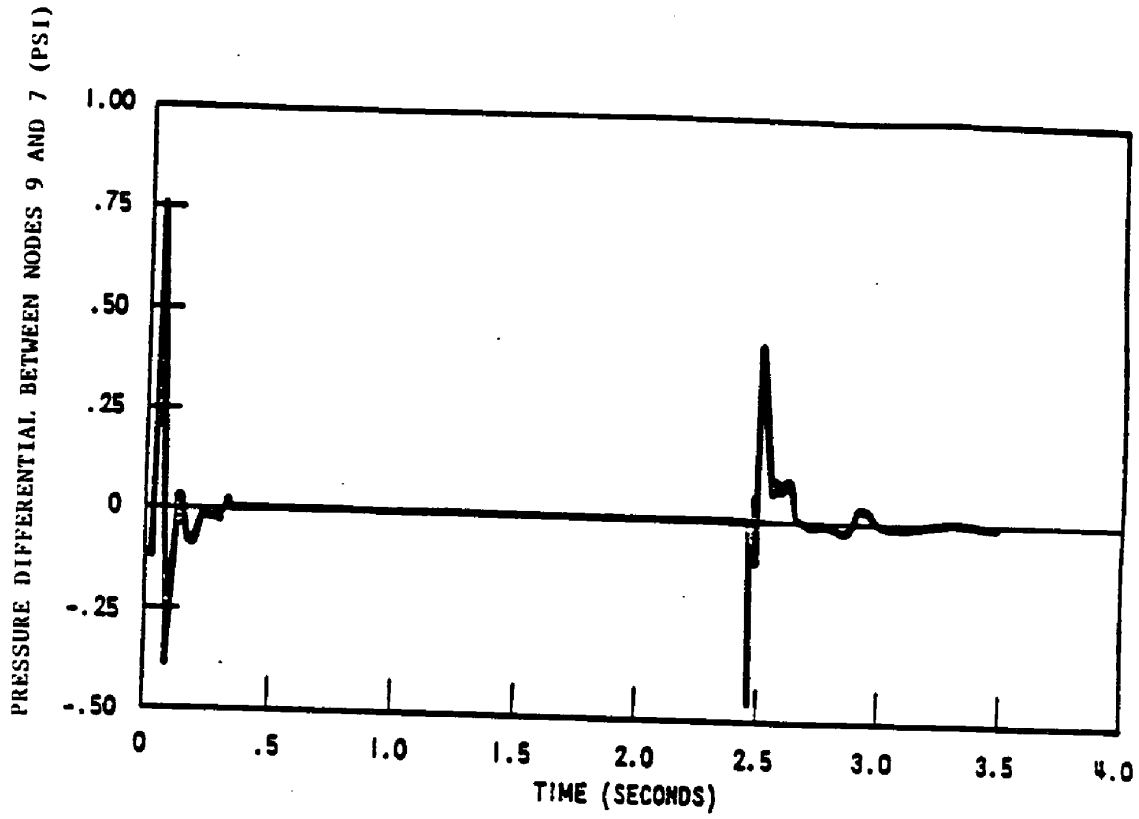


Figure 6-40. Double Ended Steam Line Break in Steam Generator Enclosure

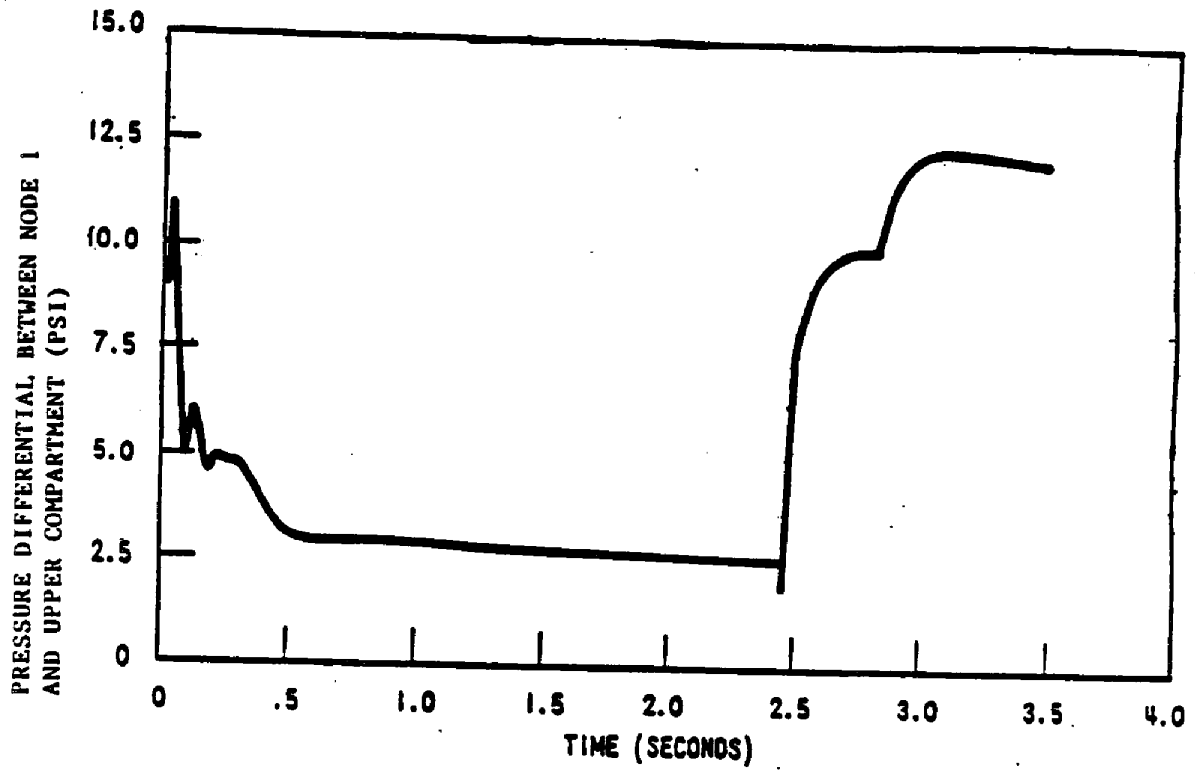


Figure 6-41. Two Volume Nodalization of the Steam Generator Enclosure

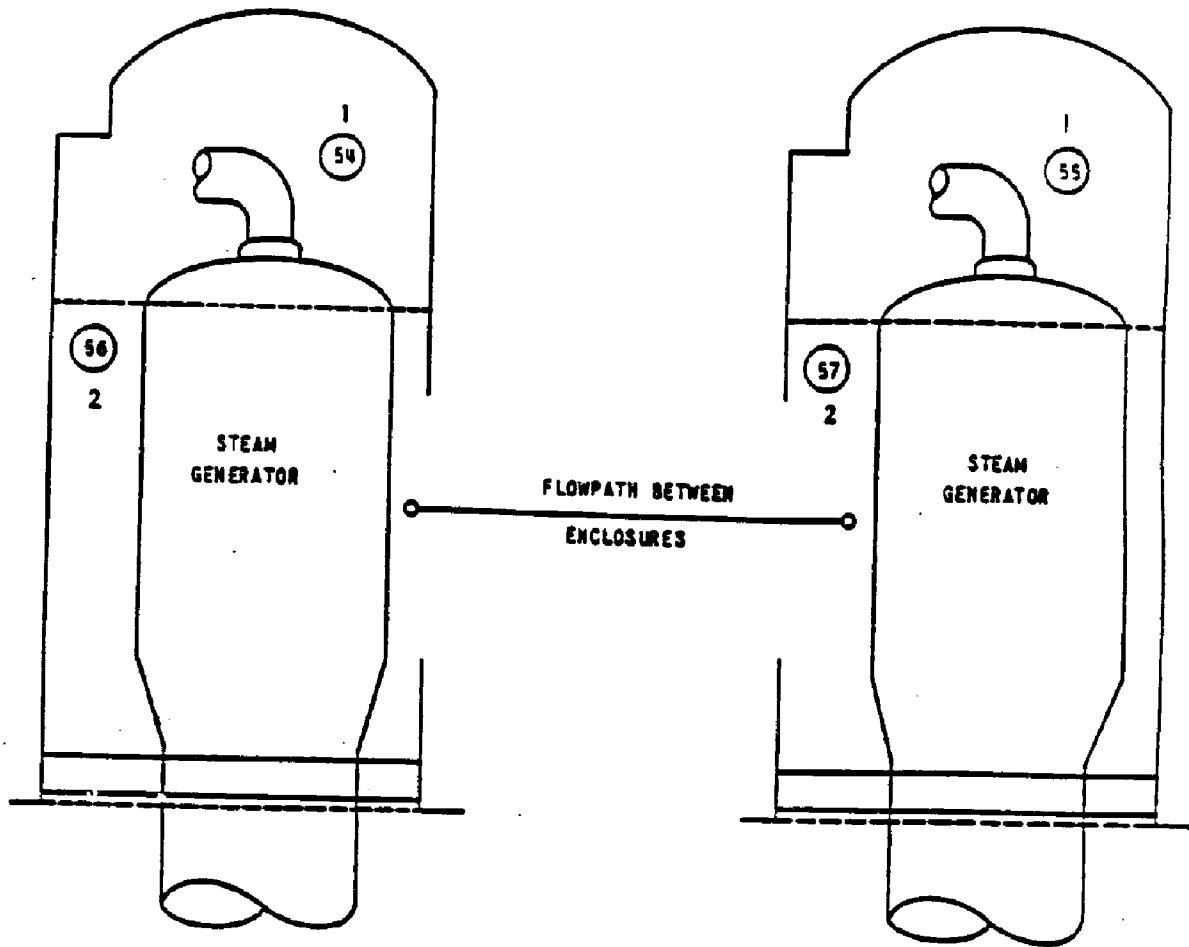


Figure 6-42. Two Volume Nodalization of the Pressurizer Enclosure

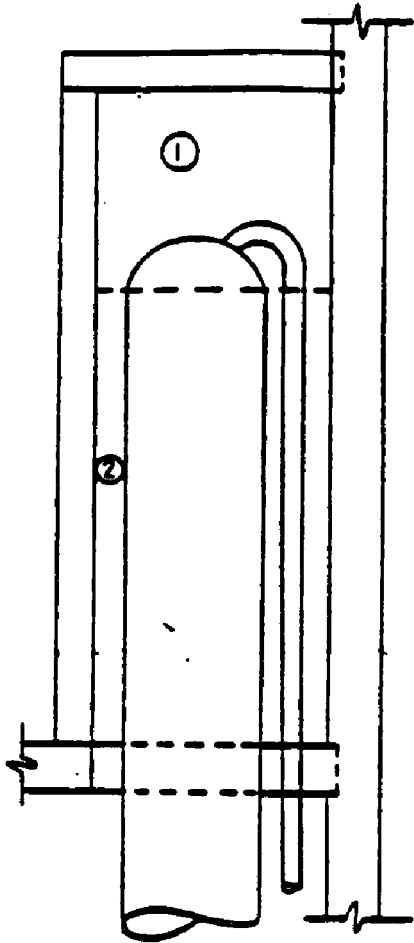


Figure 6-43. Four Volume Nodalization of the Pressurizer Enclosure

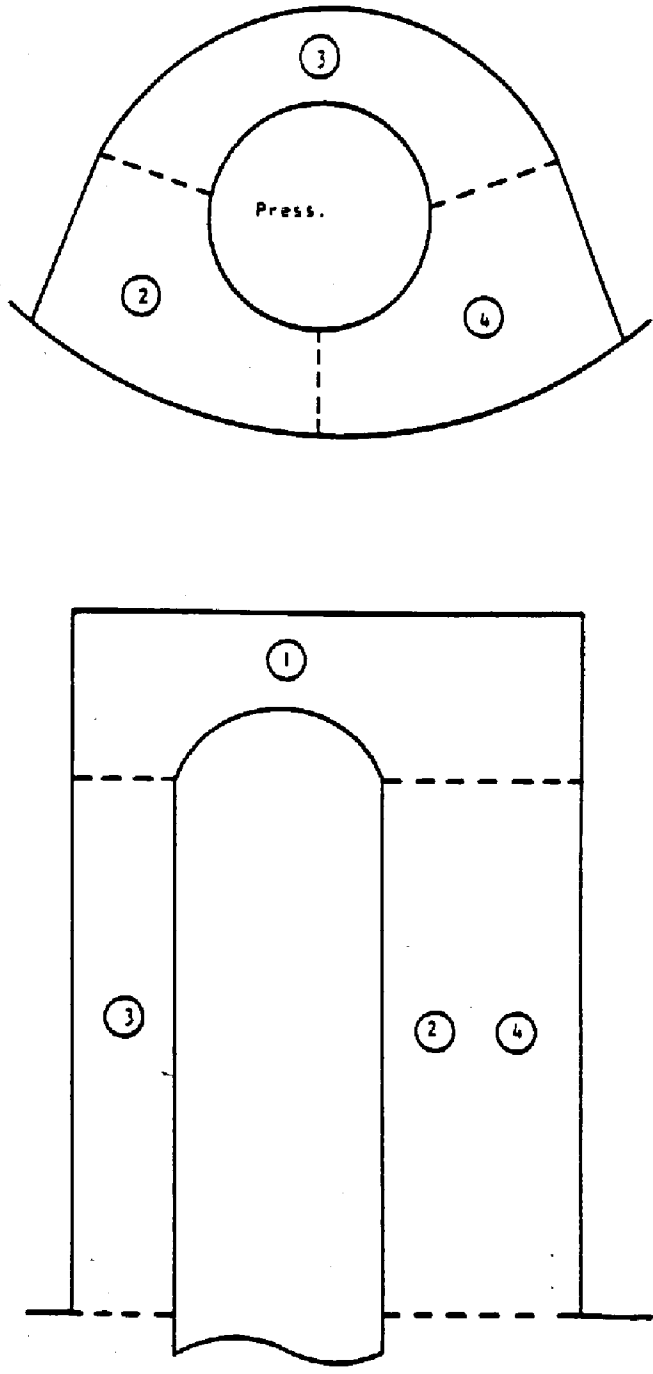


Figure 6-44. Developed View of the TMD Code Network for the Reactor Cavity Analysis

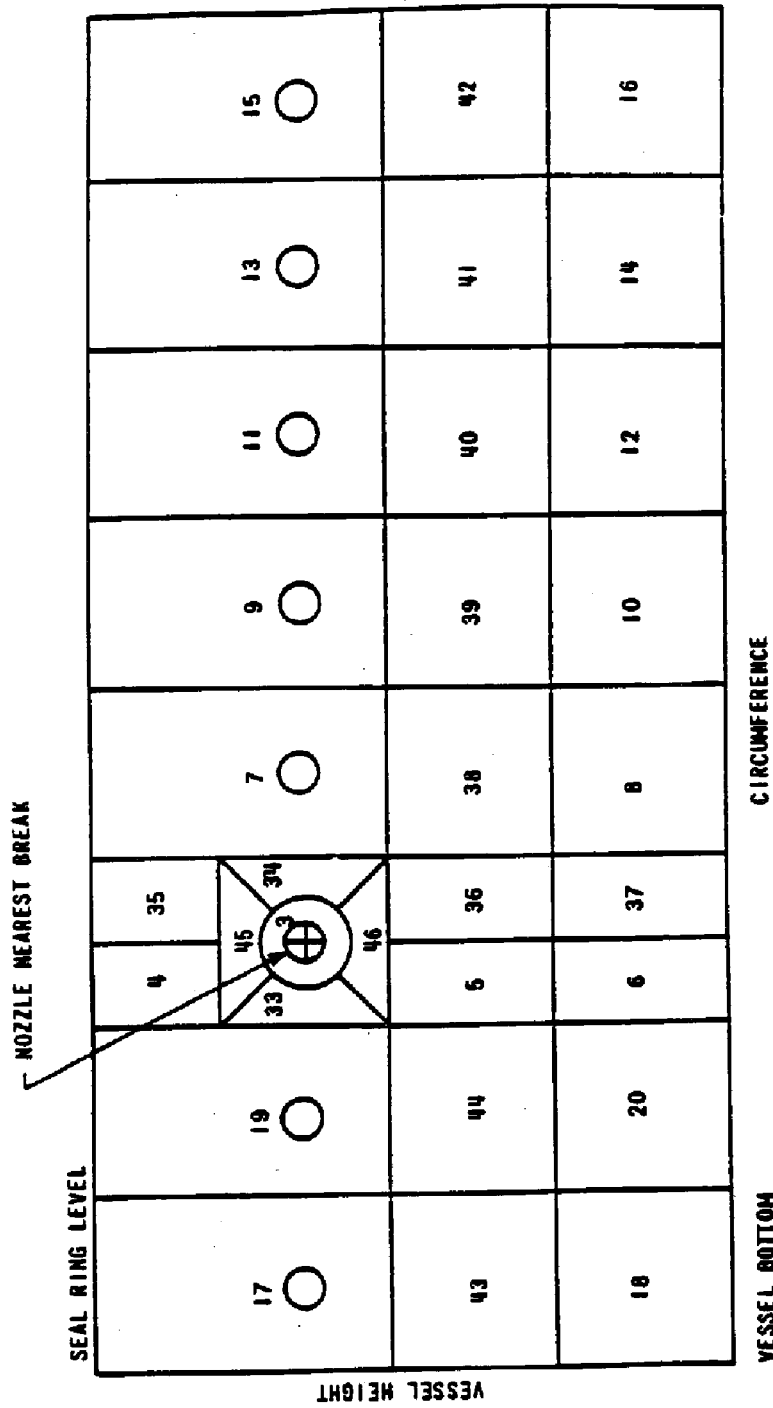


Figure 6-45. Flow Path Connections for the Reactor Cavity Analysis

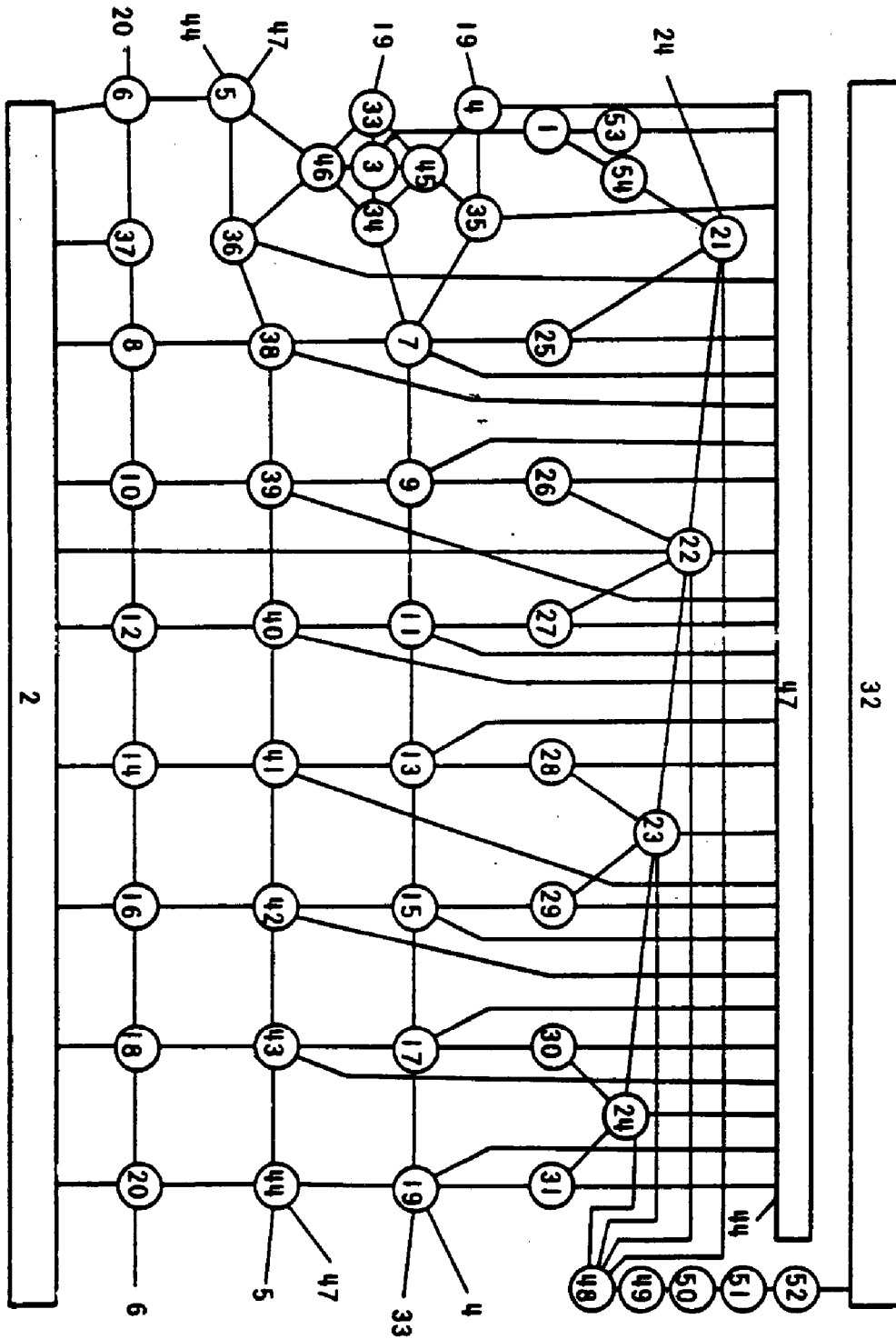


Figure 6-46. Containment Model for the Reactor Cavity Analysis

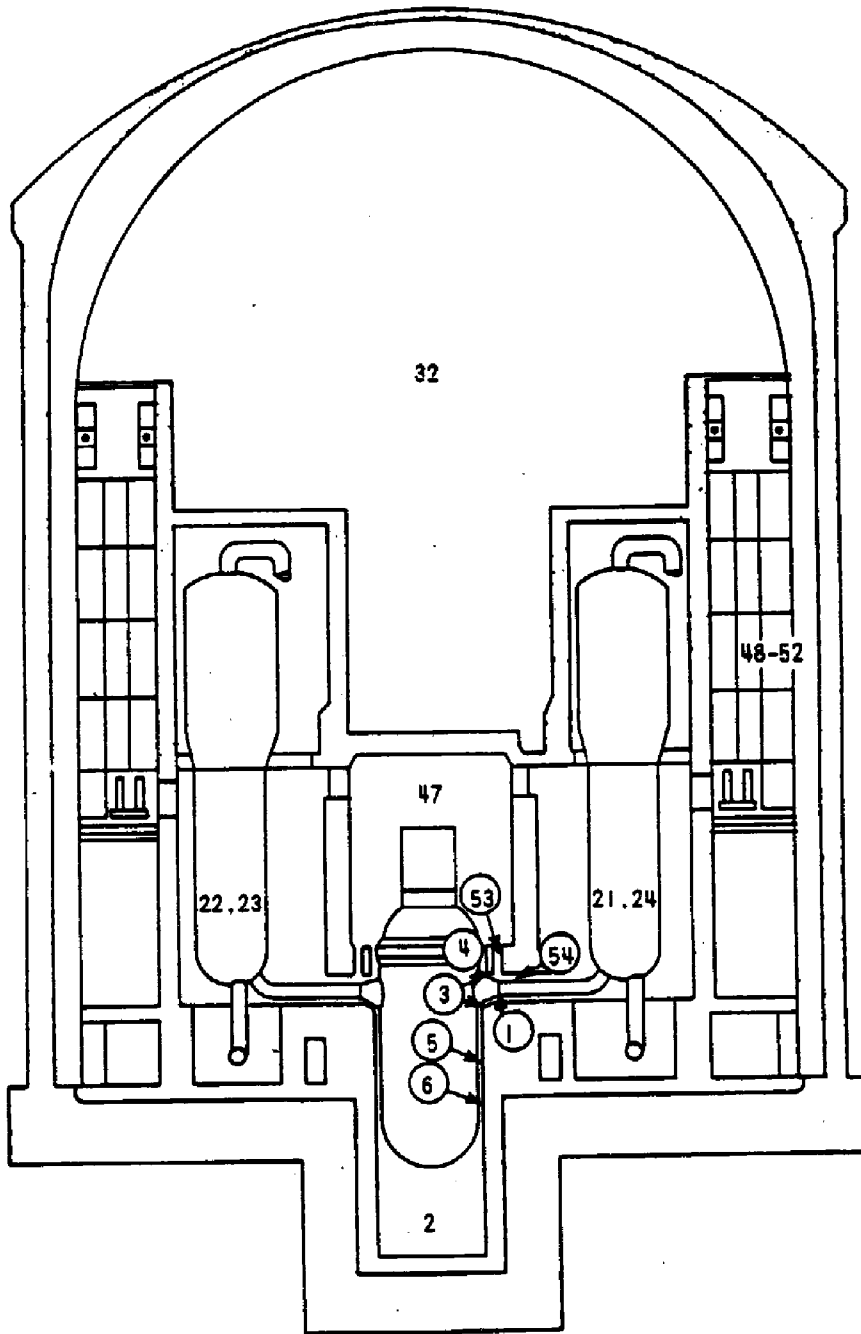


Figure 6-47. Reactor Vessel Nozzle Break Supports

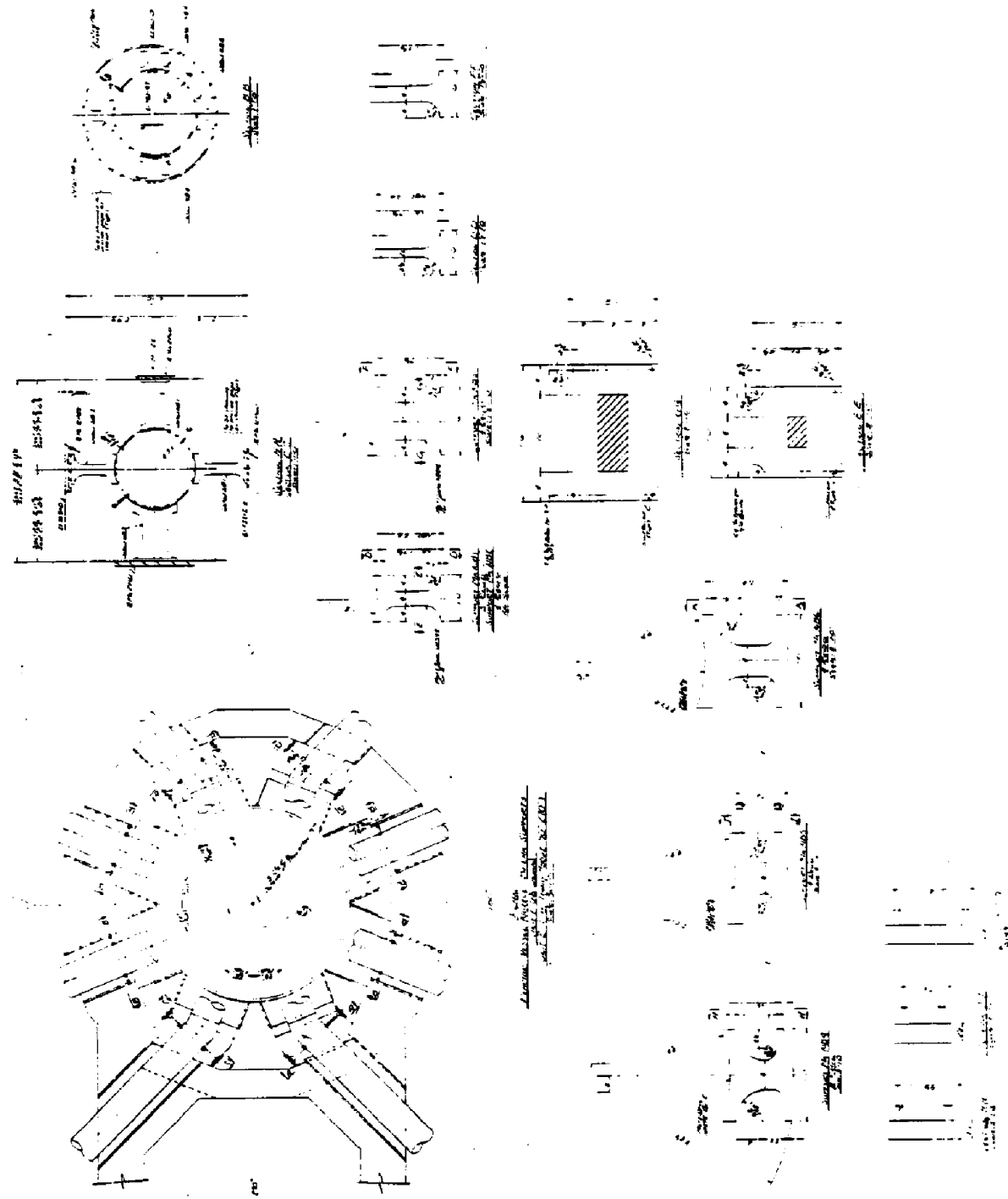


Figure 6-48. Reactor Cavity Analysis Element 1

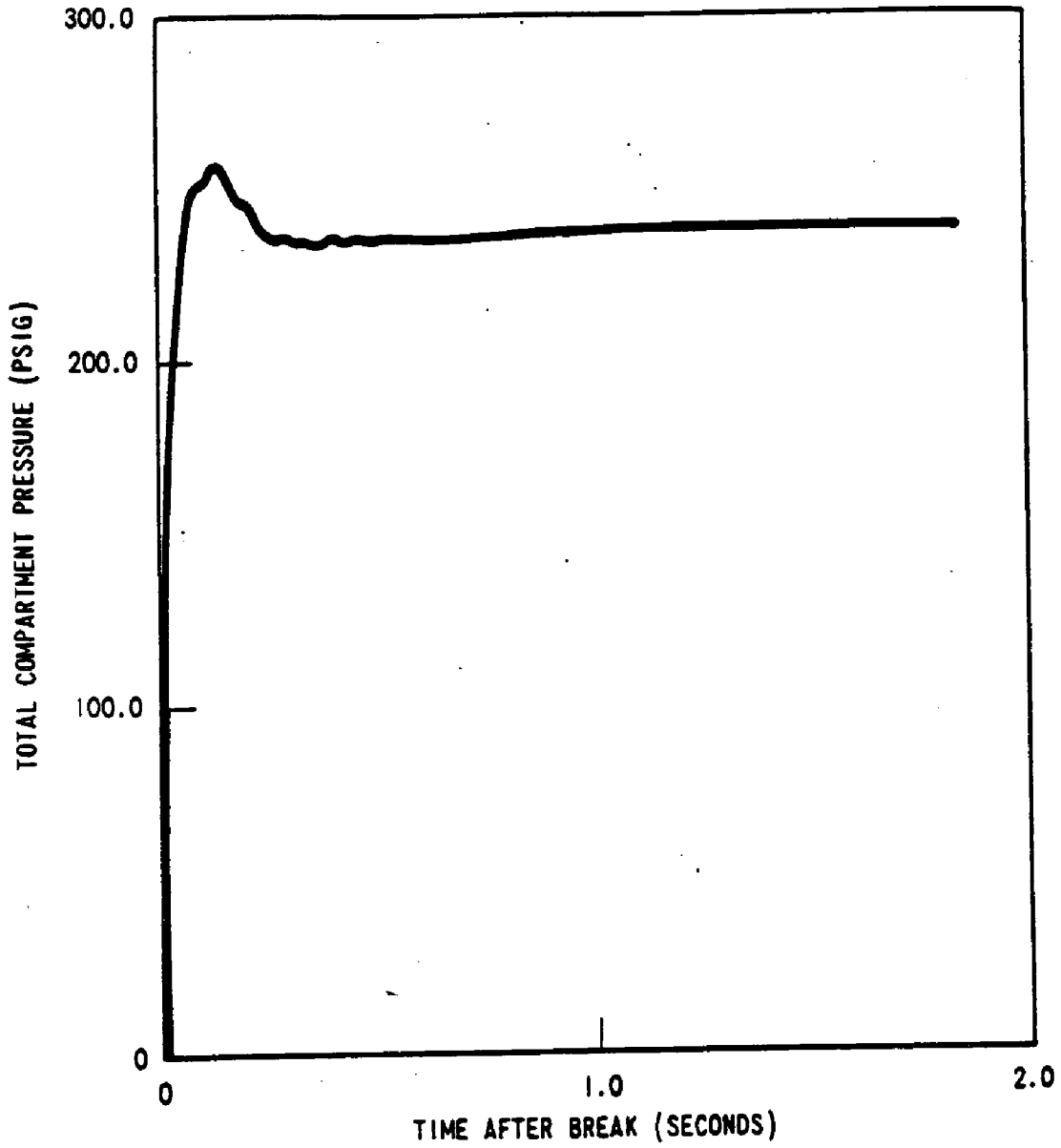


Figure 6-49. Reactor Cavity Analysis Element 2

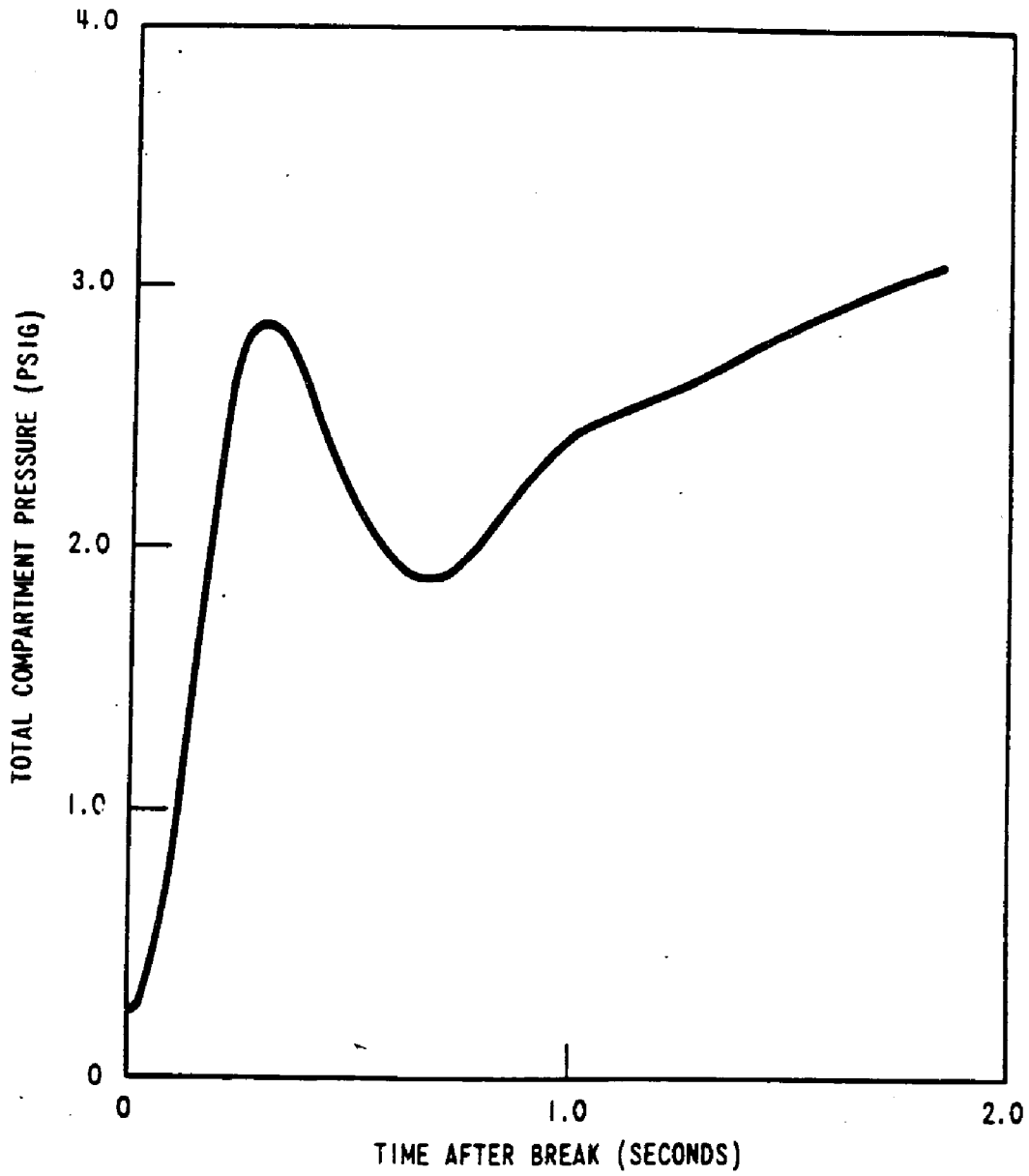


Figure 6-50. Reactor Cavity Analysis Element 3

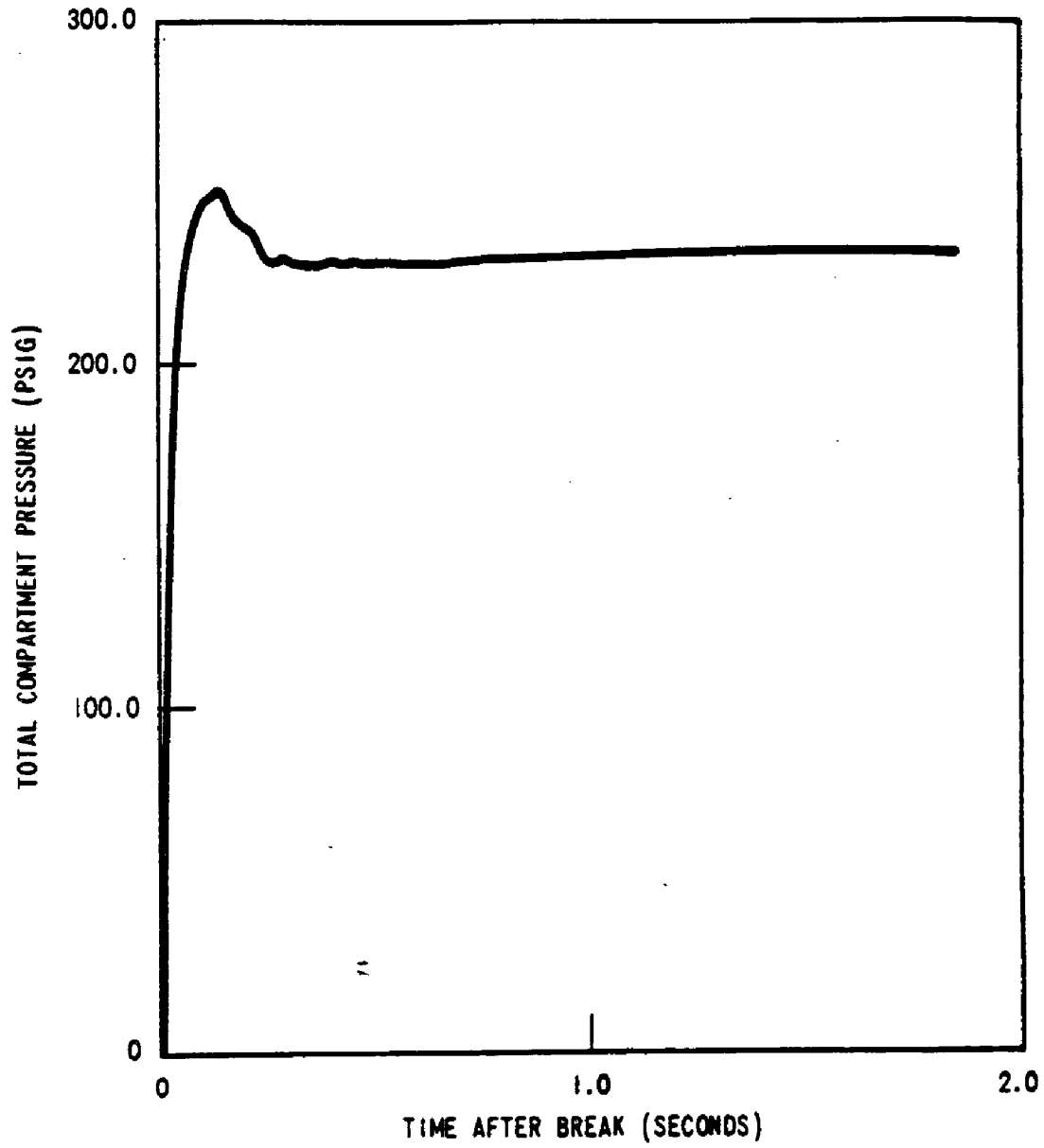


Figure 6-51. Reactor Cavity Analysis Element 4

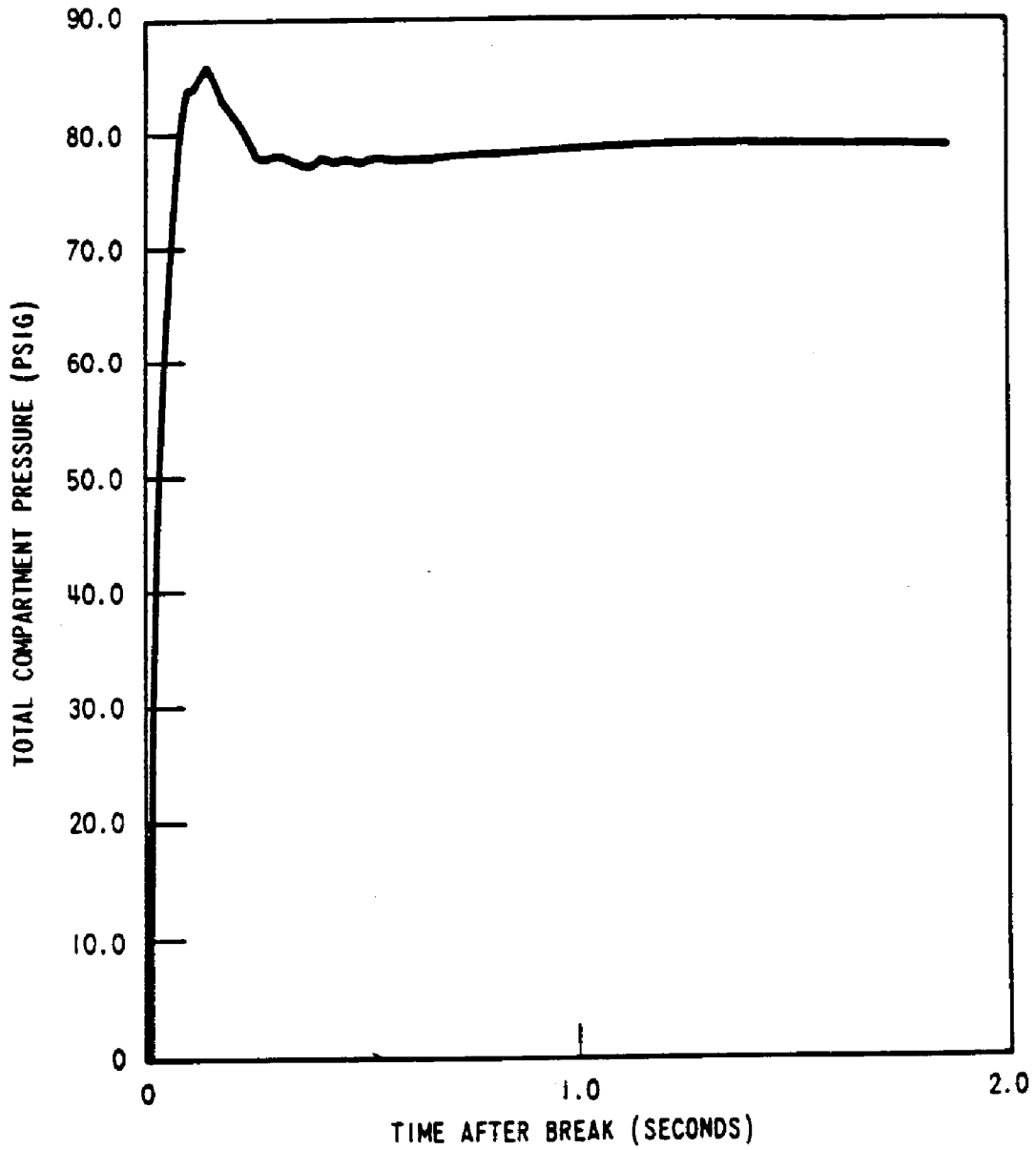


Figure 6-52. Reactor Cavity Analysis Element 5

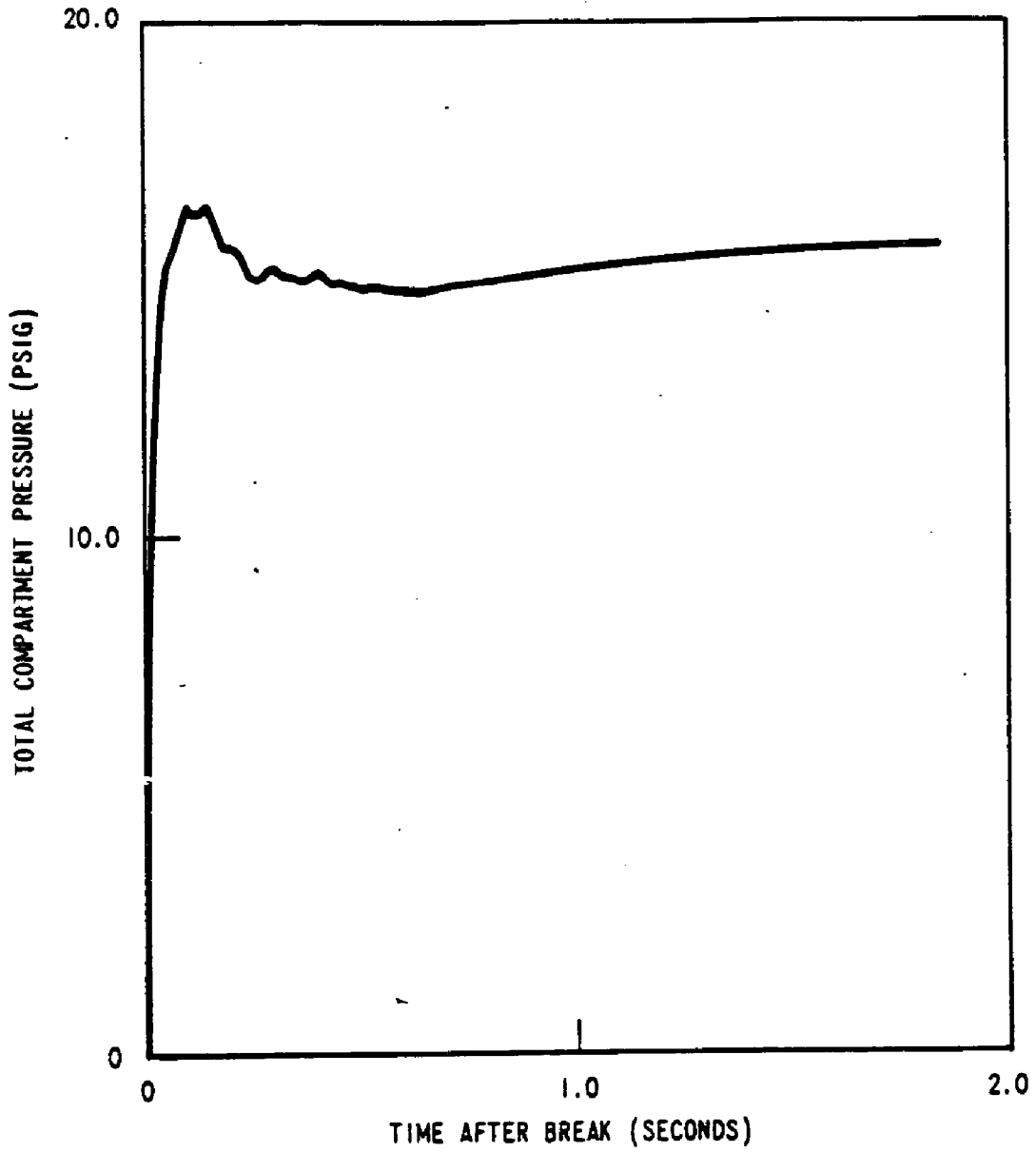


Figure 6-53. Reactor Cavity Analysis Element 6

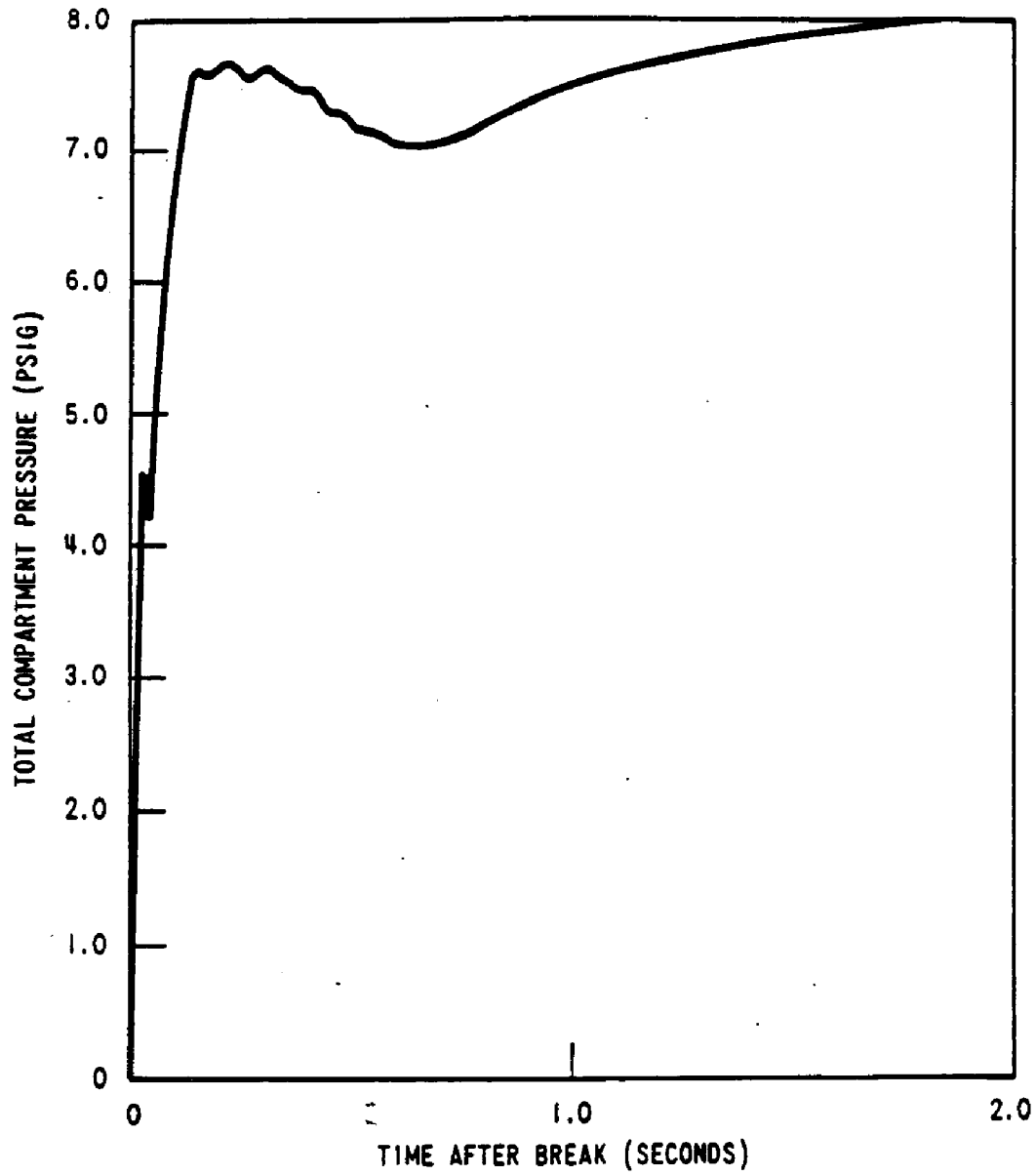


Figure 6-54. Reactor Cavity Analysis Element 7

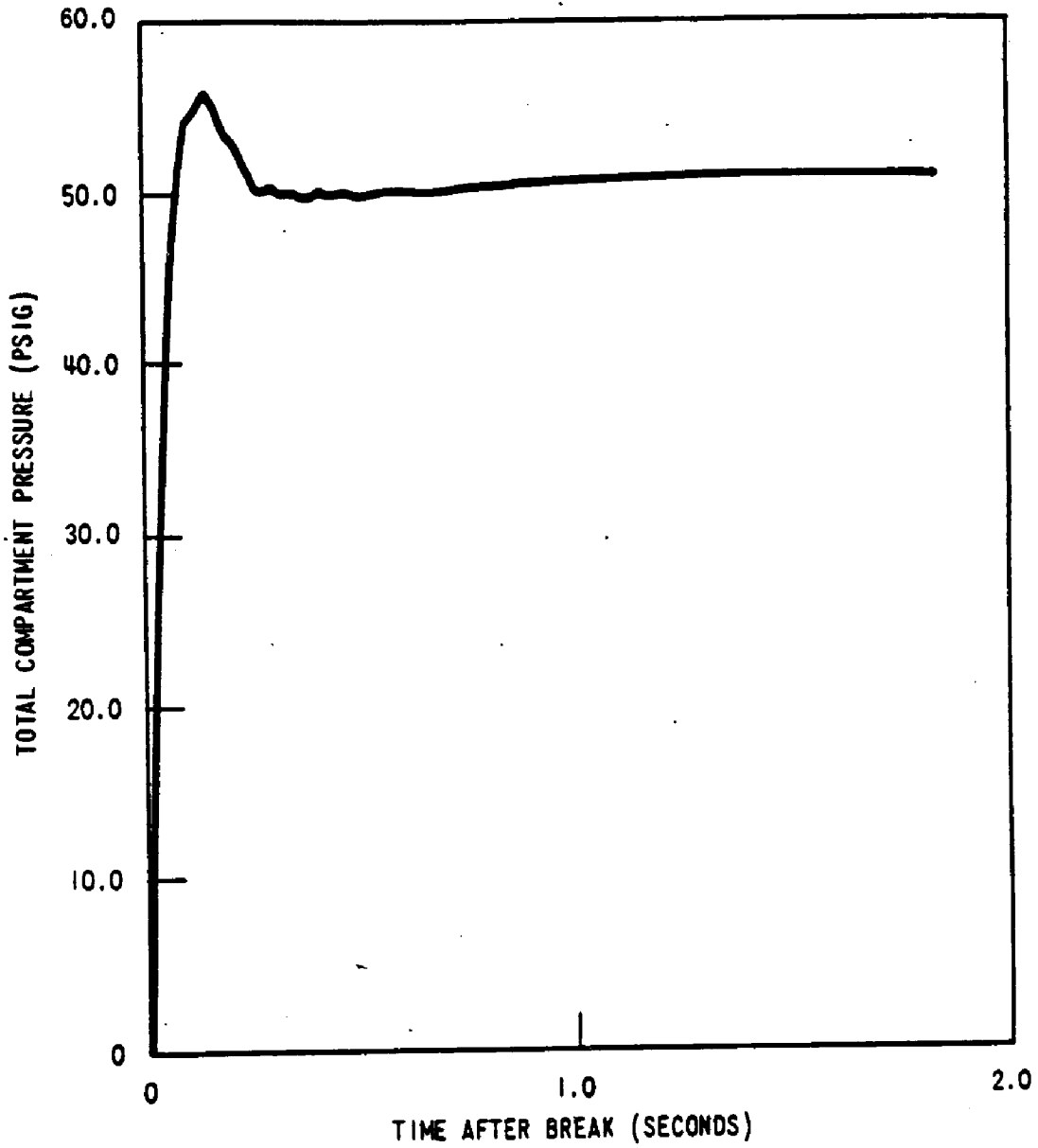


Figure 6-55. Reactor Cavity Analysis Element 8

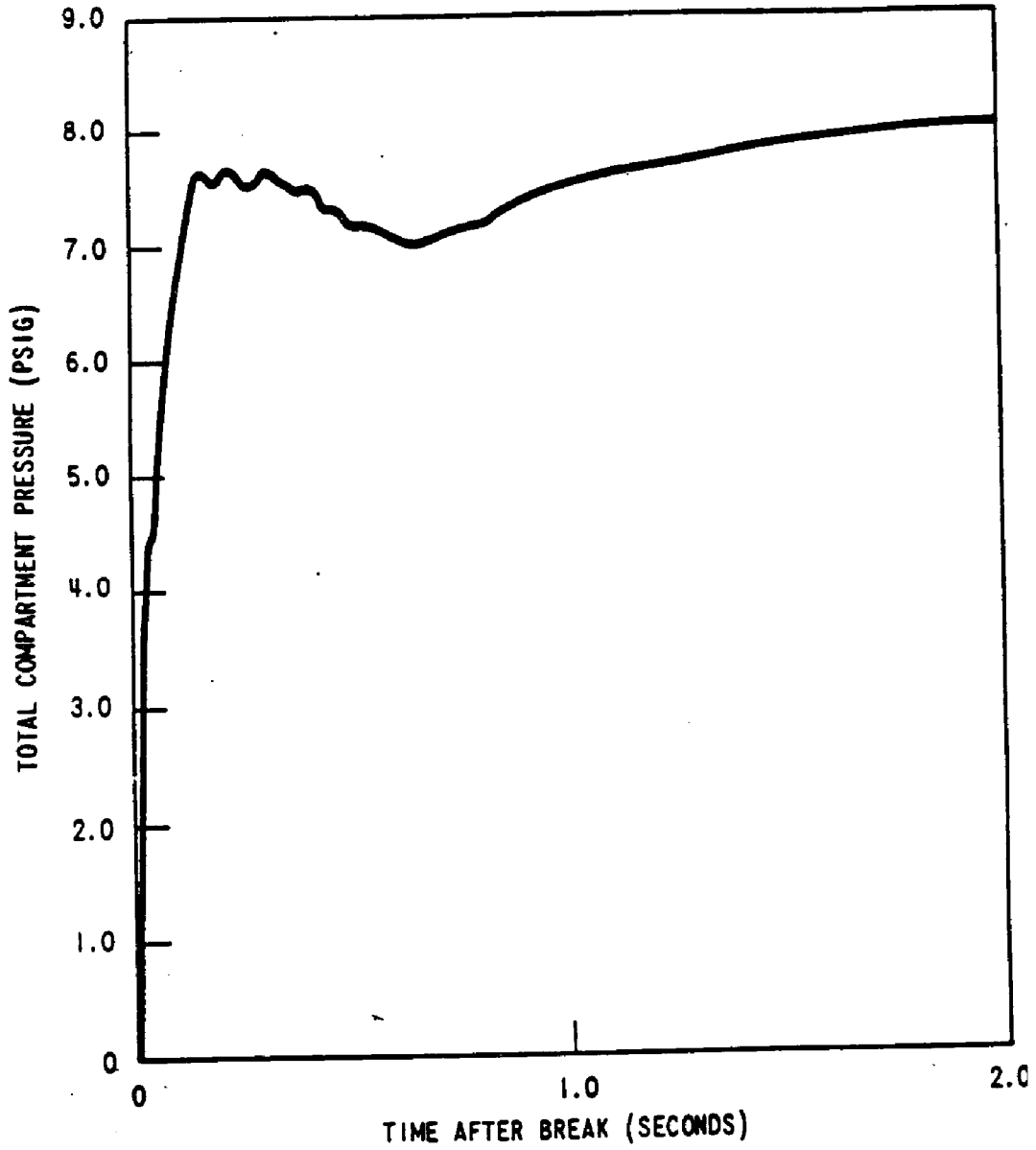


Figure 6-56. Reactor Cavity Analysis Element 9

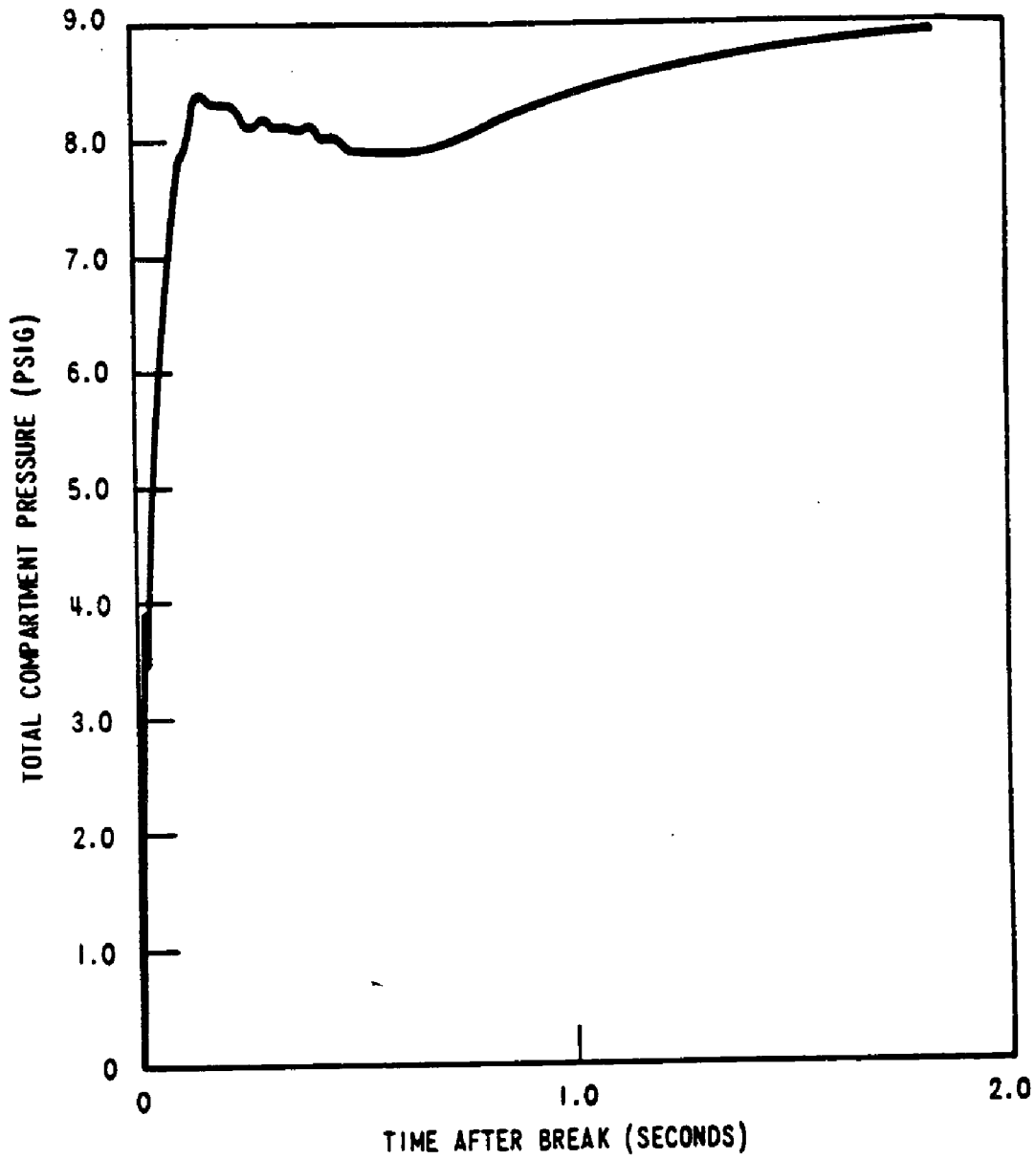


Figure 6-57. Reactor Cavity Analysis Element 10

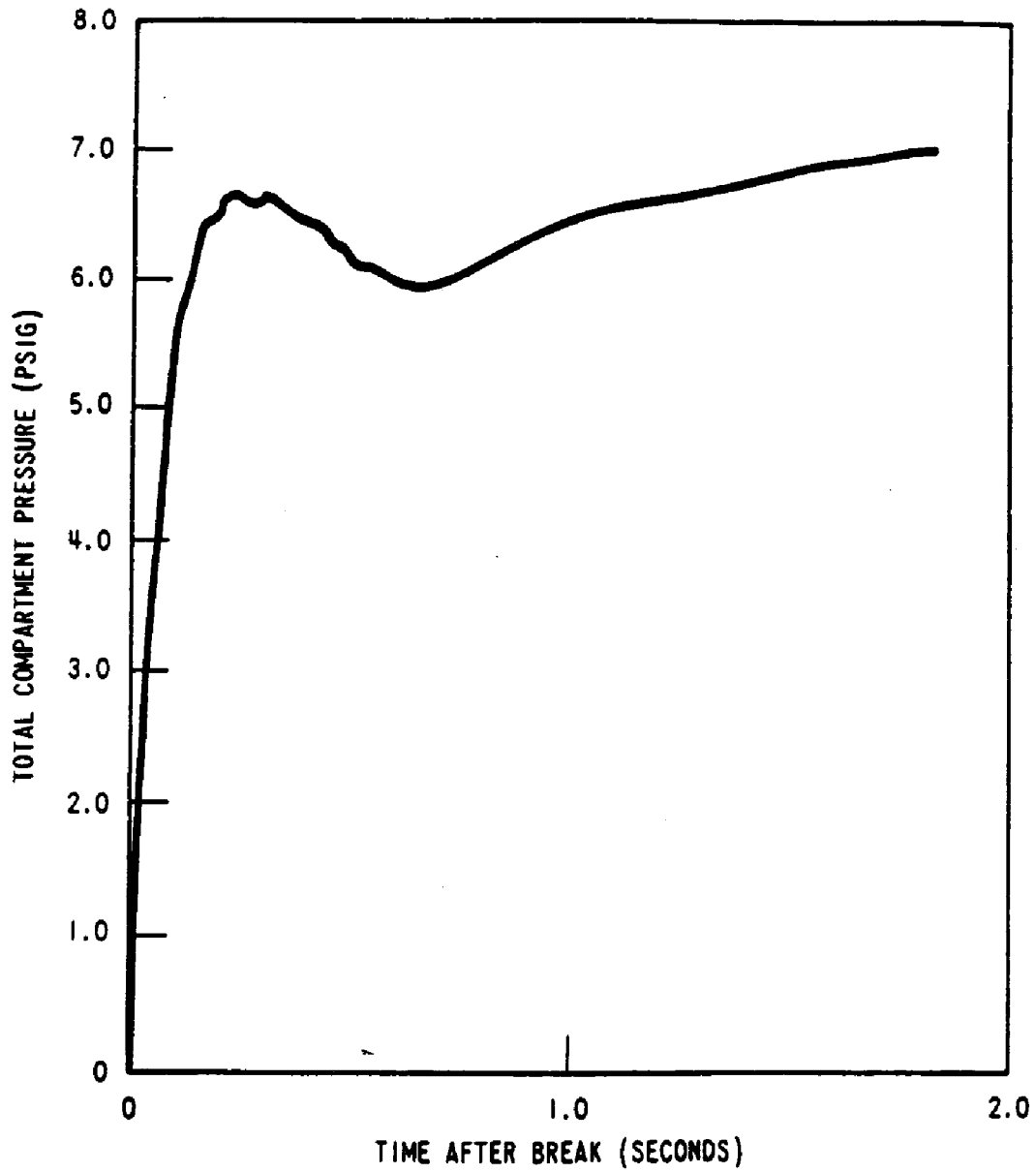


Figure 6-58. Reactor Cavity Analysis Element 11

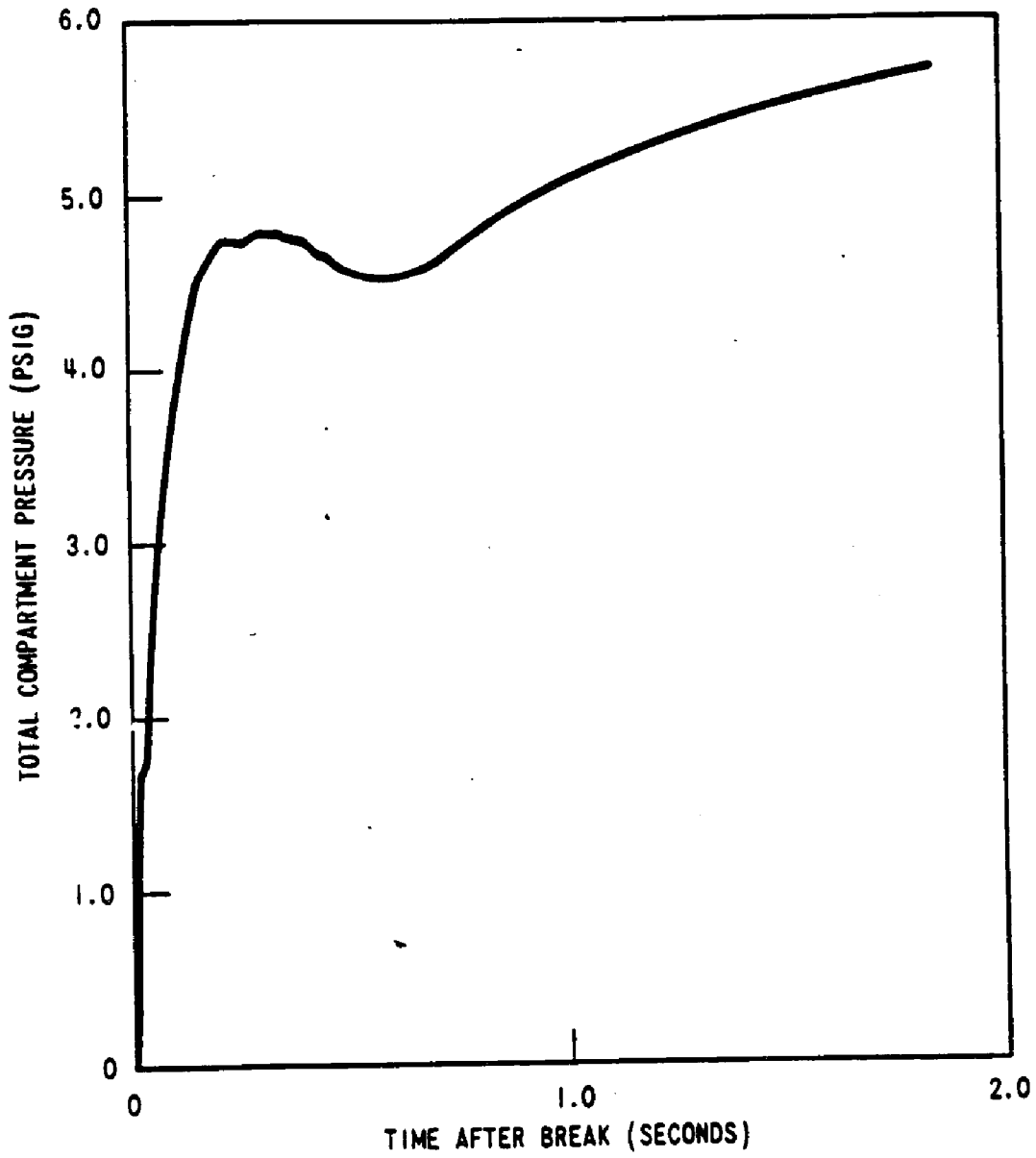


Figure 6-59. Reactor Cavity Analysis Element 12

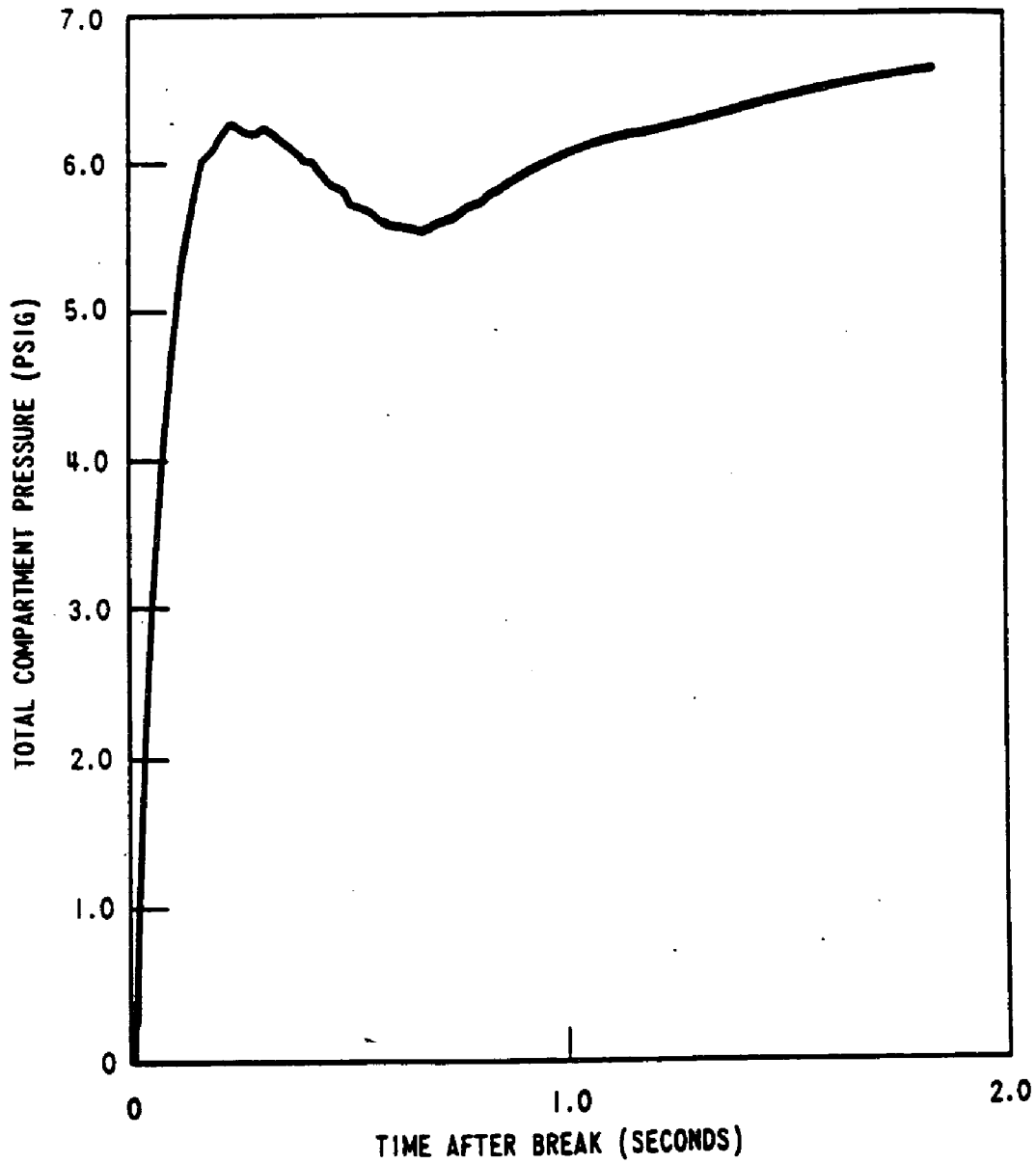


Figure 6-60. Reactor Cavity Analysis Element 13

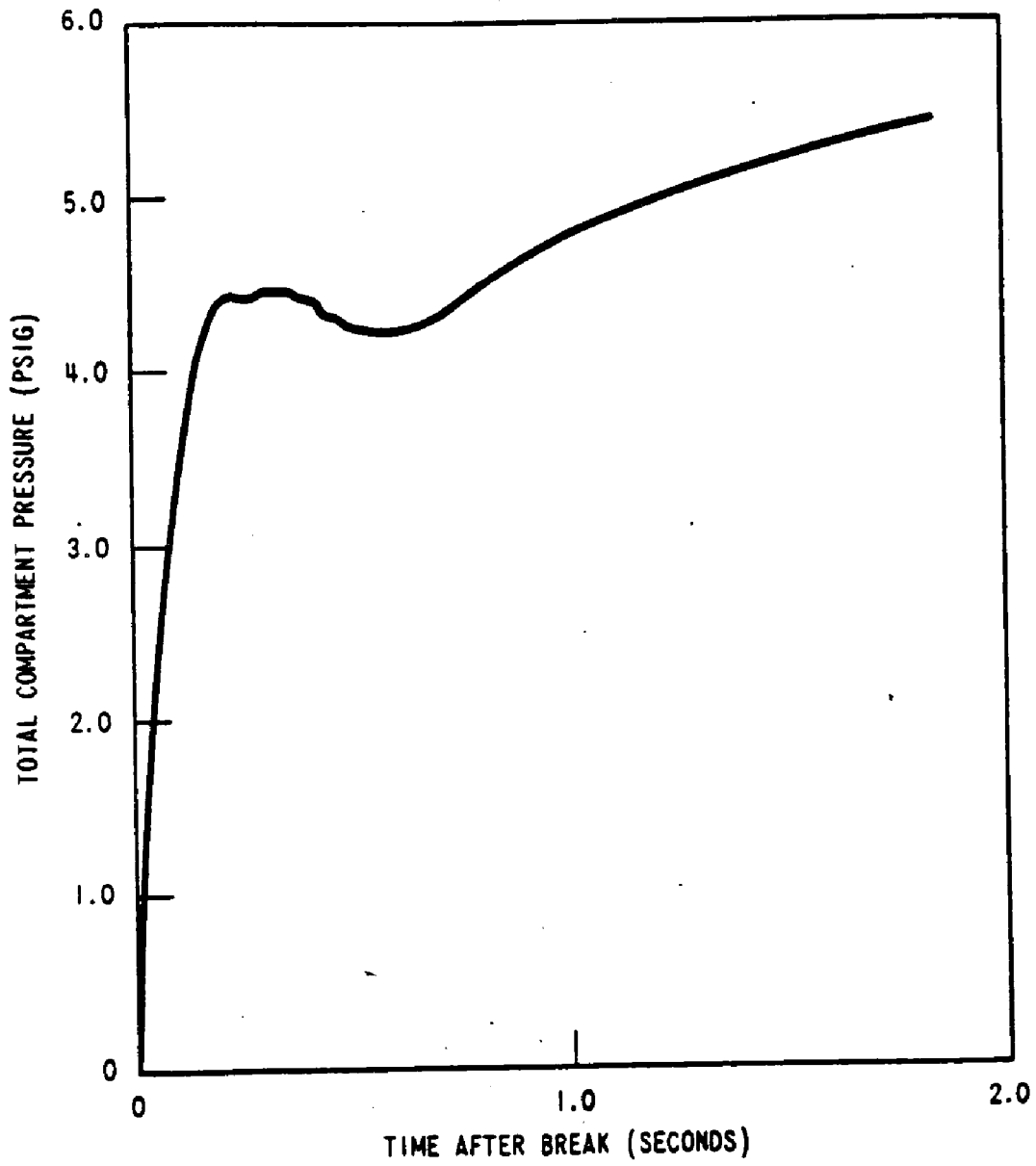


Figure 6-61. Reactor Cavity Analysis Element 14

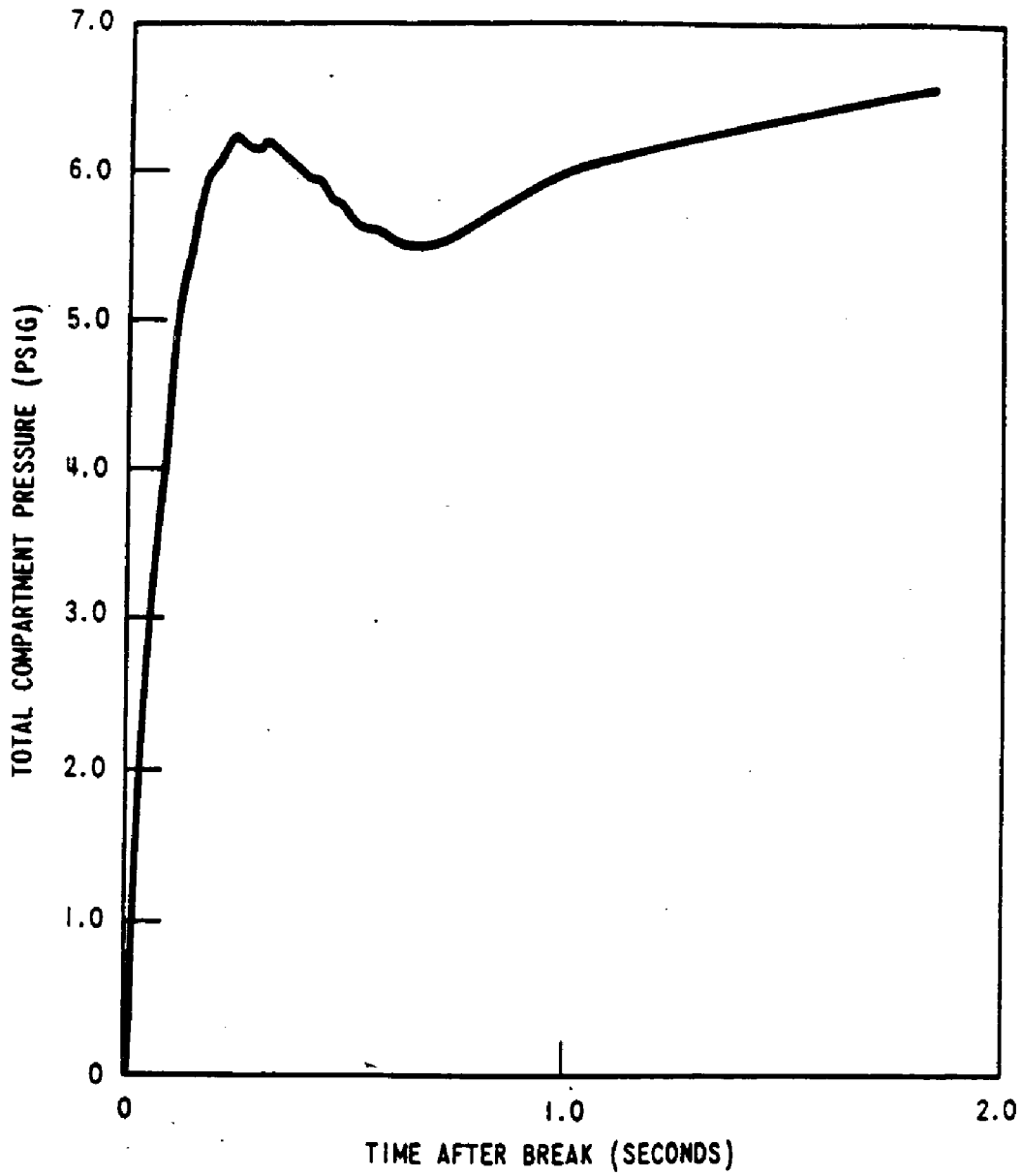


Figure 6-62. Reactor Cavity Analysis Element 15

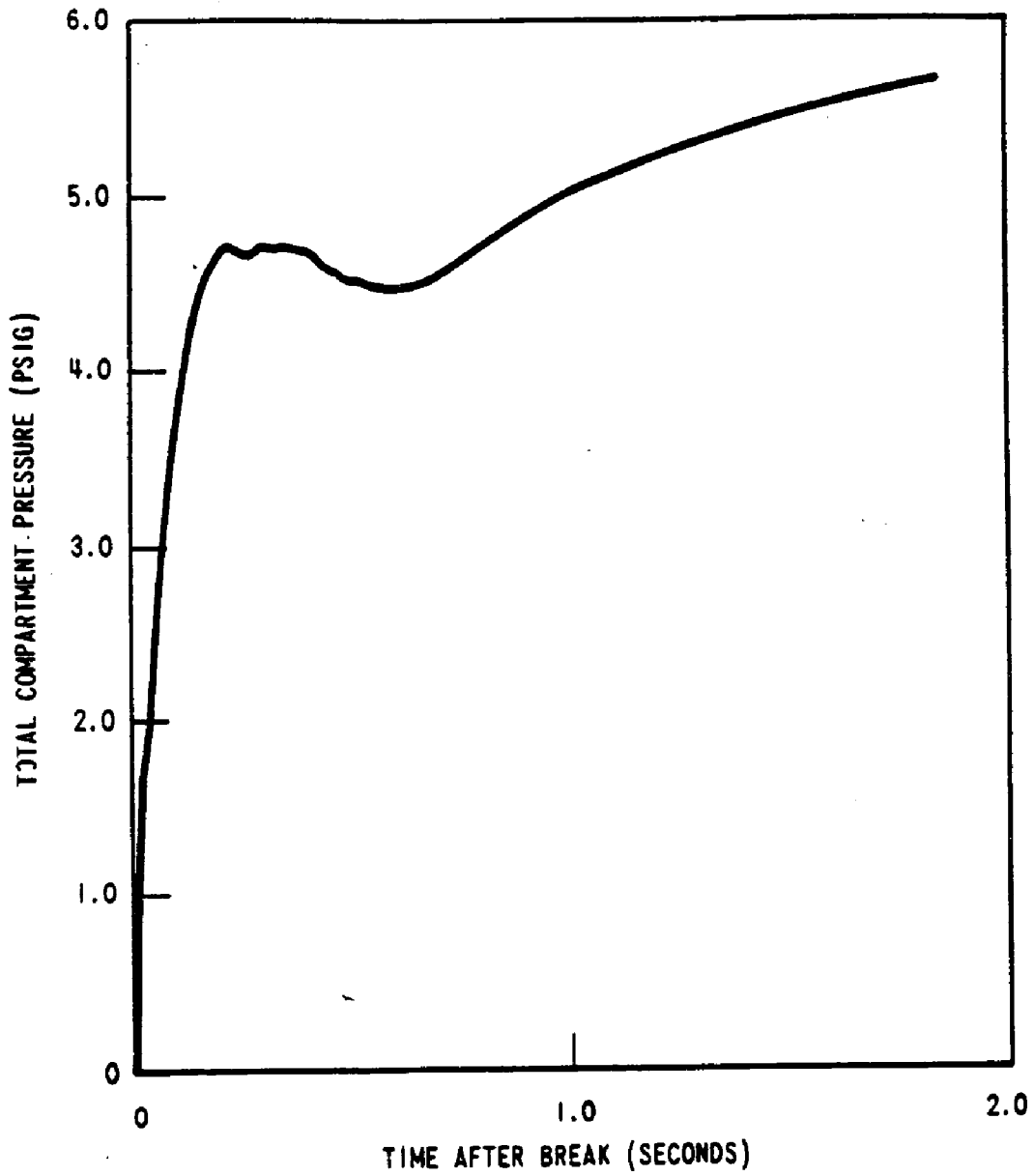


Figure 6-63. Reactor Cavity Analysis Element 16

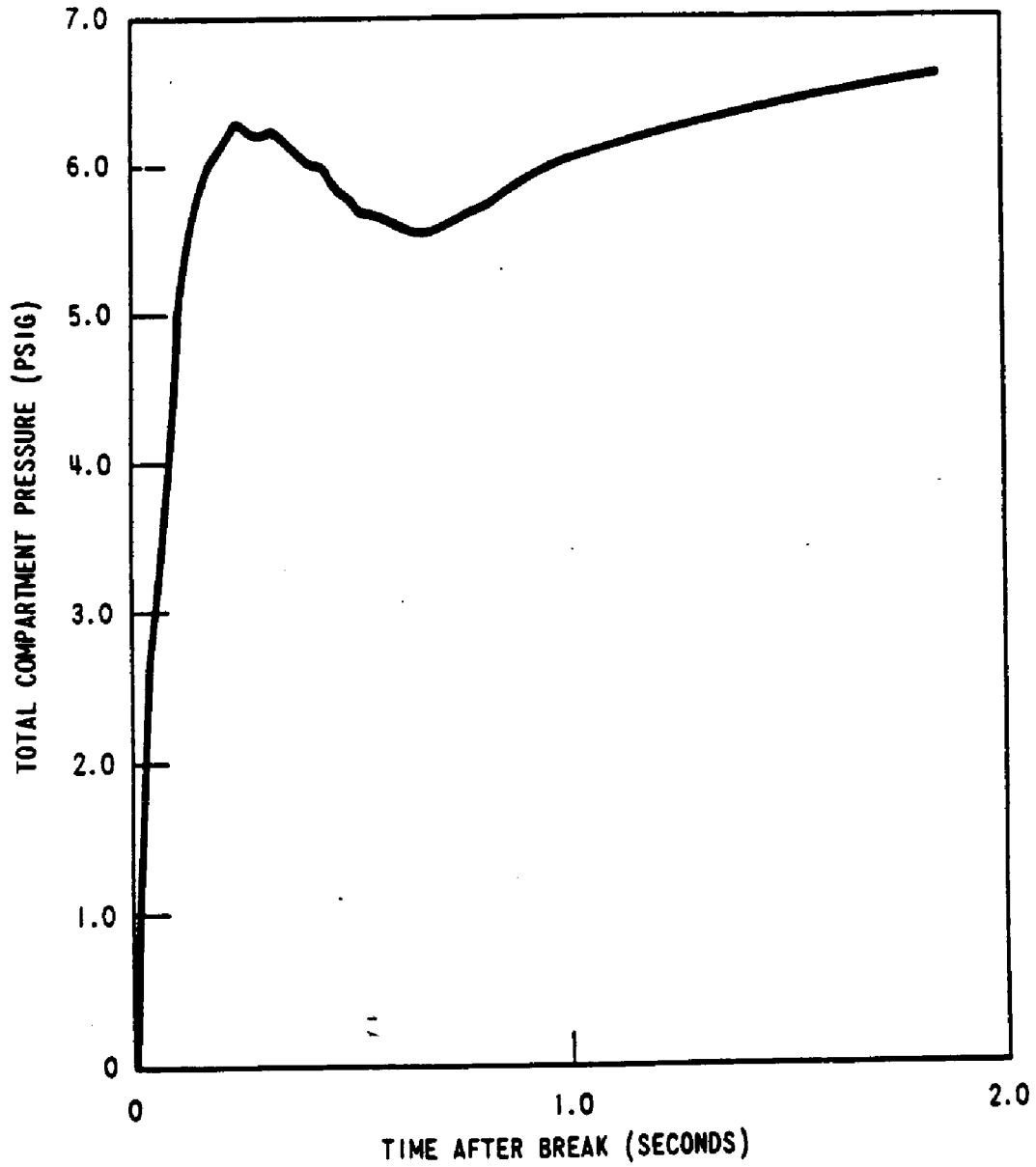


Figure 6-64. Reactor Cavity Analysis Element 17

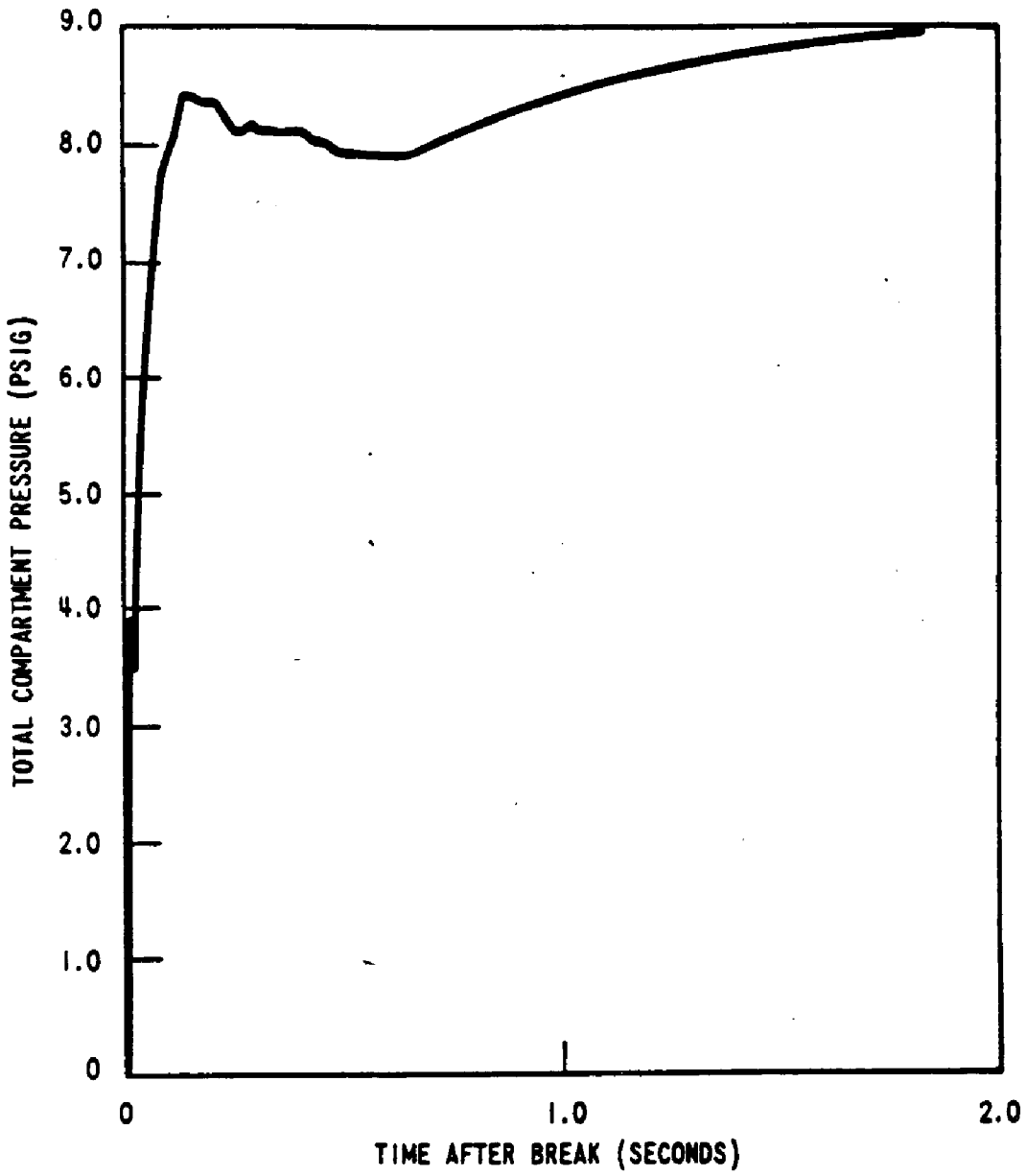


Figure 6-65. Reactor Cavity Analysis Element 18

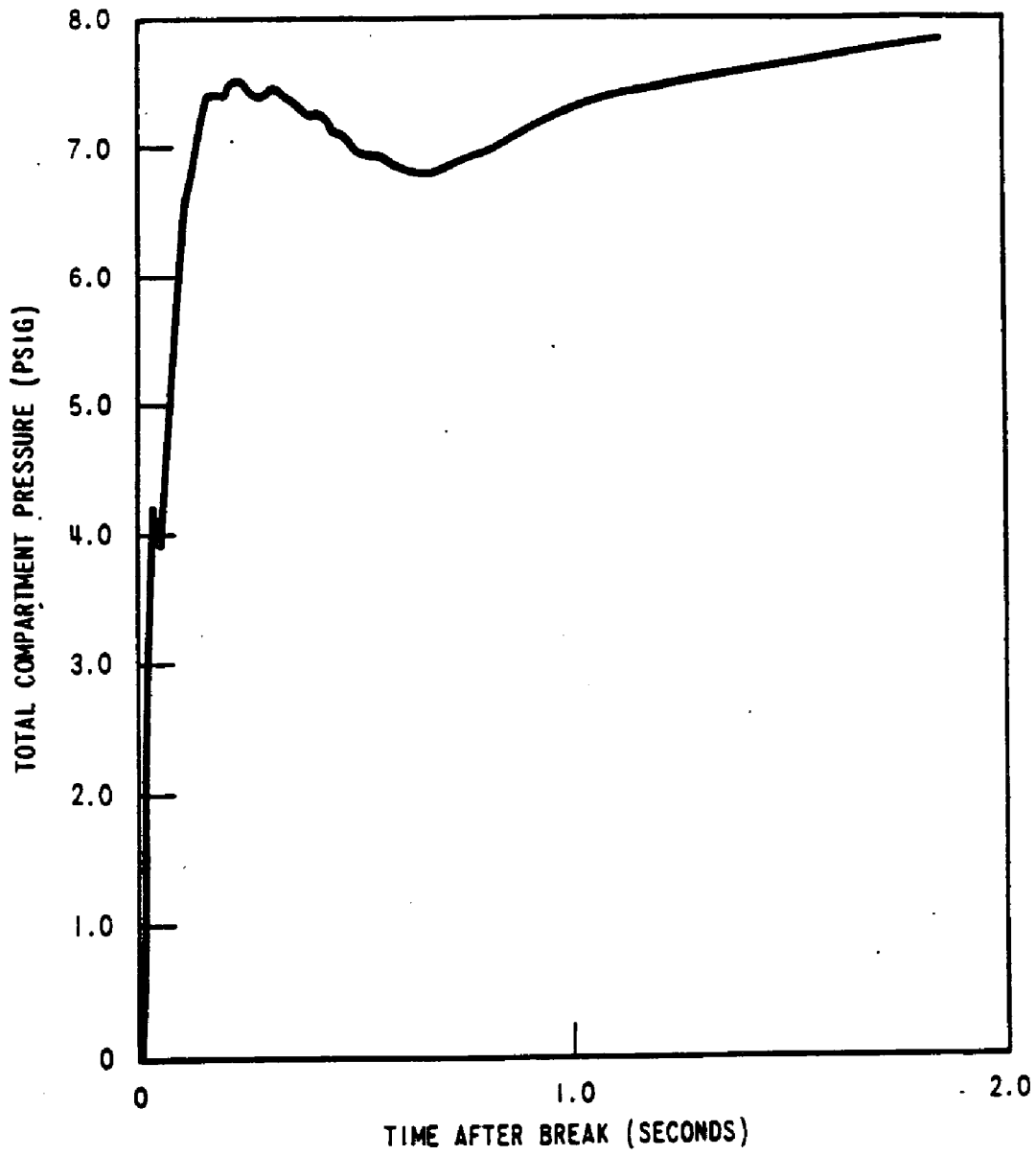


Figure 6-66. Reactor Cavity Analysis Element 19

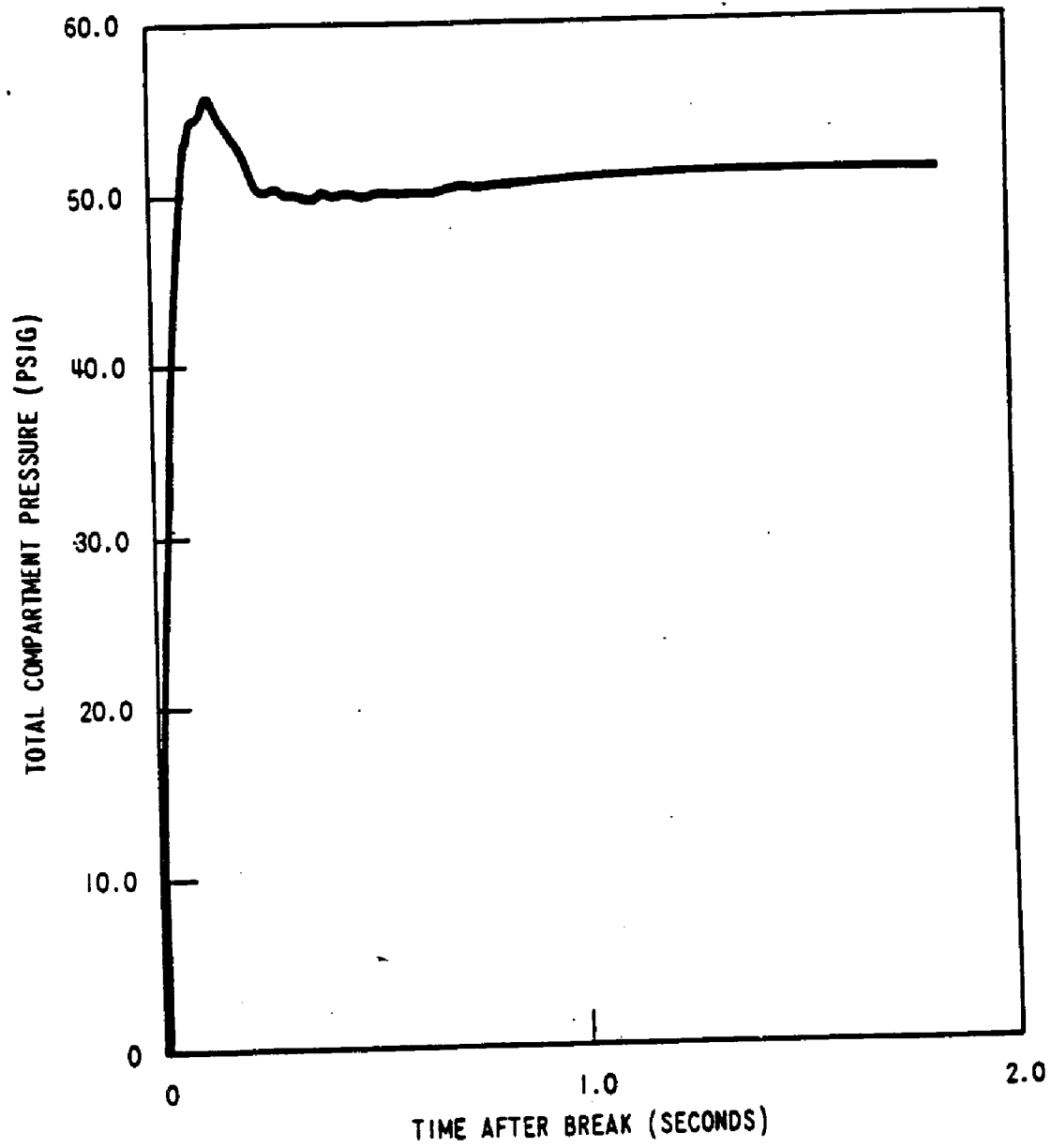


Figure 6-67. Reactor Cavity Analysis Element 20

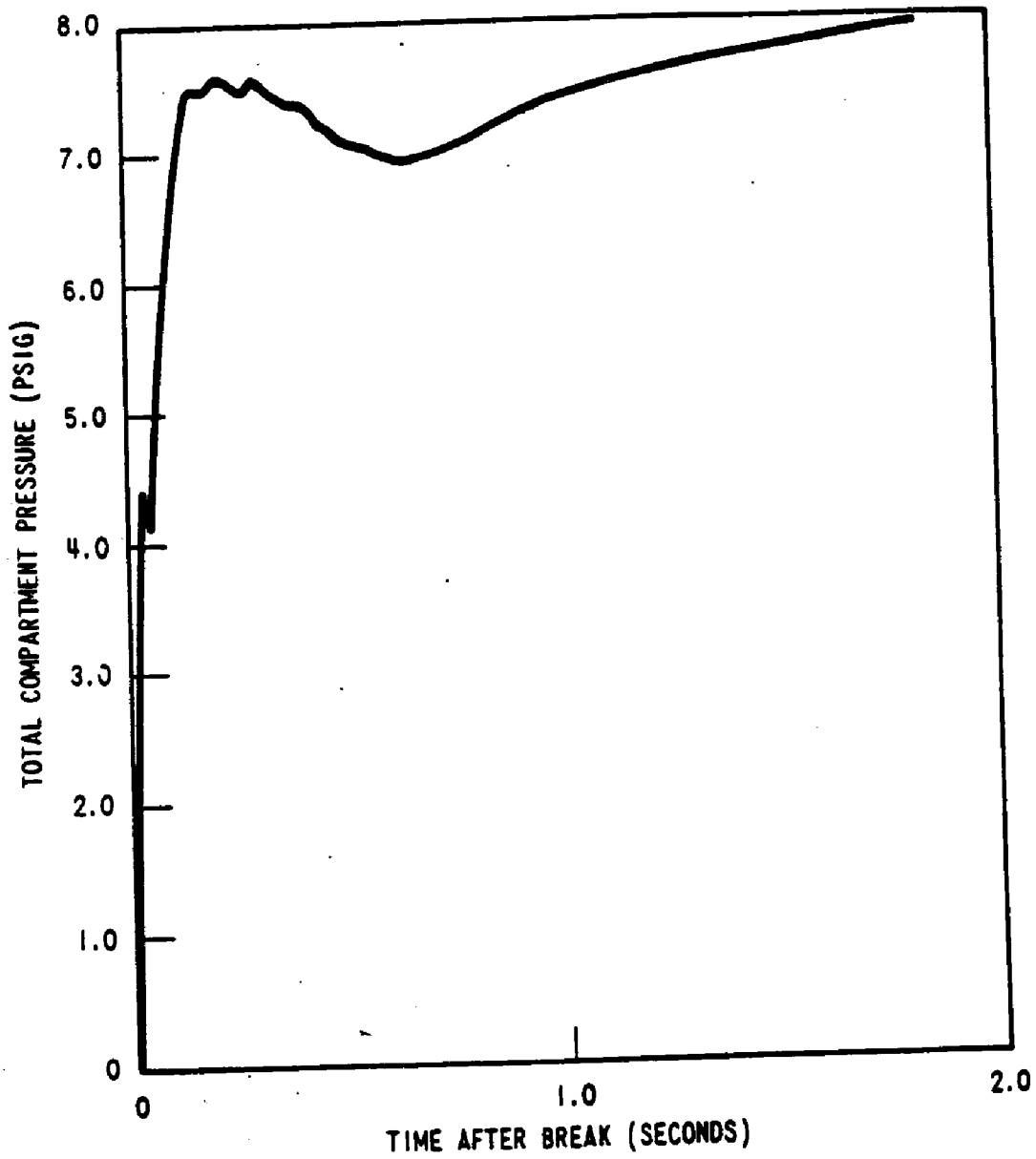


Figure 6-68. Reactor Cavity Analysis Element 21

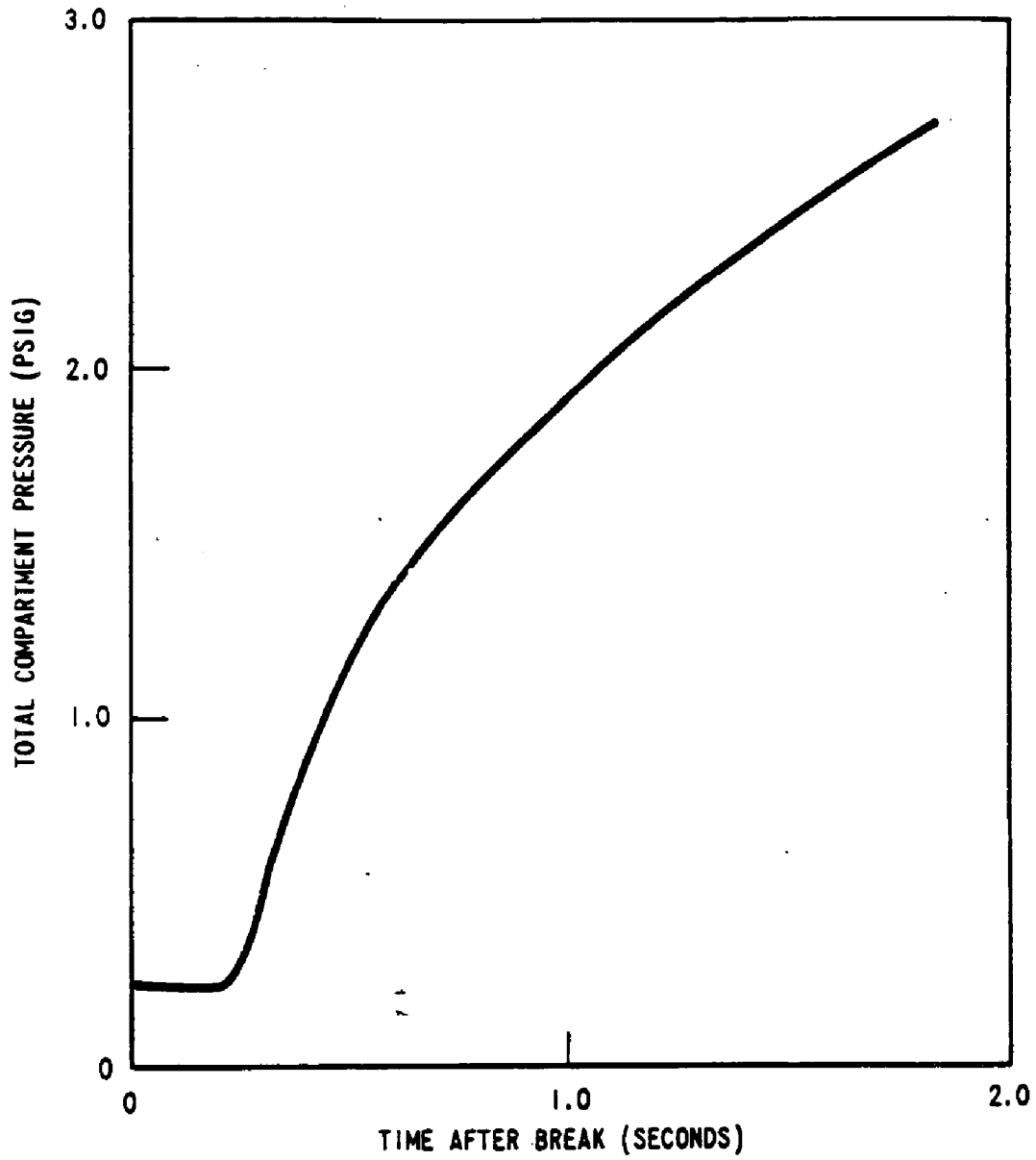


Figure 6-69. Reactor Cavity Analysis Element 22

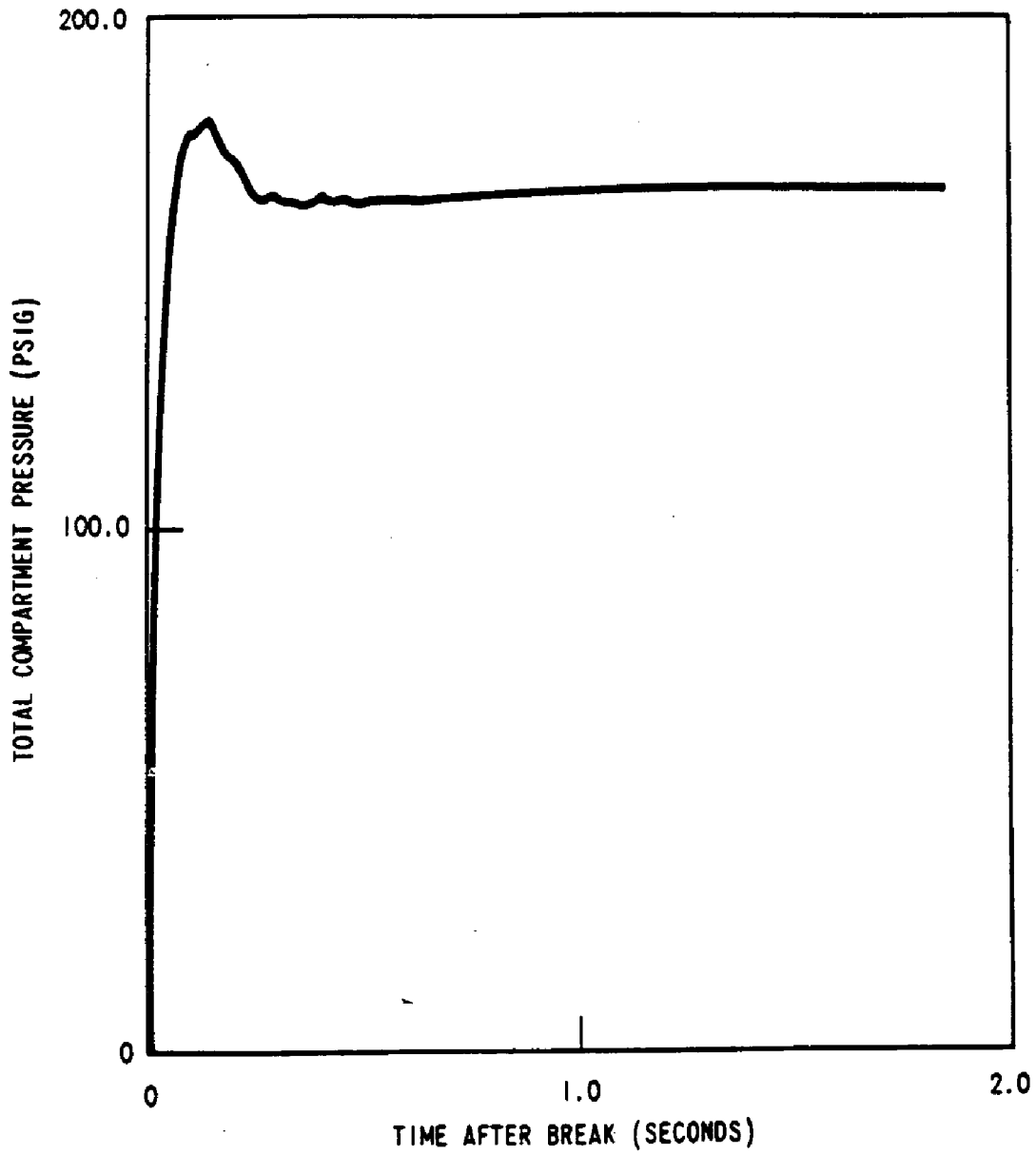


Figure 6-70. Reactor Cavity Analysis Element 23

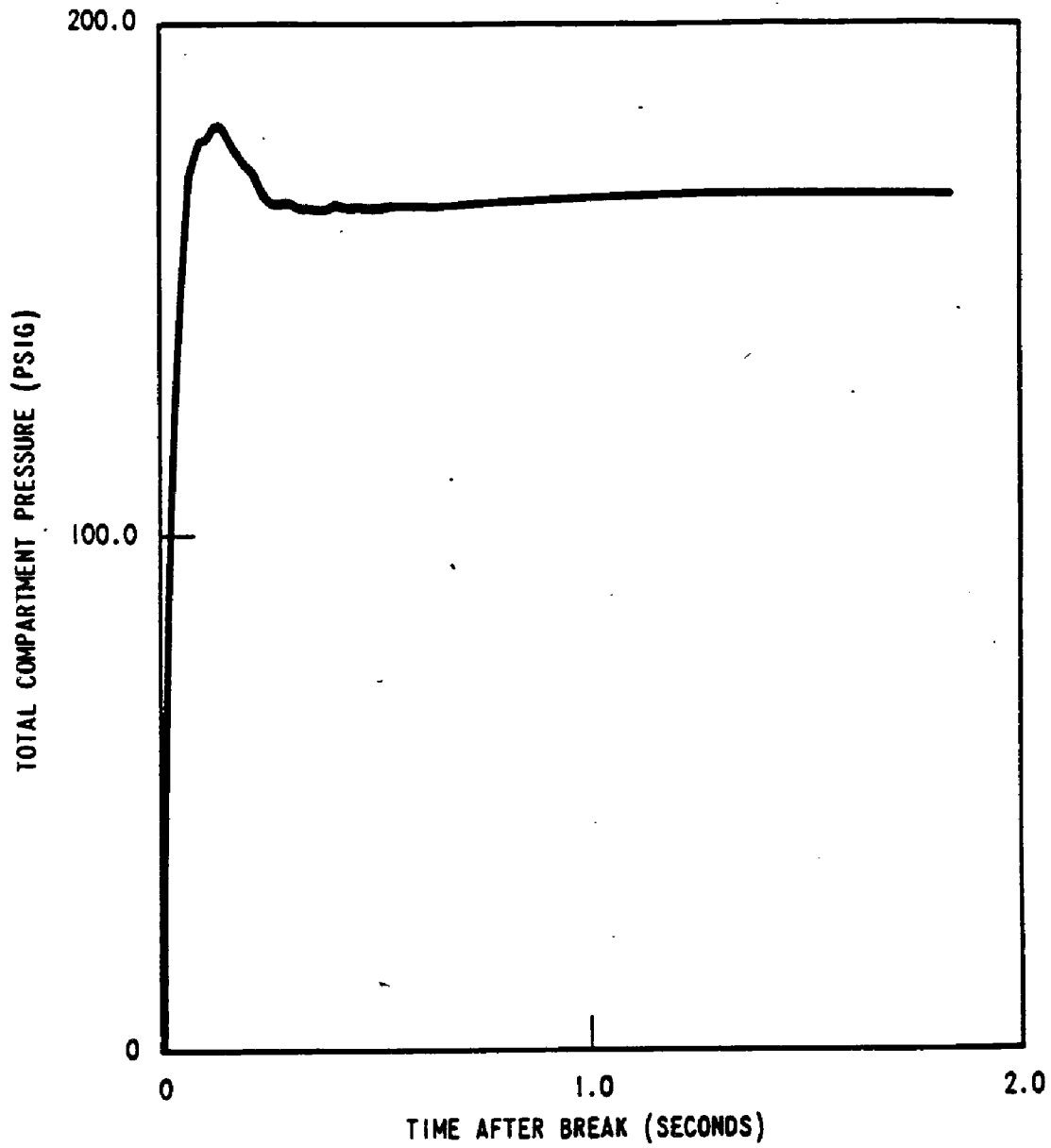


Figure 6-71. Reactor Cavity Analysis Element 24

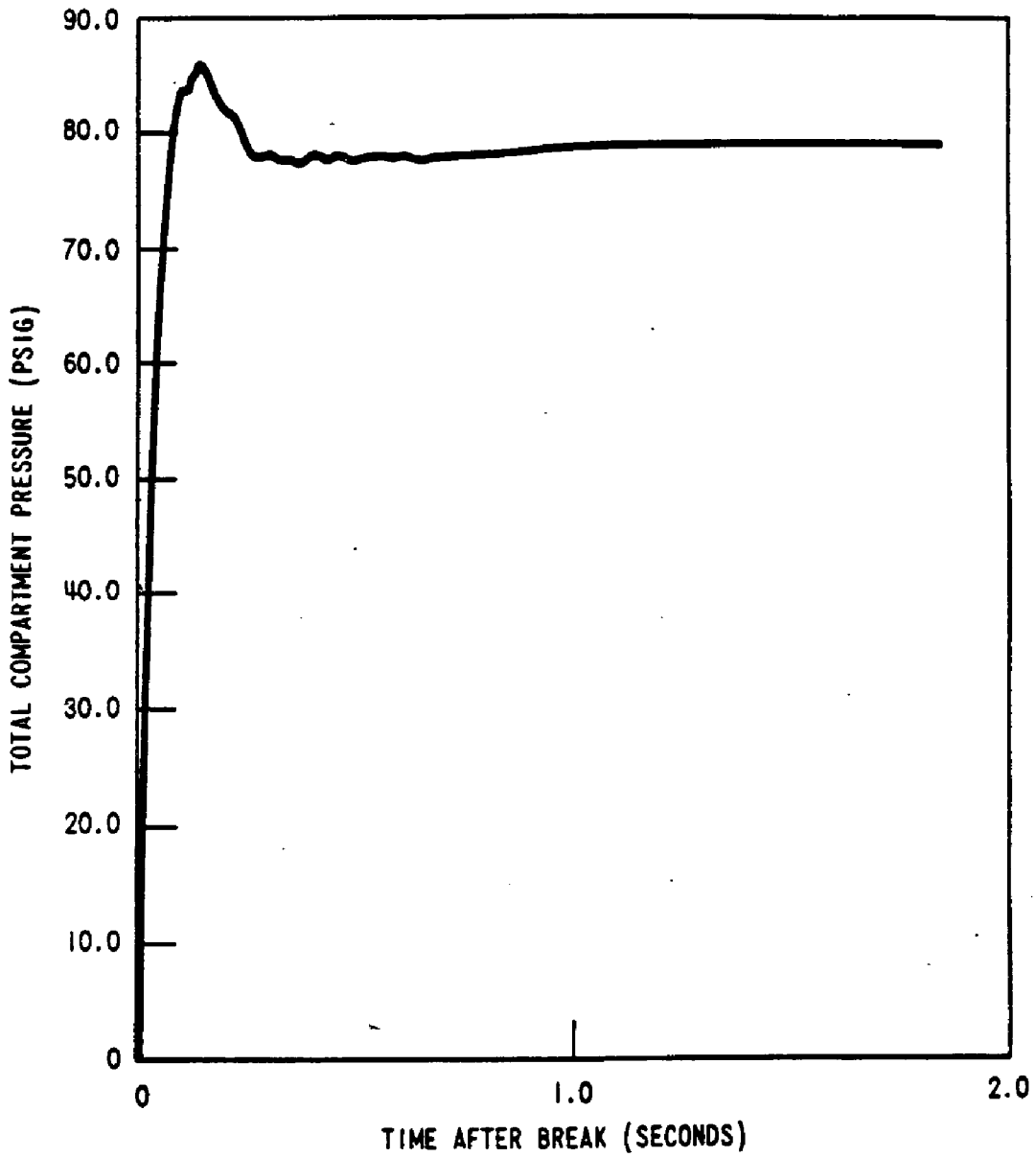


Figure 6-72. Reactor Cavity Analysis Element 25

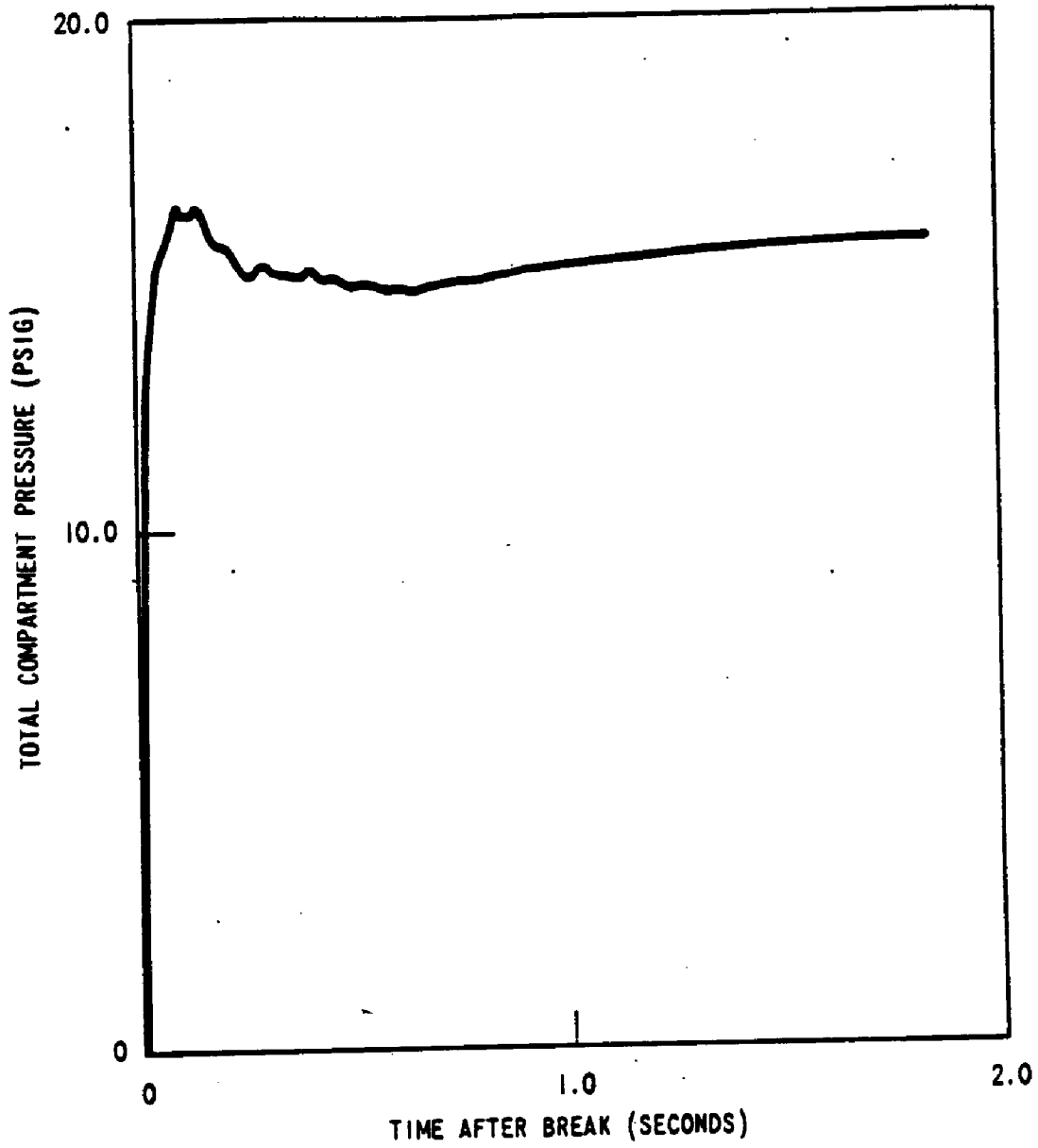


Figure 6-73. Reactor Cavity Analysis Element 26

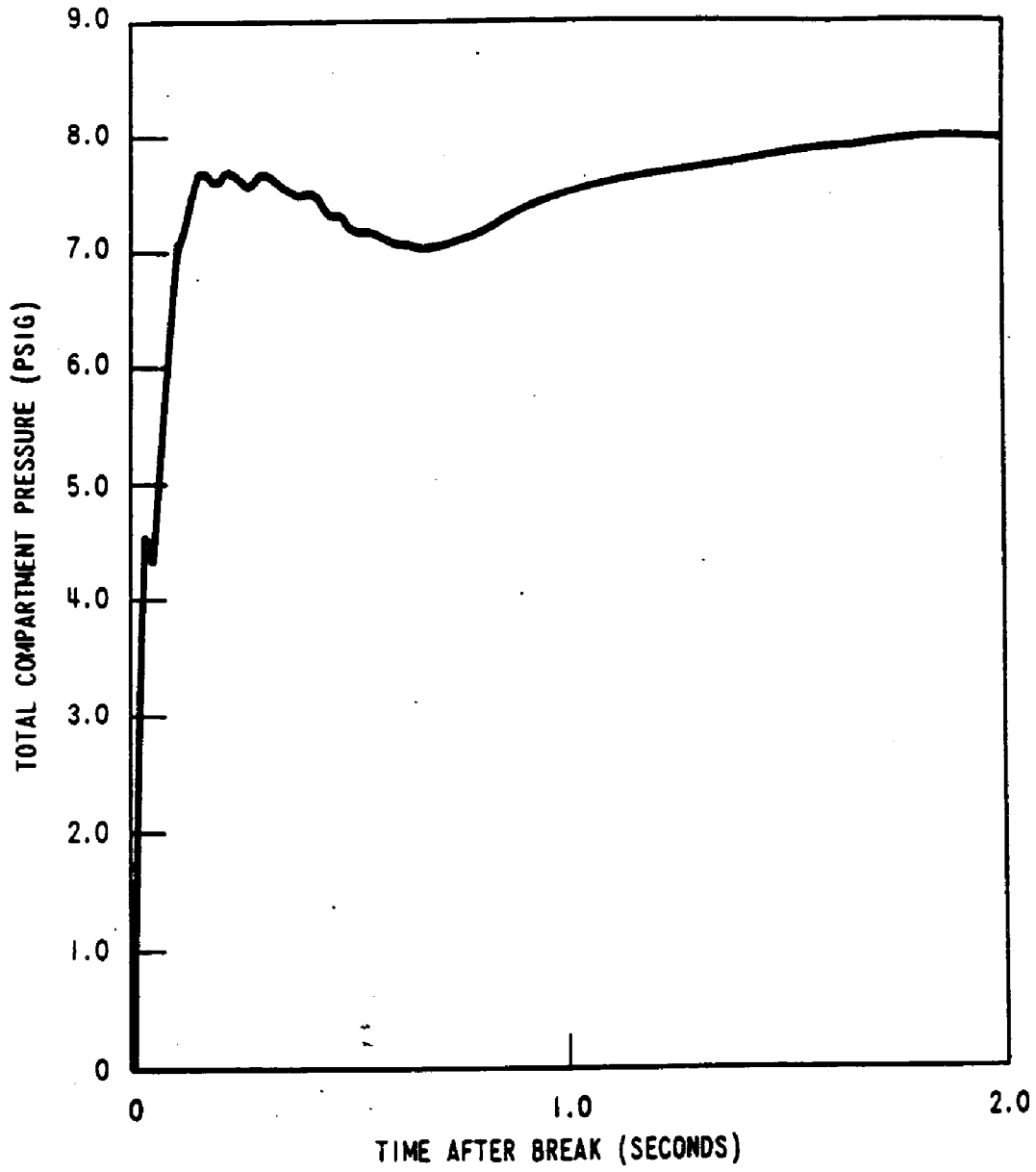


Figure 6-74. Reactor Cavity Analysis Element 27

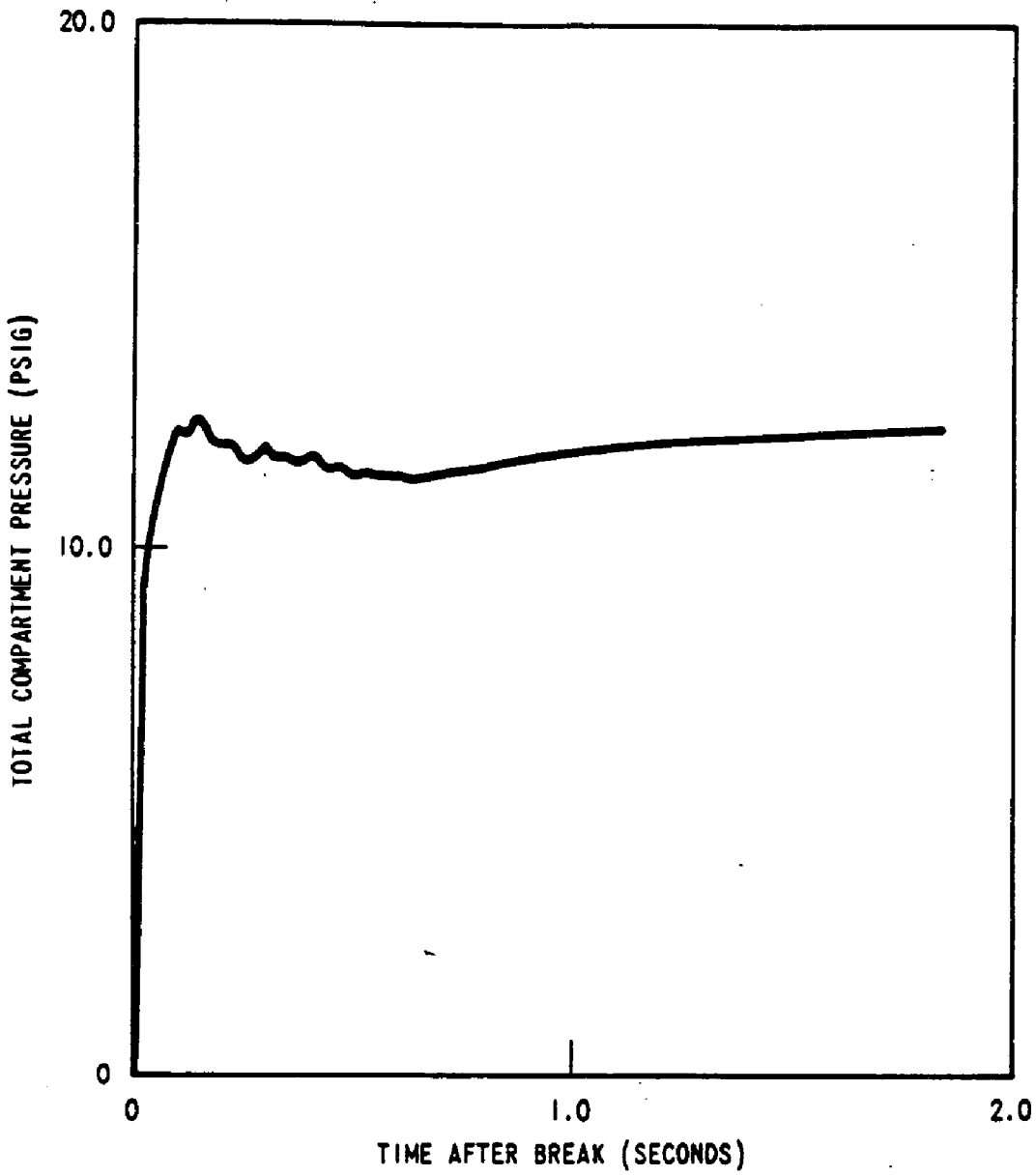


Figure 6-75. Reactor Cavity Analysis Element 28

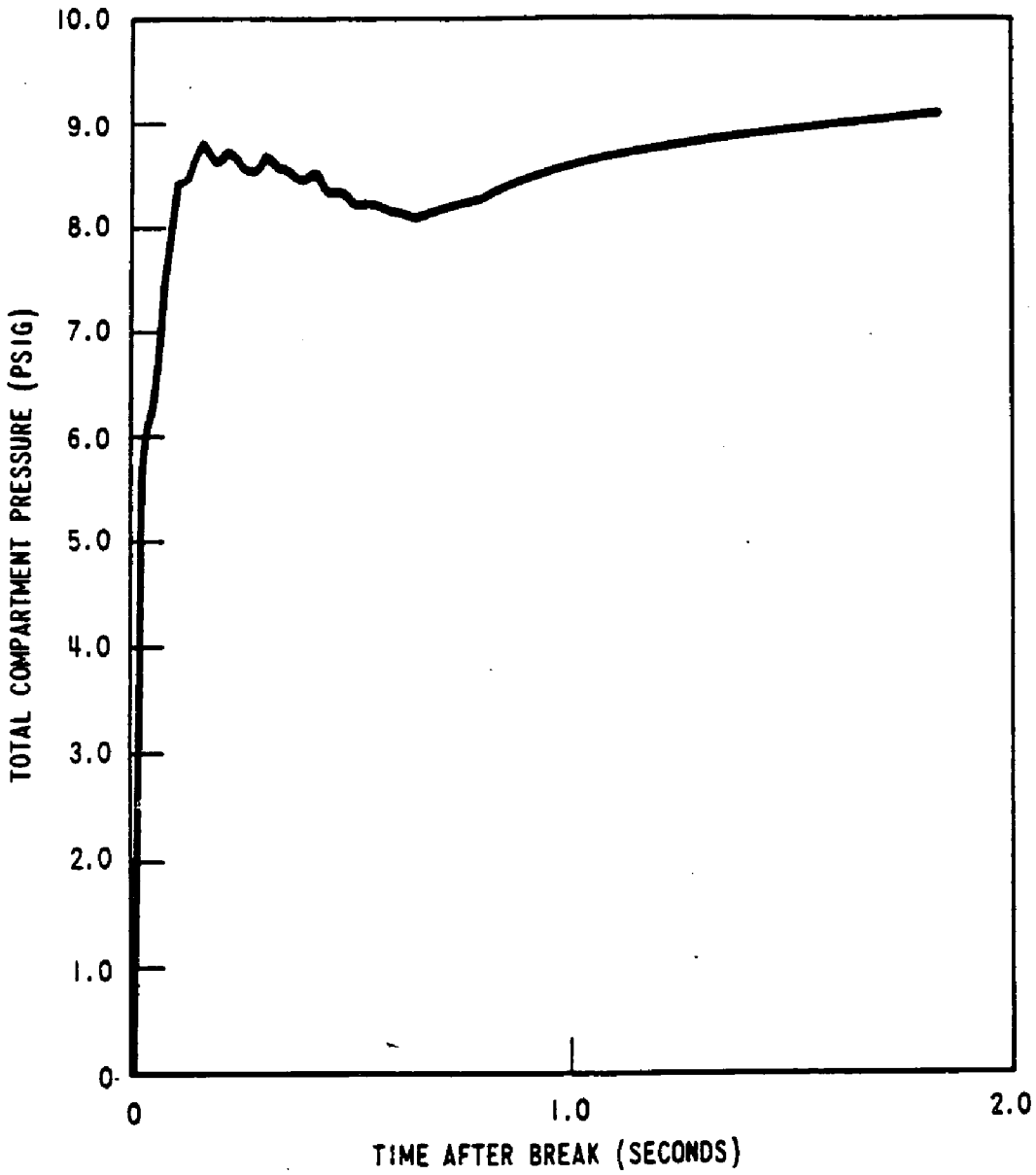


Figure 6-76. Reactor Cavity Analysis Element 29

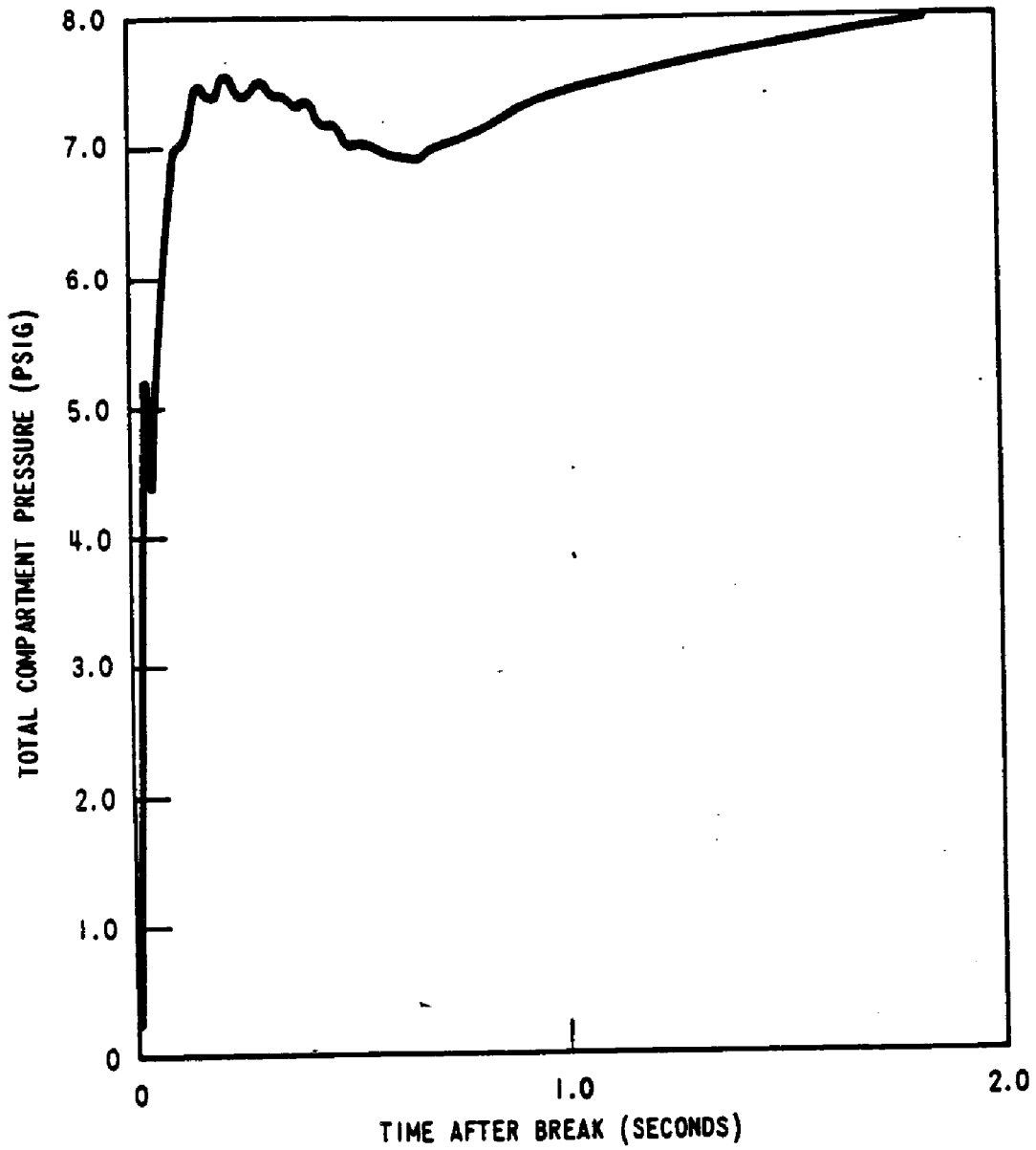


Figure 6-77. Reactor Cavity Analysis Element 30

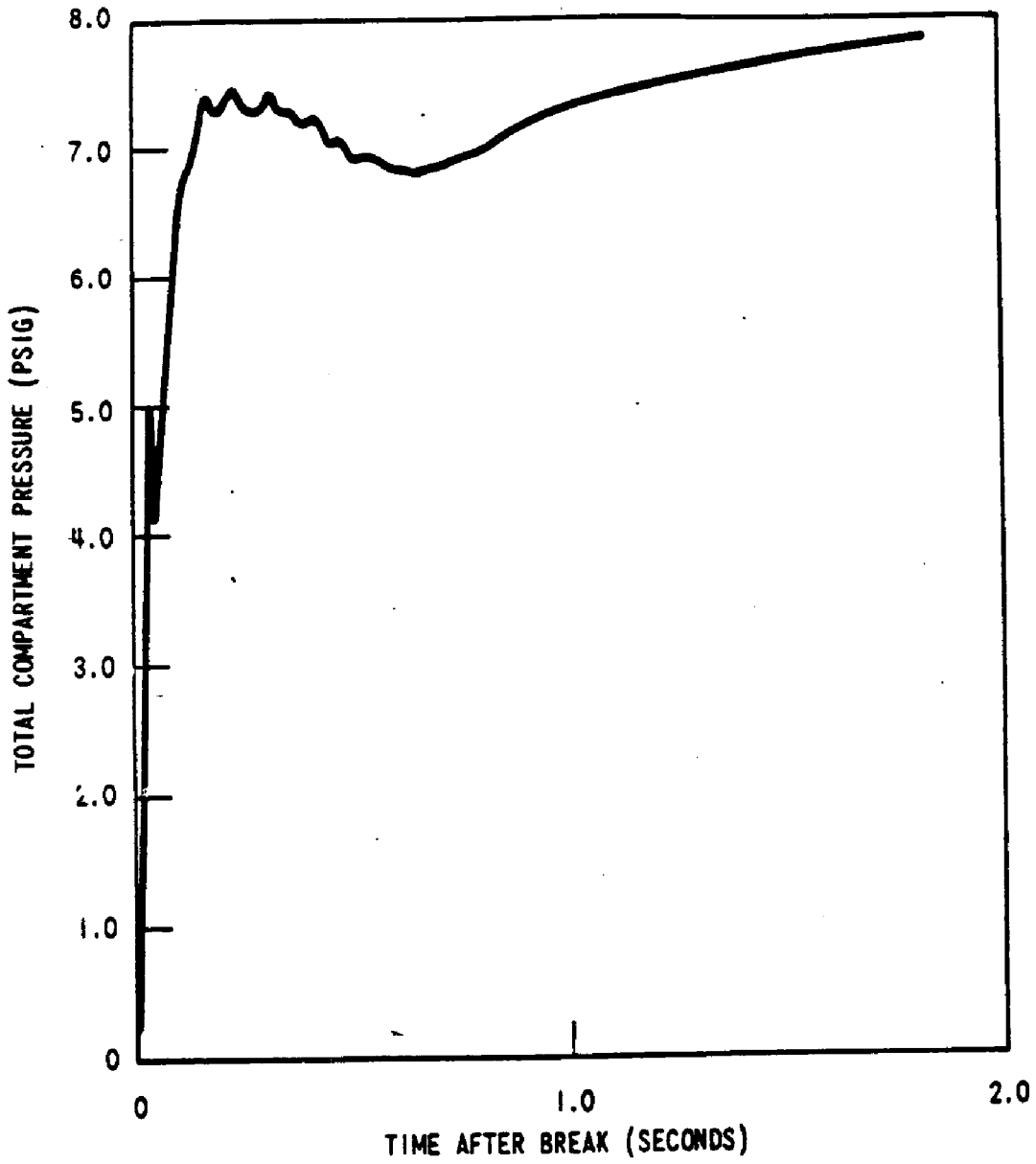


Figure 6-78. Reactor Cavity Analysis Element 31

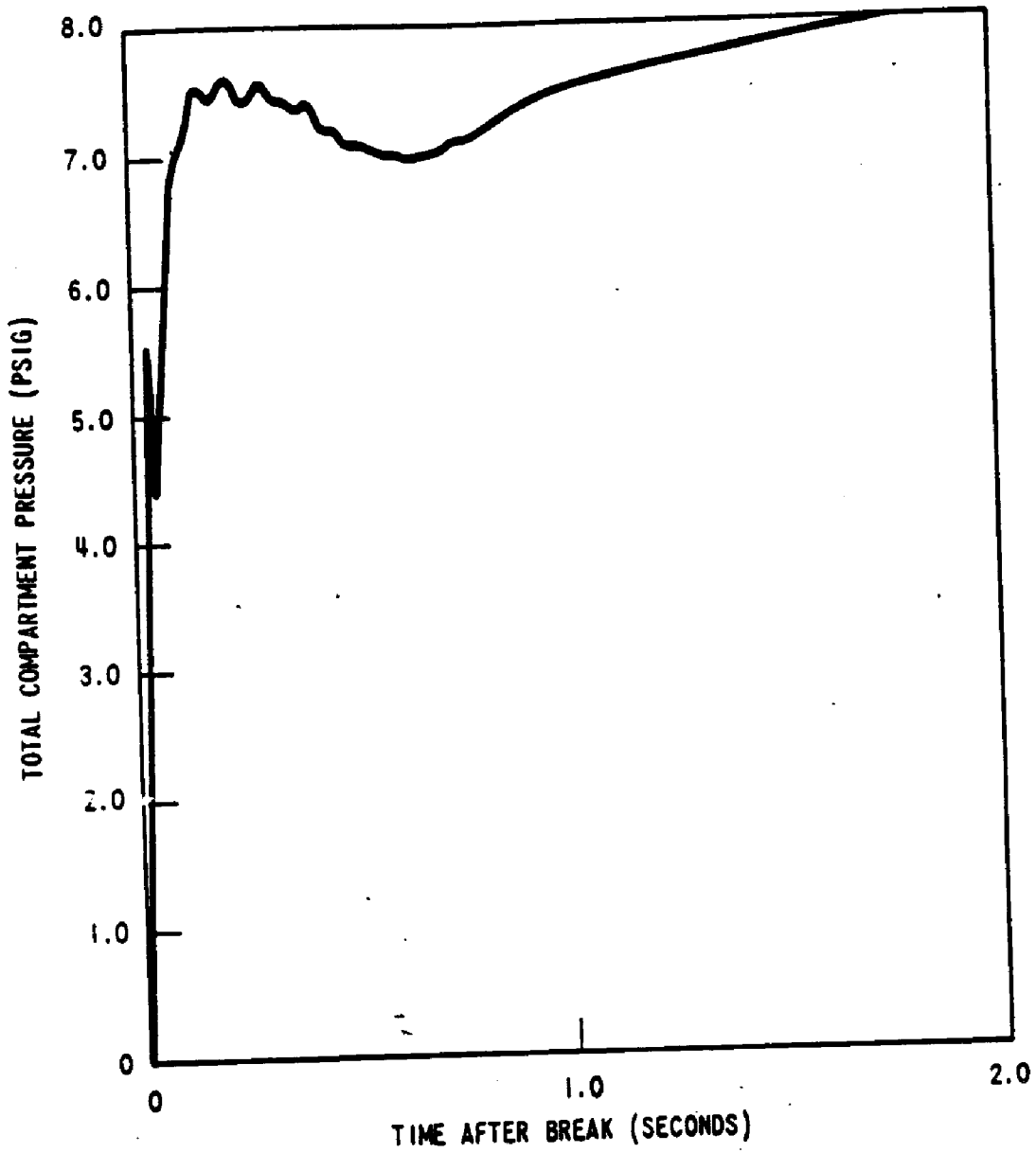


Figure 6-79. Reactor Cavity Analysis Element 32

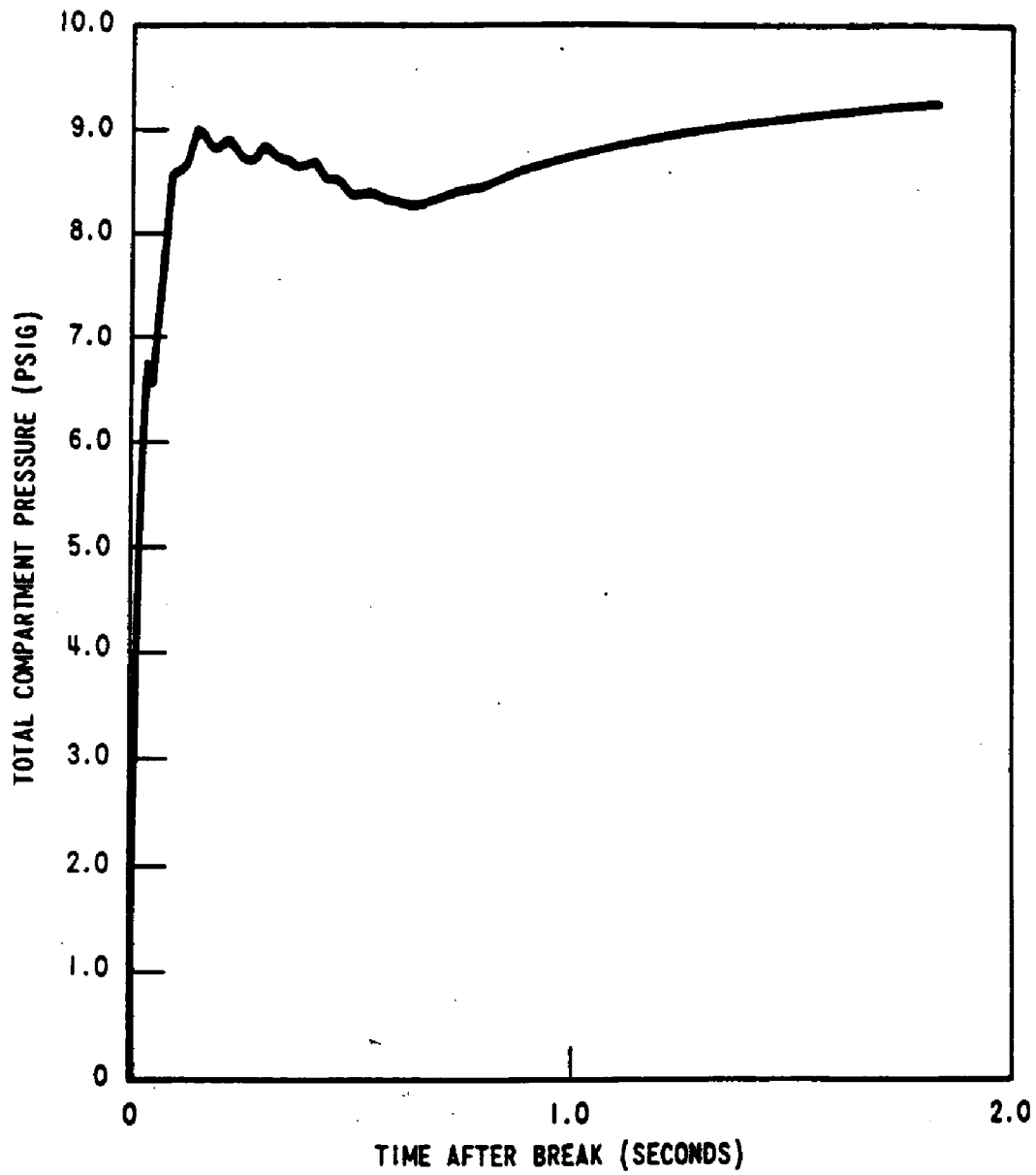


Figure 6-80. Reactor Cavity Analysis Element 33

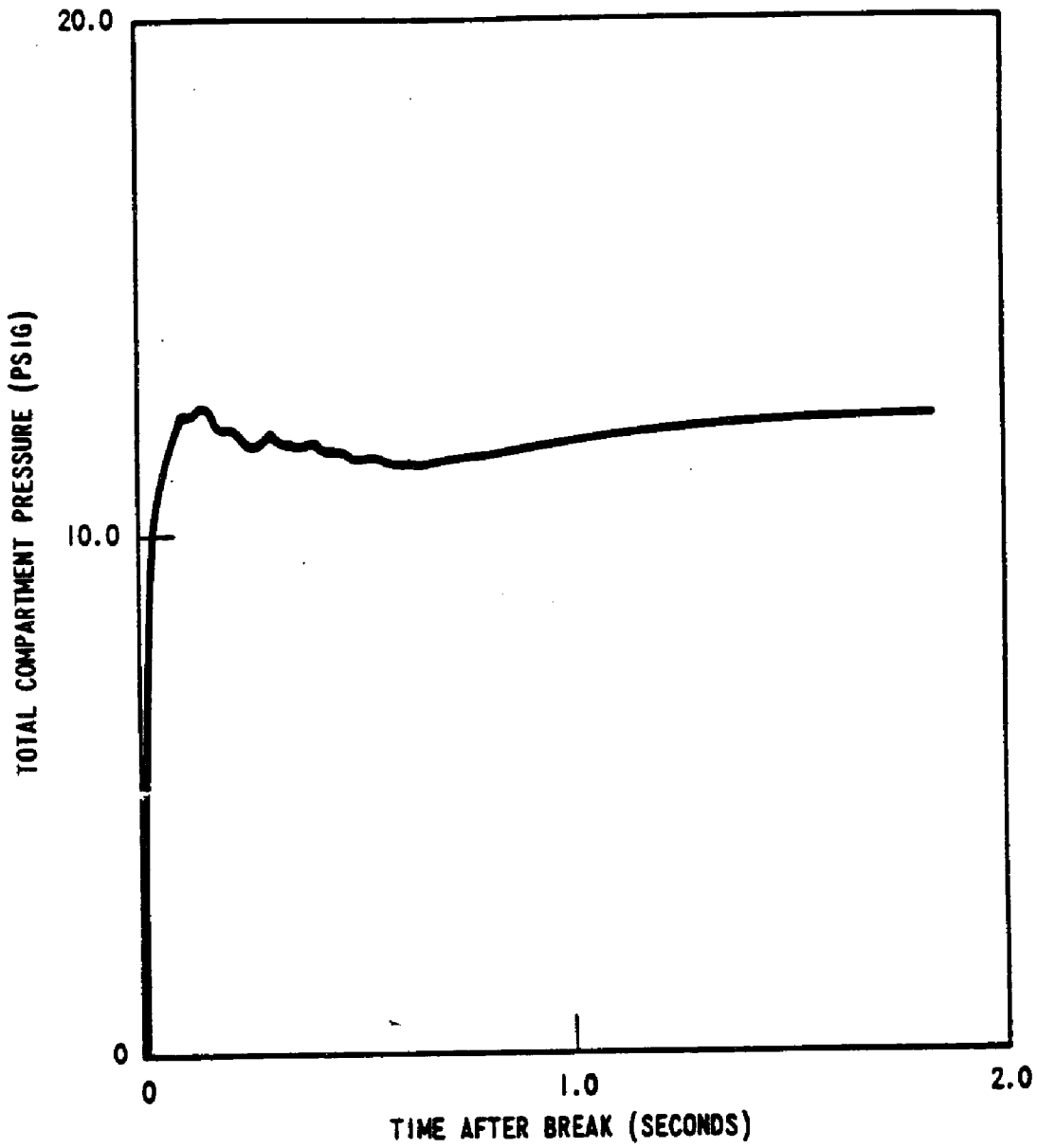


Figure 6-81. Reactor Cavity Analysis Element 45

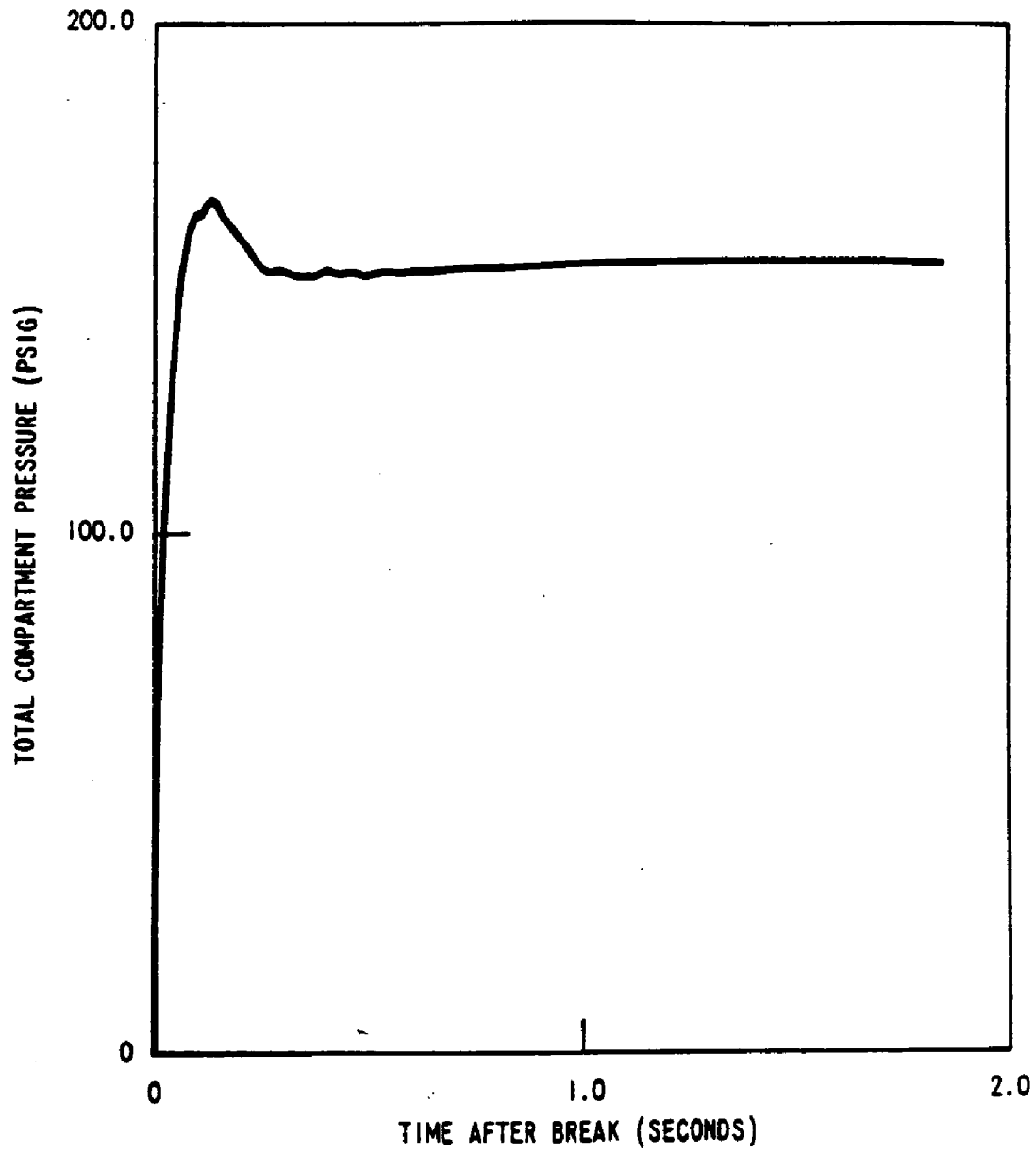


Figure 6-82. Reactor Cavity Analysis Element 46

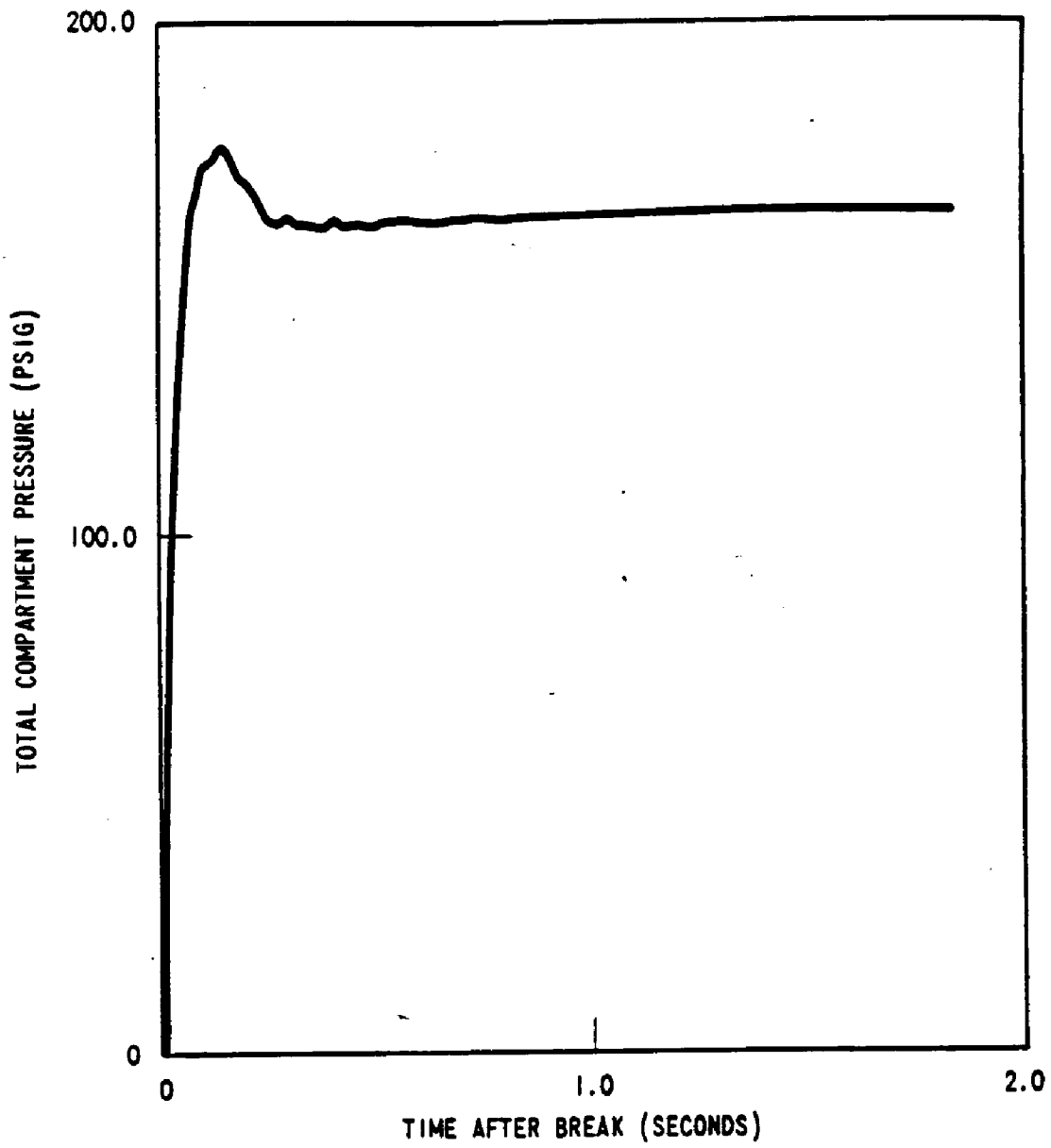


Figure 6-83. Reactor Cavity Analysis Element 47

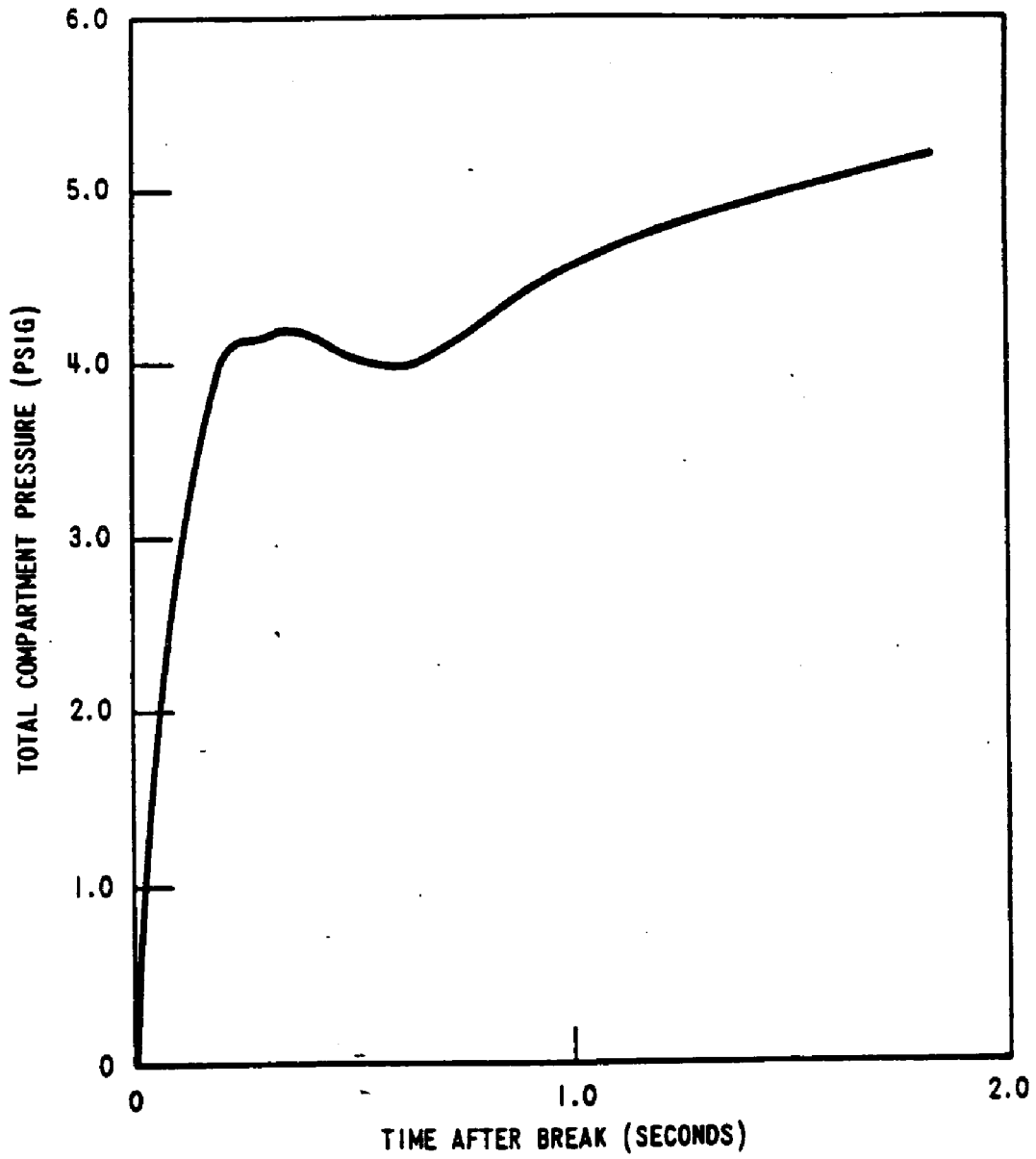


Figure 6-84. Reactor Cavity Analysis Element 53

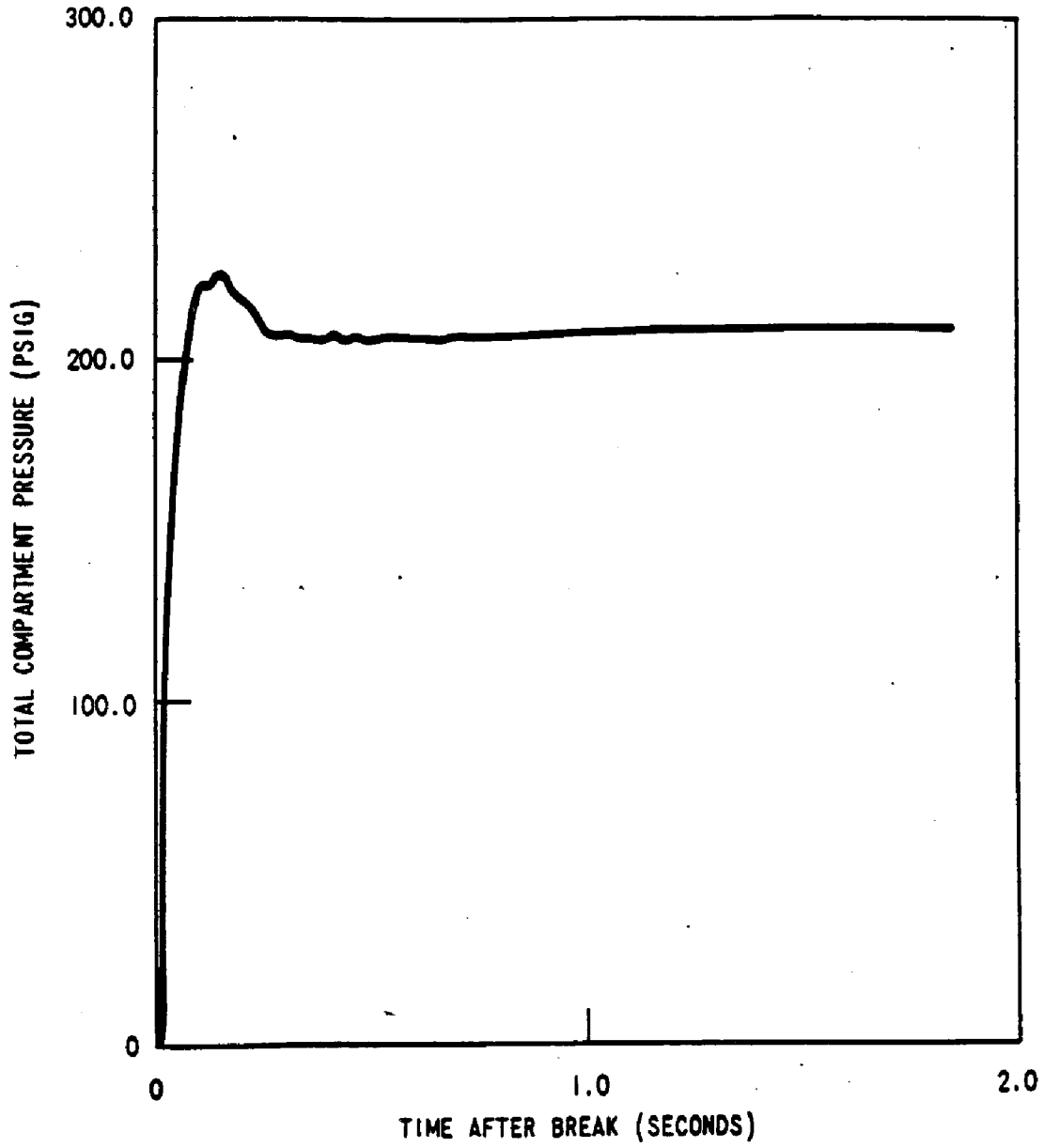


Figure 6-85. Reactor Cavity Analysis Element 54

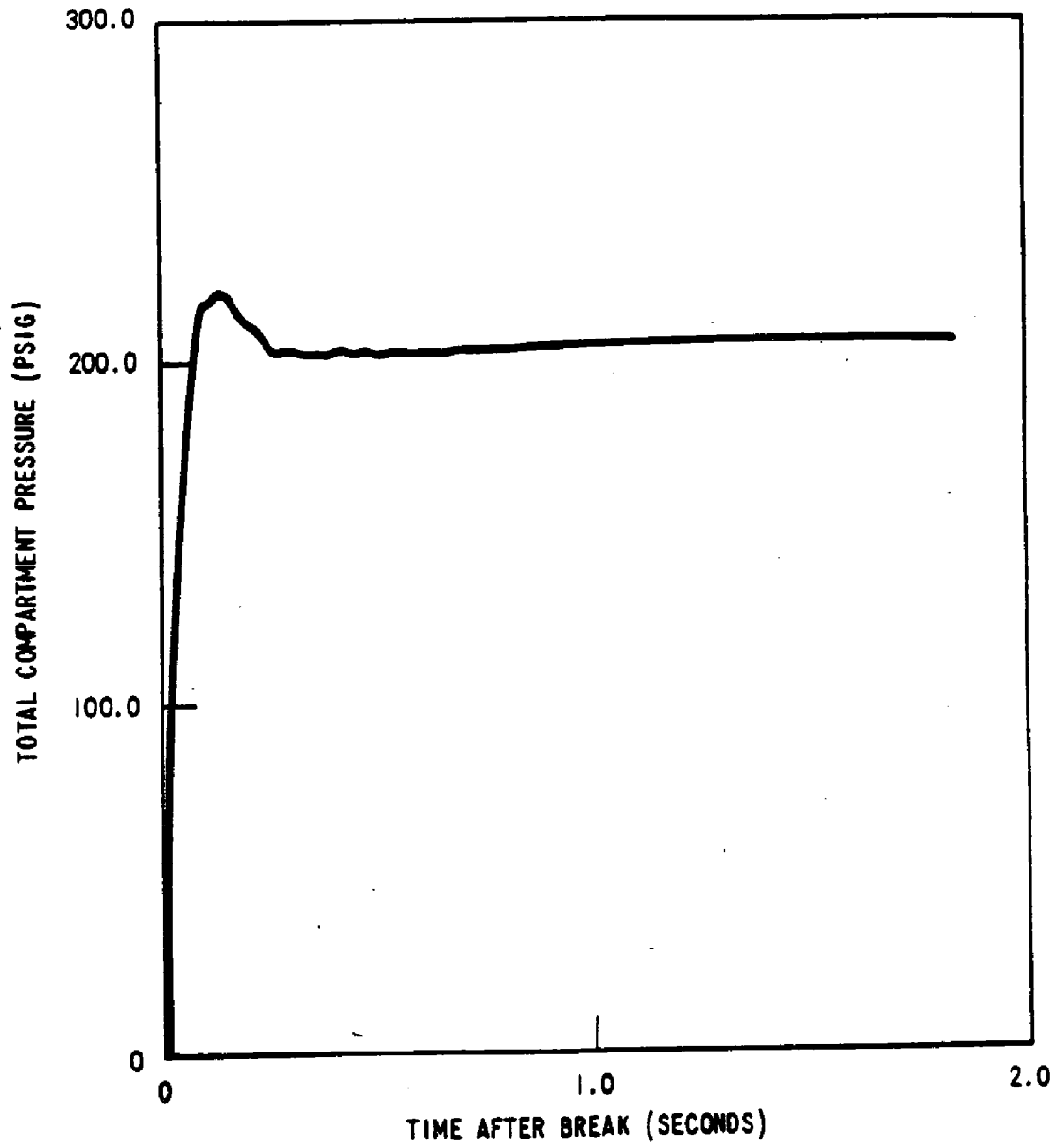


Figure 6-86. Hot Leg Double Ended Guillotine Break

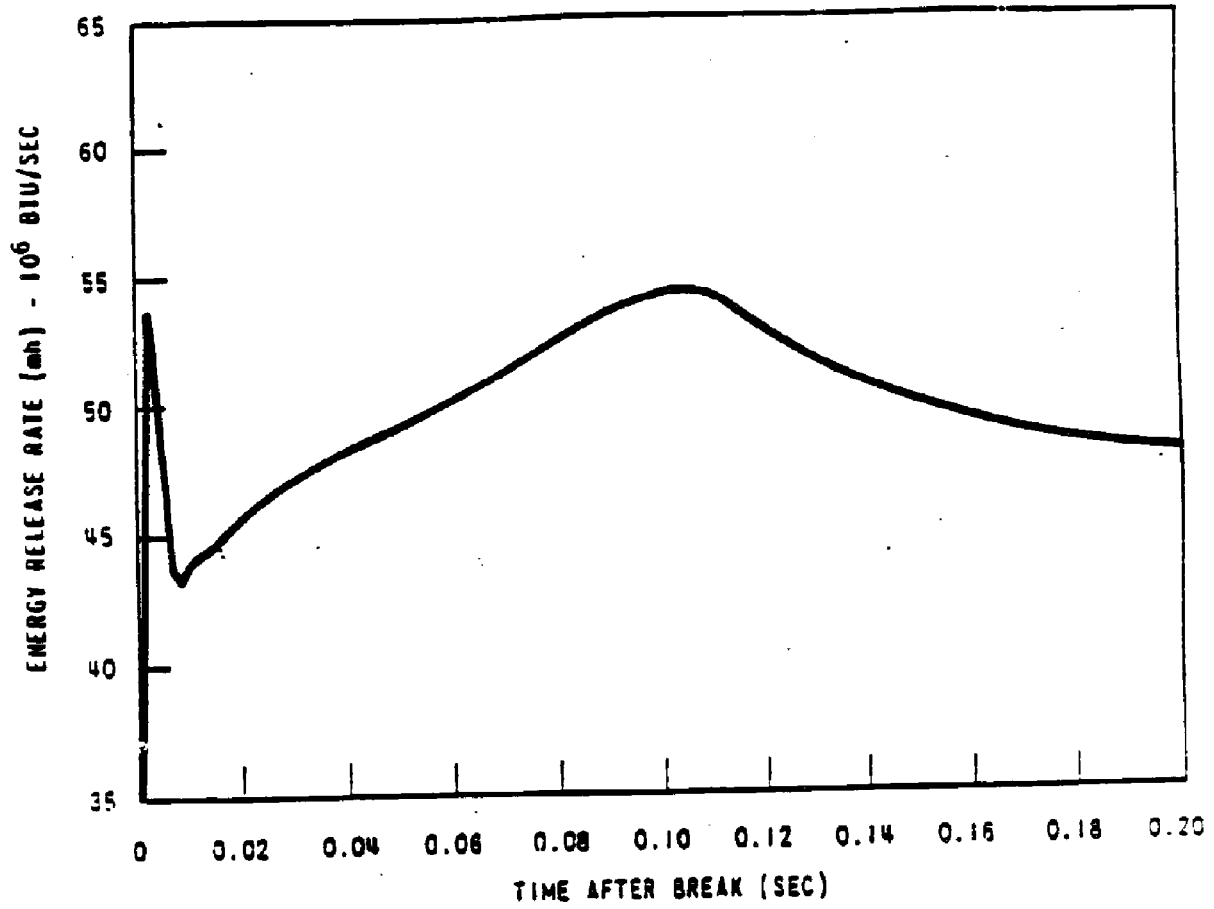


Figure 6-87. Hot Leg Double Ended Guillotine Break

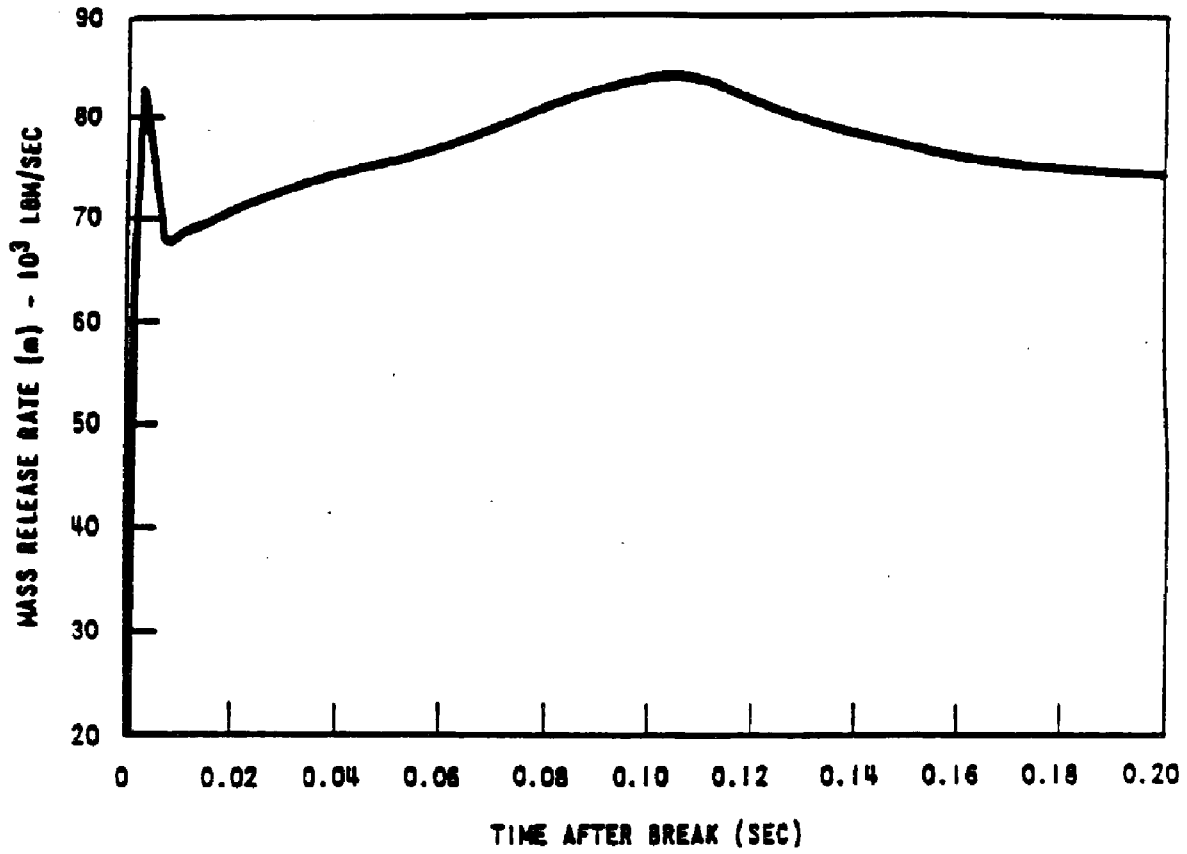


Figure 6-88. Cold Leg Double Ended Guillotine Break

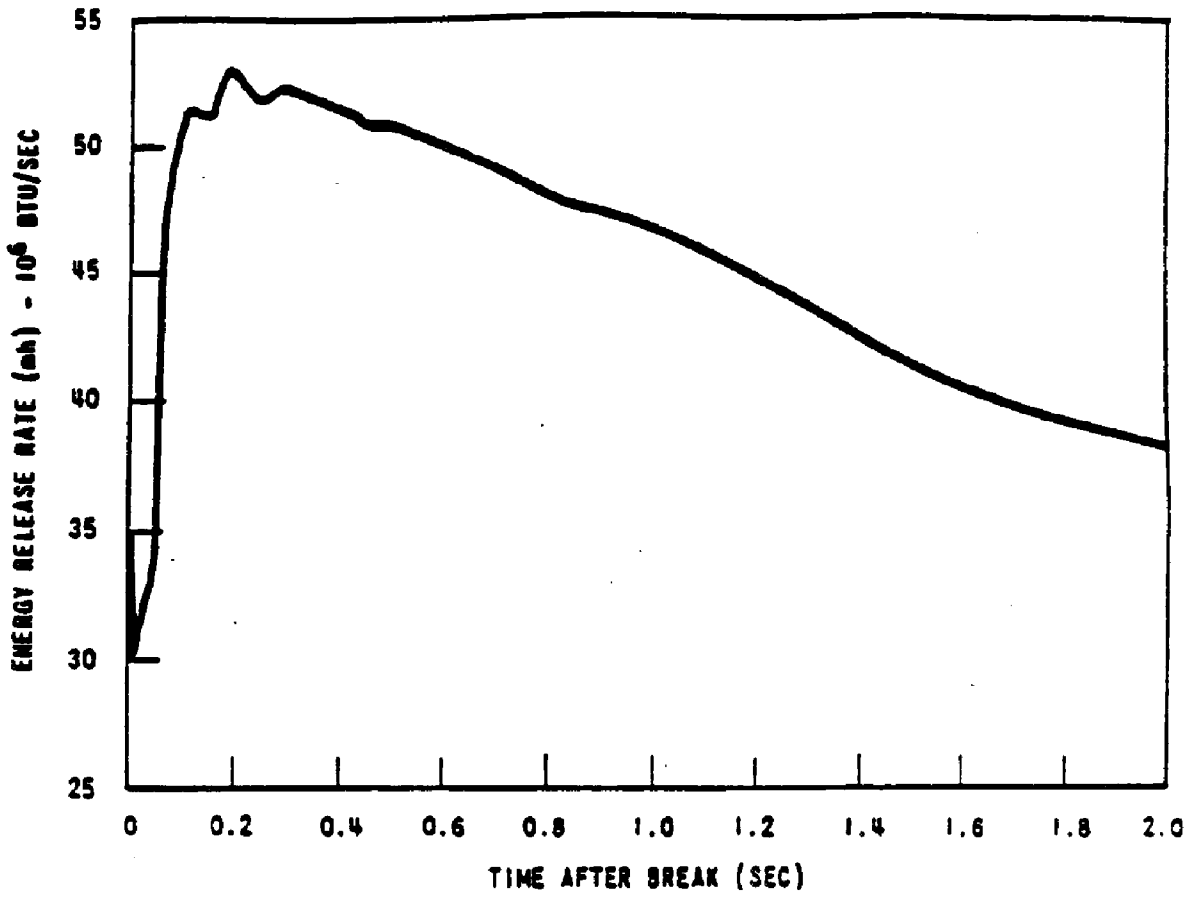


Figure 6-89. Cold Leg Double Ended Guillotine Break

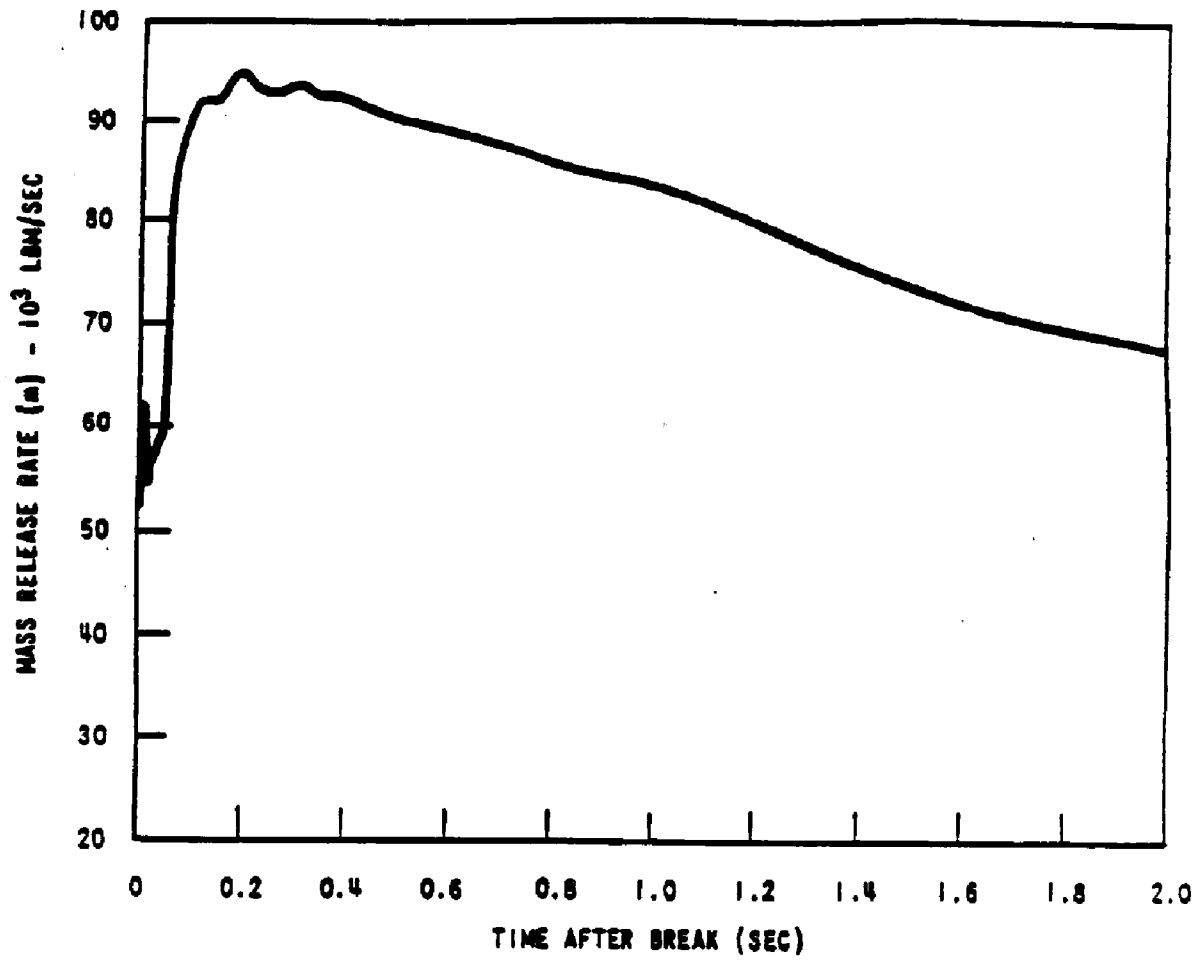


Figure 6-90. Hot Leg Single Ended Split Break

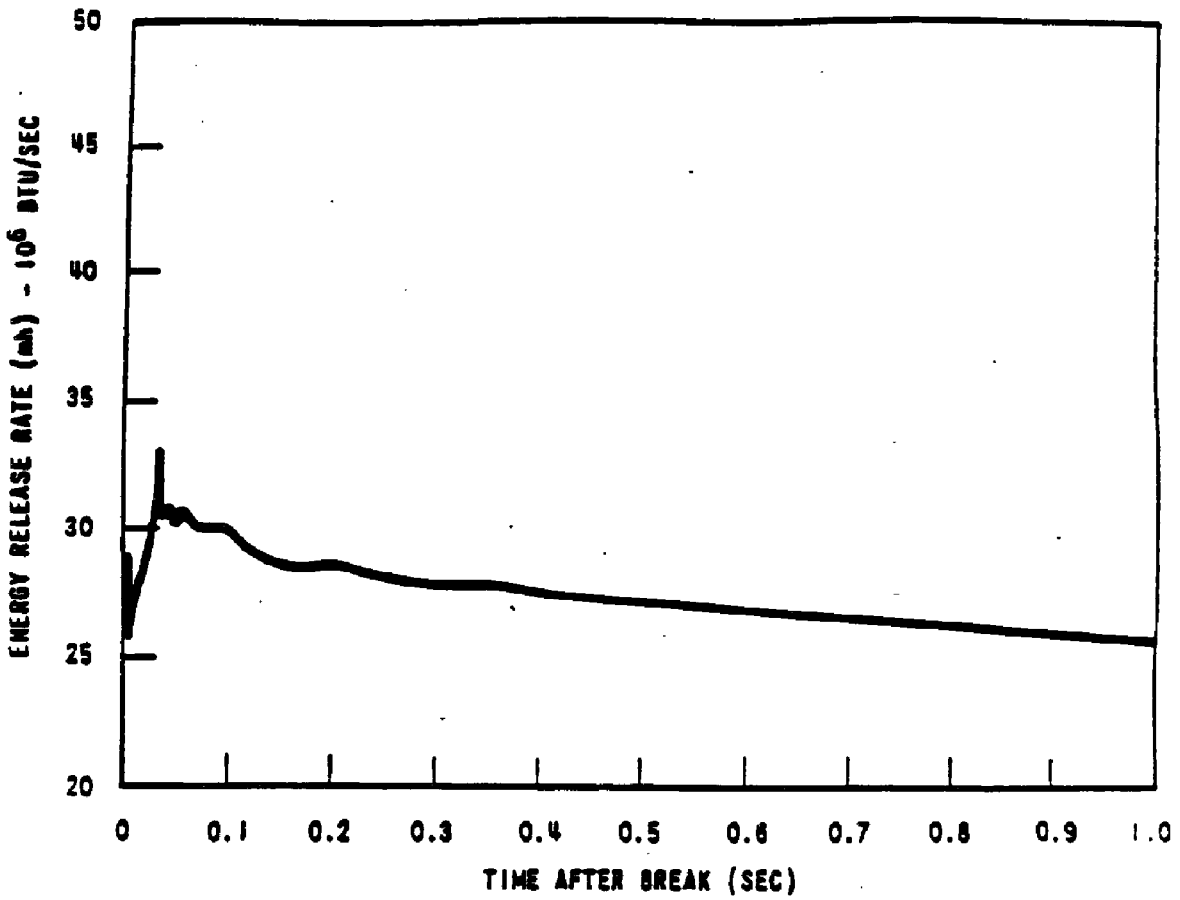


Figure 6-91. Hot Leg Single Ended Split Break

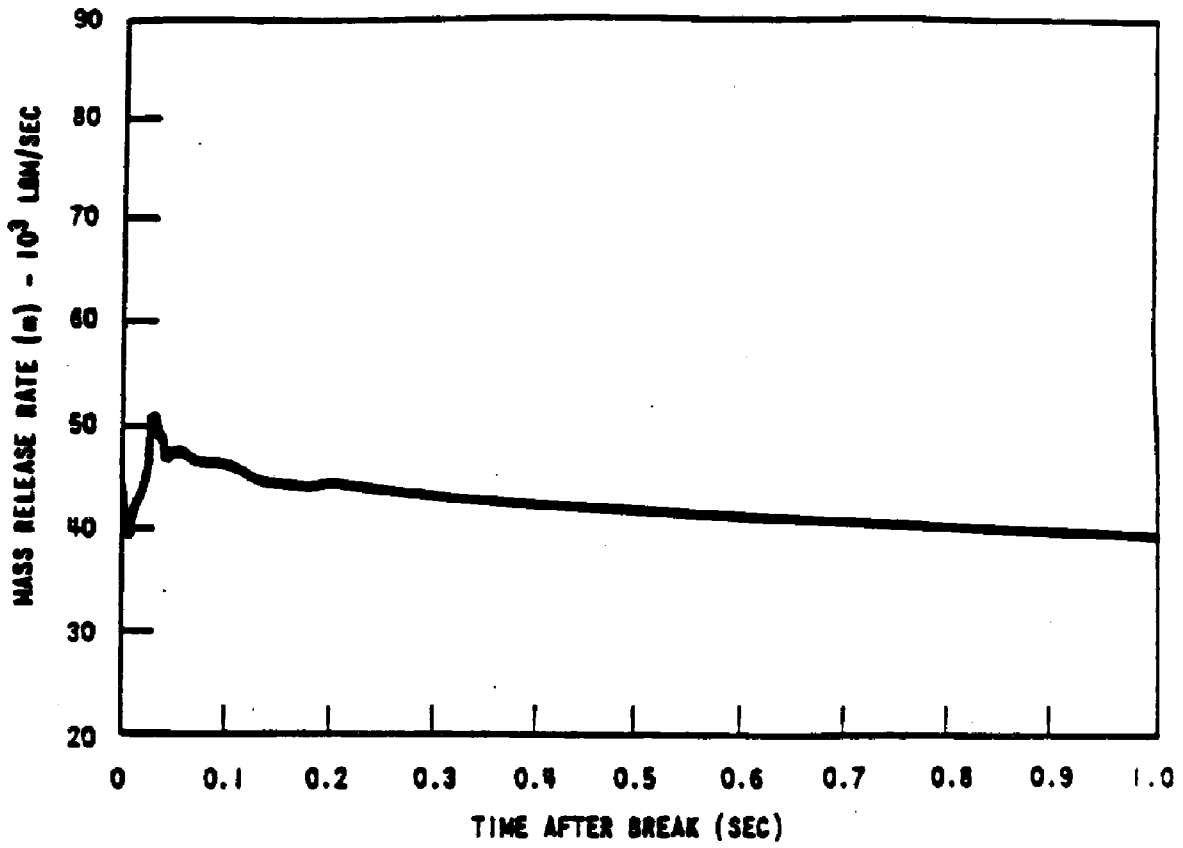


Figure 6-92. Cold Leg Single Ended Split Break

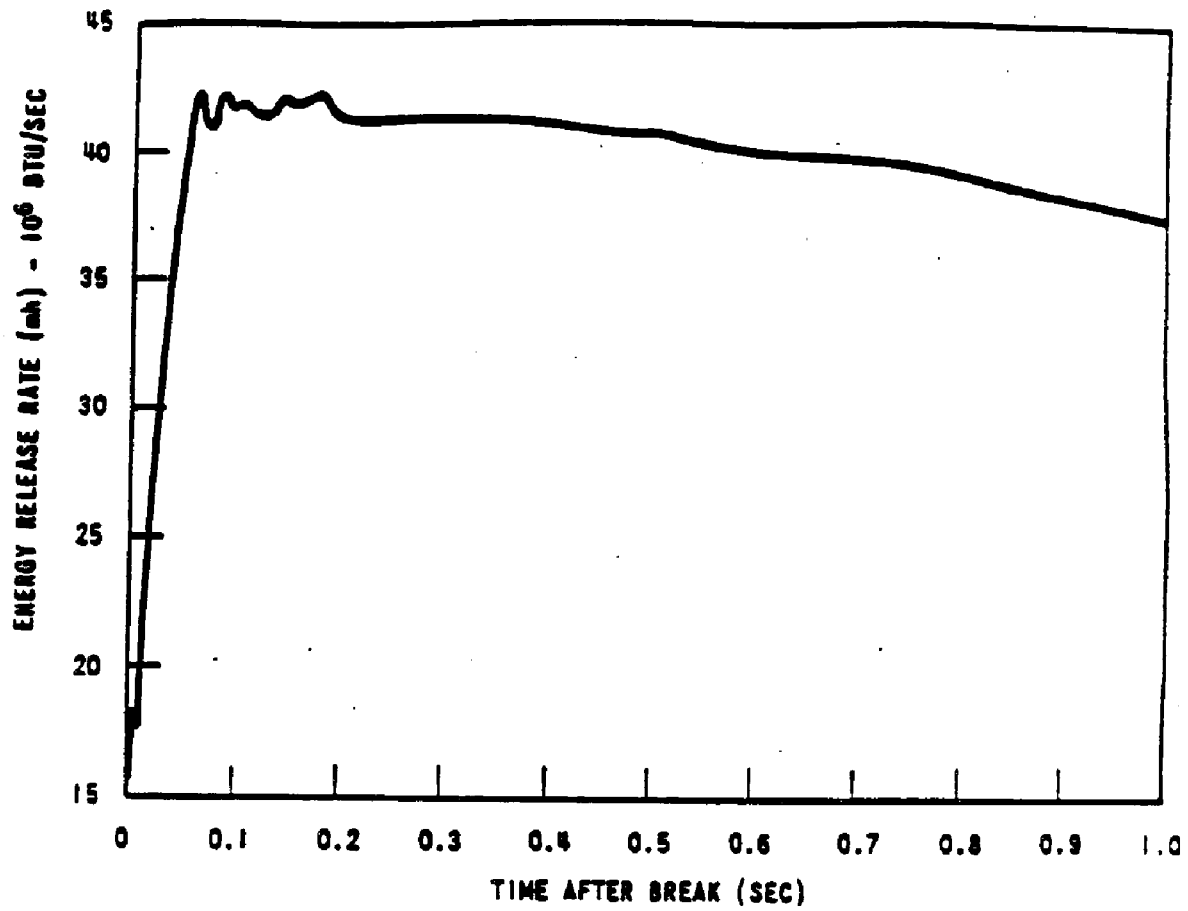


Figure 6-93. Cold Leg Single Ended Split Break

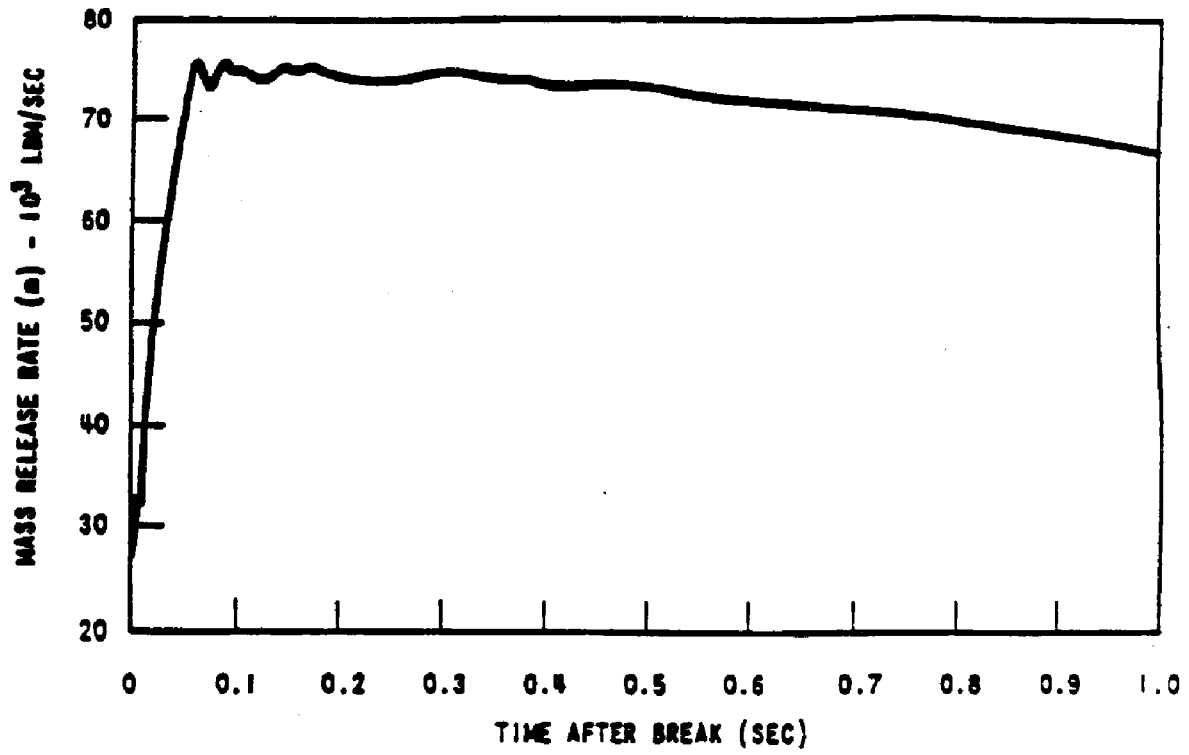


Figure 6-94. Comparison of Satan to Henry-Fauske

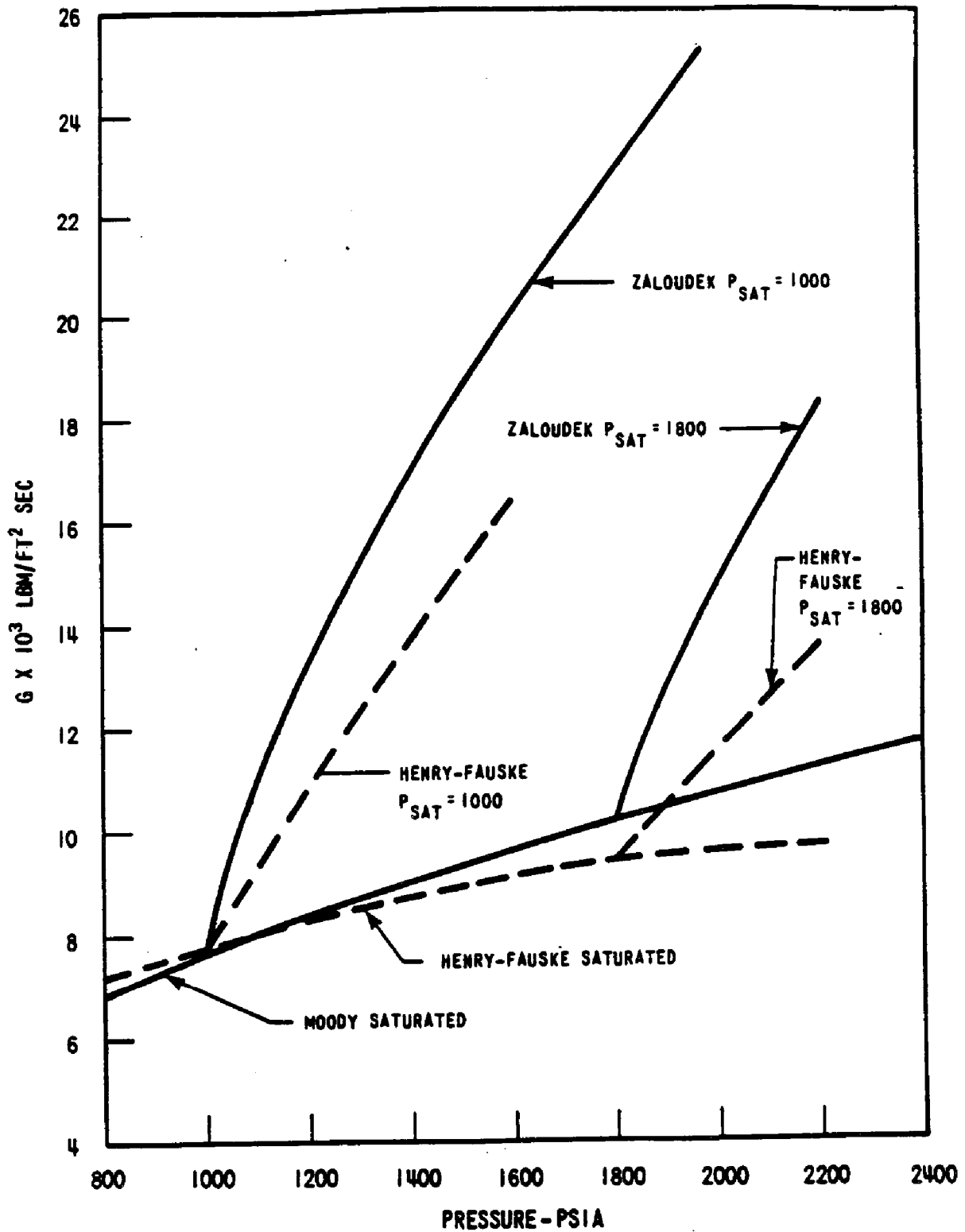


Figure 6-95. Comparison of Satan to Moody Subcooled

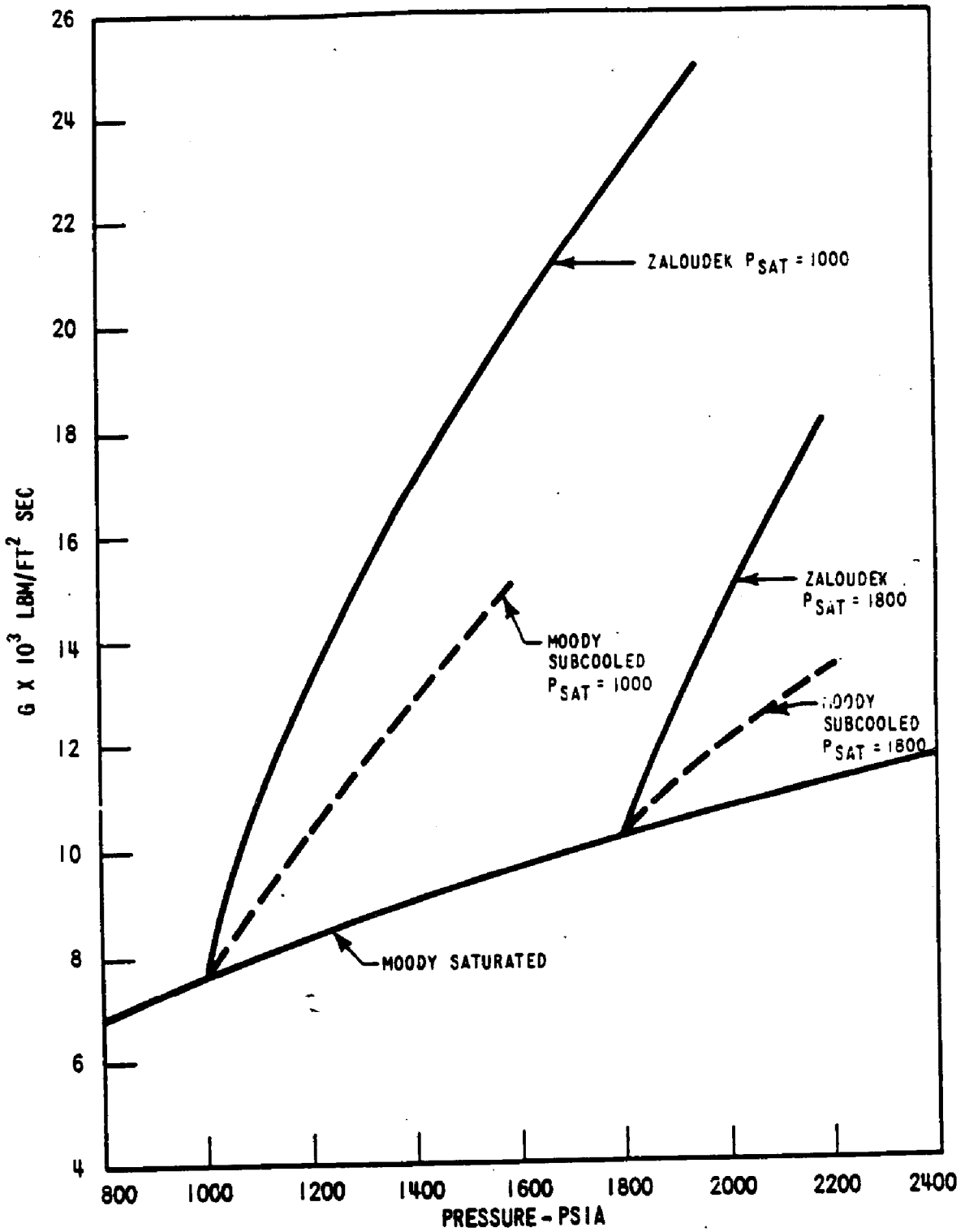


Figure 6-96. Zaloudek Measured Data Versus Modified Zaloudek Correlation

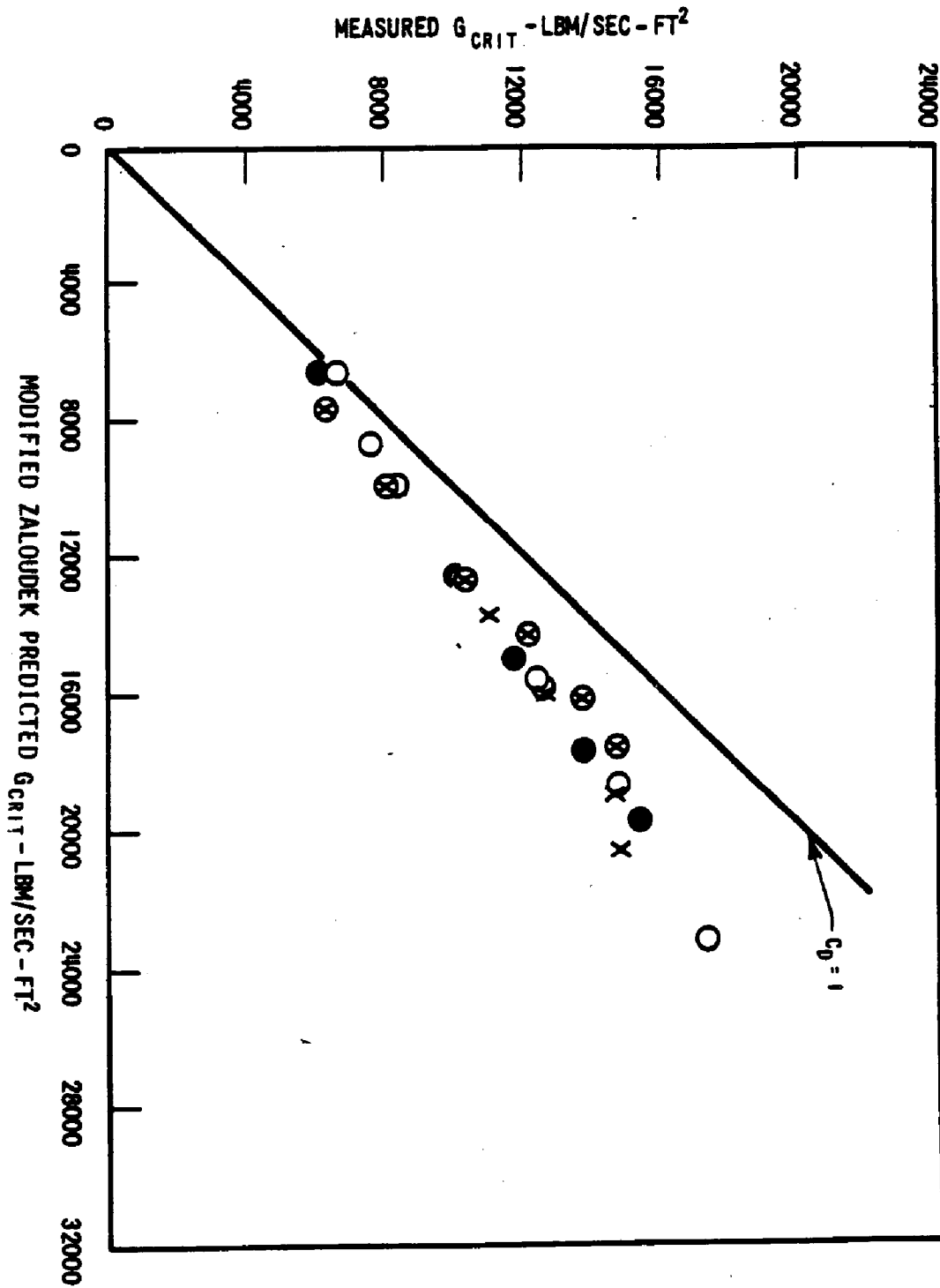


Figure 6-97. Zaloudek Short Tube Data

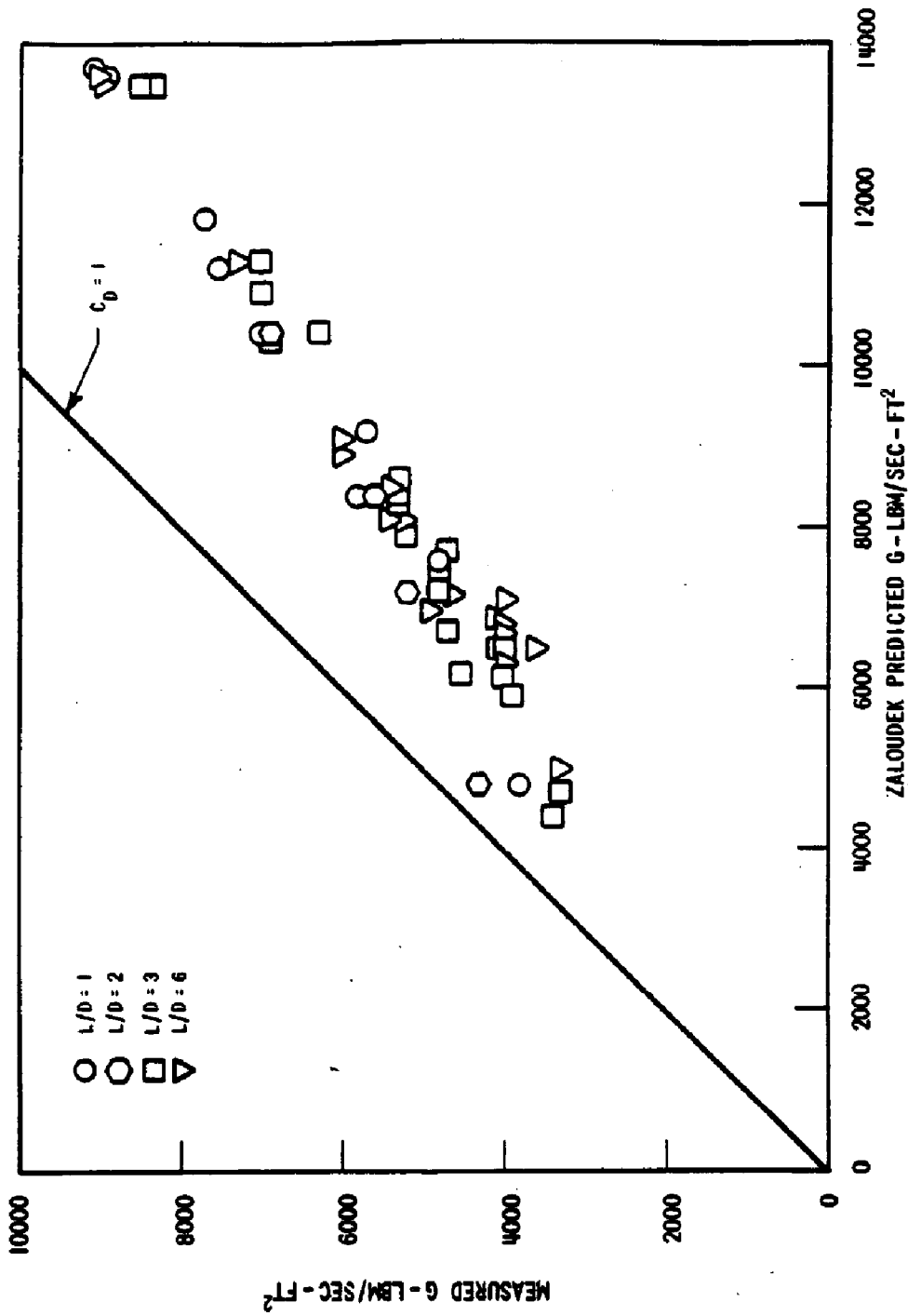


Figure 6-98. Exit Plane Quality as a Function of Upstream Pressure for Saturated Liquid

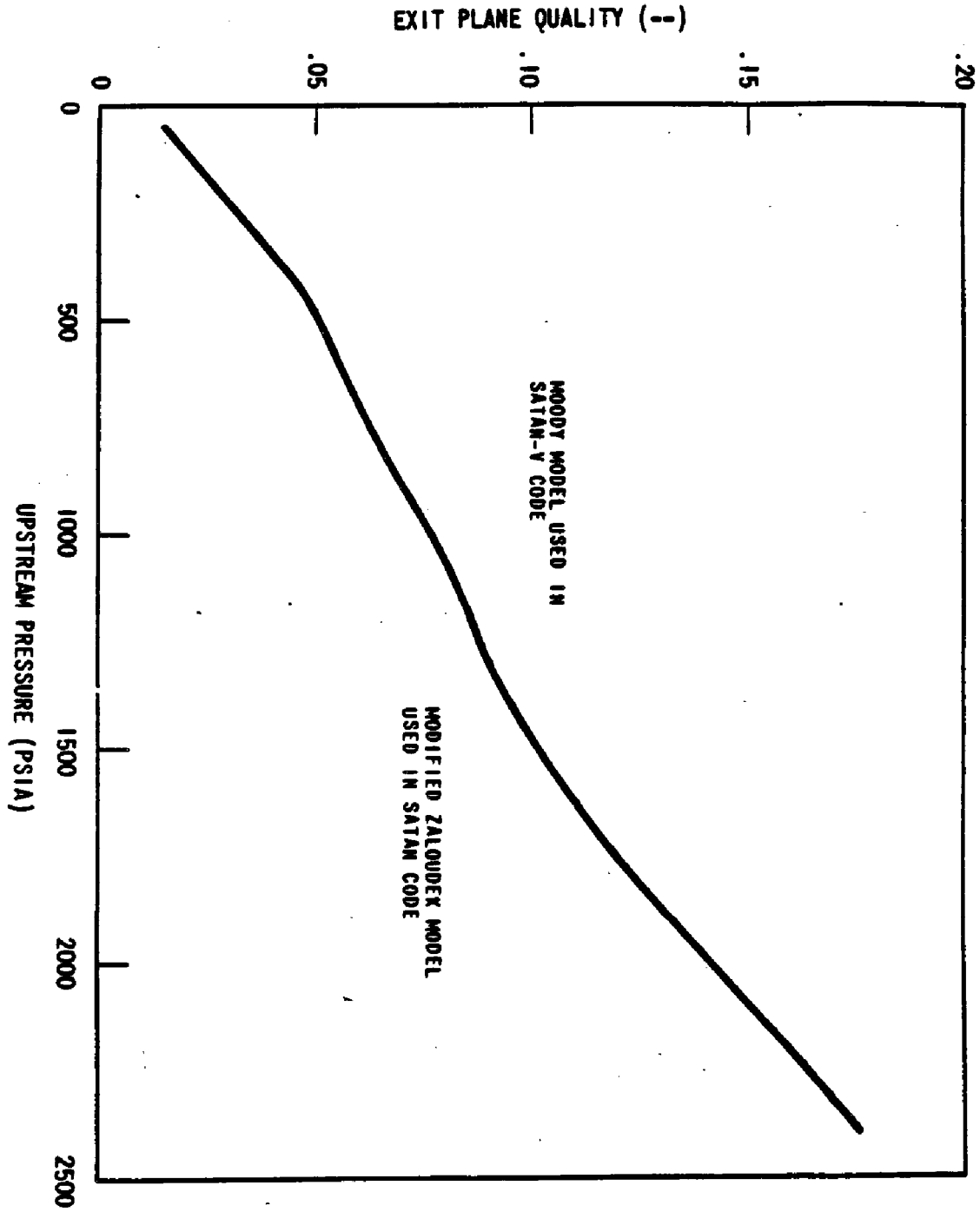


Figure 6-99. Henry Anl 7740 Data

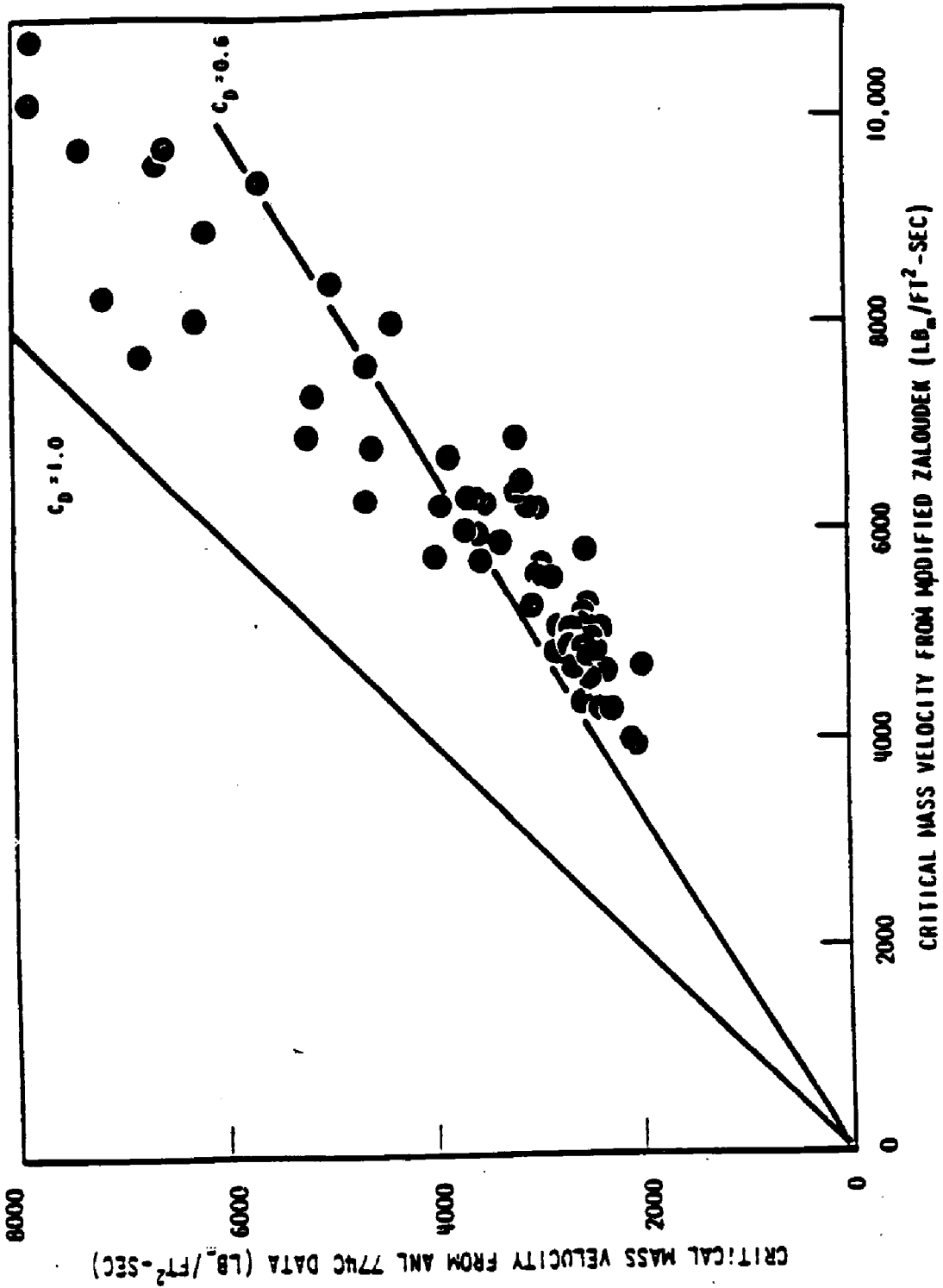


Figure 6-100. Loft Tests 809 and 813 Gate P-1

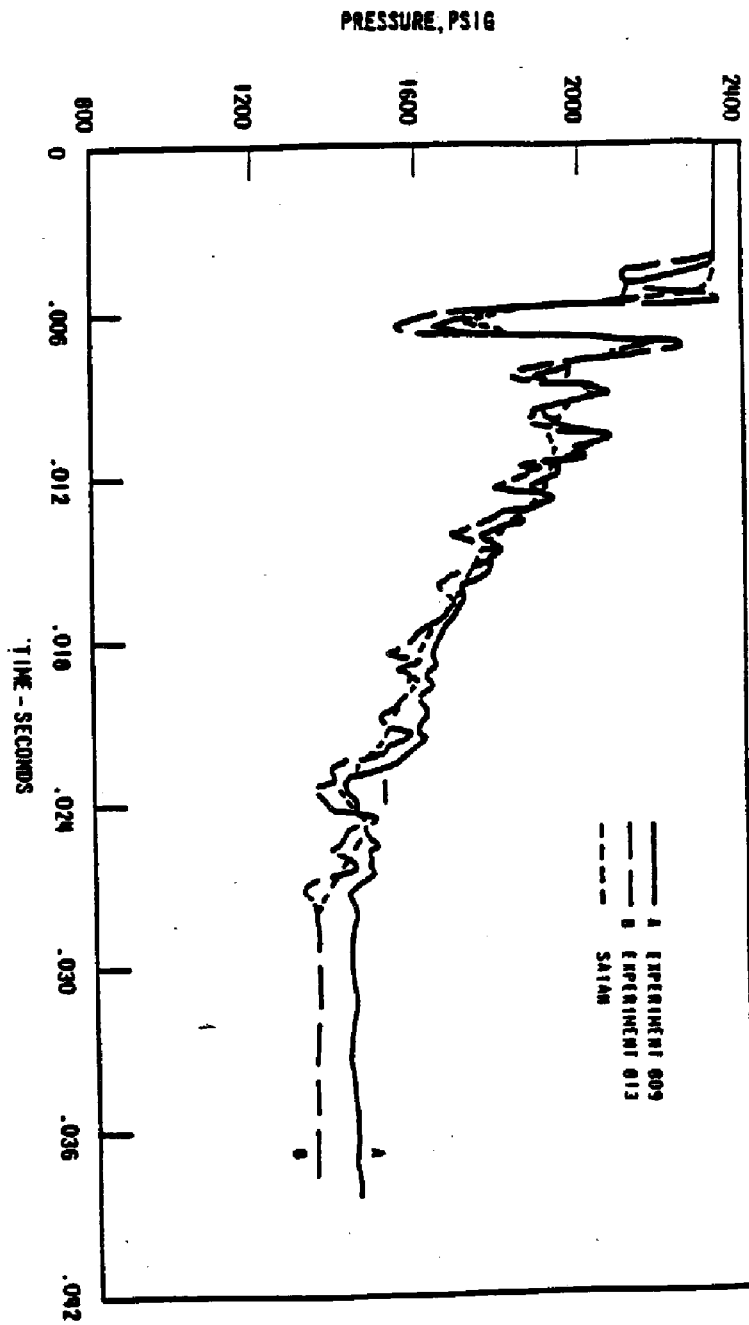


Figure 6-101. Deleted Per 2001 Update

Figure 6-102. Deleted Per 2001 Update

Figure 6-103. Deleted Per 2001 Update

Figure 6-104. Deleted Per 2001 Update

Figure 6-105. Deleted Per 2001 Update

Figure 6-106. Deleted Per 2001 Update

Figure 6-107. Flow Diagram of Containment Air Return Exchange and Hydrogen Skimmer System

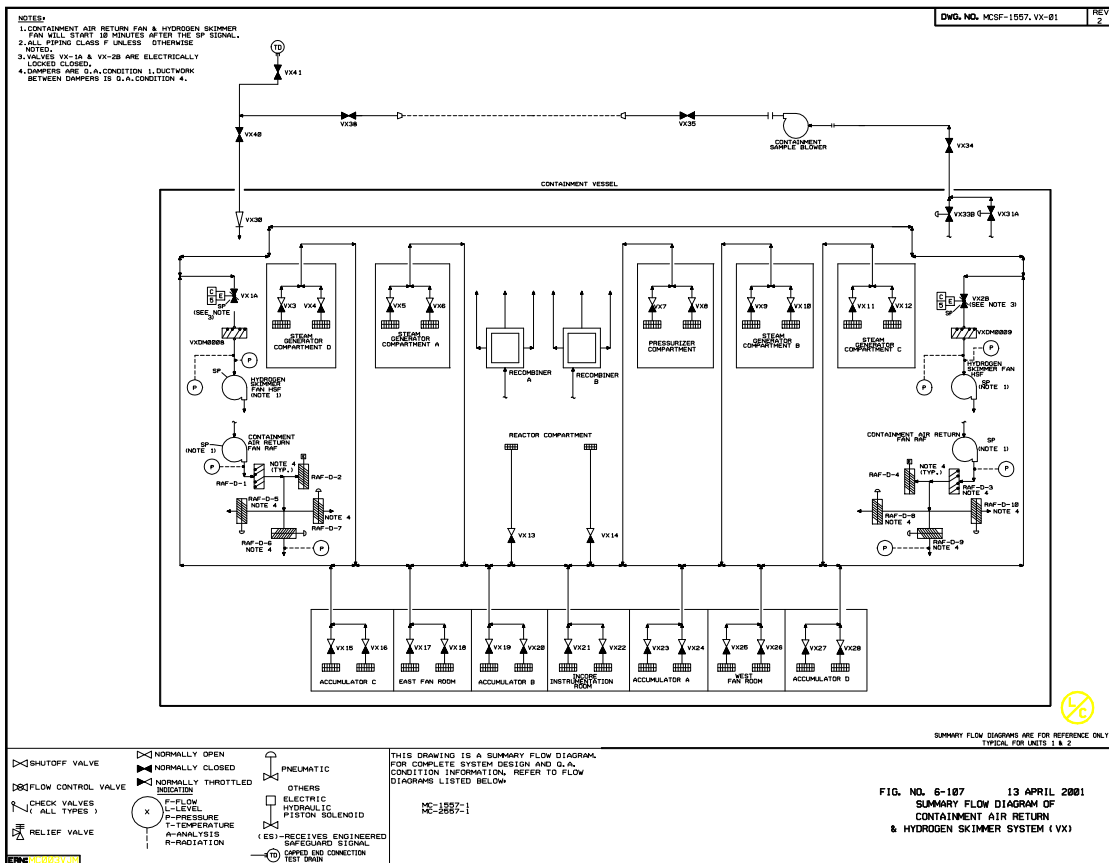


Figure 6-108. Reactor Building Heating-Ventilation-Air Conditioning

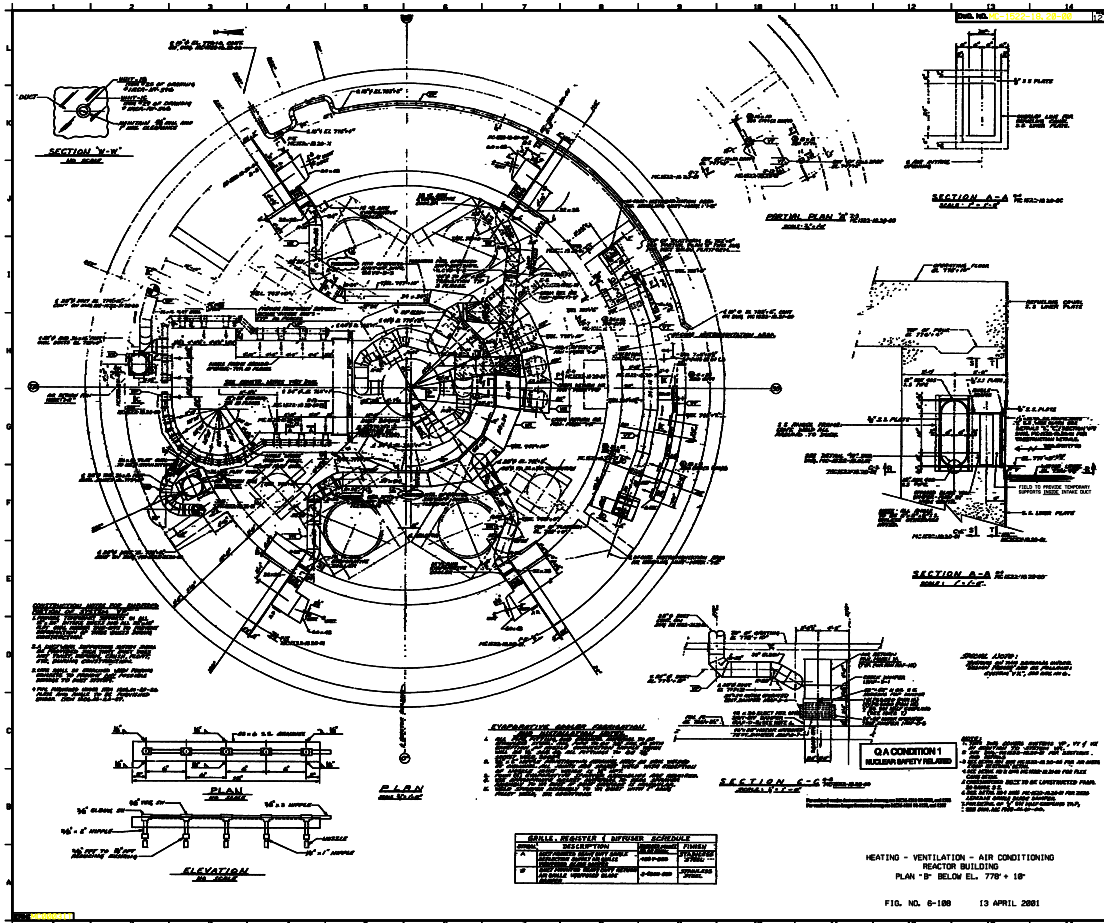


Figure 6-109. Containment Air Return Fan Performance Curve

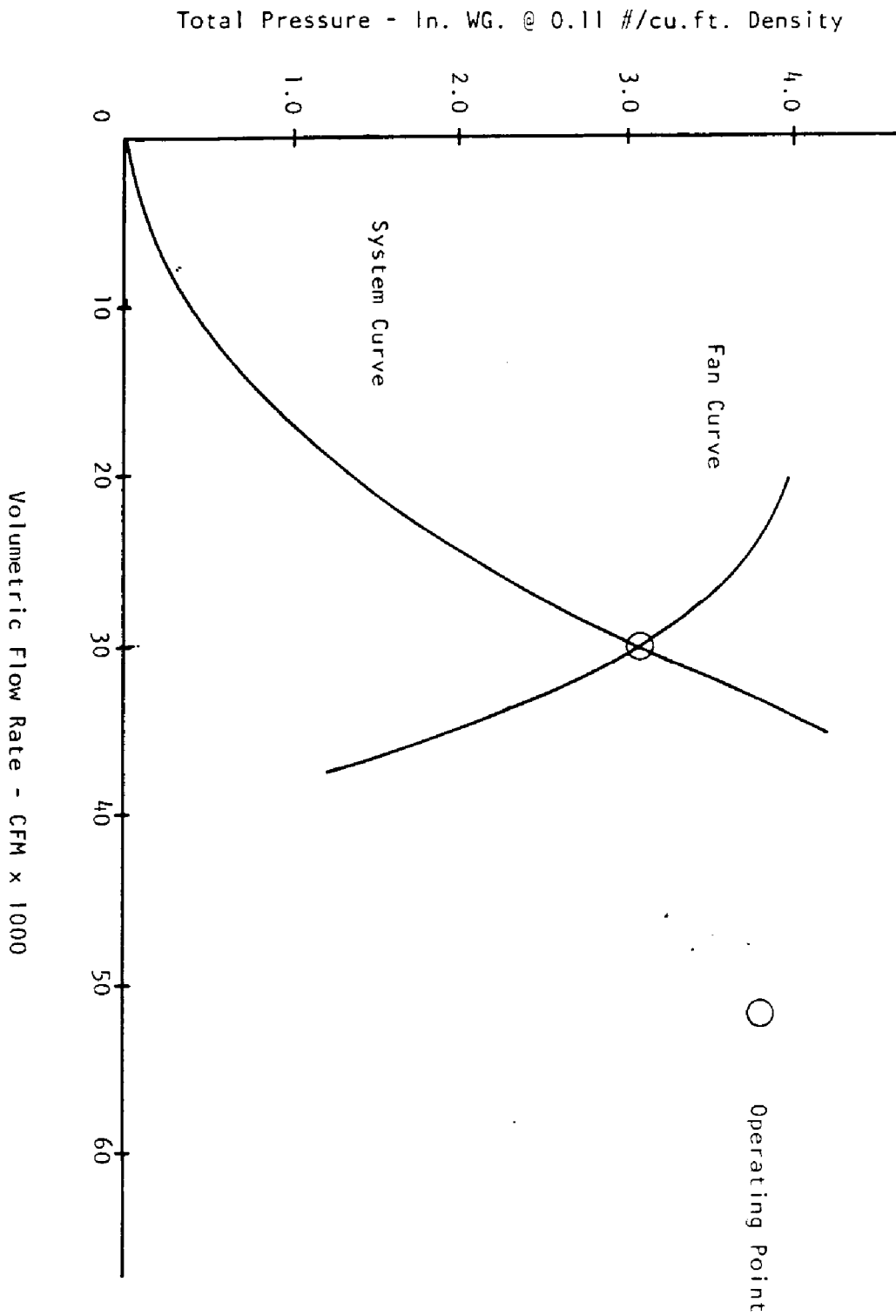


Figure 6-110. Hydrogen Skimmer System

This figure is currently unavailable in an electronic format. It can be located in a hardcopy version of the UFSAR.

Figure 6-111. Hydrogen Skimmer Fan Performance Curve

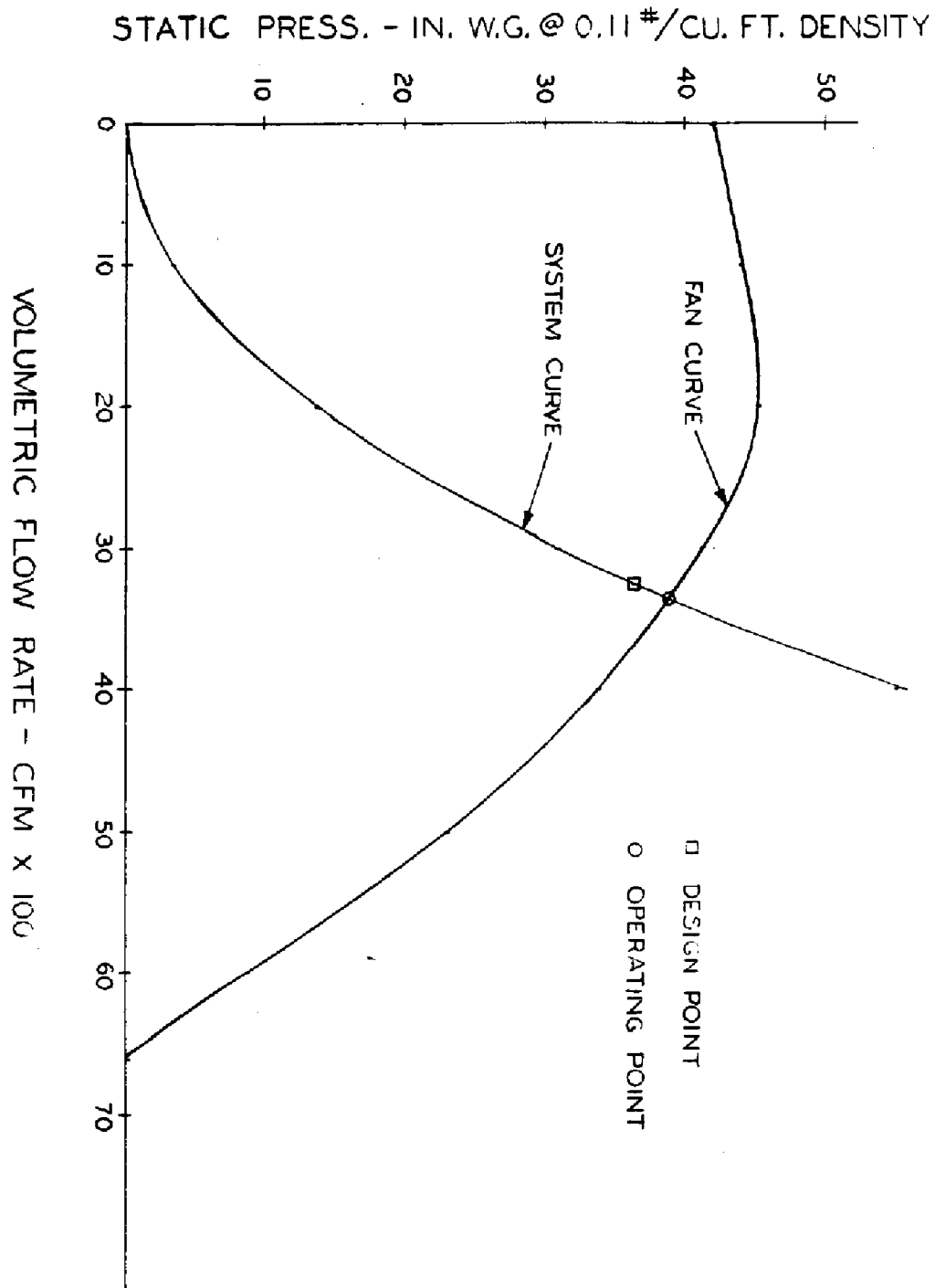
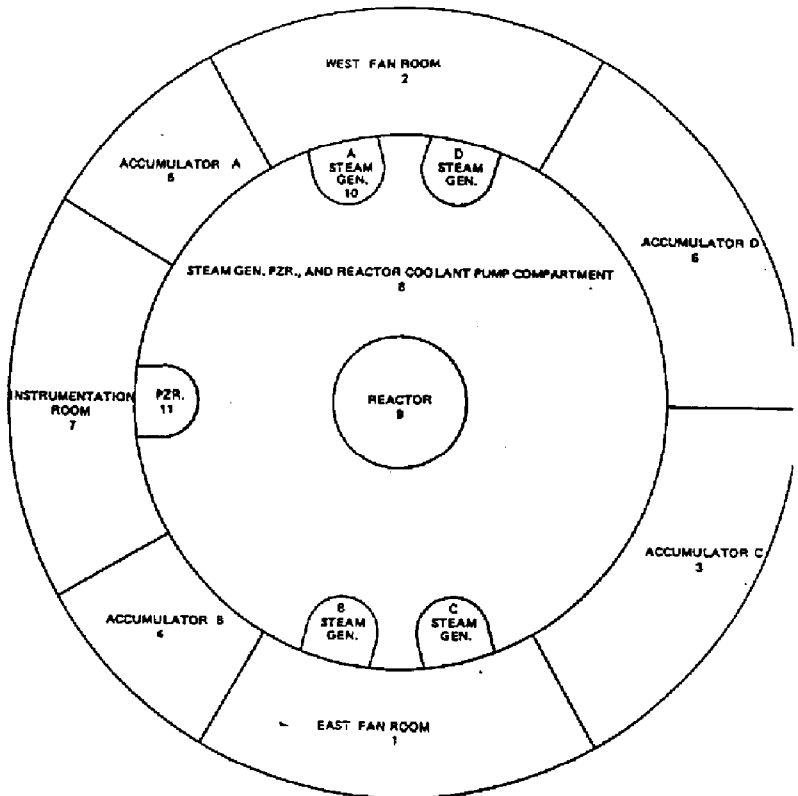


Figure 6-112. Potential Areas of Hydrogen Pocketing and Minimum Flows



Hydrogen Skimmer System		
Confined Compartment Minimum Flow		
Cavity #	Cavity Name	Min Flow
		CFM
See below		
1	E Fan Room	0
2	W Fan Room	0
3	CLA-A	5
4	CLA-B	5
5	CLA-C	0
6	CLA-D	0
7	Instr Room	6
9	Reactor	95
10A	S/G-A	1
10B	S/G-B	1
10C	S/G-C	1
10D	S/G-D	1
11	Pzr	165

Zero required flow means cavity is self venting.

Figure 6-113. Isometric of Ice Condenser

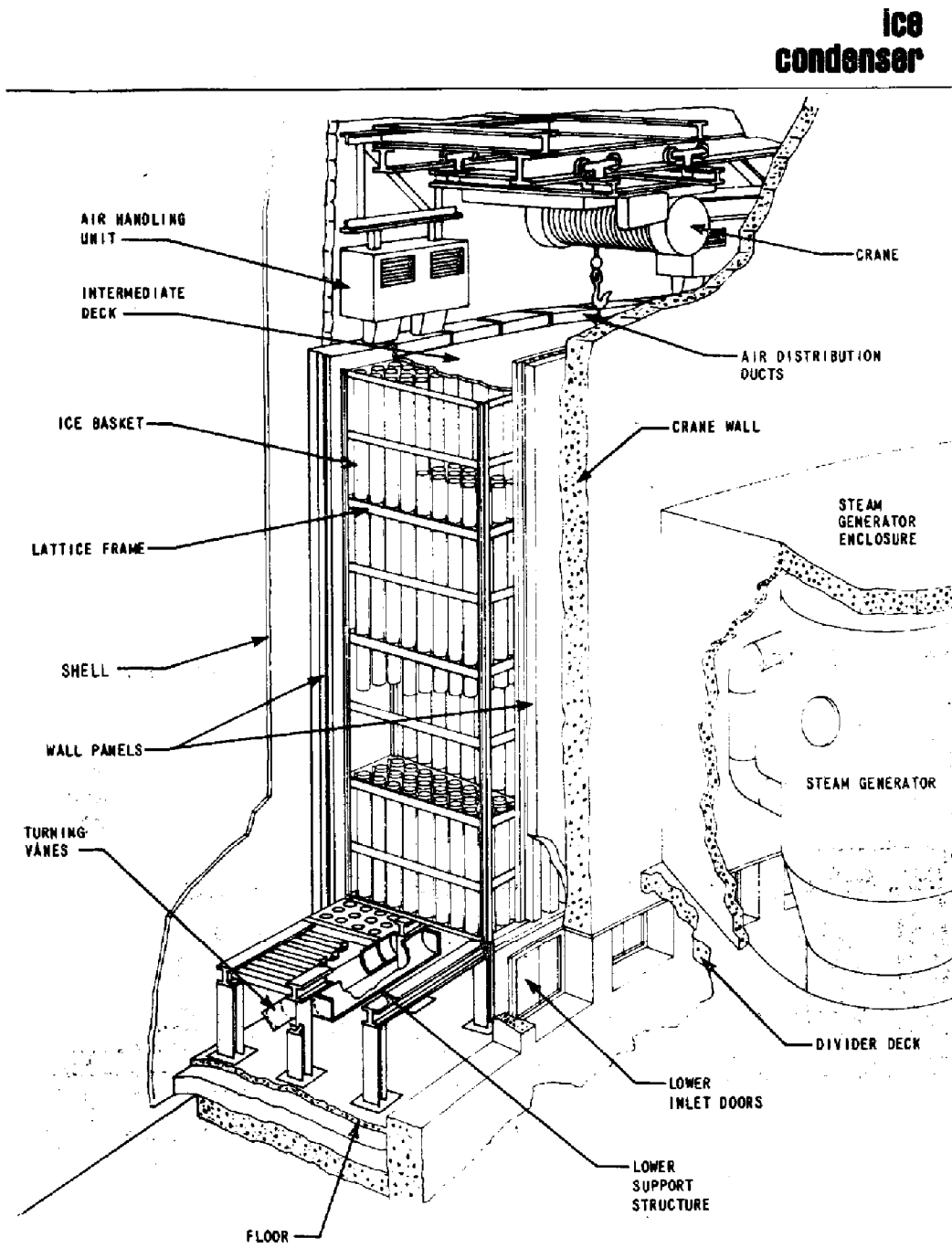


Figure 6-114. Floor Structure

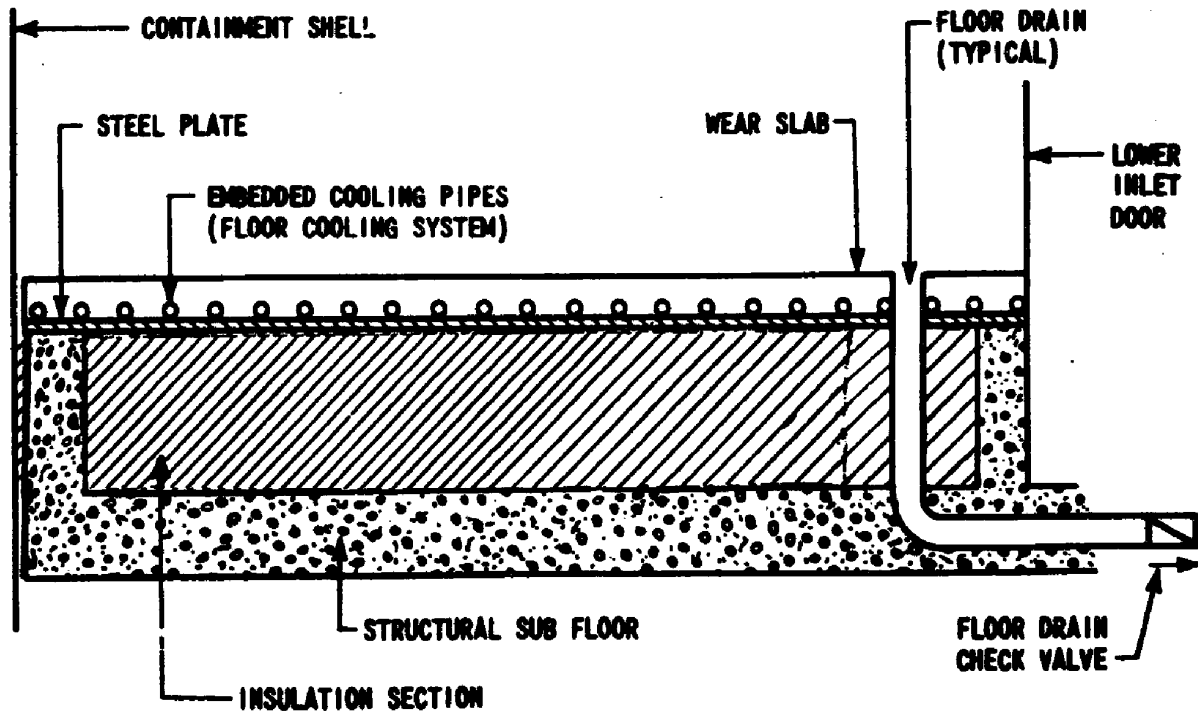


Figure 6-115. Wear Slab Top Surface Area Showing Typical Coolant Piping Layout

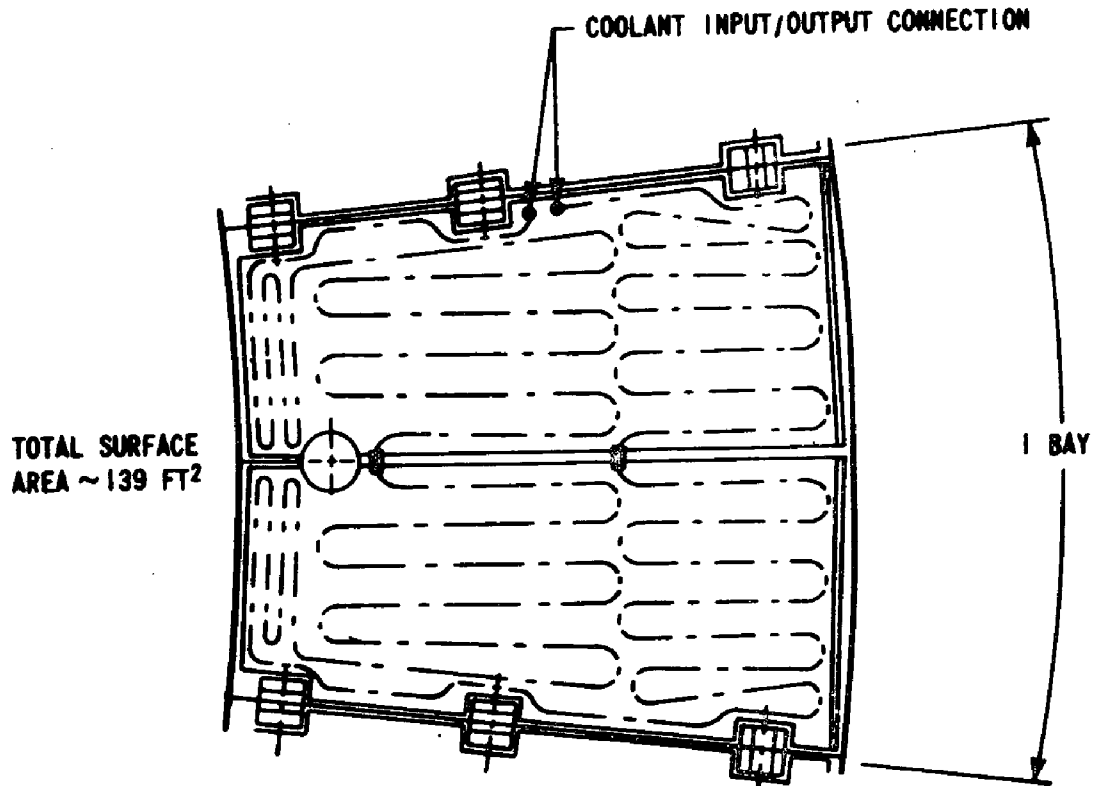
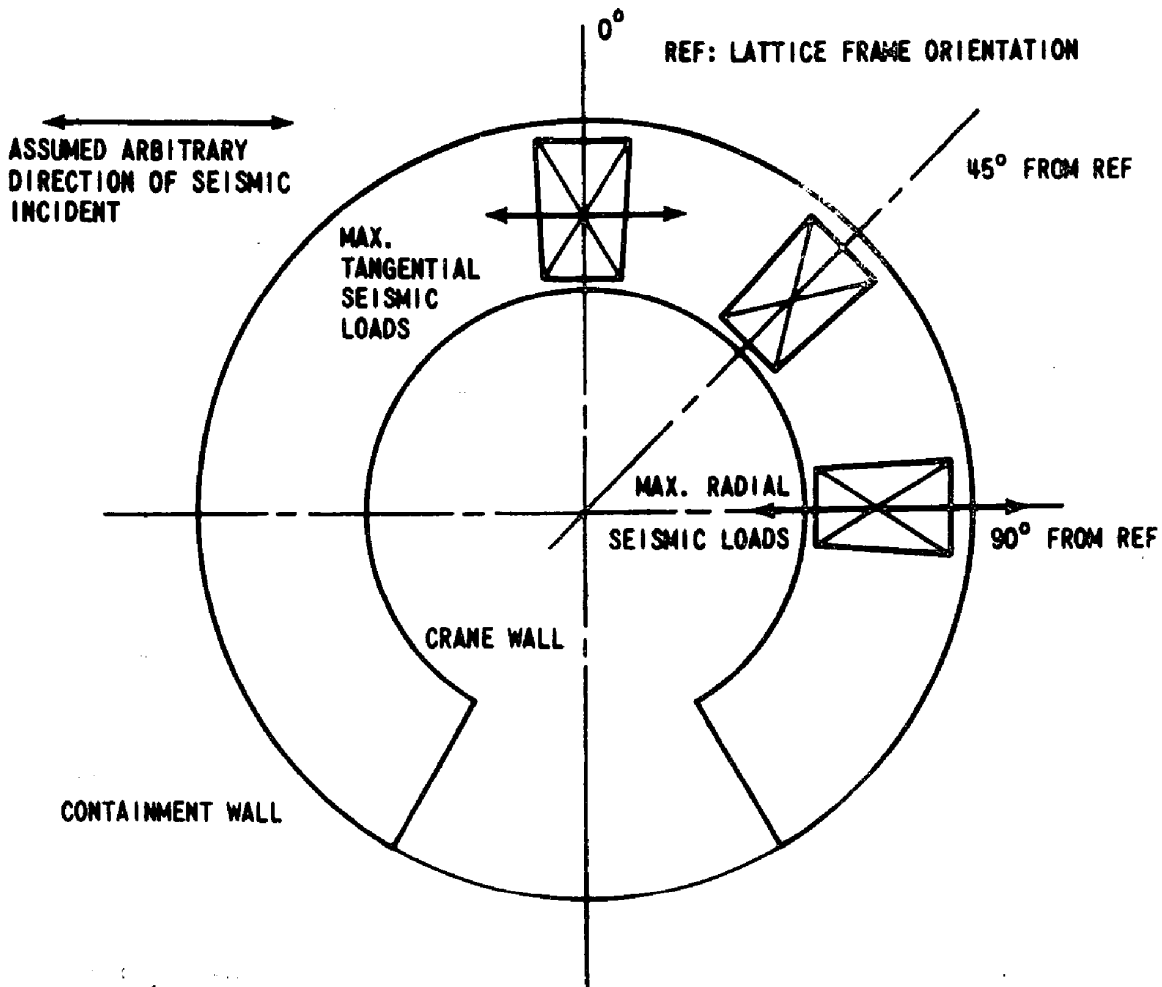


Figure 6-116. Lattice Frame Orientation

**NOTES:**

1. MAXIMUM TANGENTIAL AND RADIAL SEISMIC LOADS CANNOT OCCUR SIMULTANEOUSLY.
2. TANGENTIAL AND RADIAL SEISMIC LOADS 45 DEGREES FROM THE REFERENCE DIRECTION OF SEISMIC INPUT OCCUR SIMULTANEOUSLY AND THE MAGNITUDE IS THE AVERAGE OF MAXIMUM RADIAL AND MAXIMUM TANGENTIAL TIMES THE COSINE OF 45°, OR $\left(\frac{\text{RADIAL} + \text{TANGENTIAL}}{2} \right) .707$.
3. HORIZONTAL AND VERTICAL SEISMIC LOADS CAN OCCUR HORIZONTALLY.
4. BLOWDOWN LOADS, TANGENTIAL, RADIAL AND VERTICAL CAN OCCUR SIMULTANEOUSLY. RADIAL BLOWDOWN LOADS ALWAYS OCCUR IN THE DIRECTION OF THE CONTAINMENT WALL.

* In an individual lattice frame.

Figure 6-117. Load Distribution for Tangential Seismic and Blowdown Loads in Analytical Model

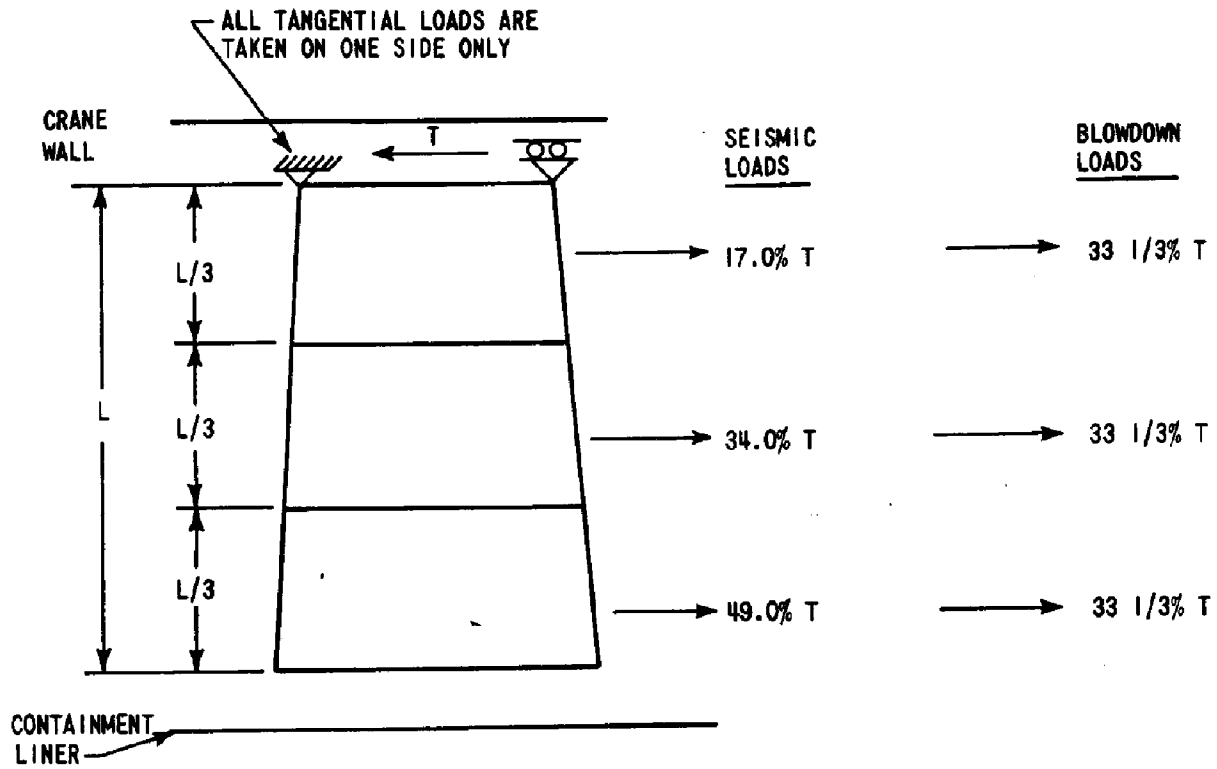


Figure 6-118. Lattice Frame

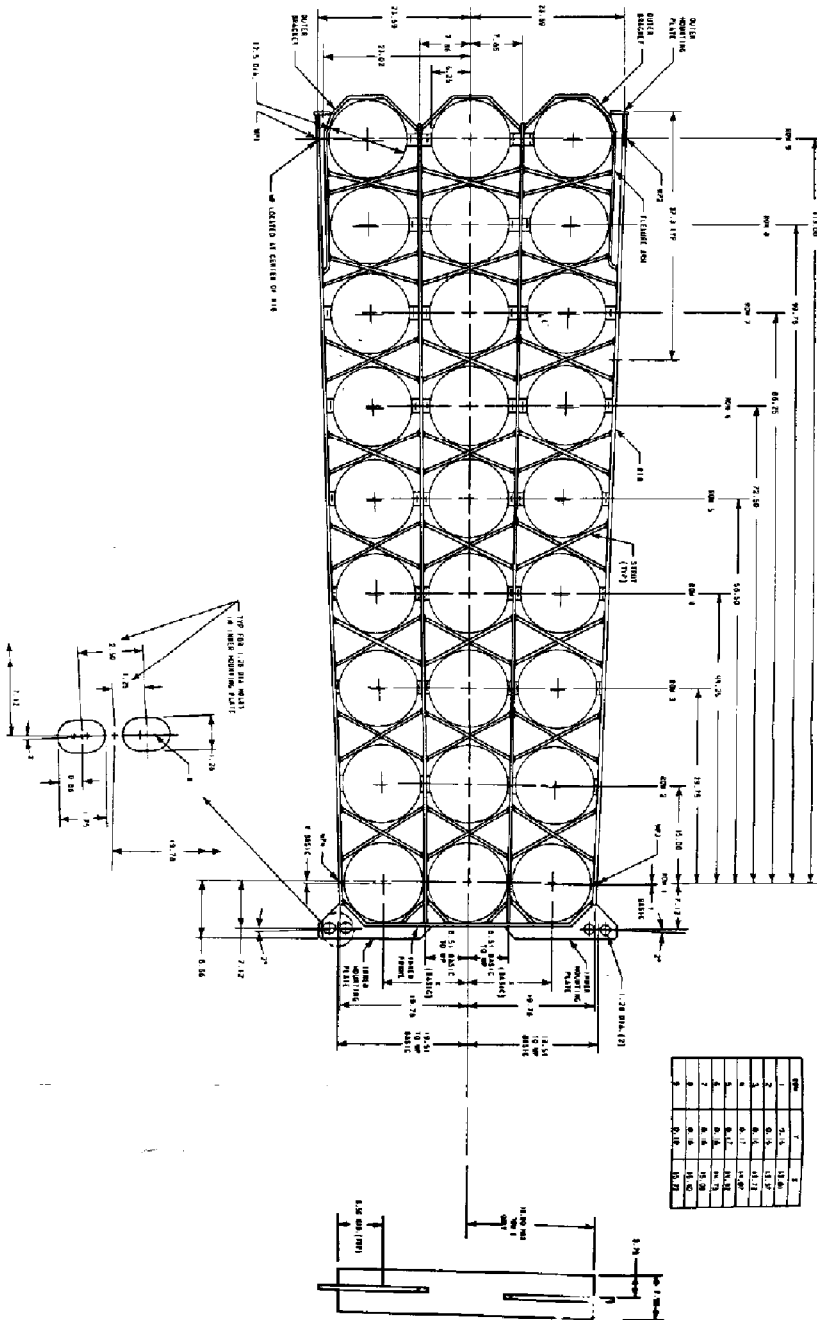


Figure 6-119. Lattice Frame Analysis Model

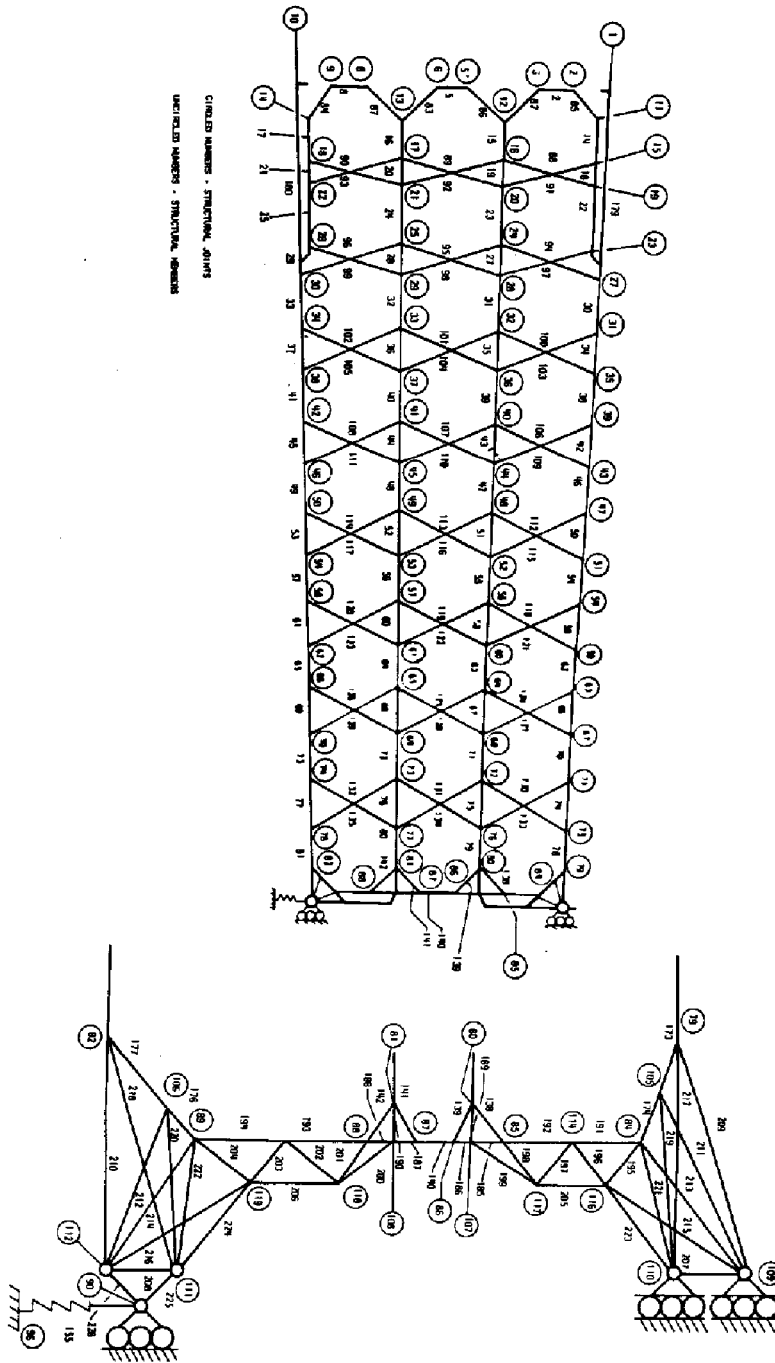
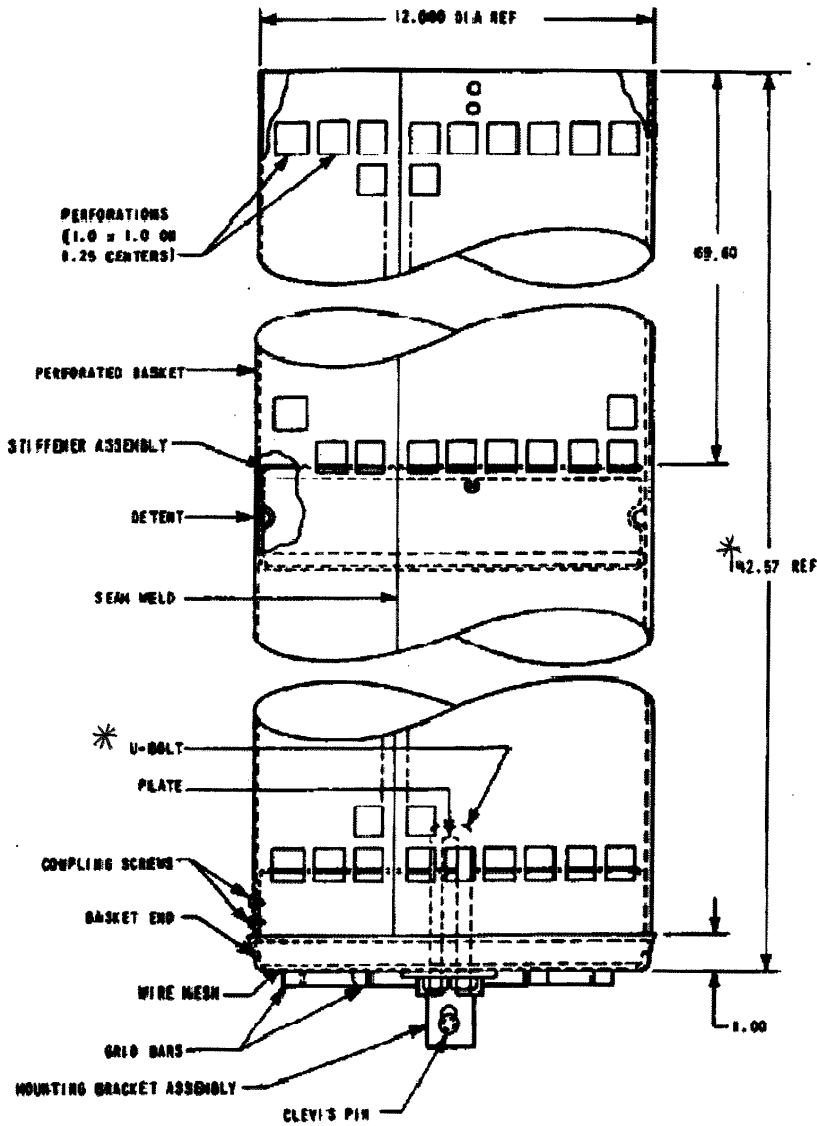


Figure 6-120. Typical Bottom Ice Basket Assembly



***Notes:**

1. The U-bolt was replaced with Swivel bracket (Figure 6-200)
2. Basket sections can be made of 2, 3 and 12 feet sections

Figure 6-121. Combination of Concentric Axial Load and Distribution Load That Will Cause Failure of a Perforated Metal Ice Condenser Basket Material Layout

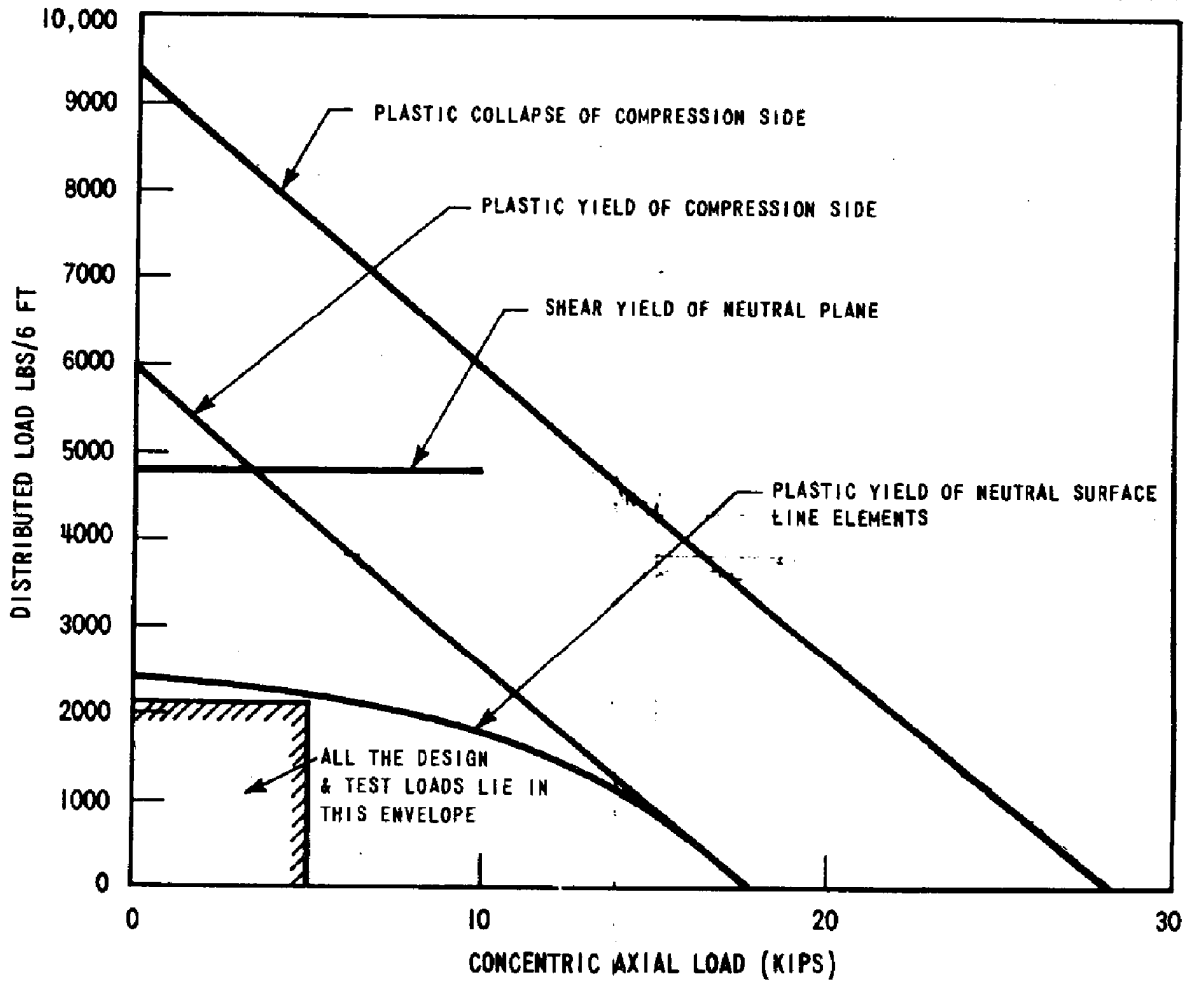


Figure 6-122. Crane Assembly

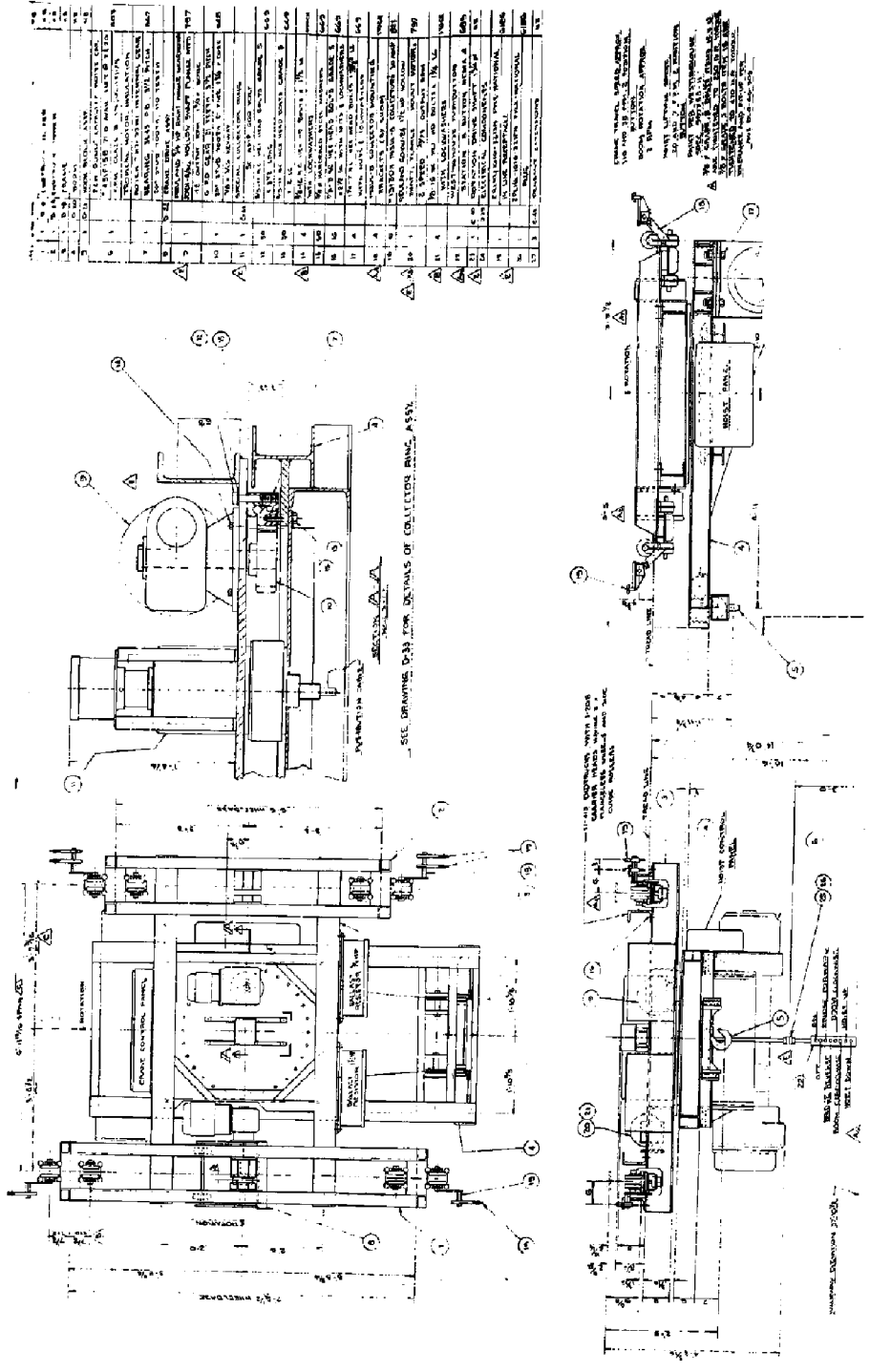


Figure 6-124. Refrigerant Cycle Diagram

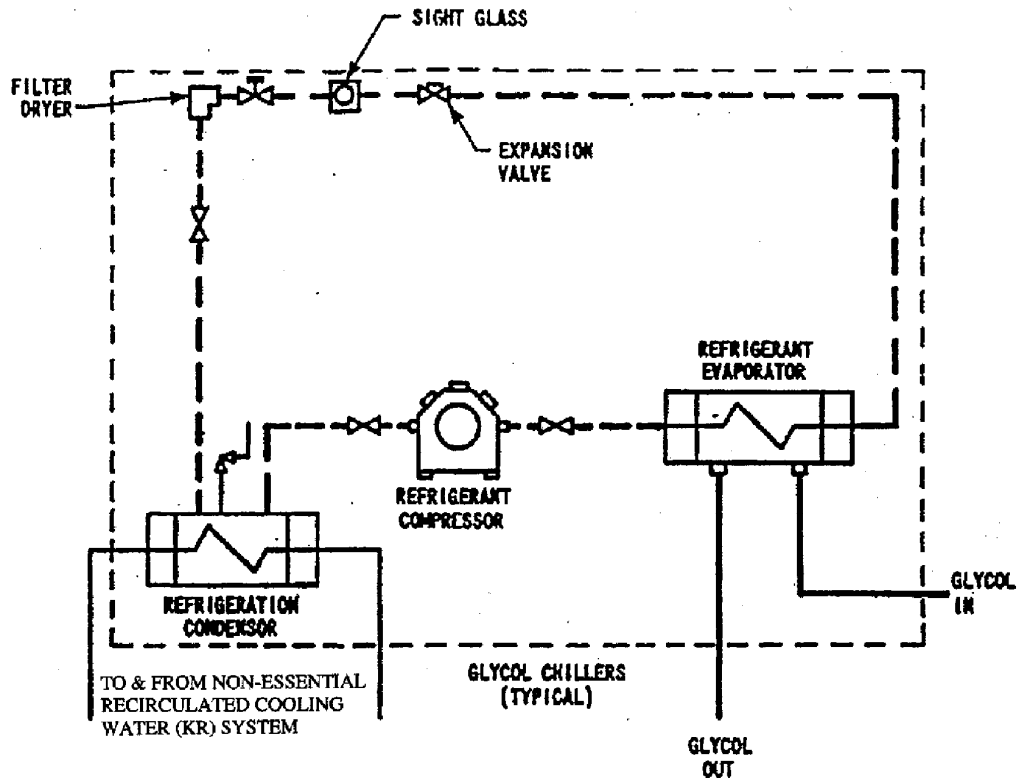


Figure 6-125. Glycol Cycle to Each Containment

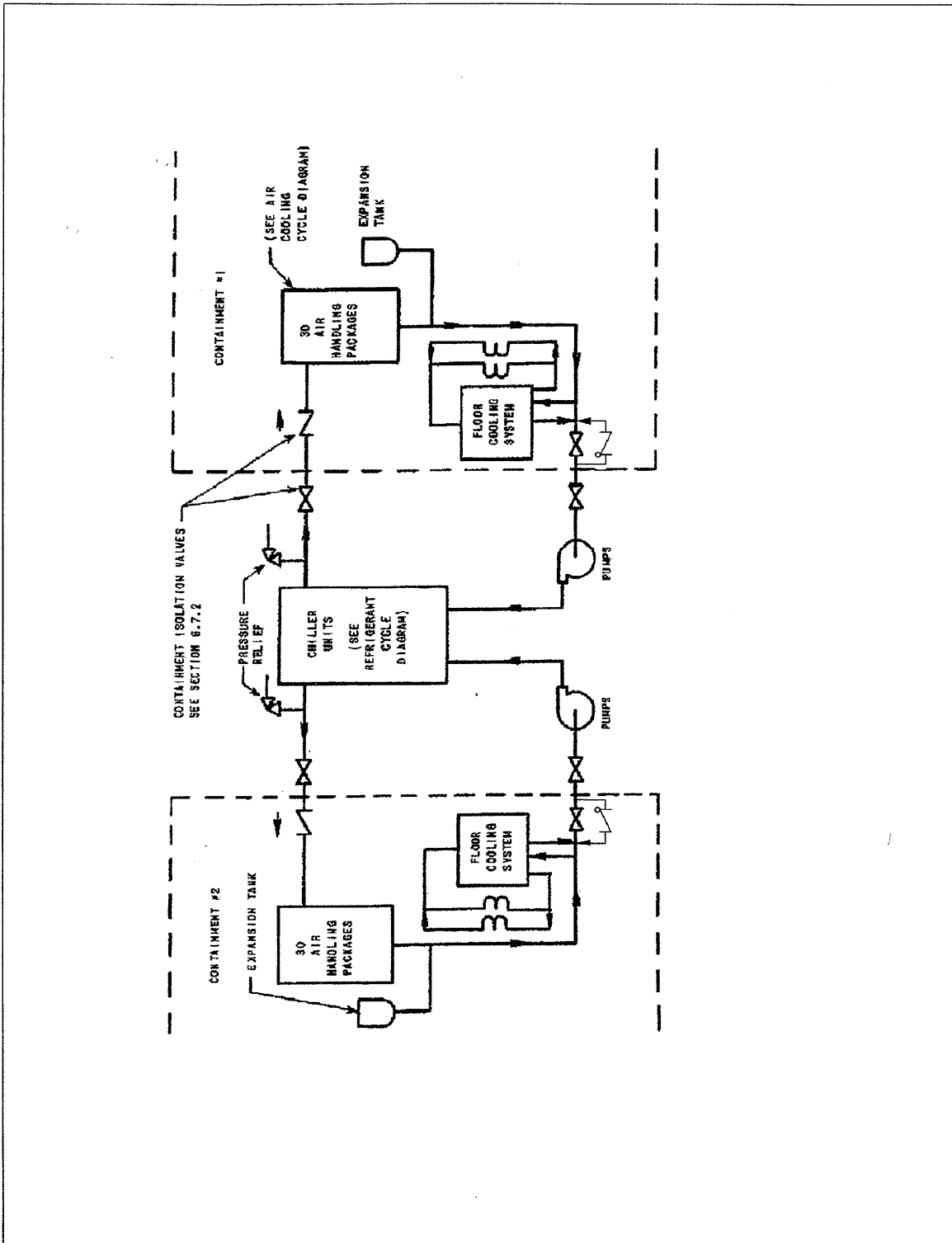


Figure 6-126. Schematic Flow Diagrams of Air Cooling Cycle

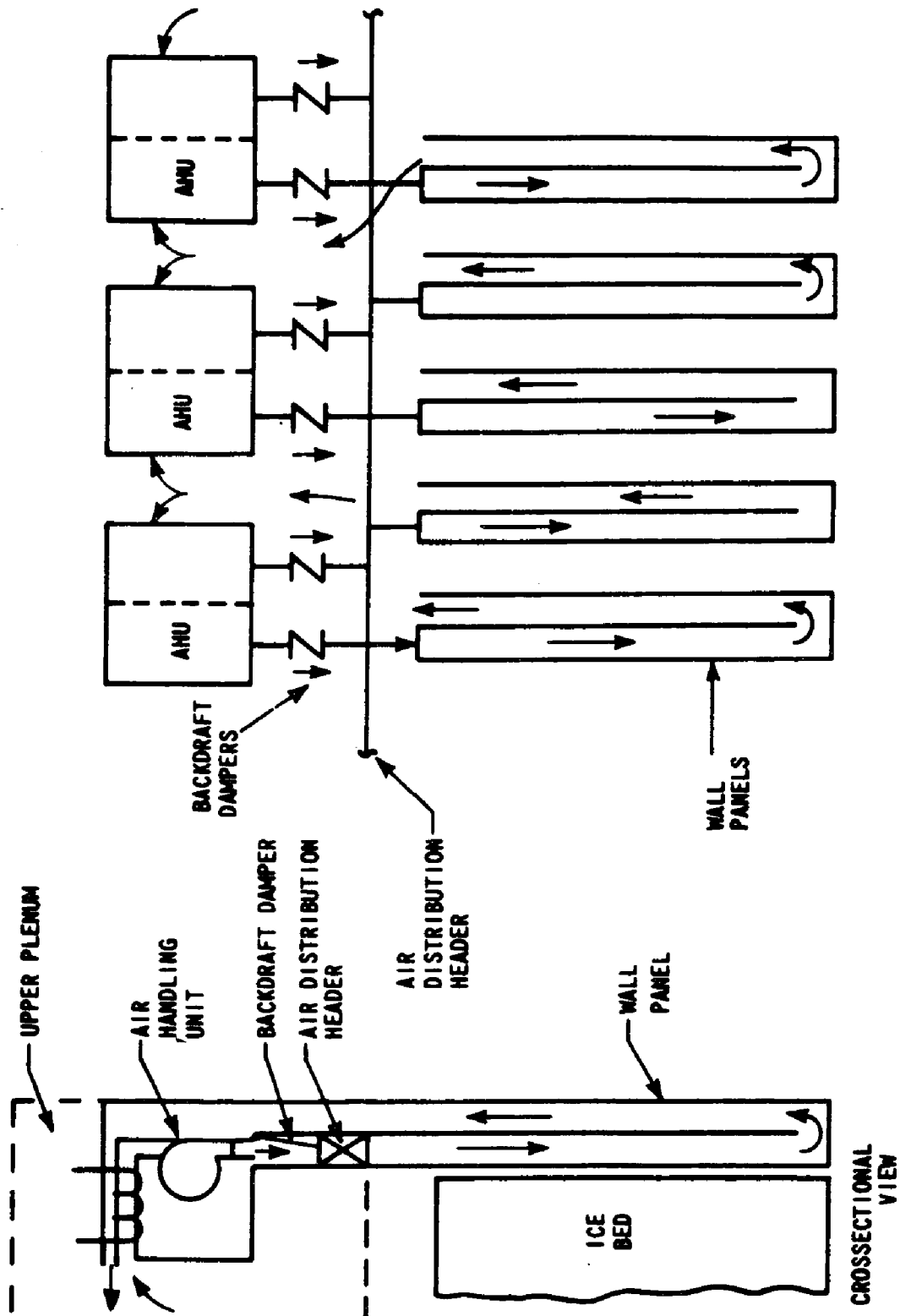


Figure 6-127. Air Handling Unit Support Structure

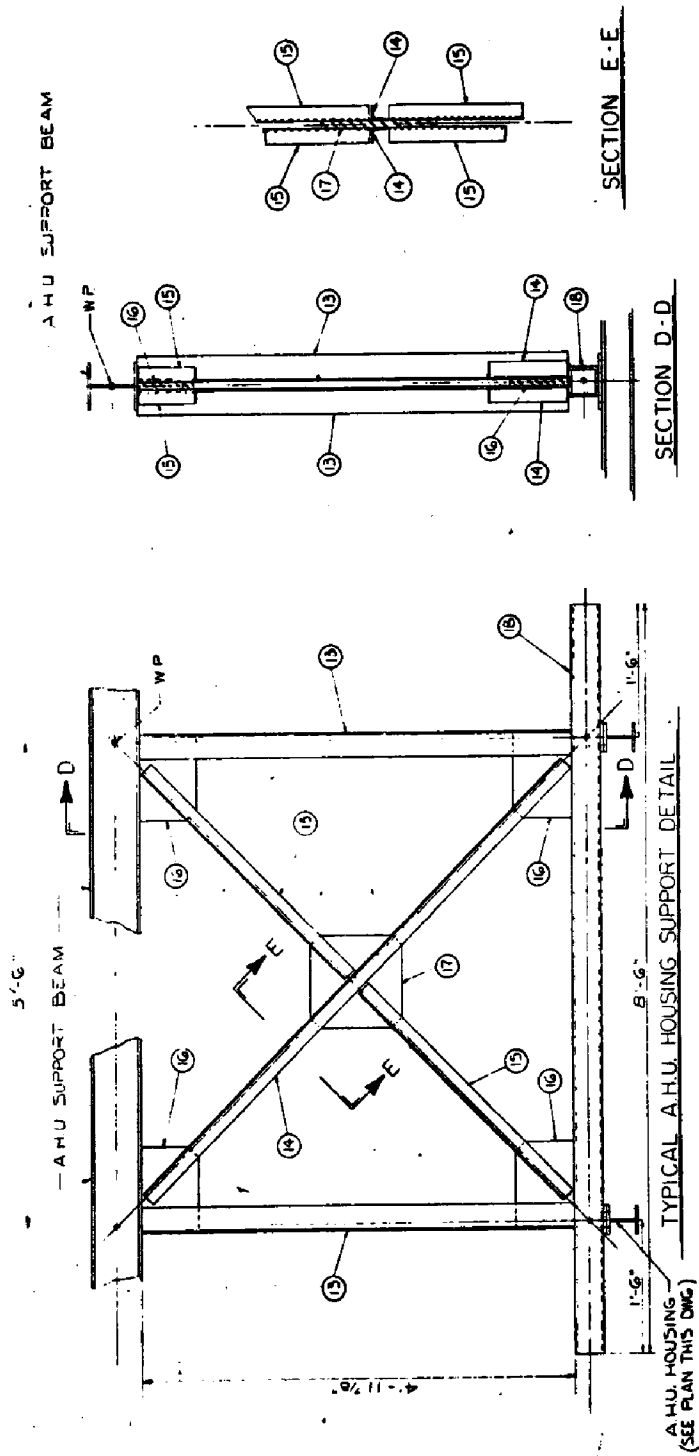


Figure 6-128. Deleted Per 2011 Update

Figure 6-129. Lower Inlet Door Assembly

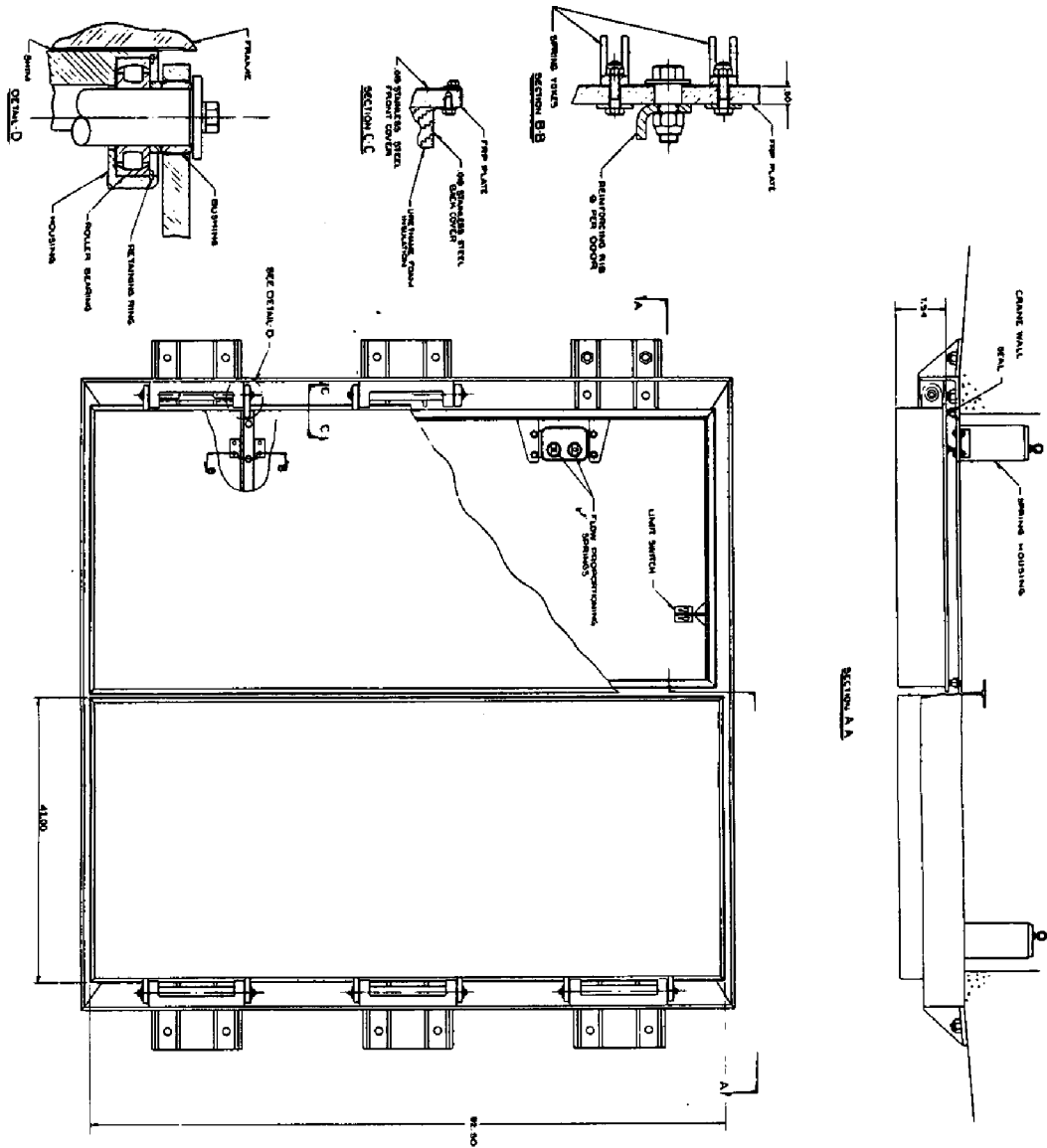
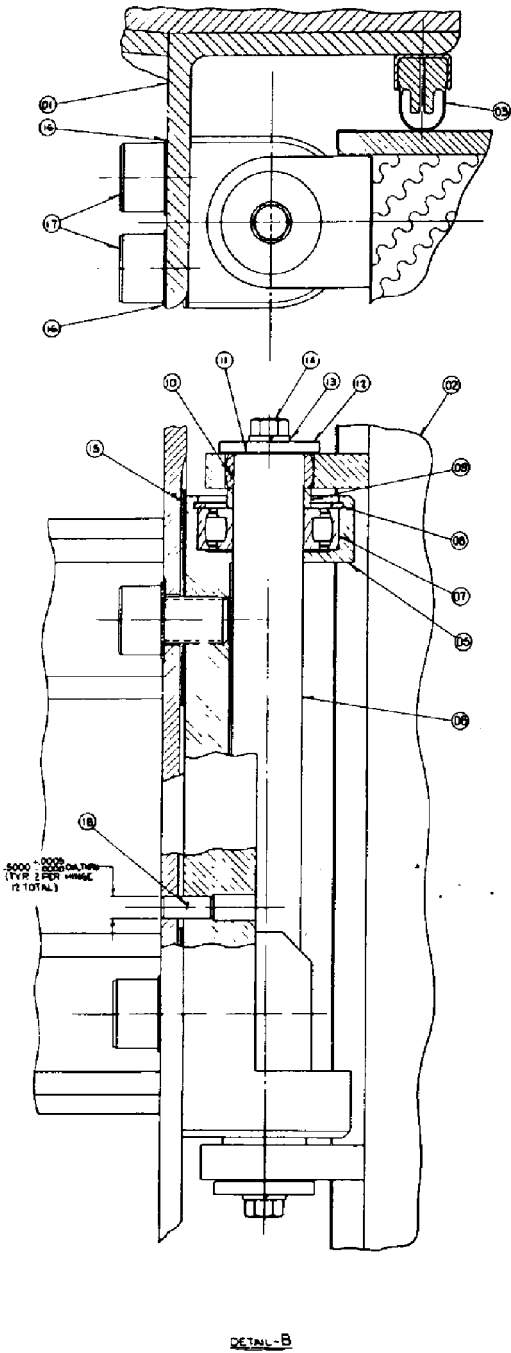
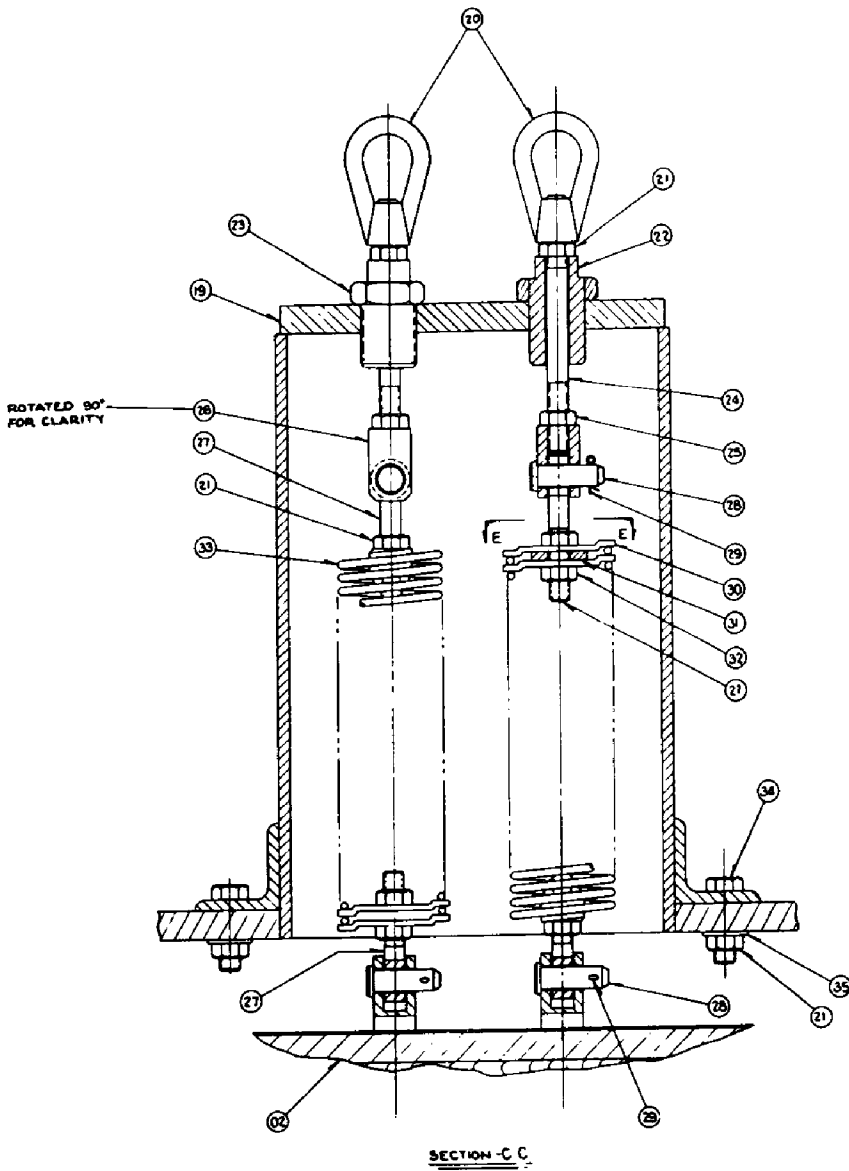
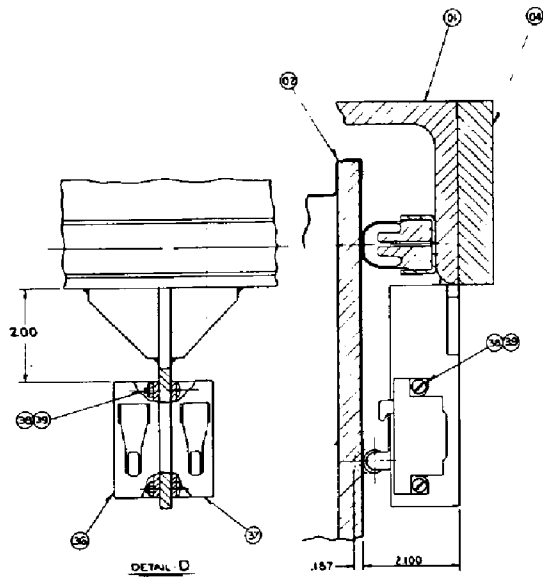


Figure 6-130. Details of Lower Inlet Door Showing Hinge, Proportioning Mechanism Limit Switches and Seals







1. Door Frame Assy
2. Door Assy
3. Seal
4. Foam Gasket
5. Bearing Housing
6. Shaft
7. Bearing
8. Retaining Ring
9. Spacer
10. Bushing
11. Spacer
12. Shaft Cap
13. .500 Lock Washer (Spring Type)
14. .500 - 12 UNC - Hex Nut x 1.00 Lg.
15. Shim
16. 1.000 Lock Washer (External Tooth)
17. 1.000 - 8 UNC - Sec. Hd. Cap SCR x 1.500 Lg.
18. Dowel Pin .5000 x .0002 Dia. x 1.000 Lg.
19. Spring Housing
20. Eye Nut - 6-480 Size 2
21. .375 - 16 UNC - Hex Nut
22. Adj. Scr.
23. 1.000 - 12 UNF - Jam Nut
24. .375 Dia. Steel Tub. Bush Ends . 578 - 16 UNC x 1.500 Lg.
25. .375 - 16 UNC Jam Nut
26. Clevis
27. Rod End 402-376
28. Clevis Pin 498-27
29. Cotter Pin .093 Dia. x .625 Lg.
30. Spring Clip
31. Washer 1.000 O.D. x .437 I.D. x .090 THK.
32. Spring Clip Assy
33. Spring
34. .375-16 UNC Hex Nut x 1.25 Lg.
35. .375 Std. Washer
36. Switch #38 31
37. Switch #38 30
38. 6-32 UNC Std. Hd. SCR x .50 Lg.
39. 6-32 UNC Hex Nut

Figure 6-131. Inlet Door Frame Assembly

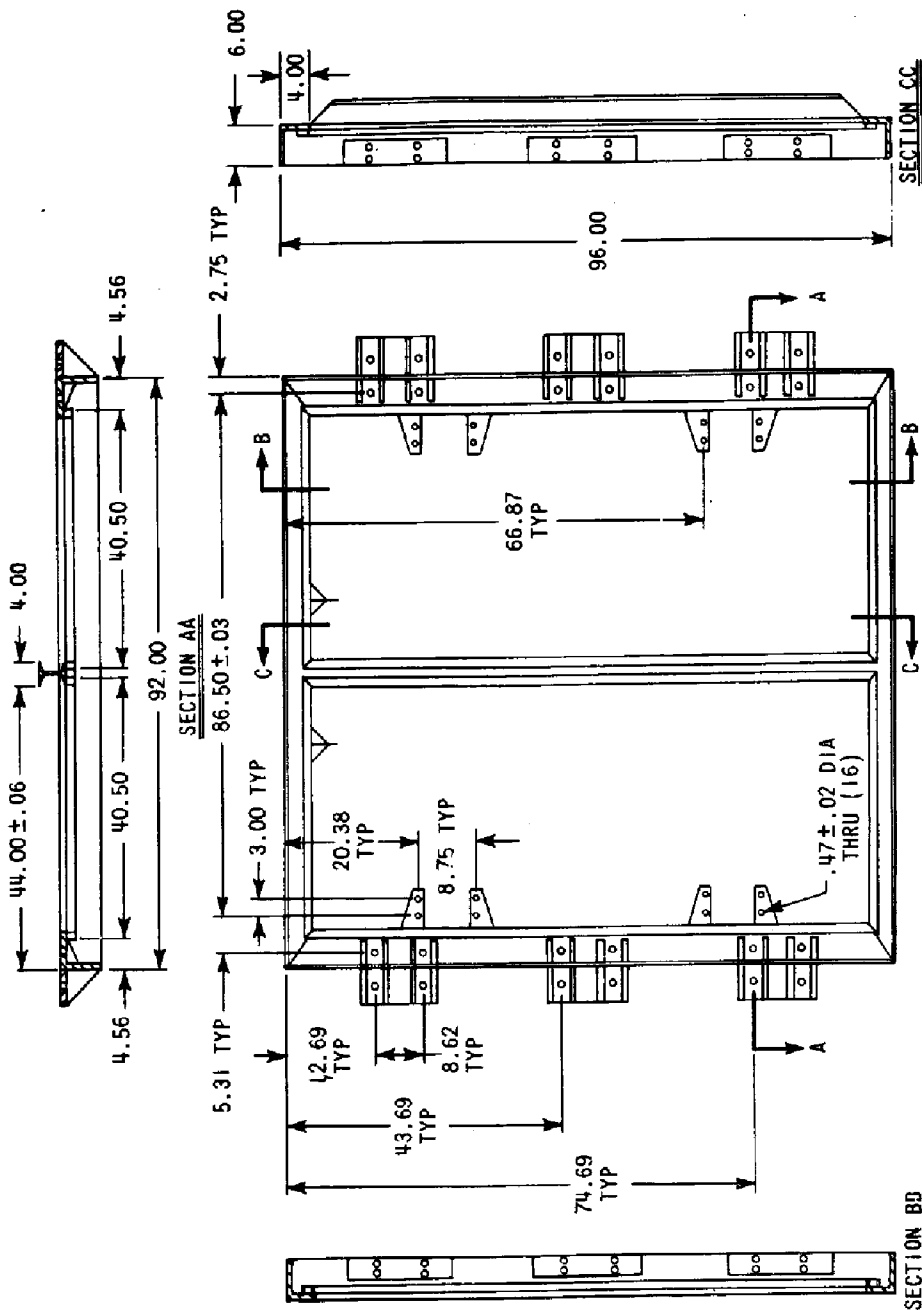


Figure 6-132. Inlet Door Panel Assembly

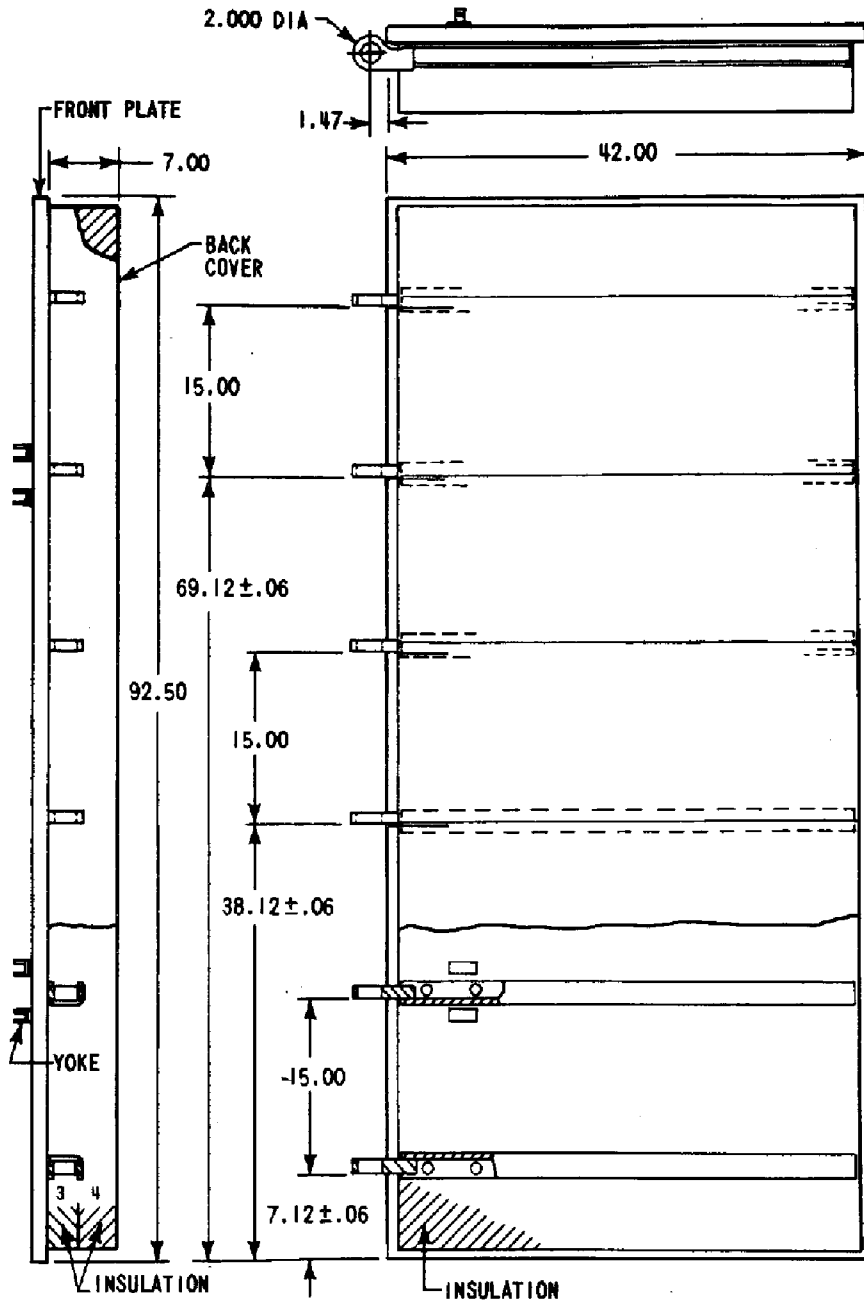
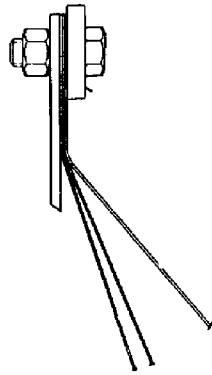
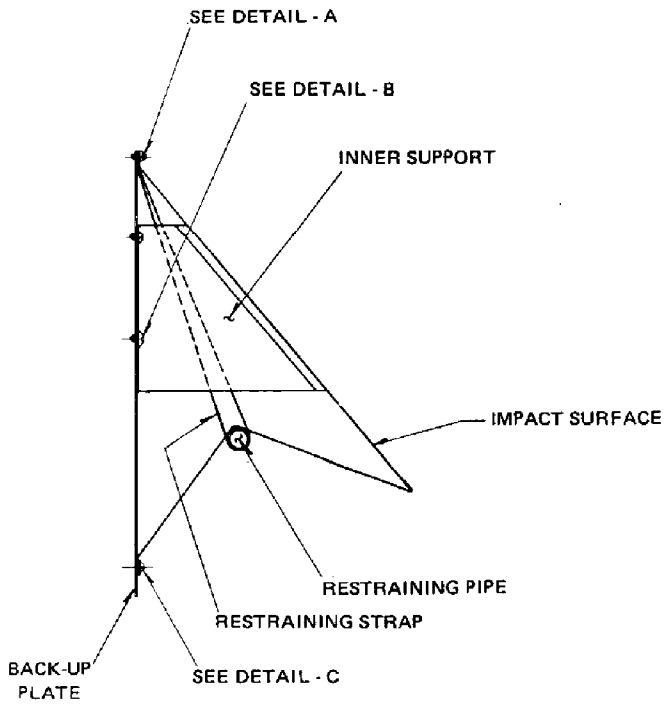
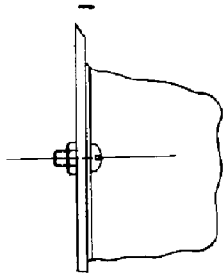


Figure 6-133. Lower Inlet Door Shock Absorber Assembly

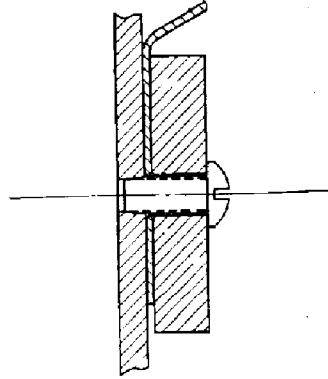


DETAIL - A
SCALE - 1:1





DETAIL - B
SCALE - 1:1



DETAIL - C
SCALE - 3:1

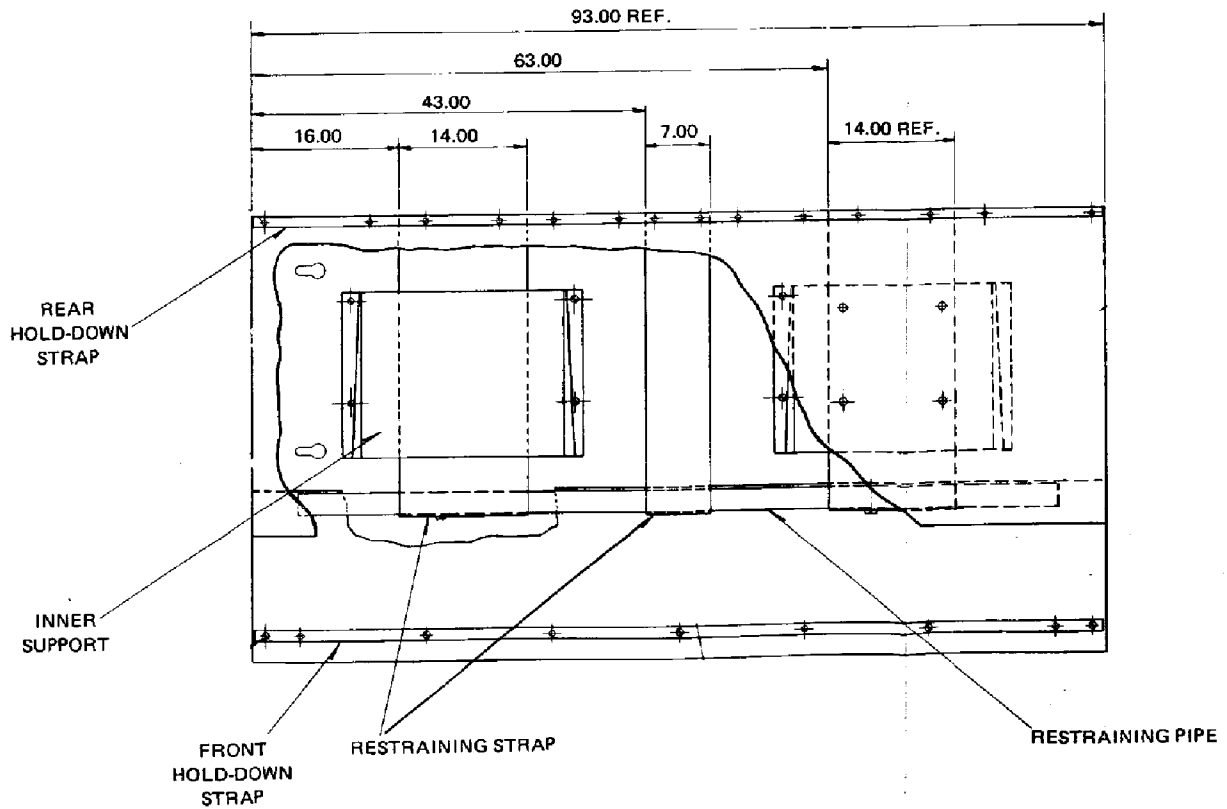


Figure 6-134. Four Loop Ice Condenser Lower Support Structure Conceptual Plan and Sections

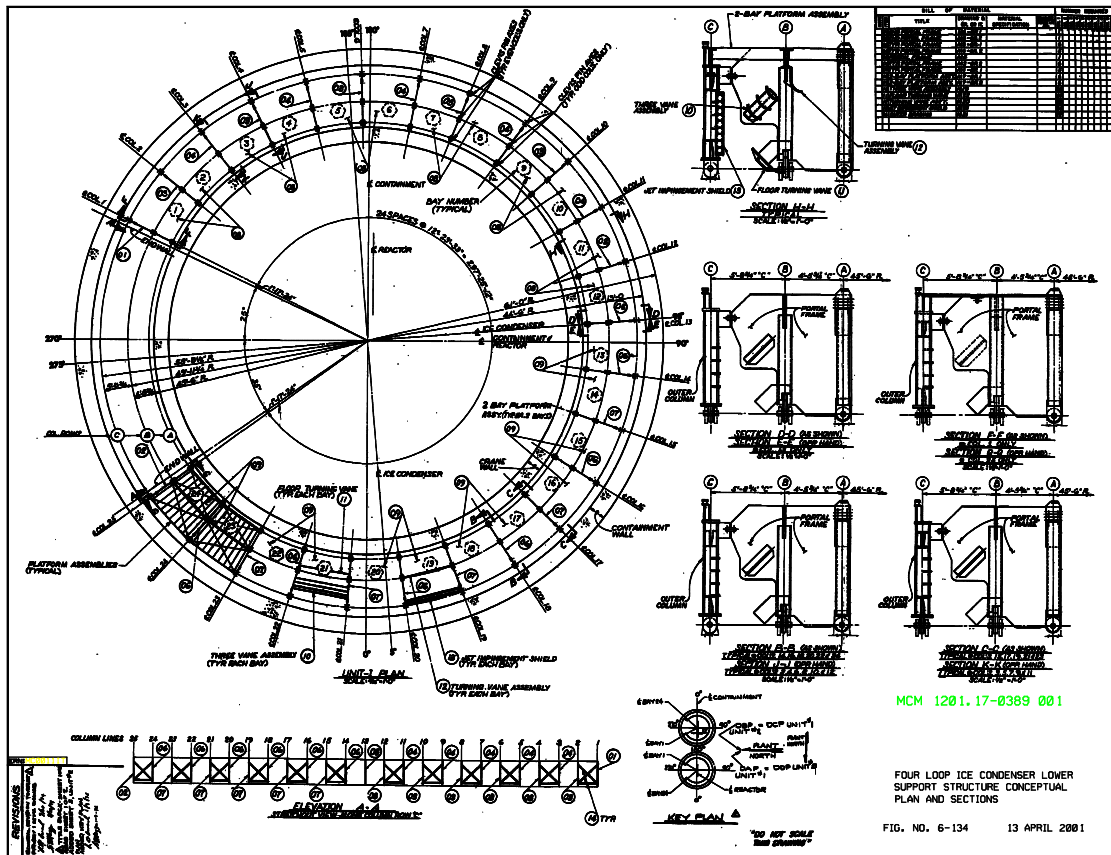


Figure 6-135. Four Loop Ice Condenser Lower Support Structure General Assembly

McGuire Nuclear Station

Appendix 6. Chapter 6 Tables and Figures

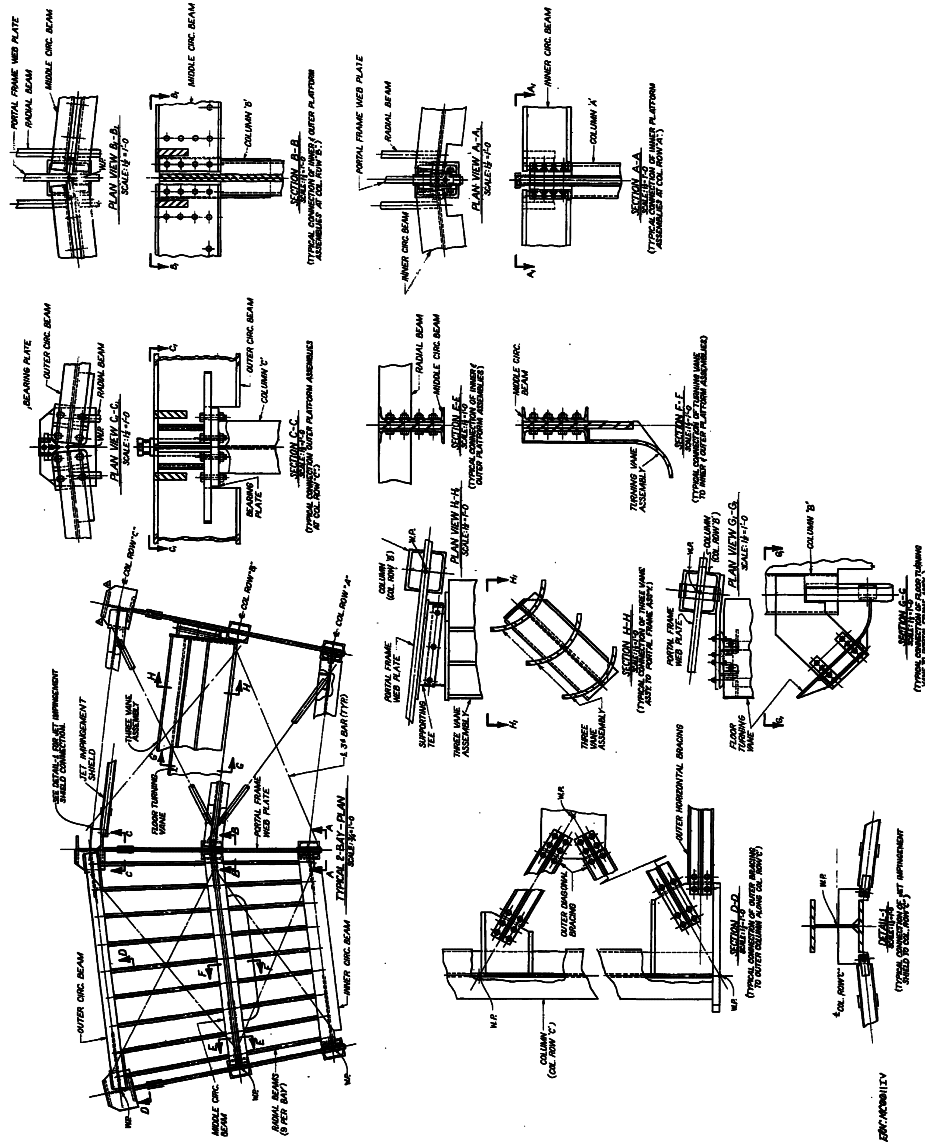


FIGURE 6-135
FOUR LOOP ICE CONDENSER LOWER SUPPORT STRUCTURE GENERAL ASSEMBLY

(13 APRIL 2001)

Figure 6-136. ANSYS Model Assembly

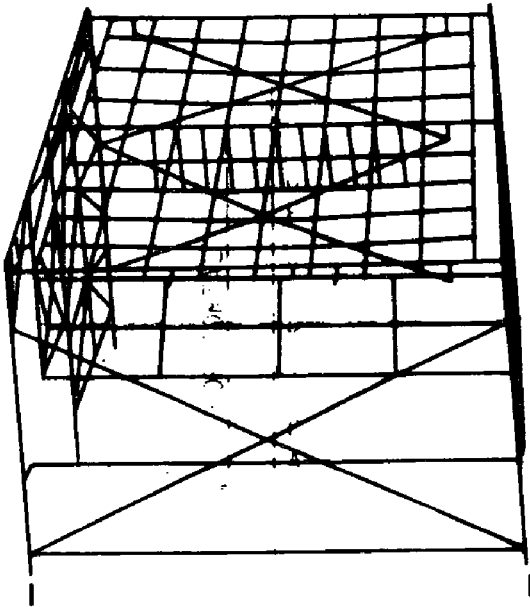


Figure 6-137. Finite Element Model of Portal Frame

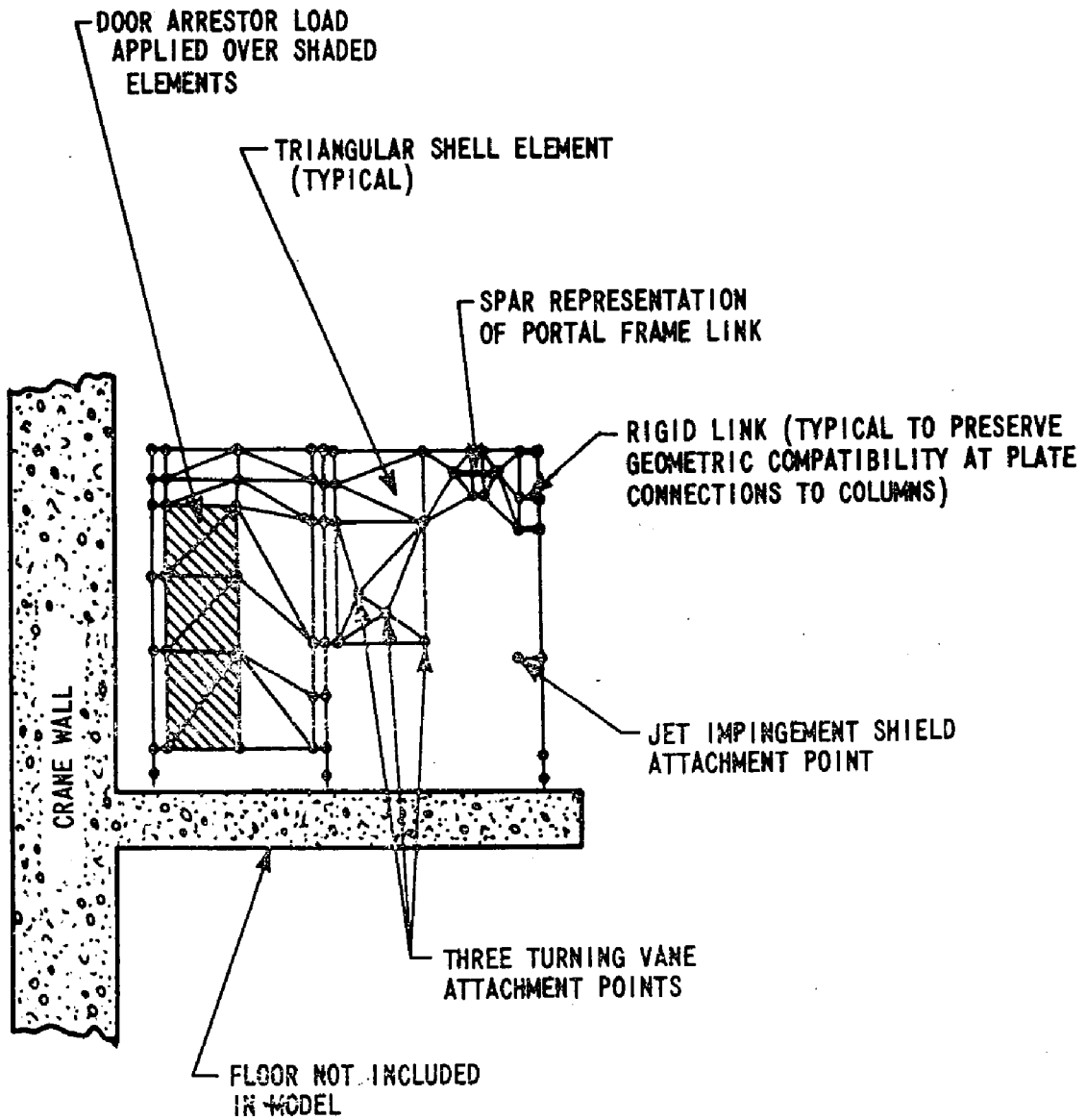


Figure 6-138. Schematic Diagram of Forces Applied to Three Pier Lower Support Structure

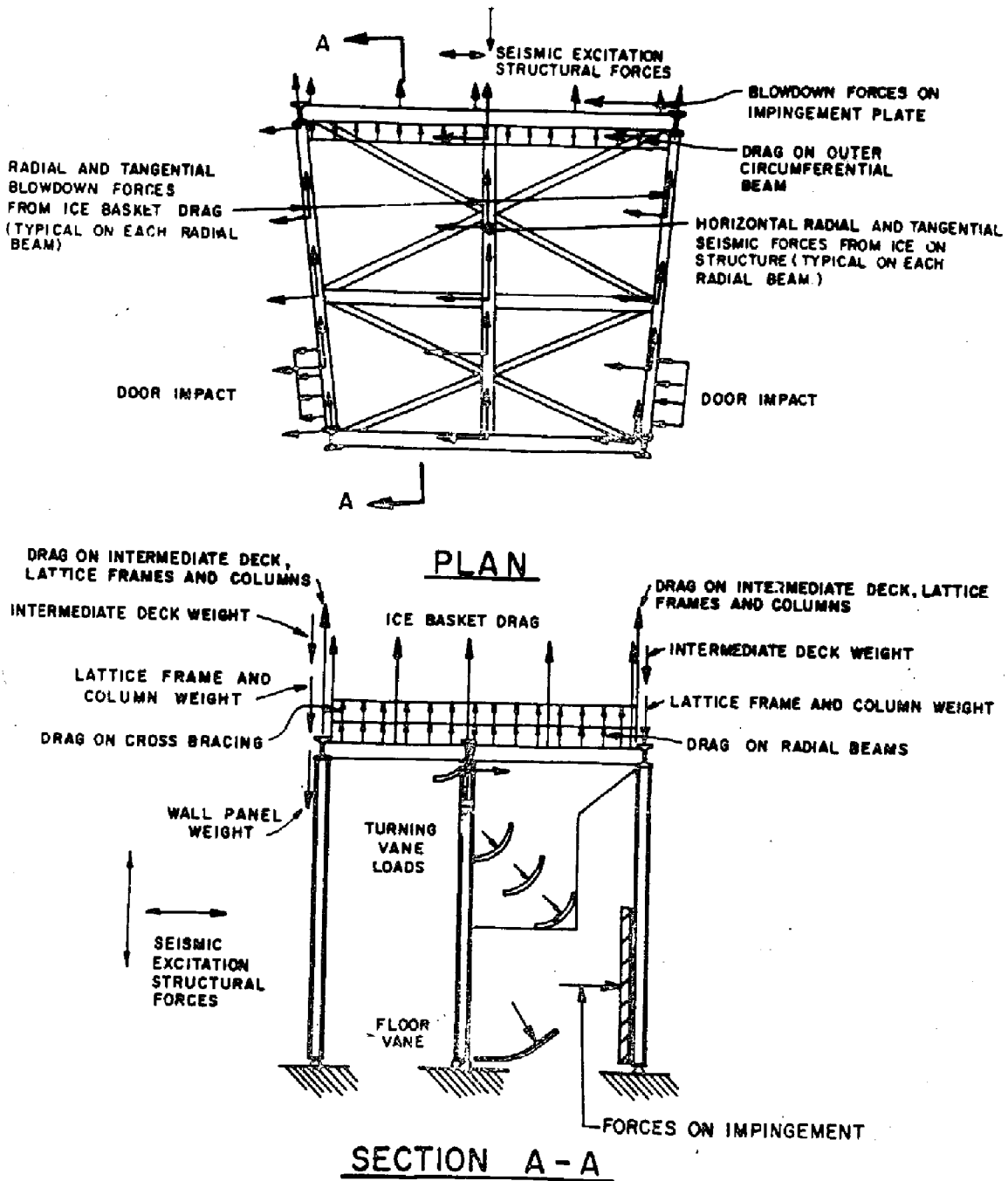


Figure 6-139. Force Transient Hot Leg Break

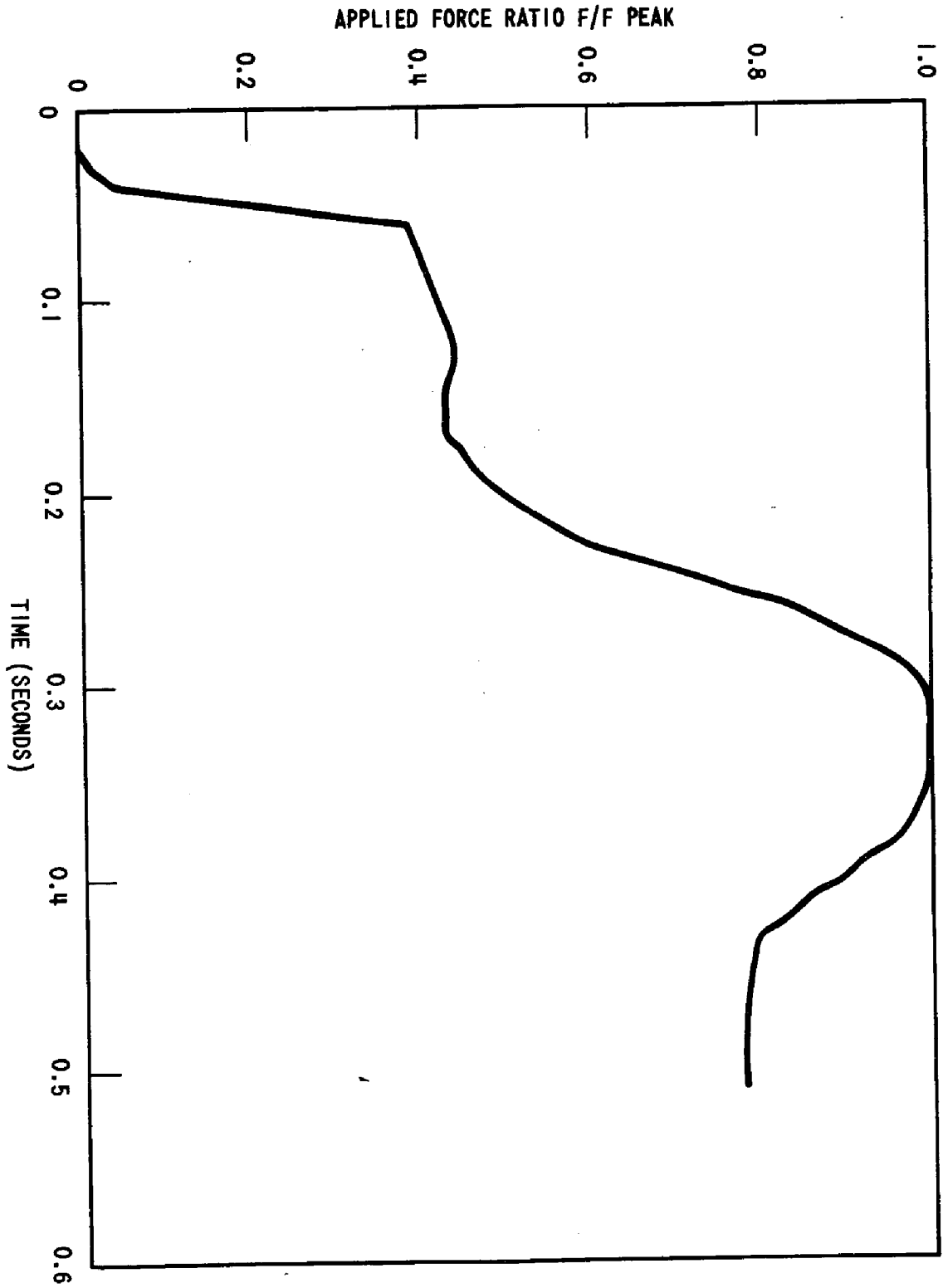


Figure 6-140. DLF Spectra Hot Leg Break Force Transient

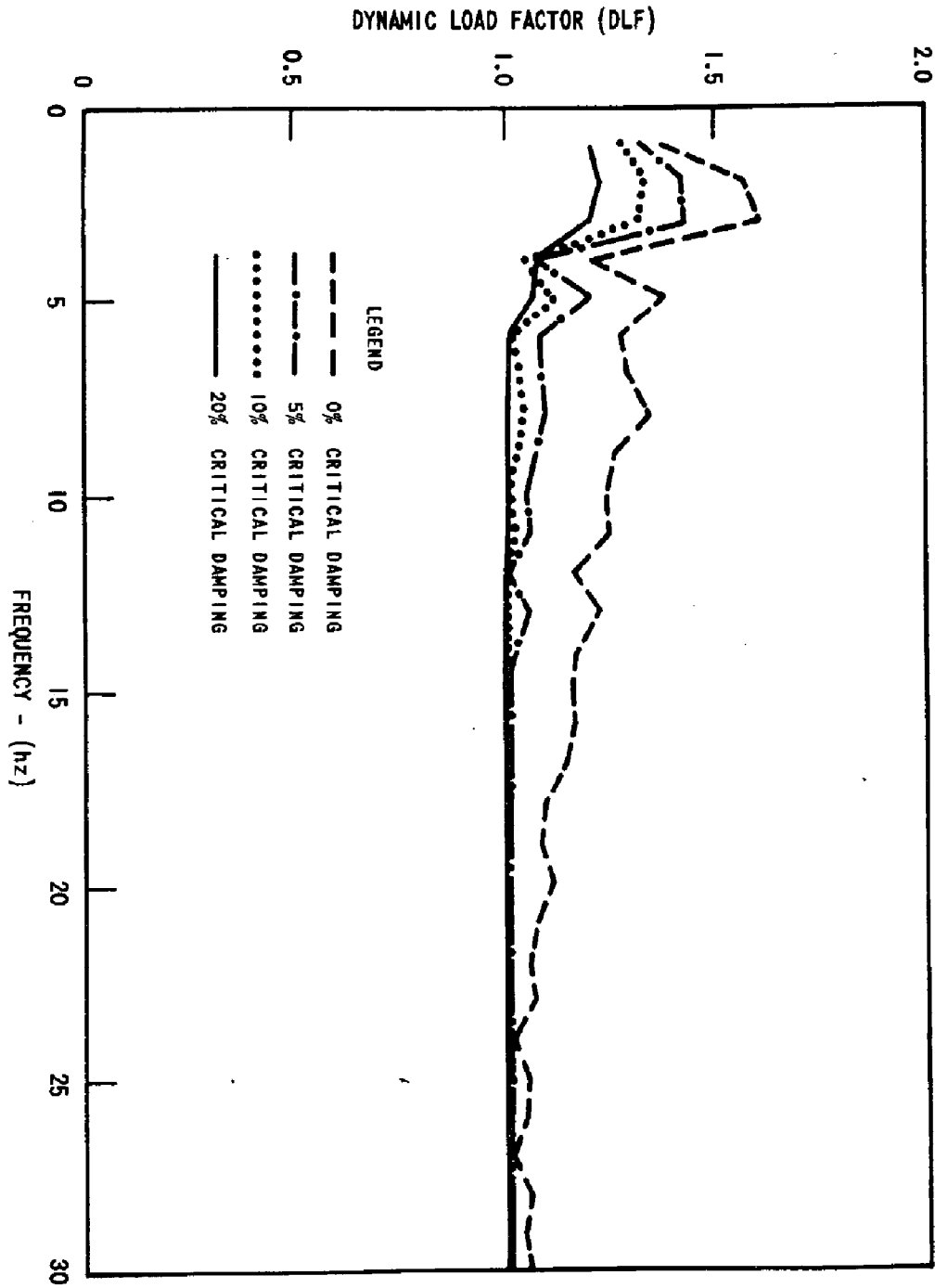


Figure 6-141. Top Deck Test Assembly

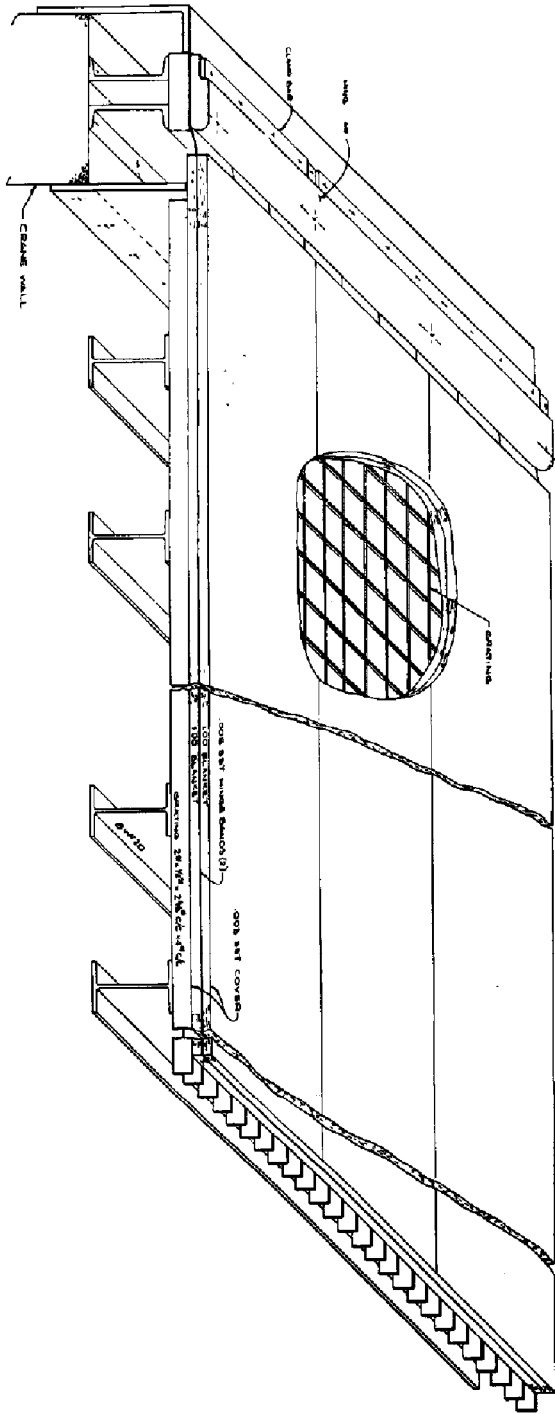
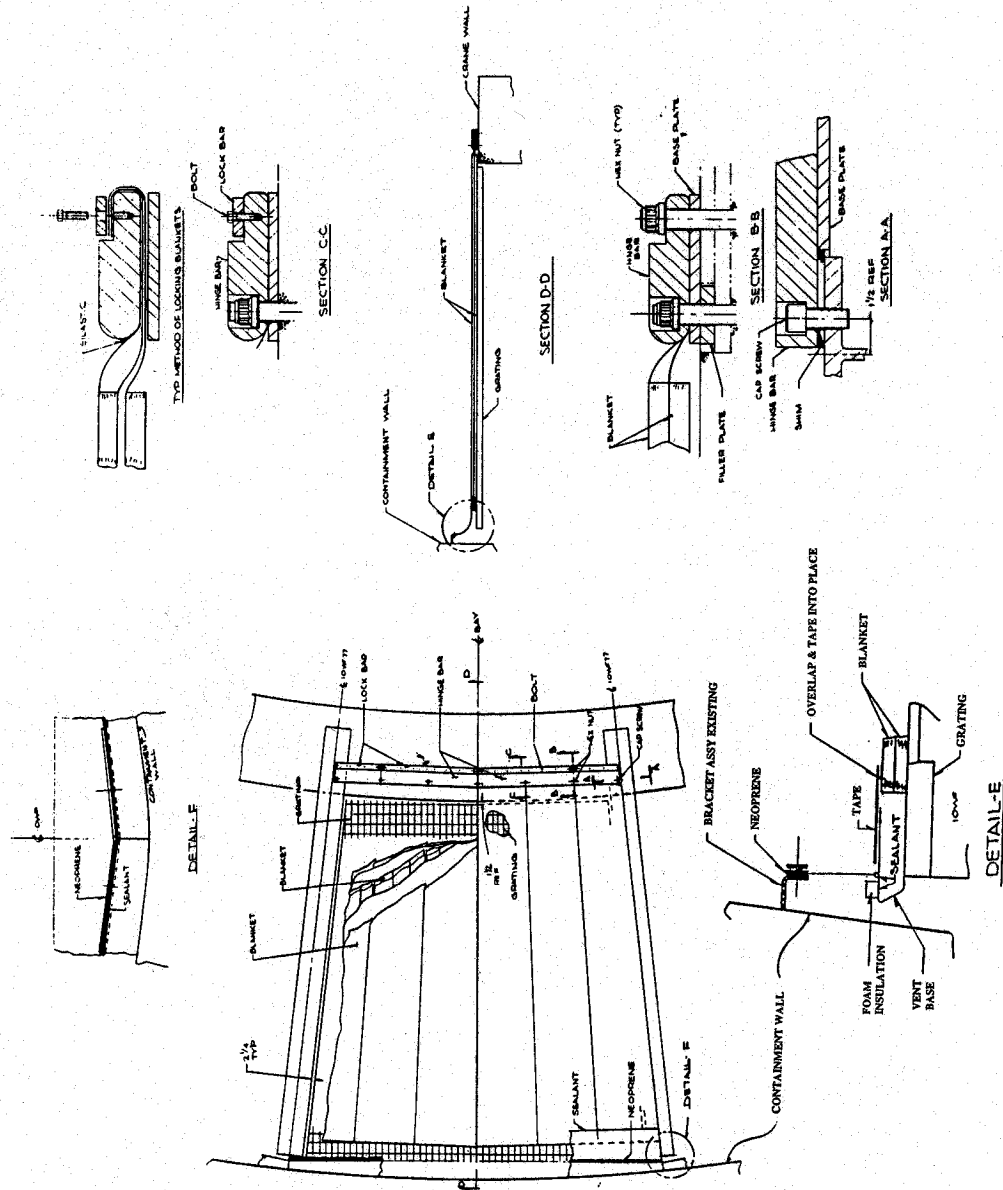


Figure 6-142. Details of Top Deck Door Assembly



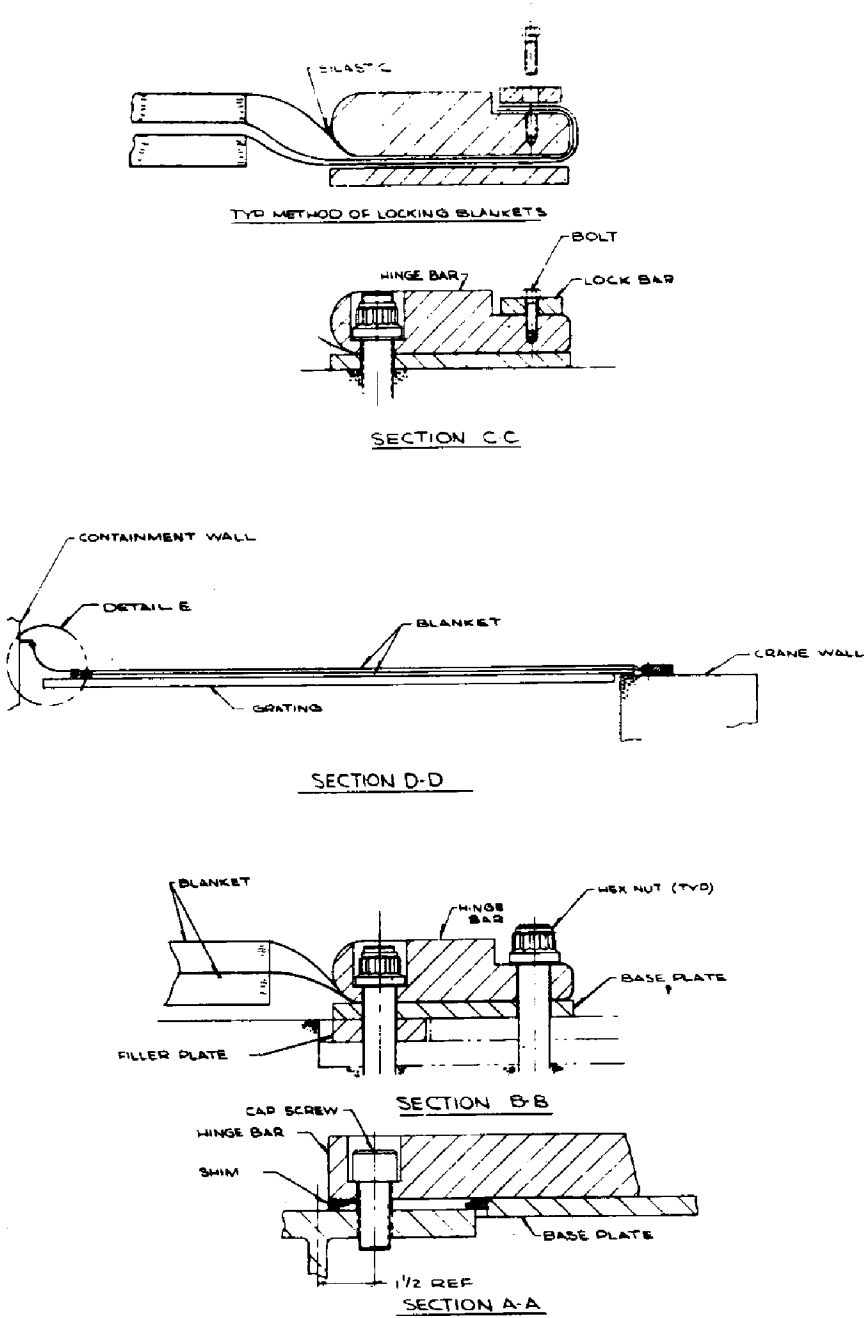


Figure 6-143. Intermediate Deck Door Assembly

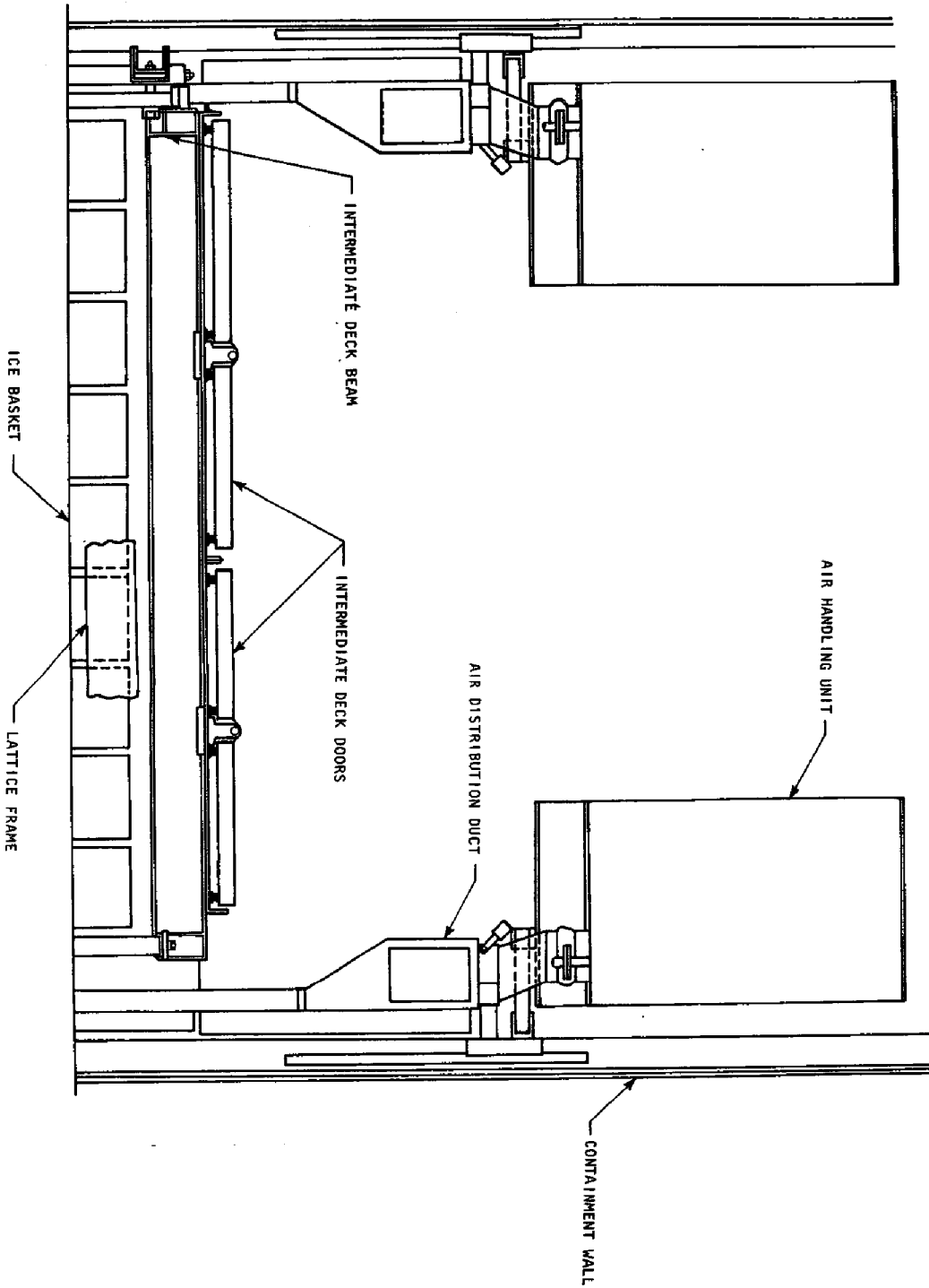


Figure 6-144. Air Distribution Duct

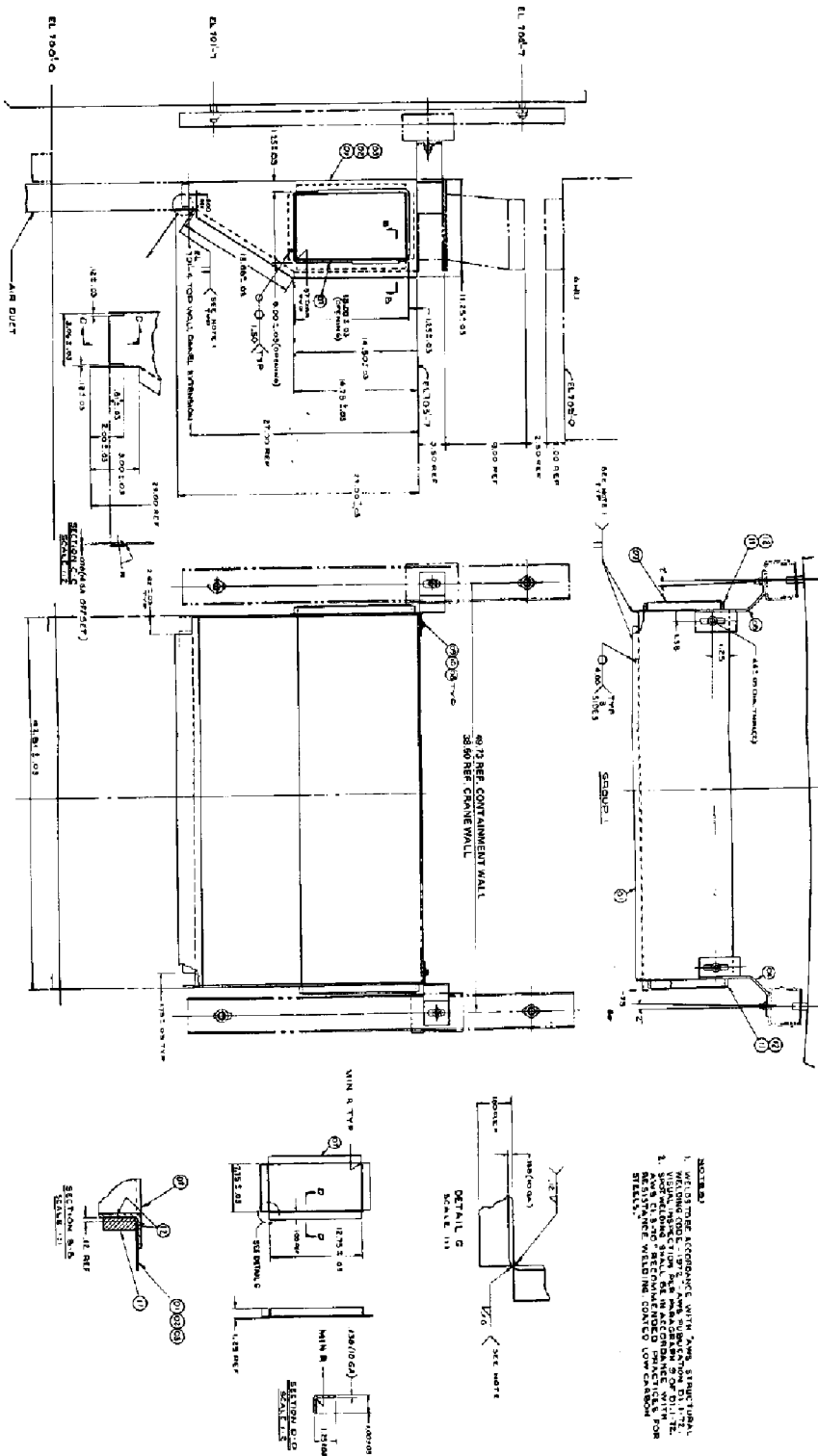


Figure 6-145. Phase Diagram for $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$ /Water System at One Atmosphere

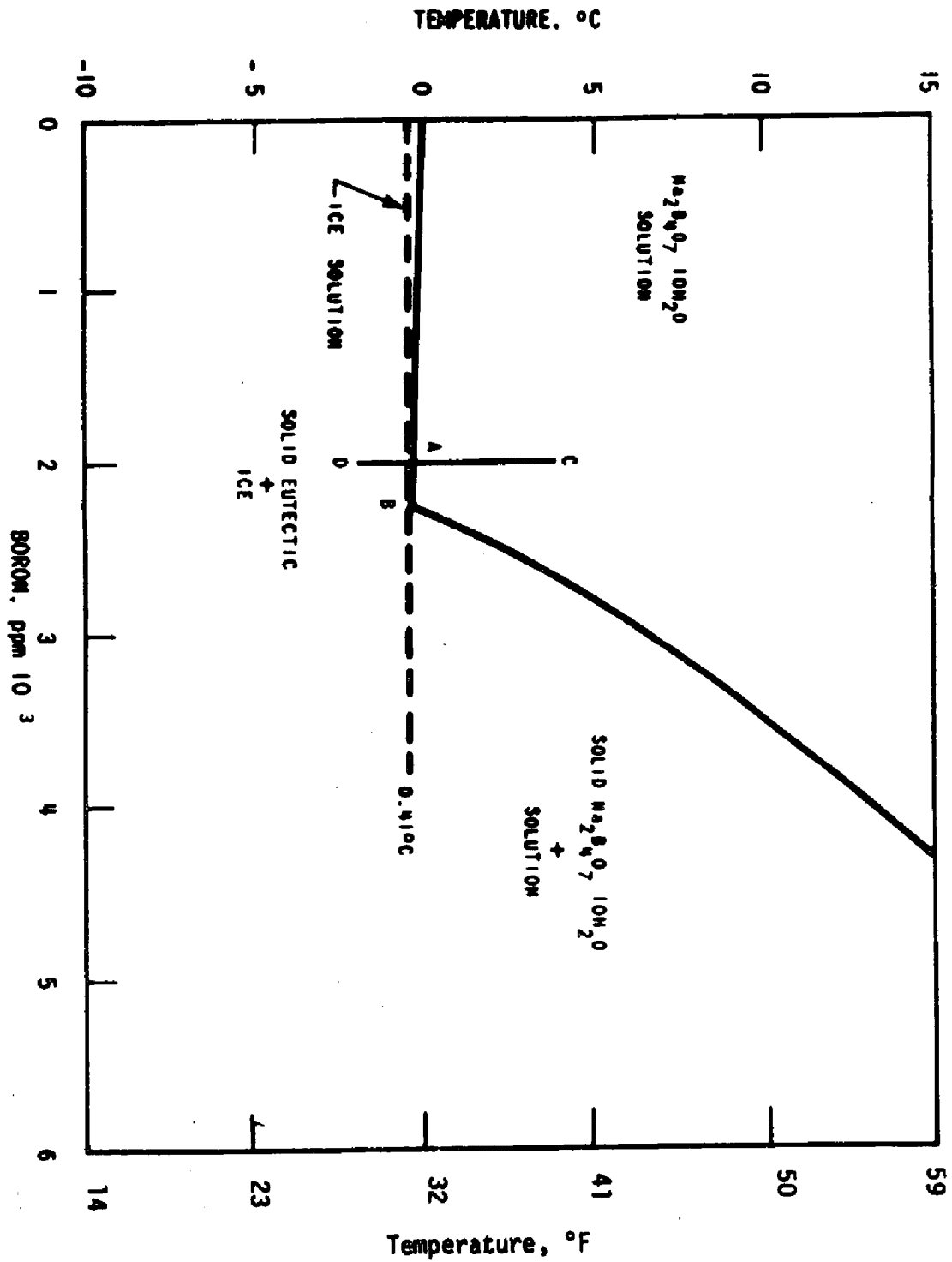


Figure 6-146. Ice Bed Compaction Versus Time

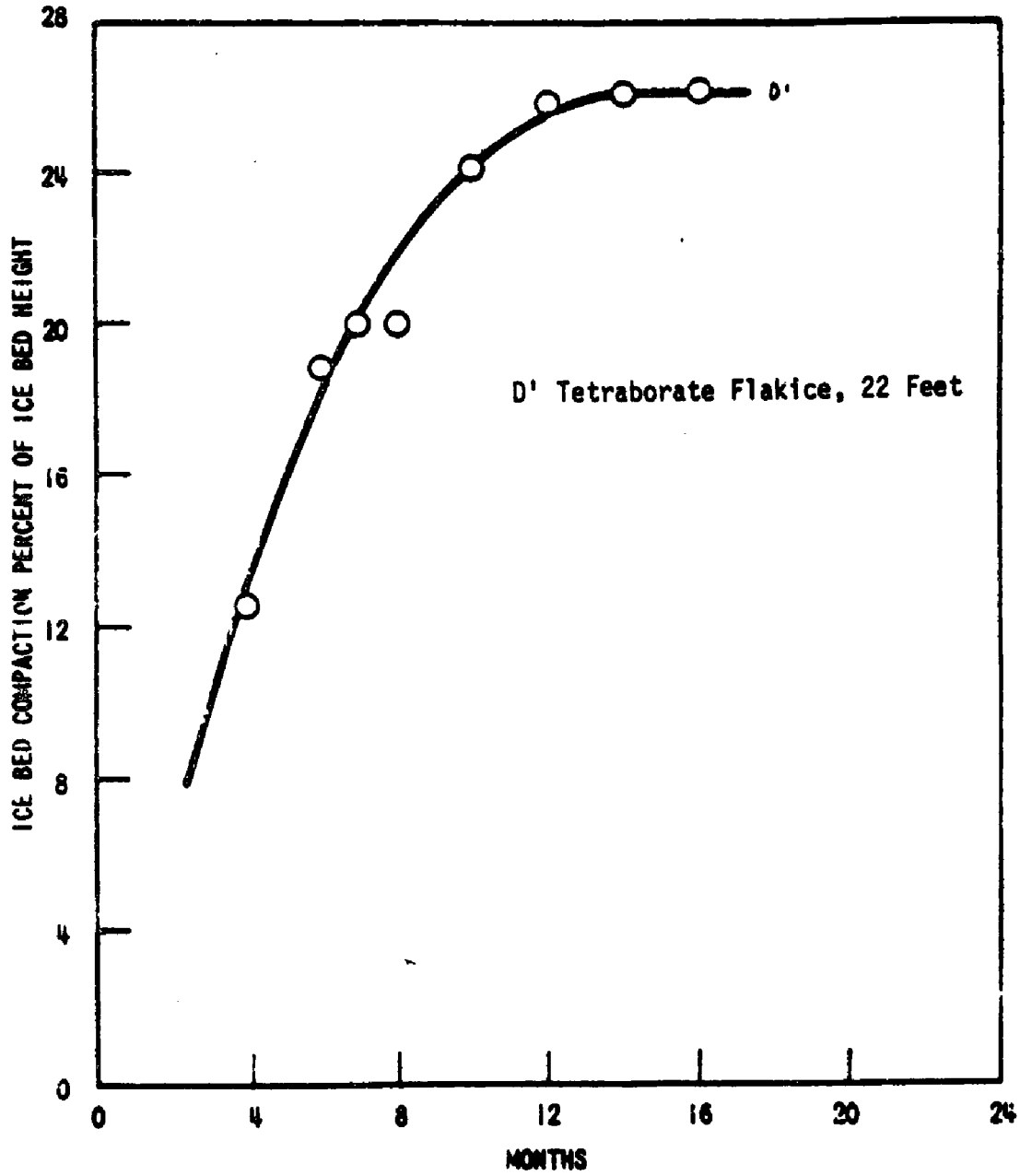


Figure 6-147. Test Ice Bed Compaction Versus Ice Bed Height

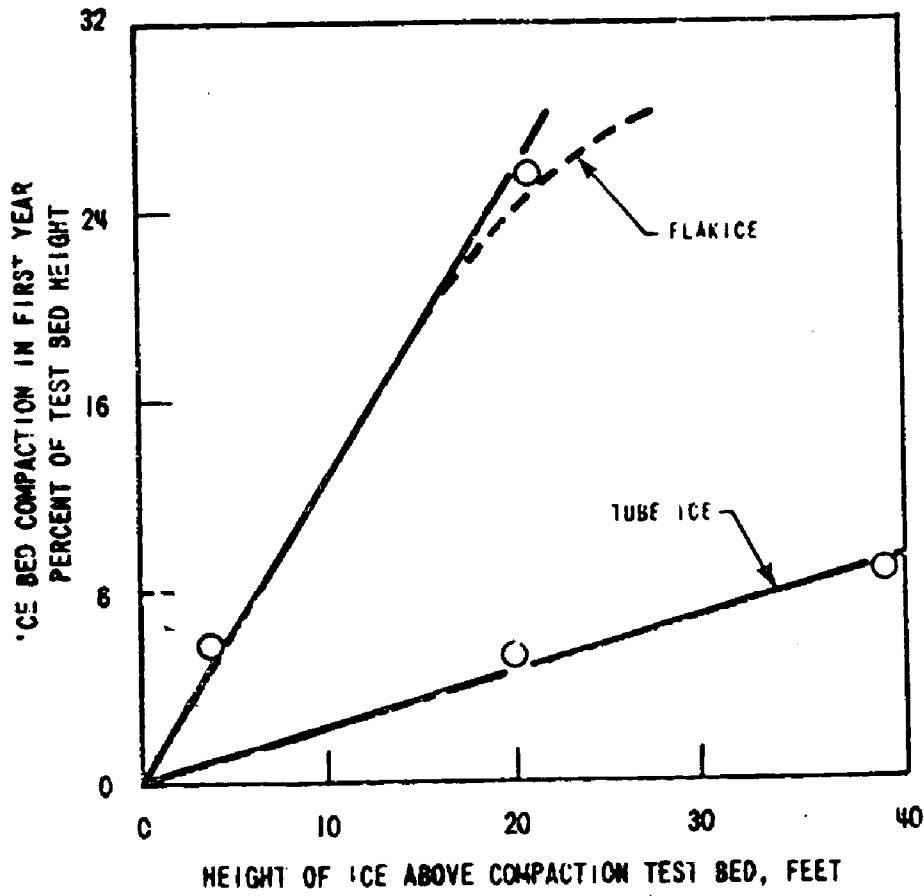


Figure 6-148. Model of Horizontal Lattice Frame Structure

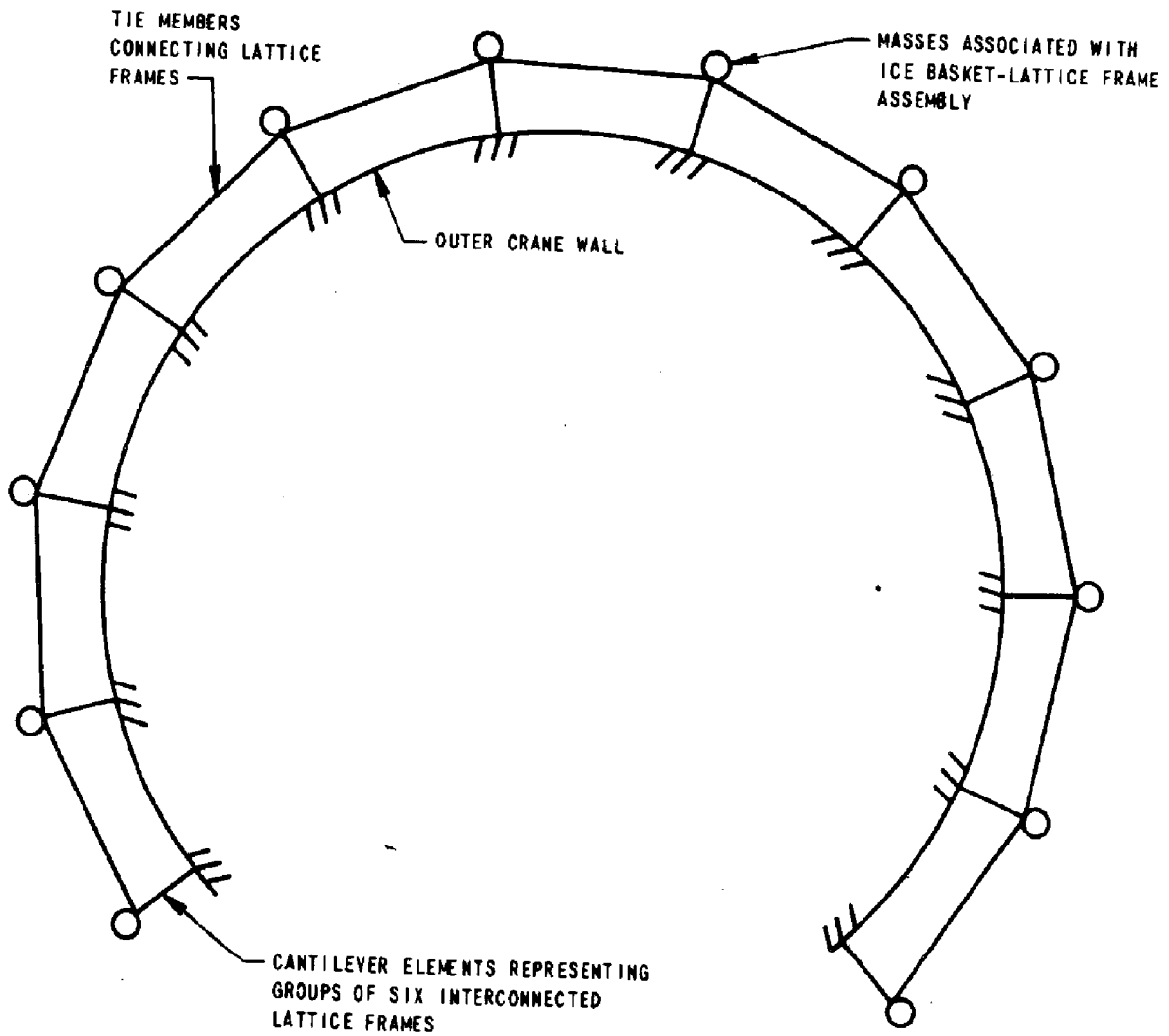


Figure 6-149. Group Six Interconnected Lattice Frames

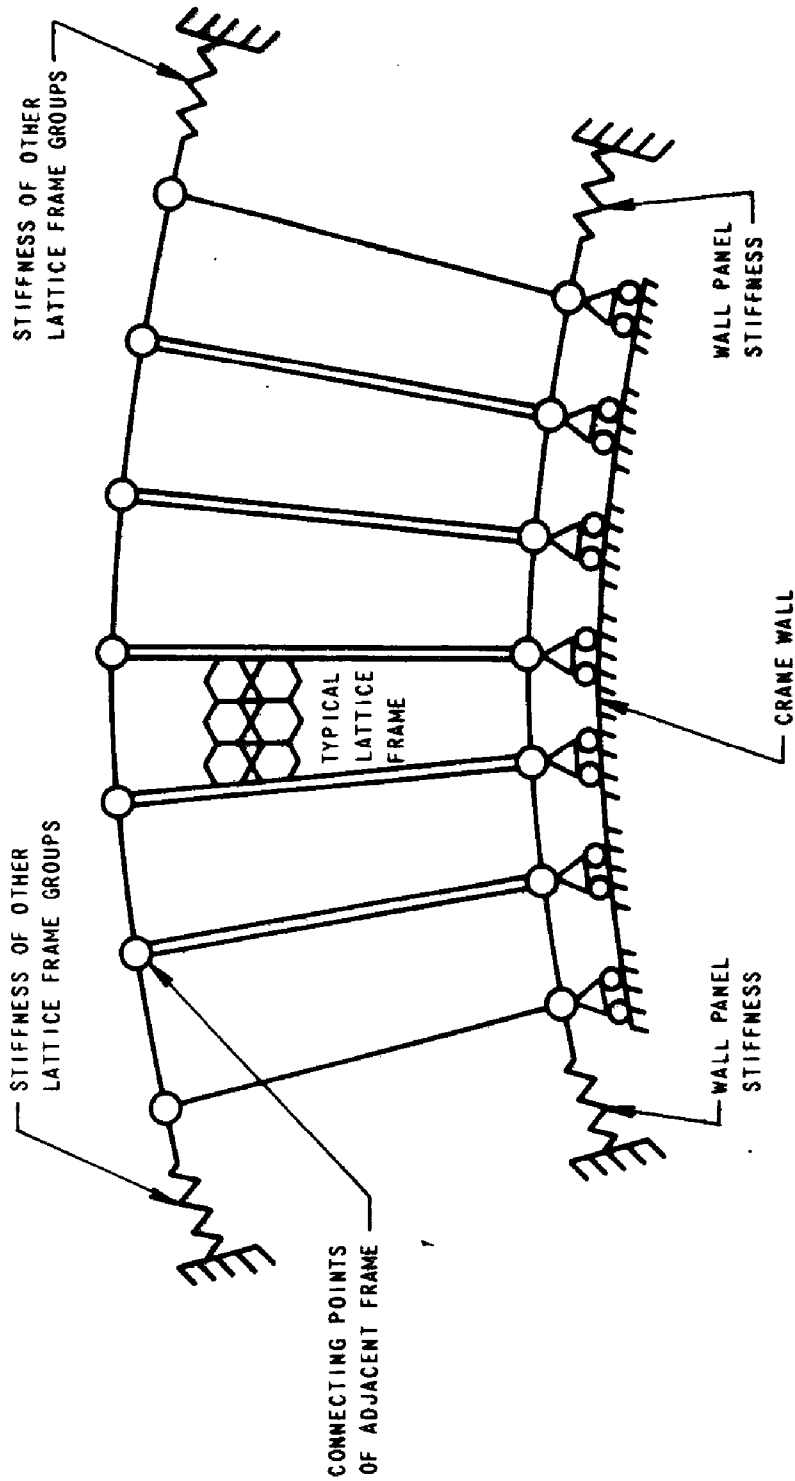


Figure 6-150. Lattice Frame Ice Basket Gap

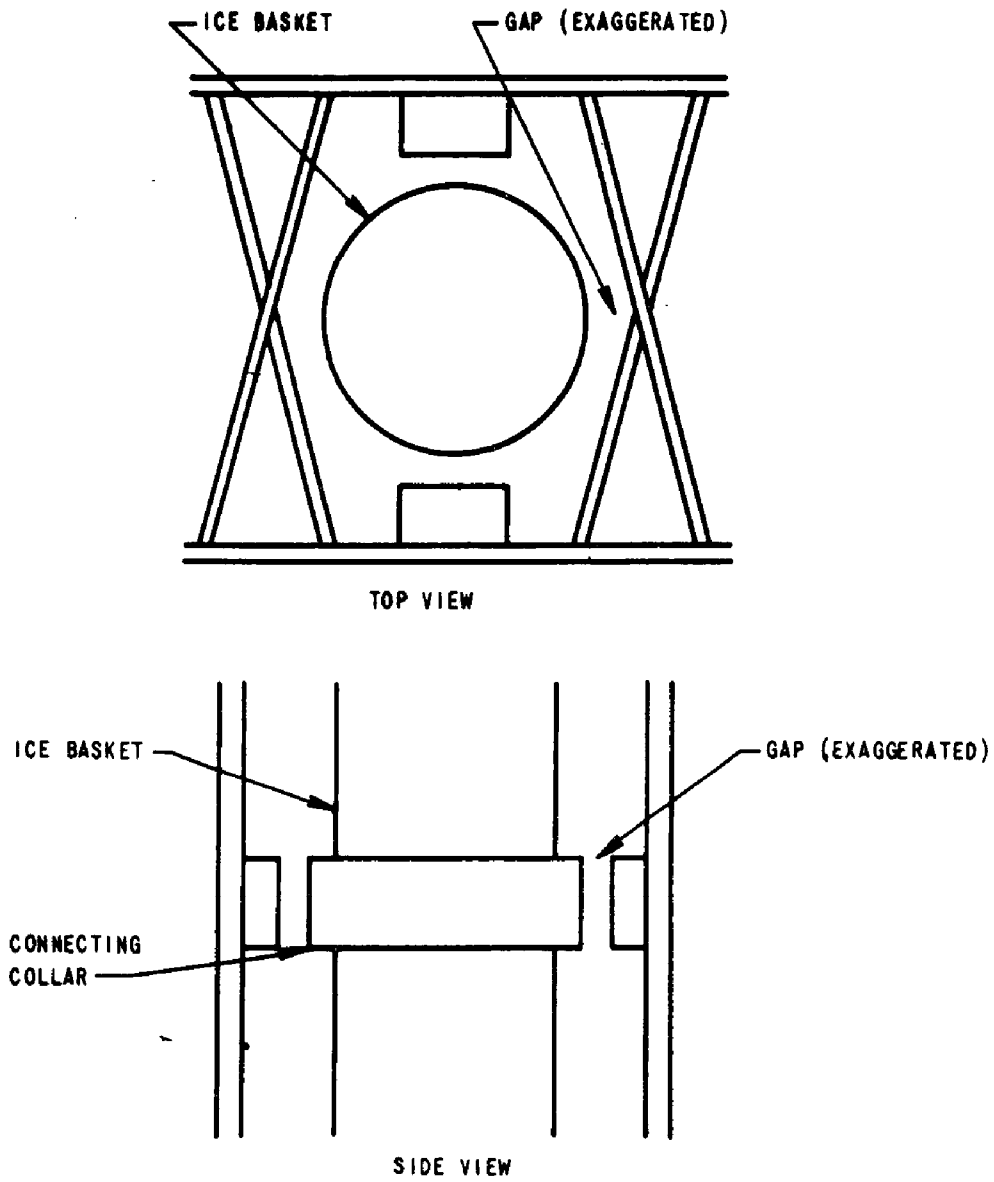


Figure 6-151. Typical Displacement Time Histories for 12 Foot Basket With End Supports - Pluck Test

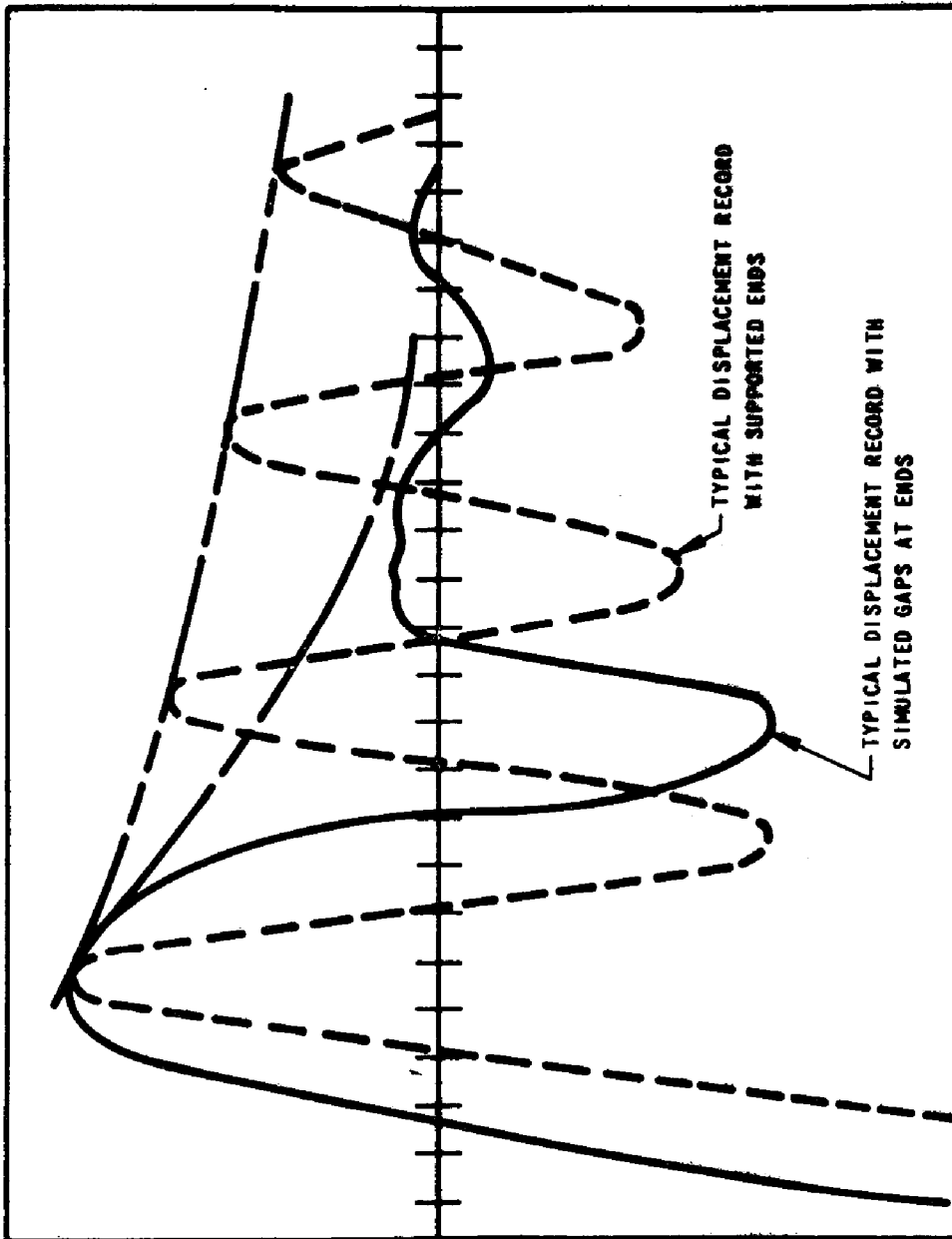


Figure 6-152. Non Linear Dynamic Model

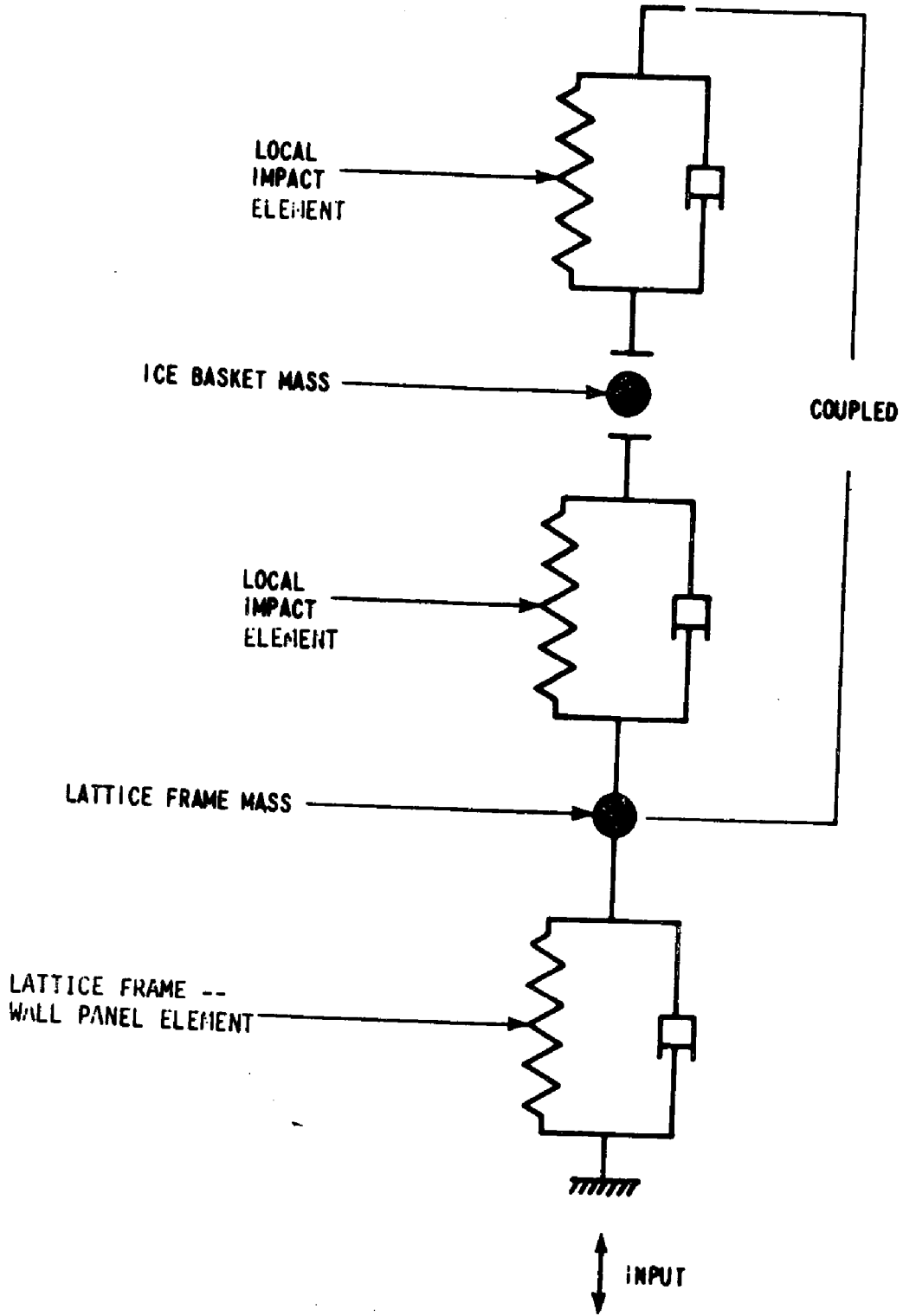


Figure 6-153. 3 Mass Tangential Ice Basket Model

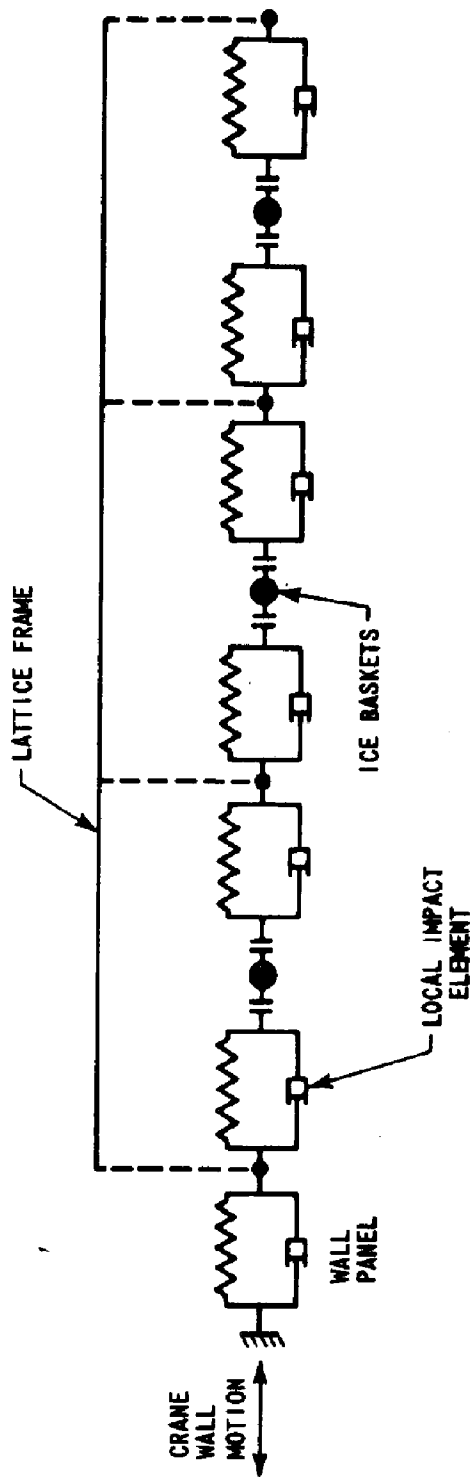


Figure 6-154. 9 Mass Radial Ice Basket Model

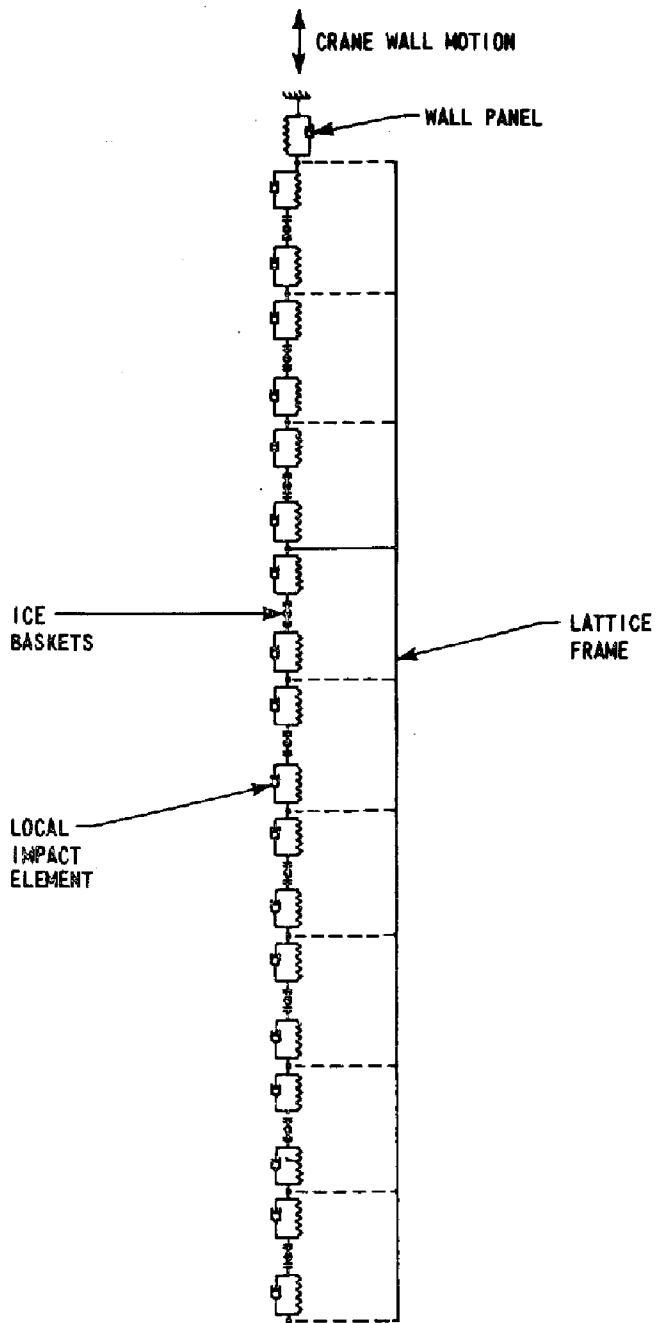


Figure 6-155. 48 Foot Beam Model

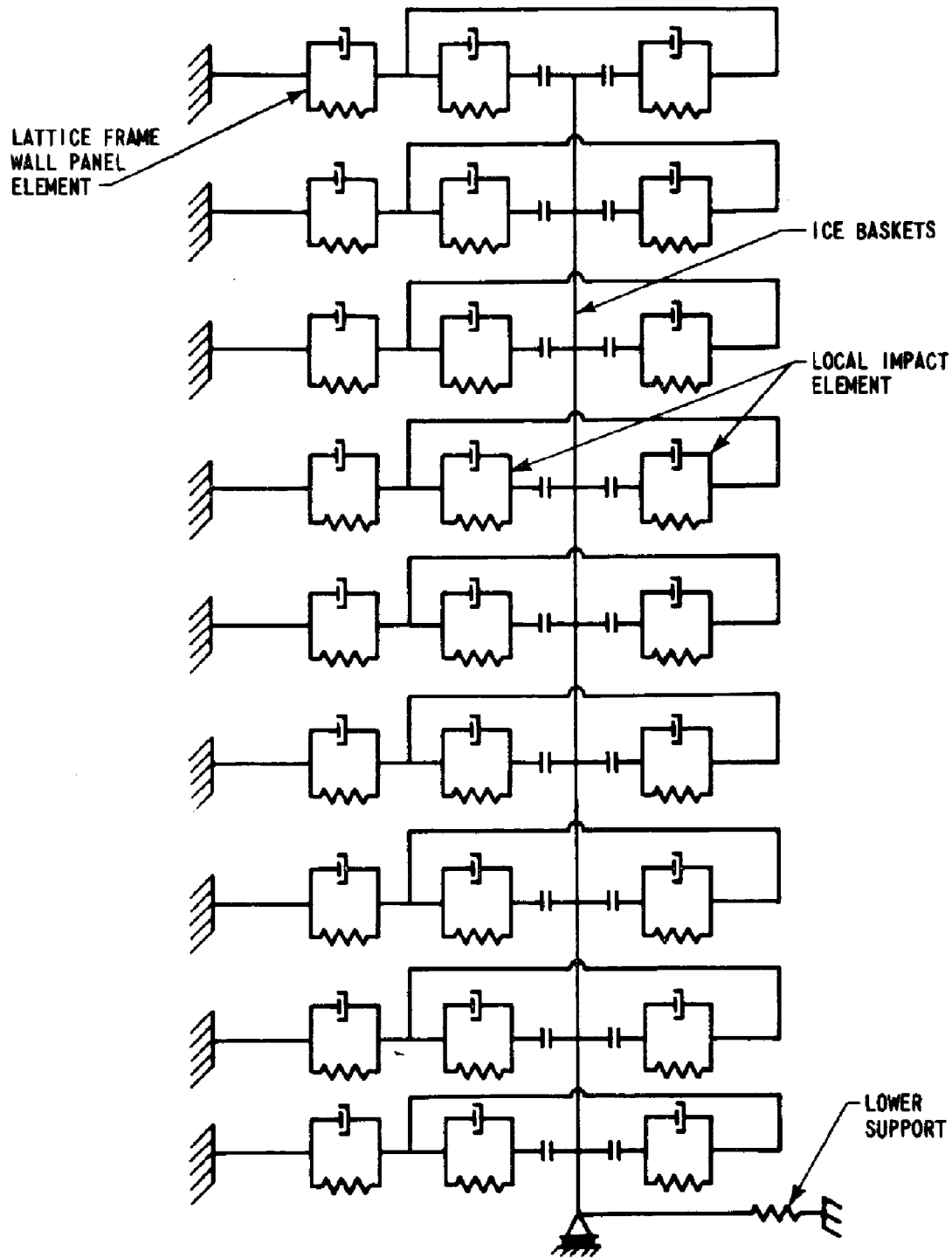


Figure 6-156. Phasing Mass Model of Adjacent Lattice Frame Bays

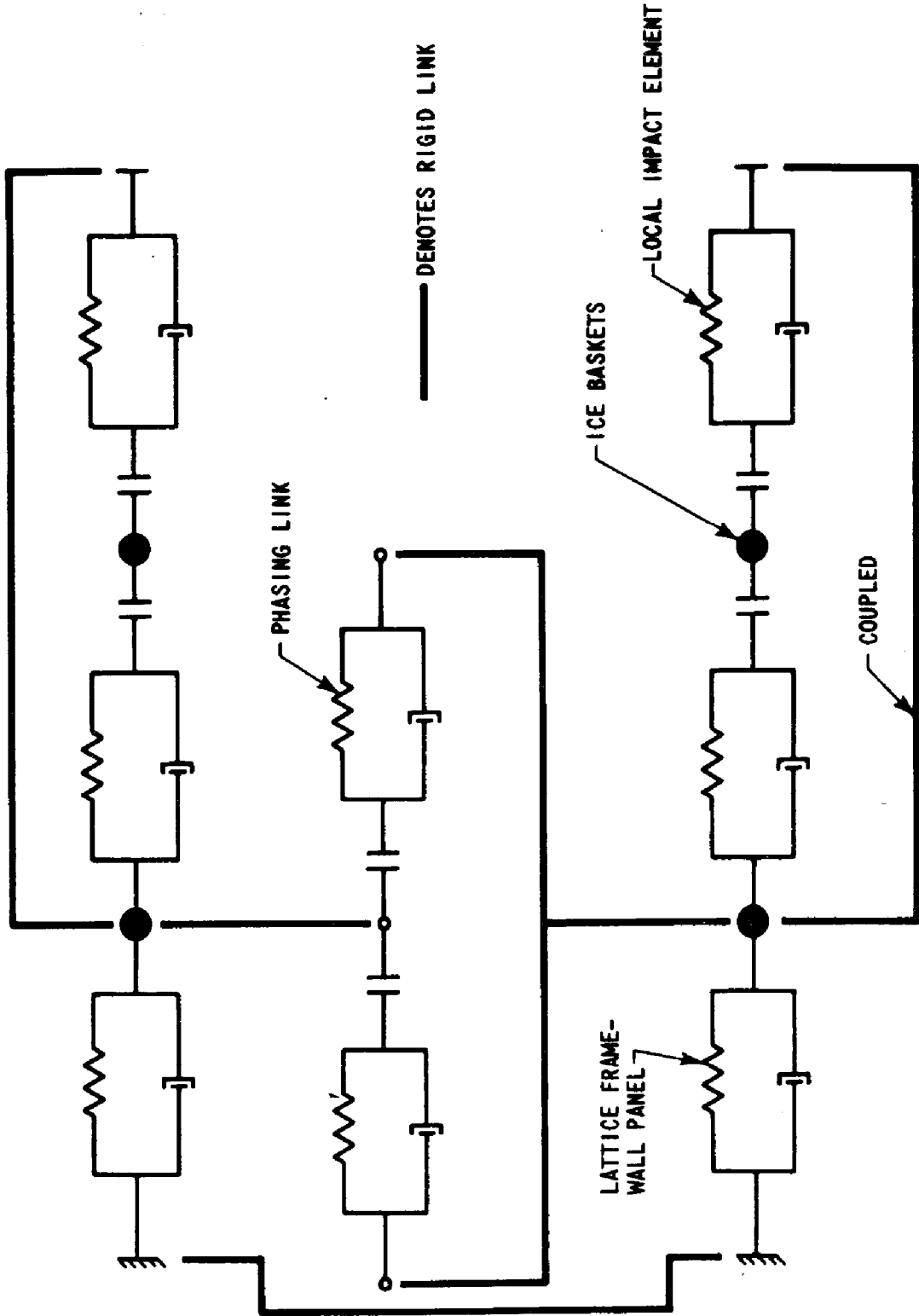


Figure 6-157. Phasing Study Model, 1 Level Lattice Frame 300 Degrees NonLinear Model

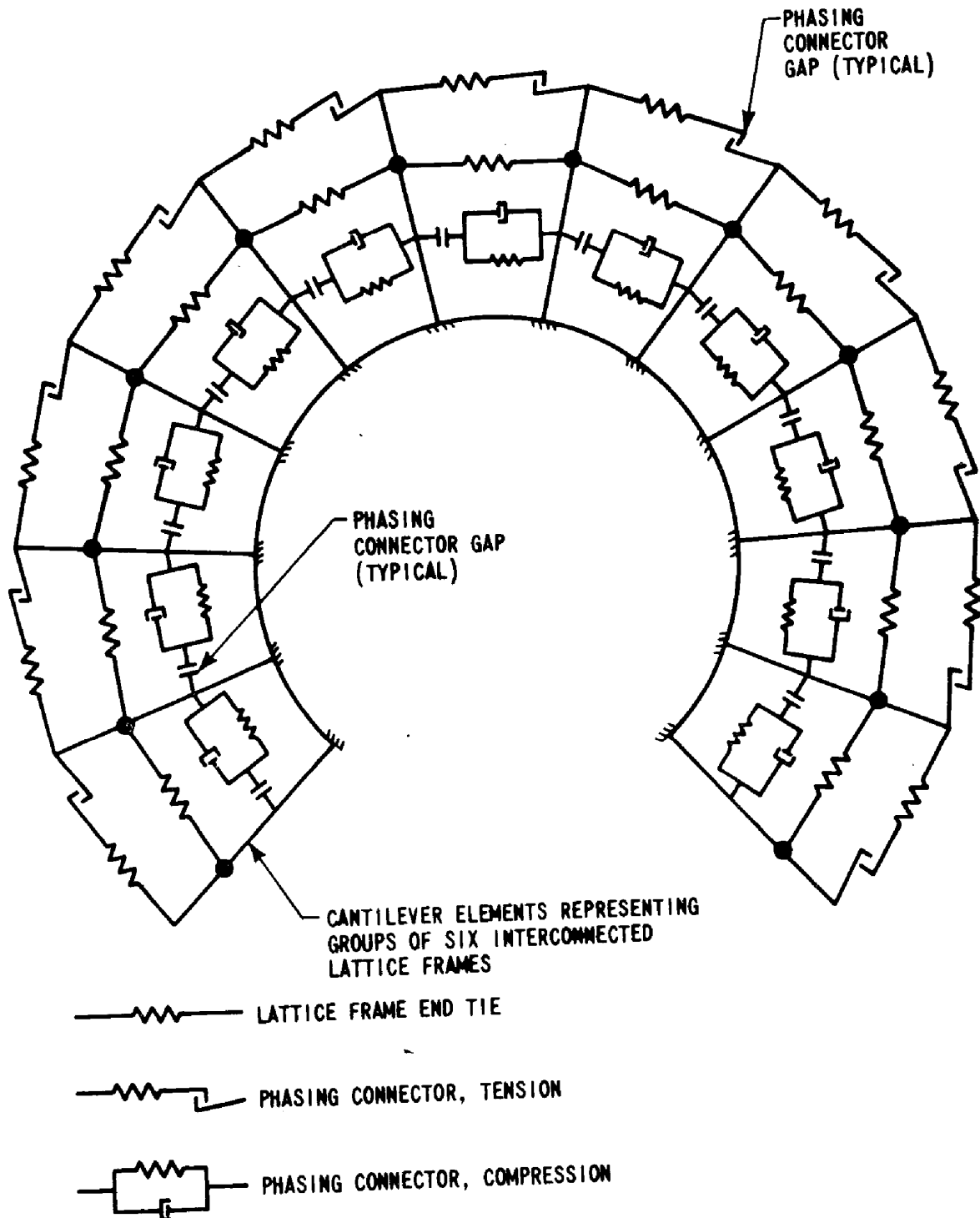


Figure 6-158. Typical Crane Wall Acceleration

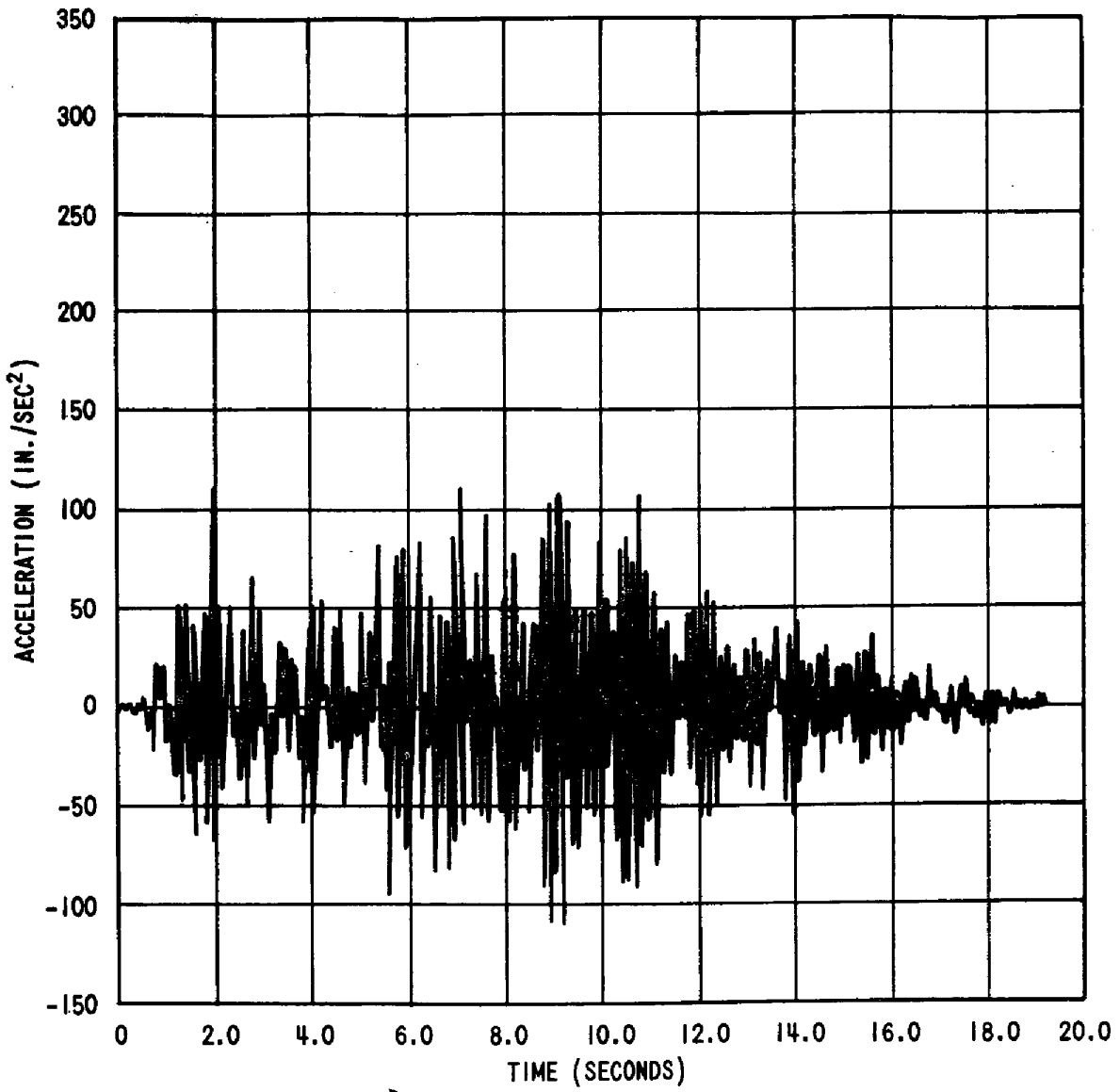


Figure 6-159. Typical Crane Wall Velocity

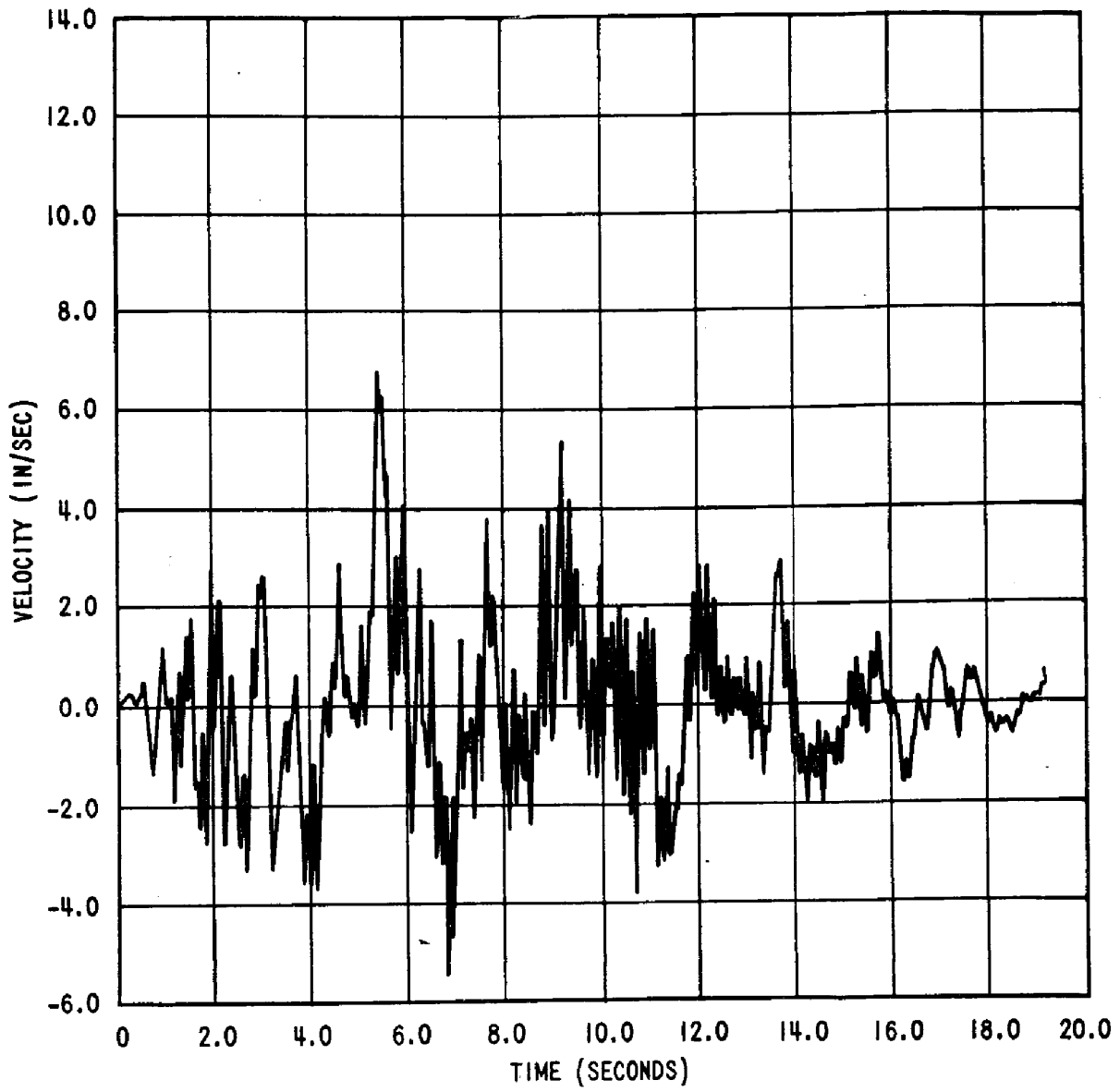


Figure 6-160. Typical Crane Wall Displacement

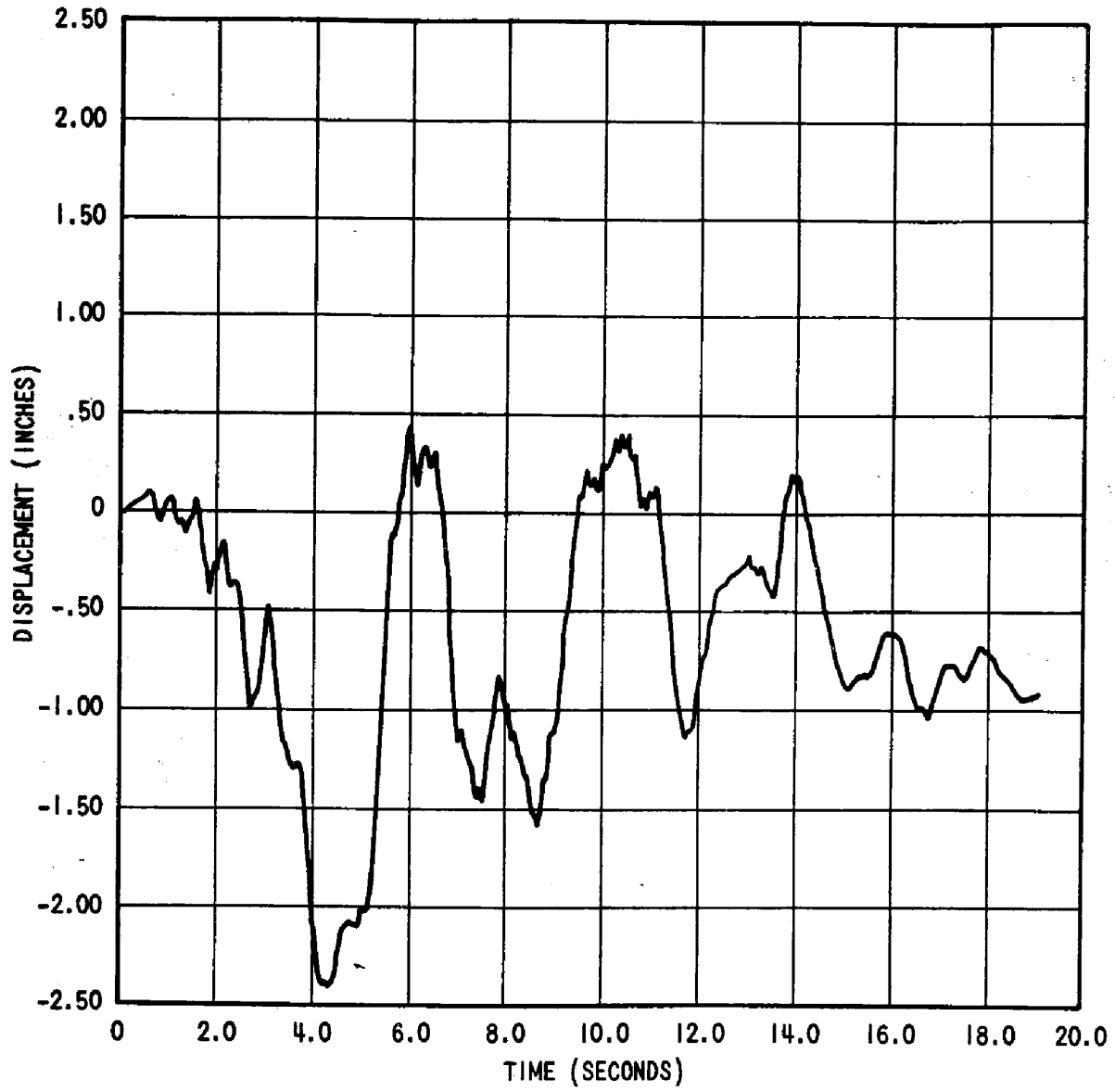


Figure 6-161. Typical Ice Basket Displacement Response

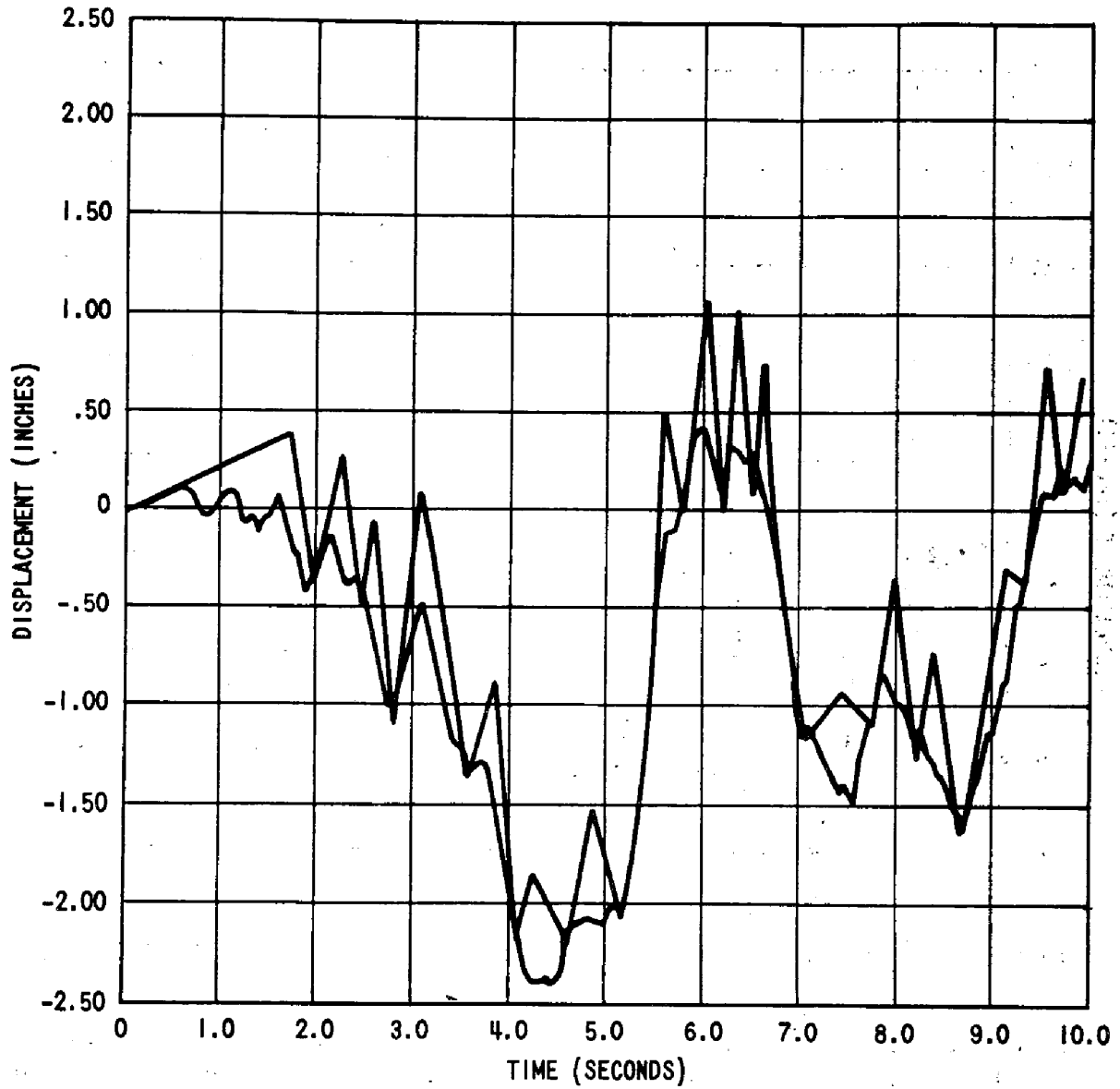


Figure 6-162. Typical Ice Basket Impact Face Response

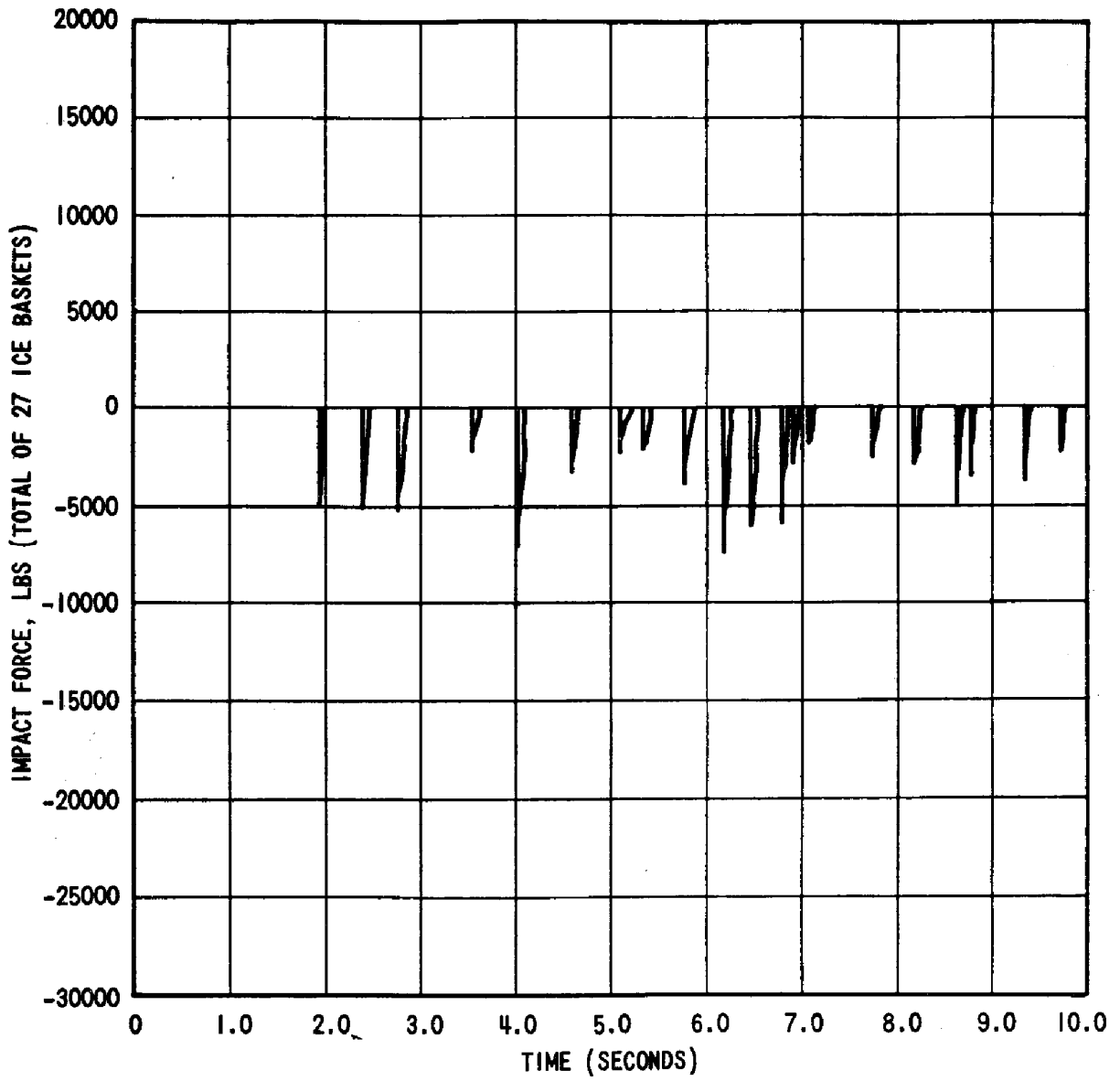


Figure 6-163. Typical Crane Wall Panel Load Response

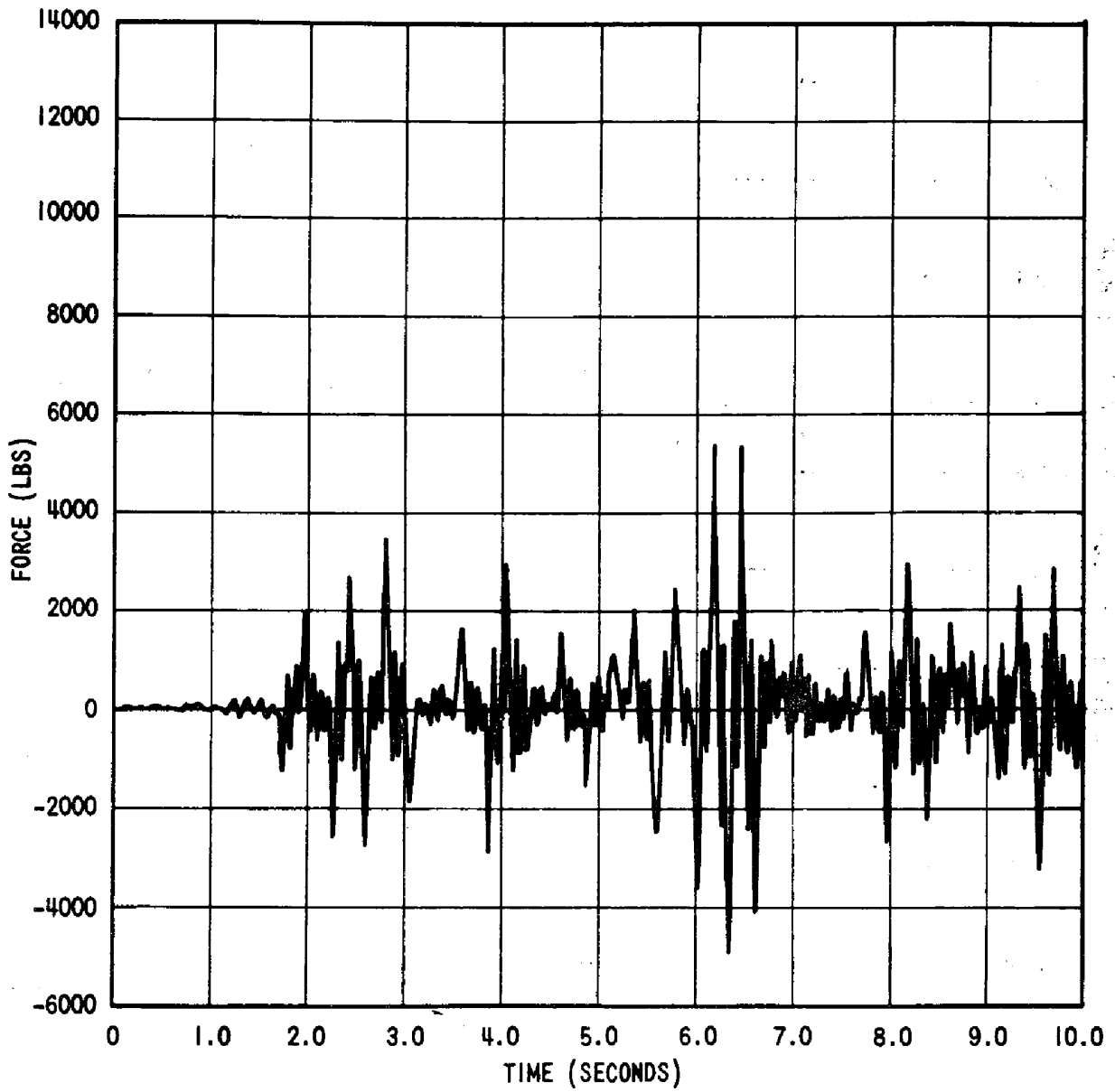


Figure 6-164. Wall Panel Load Distribution Obtained Using the 48-Foot Beam Model Tangential Case

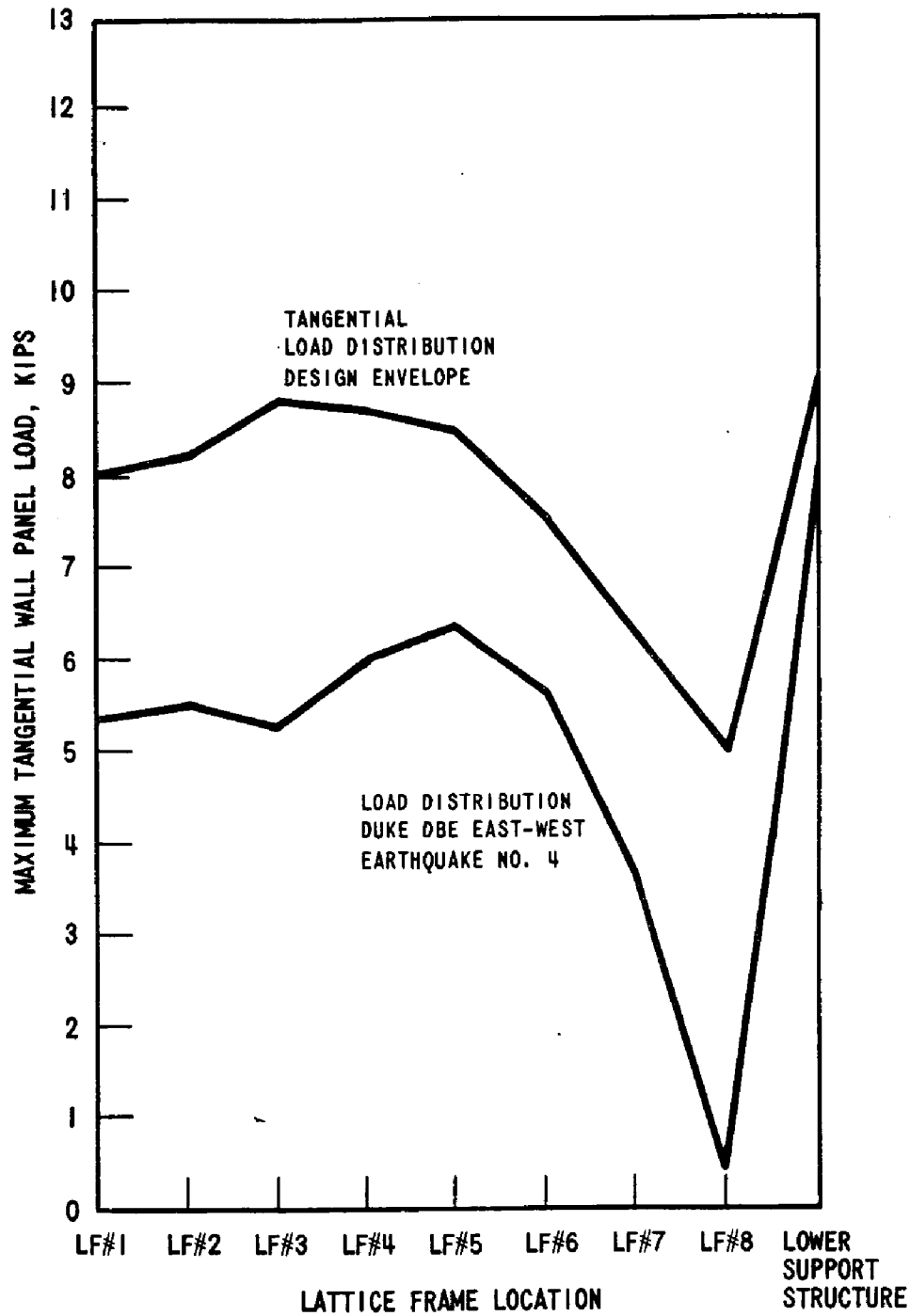


Figure 6-165. Wall Panel Load Distribution Obtained Using the 48-Foot Beam Model Radial Case

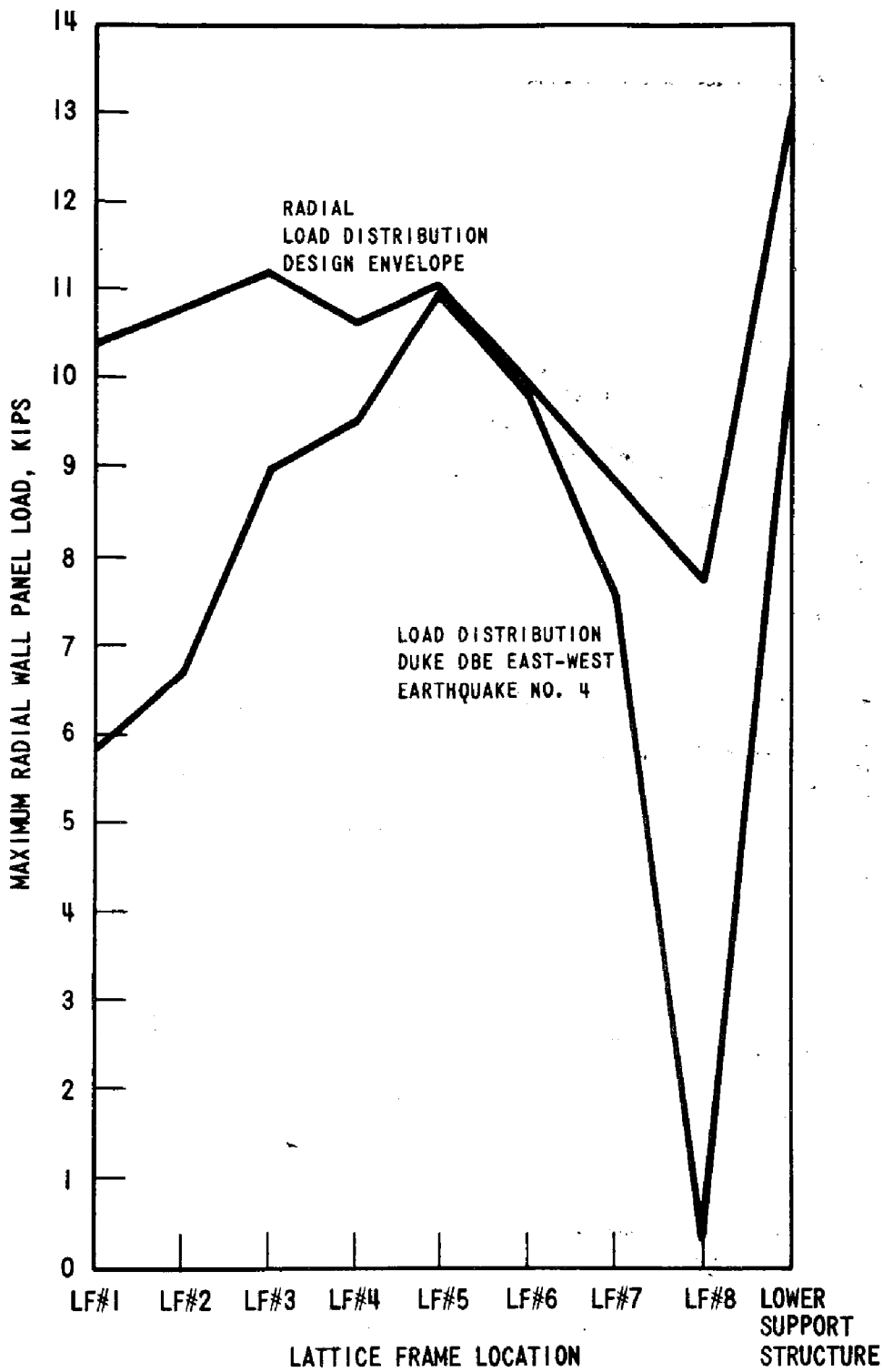


Figure 6-166. Ice Basket Impact Load Distribution Obtained Using the 48-Foot Beam Model Tangential Case

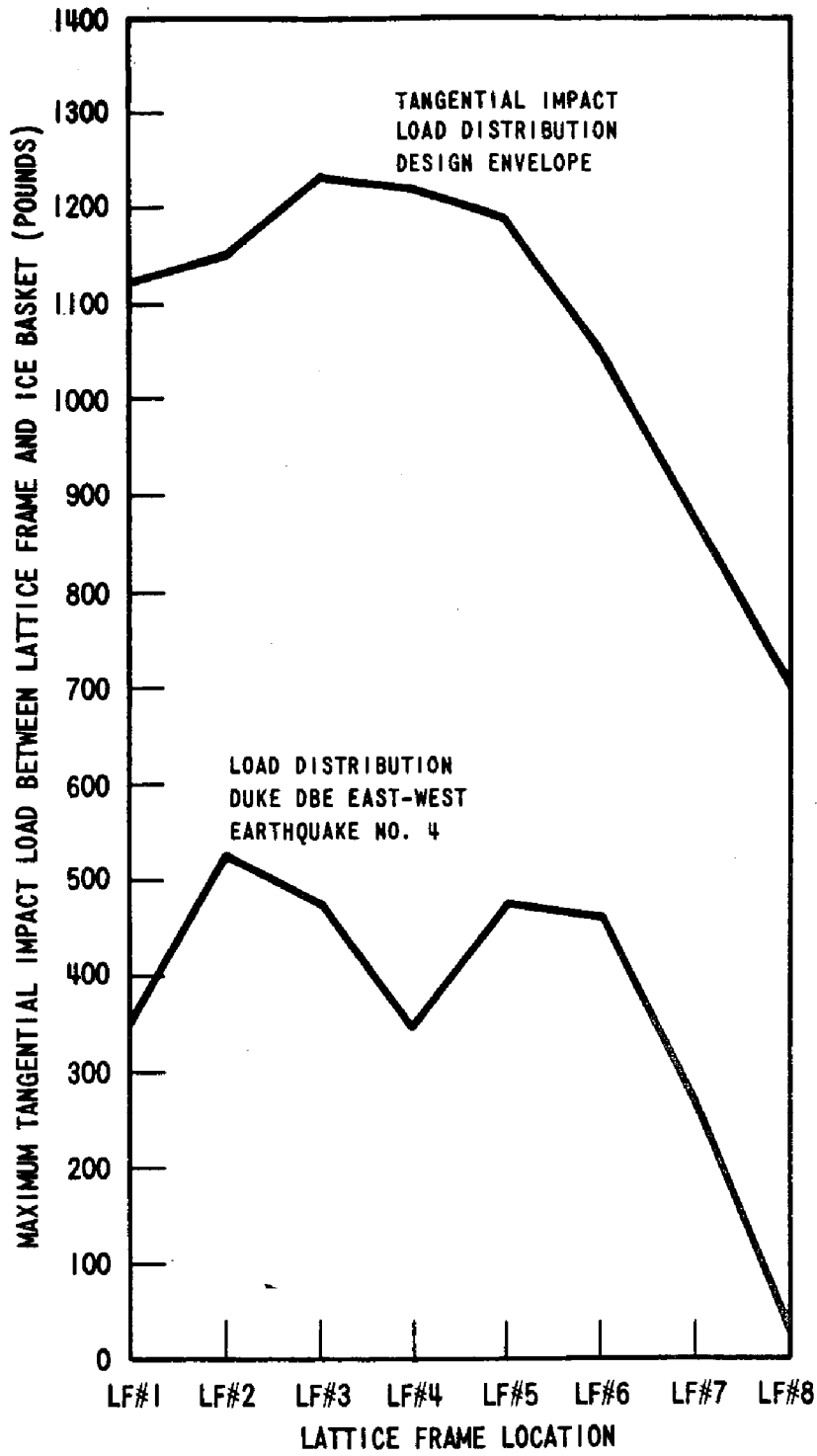


Figure 6-167. Ice Basket Impact Load Distribution Obtained Using the 48-Foot Beam Model Radial Case

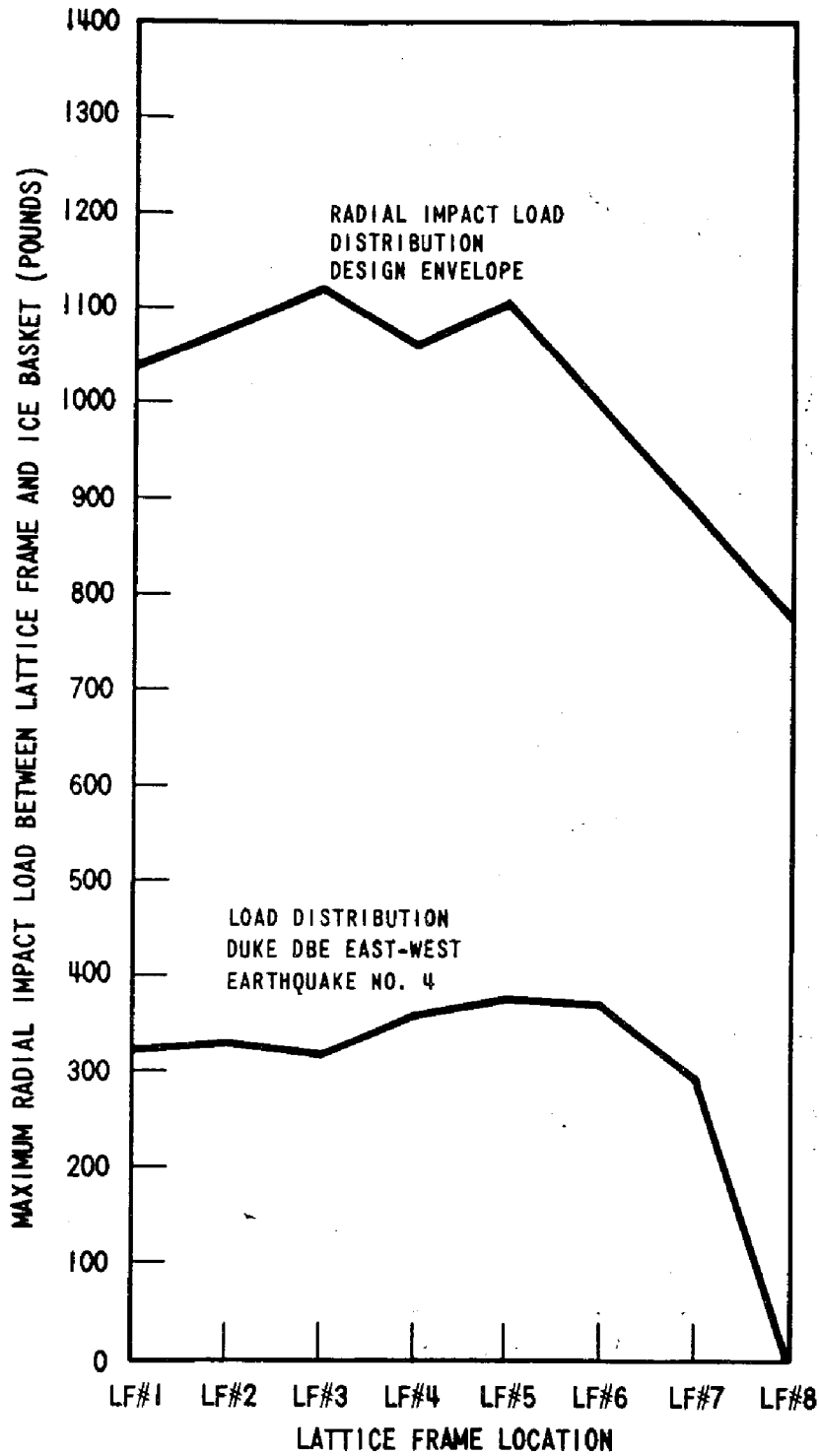


Figure 6-168. Lower Inlet Door Differential Pressure - Time History

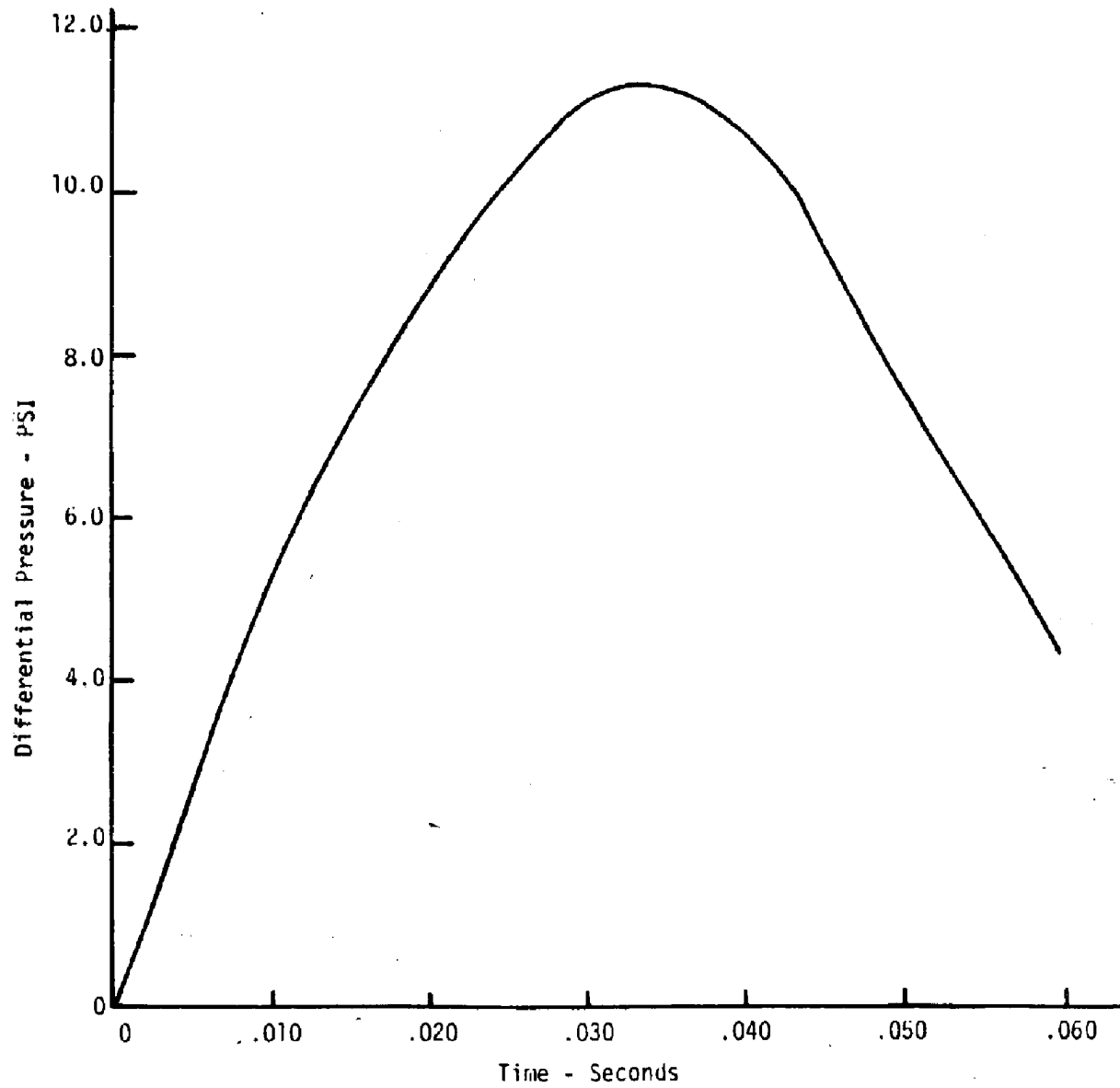


Figure 6-169. Flow Diagram of Annulus Ventilation System

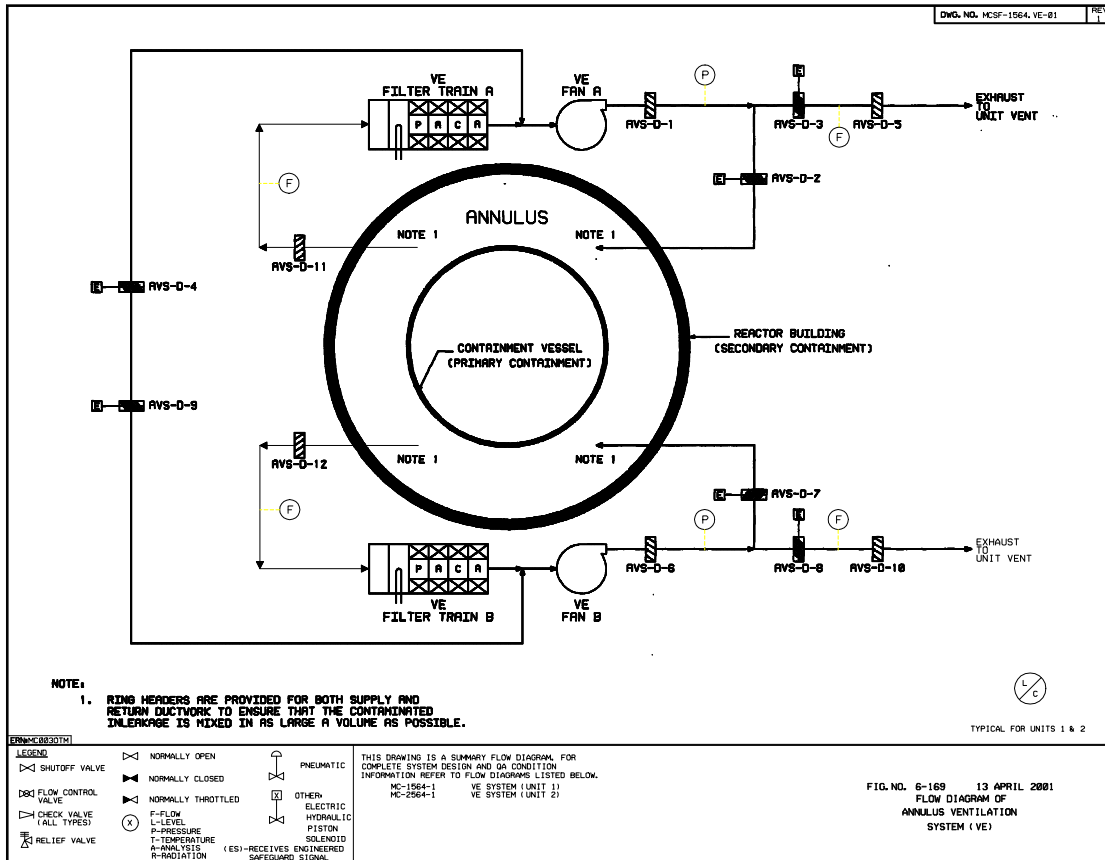


Figure 6-170. Reactor Building Annulus - Developed Elevation From 270° to 90°

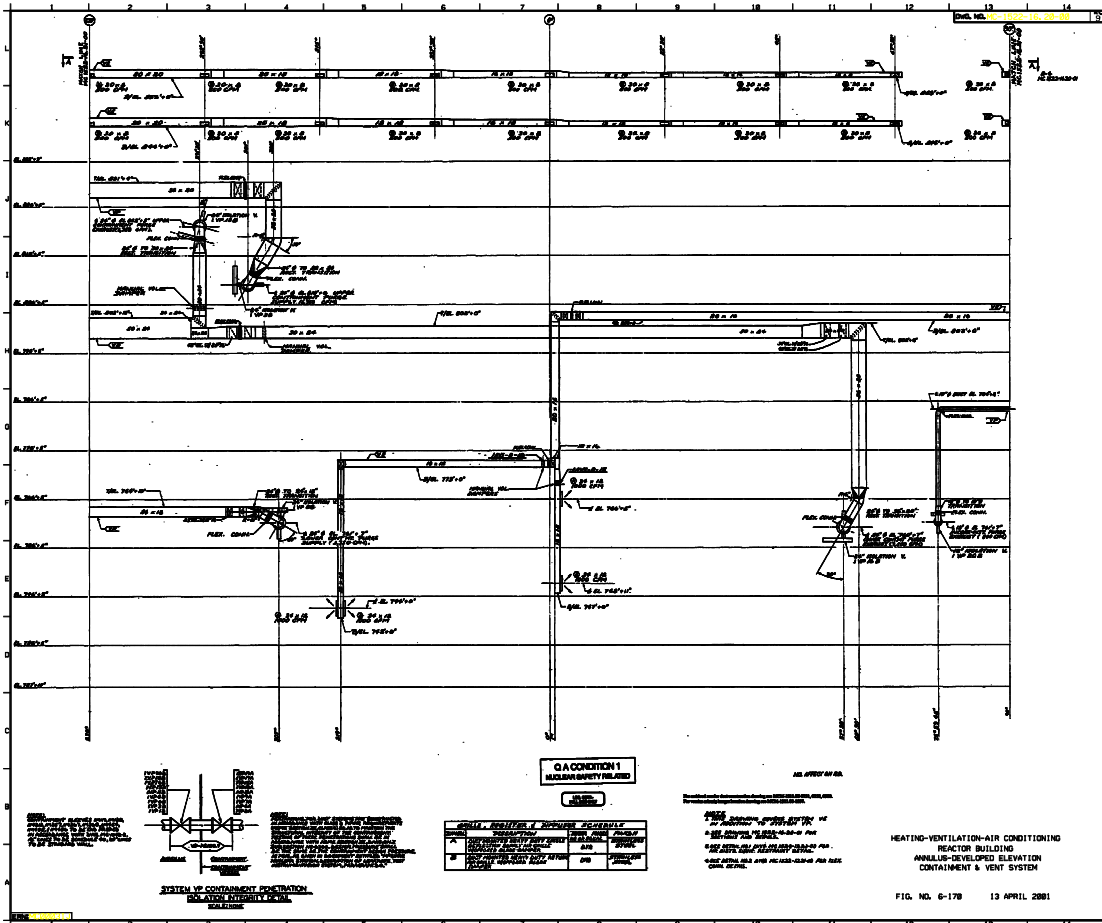


Figure 6-171. Reactor Building Annulus - Developed Elevation From 90° to 270°

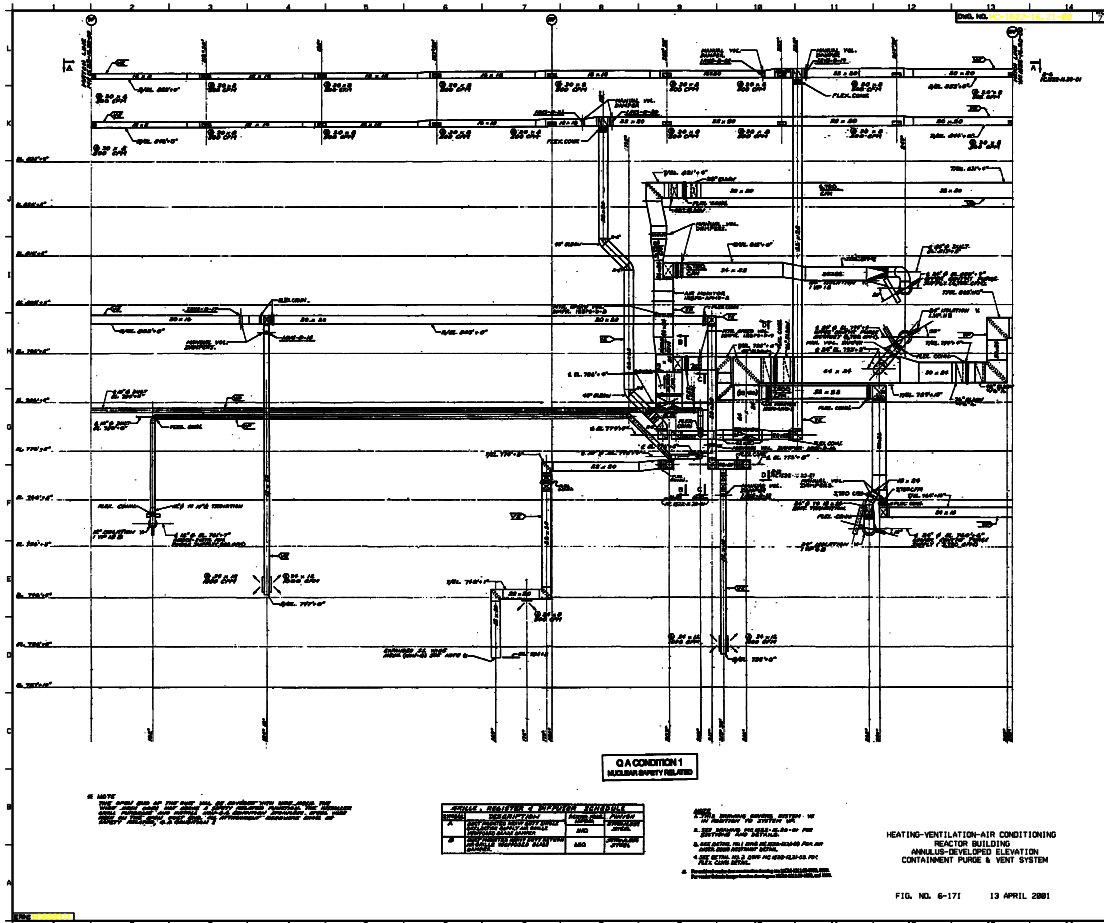
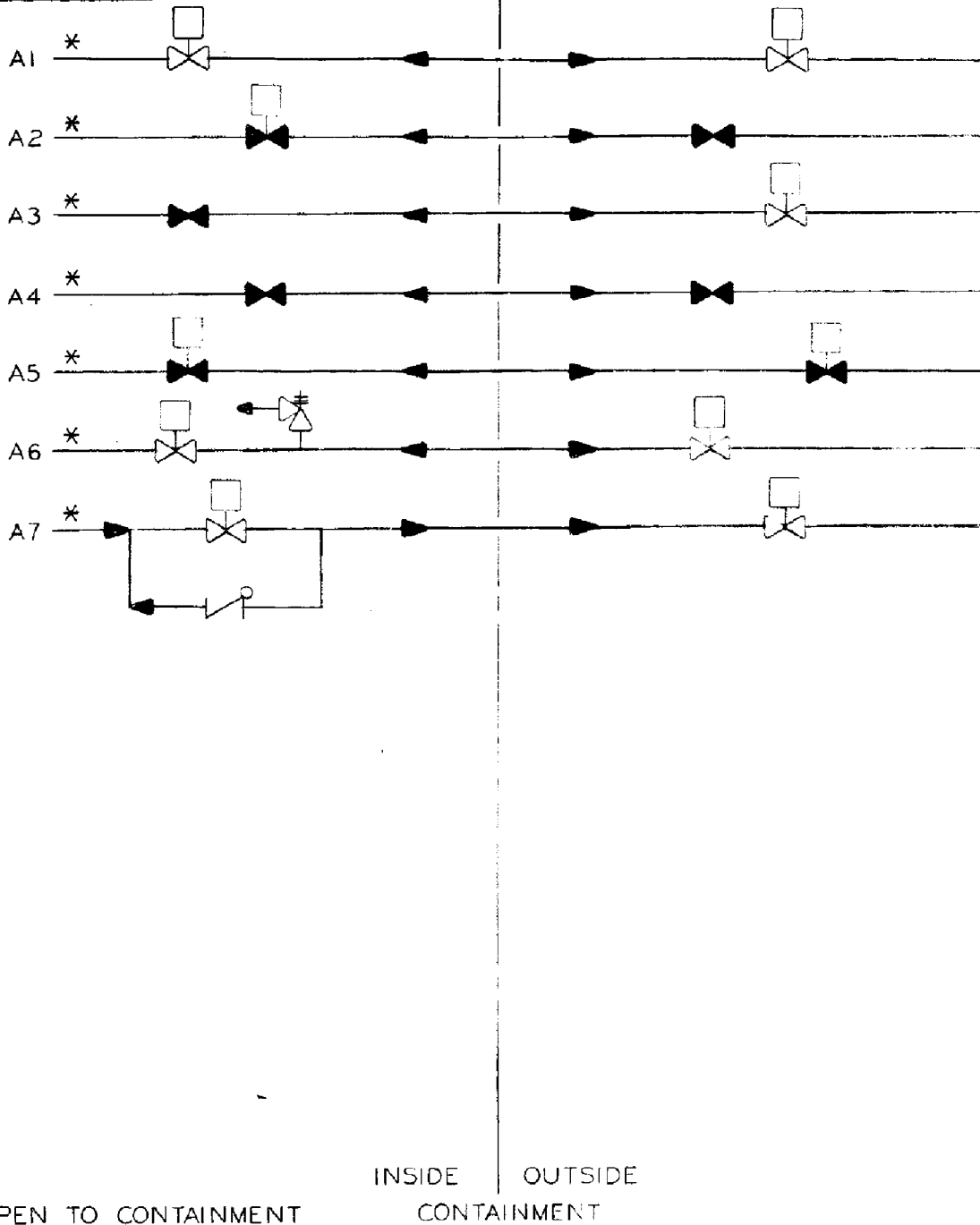
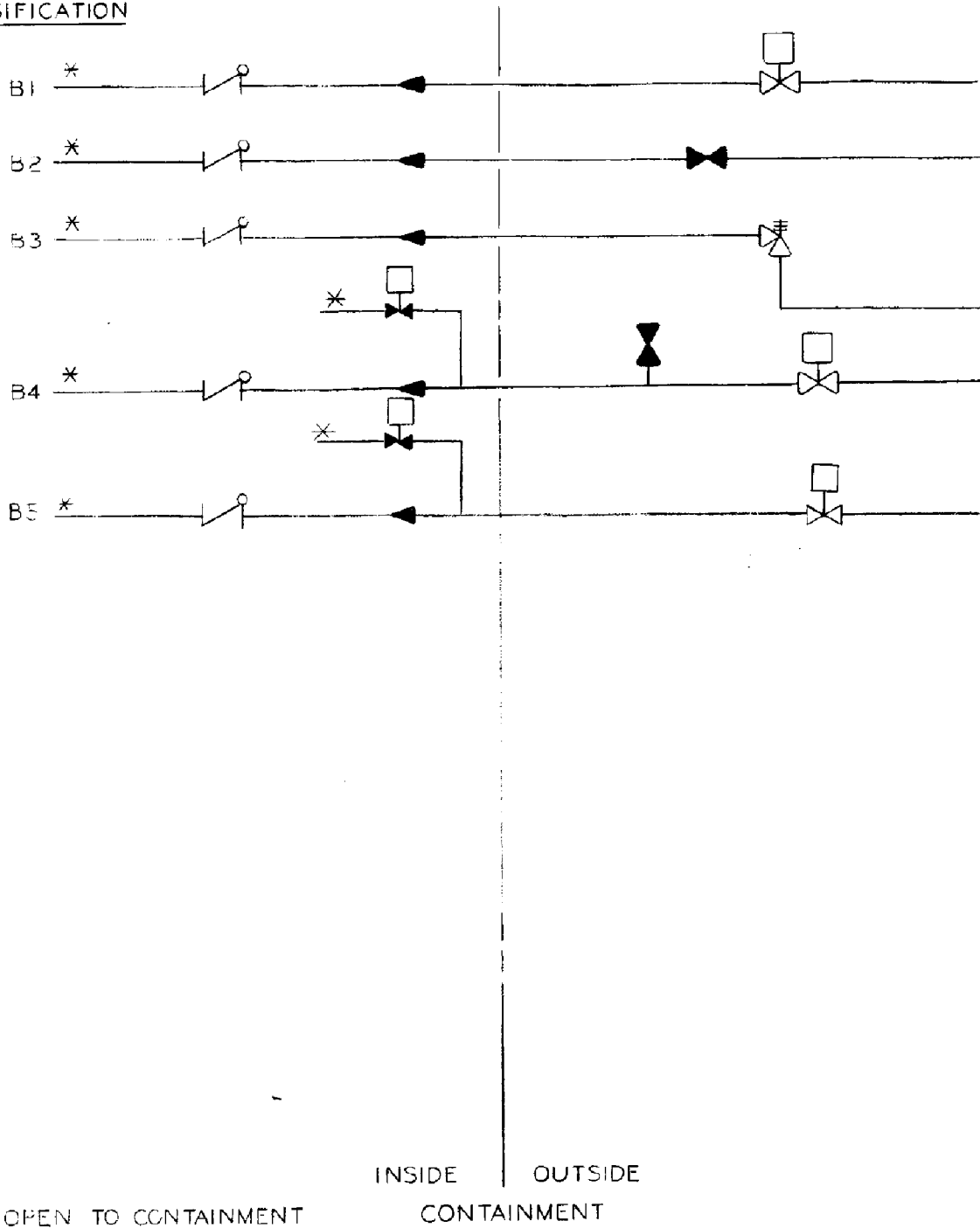


Figure 6-172. Containment Piping Penetration Classification

CLASSIFICATION



CLASSIFICATION



McGuire Nuclear Station Appendix 6. Chapter 6 Tables and Figures

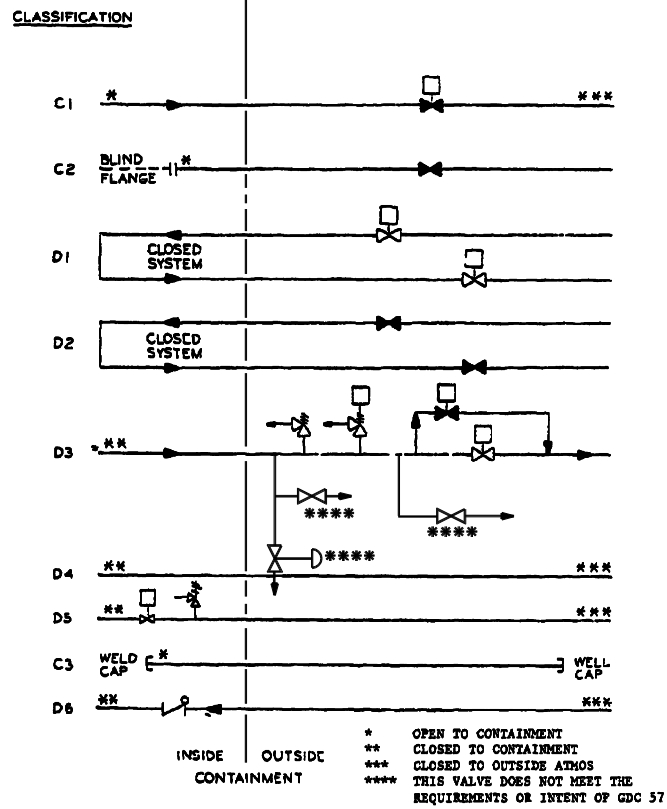


Figure 6-172 (Part 3 of 3)
Containment Piping Penetration Classification

(13 APRIL 2001)

Figure 6-173. Butterfly Valve Details

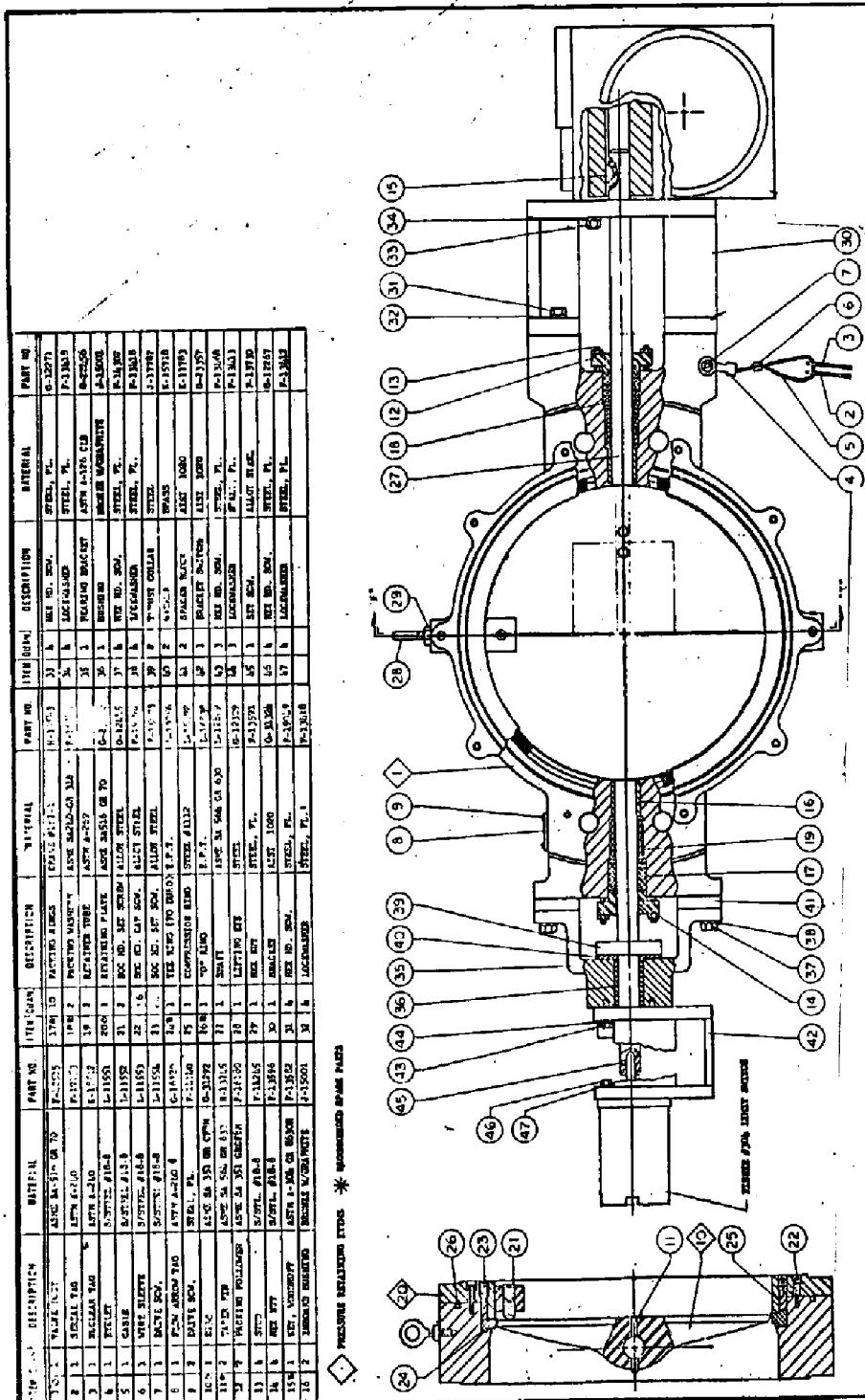
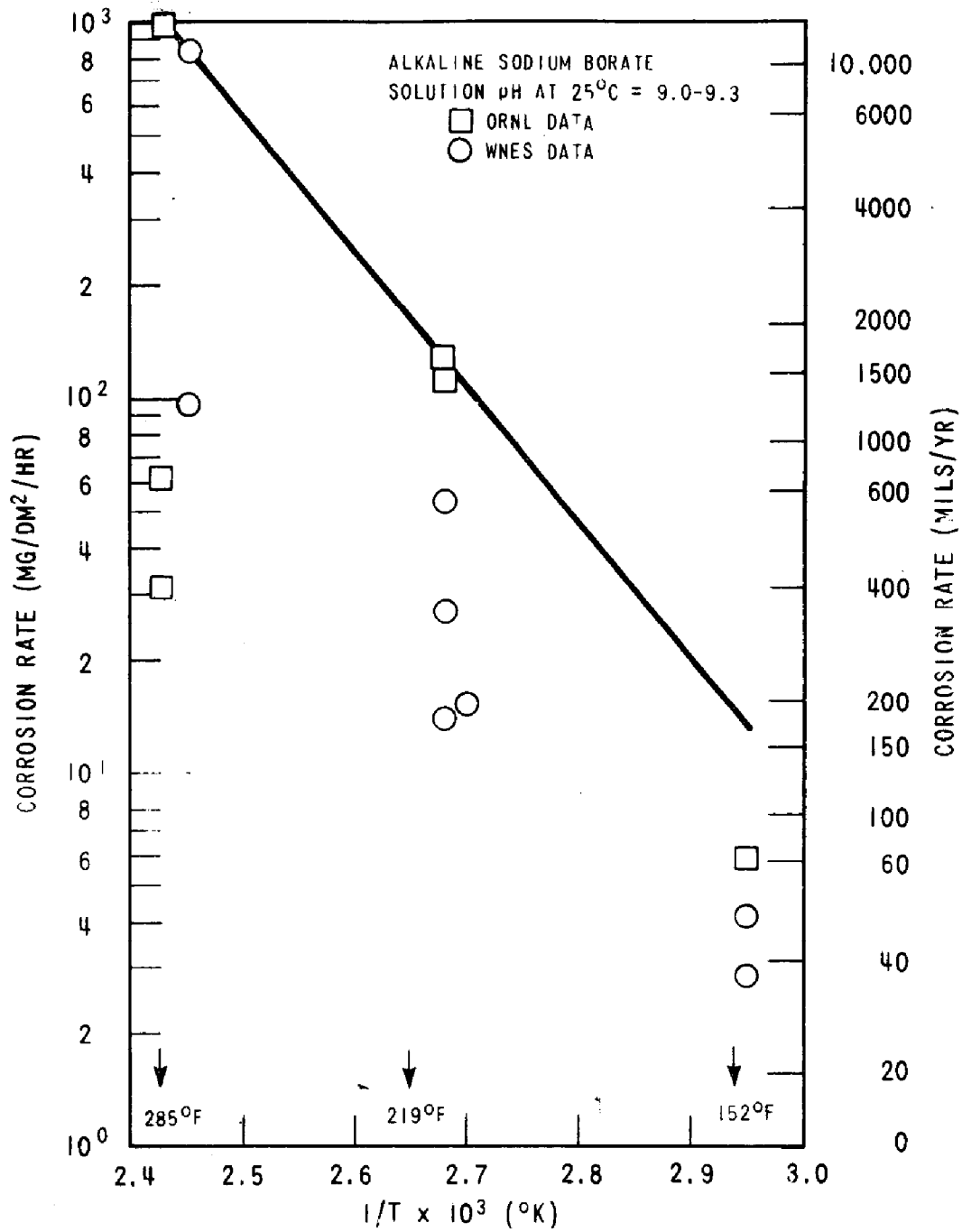


Figure 6-174. Aluminum Corrosion in DBA Environment ¹



Note(s):

1. Figure contains "historical" documentation (Refer to Section [6.1.7](#)).

Figure 6-175. Results of Westinghouse Capsule Irradiation Tests

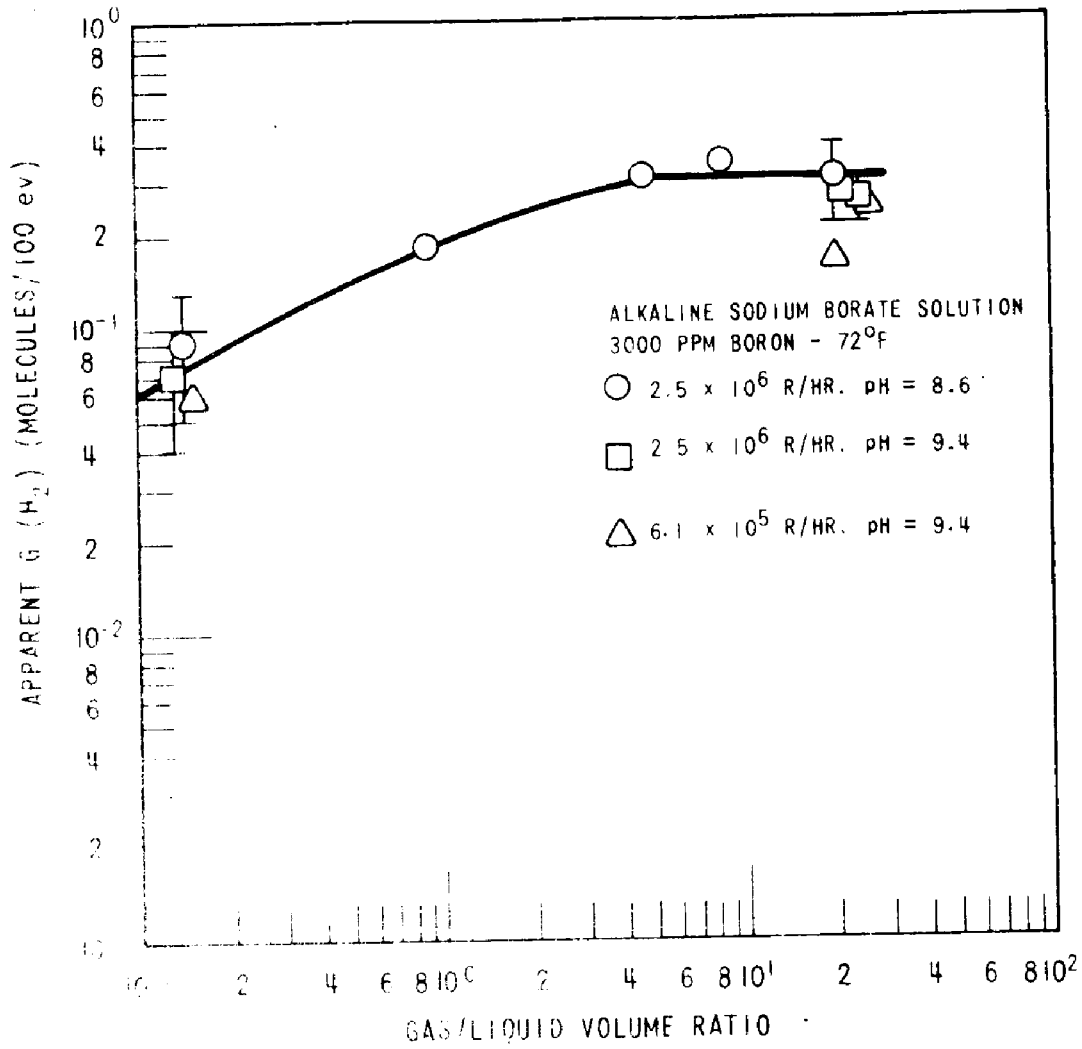


Figure 6-176. Flow Diagram of Safety Injection (NI) System

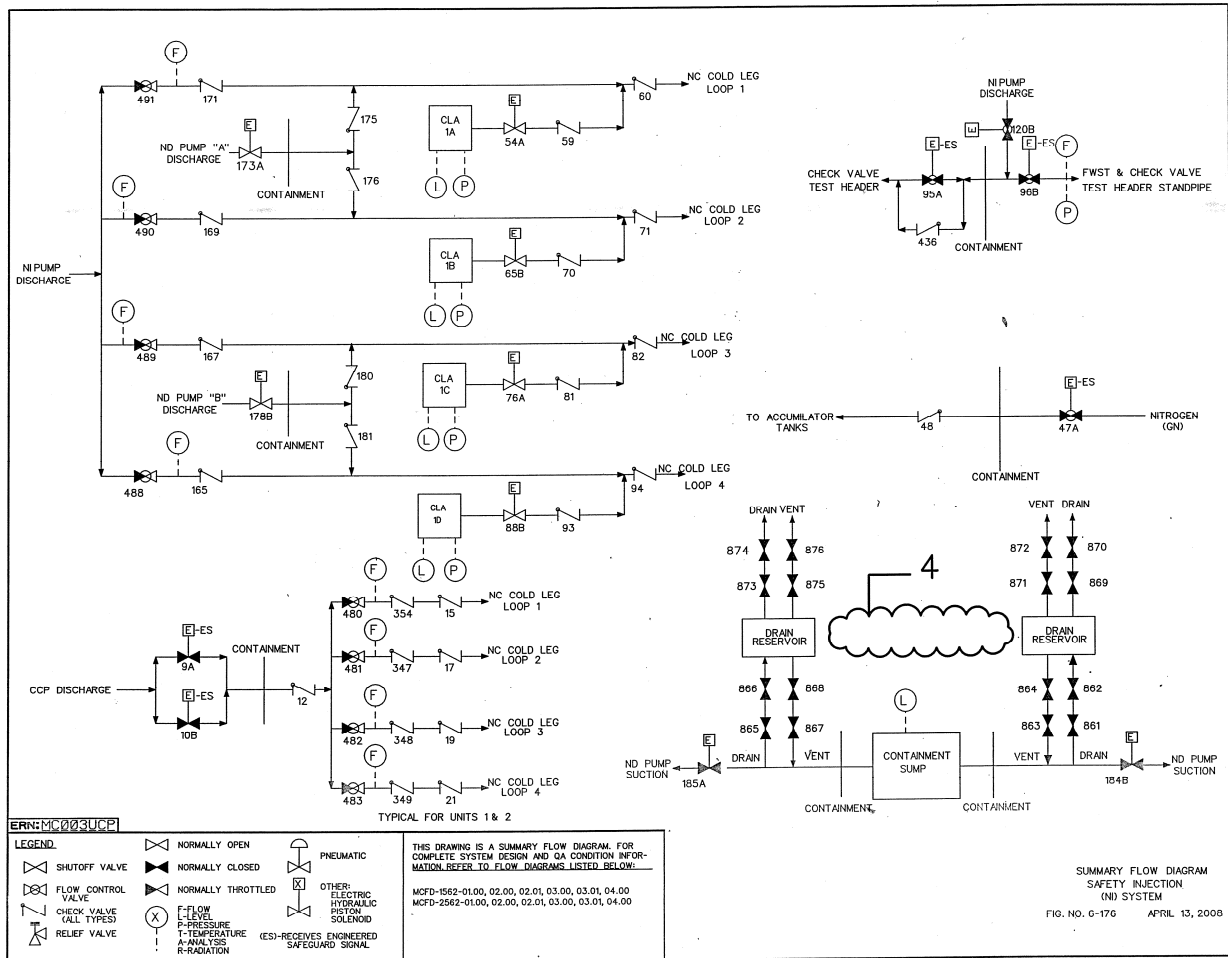


Figure 6-177. Flow Diagram of Safety Injection System

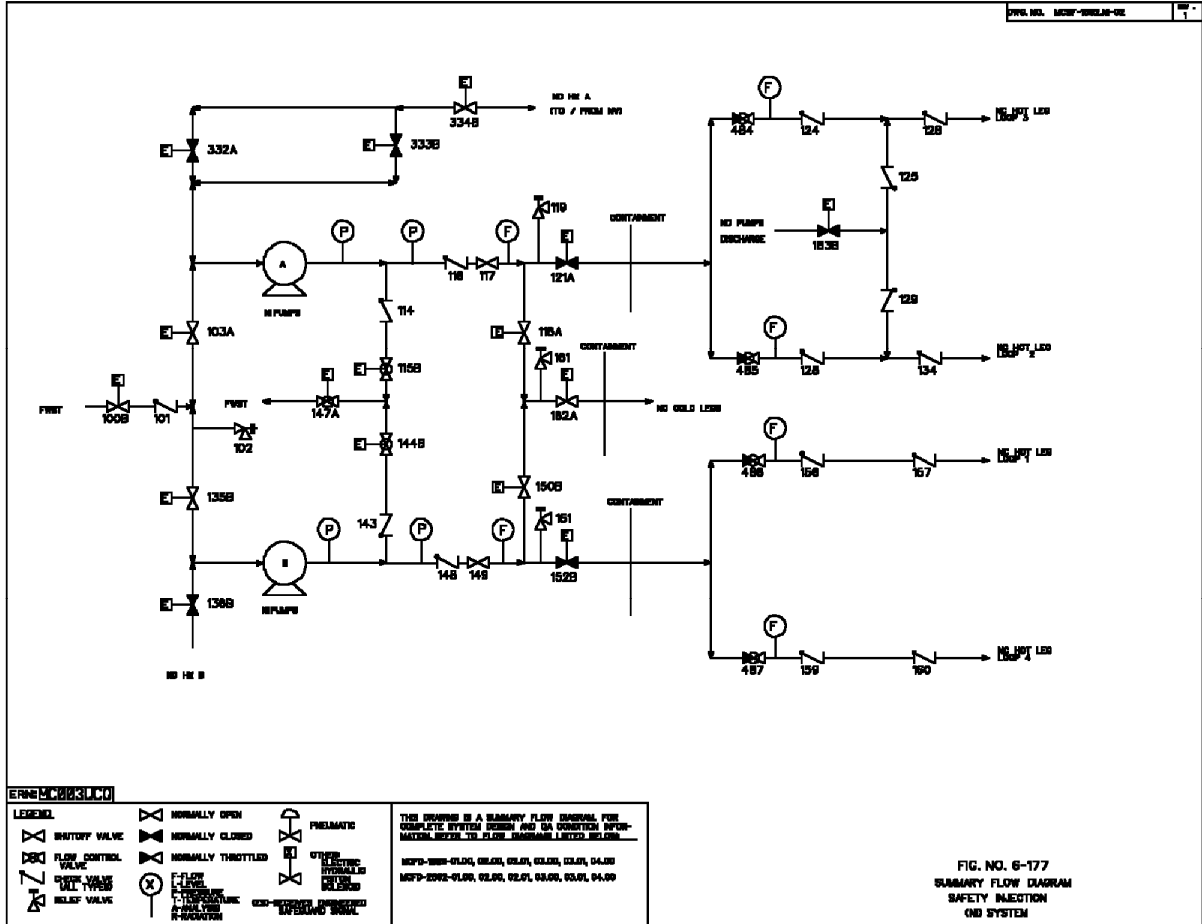


Figure 6-178. Deleted Per 1993 Update

Figure 6-179. NPSH and Head Capacity Curves for RHR Pumps

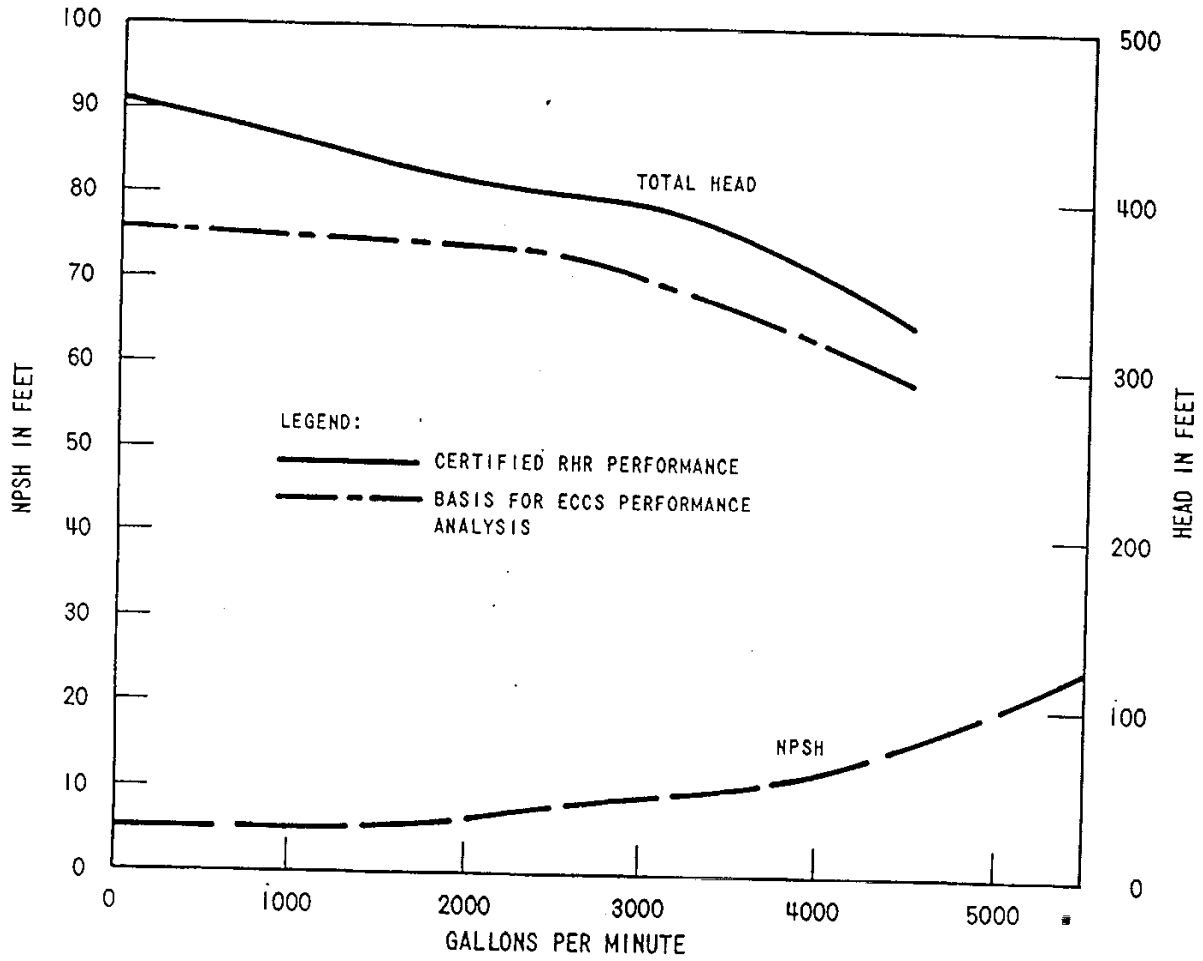


Figure 6-180. NPSH and Head Capacity Curves for Safety Injection Pumps

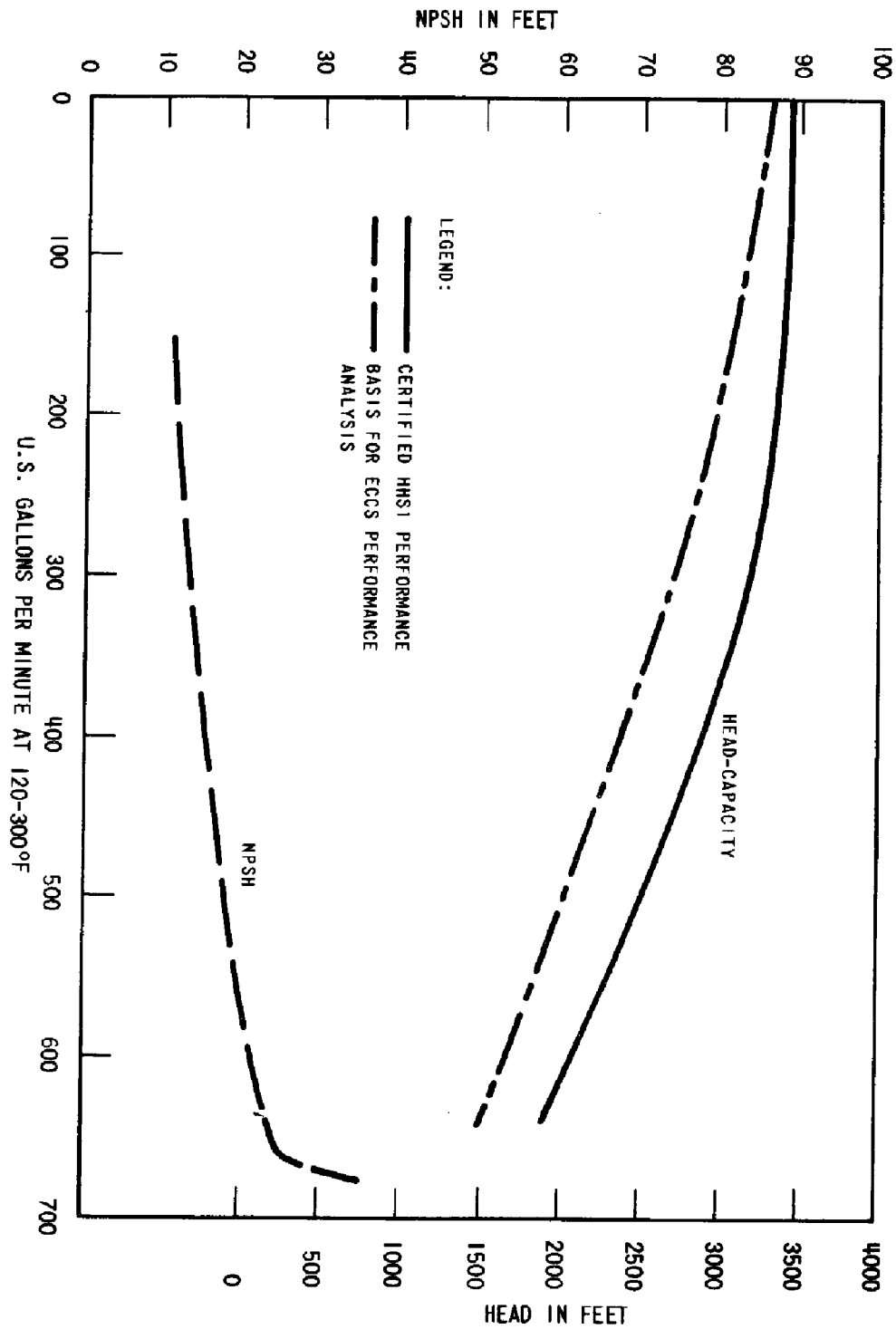


Figure 6-181. NPSH and Head Capacity Curves for Charging Pumps

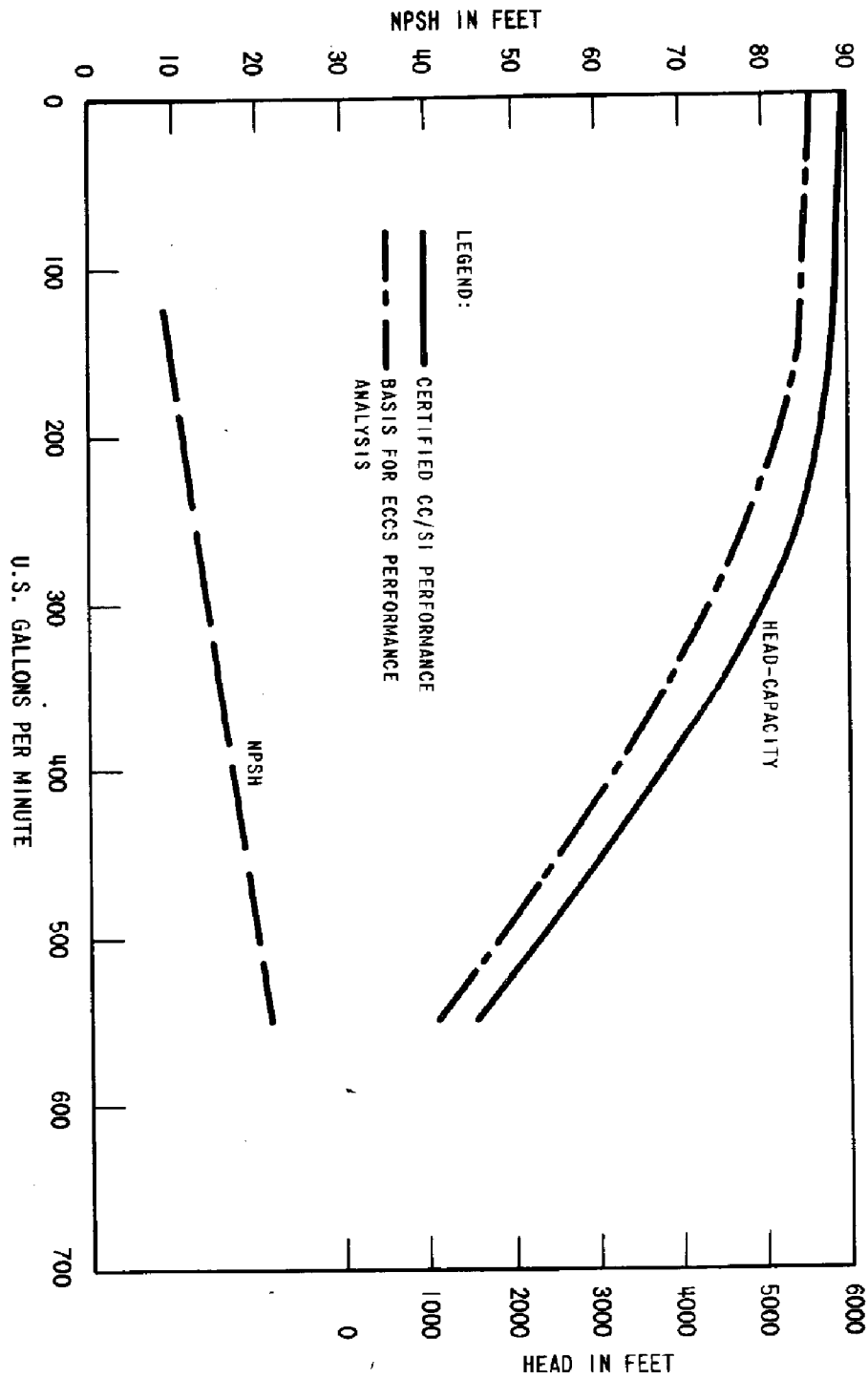
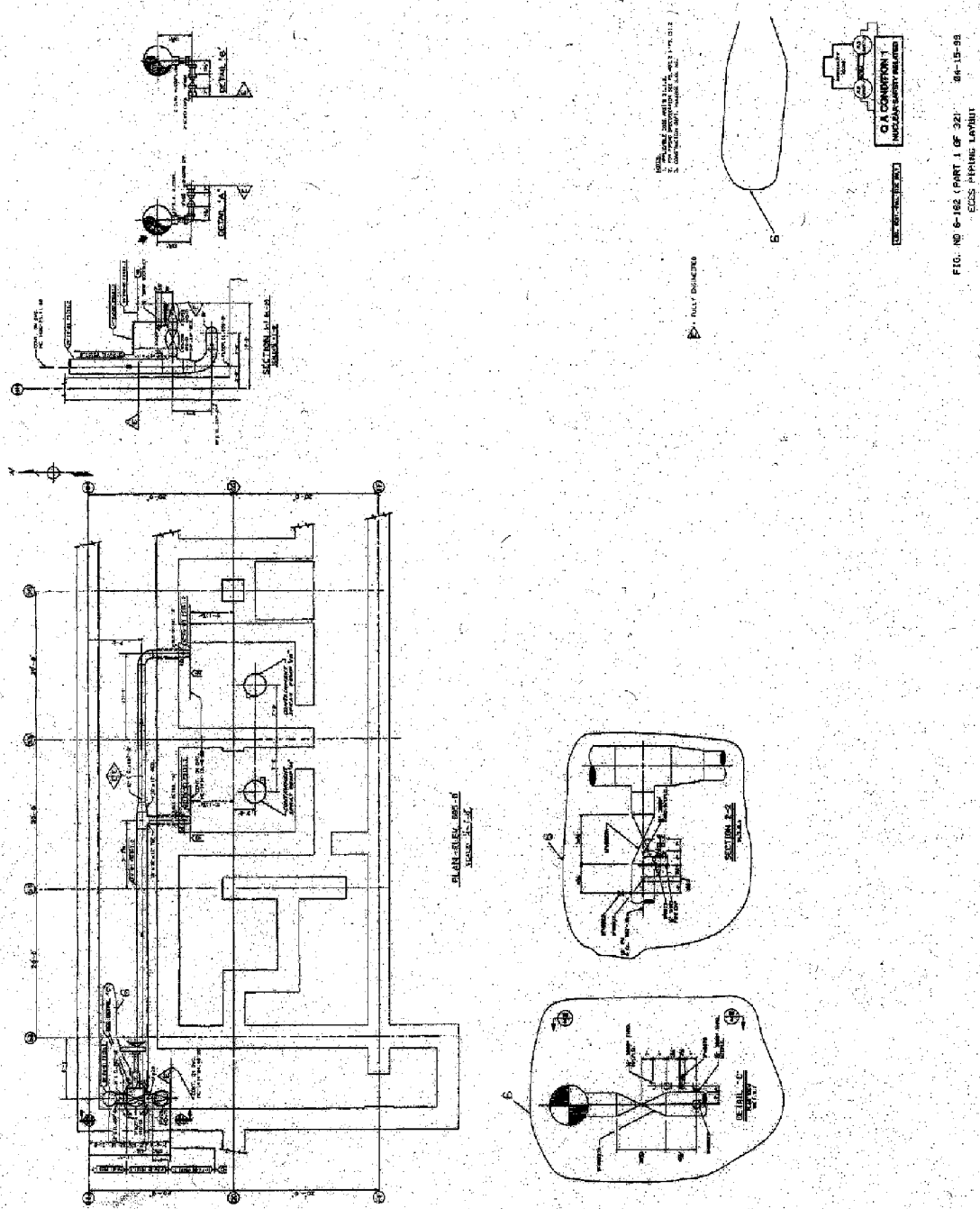
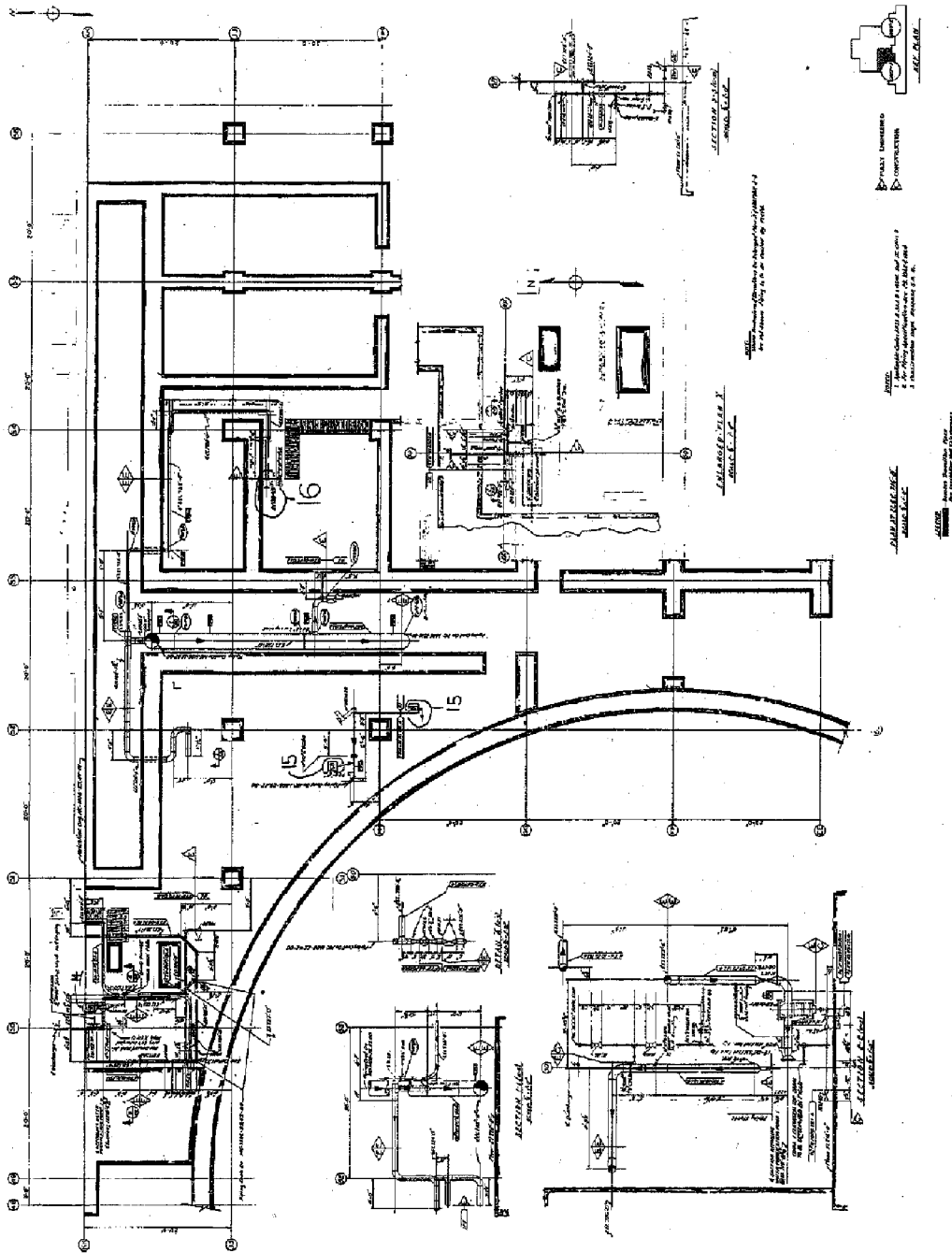


Figure 6-182. ECCS Piping Layout





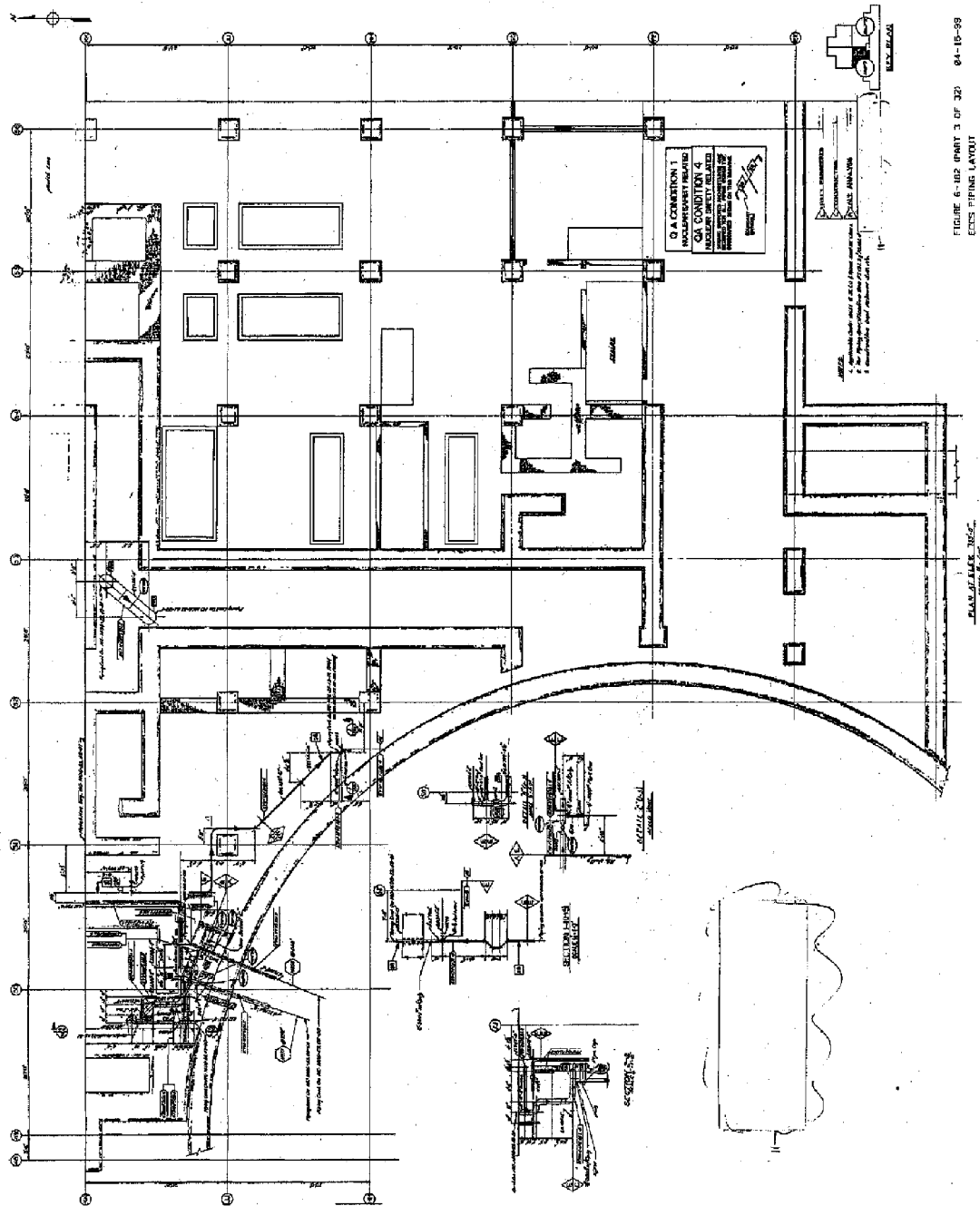


FIGURE 6-182 (PART 3 OF 32) 04-15-99
ECS PIPING LAYOUT

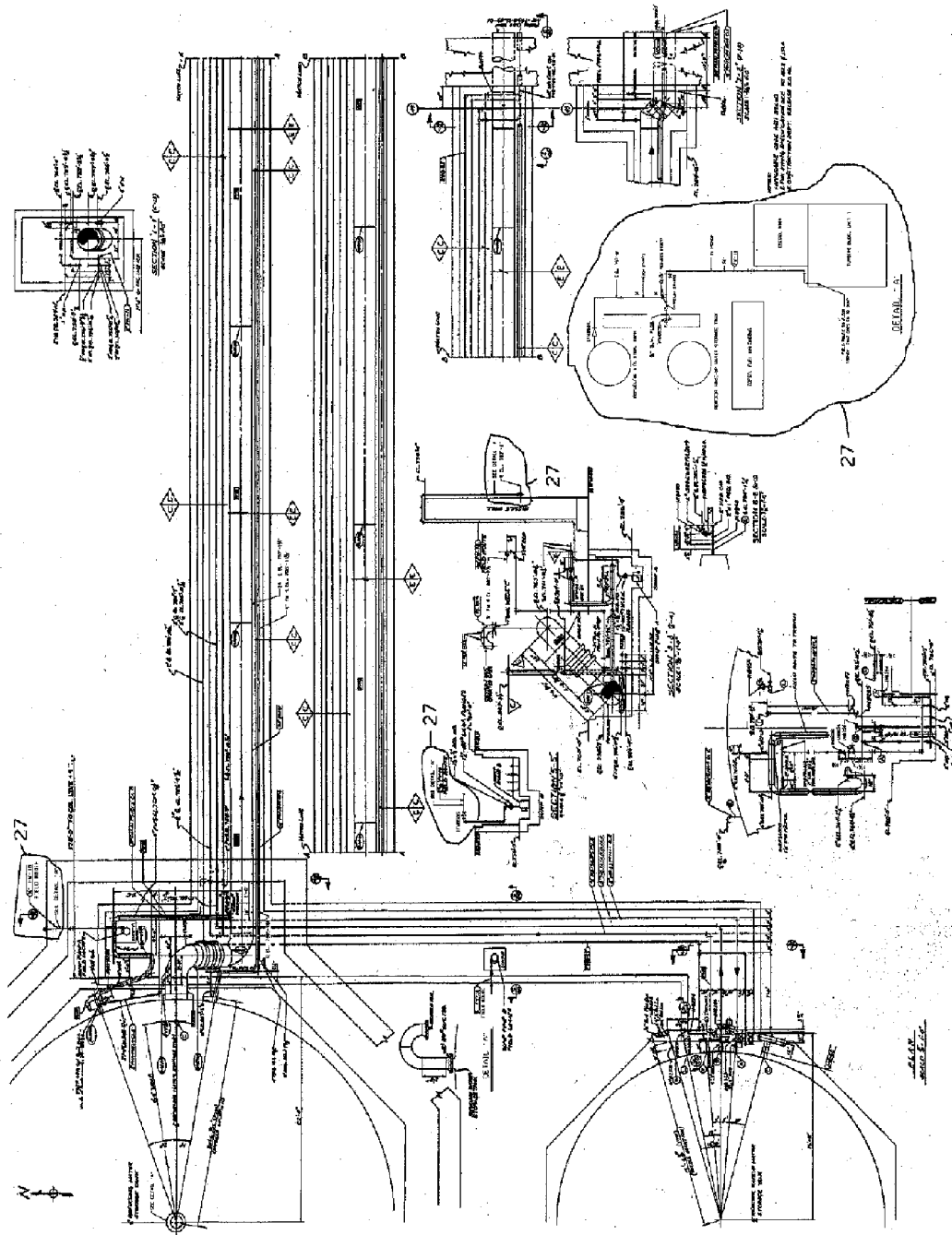


FIGURE 6-182 (PART 4 OF 32) 04-15-99
ECCS PIPING LAYOUT

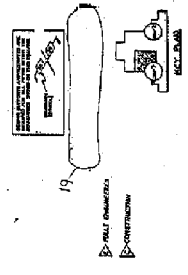
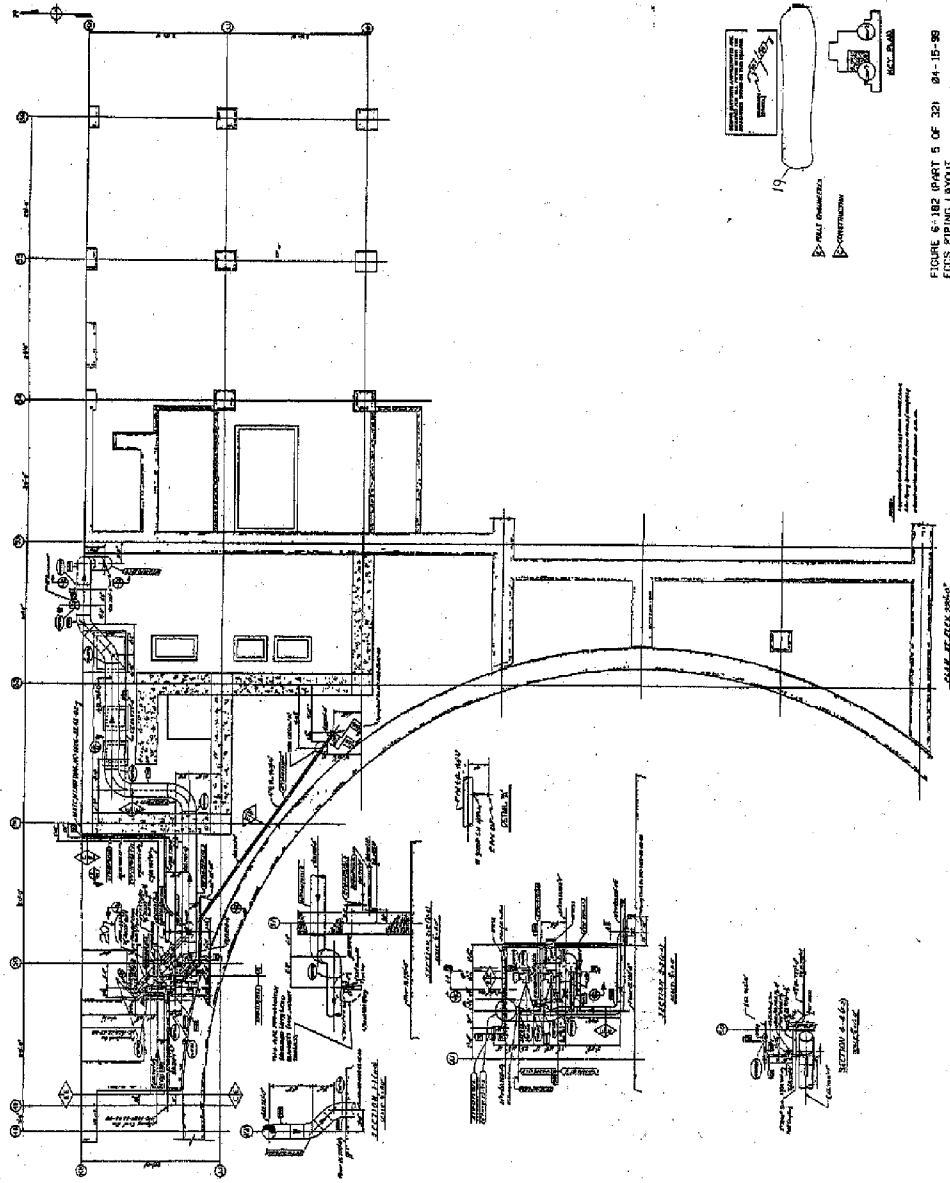


FIGURE 6-182 (PART 5 OF 32) 84-15-88
EDCS PIPING LAYOUT

Symbol	Description
1/2"	1/2" Schedule 40 Pipe
3/4"	3/4" Schedule 40 Pipe
1"	1" Schedule 40 Pipe
1 1/2"	1 1/2" Schedule 40 Pipe
2"	2" Schedule 40 Pipe
2 1/2"	2 1/2" Schedule 40 Pipe
3"	3" Schedule 40 Pipe
3 1/2"	3 1/2" Schedule 40 Pipe
4"	4" Schedule 40 Pipe
4 1/2"	4 1/2" Schedule 40 Pipe
5"	5" Schedule 40 Pipe
5 1/2"	5 1/2" Schedule 40 Pipe
6"	6" Schedule 40 Pipe
6 1/2"	6 1/2" Schedule 40 Pipe
7"	7" Schedule 40 Pipe
7 1/2"	7 1/2" Schedule 40 Pipe
8"	8" Schedule 40 Pipe
8 1/2"	8 1/2" Schedule 40 Pipe
9"	9" Schedule 40 Pipe
9 1/2"	9 1/2" Schedule 40 Pipe
10"	10" Schedule 40 Pipe
10 1/2"	10 1/2" Schedule 40 Pipe
11"	11" Schedule 40 Pipe
11 1/2"	11 1/2" Schedule 40 Pipe
12"	12" Schedule 40 Pipe
12 1/2"	12 1/2" Schedule 40 Pipe
13"	13" Schedule 40 Pipe
13 1/2"	13 1/2" Schedule 40 Pipe
14"	14" Schedule 40 Pipe
14 1/2"	14 1/2" Schedule 40 Pipe
15"	15" Schedule 40 Pipe
15 1/2"	15 1/2" Schedule 40 Pipe
16"	16" Schedule 40 Pipe
16 1/2"	16 1/2" Schedule 40 Pipe
17"	17" Schedule 40 Pipe
17 1/2"	17 1/2" Schedule 40 Pipe
18"	18" Schedule 40 Pipe
18 1/2"	18 1/2" Schedule 40 Pipe
19"	19" Schedule 40 Pipe
19 1/2"	19 1/2" Schedule 40 Pipe
20"	20" Schedule 40 Pipe
20 1/2"	20 1/2" Schedule 40 Pipe
21"	21" Schedule 40 Pipe
21 1/2"	21 1/2" Schedule 40 Pipe
22"	22" Schedule 40 Pipe
22 1/2"	22 1/2" Schedule 40 Pipe
23"	23" Schedule 40 Pipe
23 1/2"	23 1/2" Schedule 40 Pipe
24"	24" Schedule 40 Pipe
24 1/2"	24 1/2" Schedule 40 Pipe
25"	25" Schedule 40 Pipe
25 1/2"	25 1/2" Schedule 40 Pipe
26"	26" Schedule 40 Pipe
26 1/2"	26 1/2" Schedule 40 Pipe
27"	27" Schedule 40 Pipe
27 1/2"	27 1/2" Schedule 40 Pipe
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29"	29" Schedule 40 Pipe
29 1/2"	29 1/2" Schedule 40 Pipe
30"	30" Schedule 40 Pipe
30 1/2"	30 1/2" Schedule 40 Pipe
31"	31" Schedule 40 Pipe
31 1/2"	31 1/2" Schedule 40 Pipe
32"	32" Schedule 40 Pipe
32 1/2"	32 1/2" Schedule 40 Pipe
33"	33" Schedule 40 Pipe
33 1/2"	33 1/2" Schedule 40 Pipe
34"	34" Schedule 40 Pipe
34 1/2"	34 1/2" Schedule 40 Pipe
35"	35" Schedule 40 Pipe
35 1/2"	35 1/2" Schedule 40 Pipe
36"	36" Schedule 40 Pipe
36 1/2"	36 1/2" Schedule 40 Pipe
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37 1/2"	37 1/2" Schedule 40 Pipe
38"	38" Schedule 40 Pipe
38 1/2"	38 1/2" Schedule 40 Pipe
39"	39" Schedule 40 Pipe
39 1/2"	39 1/2" Schedule 40 Pipe
40"	40" Schedule 40 Pipe
40 1/2"	40 1/2" Schedule 40 Pipe
41"	41" Schedule 40 Pipe
41 1/2"	41 1/2" Schedule 40 Pipe
42"	42" Schedule 40 Pipe
42 1/2"	42 1/2" Schedule 40 Pipe
43"	43" Schedule 40 Pipe
43 1/2"	43 1/2" Schedule 40 Pipe
44"	44" Schedule 40 Pipe
44 1/2"	44 1/2" Schedule 40 Pipe
45"	45" Schedule 40 Pipe
45 1/2"	45 1/2" Schedule 40 Pipe
46"	46" Schedule 40 Pipe
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47"	47" Schedule 40 Pipe
47 1/2"	47 1/2" Schedule 40 Pipe
48"	48" Schedule 40 Pipe
48 1/2"	48 1/2" Schedule 40 Pipe
49"	49" Schedule 40 Pipe
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50"	50" Schedule 40 Pipe
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52"	52" Schedule 40 Pipe
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53"	53" Schedule 40 Pipe
53 1/2"	53 1/2" Schedule 40 Pipe
54"	54" Schedule 40 Pipe
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55"	55" Schedule 40 Pipe
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57 1/2"	57 1/2" Schedule 40 Pipe
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59 1/2"	59 1/2" Schedule 40 Pipe
60"	60" Schedule 40 Pipe
60 1/2"	60 1/2" Schedule 40 Pipe
61"	61" Schedule 40 Pipe
61 1/2"	61 1/2" Schedule 40 Pipe
62"	62" Schedule 40 Pipe
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63"	63" Schedule 40 Pipe
63 1/2"	63 1/2" Schedule 40 Pipe
64"	64" Schedule 40 Pipe
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66"	66" Schedule 40 Pipe
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69"	69" Schedule 40 Pipe
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85 1/2"	85 1/2" Schedule 40 Pipe
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89"	89" Schedule 40 Pipe
89 1/2"	89 1/2" Schedule 40 Pipe
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92 1/2"	92 1/2" Schedule 40 Pipe
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94 1/2"	94 1/2" Schedule 40 Pipe
95"	95" Schedule 40 Pipe
95 1/2"	95 1/2" Schedule 40 Pipe
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97 1/2"	97 1/2" Schedule 40 Pipe
98"	98" Schedule 40 Pipe
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99 1/2"	99 1/2" Schedule 40 Pipe
100"	100" Schedule 40 Pipe

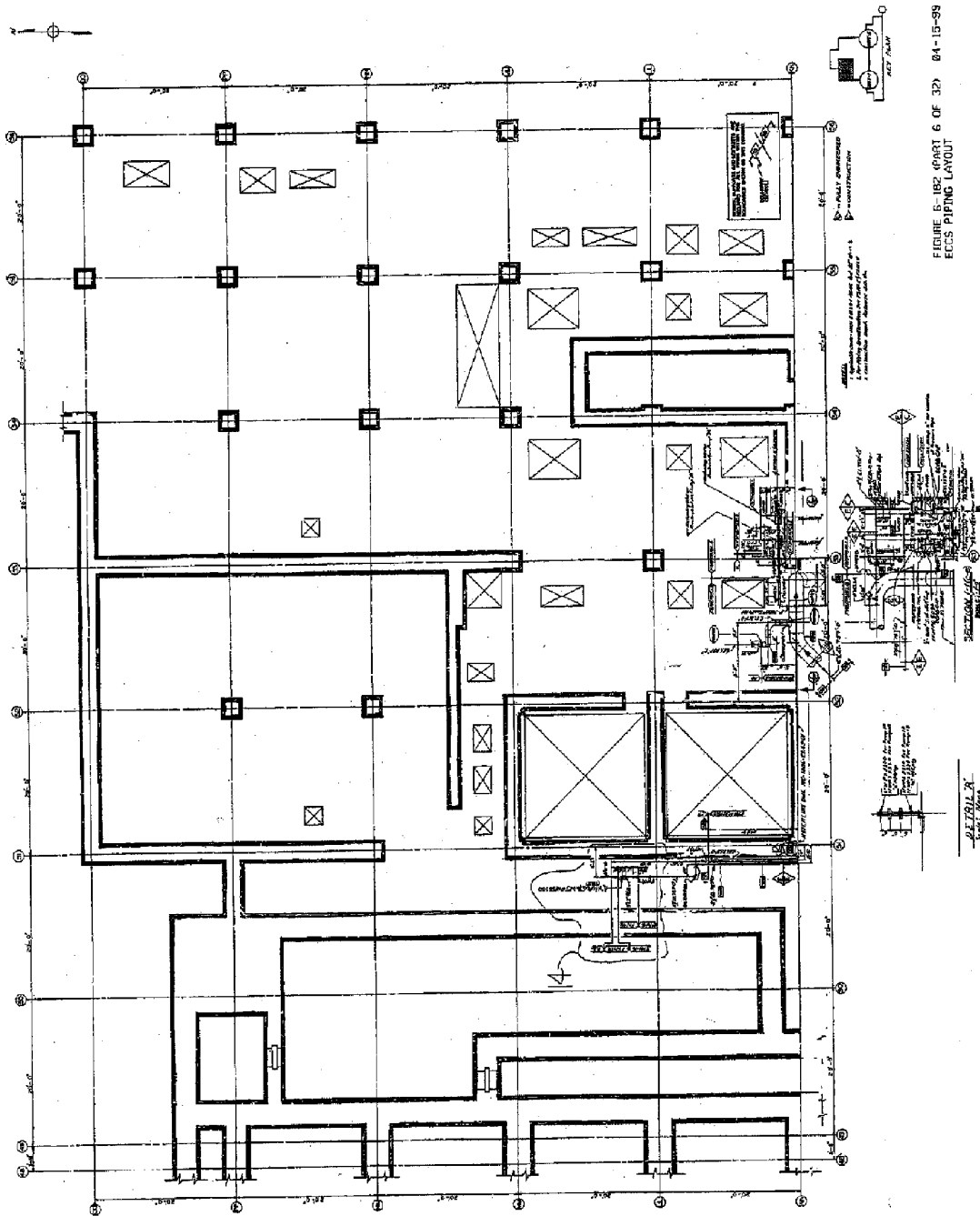


FIGURE 6-182 (PART 6 OF 32) 84-15-98
ECUS PIPING LAYOUT

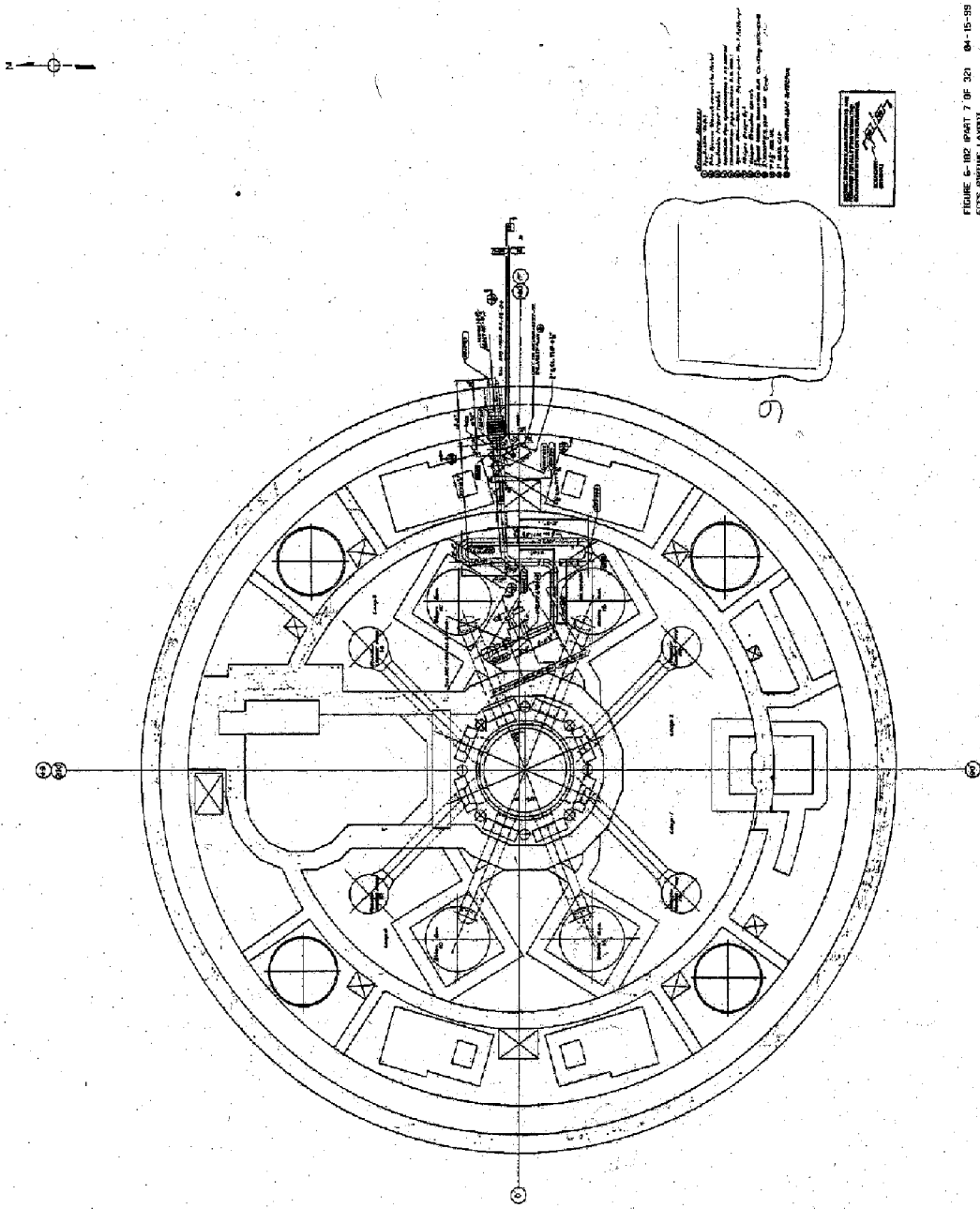


FIGURE 6-182 PART 7 OF 32 04-15-99
ELECTRICAL PIPING LAYOUT

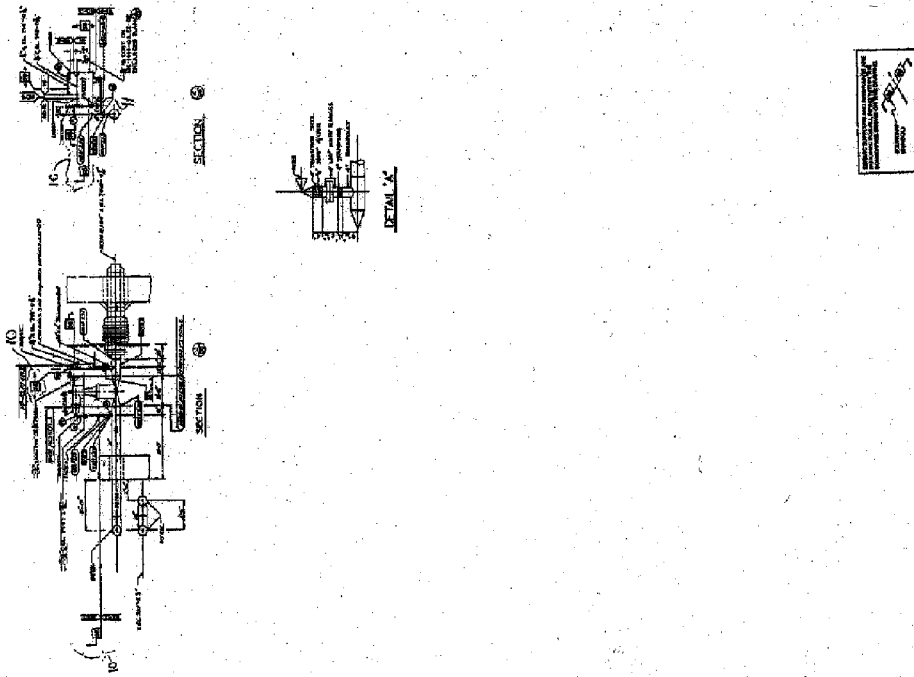


FIGURE 6-182 PART 8 OF 32 04-15-99
ECCS PIPING LAYOUT

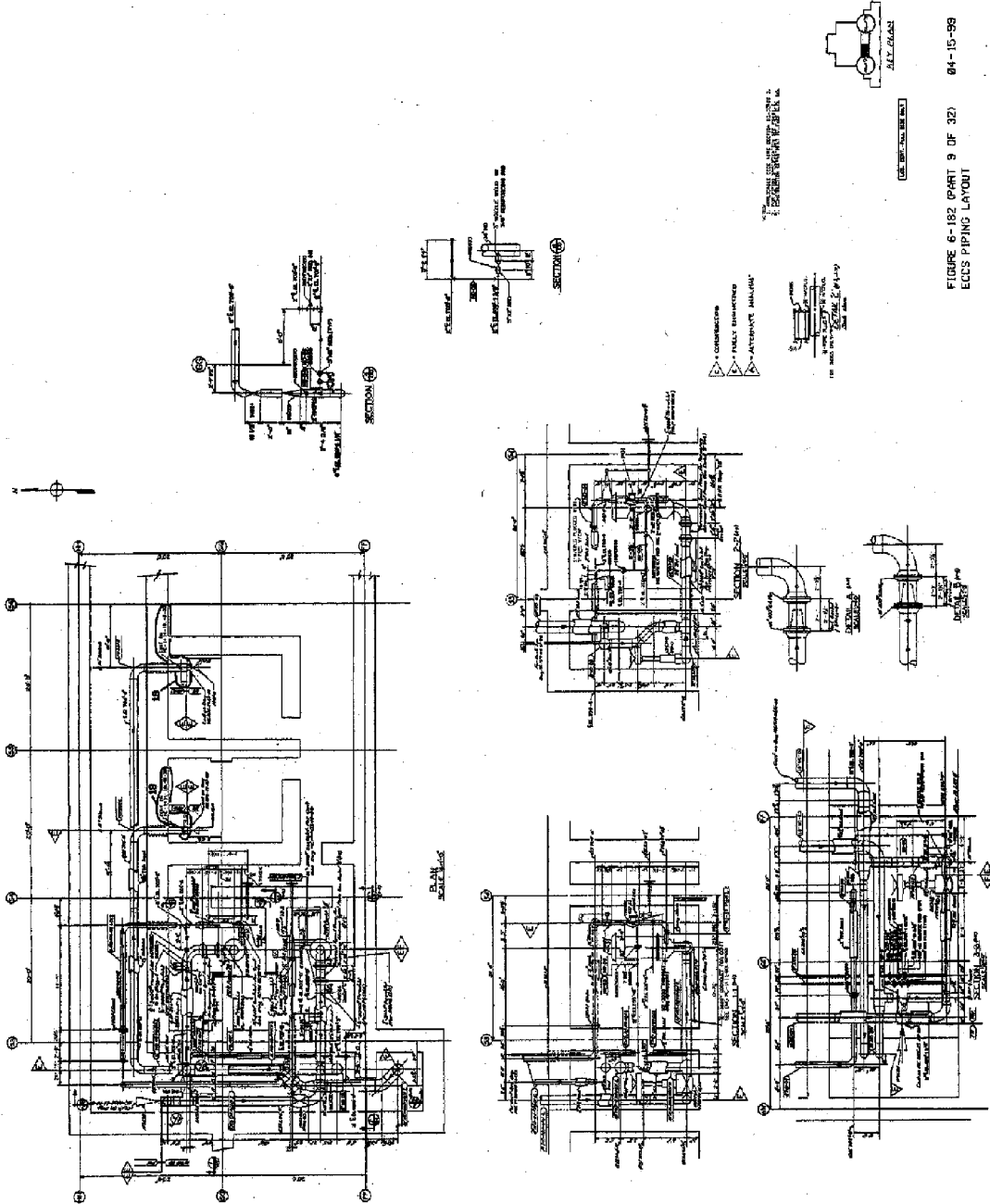


FIGURE 6-182 (PART 9 OF 32)
EGS PIPING LAYOUT

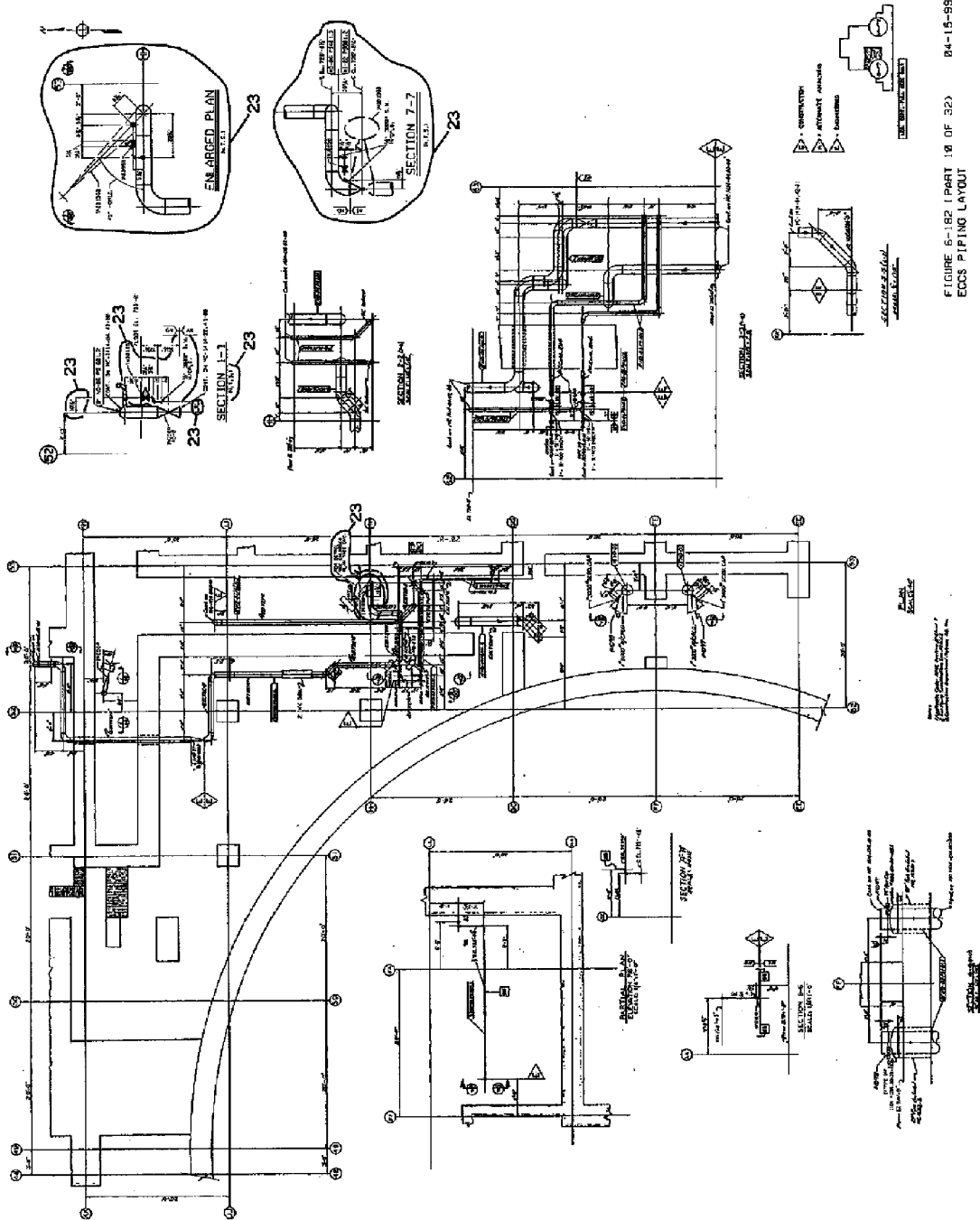


FIGURE 6-182 (PART 10 OF 32) 04-15-99
ECCS PIPING LAYOUT

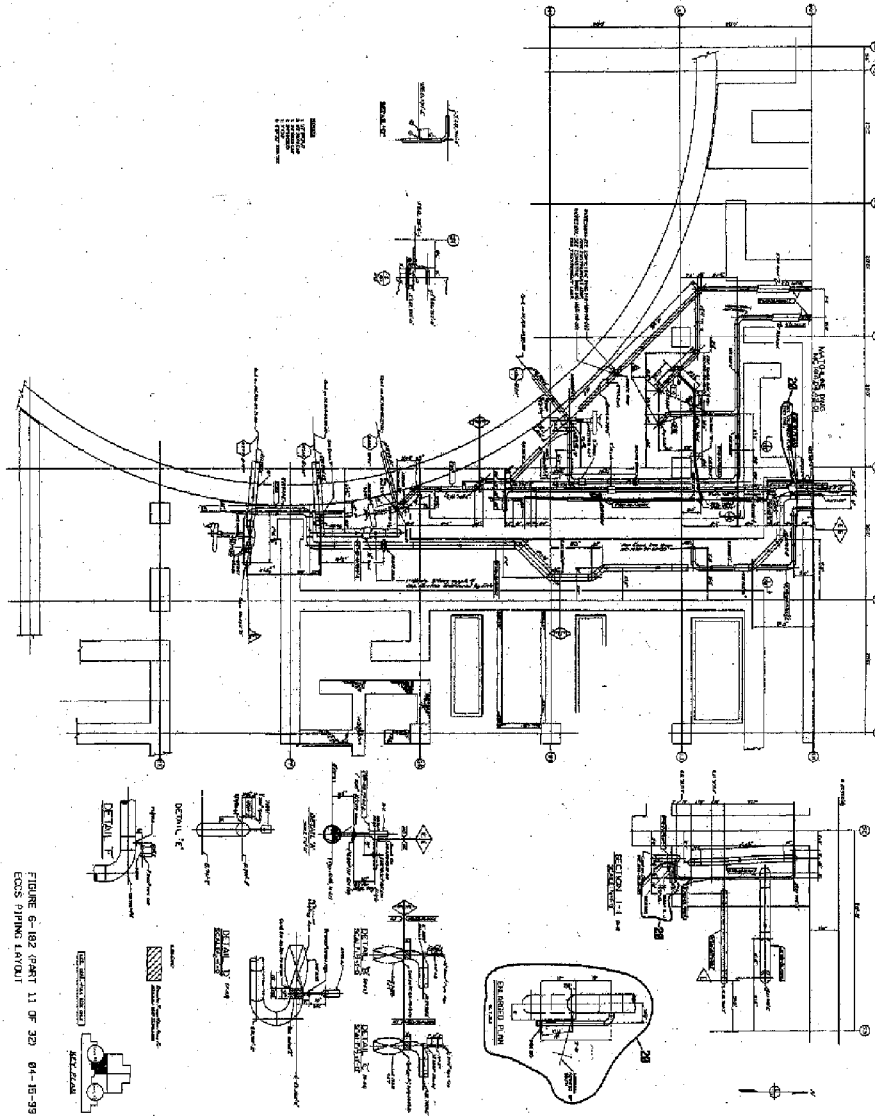


FIGURE 6-182 (PART 11 OF 32) 04-18-99
CCSS (PENDING LAYOUT)

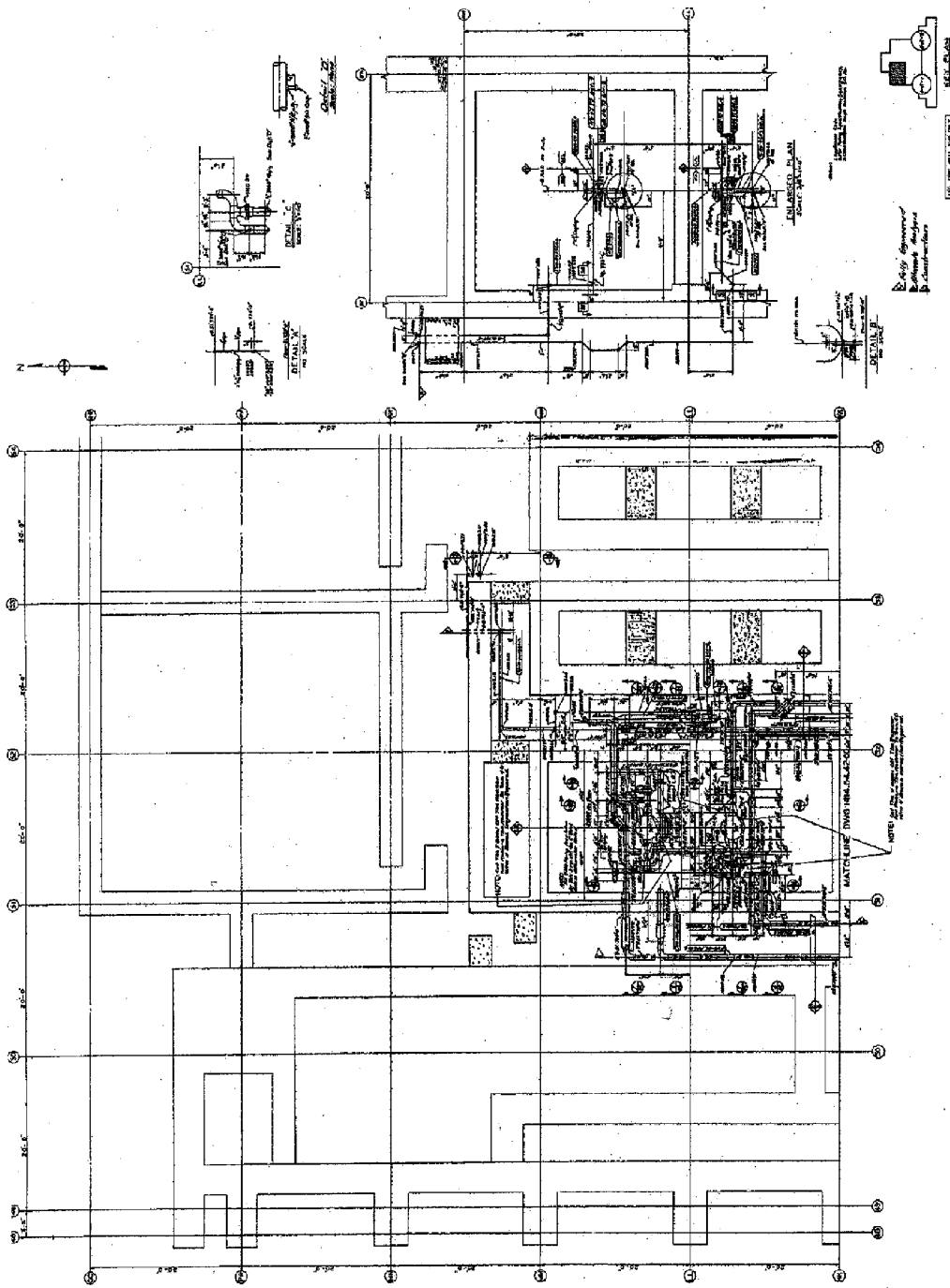


FIGURE 6-182 (PART 12 OF 32) 04-15-99
ECCS PIPING LAYOUT

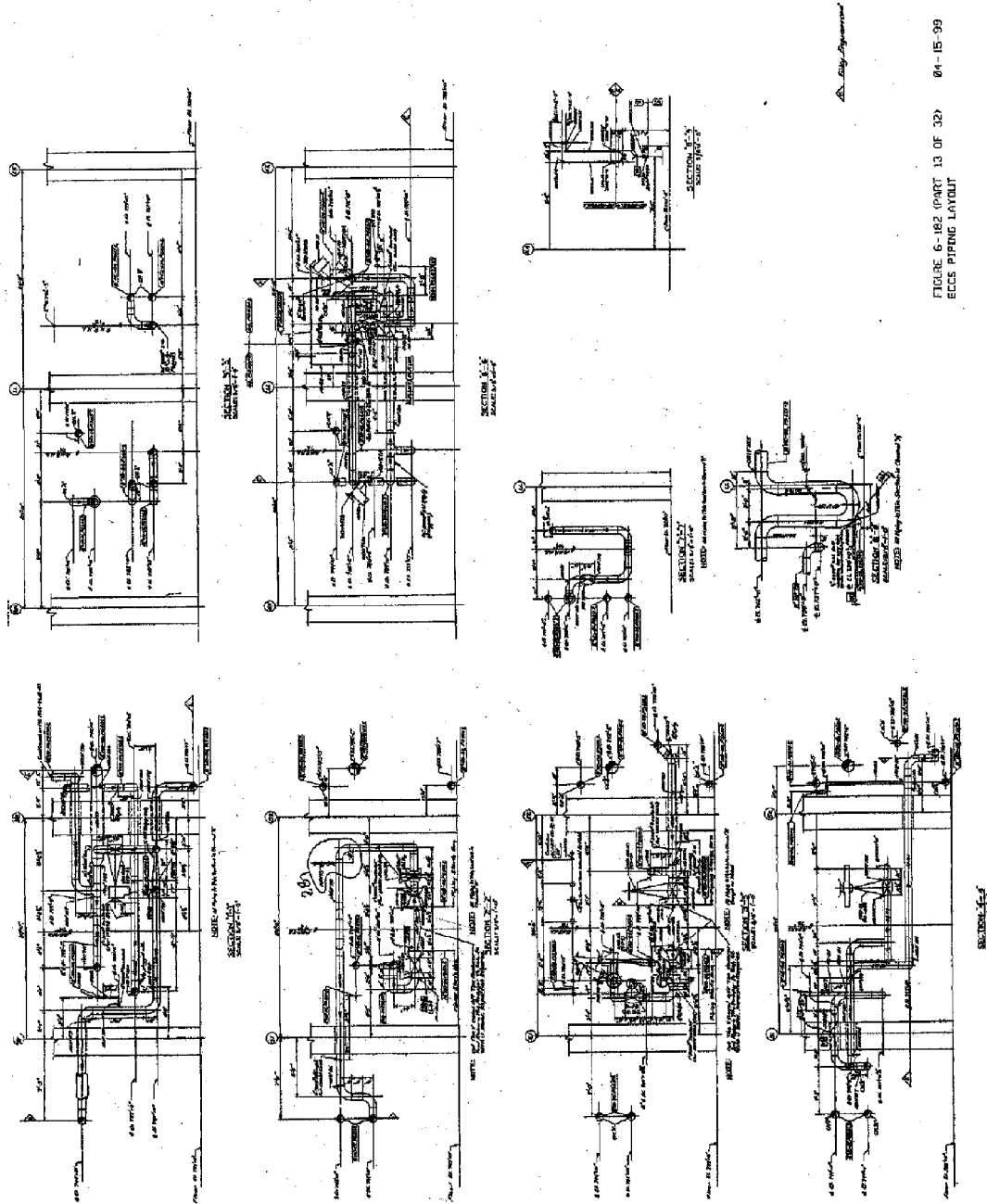
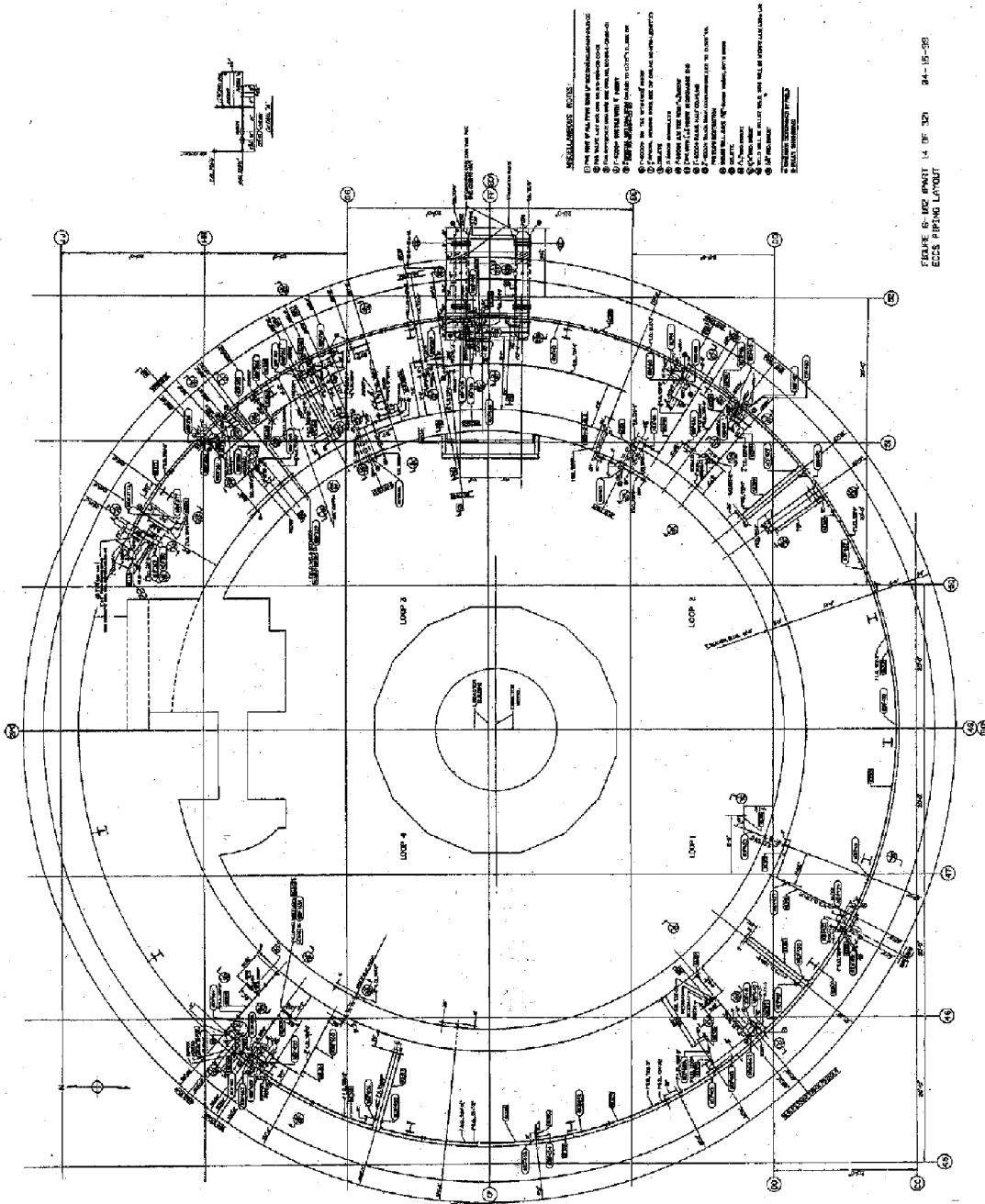


FIGURE 6-182 (PART 13 OF 32) 84-15-39
ECCS PIPING LAYOUT



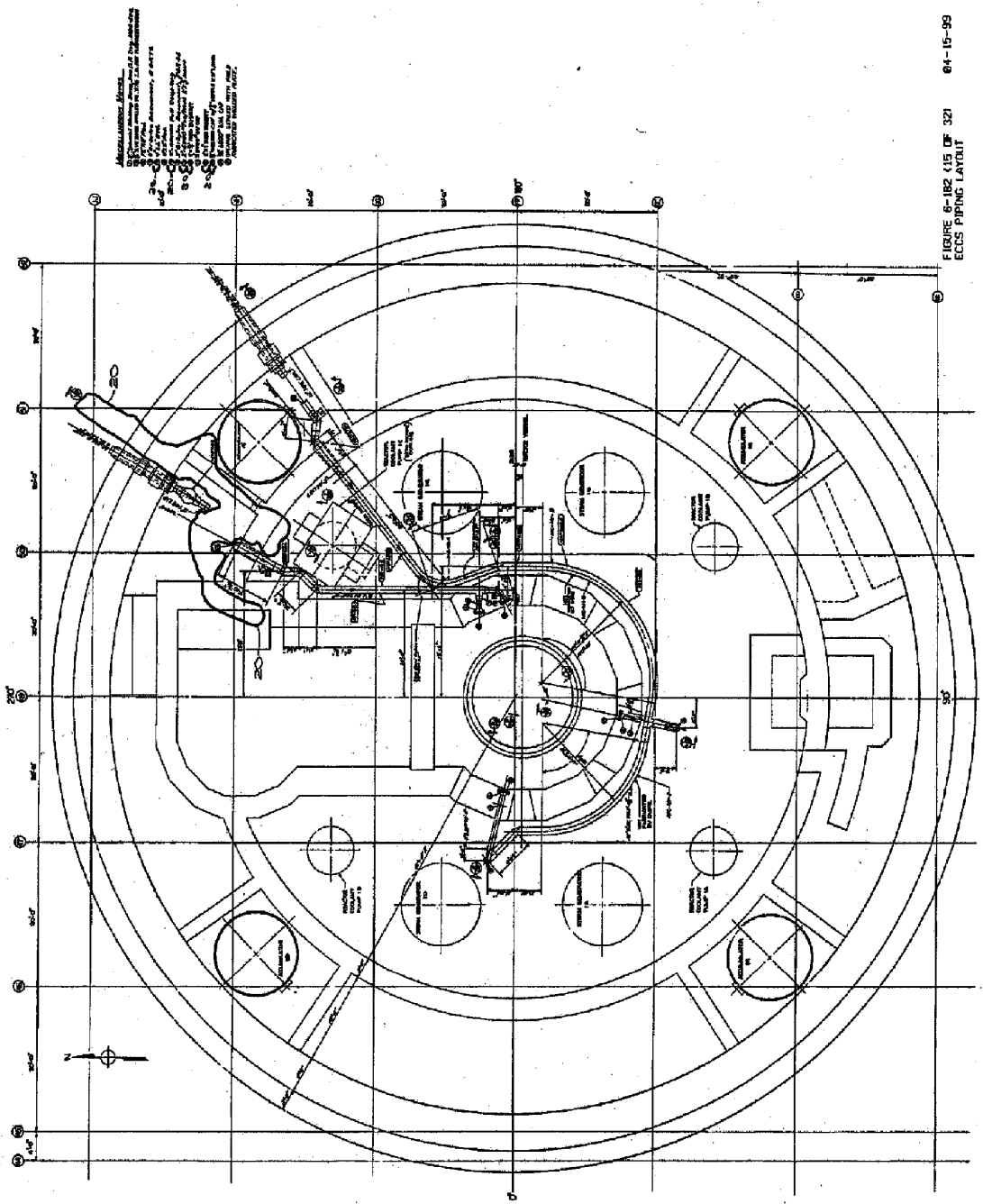


FIGURE 6-182 (15 OF 32)
ECCS PIPING LAYOUT
04-15-99

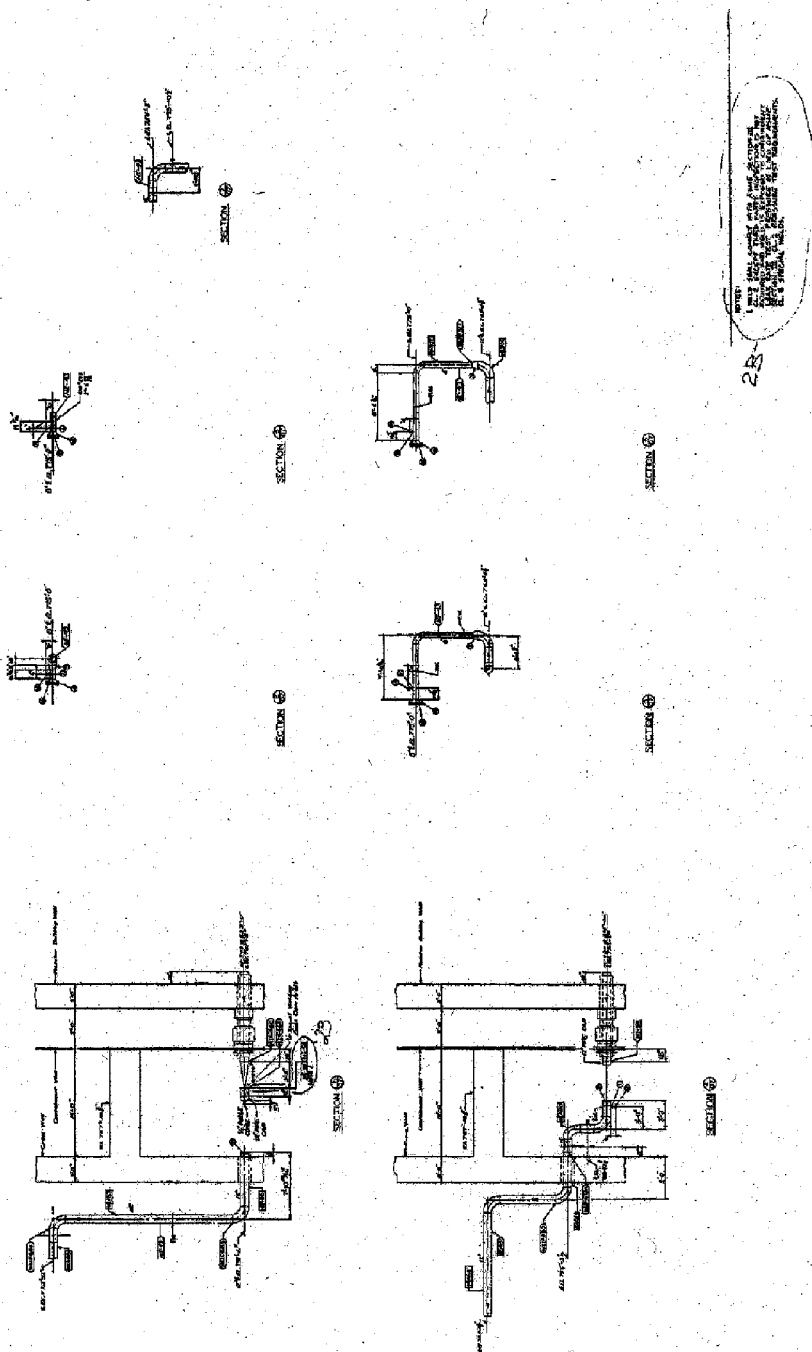
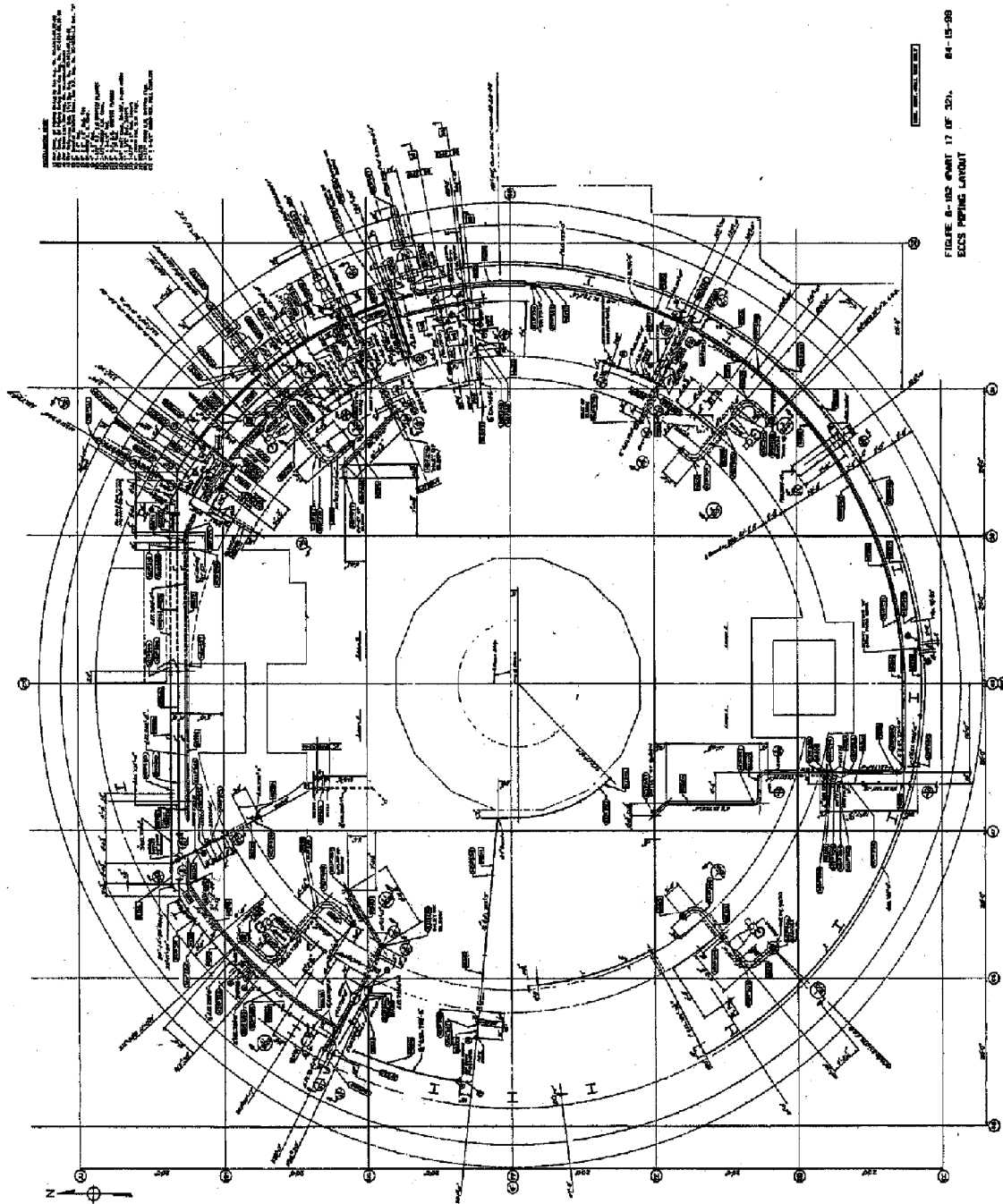


FIGURE 6-182 PART 16 OF 32
ECCS PIPING LAYOUT 04-15-99



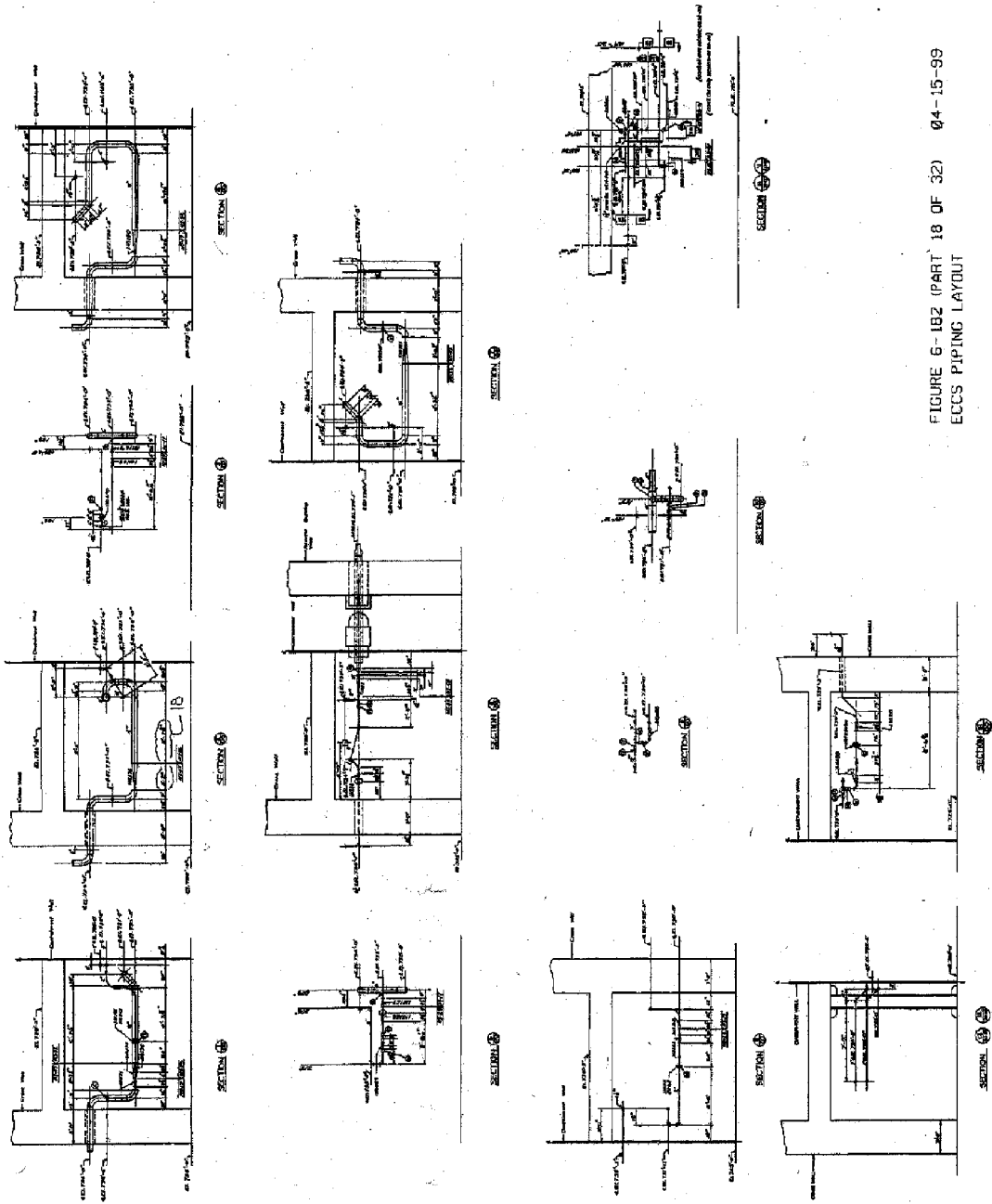
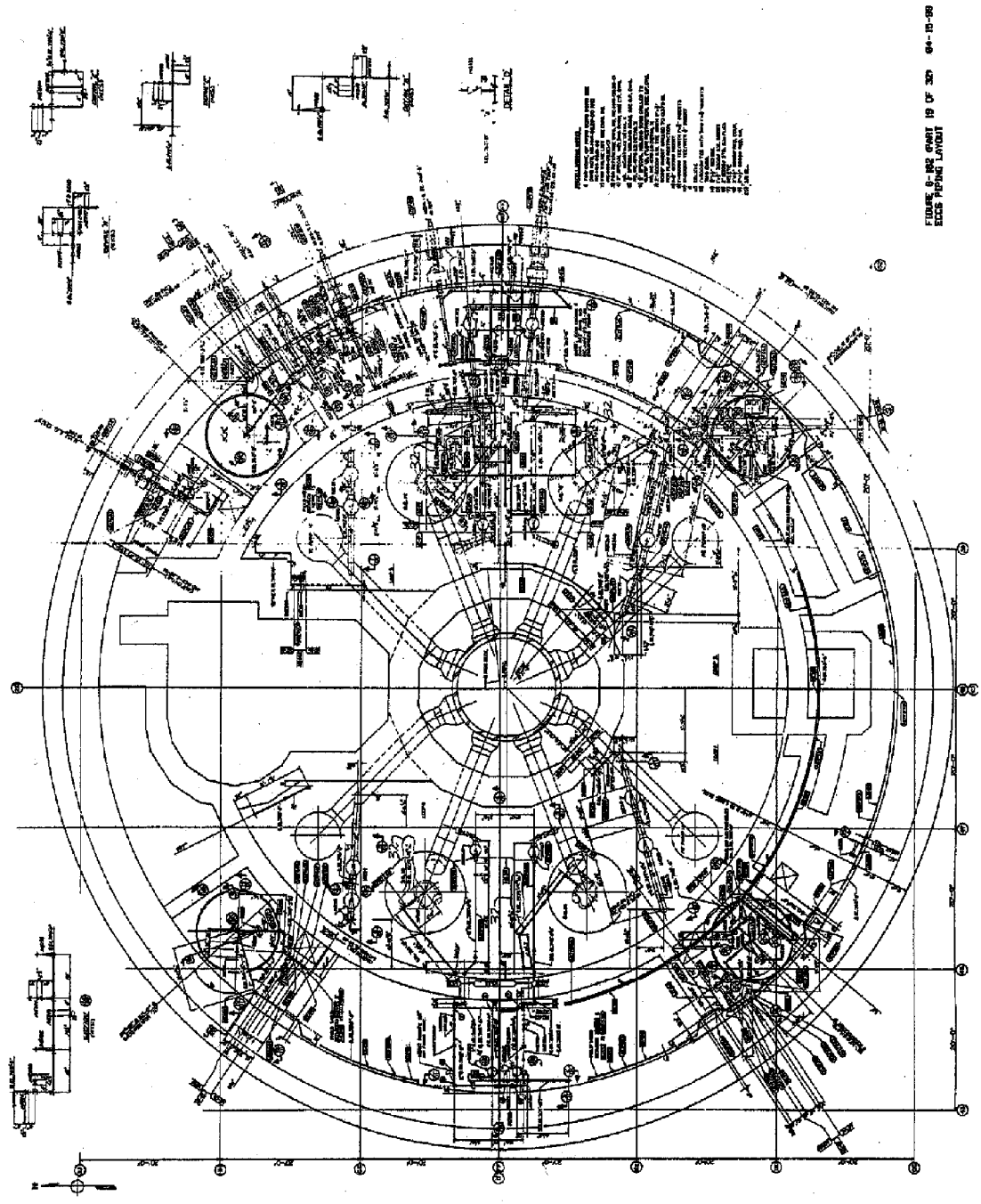


FIGURE 6-182 (PART 18 OF 32) 04-15-99
ECCS PIPING LAYOUT



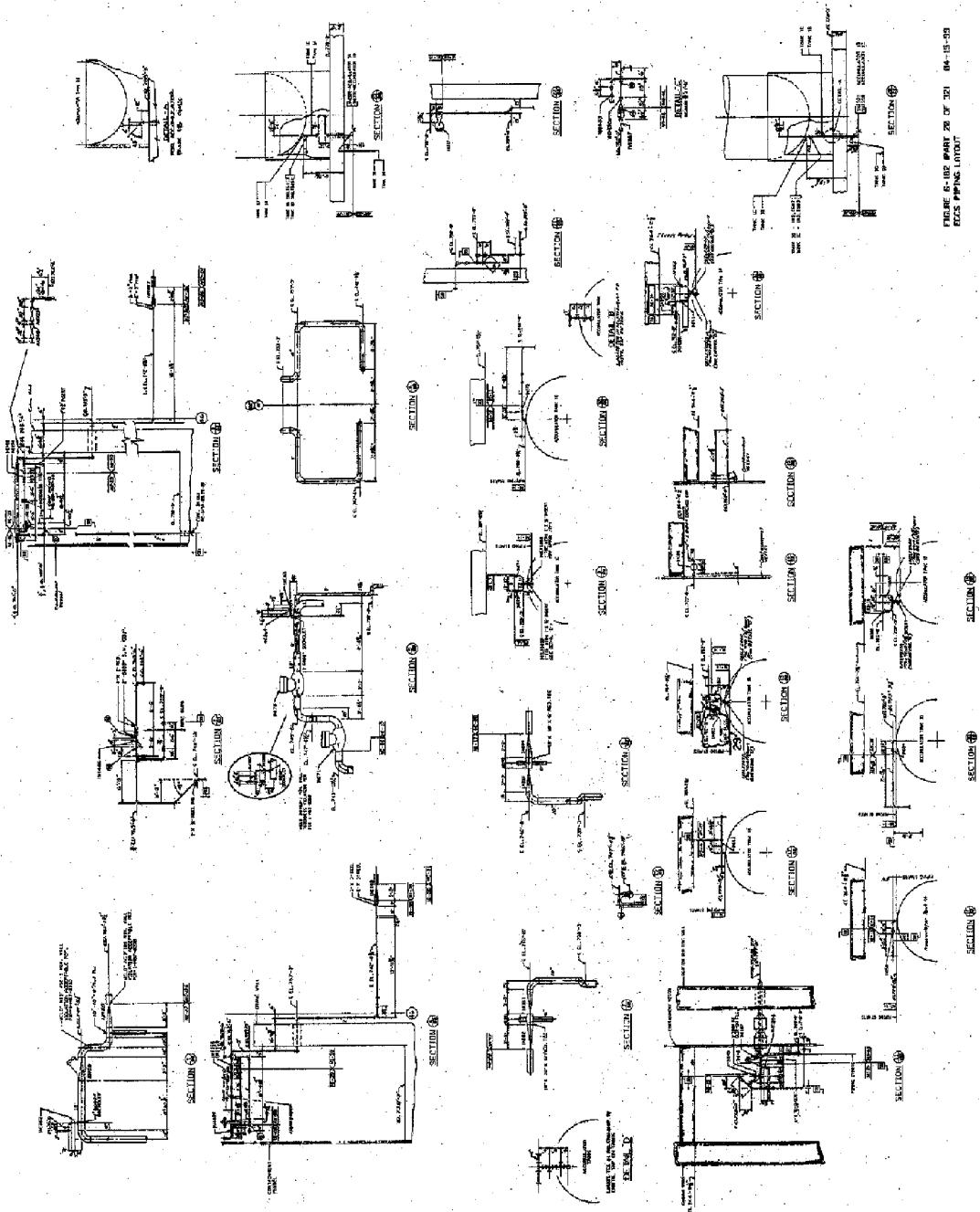


FIGURE 6-182 PART 20 OF 321 04-10-00
PIPE PIPING LAYOUT

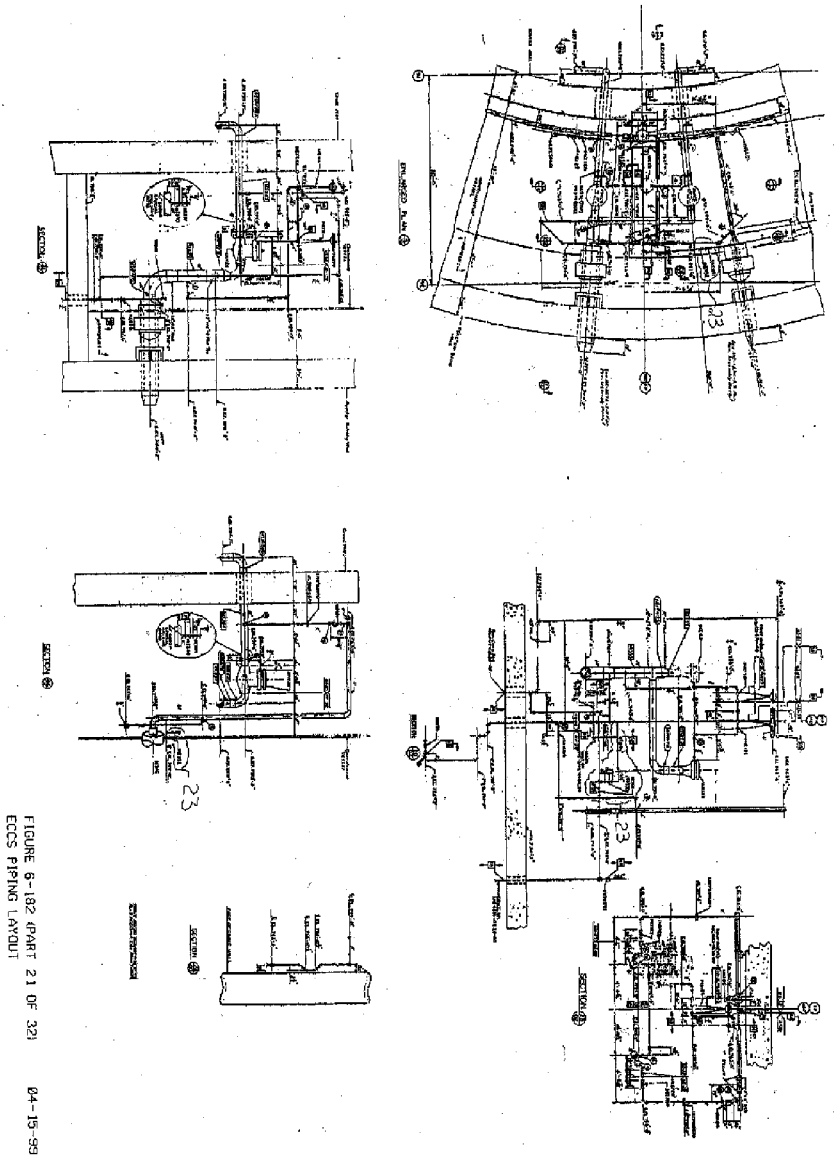
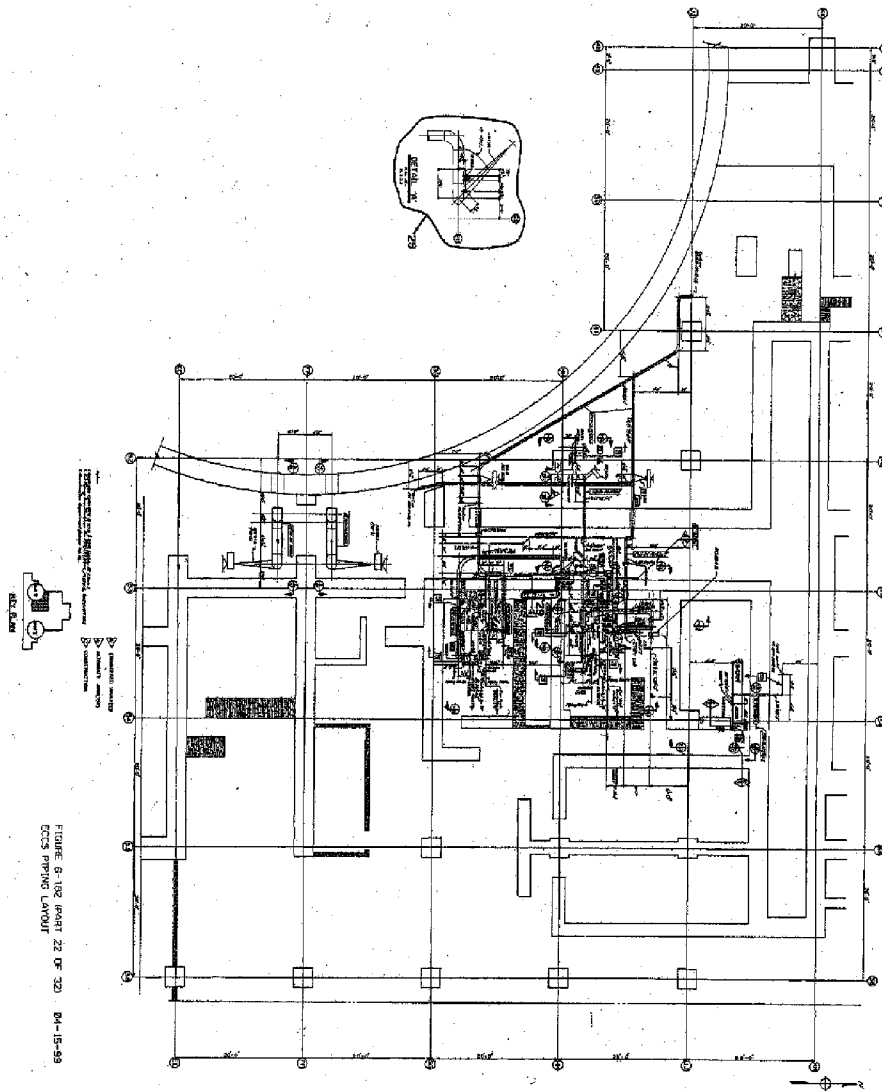


FIGURE 6-182 (PART 21 OF 32)
ECCS PIPING LAYOUT
04-15-99



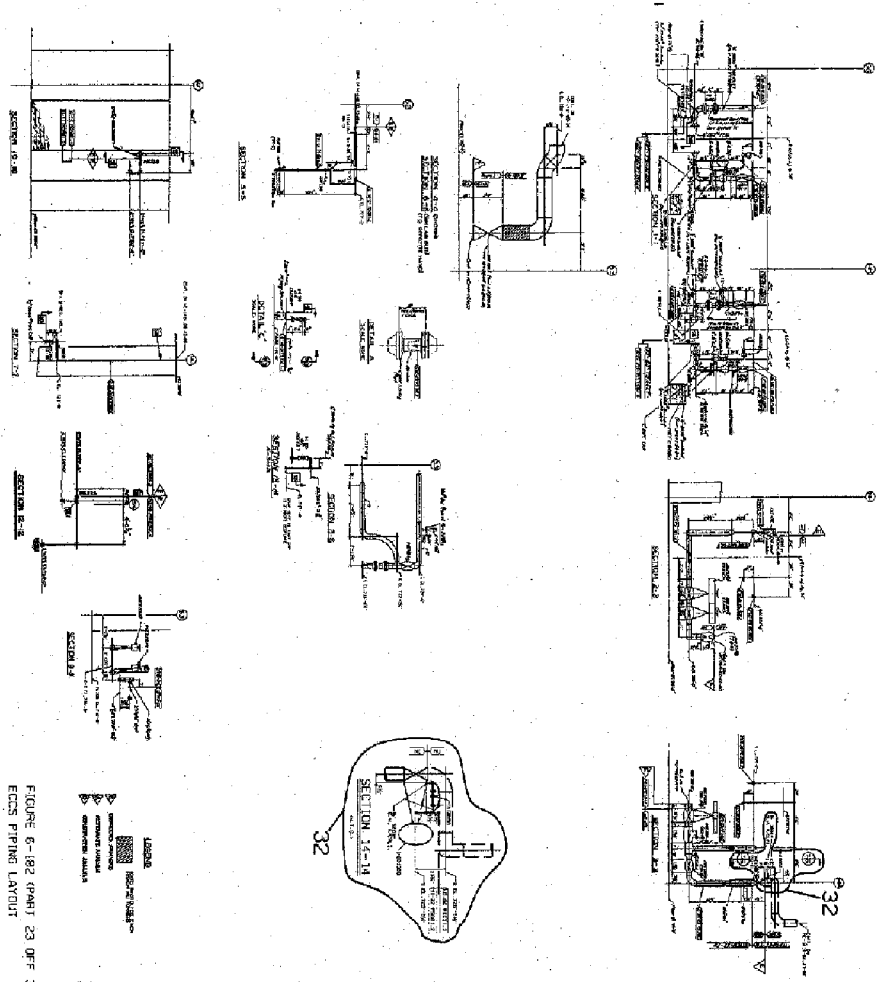


FIGURE 6-182 (PART 23 OF 32)
ECCS PIPING LAYOUT 84-15-99

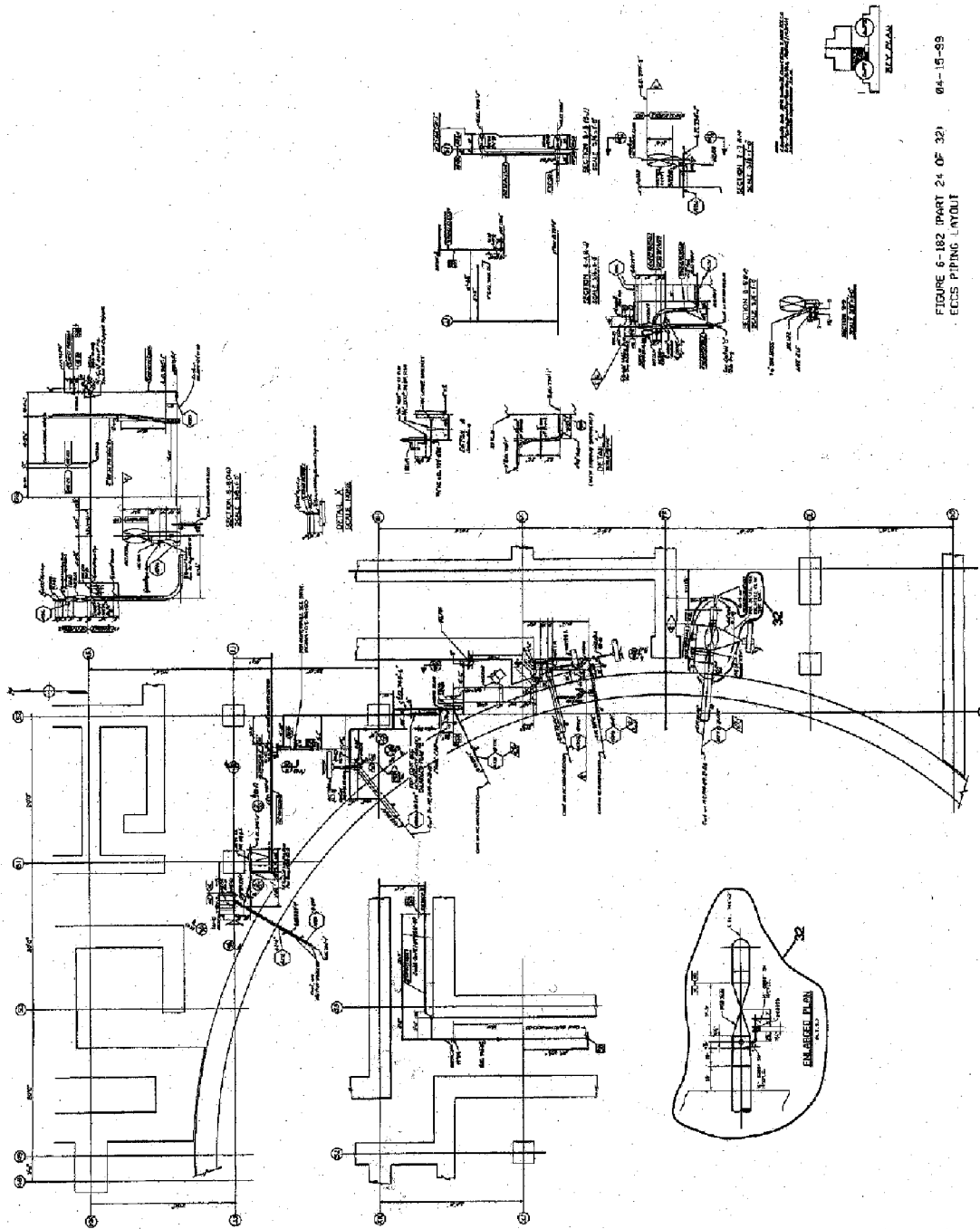


FIGURE 6-182 (PART 24 OF 32) 04-15-89
EGGS PIPING LAYOUT

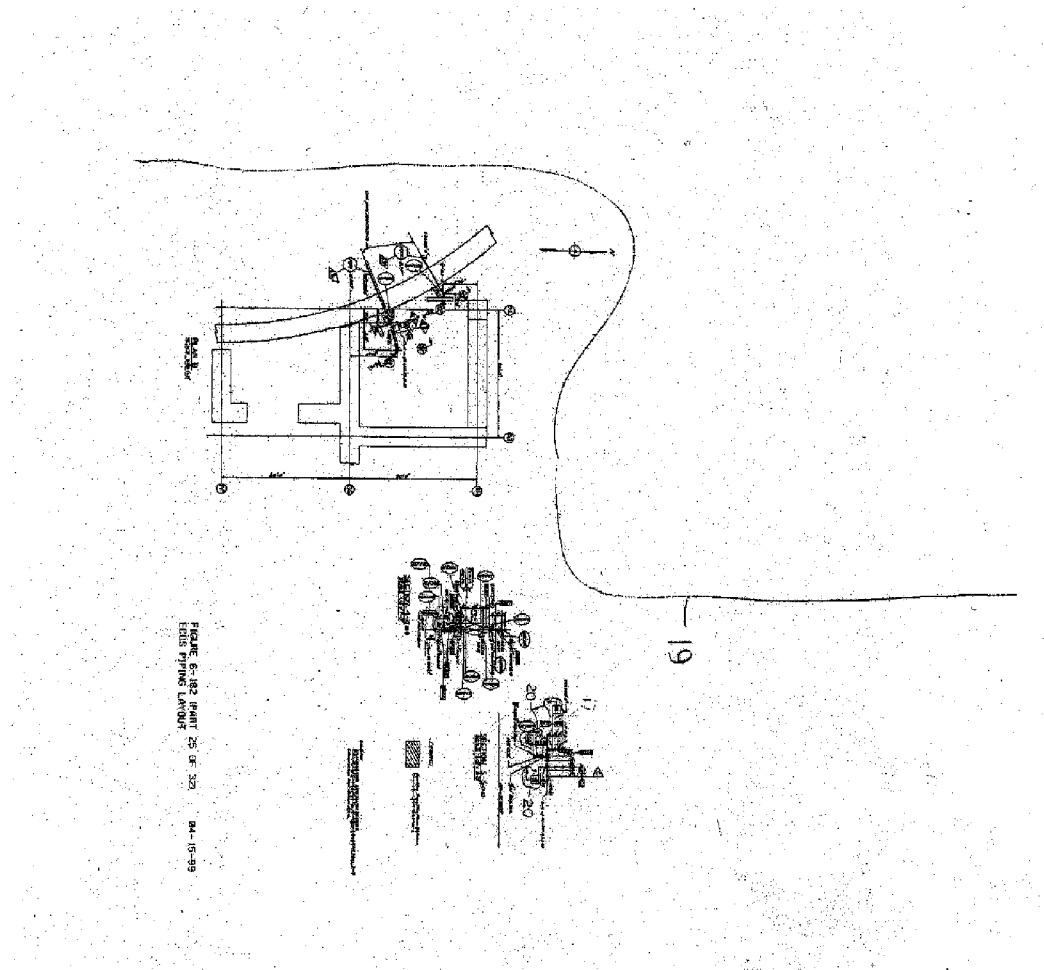
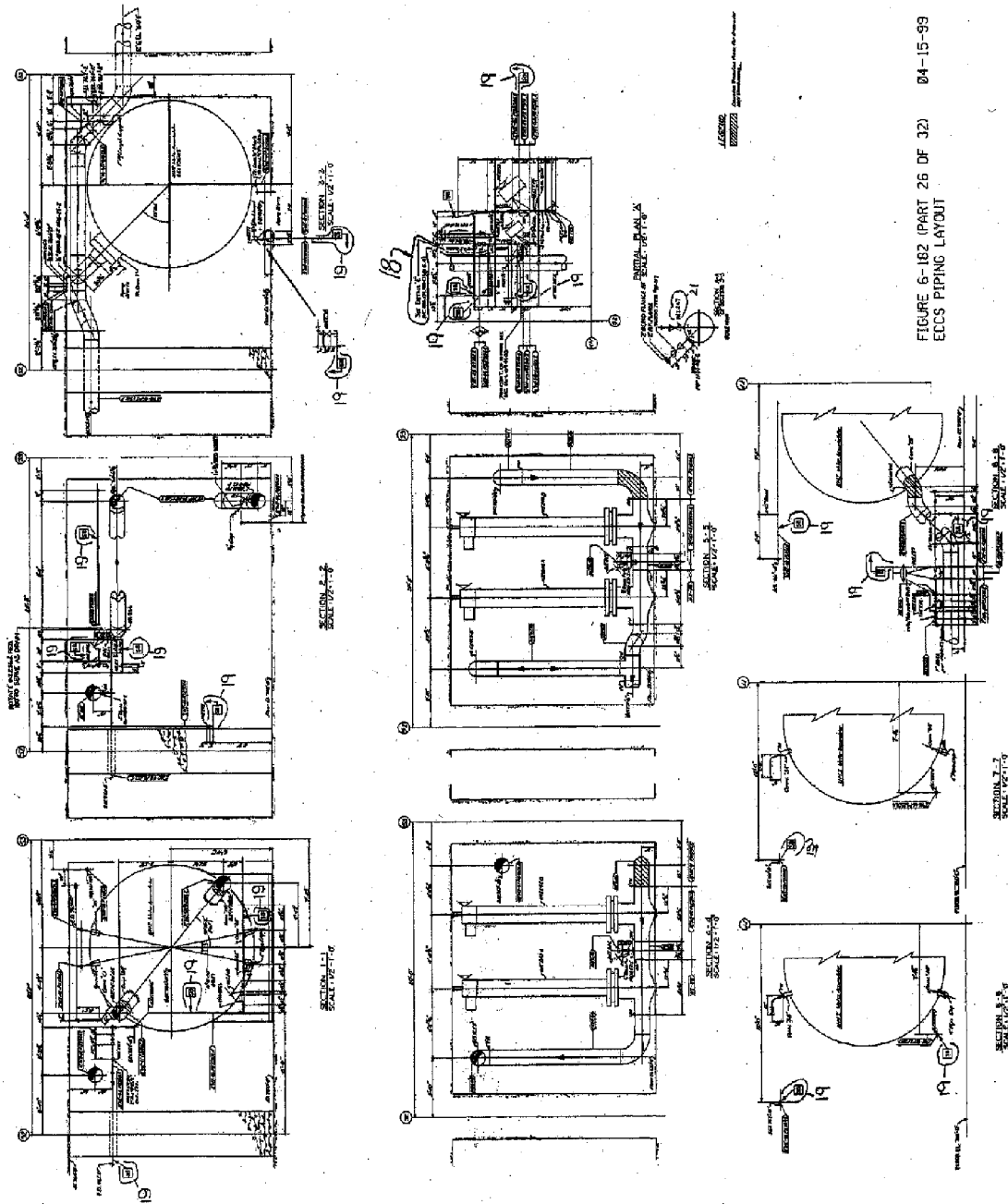


FIGURE 6-182 (PART 25 OF 32) 84-15-99
EELS PIPING LAYOUT



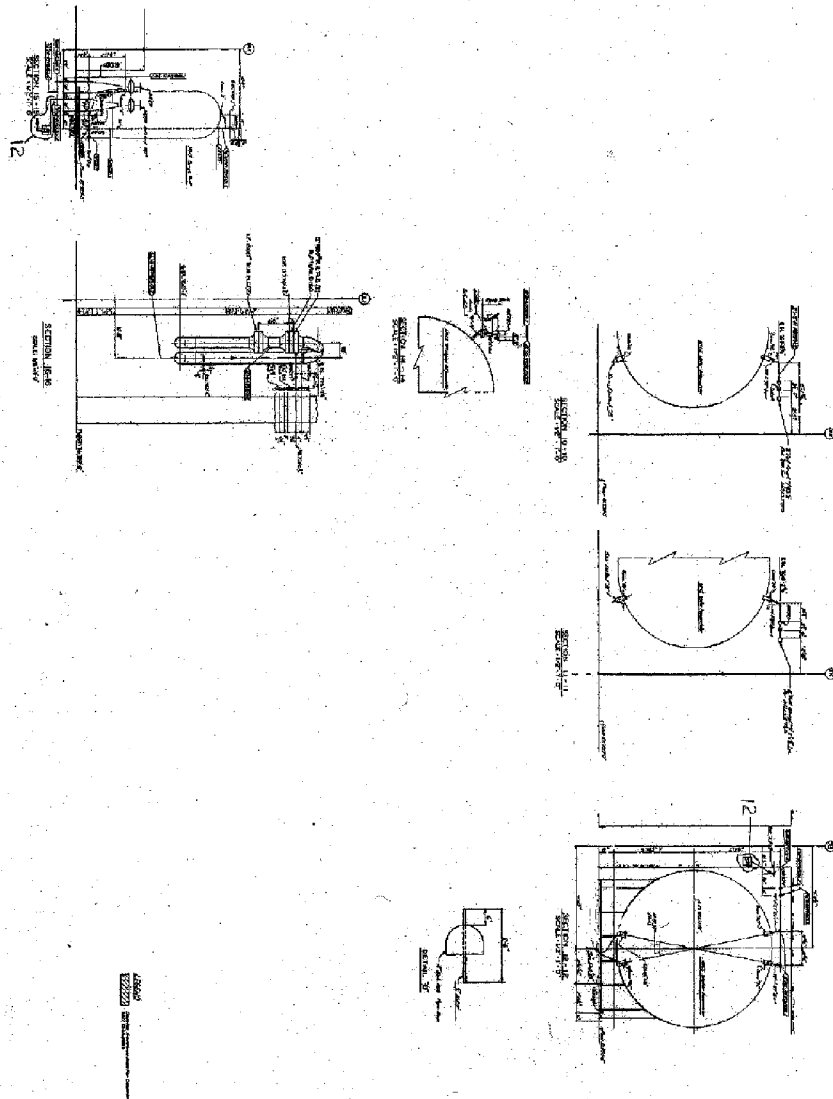


FIGURE 6-182 (PART 27 OF 32)
ECCS PIPING LAYOUT 04-15-99

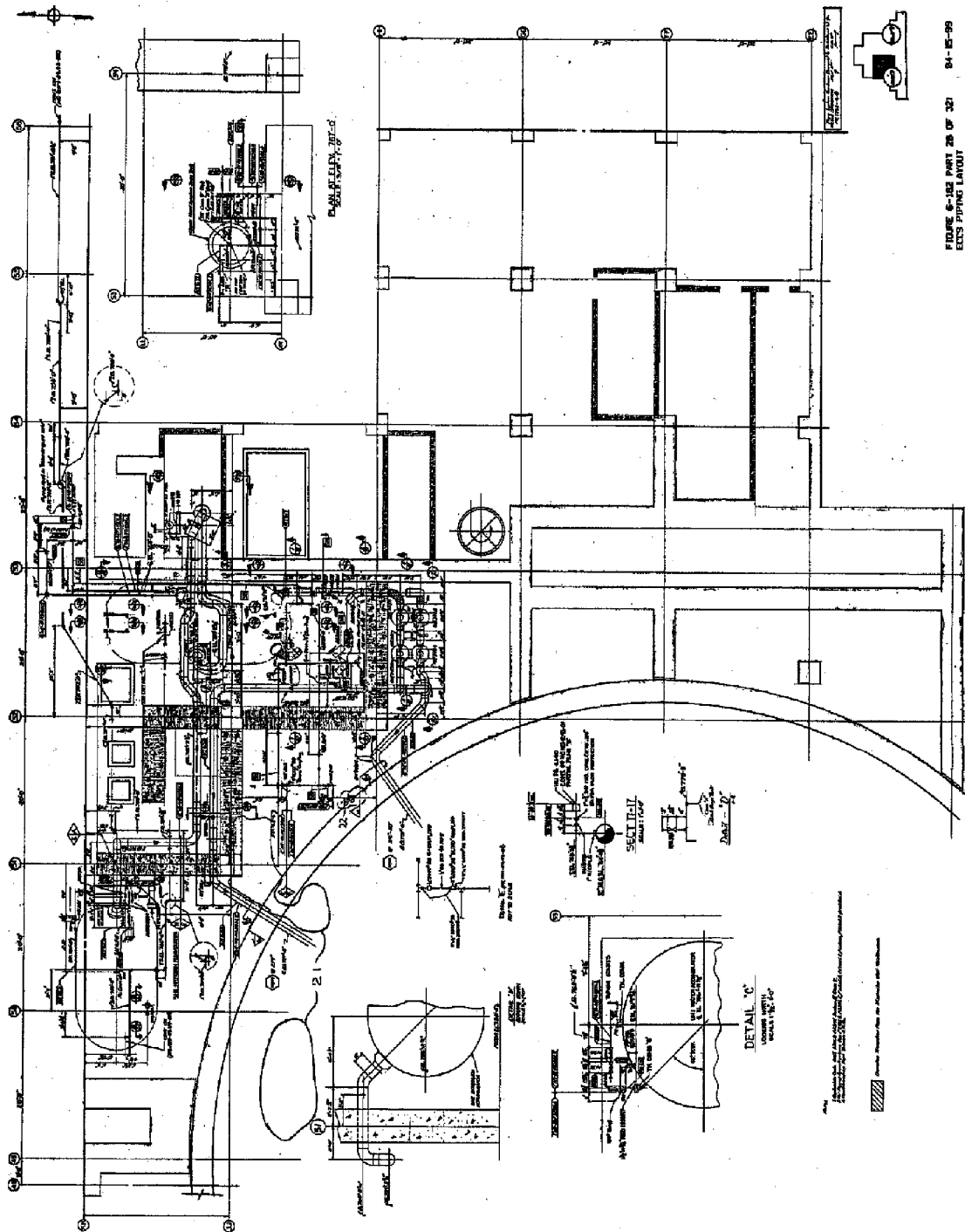


FIGURE 6-182 PART 28 OF 32
EXCS PIPING LAYOUT
84-05-99

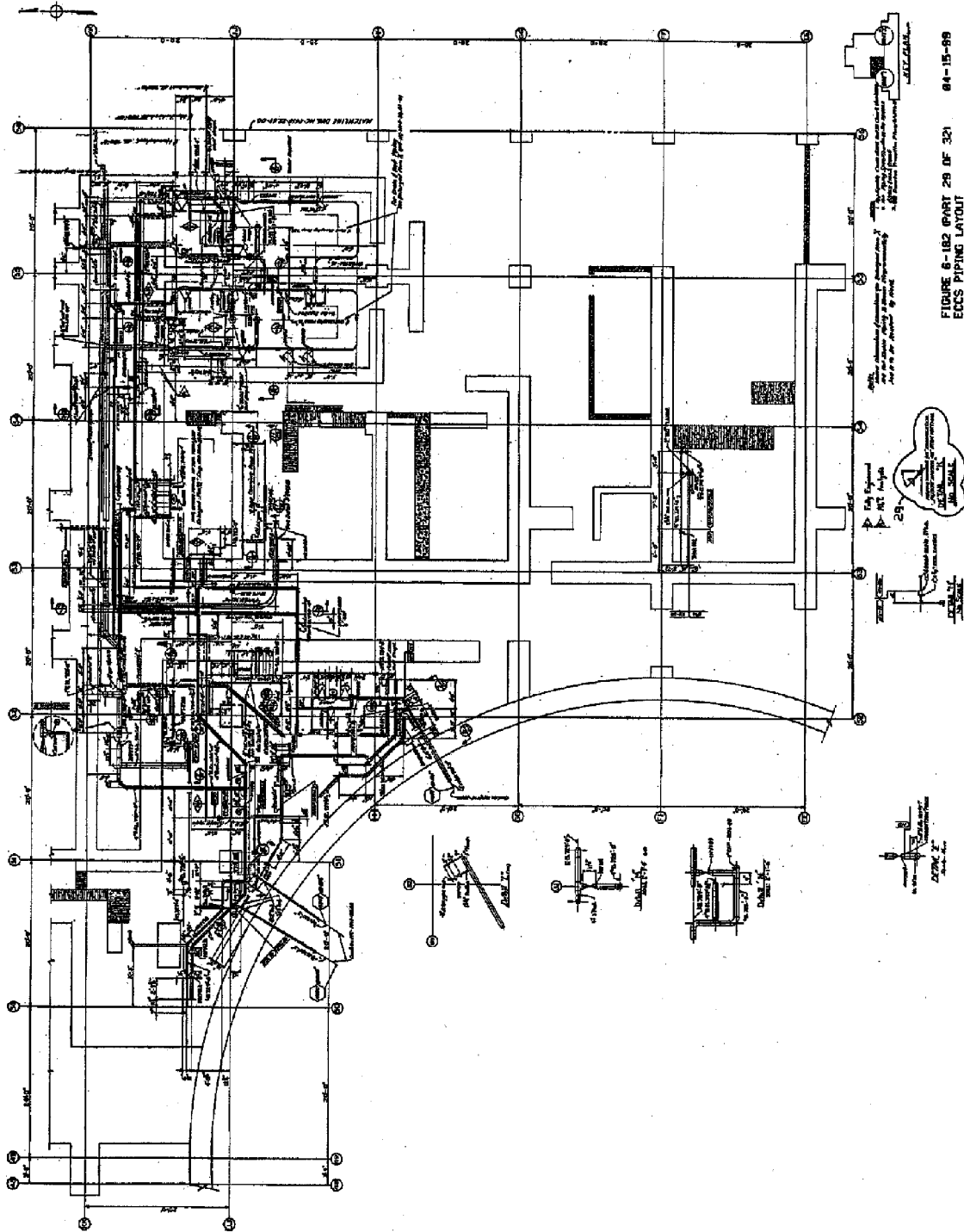
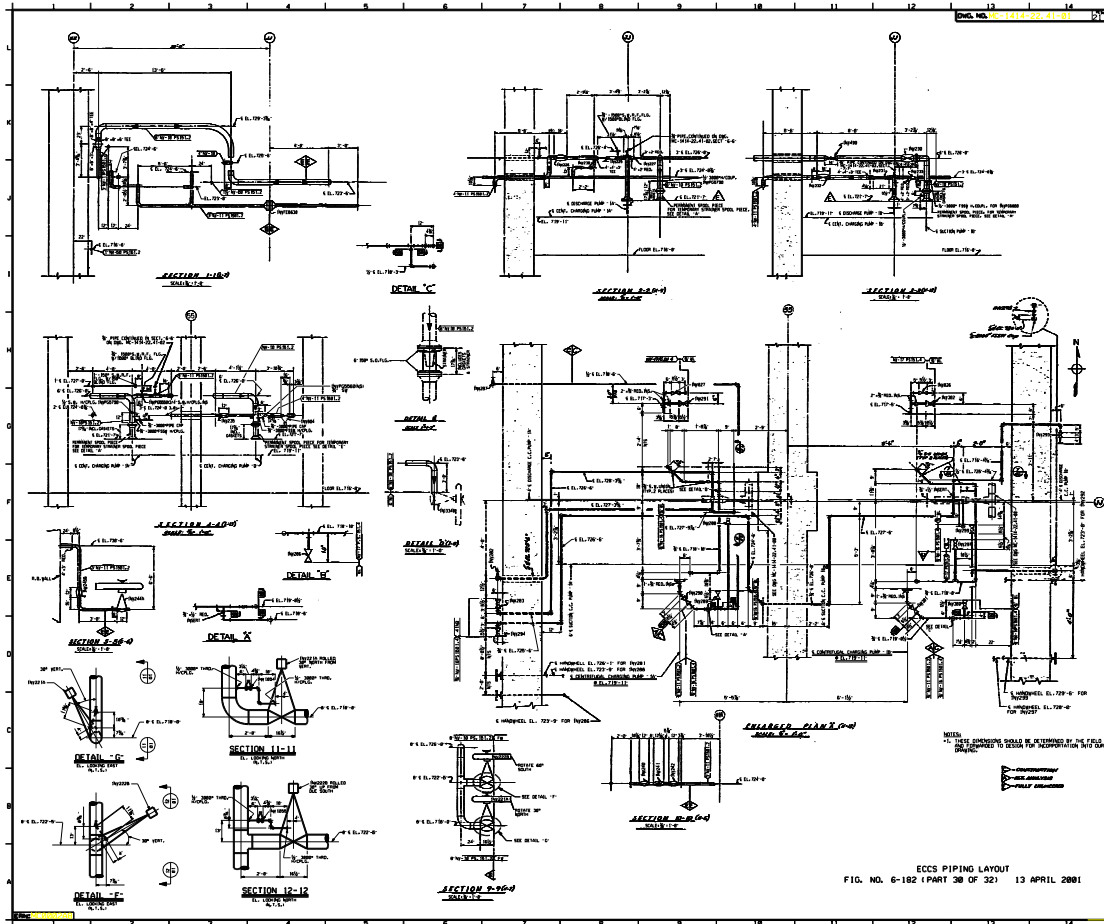


FIGURE 6-182 (PART 29 OF 32)
ECCS PIPING LAYOUT
64-15-88



ECCS PIPING LAYOUT
FIG. NO. 6-182 (PART 30 OF 32) 13 APRIL 2001

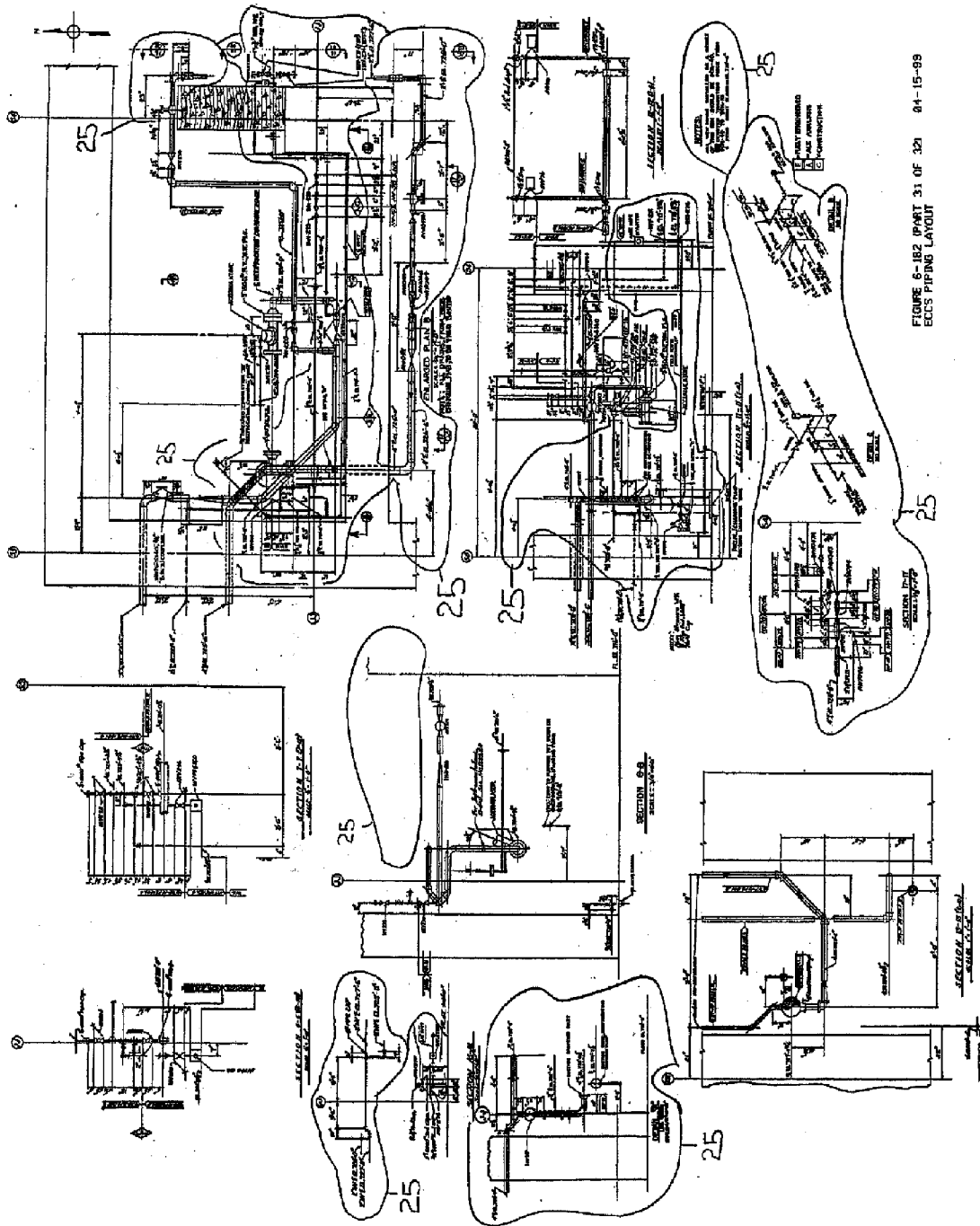


FIGURE 6-182 (PART 31 OF 32) 04-15-89
ECCS PIPING LAYOUT

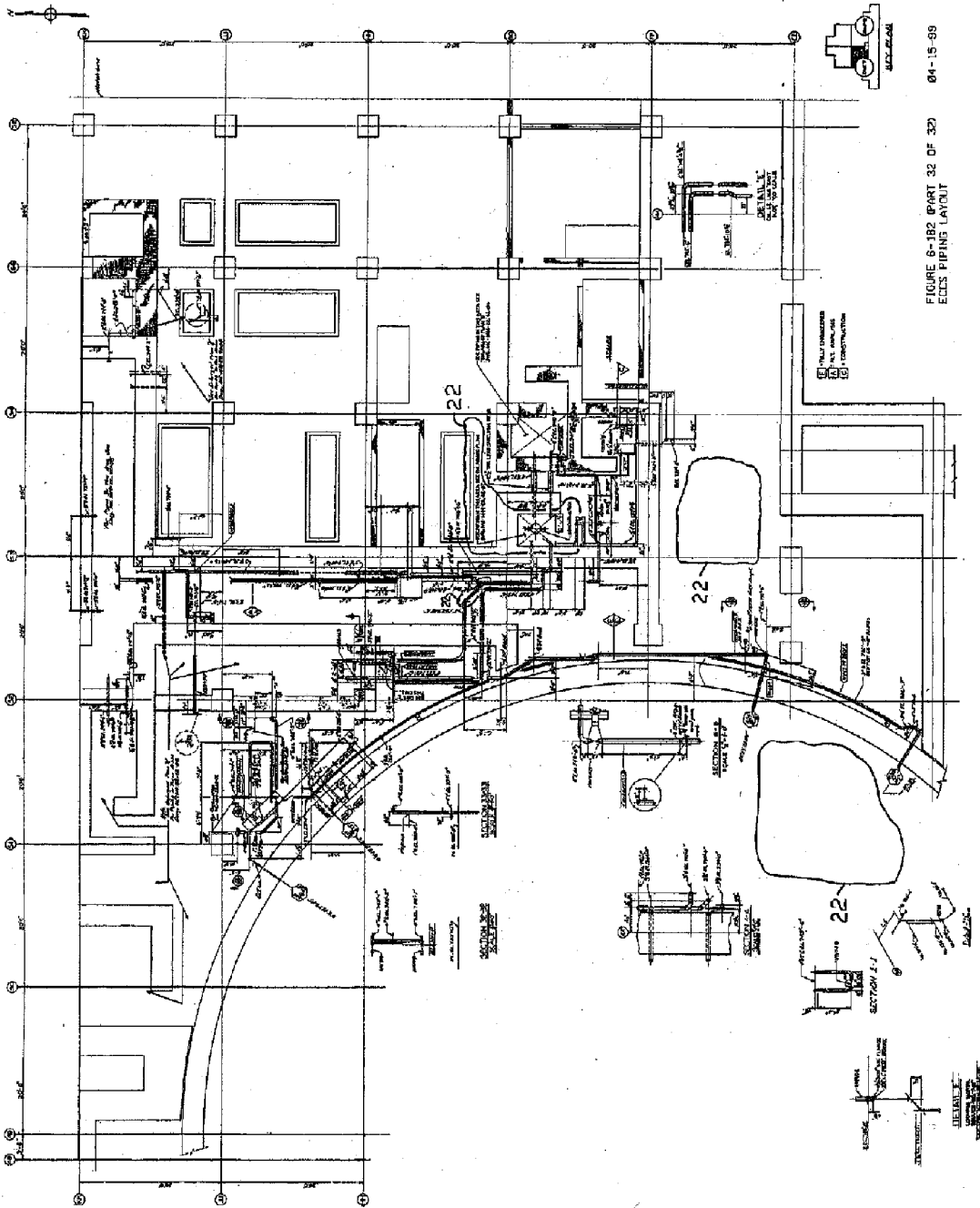


Figure 6-183. ECCS Process Flow Diagram

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This figure is currently unavailable in an electronic format. It can be located in a hardcopy version of the UFSAR. .

This figure is currently unavailable in an electronic format. It can be located in a hardcopy version of the UFSAR.

Figure 6-184. UHI Water Accumulator

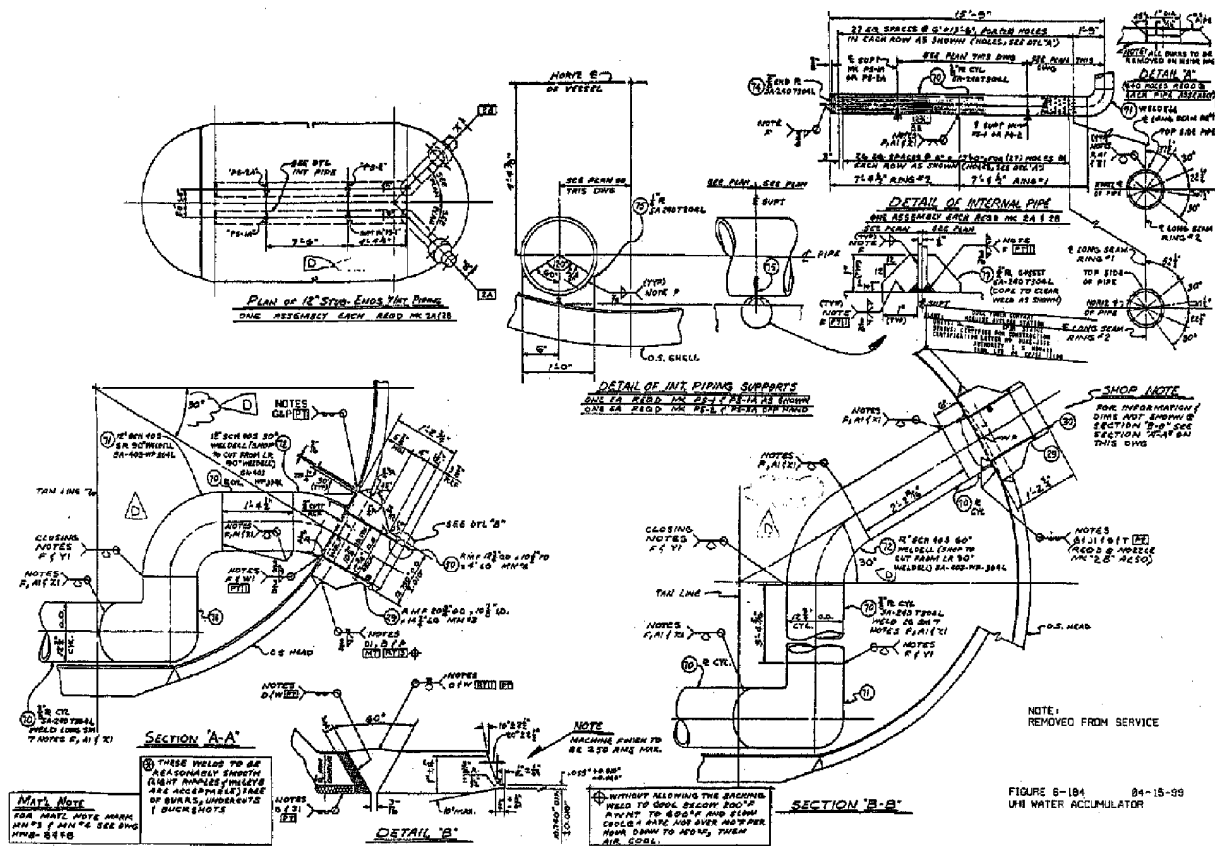


Figure 6-185. Leak Rates for Bushing

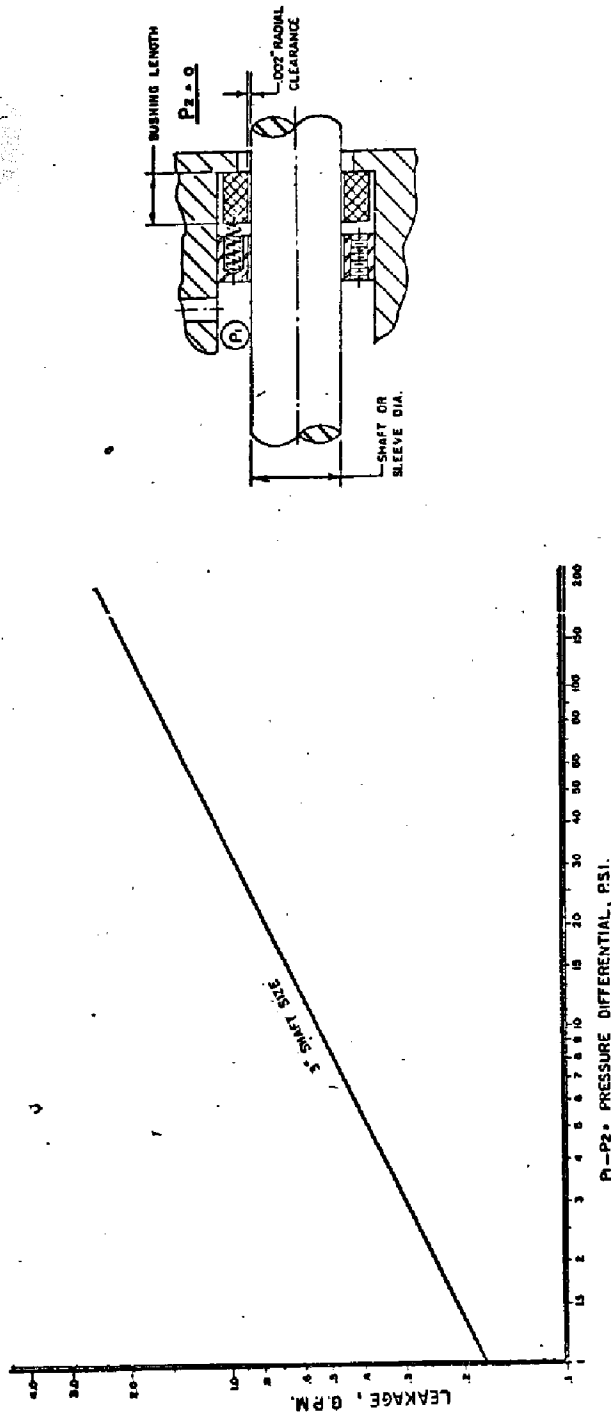


Figure 6-186. Bushing Leak Rate After Severe Operation

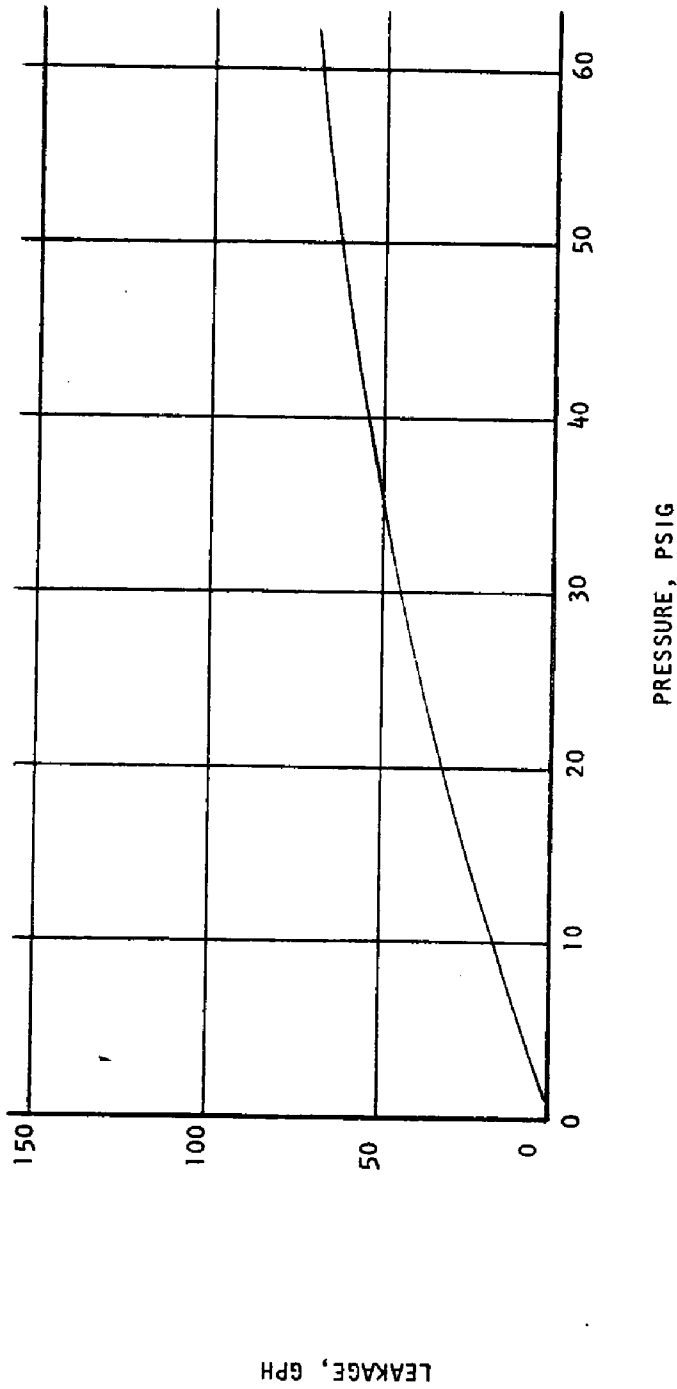


Figure 6-187. Cutaway View of Motor Operated Valve Actuator

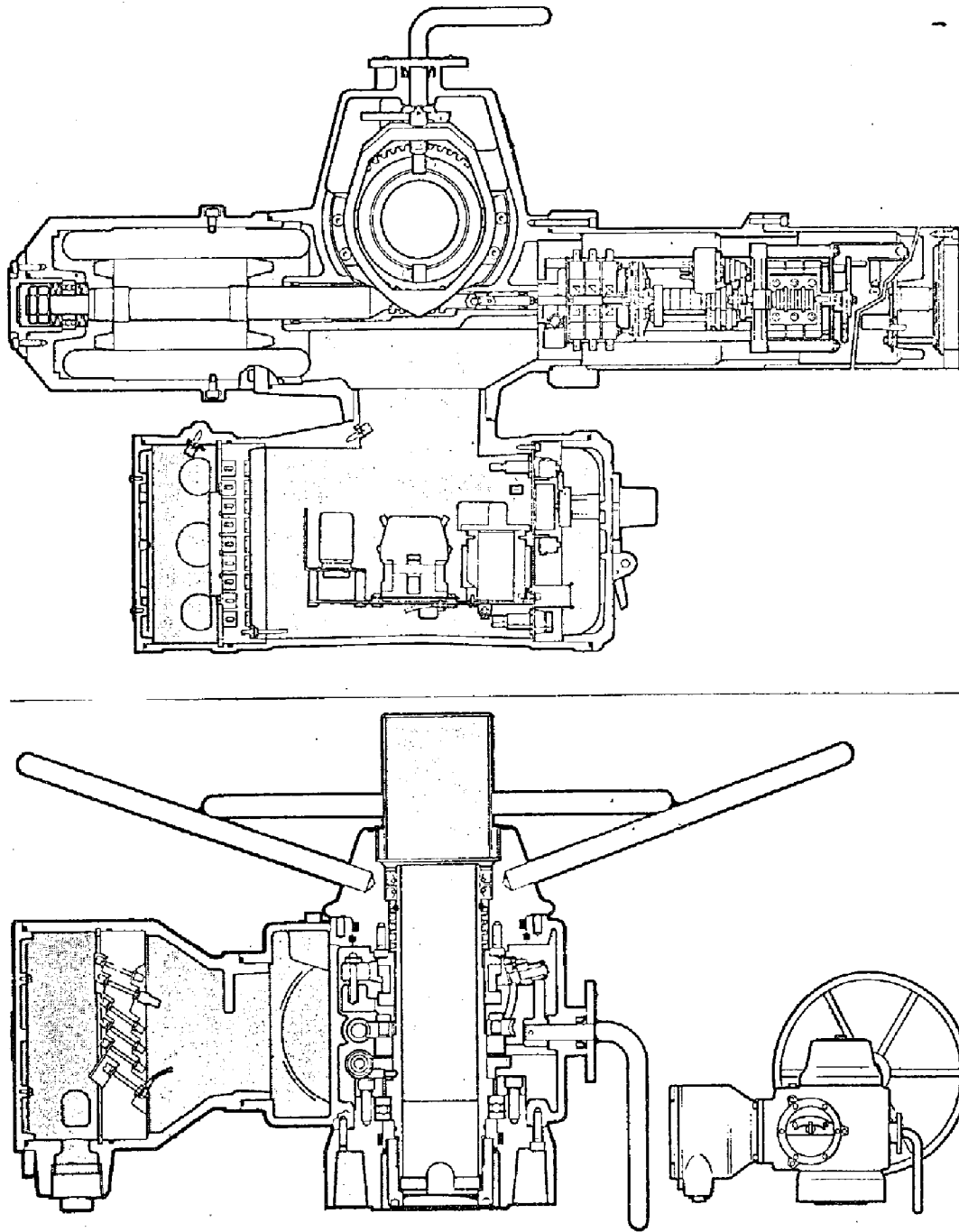


Figure 6-188. Flow Diagram of Control Area Chilled Water System

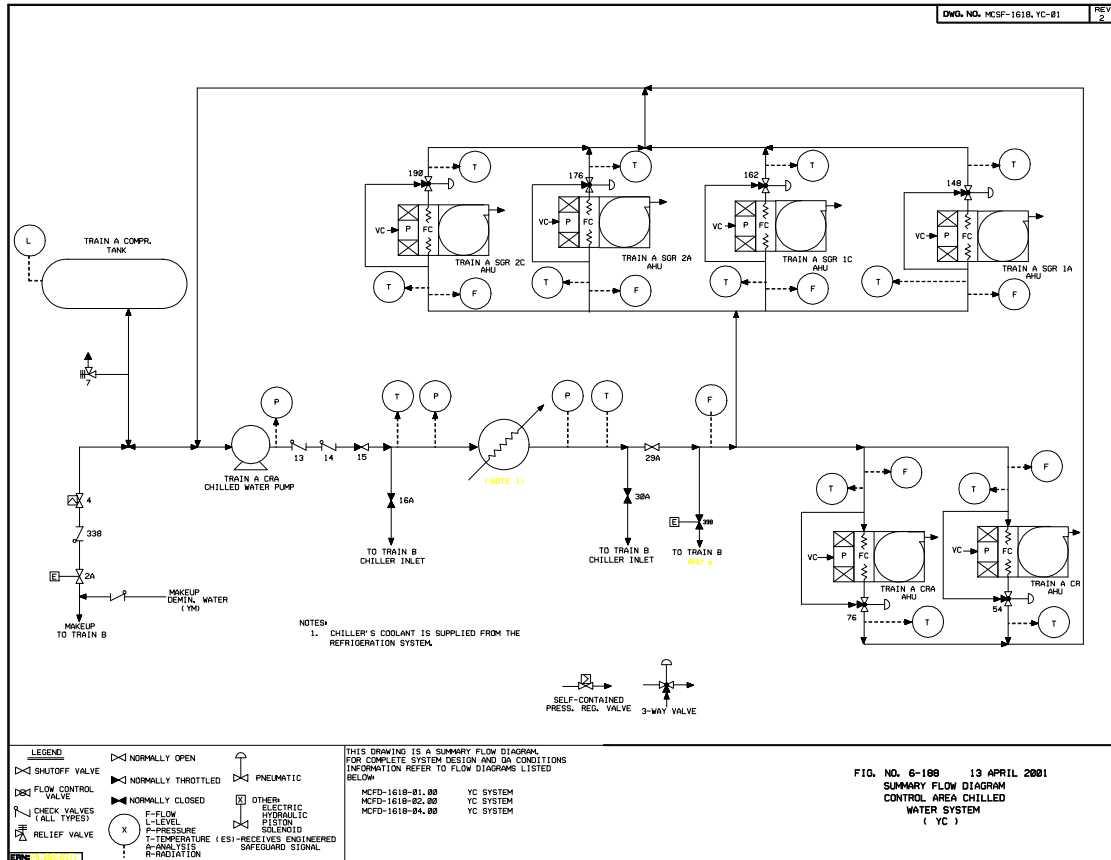


Figure 6-189. Flow Diagram of Control Area Chilled Water System

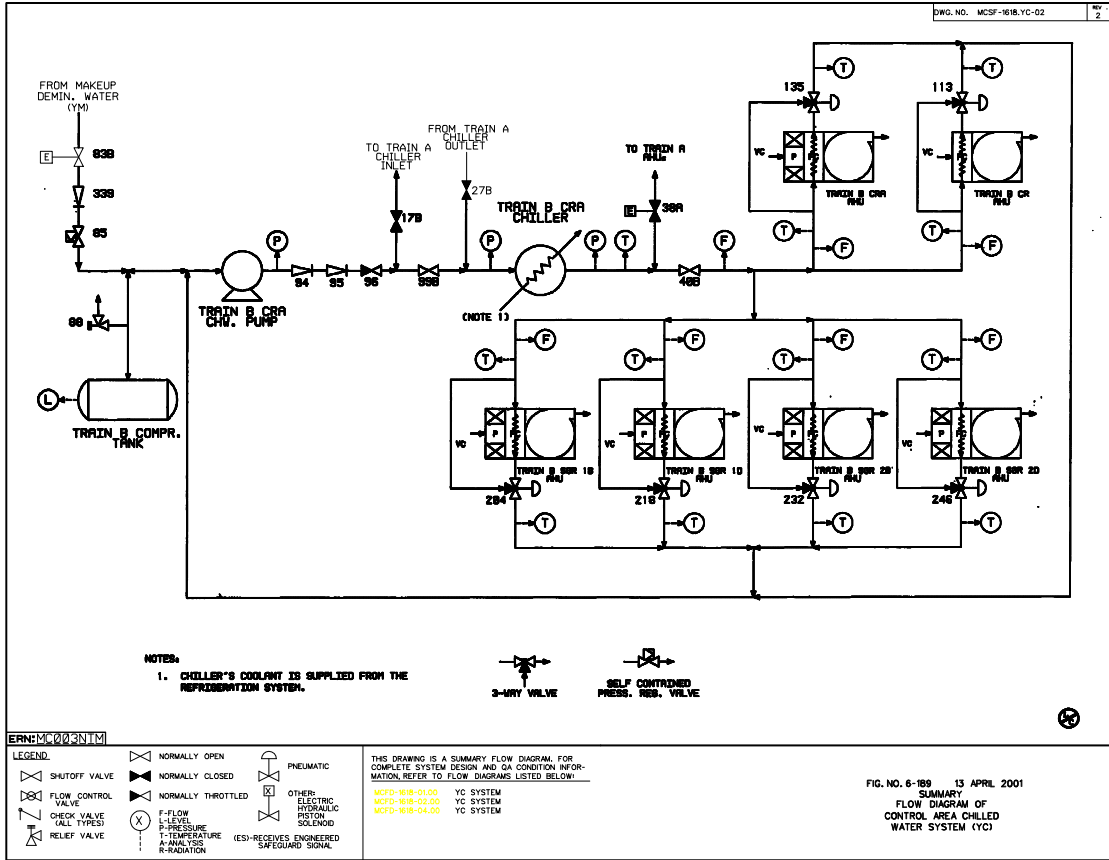


Figure 6-190. Flow Diagram of Control Area Chilled Water System

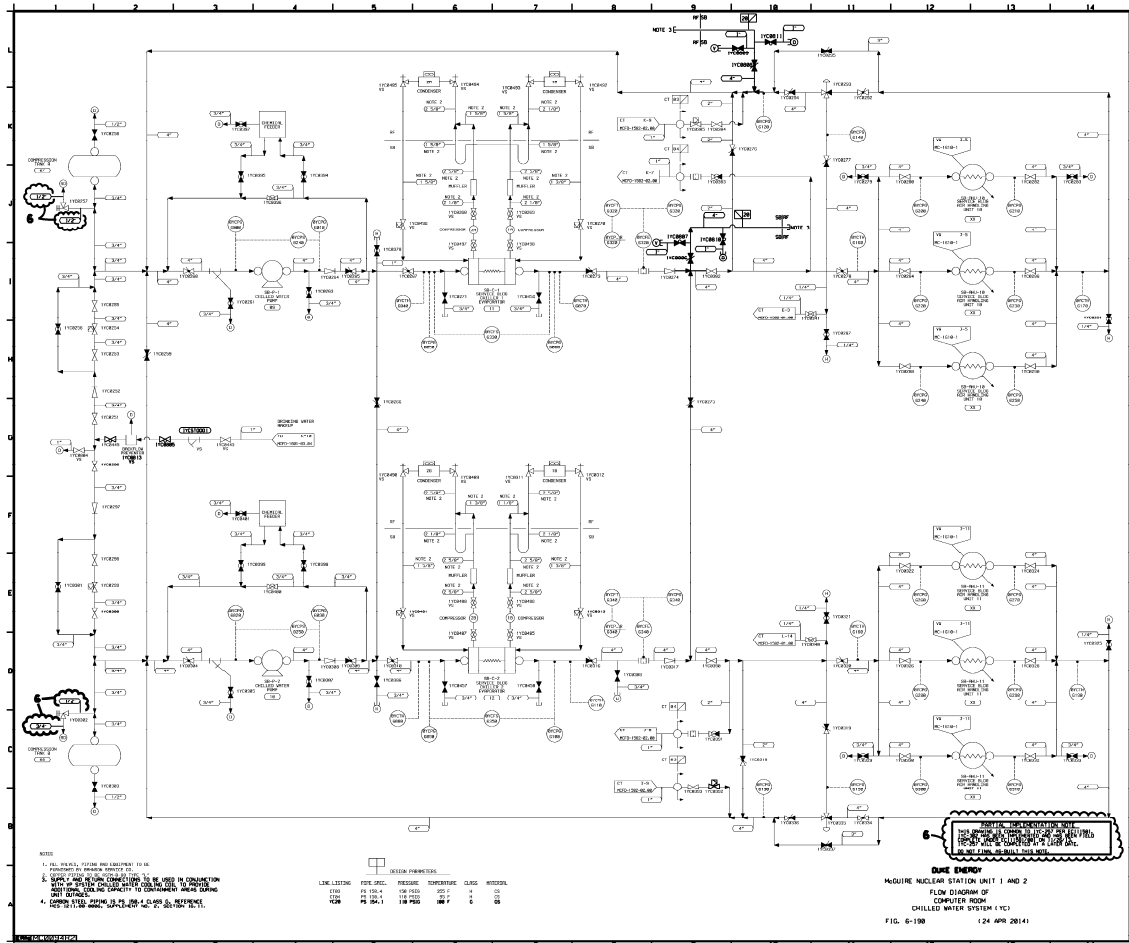


Figure 6-191. Flow Diagram of Control Area Ventilation System

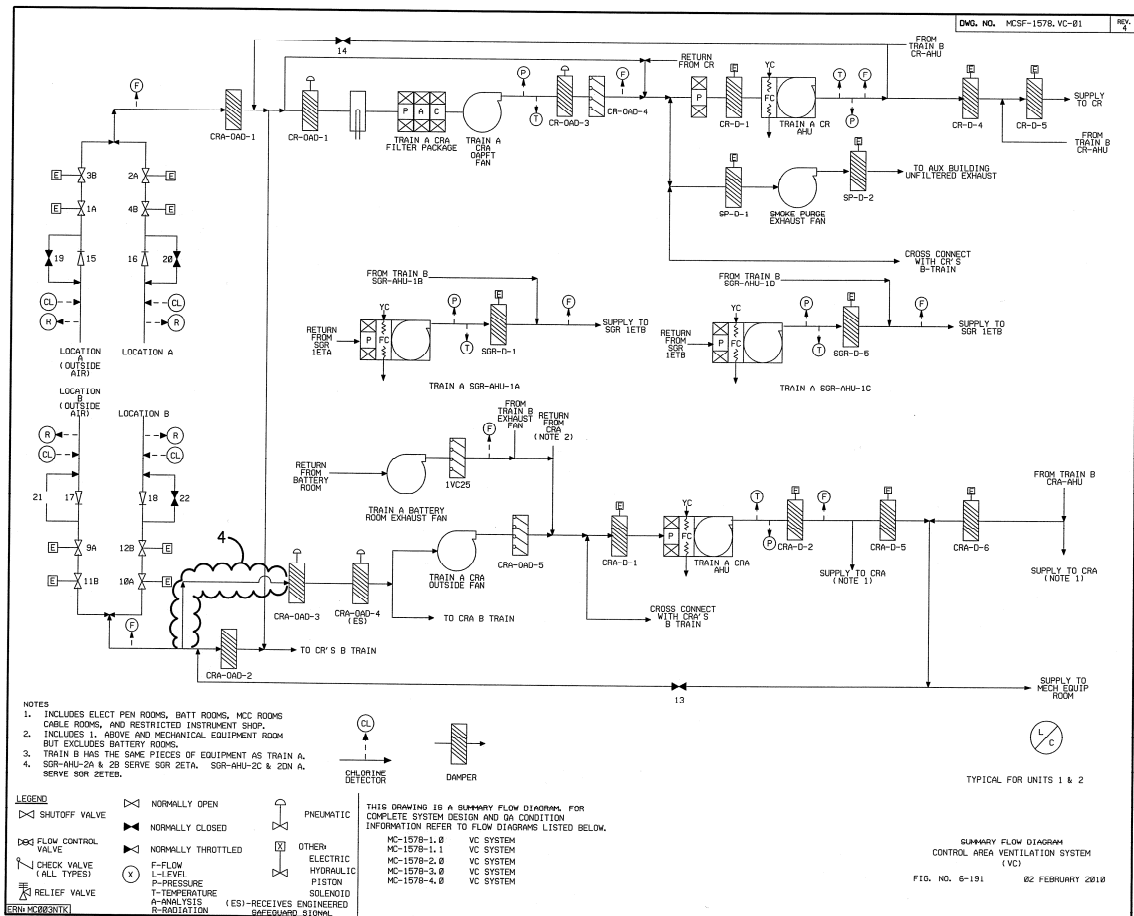


Figure 6-192. Deleted Per 1993 Update

Figure 6-193. Deleted Per 1993 Update

Figure 6-194. Flow Diagram of Containment Spray (NS) System

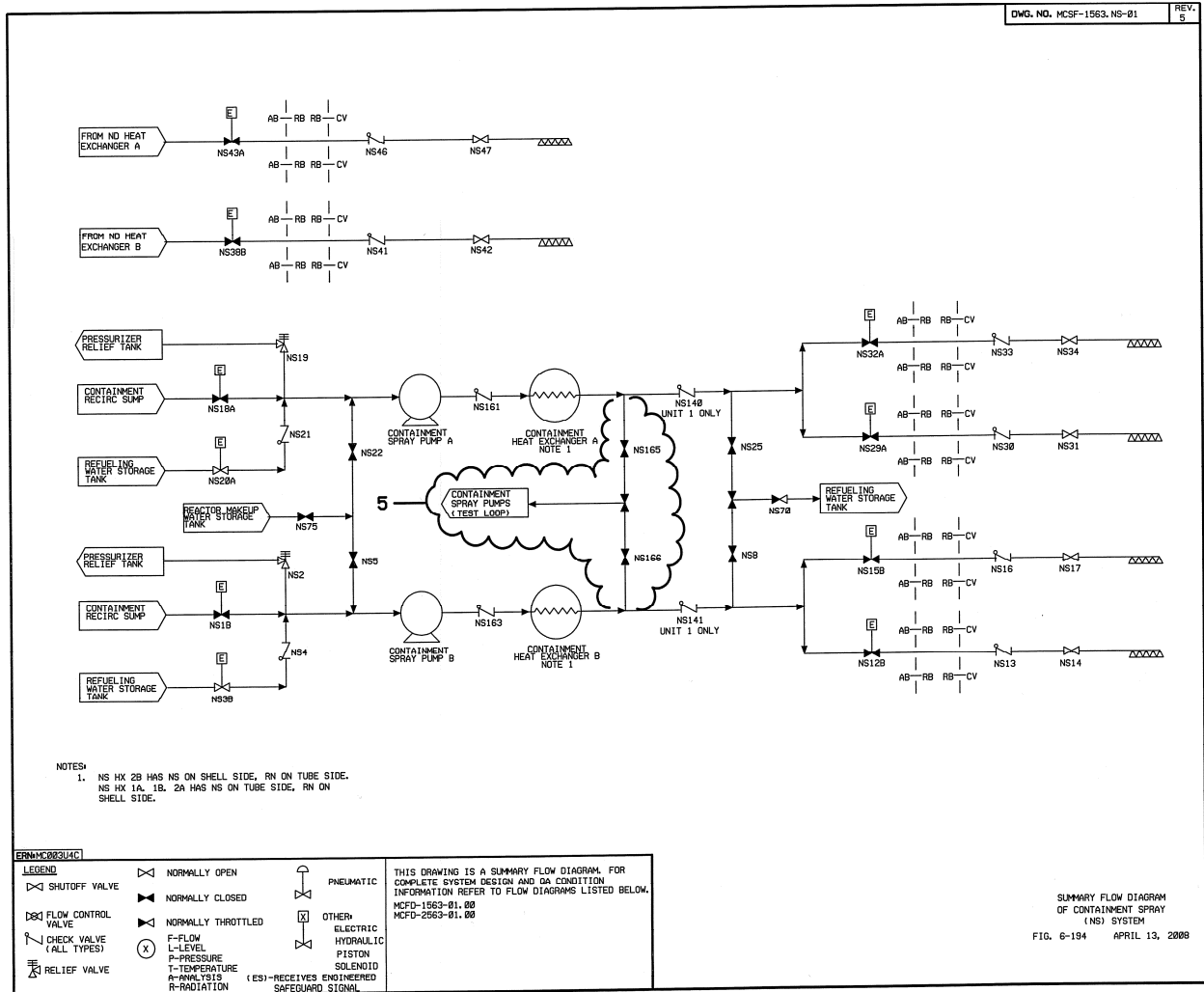


Figure 6-195. Spray Nozzle Mass Distribution

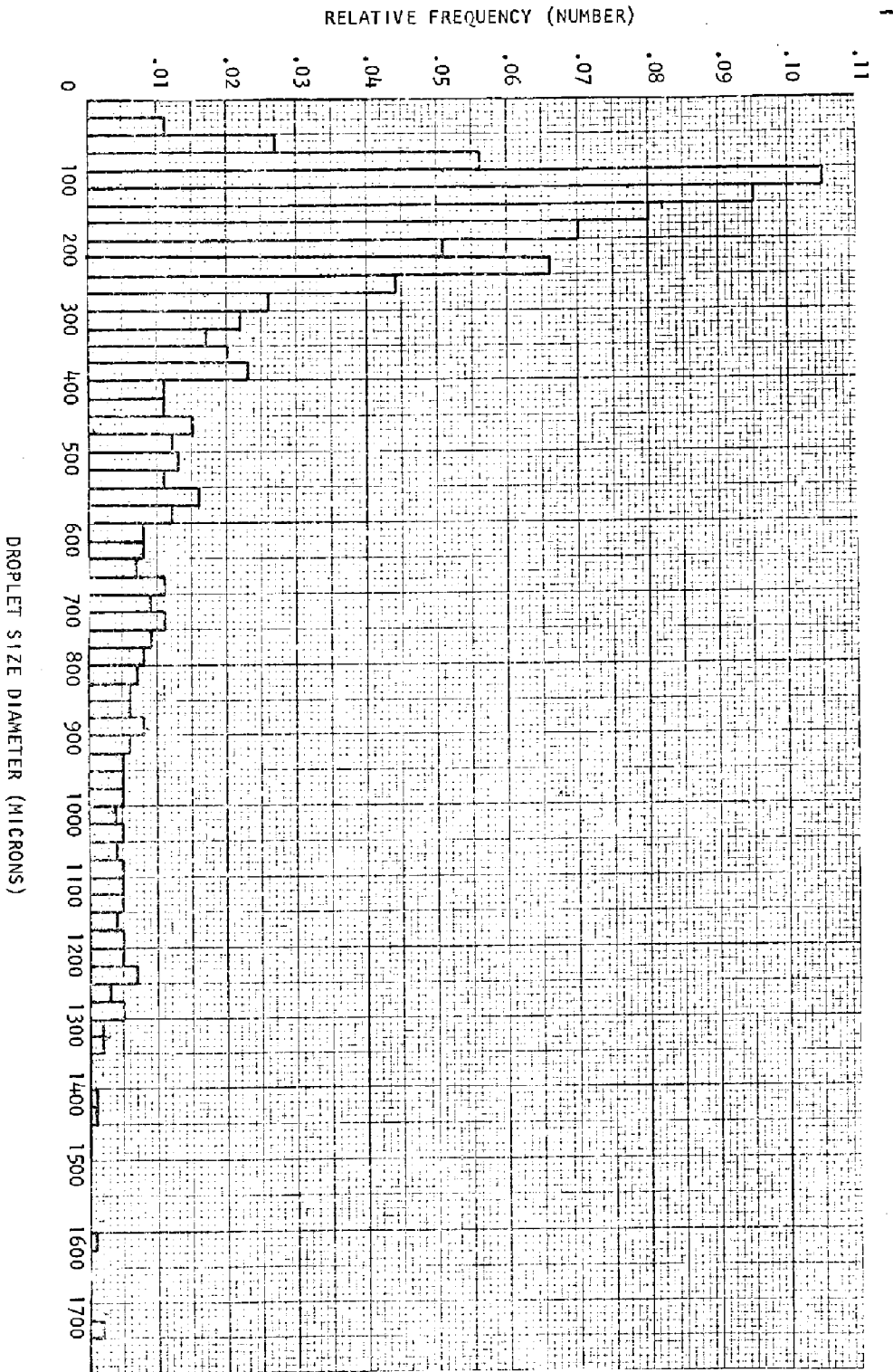
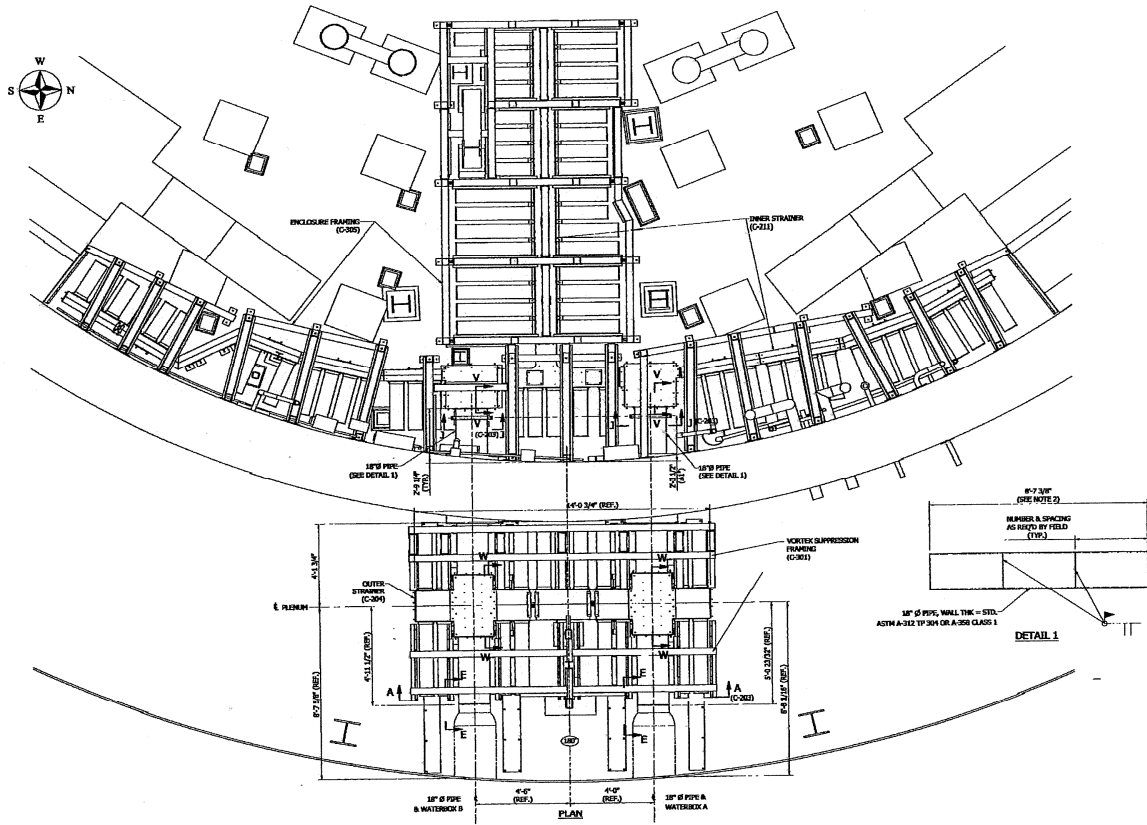
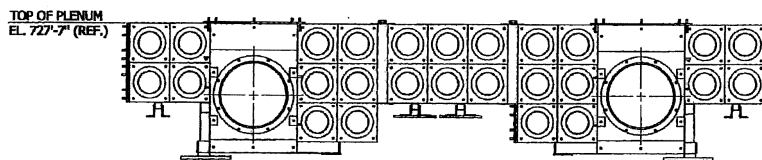
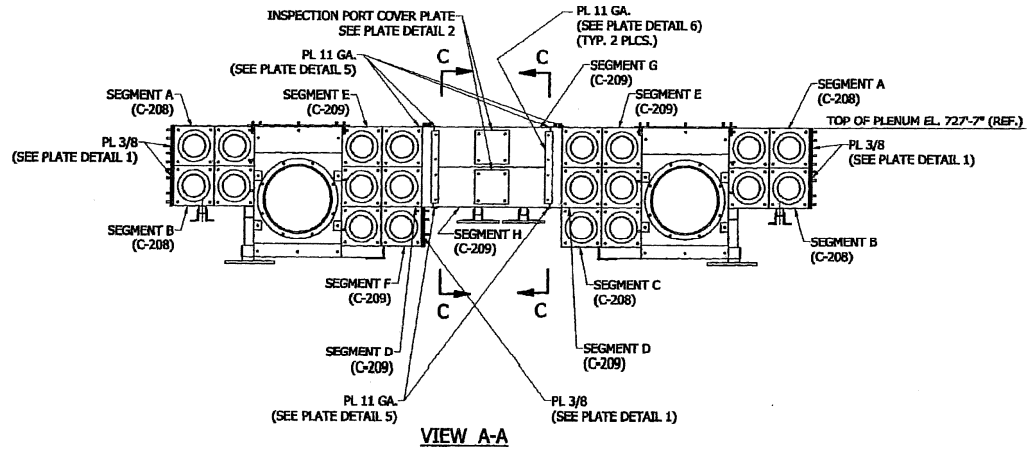
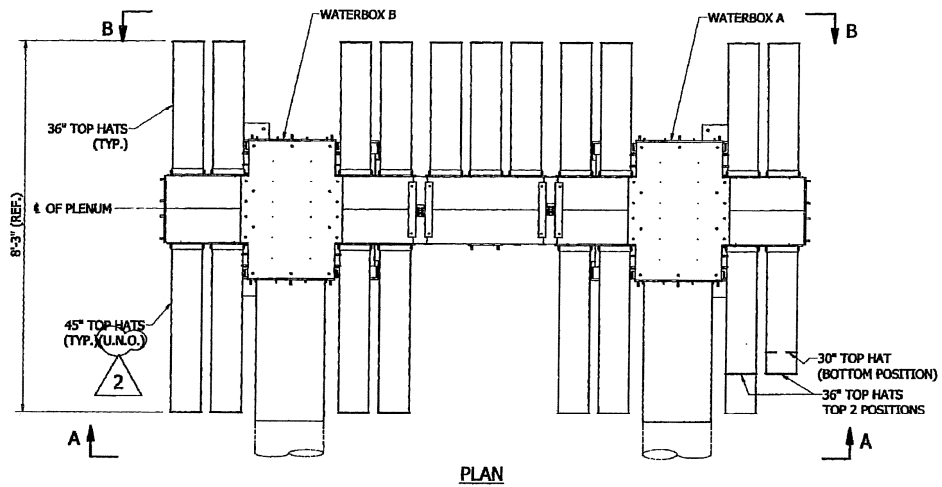


Figure 6-196. Containment Sump Strainers - Unit 1 (Unit 2 similar)



Containment Sump Strainers- Unit 1 (Unit 2 similar)



Containment Sump Strainers - Unit 1 (Unit 2 similar)

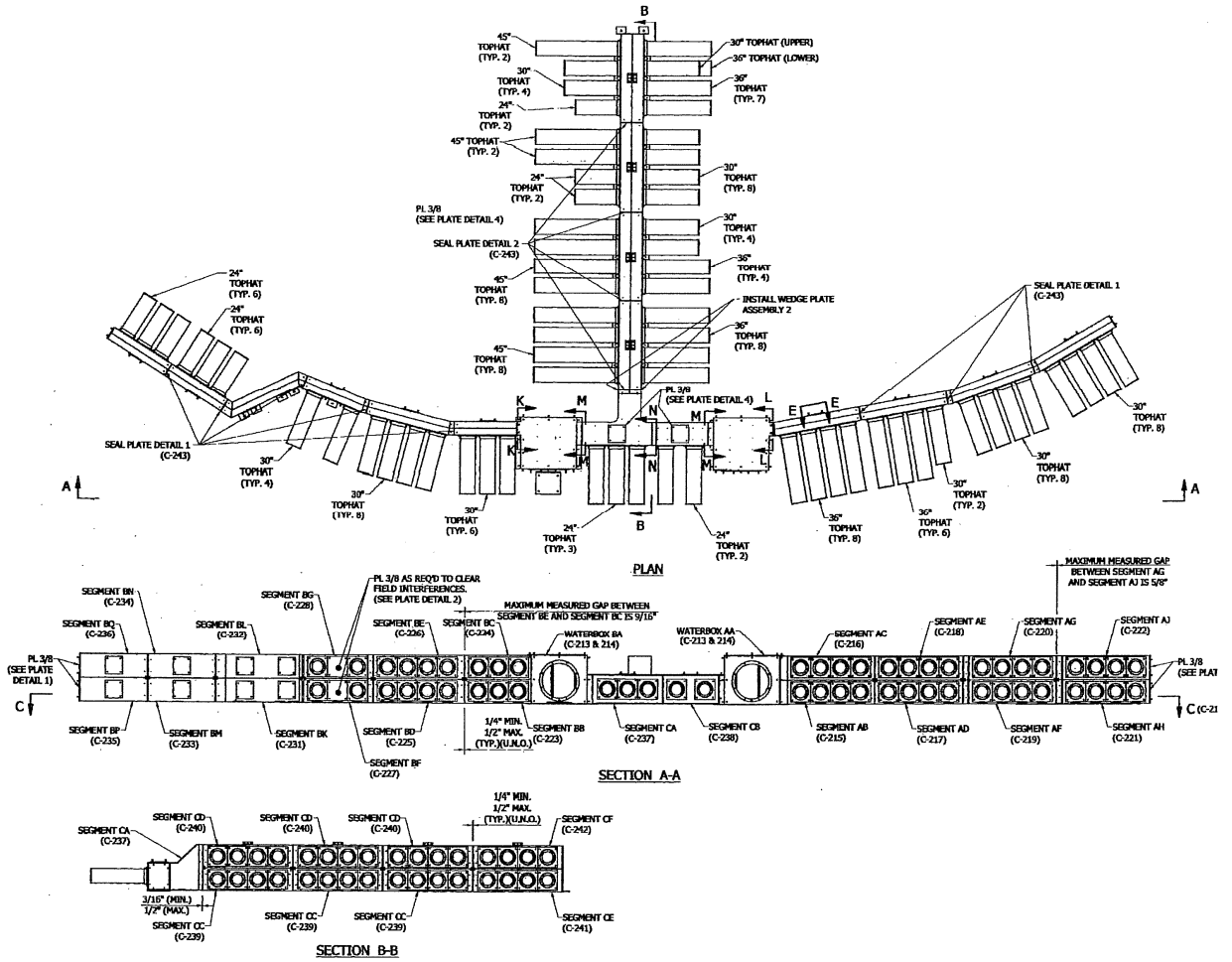


Figure 6-197. Intermediate Deck Differential Pressure - Time History

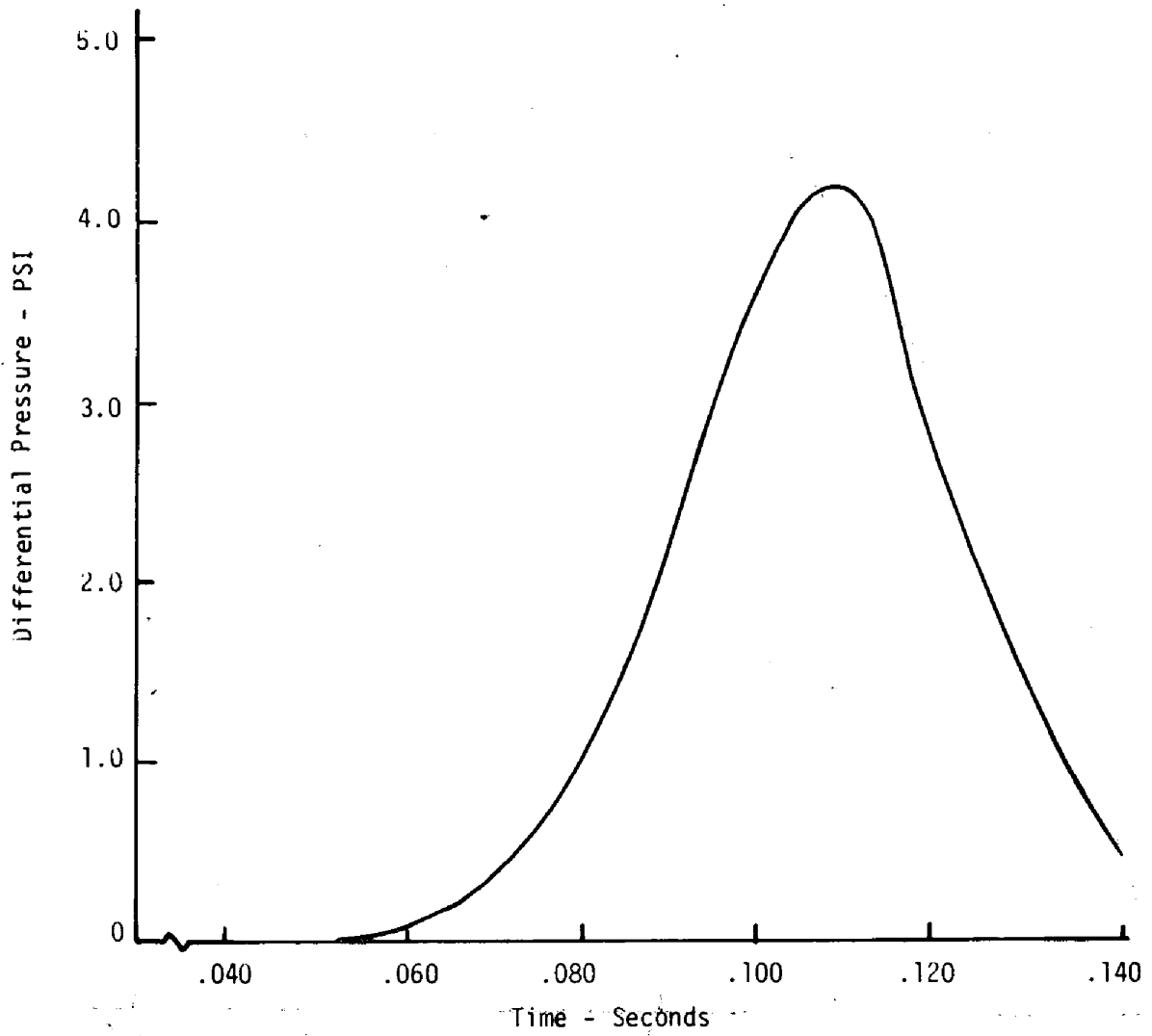


Figure 6-198. Zinc Corrosion in DBA Environment

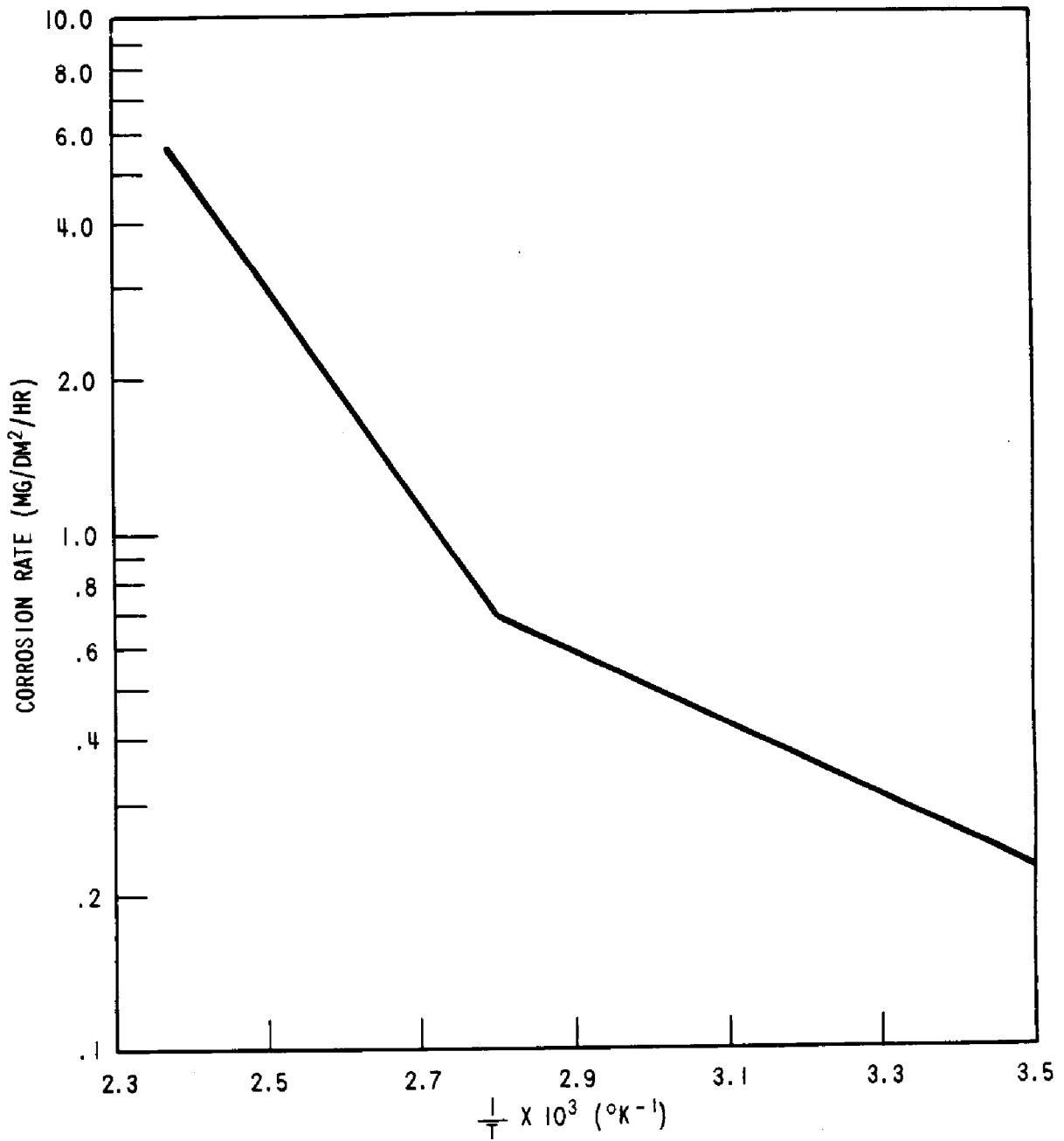


Figure 6-199. Flow From Intact And Broken Loops

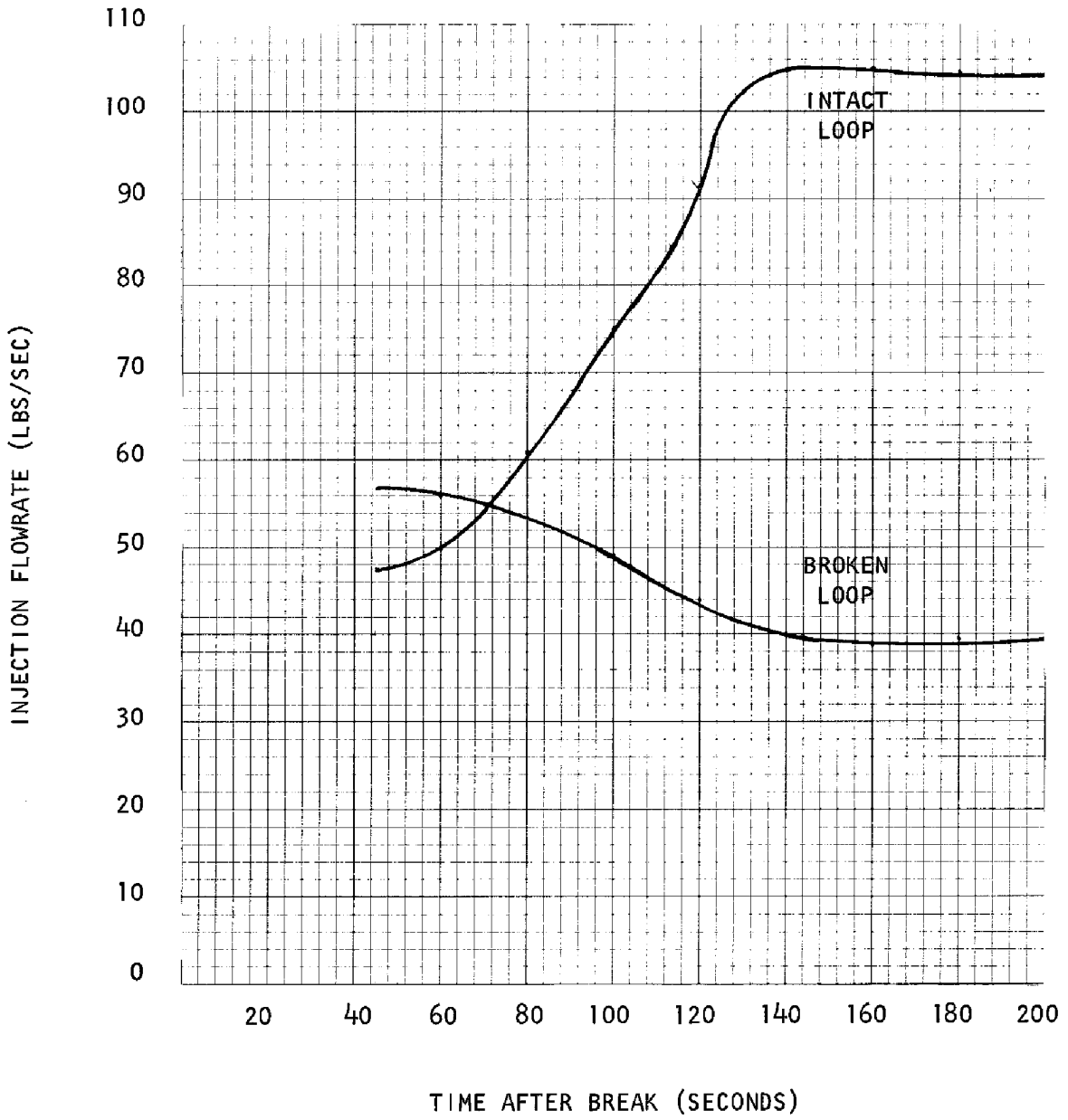


Figure 6-200. Ice Basket Swivel Bracket Assembly

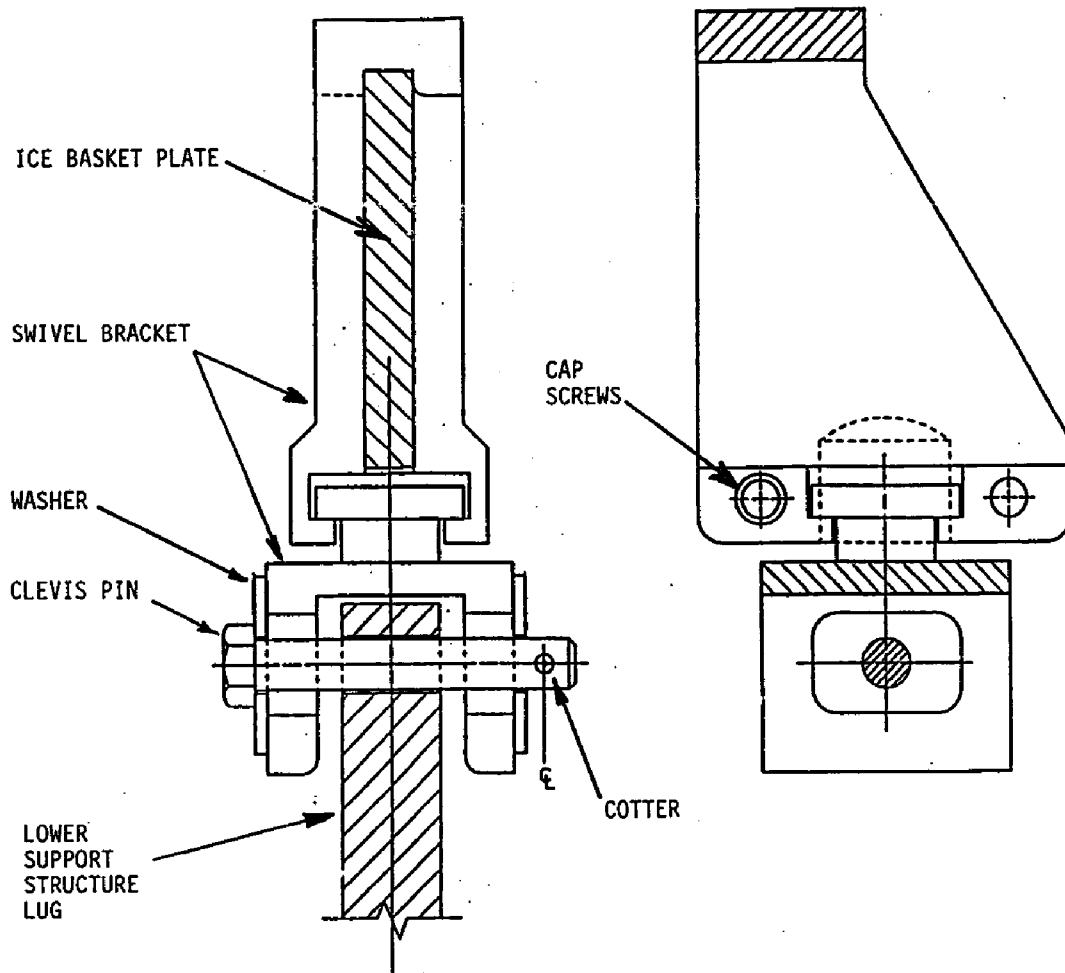


Figure 6-201. Double-Ended LBLOCA Mass and Energy Release Analysis

Figure 6-202. Double-Ended LBLOCA Mass and Energy Release Analysis

Figure 6-203. Double-Ended LBLOCA Mass and Energy Release Analysis

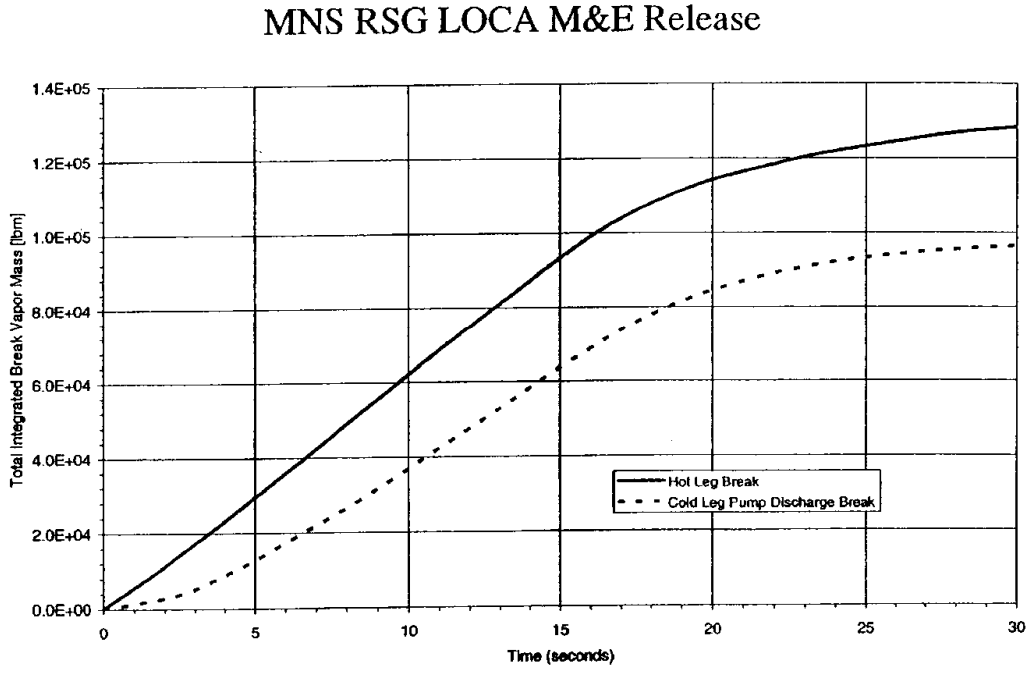


Figure 6-204. Double-Ended LBLOCA Mass and Energy Release Analysis

Figure 6-205. Upper and Lower Compartment Pressure, Min. Pressure Analysis

Figure 6-206. Upper Compartment Heat Removal Rate, Min. Pressure Analysis

Figure 6-207. Lower Compartment Heat Removal Rate, Min. Pressure Analysis

Figure 6-208 Upper and Lower Compartment Temperature, Min. Pressure Analysis

Figure 6-209. Ice Bed Heat Removal Rate, Min. Pressure Analysis

6-210. Heat Removal Rate by Lower Compartment Drain, Min. Pressure Analysis

Figure 6-211. Heat Removal Rate by Sump and Spray, Min. Pressure Analysis

