Appendix 6B. Figures

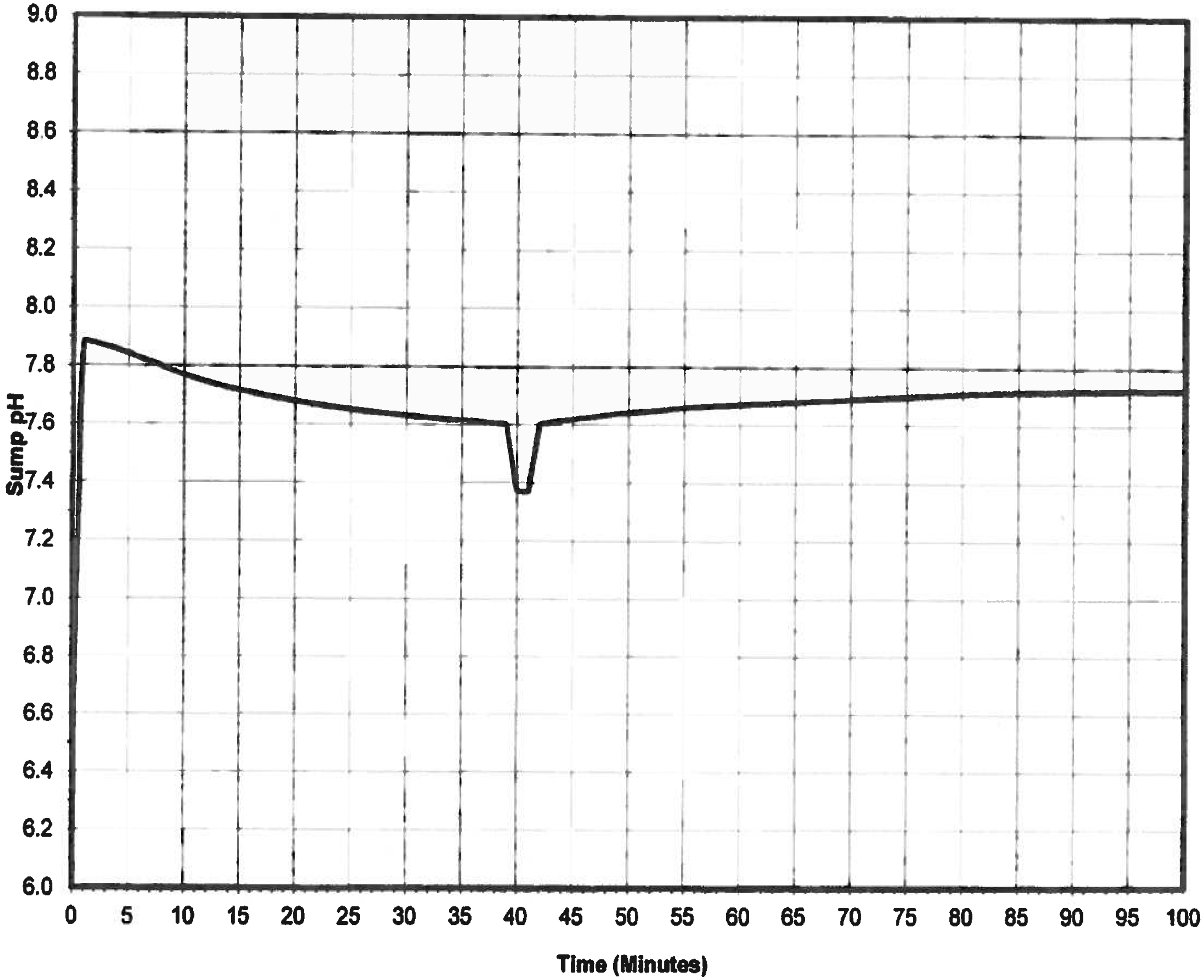


Figure 6-1. Minimum Containment Sump pH Following a Design Basis LOCA

Figure 6-2. Sensitivity of Peak Pressure to Air Compression Ratio

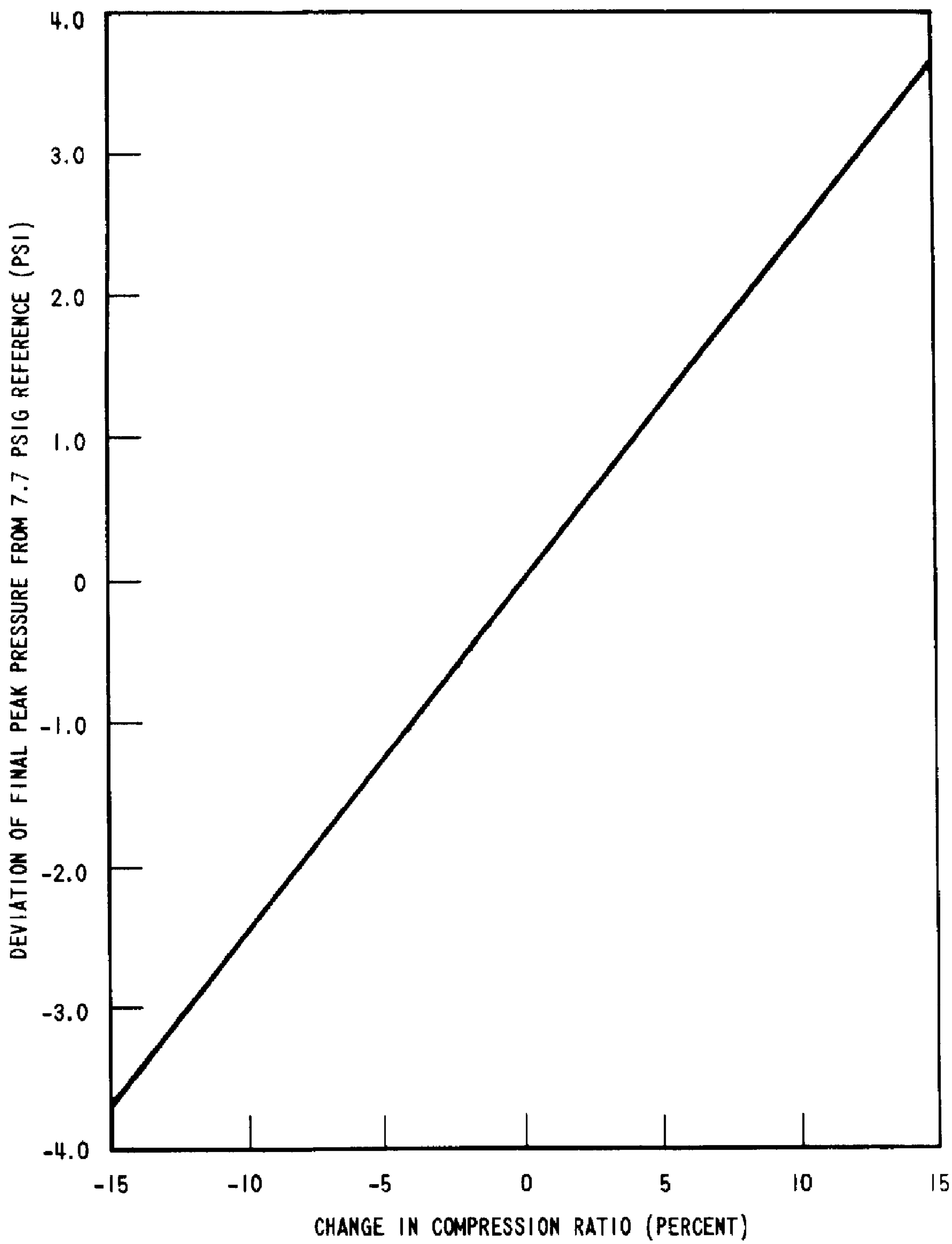
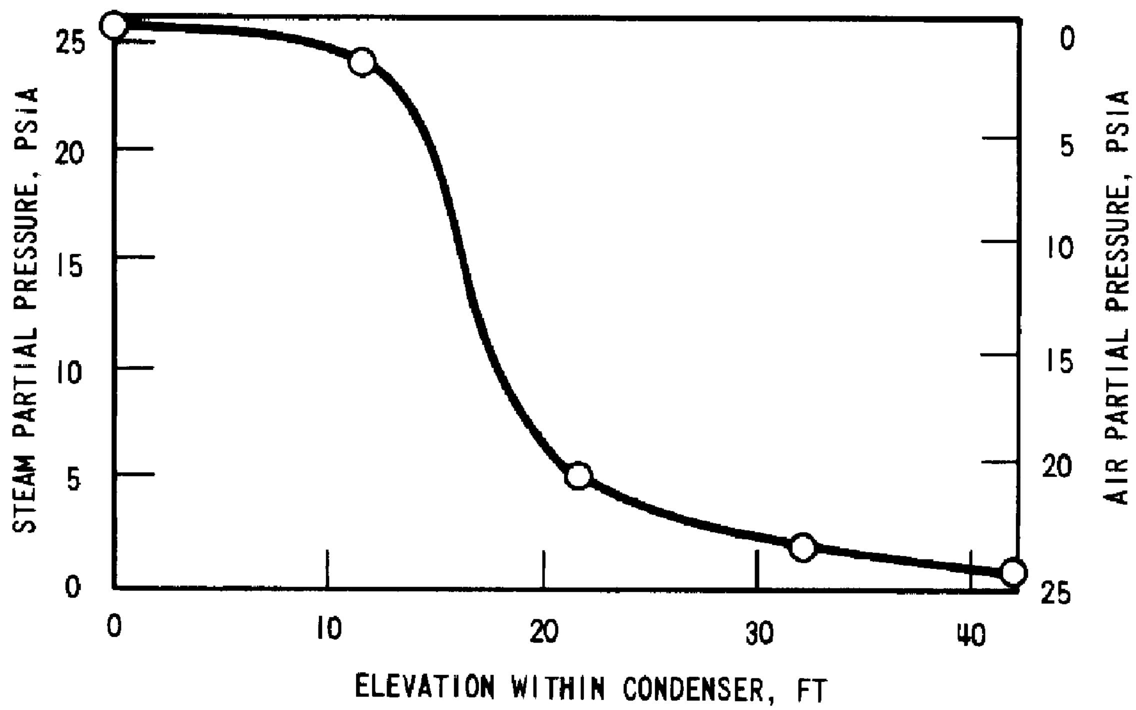


Figure 6-3. Steam Concentration in a Vertical Distribution Channel



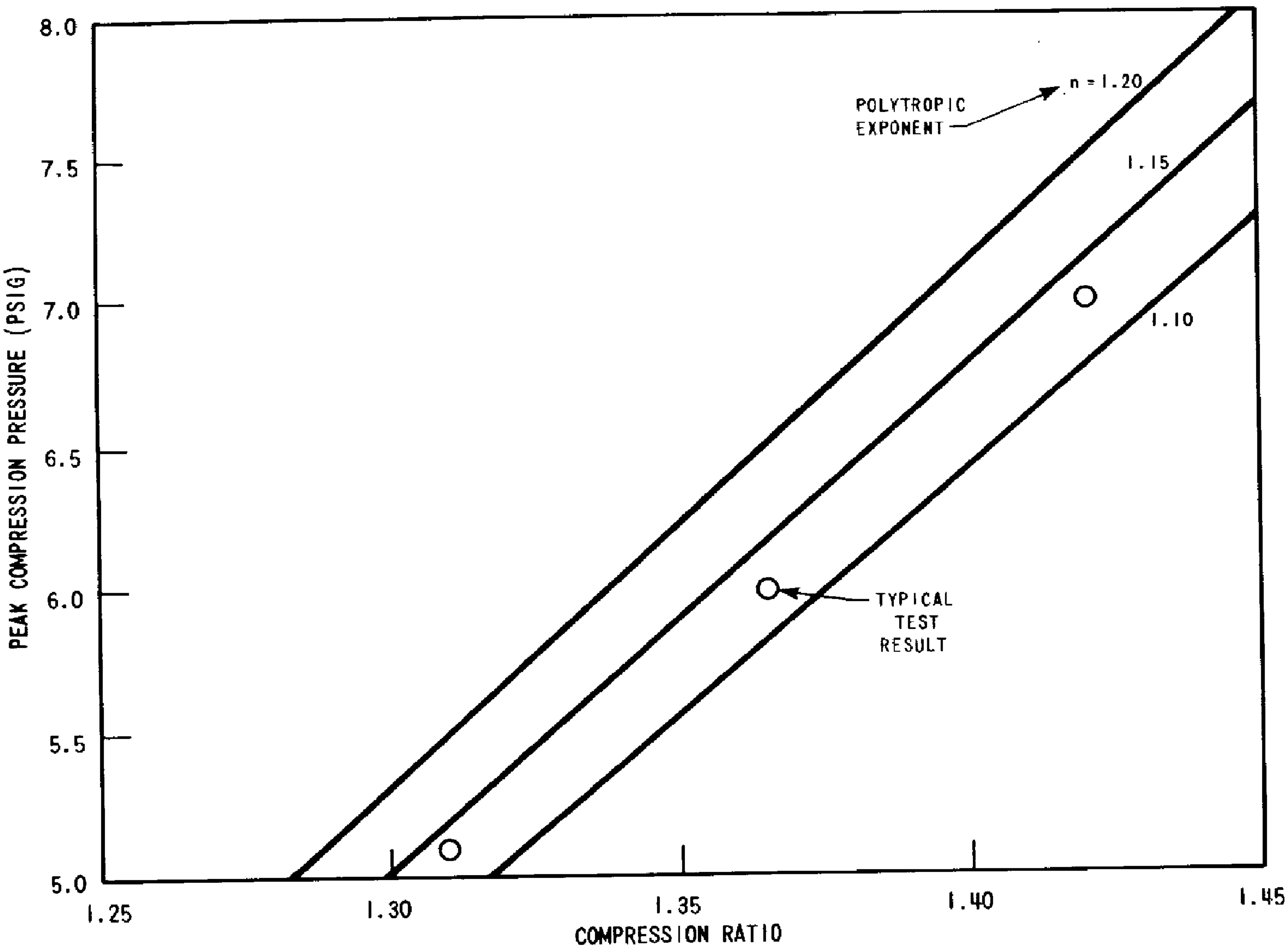
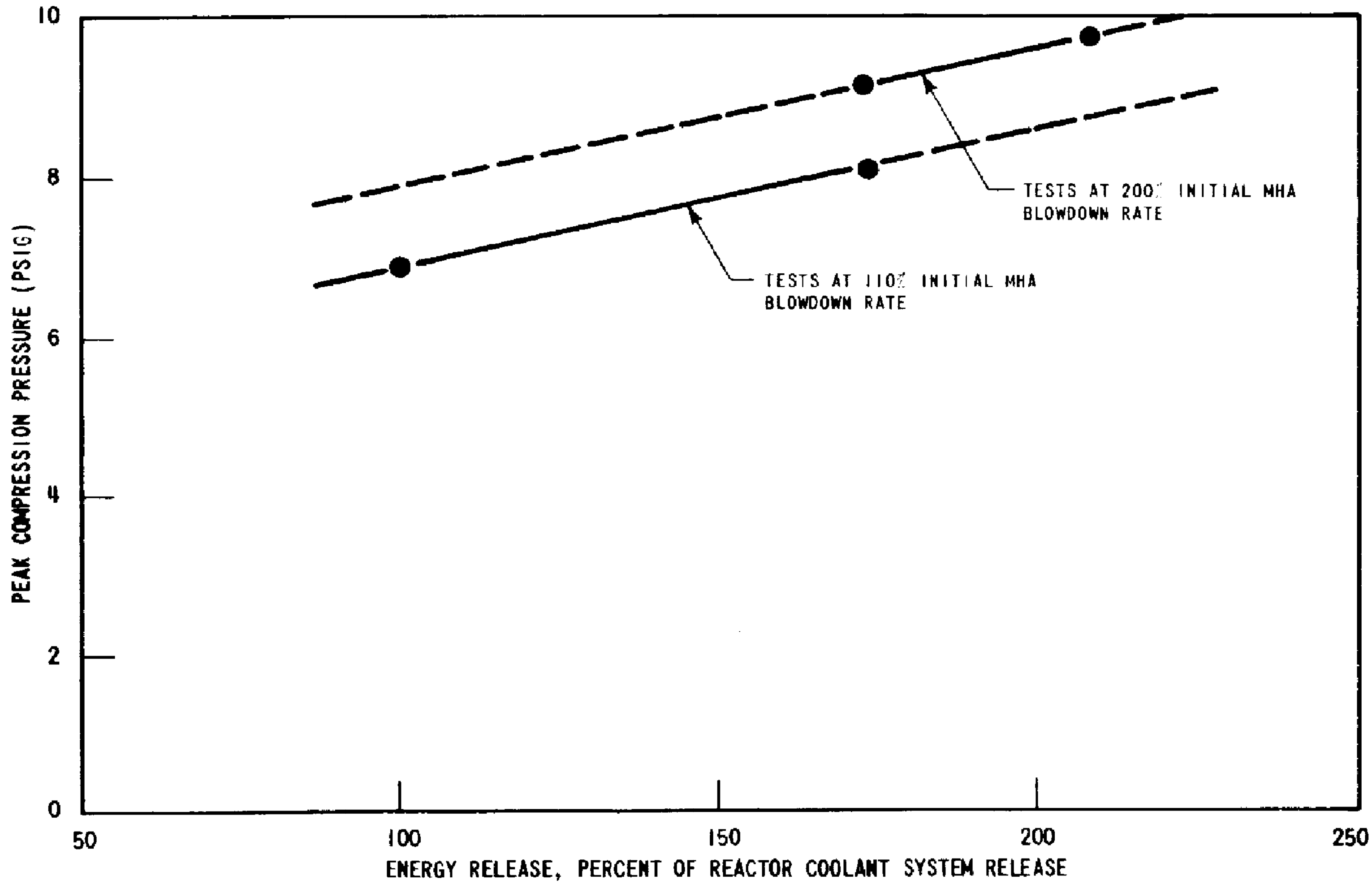


Figure 6-4. Peak Compression Pressure Versus Compression Ratio

Figure 6-5. Upper Compartment Compression Pressure Versus Energy Release for Tests at 110% and 200% of Initial DBA Blowdown Rate



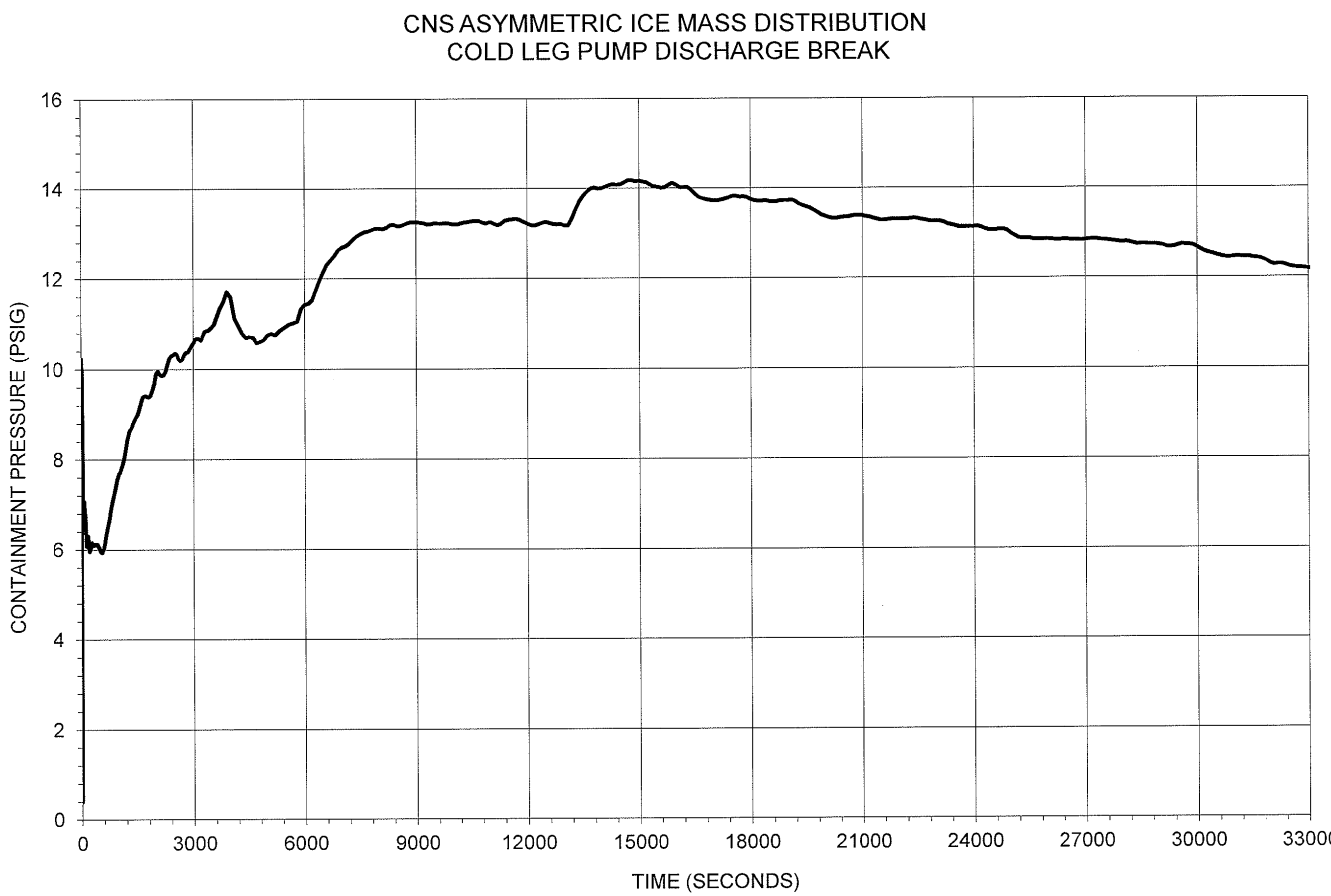


Figure 6-6. Peak Containment Pressure Transient – Pressure

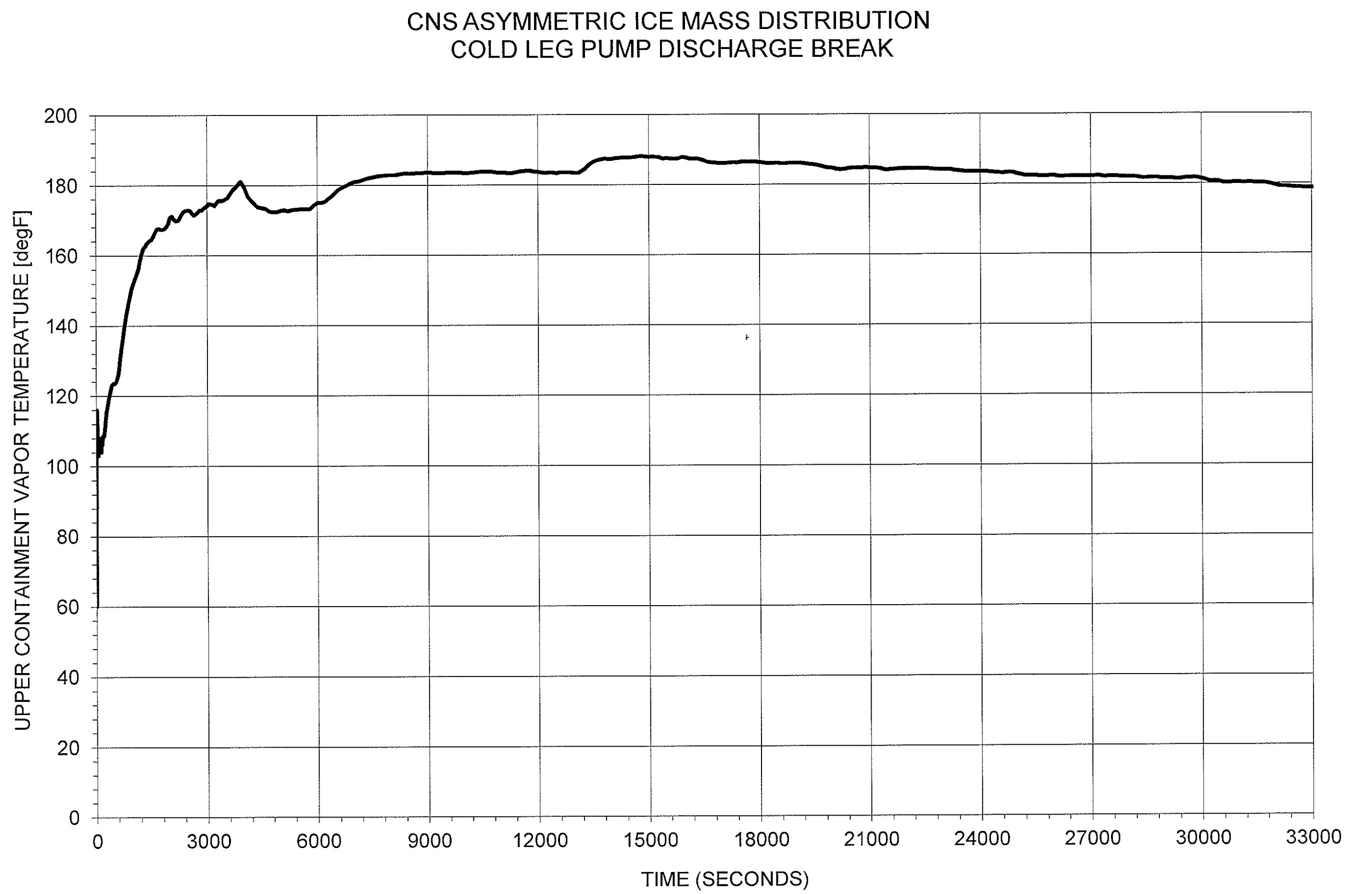


Figure 6-7. Peak Containment Pressure Transient - Upper Containment Temperature

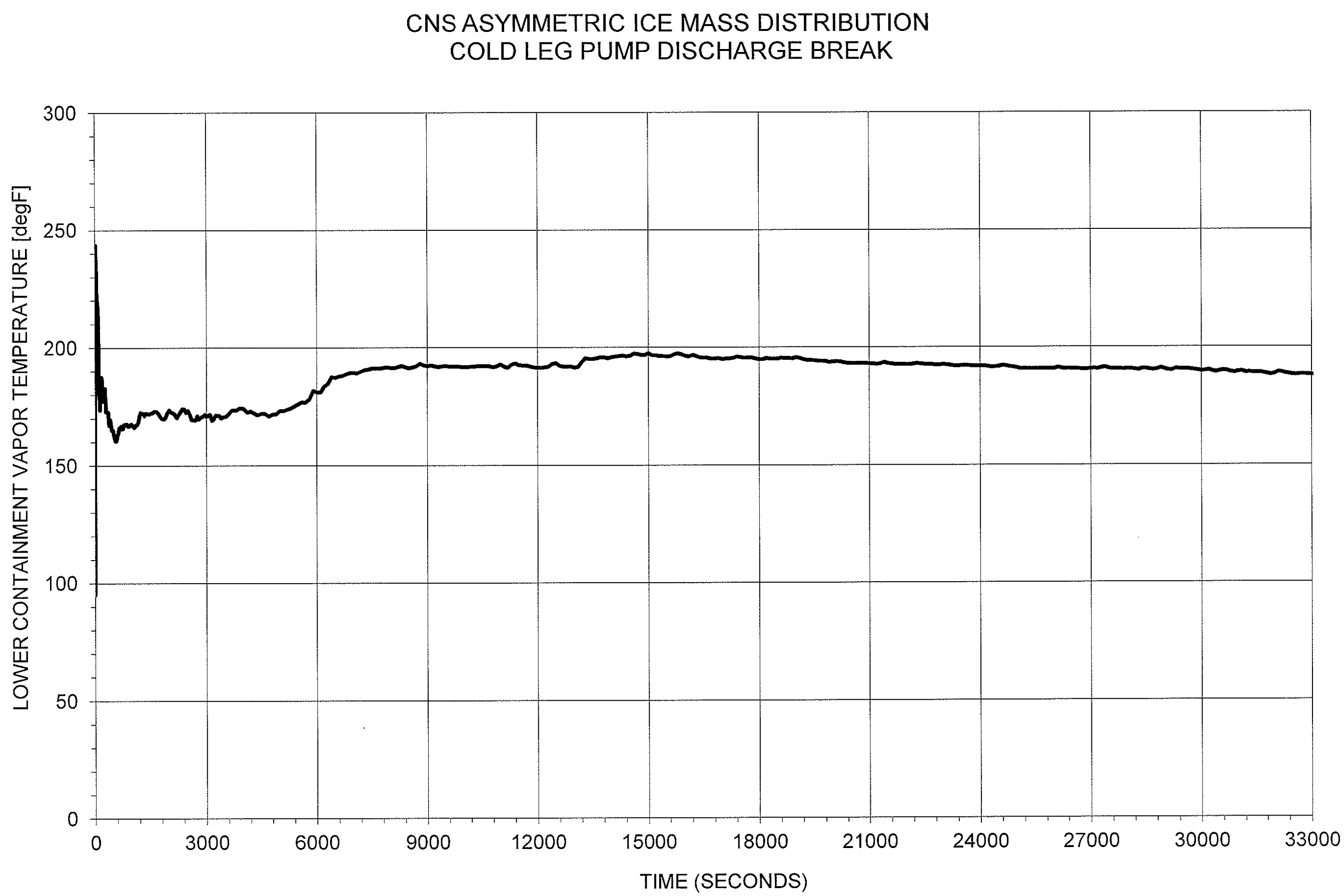


Figure 6-8. Peak Containment Pressure Transient - Lower Containment Temperature

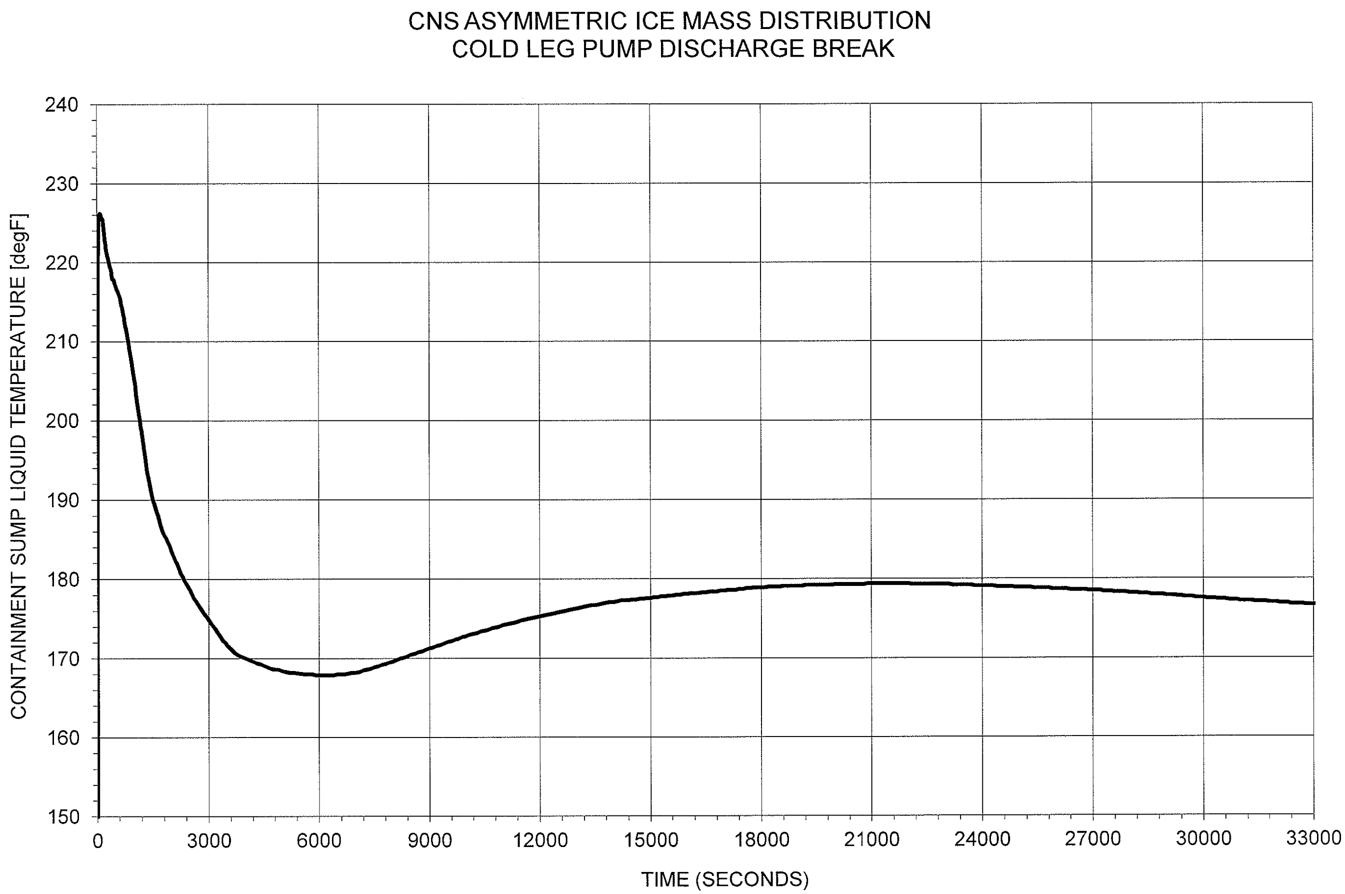


Figure 6-9. Peak Containment Pressure Transient - Sump Temperature

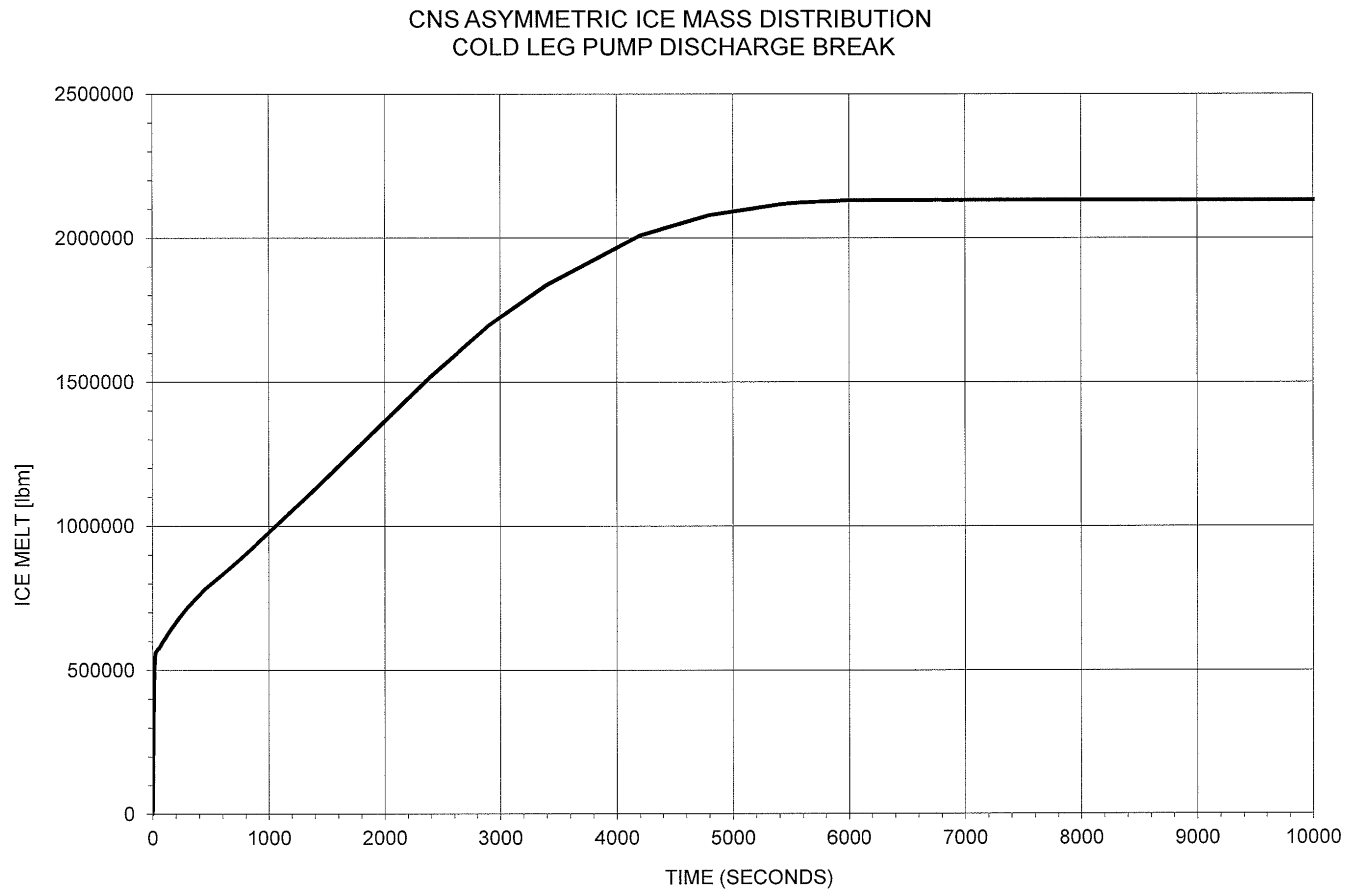


Figure 6-10. Peak Containment Pressure Transient - Ice Melted

Figure 6-11. Containment Spray Return Drains from Air Return Pit Fans

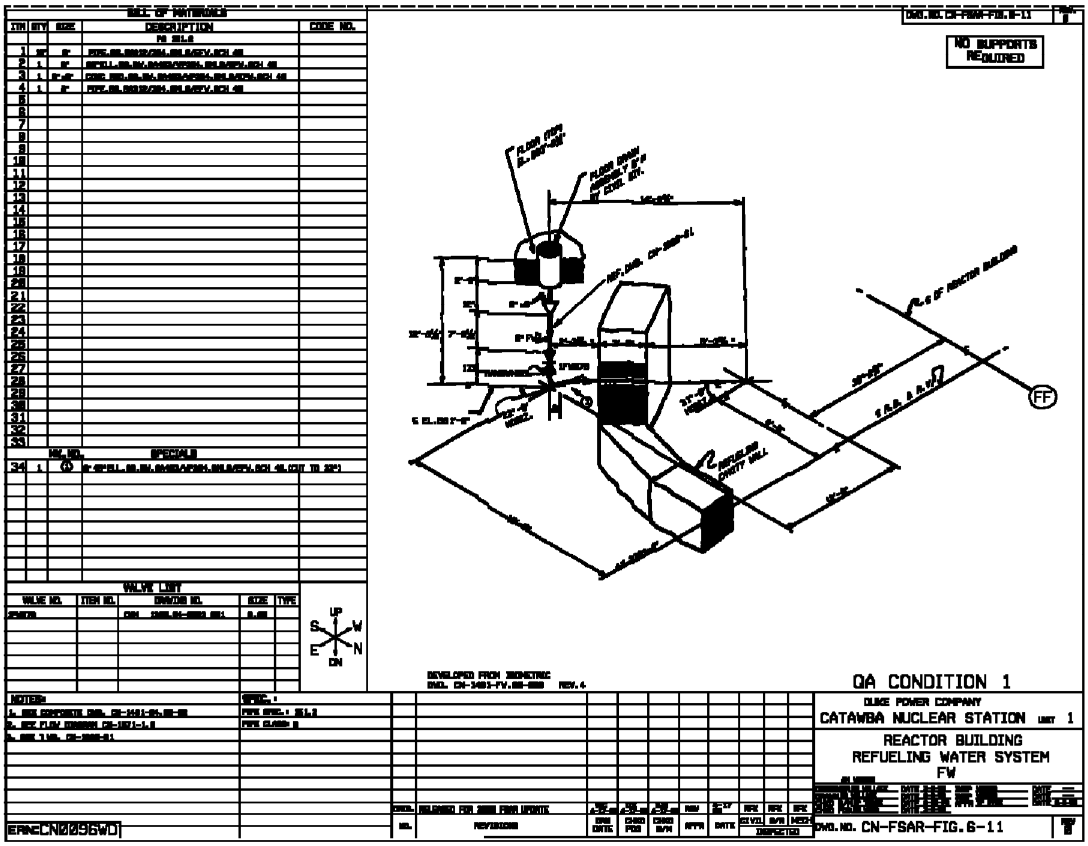


Figure 6-12. Containment Spray Return Drains from Air Return Pit Fans

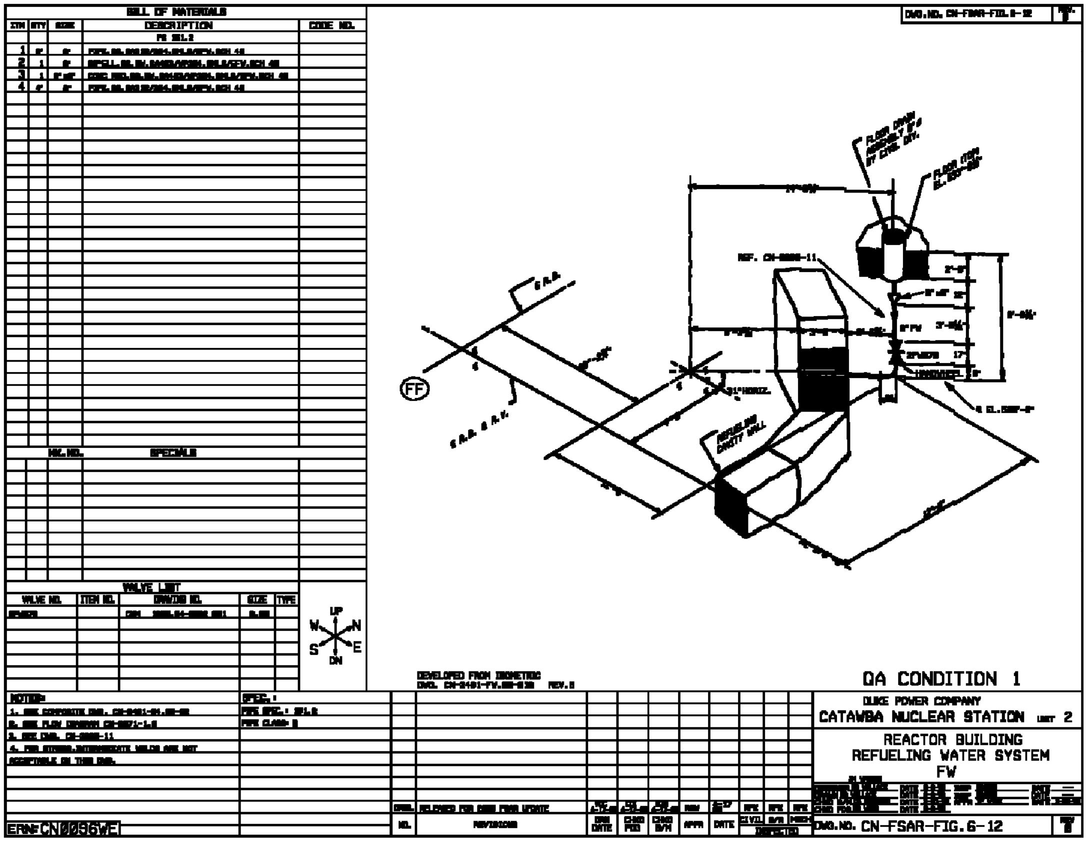
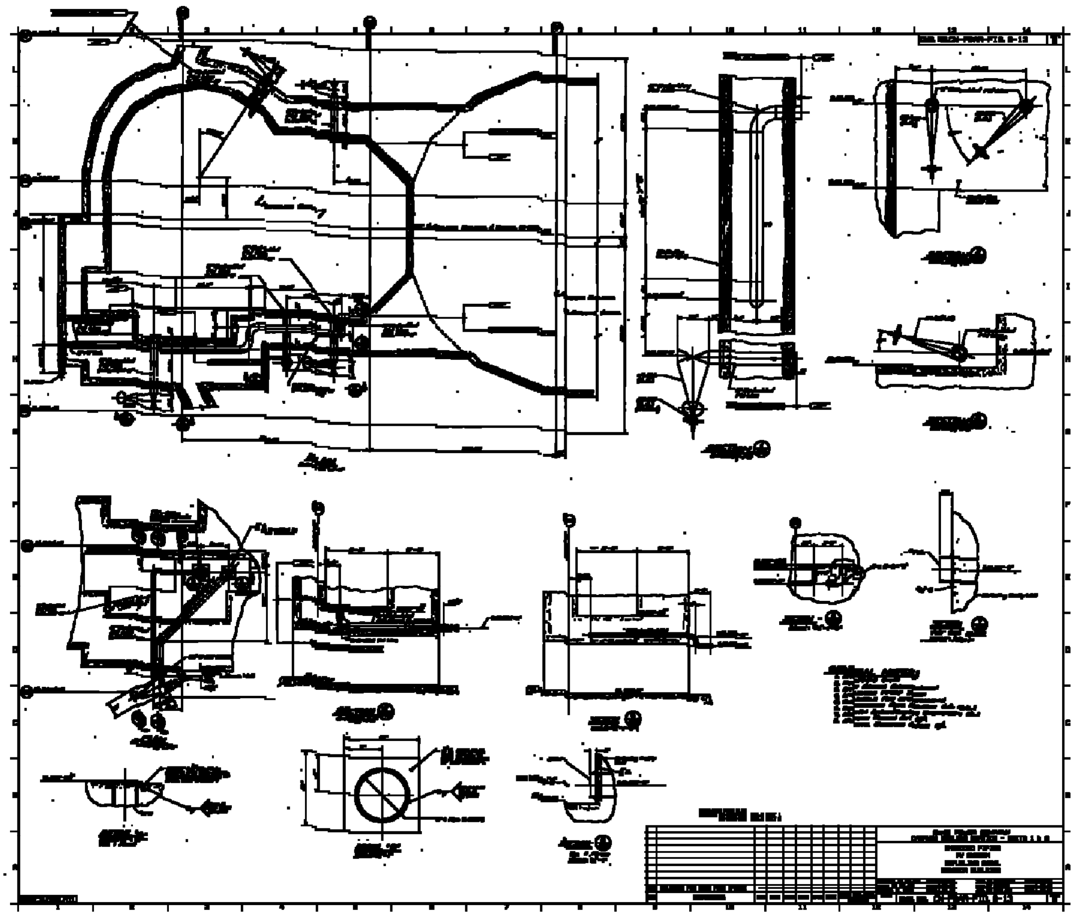


Figure 6-13. Drain Piping Arrangement Refueling Canal



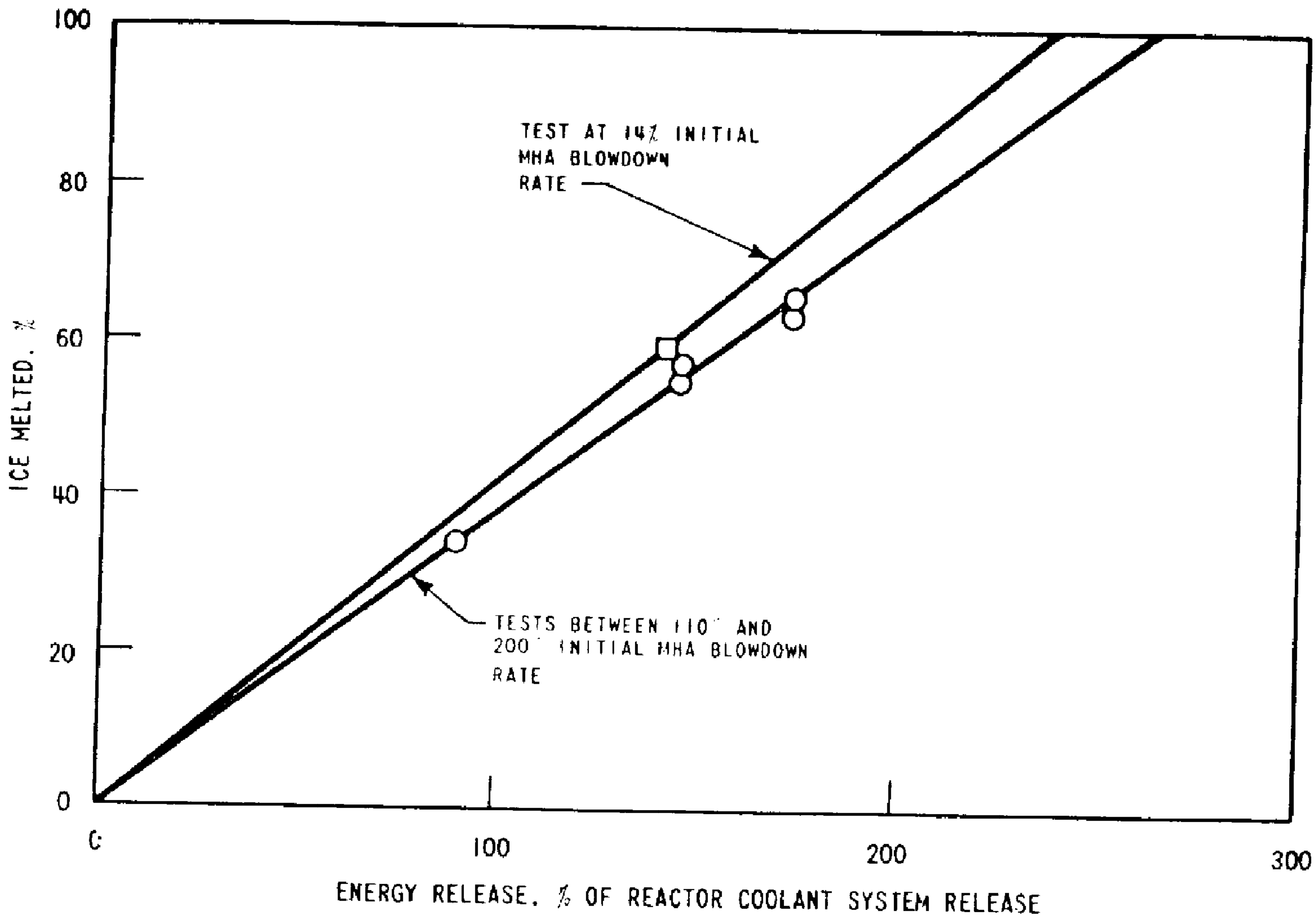
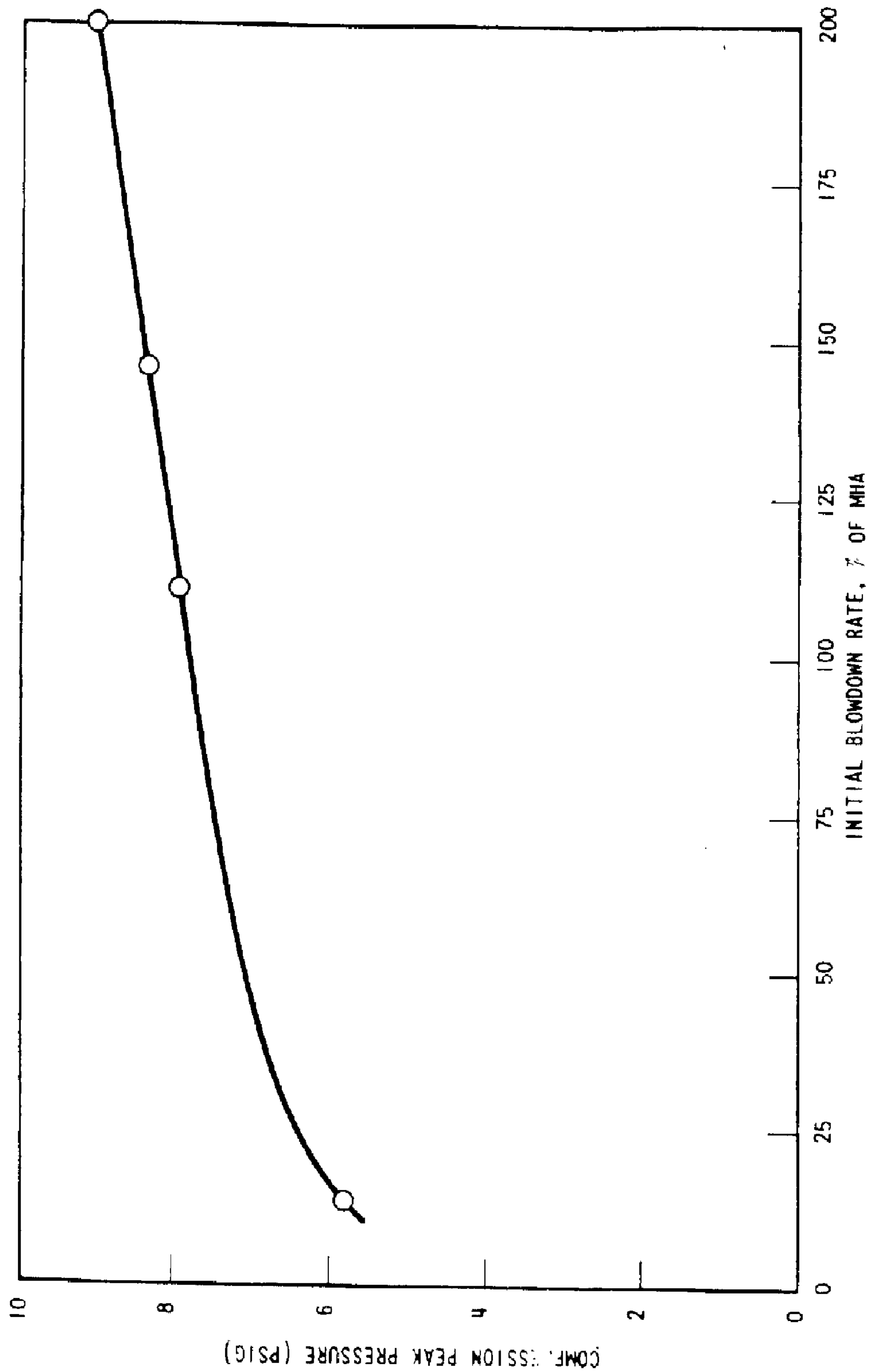


Figure 6-14. Ice Melted Versus Energy Release for Tests at Different Blowdown Rates

Figure 6-15. Upper Compartment Peak Compression Pressure Versus Blowdown Rate for Tests with 175% Energy Release



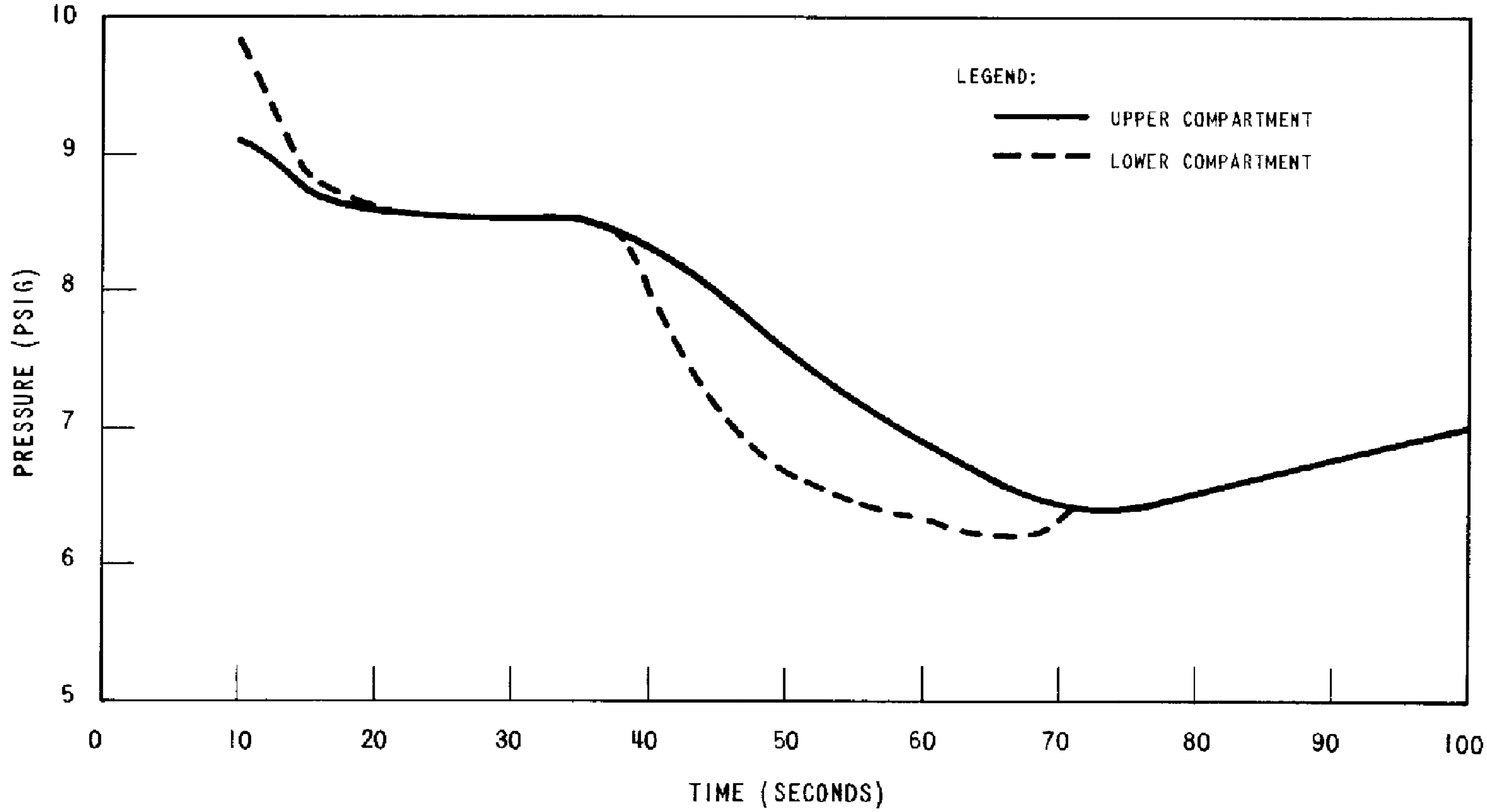


Figure 6-16. Peak Reverse Differential Pressure Transient

Figure 6-17. Peak Reverse Differential Pressure Transient

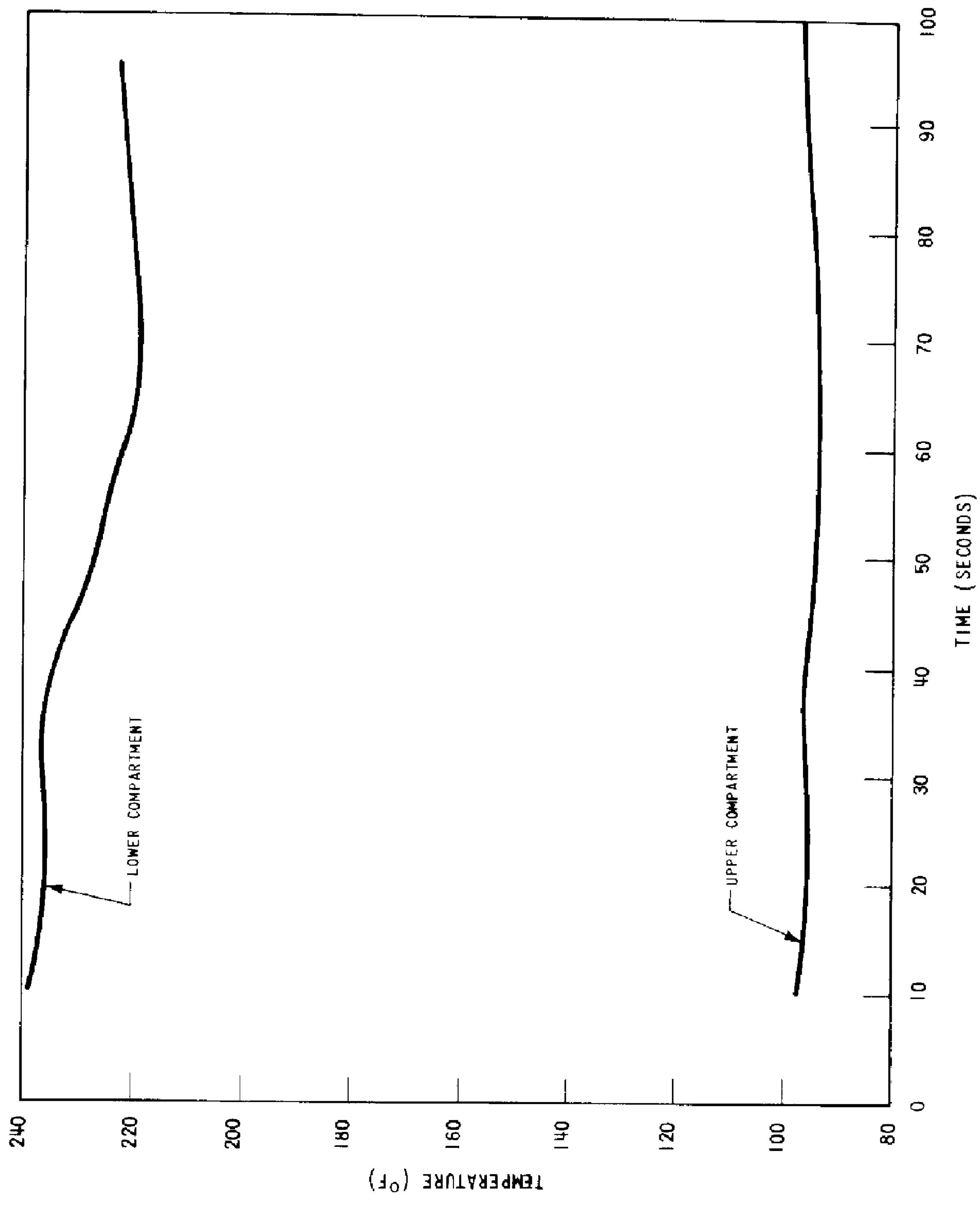


Figure 6-18. Pressure Increase Versus Deck Area from Deck Leakage Tests

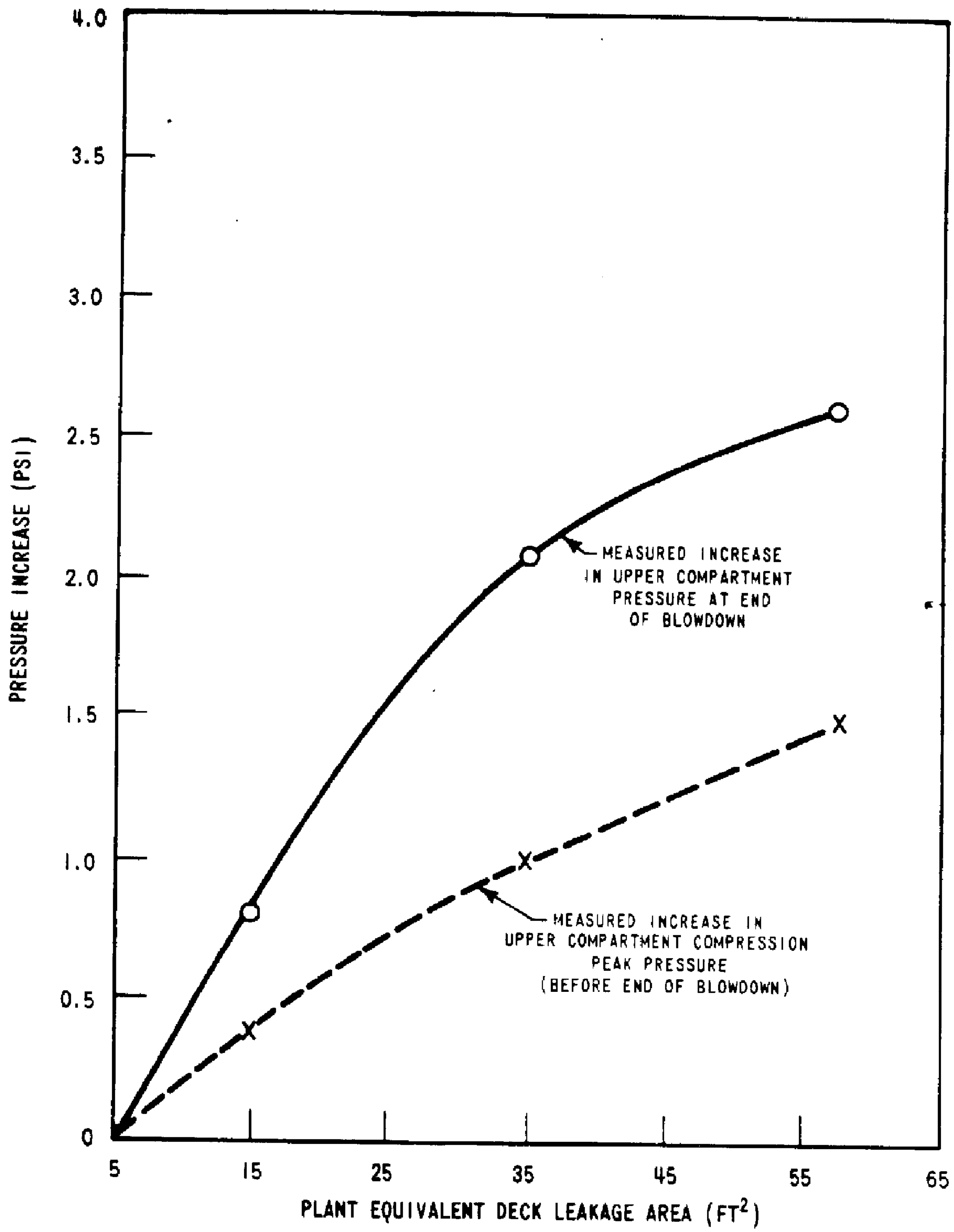


Figure 6-19. Energy Release at Time of Compression Peak Pressure from Full-Scale Section Test with 1-Foot Diameter Baskets

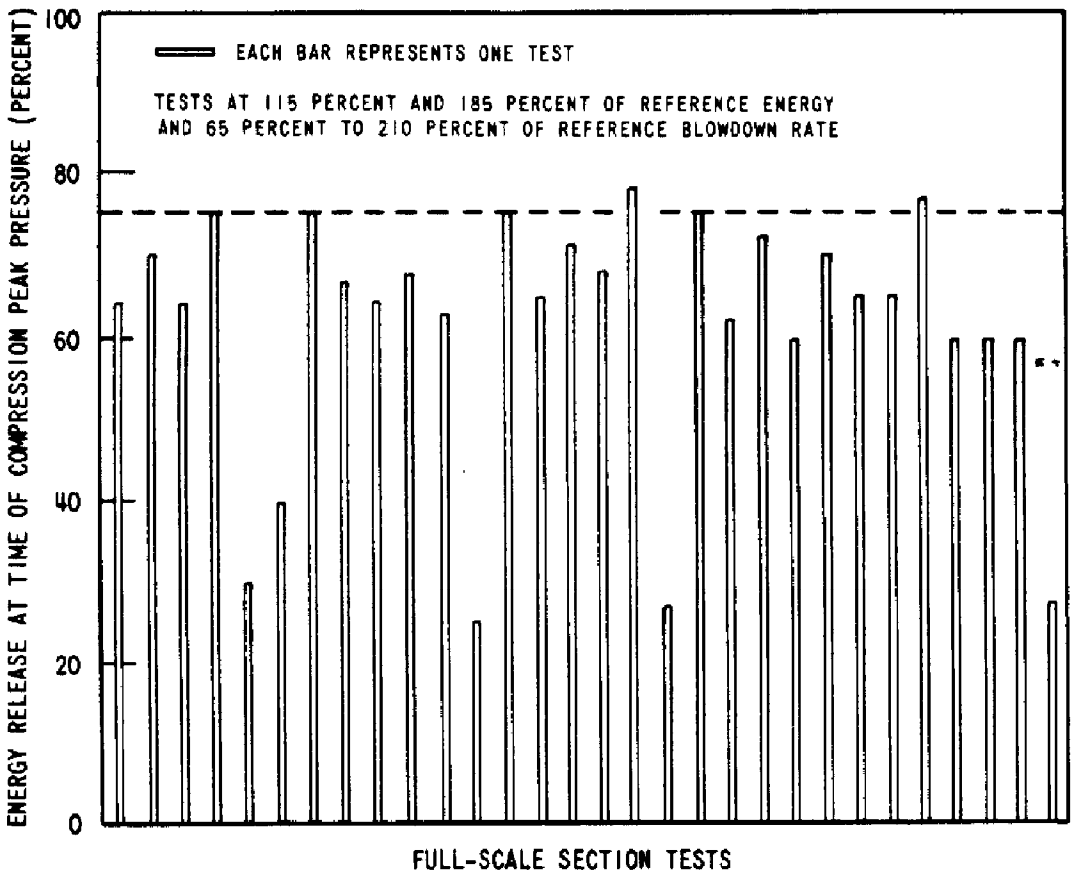


Figure 6-20. Peak Containment Temperature Transient - Lower Containment Temperature

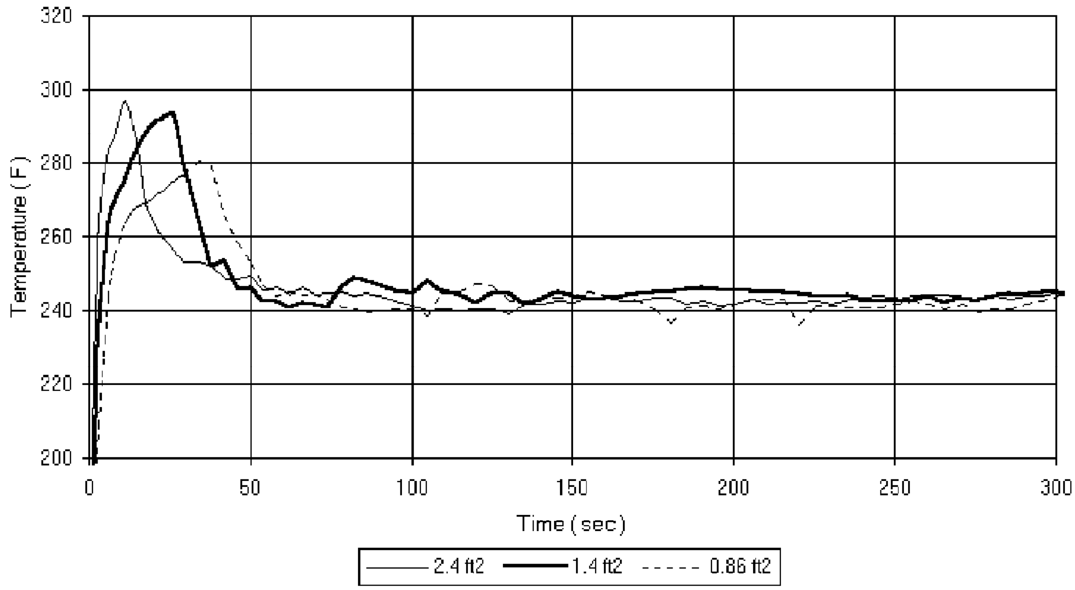


Figure 6-21. Peak Containment Temperature Transient - Break Compartment Temperature

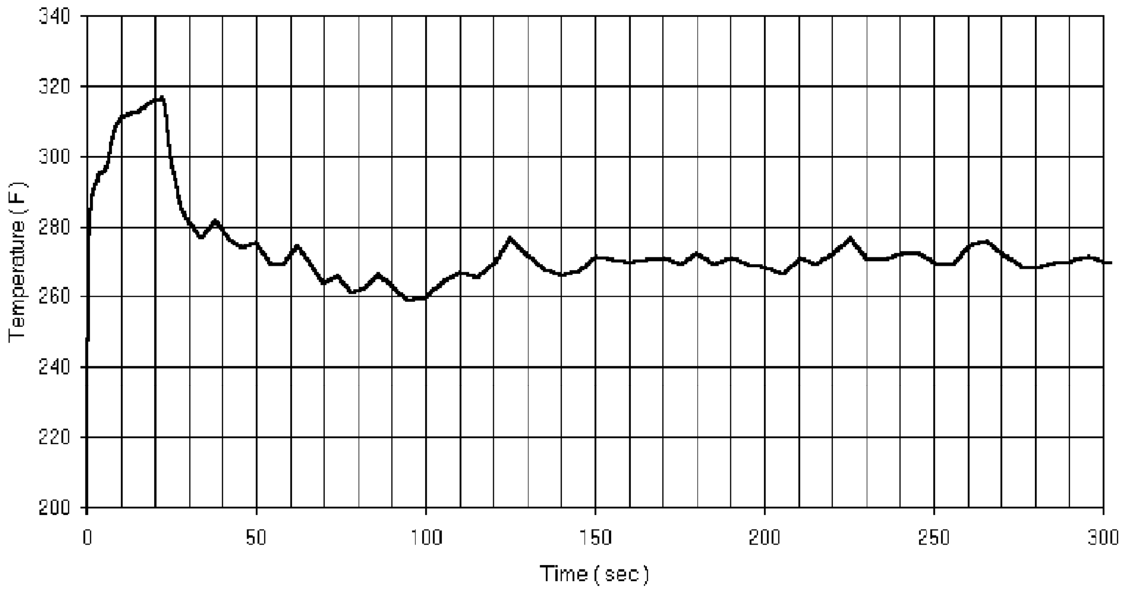


Figure 6-22. Deleted Per 1997 Update

Figure 6-23. Typical Upper and Lower Compartment Pressure Transient for Break Compartment Having a DEHL Break

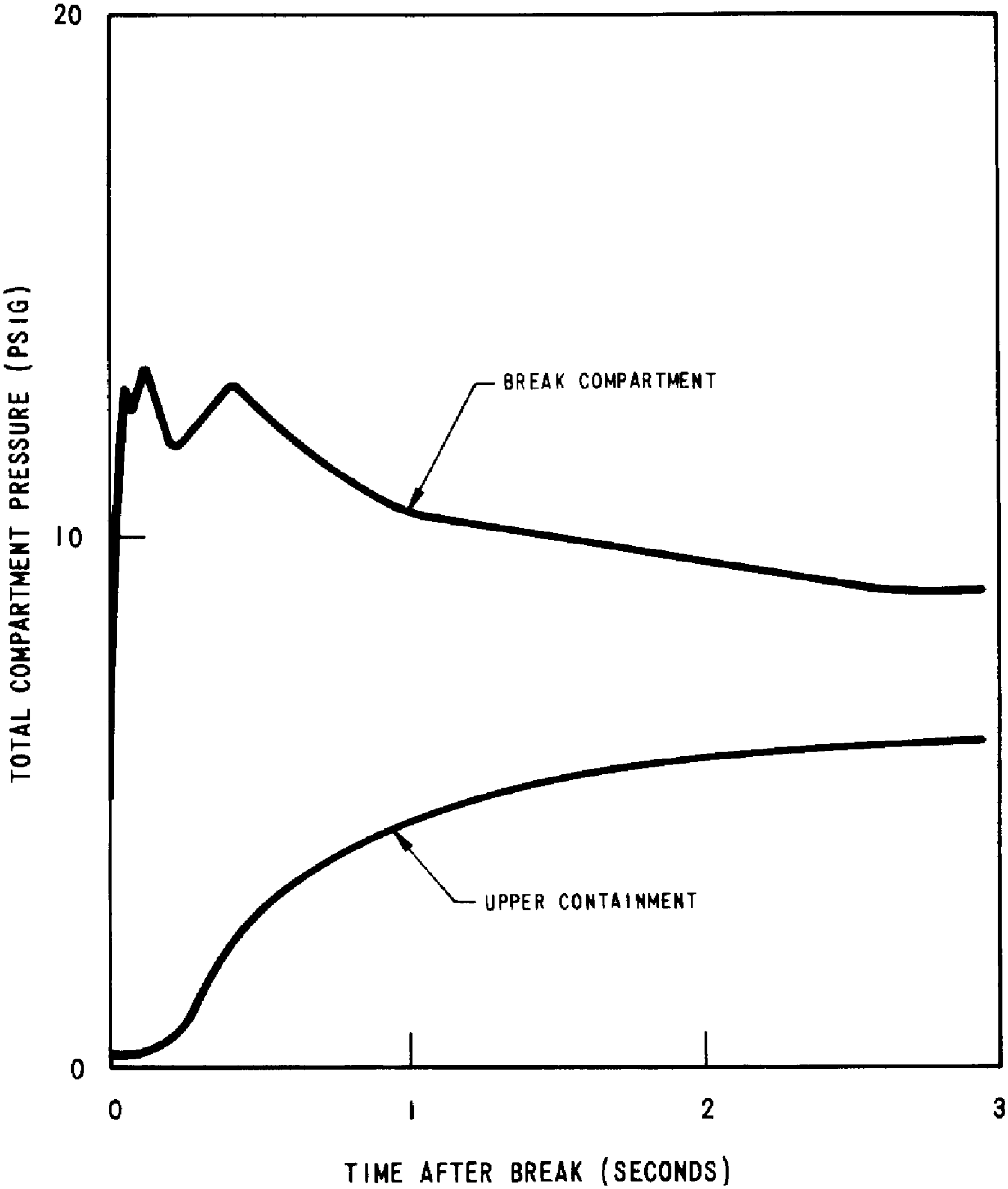


Figure 6-24. Typical Upper and Lower Compartment Pressure Transient for Break Compartment Having a DECL Break

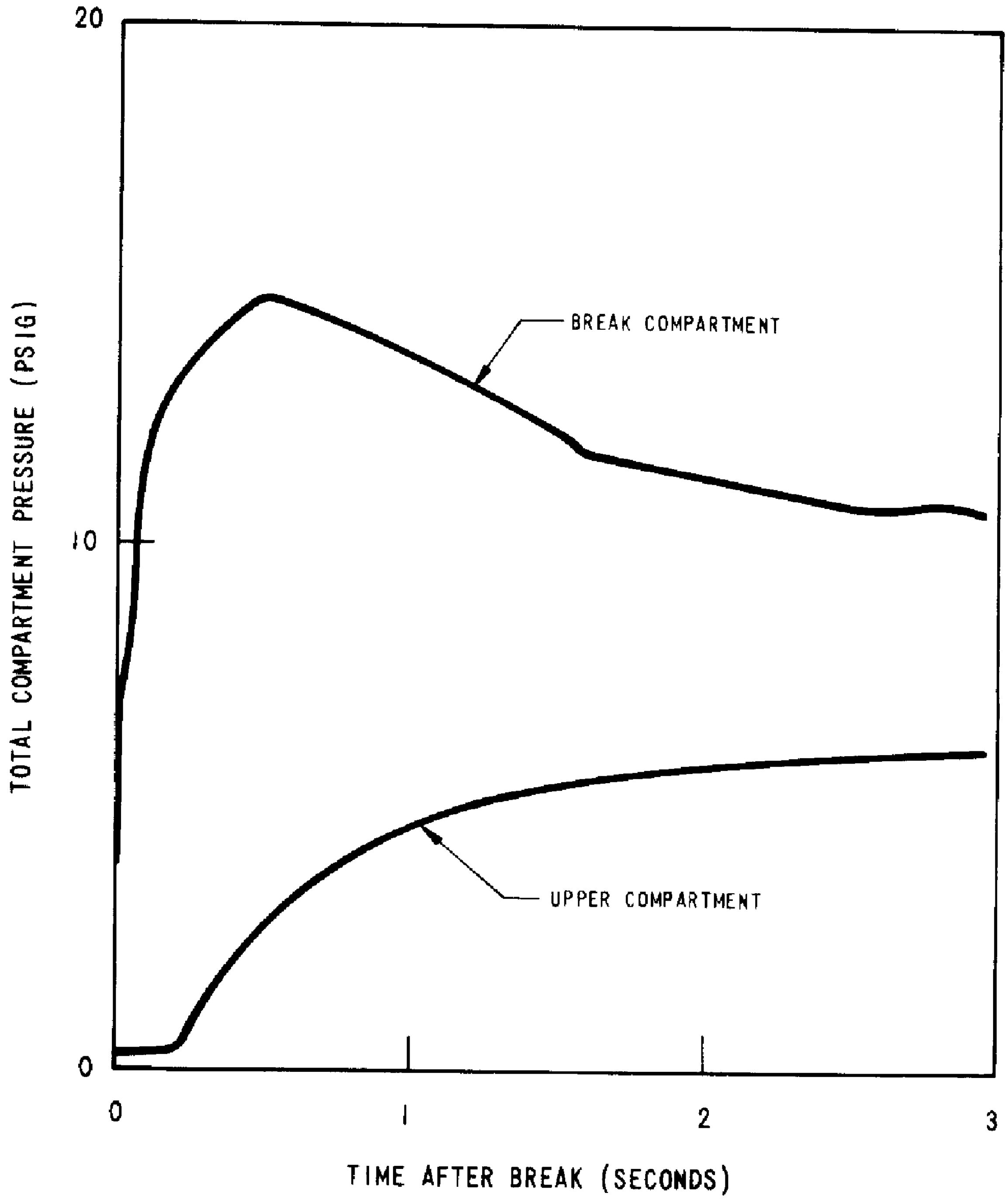


Figure 6-25. Plan at Equipment Rooms Elevation

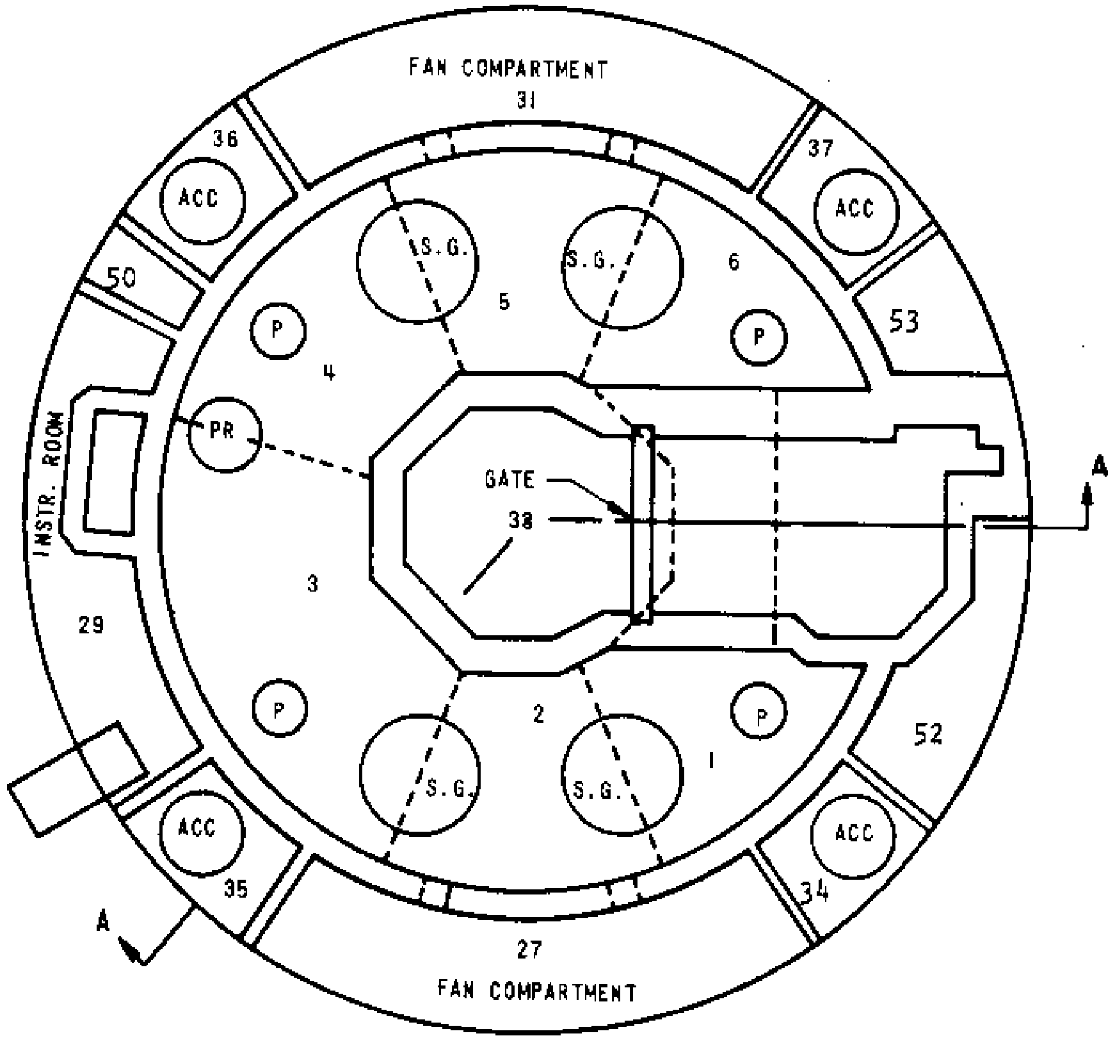


Figure 6-26. Compartment Section View

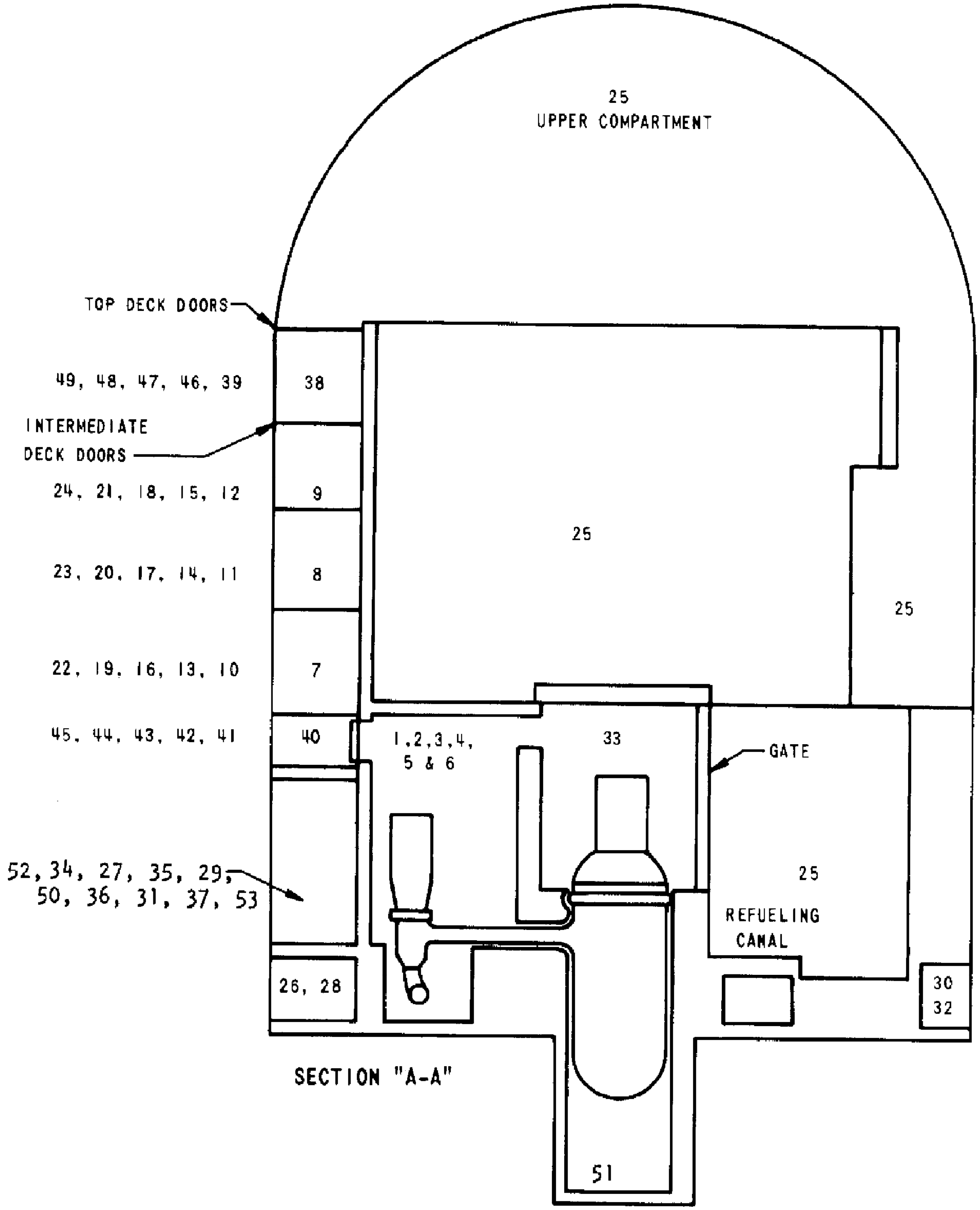


Figure 6-27. Plan View at Ice Condenser Elevation - Ice Condenser Compartments

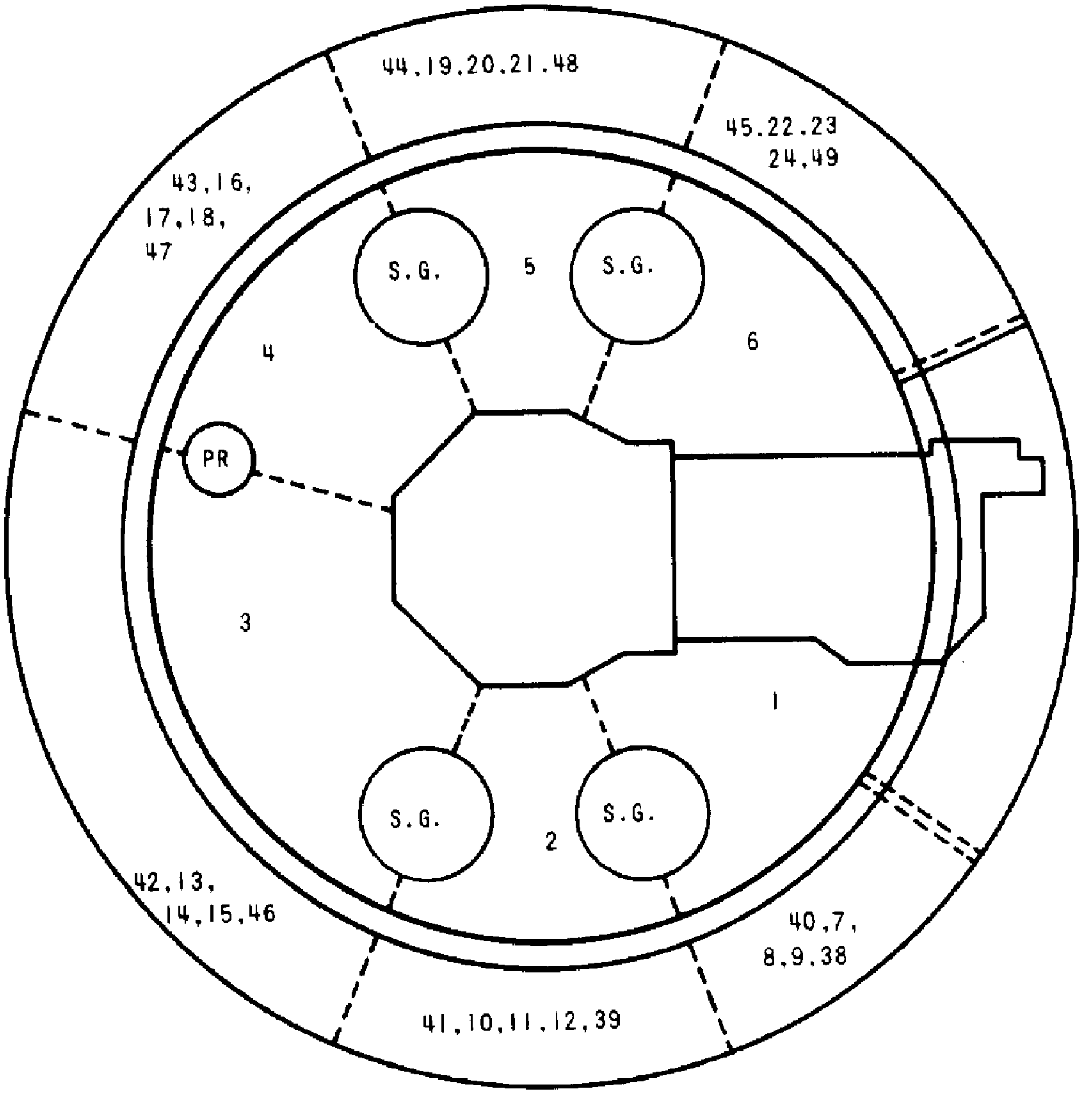


Figure 6-28. Layout of Containment Shell

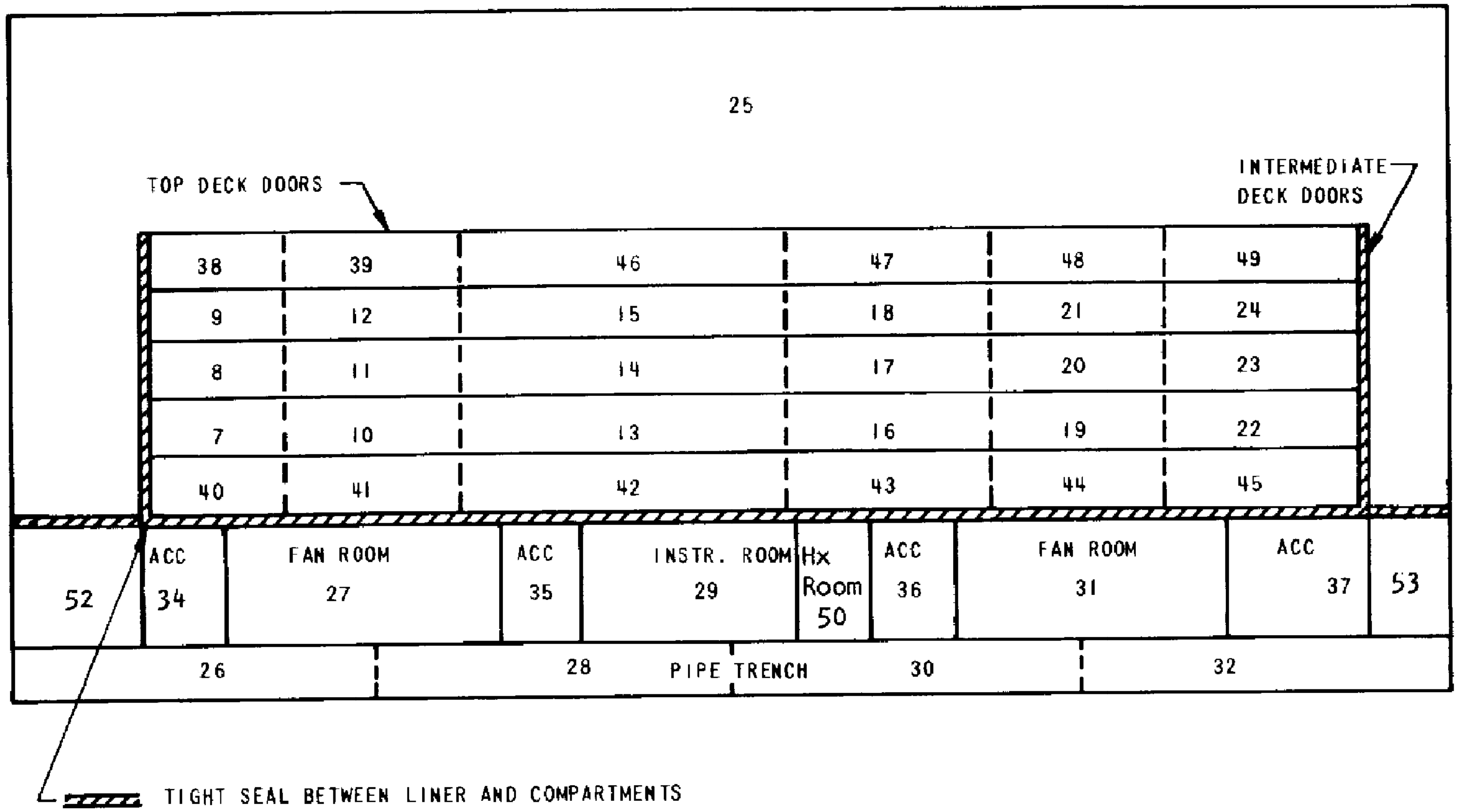


Figure 6-29. TMD Code Network

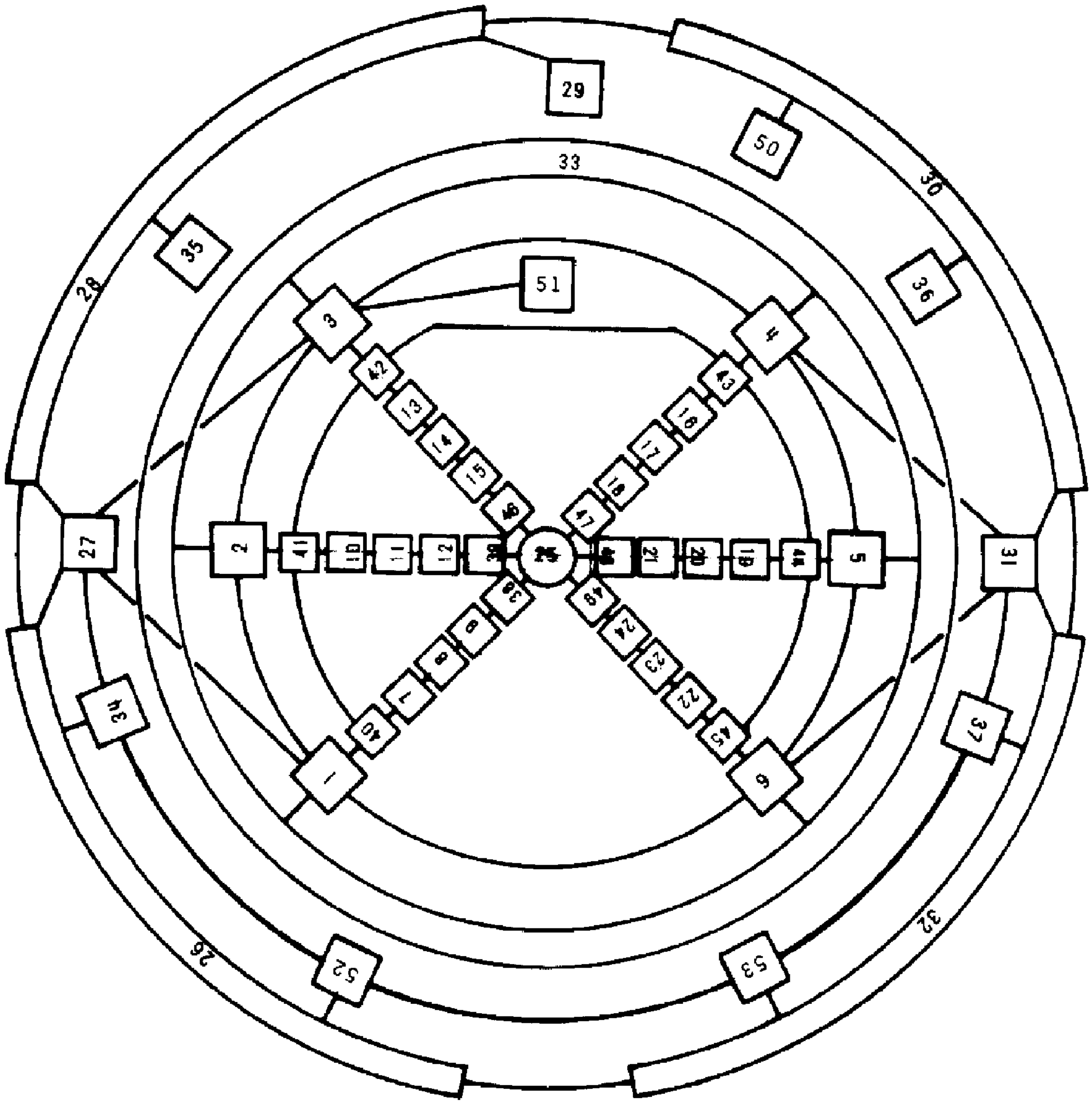
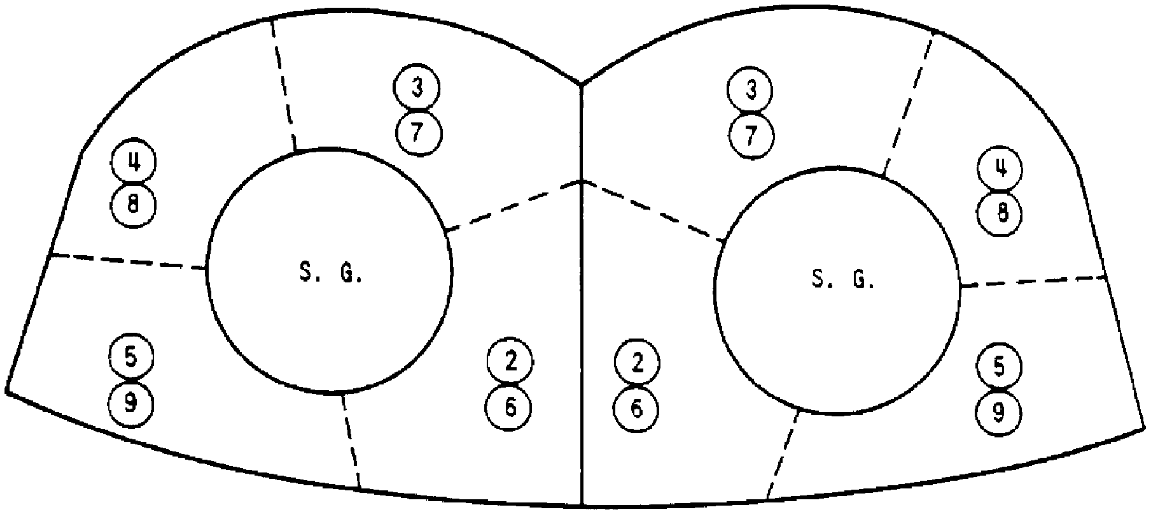


Figure 6-30. Nine Volume Nodalization of the Steam Generator Enclosure



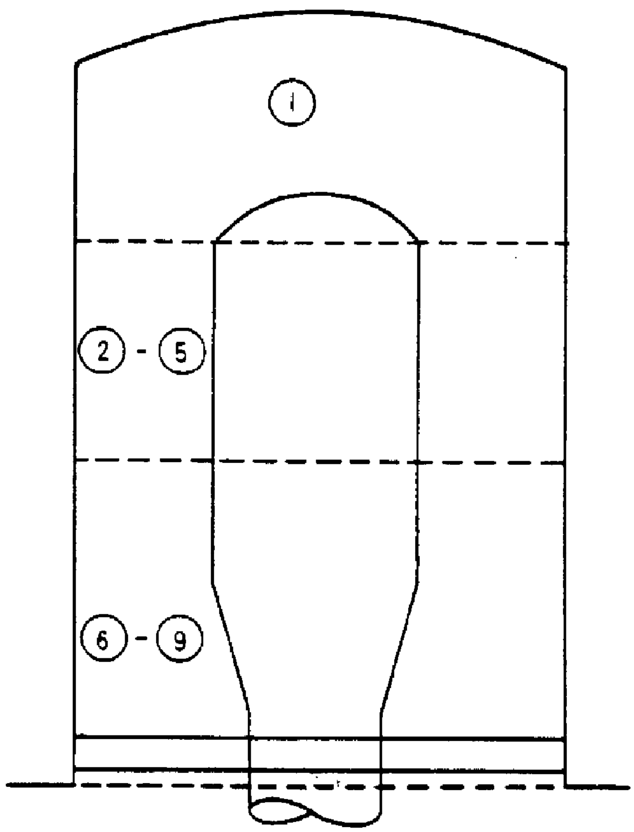


Figure 6-31. Double Ended Steam Line Break in Steam Generator Enclosure

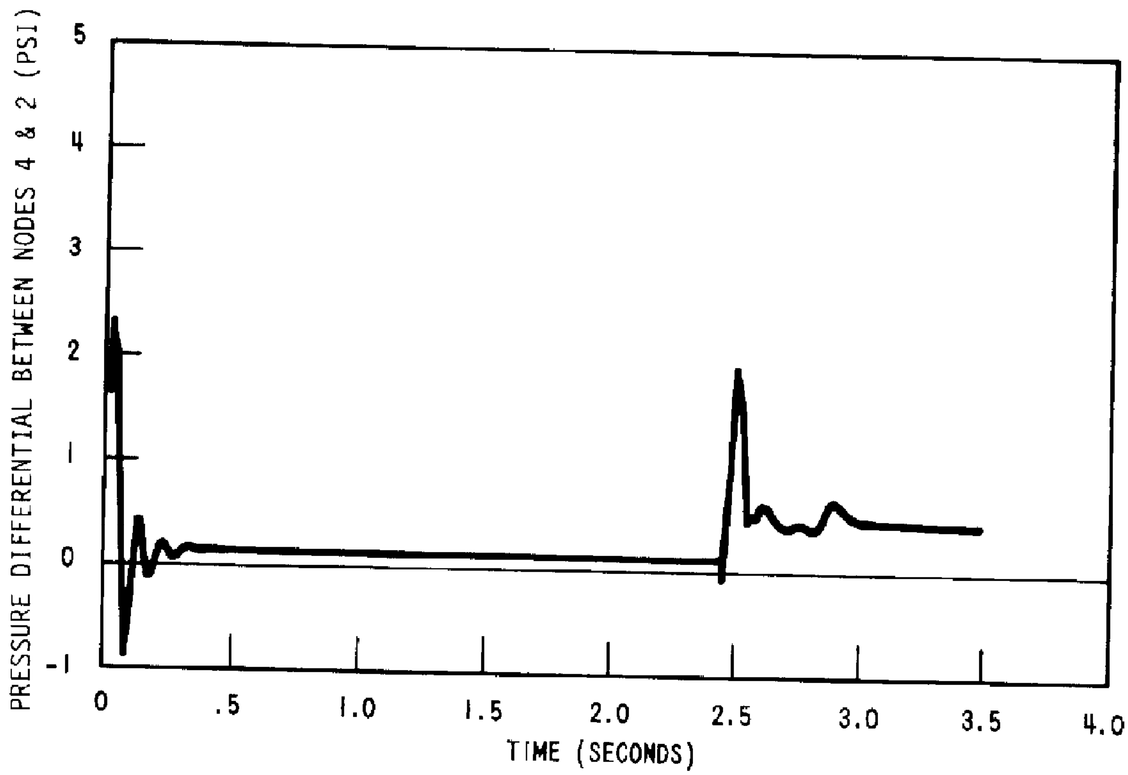


Figure 6-32. Double Ended Steam Line Break in Steam Generator Enclosure

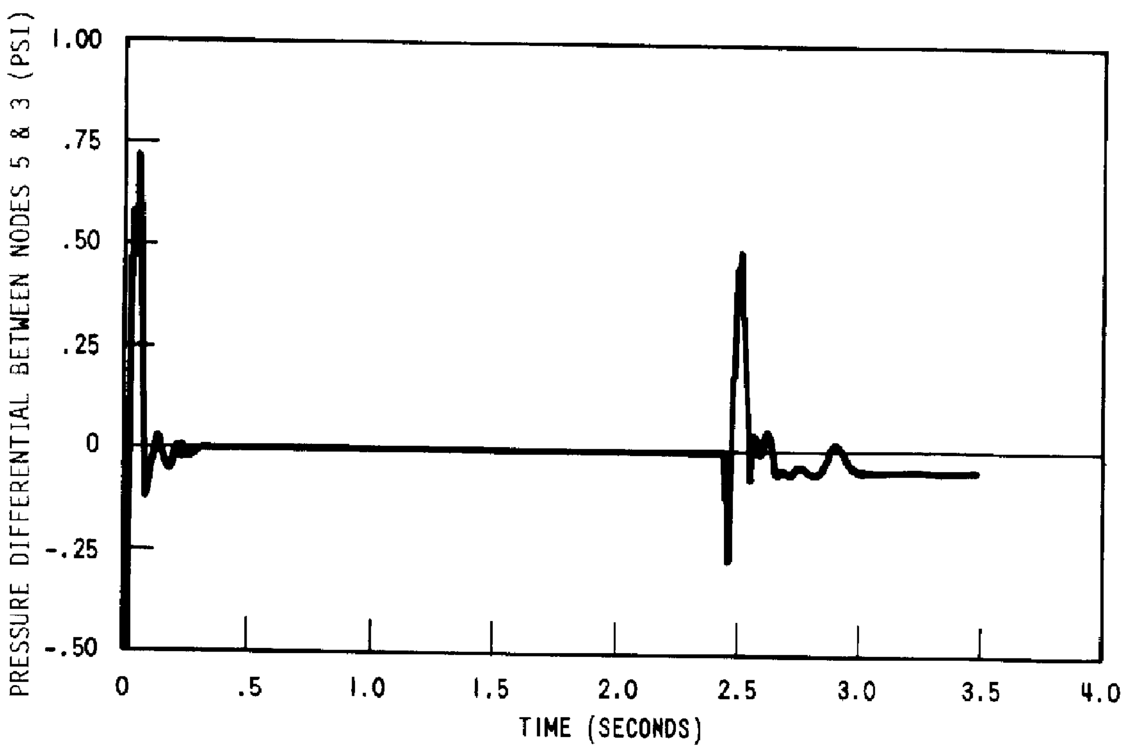


Figure 6-33. Double Ended Steam Line Break in Steam Generator Enclosure

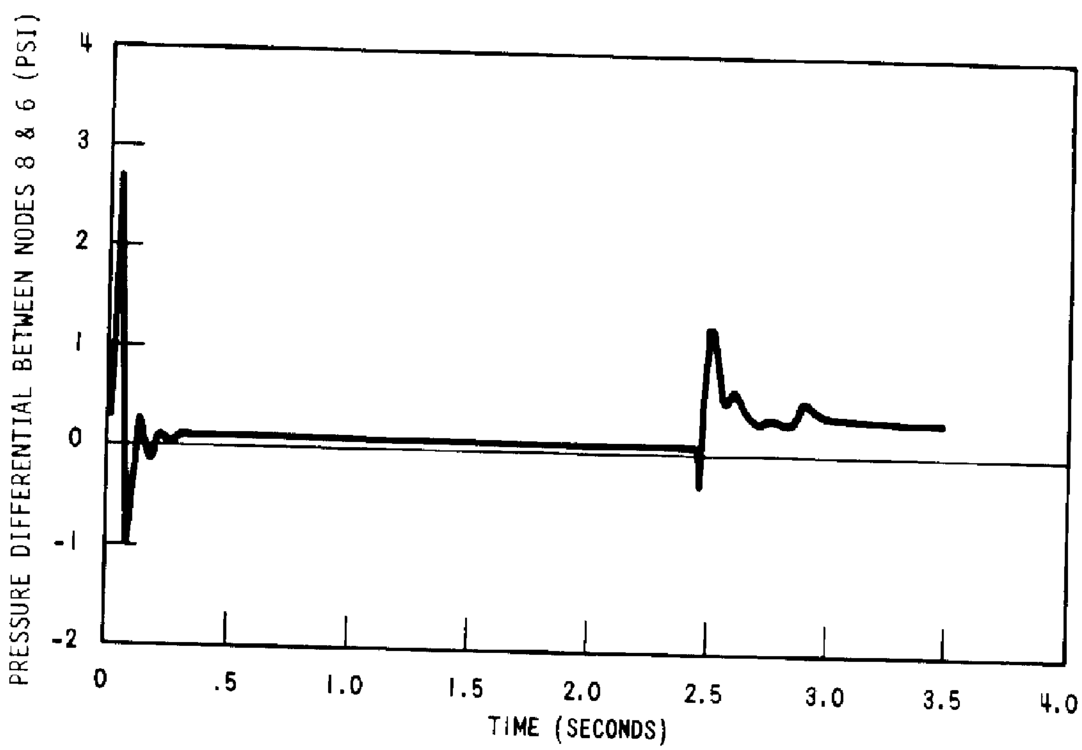


Figure 6-34. Double Ended Steam Line Break in Steam Generator Enclosure

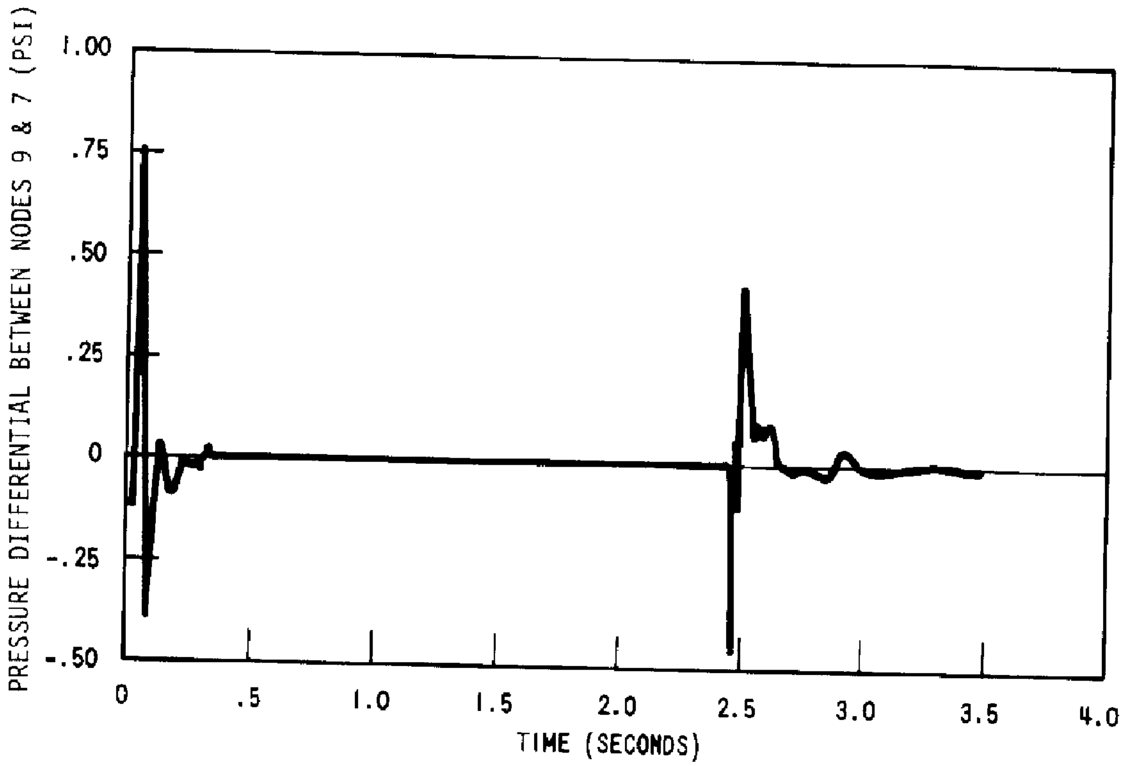


Figure 6-35. Double Ended Steam Line Break in Steam Generator Enclosure

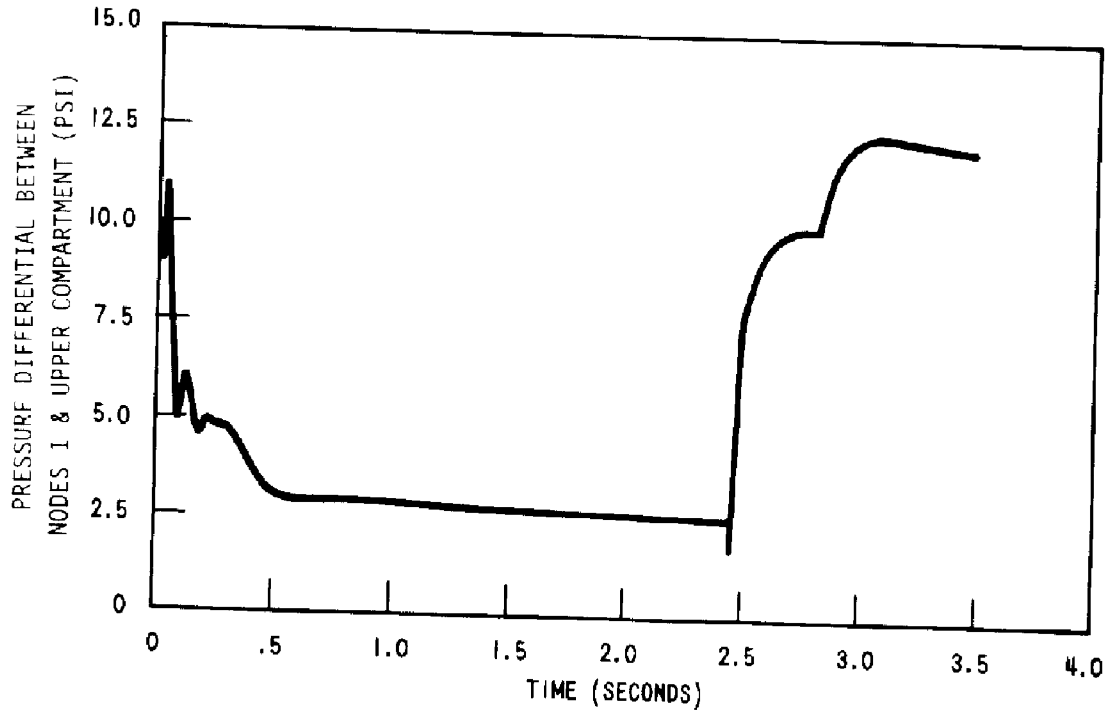


Figure 6-36. Two Volume Nodalization of the Steam Generator Enclosure

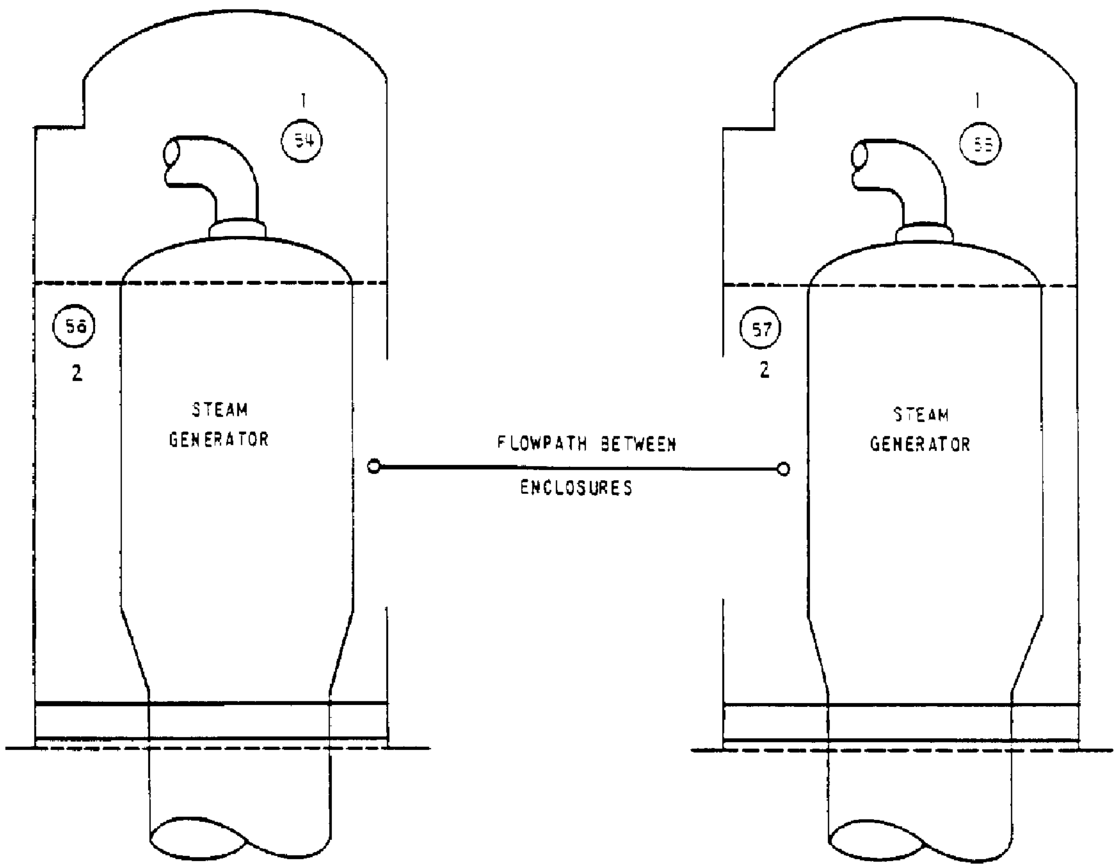


Figure 6-37. Two Volume Nodalization of the Pressurizer Enclosure

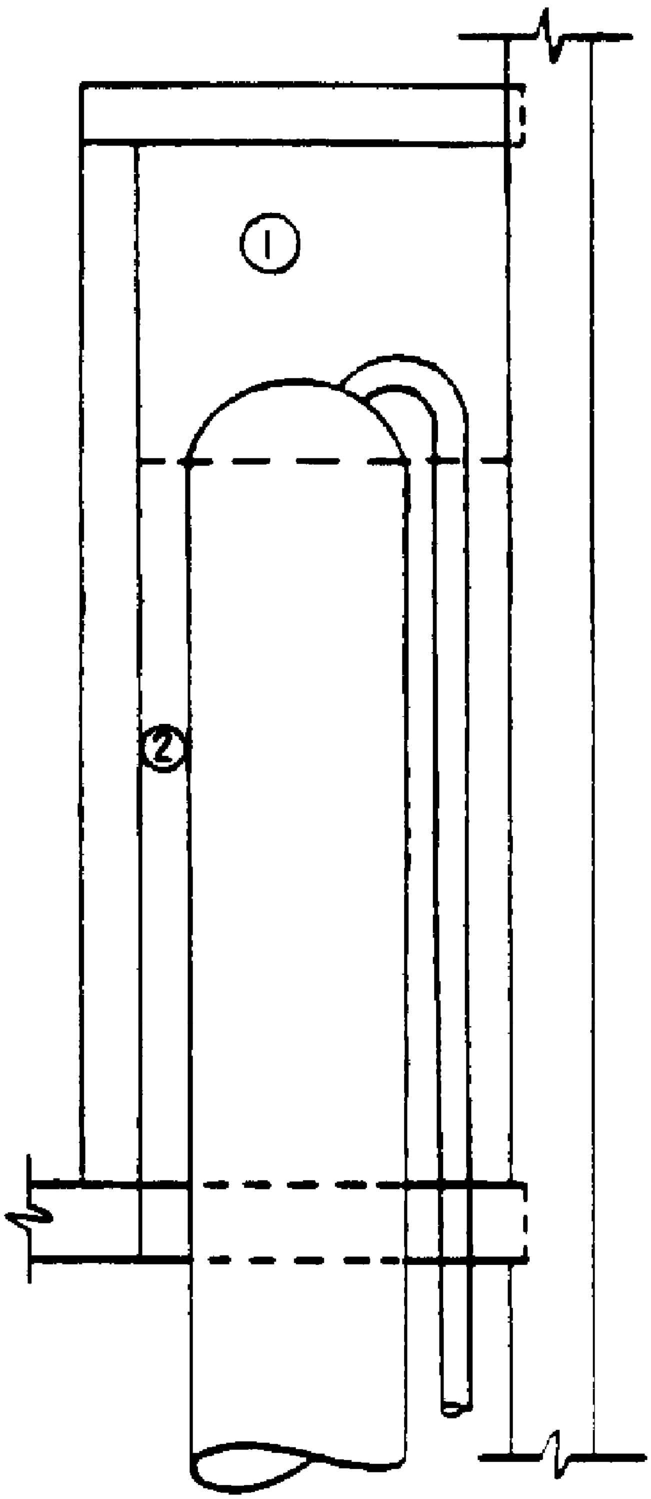
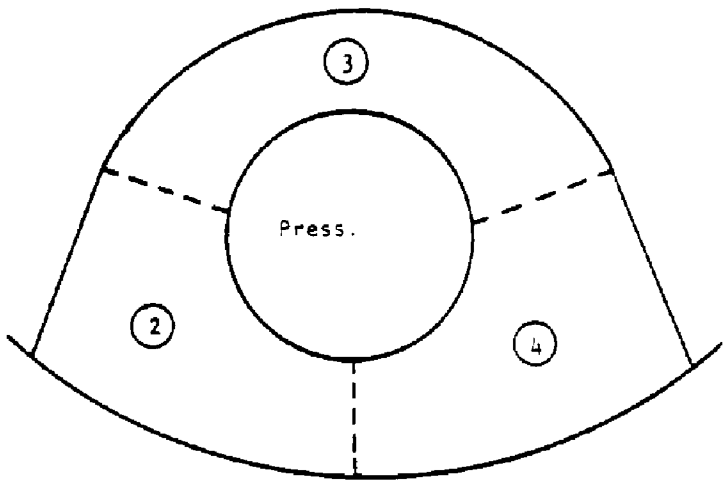
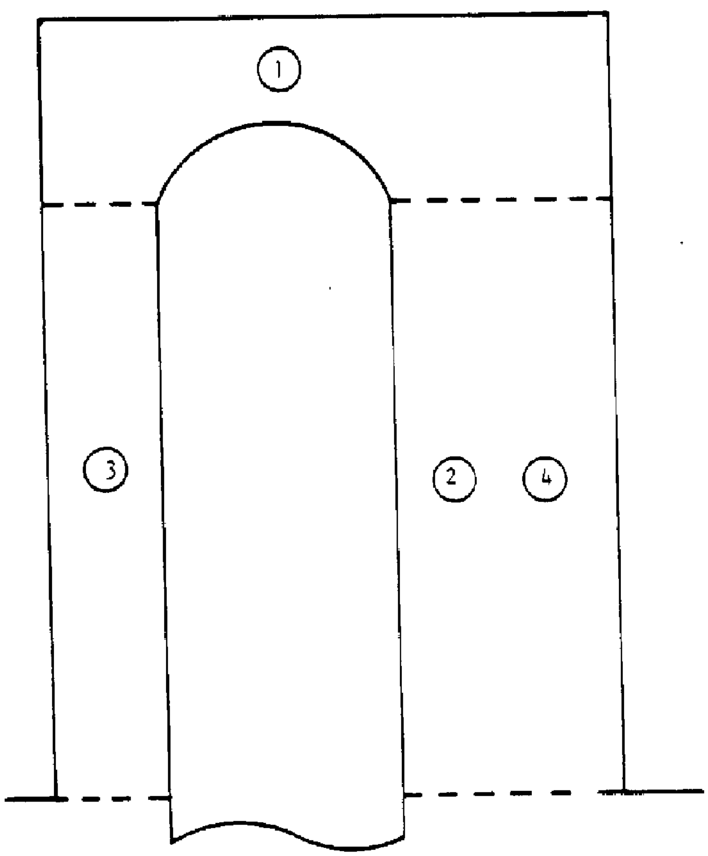


Figure 6-38. Four Volume Nodalization of the Pressurizer Enclosure





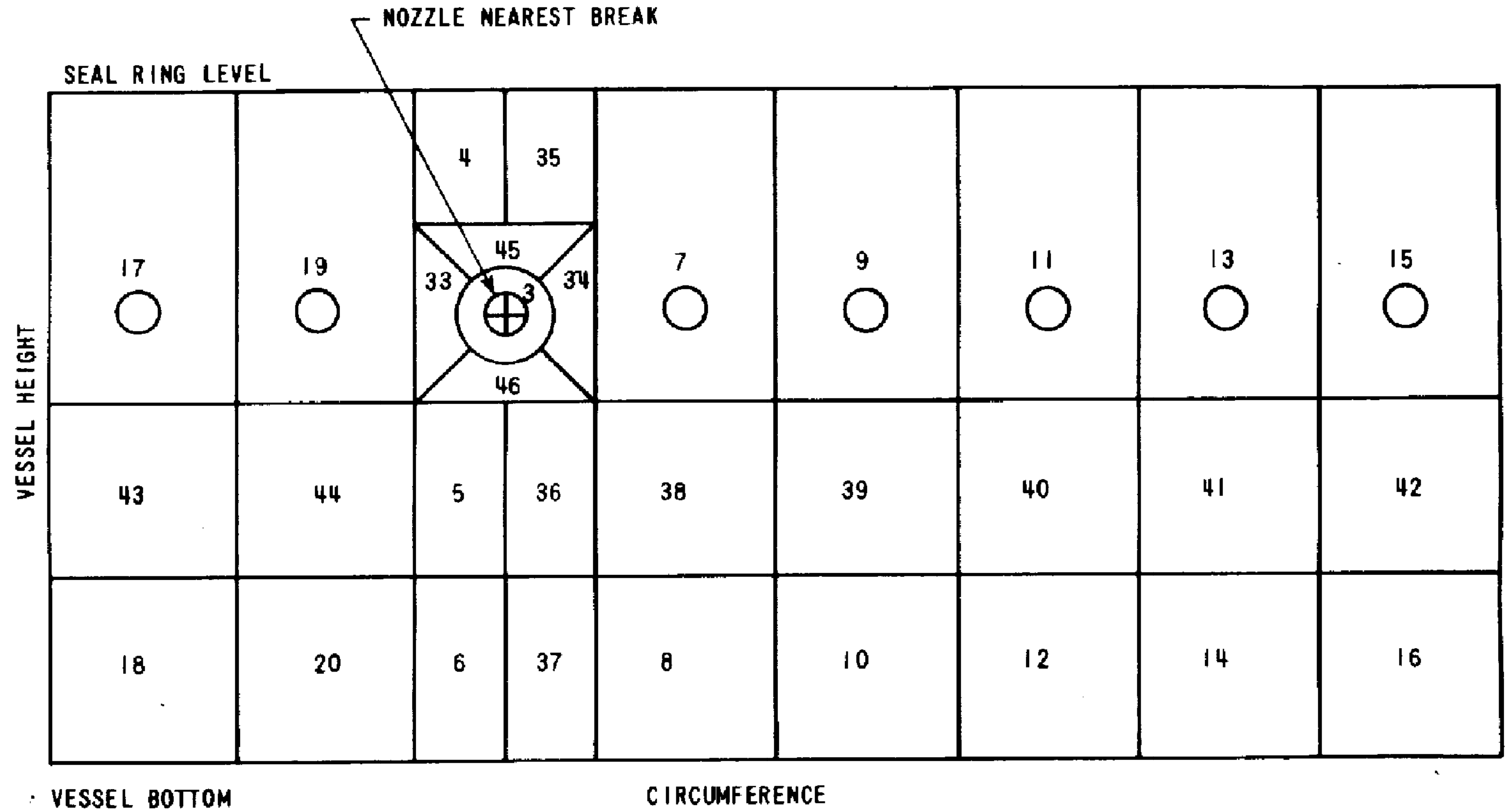


Figure 6-39. Developed View of the TMD Code Network for the Reactor Cavity Analysis

Figure 6-40. Flowpath Connections for the Reactor Cavity Analysis

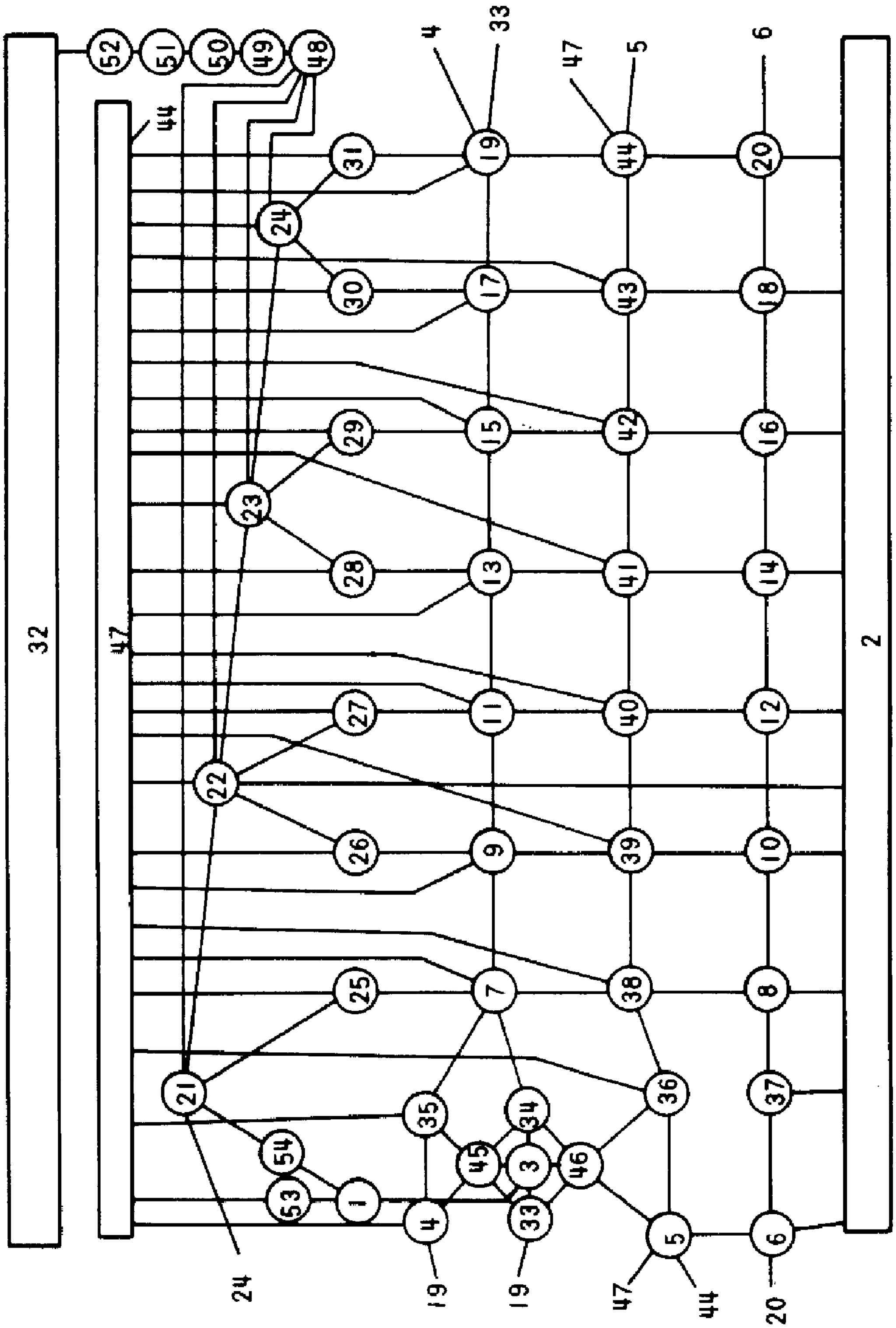


Figure 6-41. Containment Model for the Reactor Cavity Analysis

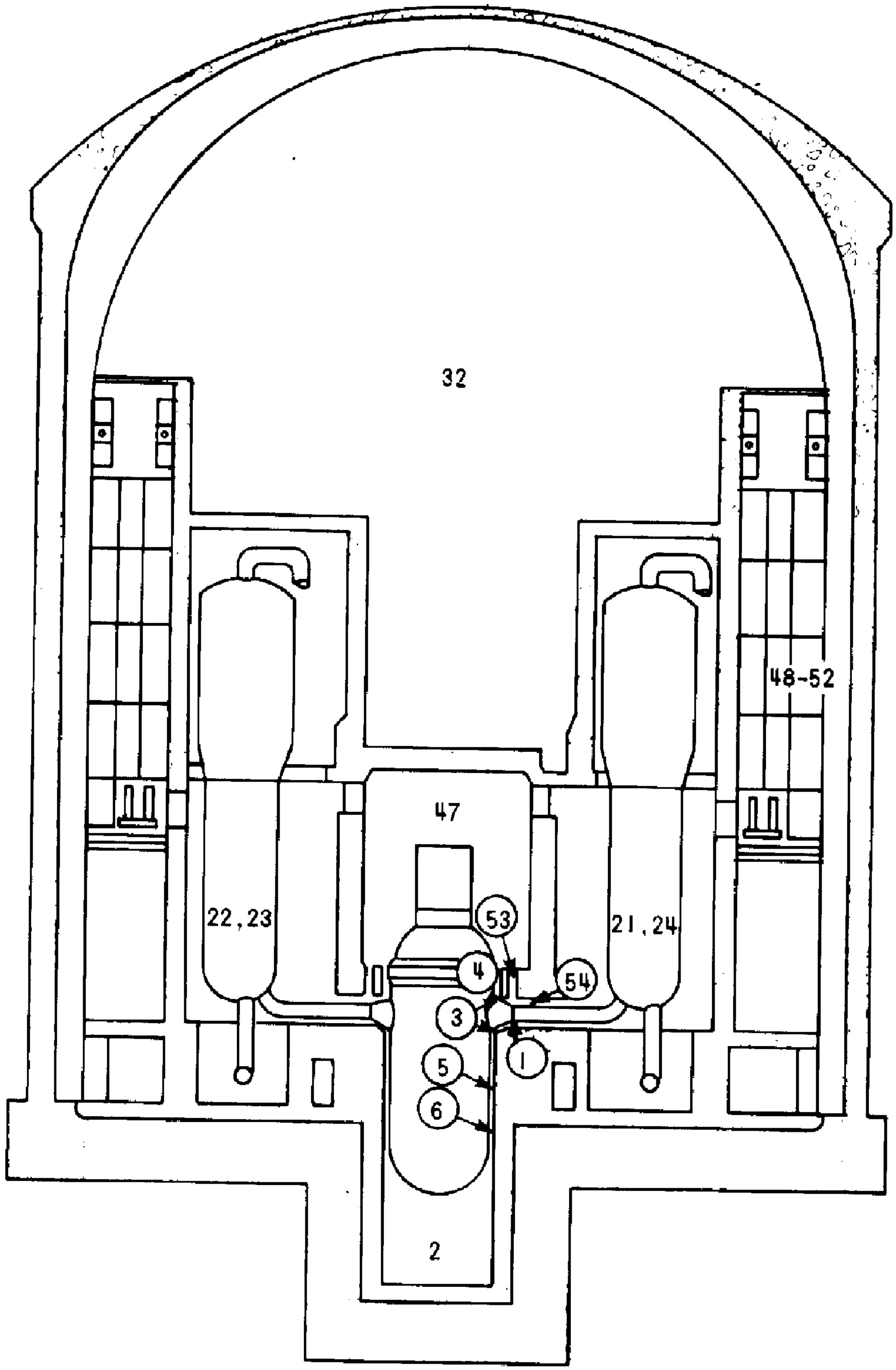


Figure 6-42. Reactor Vessel Nozzle Break Restraints

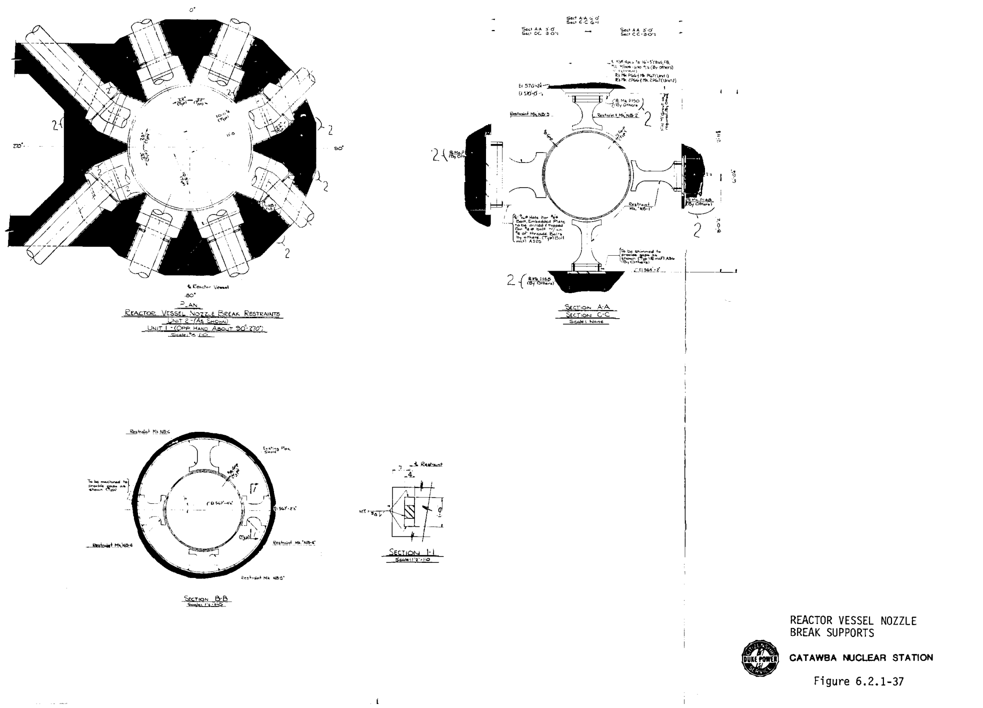


Figure 6-43. Reactor Cavity Analysis, Element 1

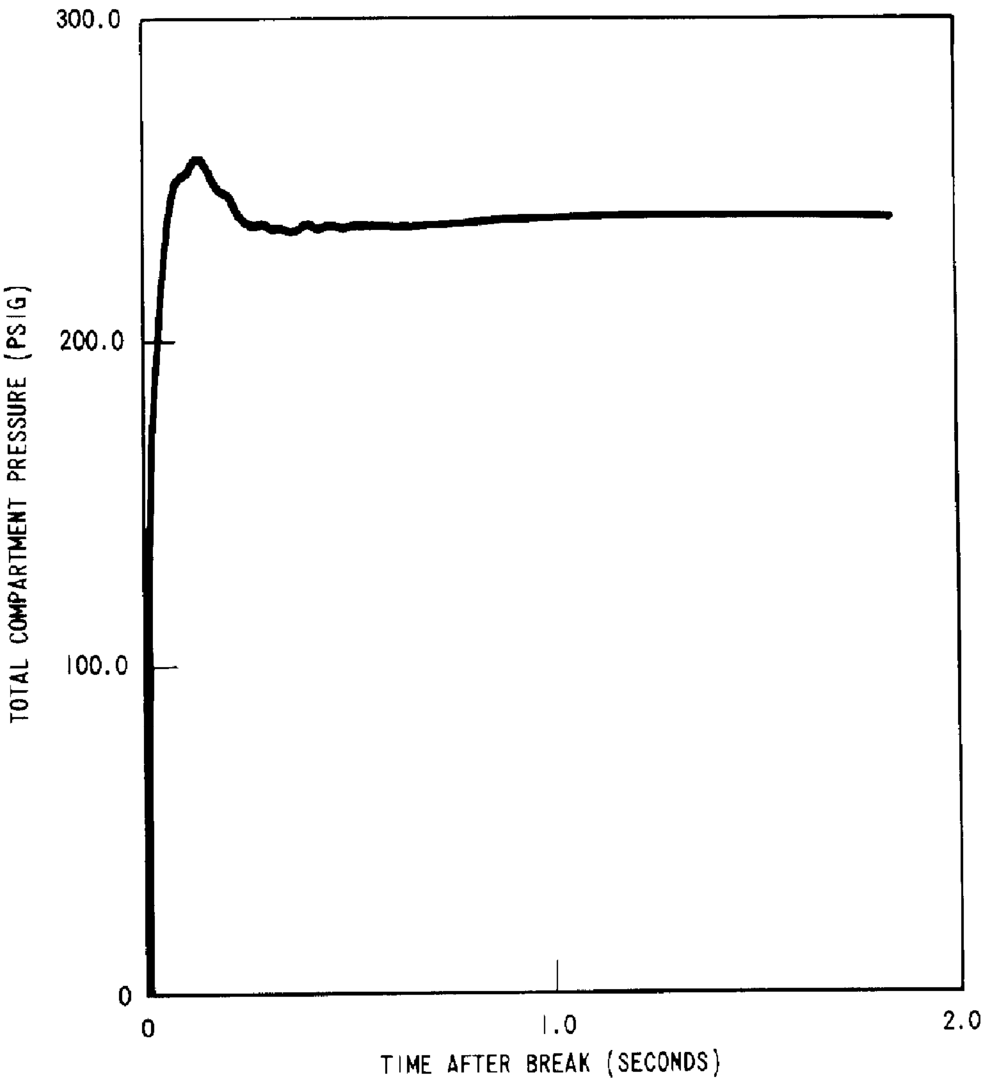


Figure 6-44. Reactor Cavity Analysis, Element 2

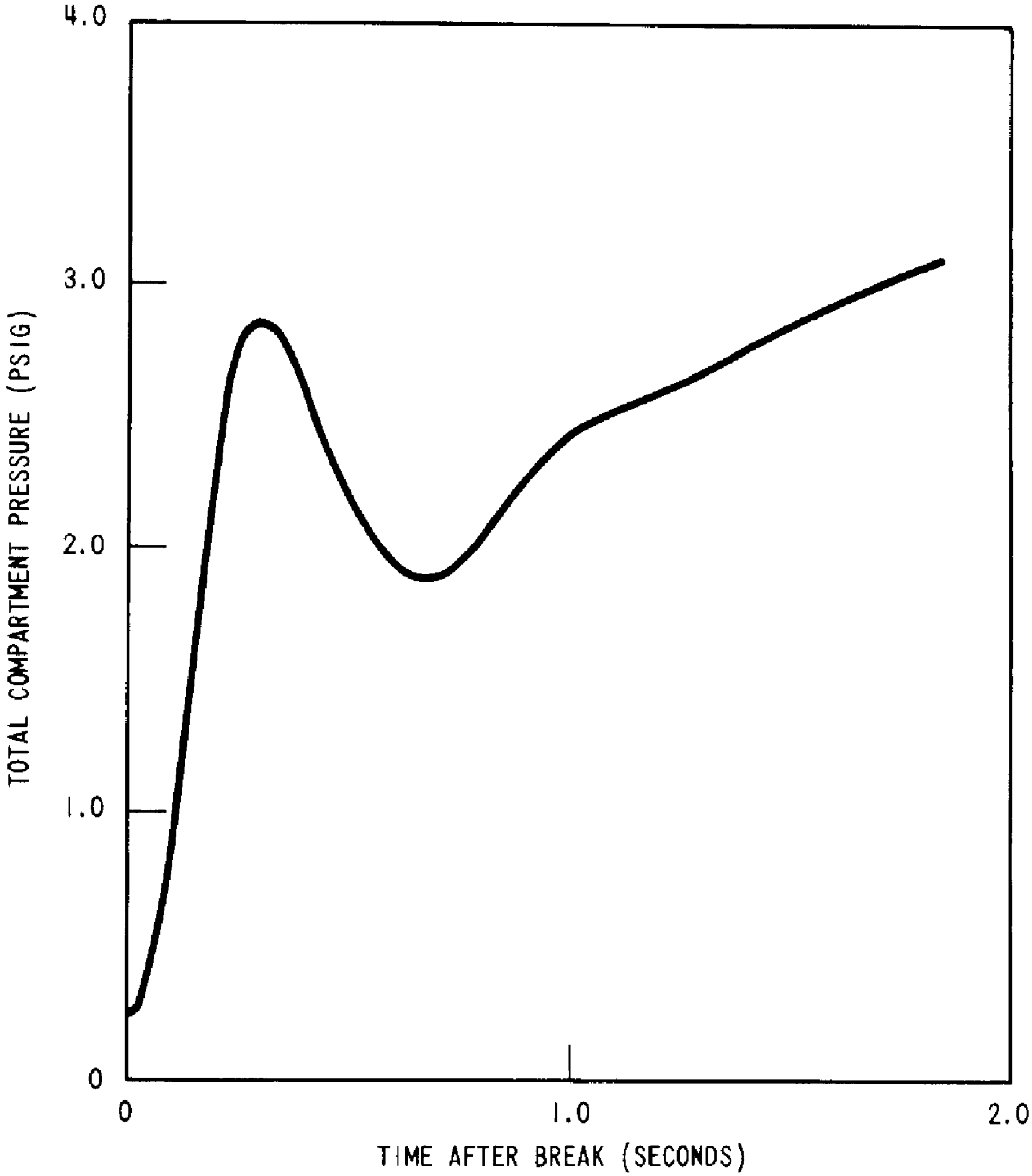


Figure 6-45. Reactor Cavity Analysis, Element 3

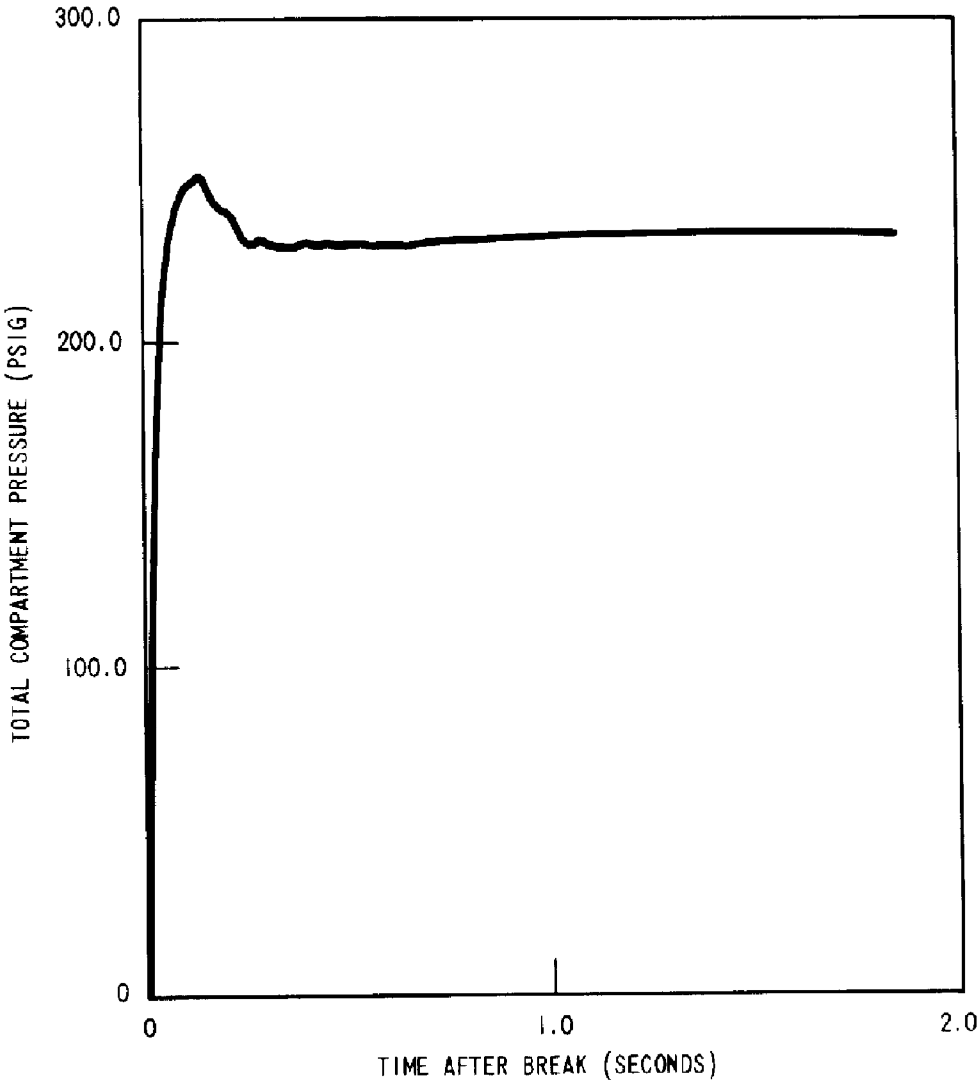


Figure 6-46. Reactor Cavity Analysis, Element 4

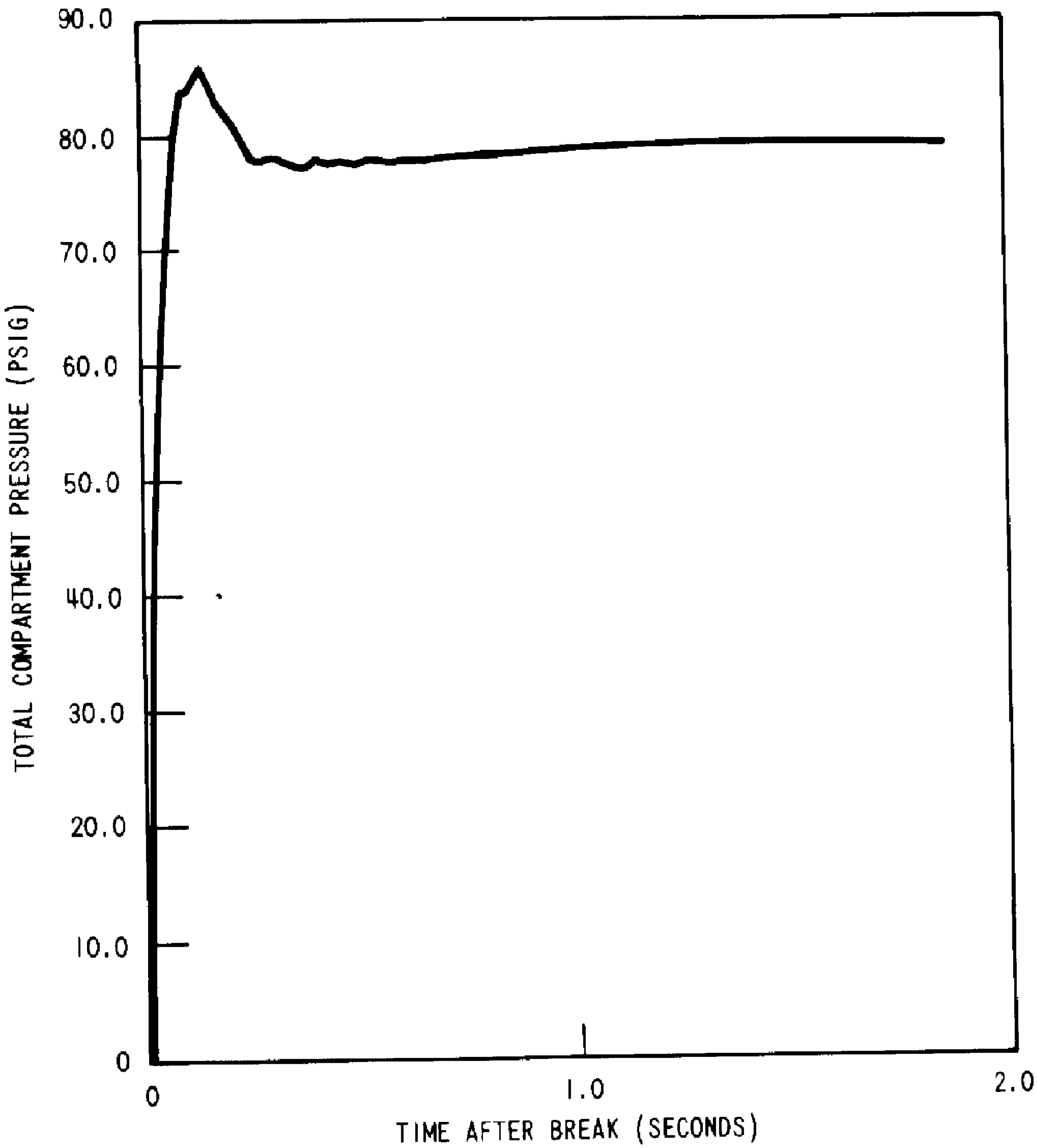


Figure 6-47. Reactor Cavity Analysis, Element 5

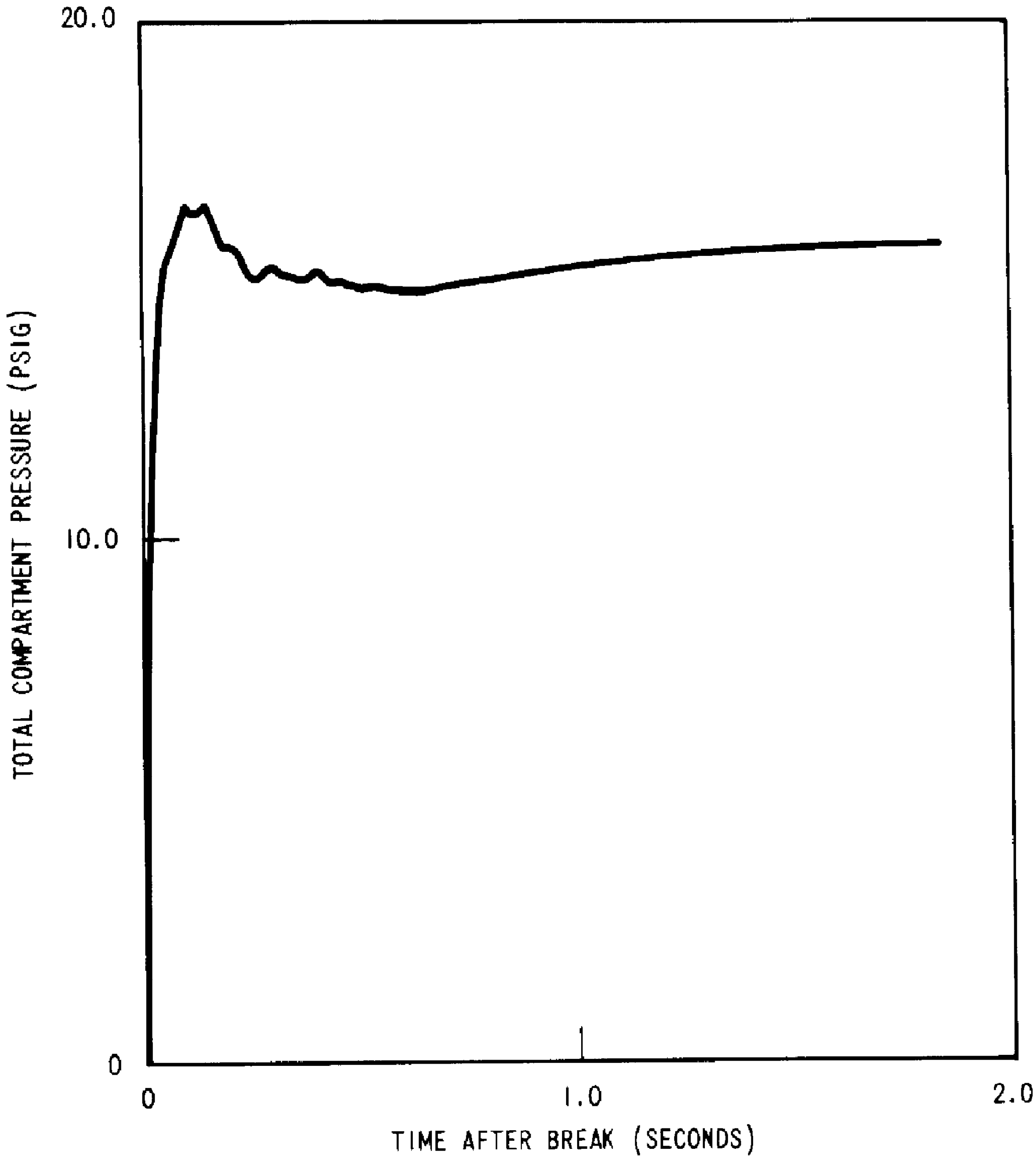


Figure 6-48. Reactor Cavity Analysis, Element 6

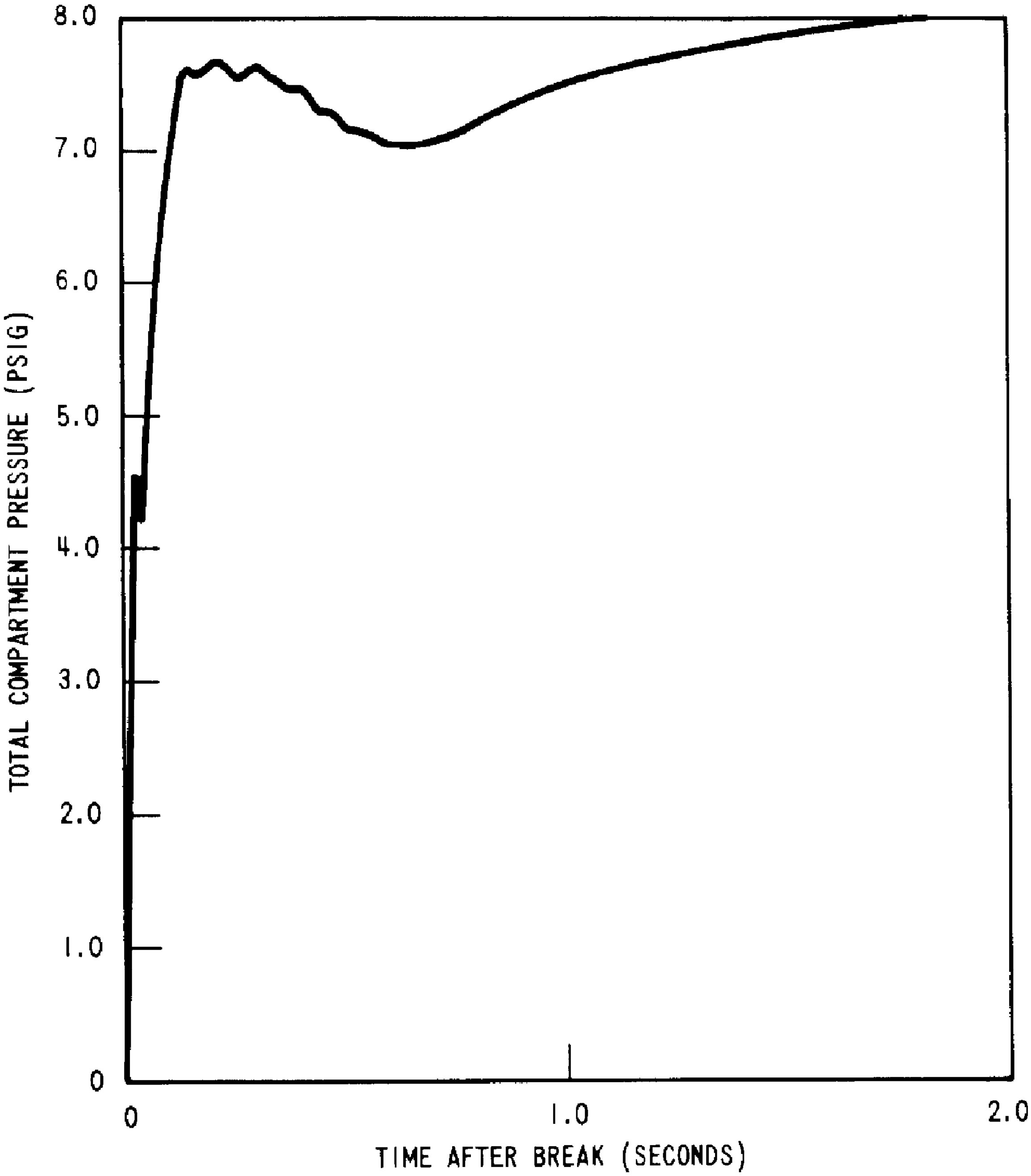


Figure 6-49. Reactor Cavity Analysis, Element 7

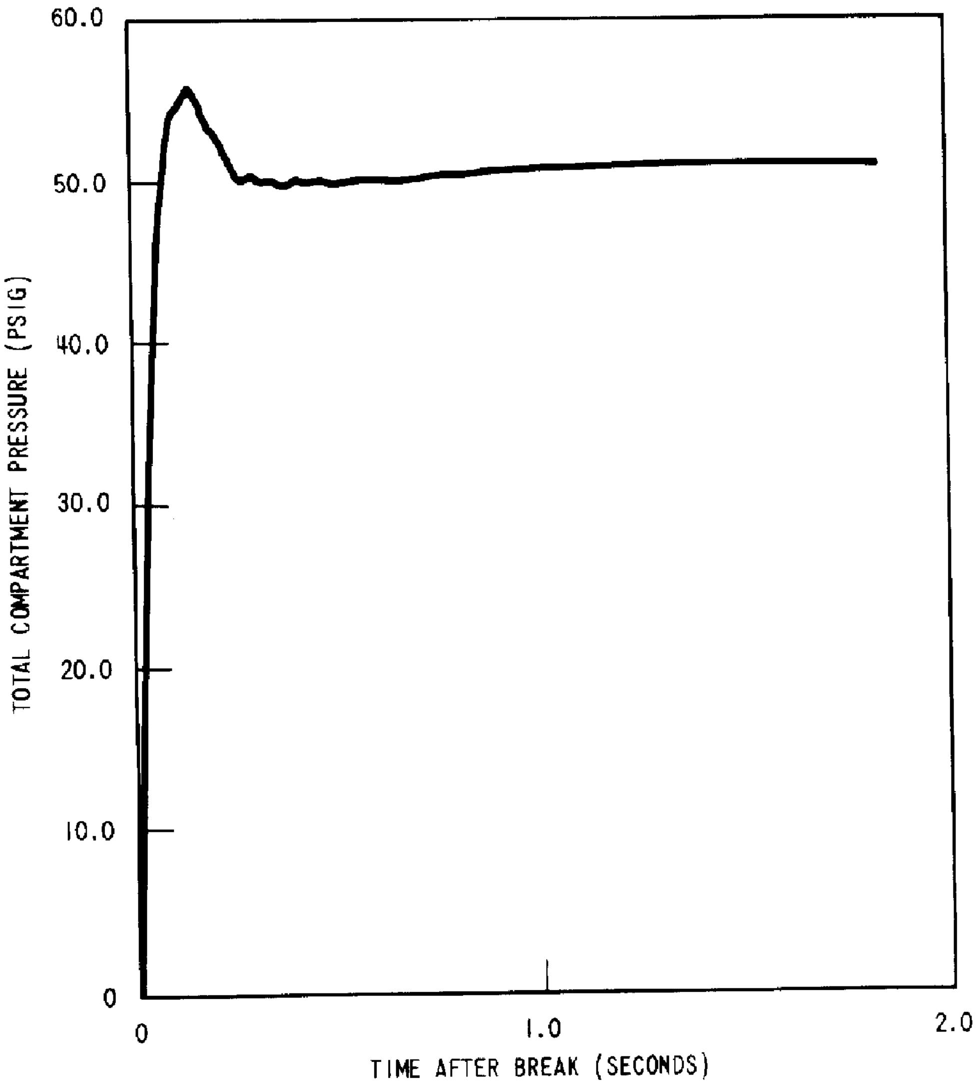


Figure 6-50. Reactor Cavity Analysis, Element 8

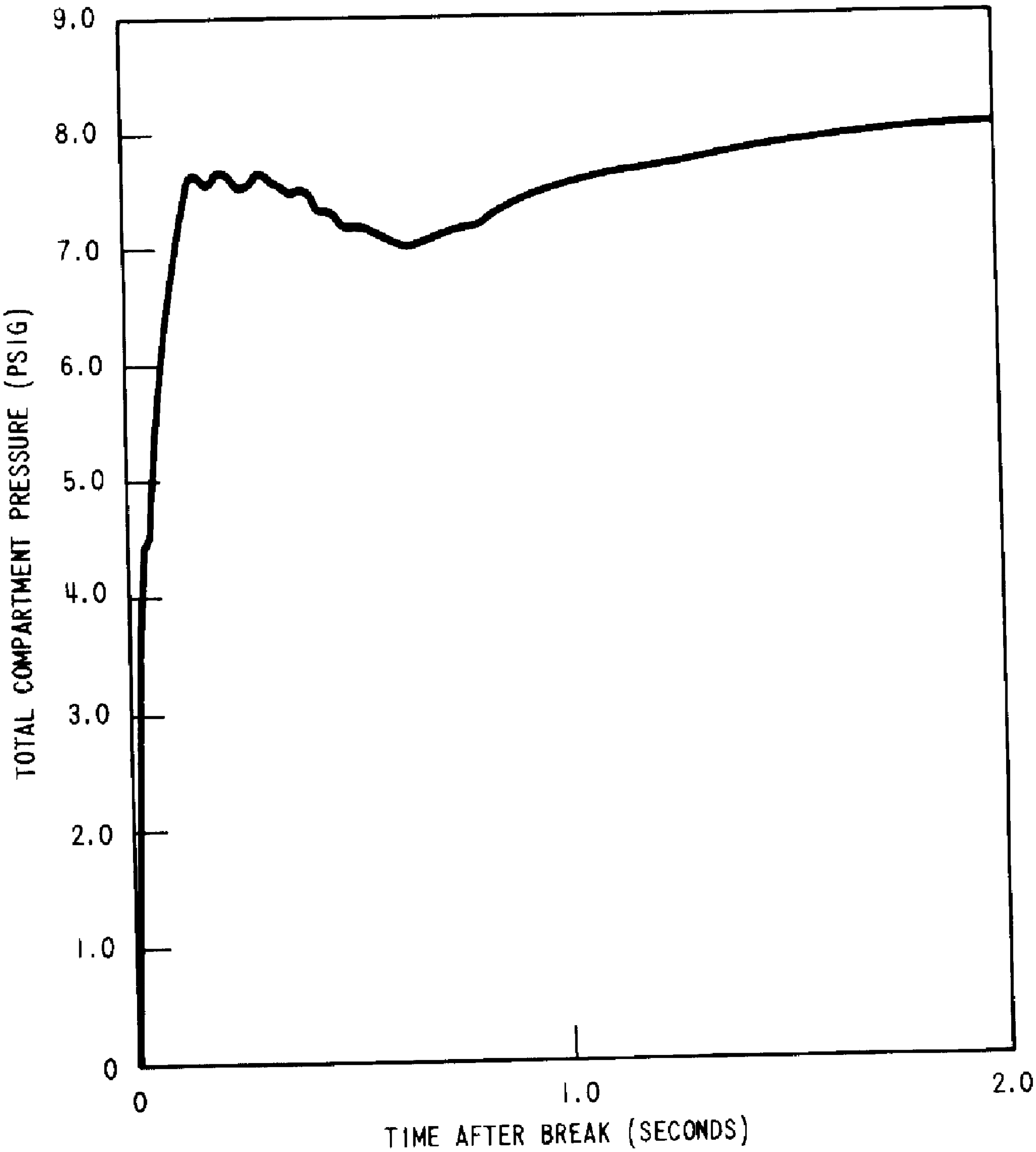


Figure 6-51. Reactor Cavity Analysis, Element 9

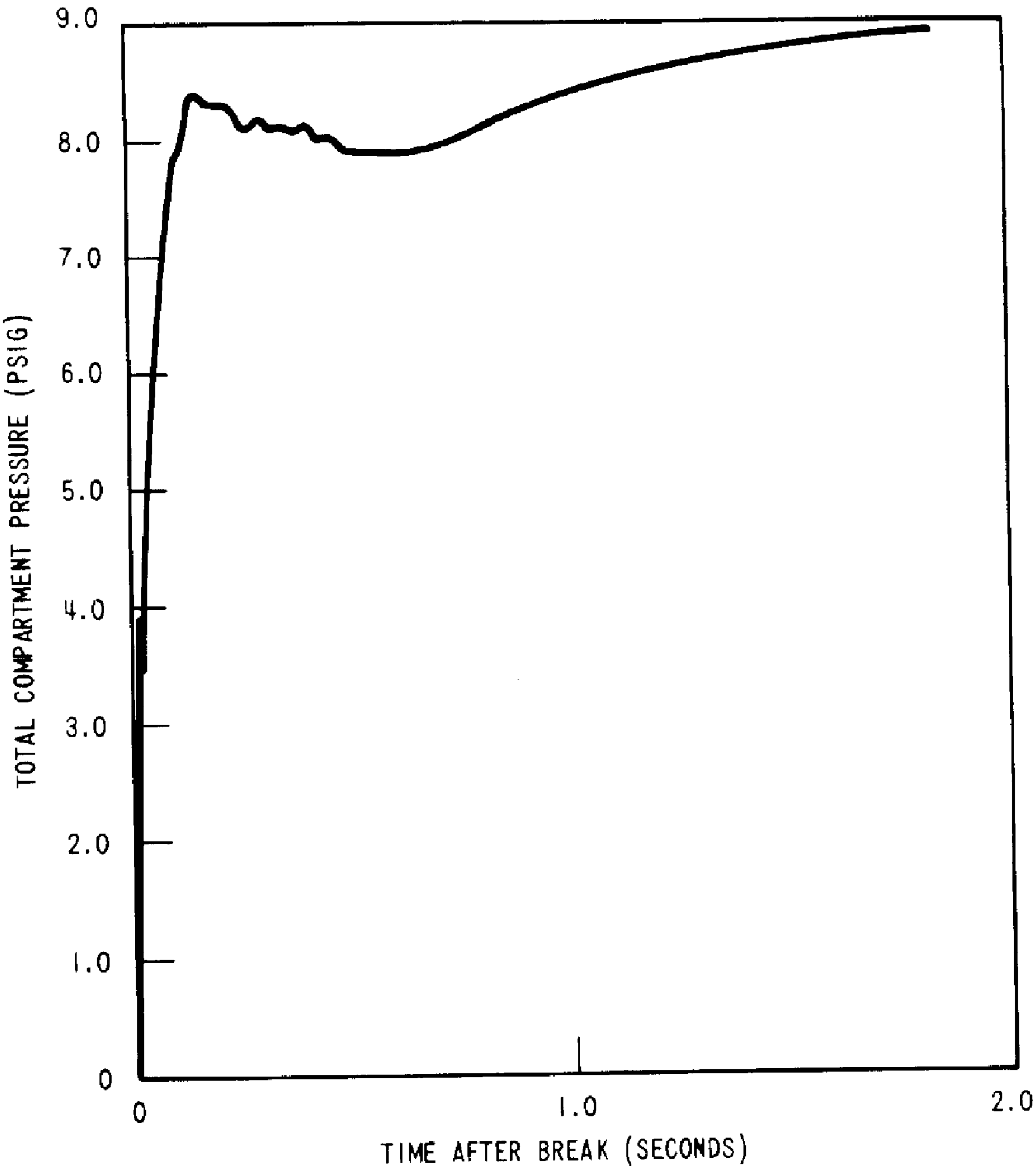


Figure 6-52. Reactor Cavity Analysis, Element 10

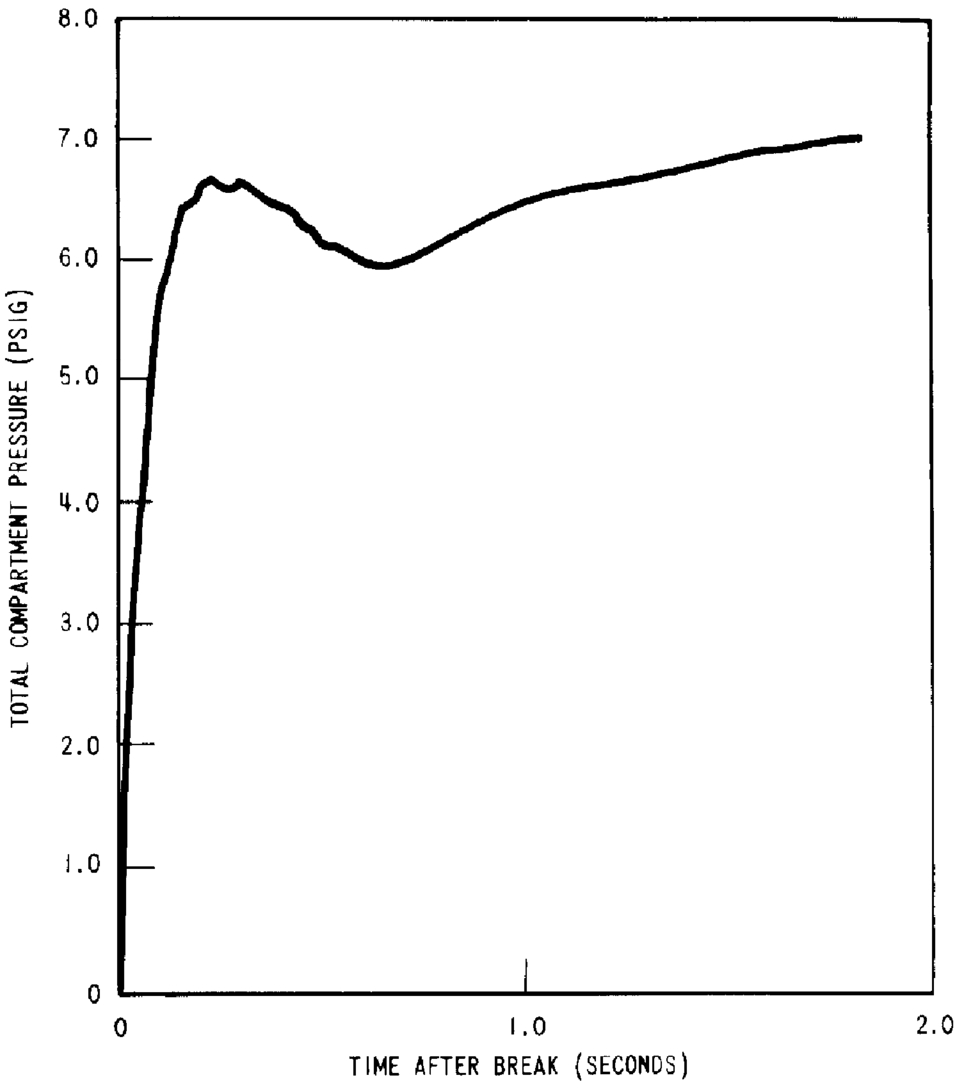


Figure 6-53. Reactor Cavity Analysis, Element 11

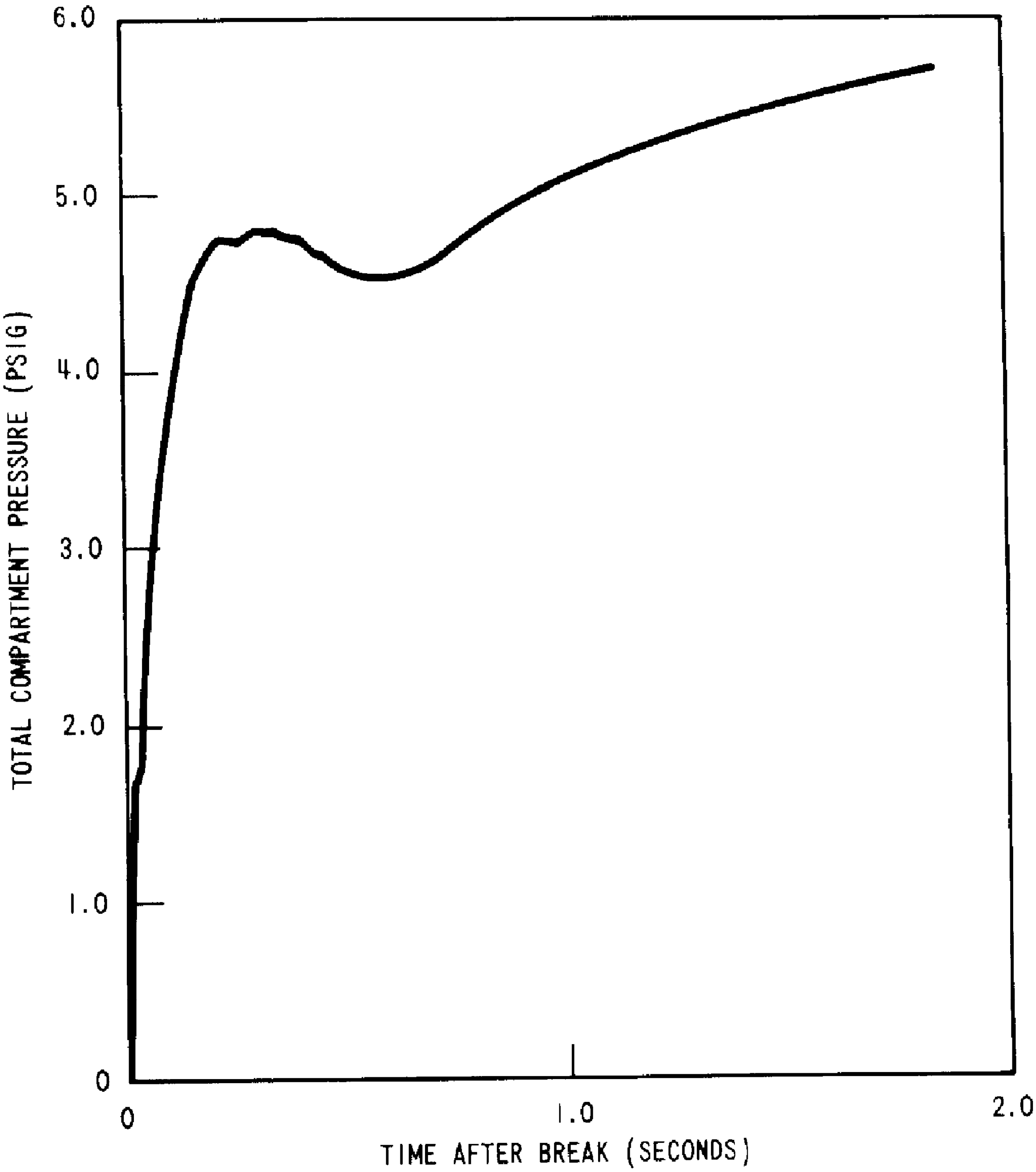


Figure 6-54. Reactor Cavity Analysis, Element 12

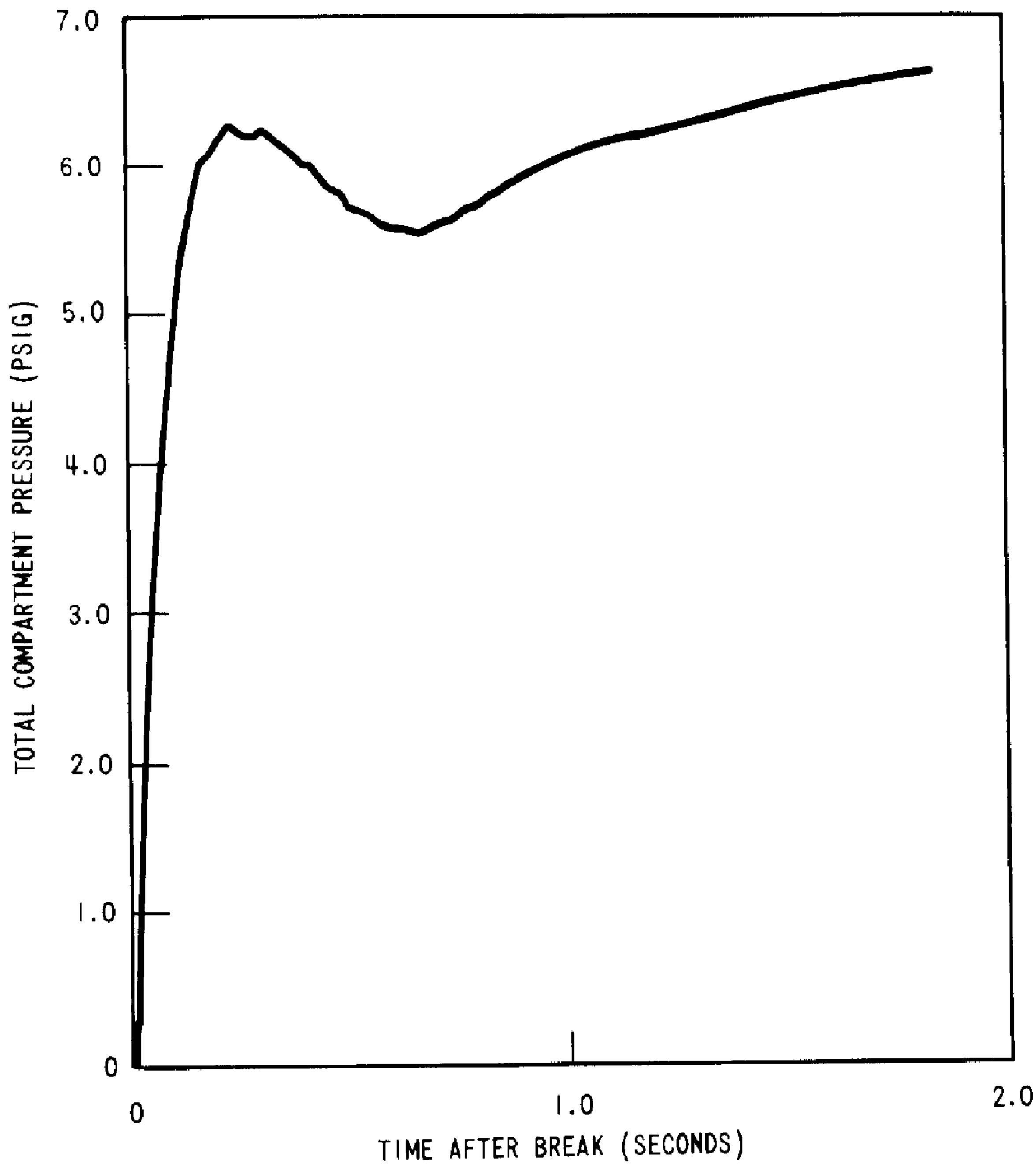


Figure 6-55. Reactor Cavity Analysis, Element 13

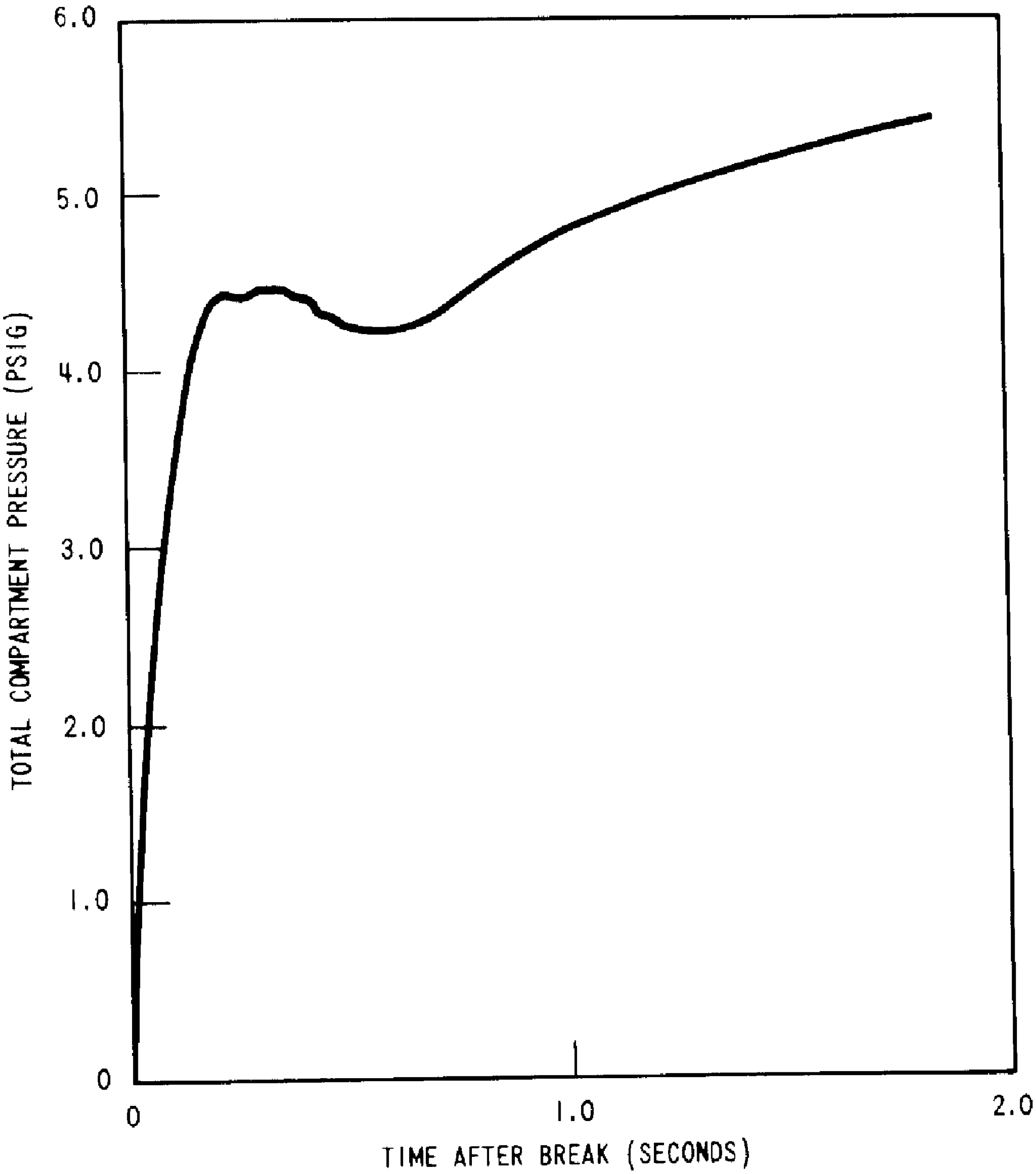


Figure 6-56. Reactor Cavity Analysis, Element 14

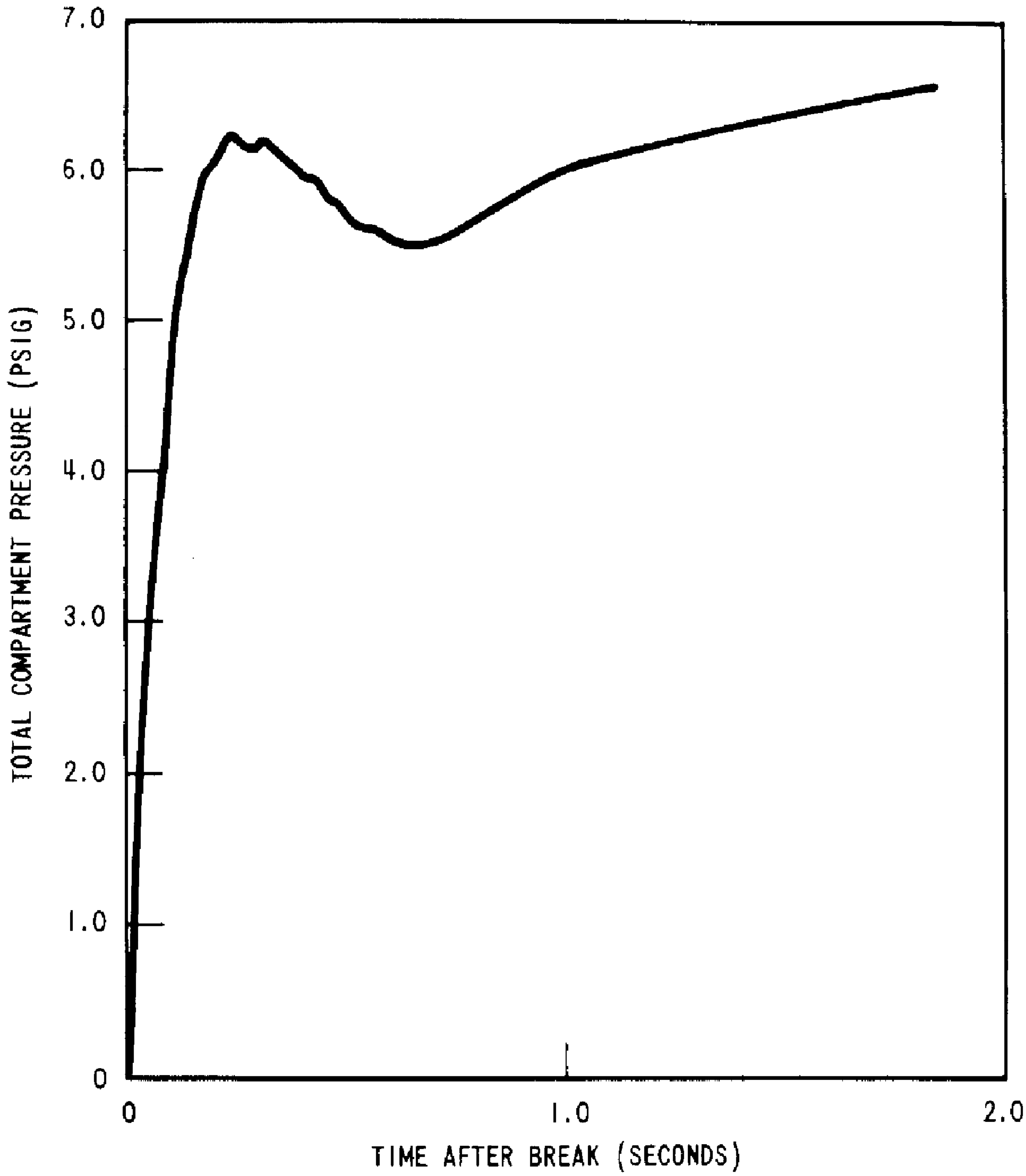


Figure 6-57. Reactor Cavity Analysis, Element 15

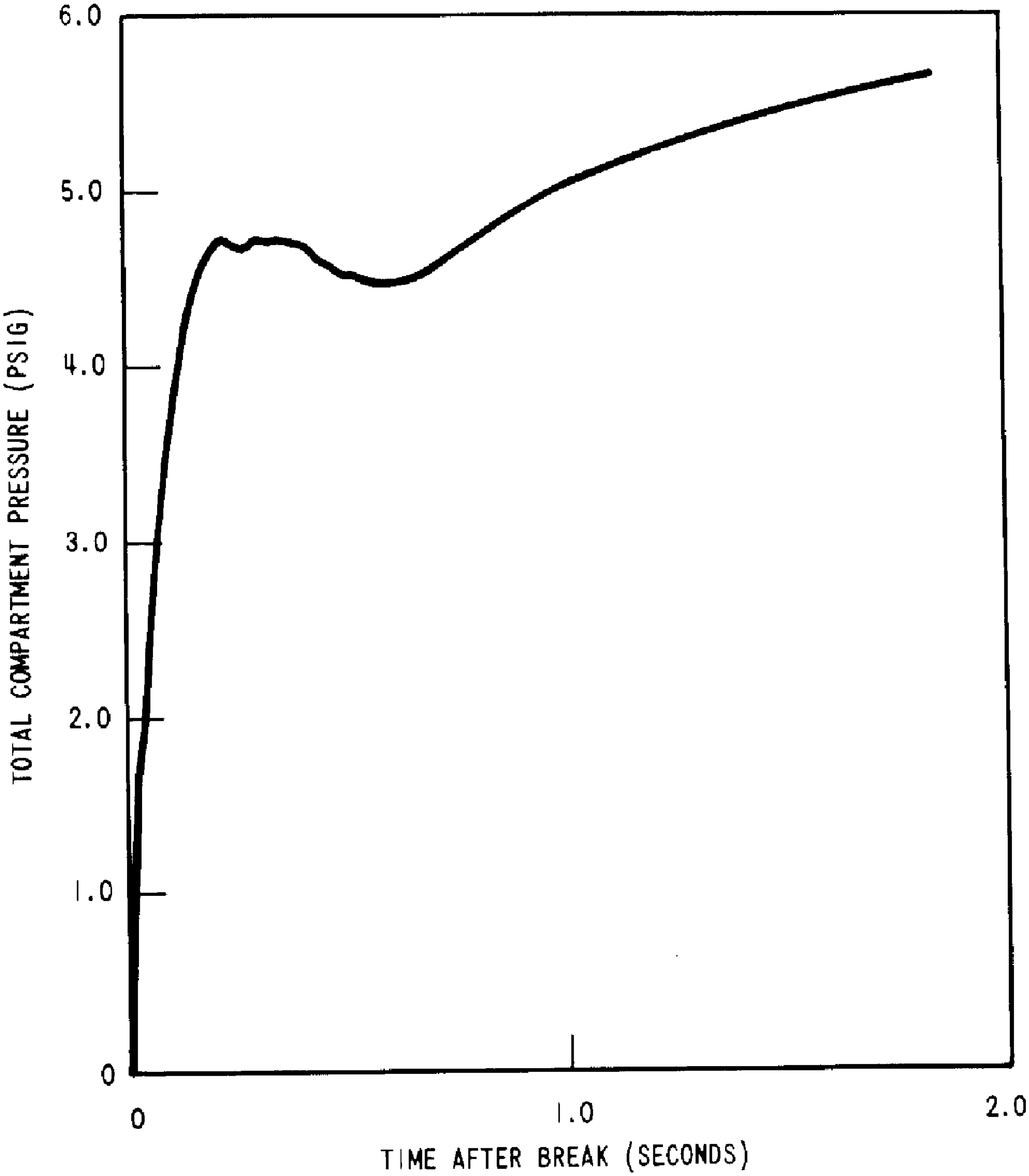


Figure 6-58. Reactor Cavity Analysis, Element 16

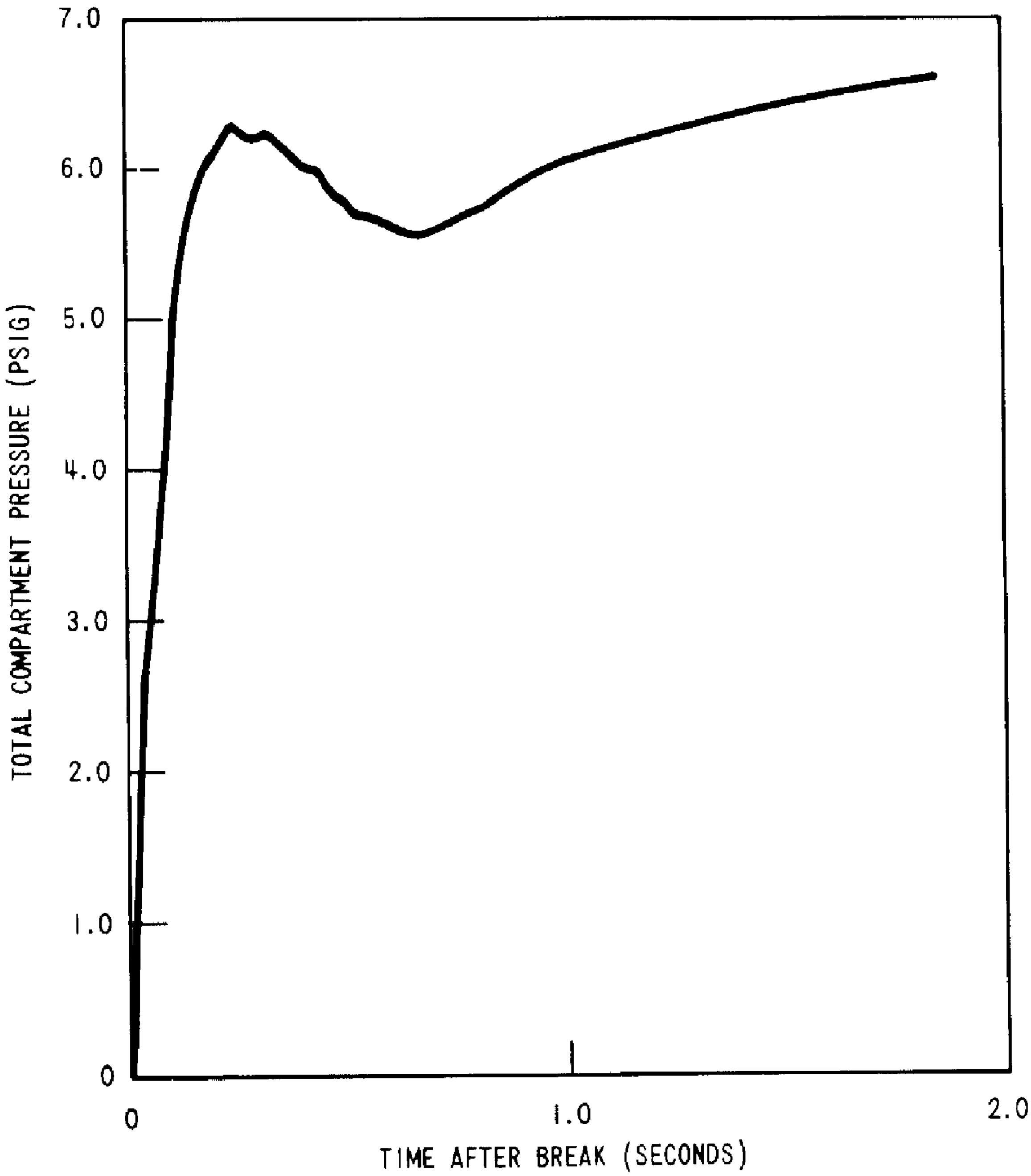


Figure 6-59. Reactor Cavity Analysis, Element 17

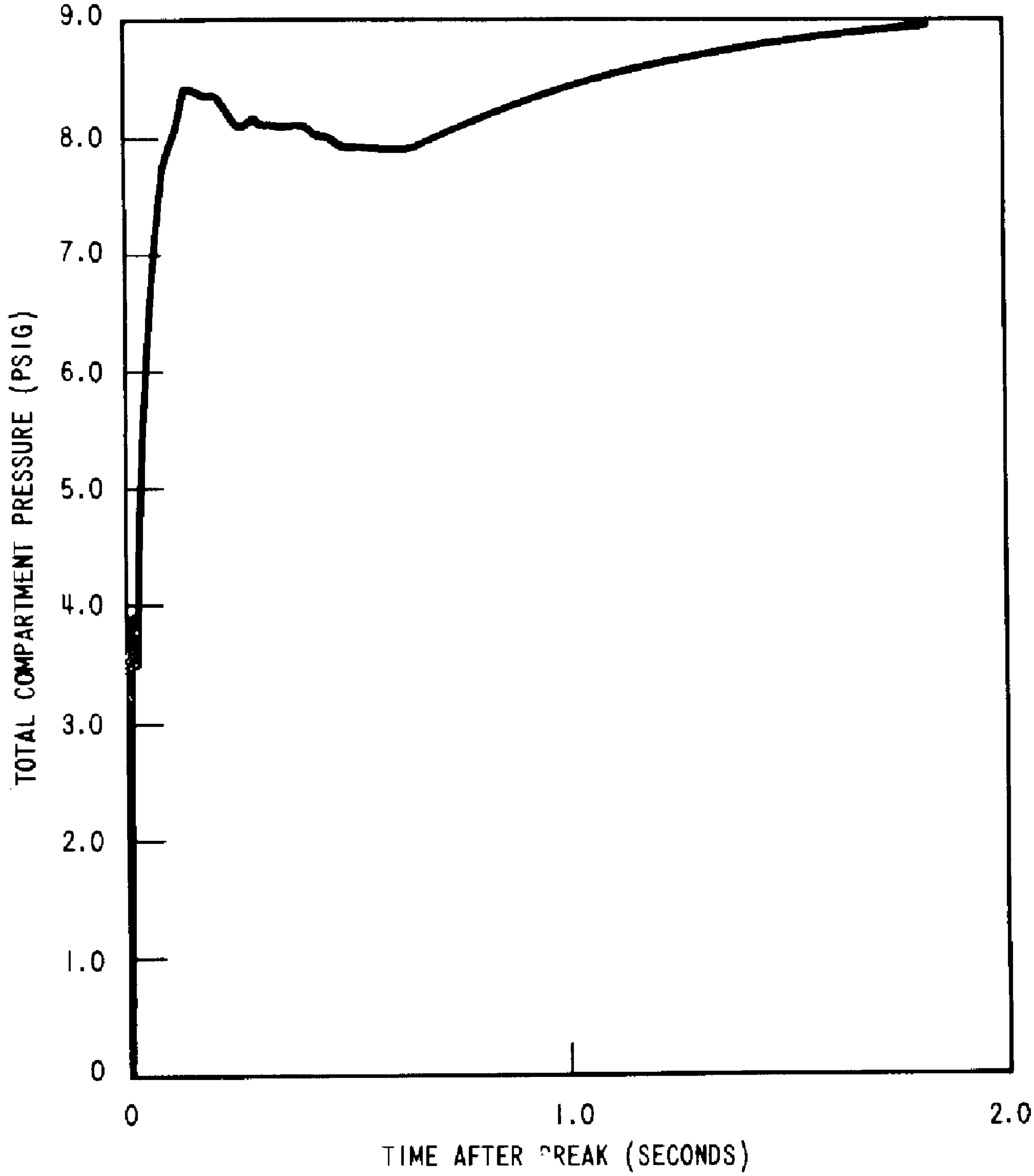


Figure 6-60. Reactor Cavity Analysis, Element 18

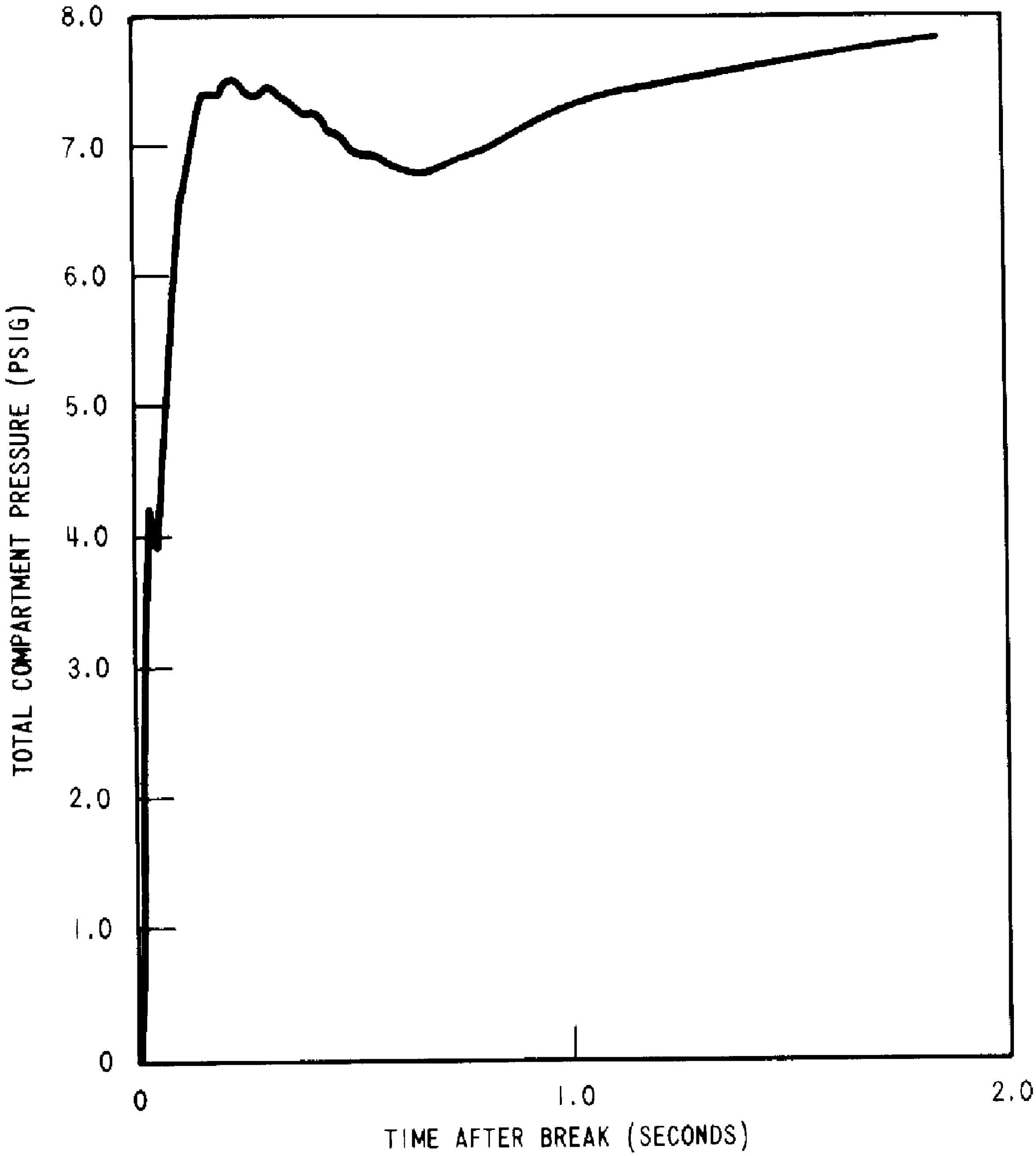


Figure 6-61. Reactor Cavity Analysis, Element 19

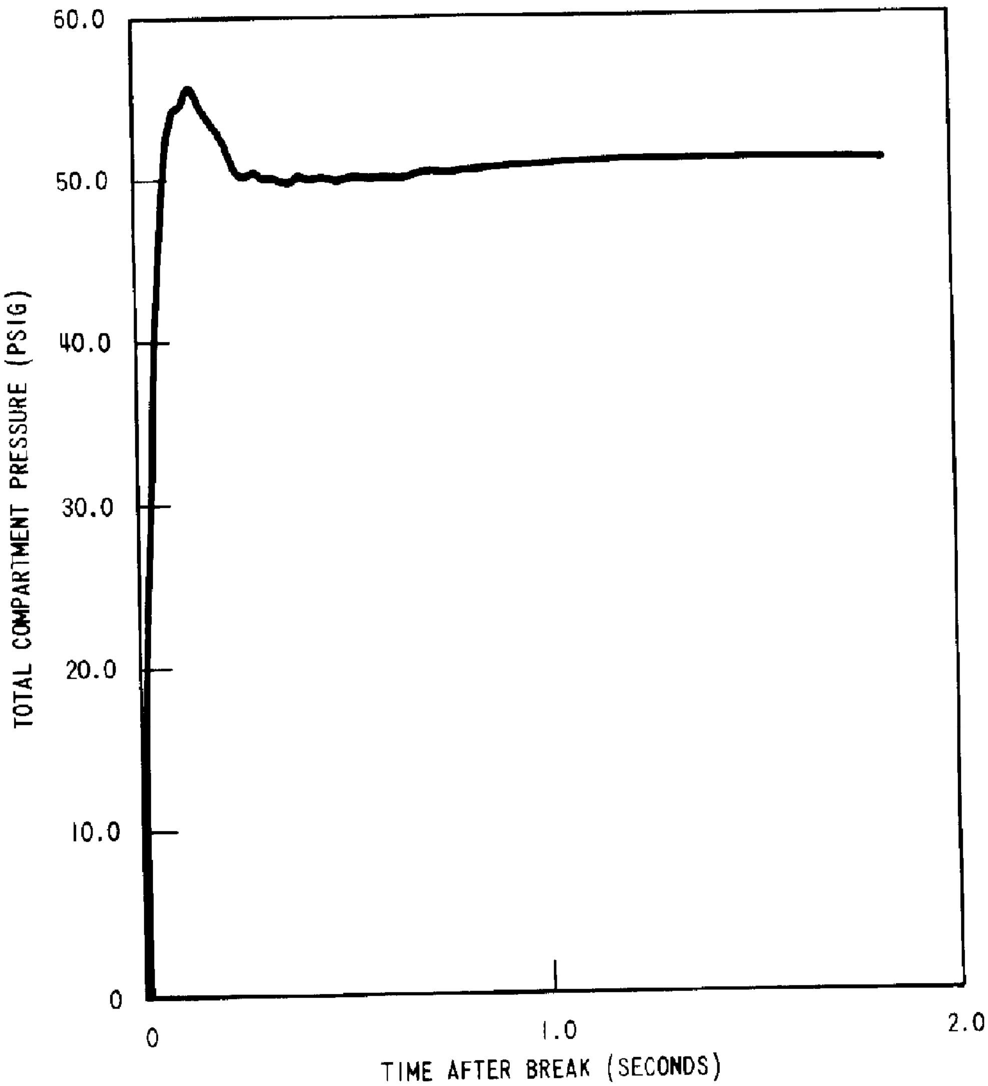


Figure 6-62. Reactor Cavity Analysis, Element 20

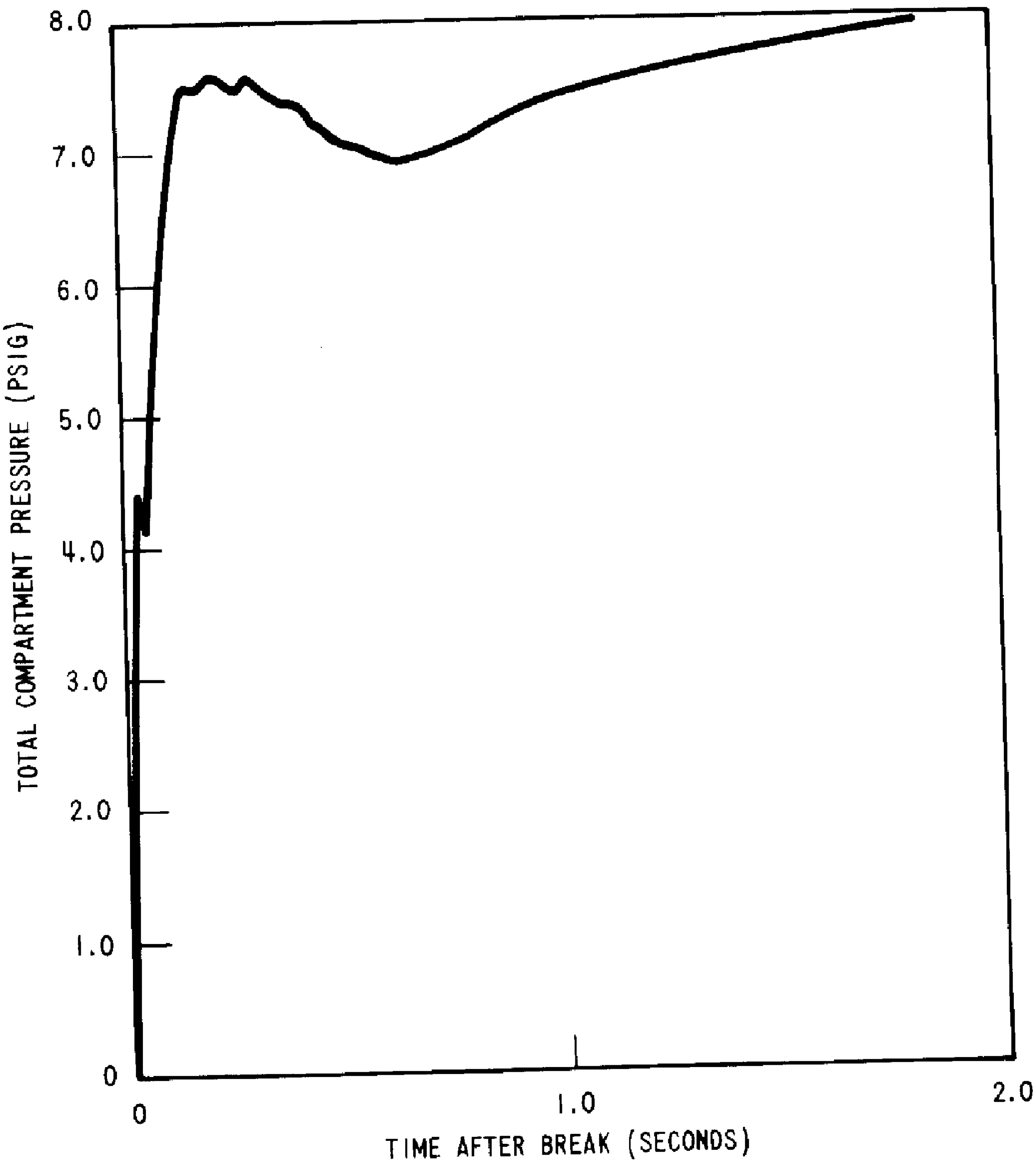


Figure 6-63. Reactor Cavity Analysis, Element 32

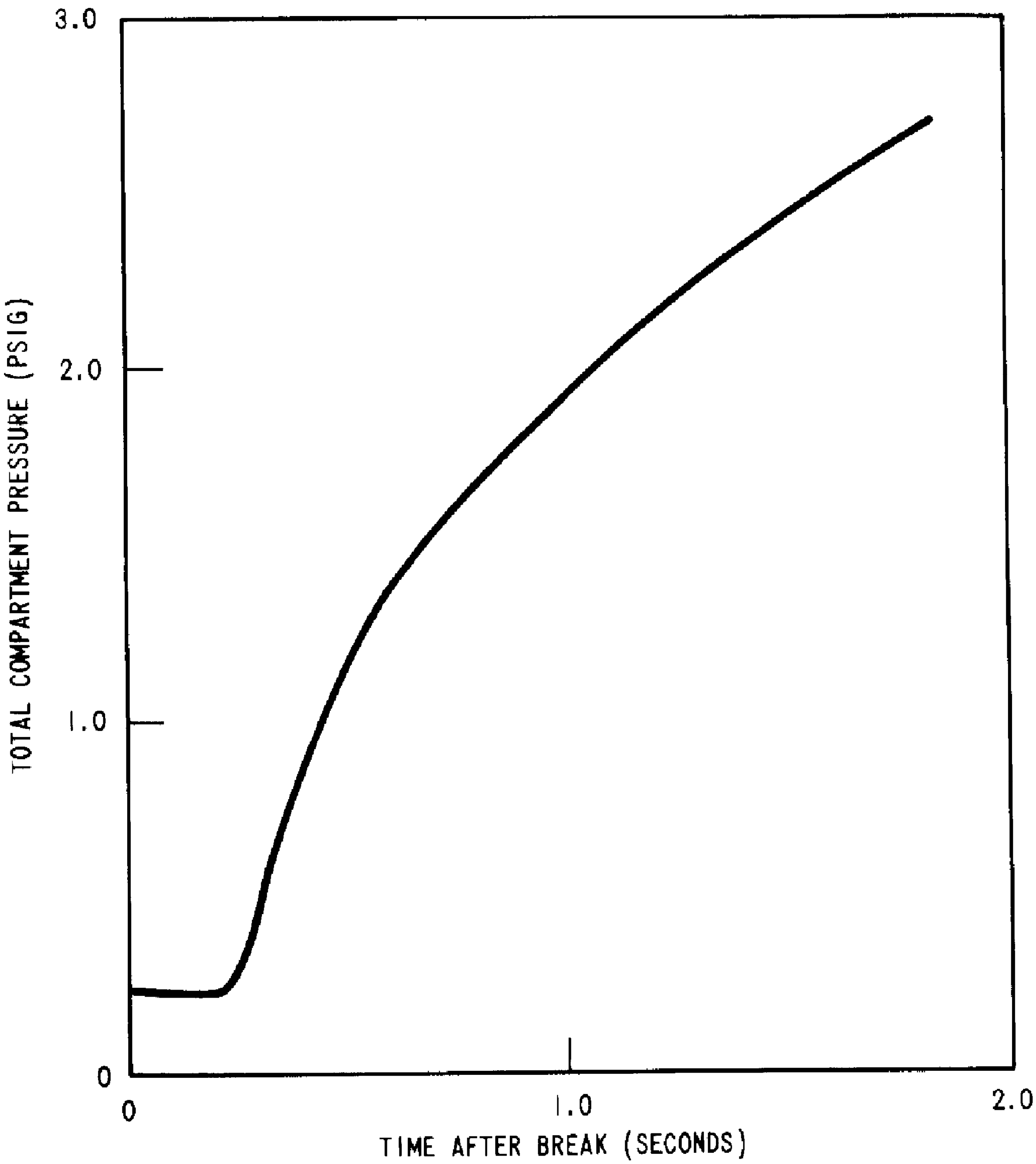


Figure 6-64. Reactor Cavity Analysis, Element 33

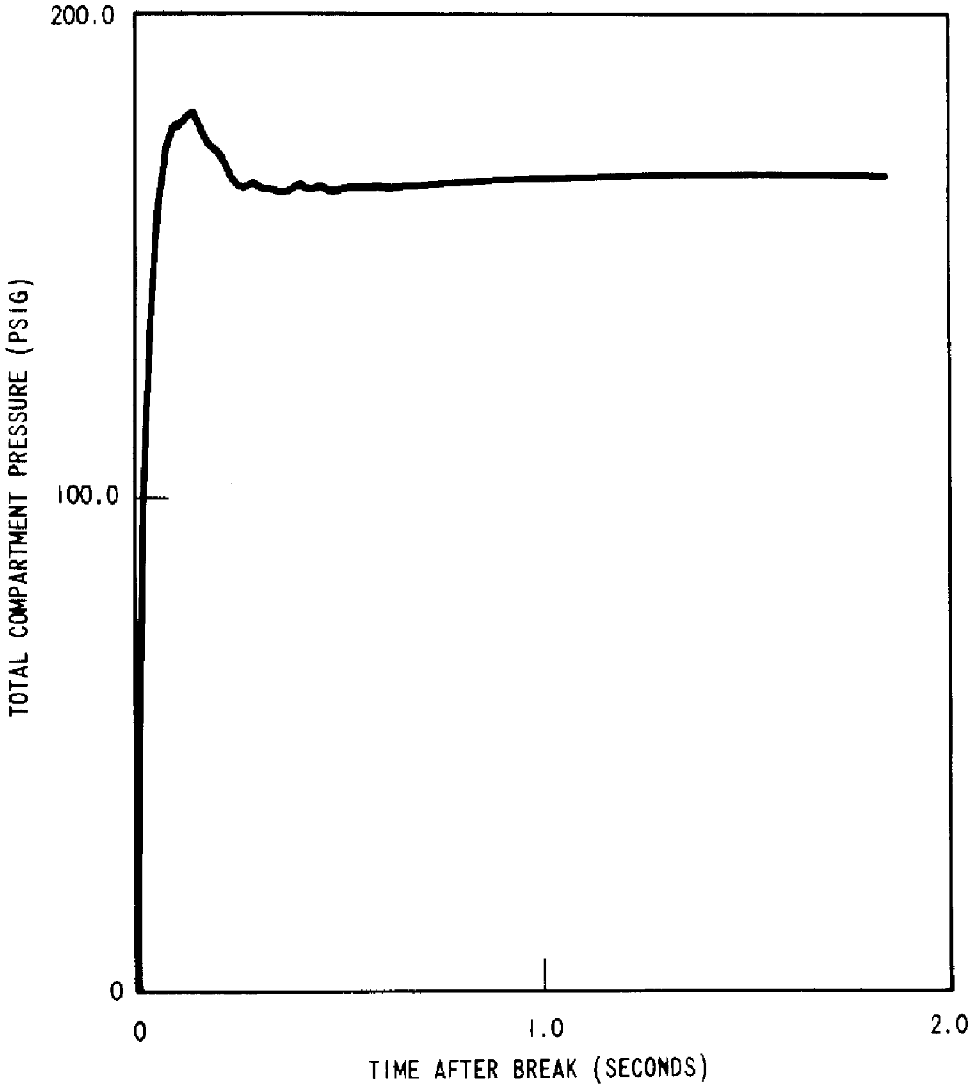


Figure 6-65. Reactor Cavity Analysis, Element 34

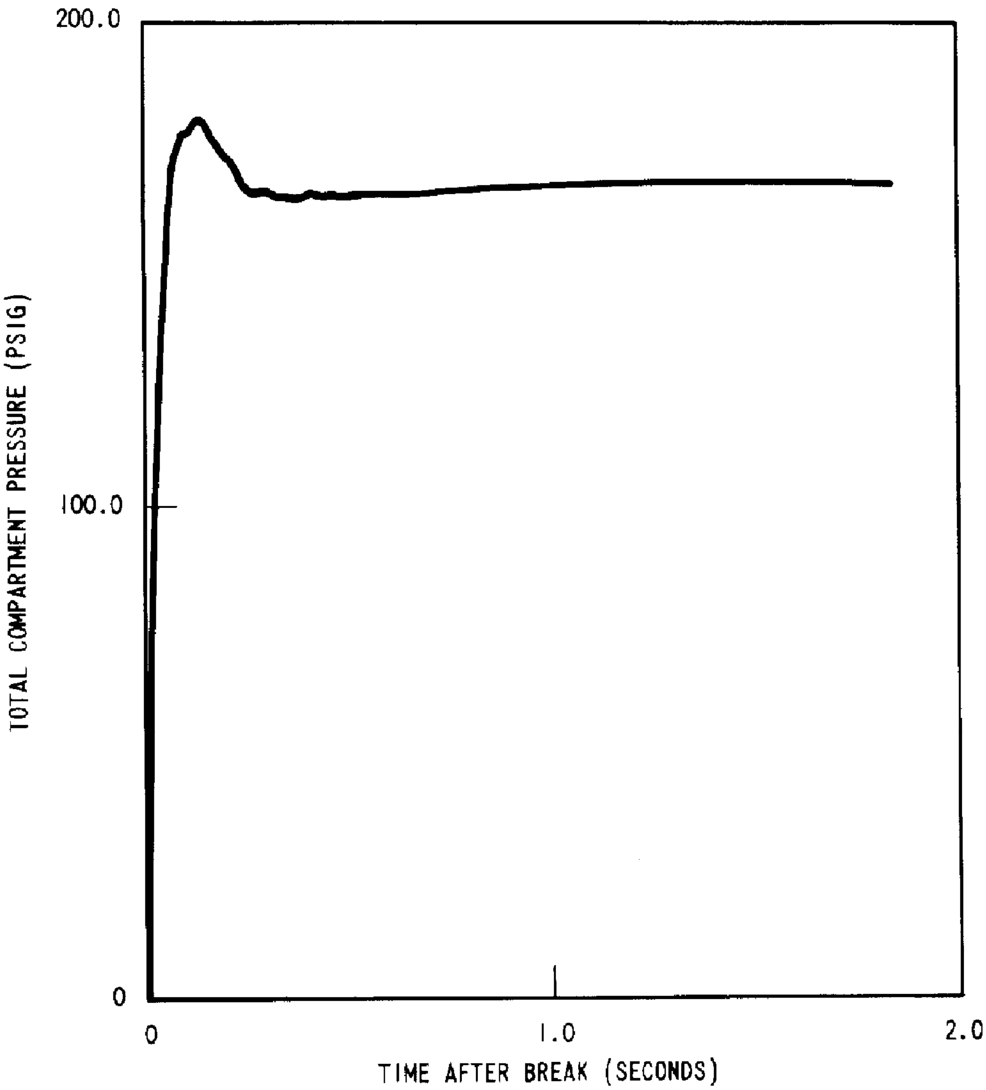


Figure 6-66. Reactor Cavity Analysis, Element 35

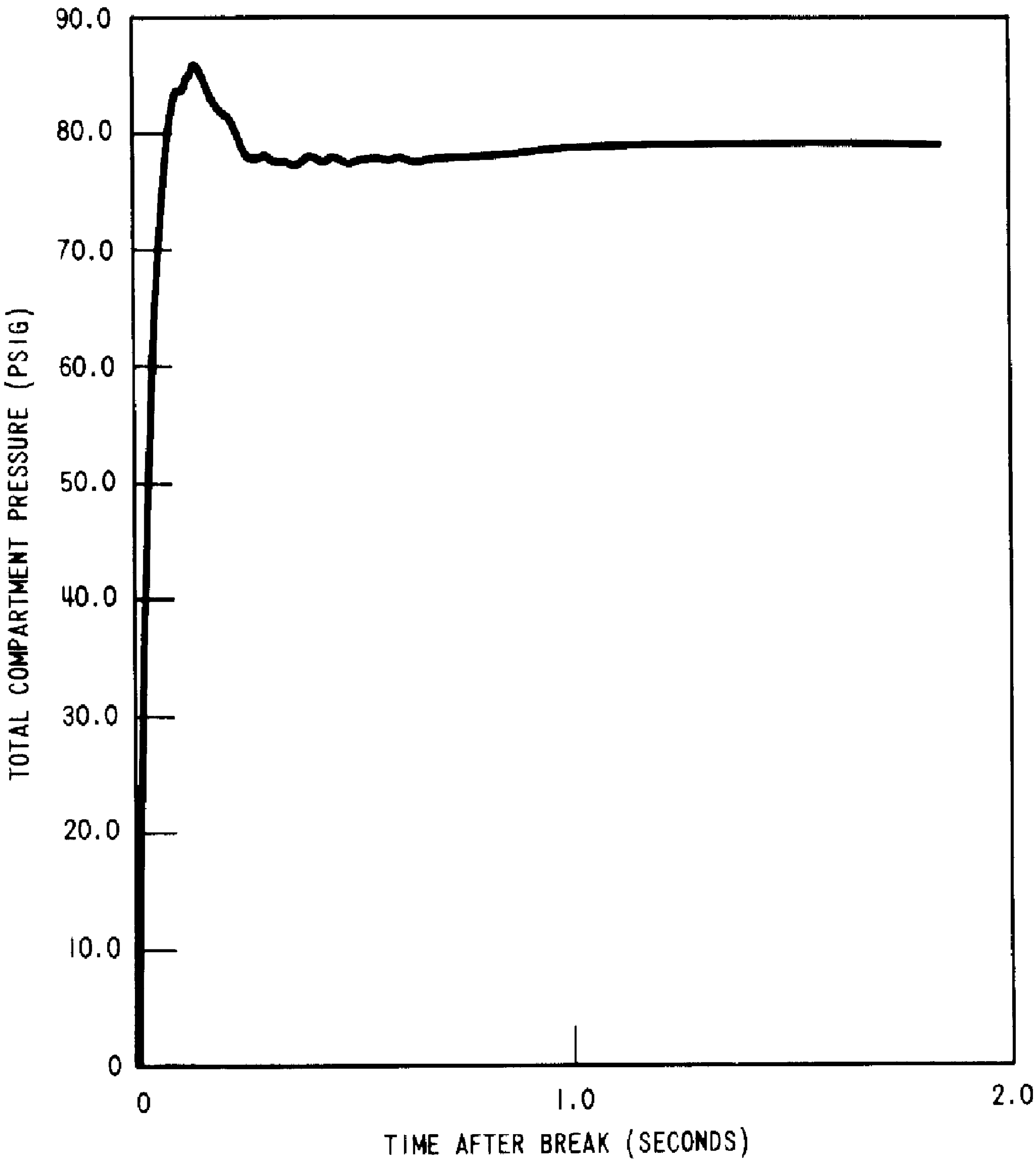


Figure 6-67. Reactor Cavity Analysis, Element 36

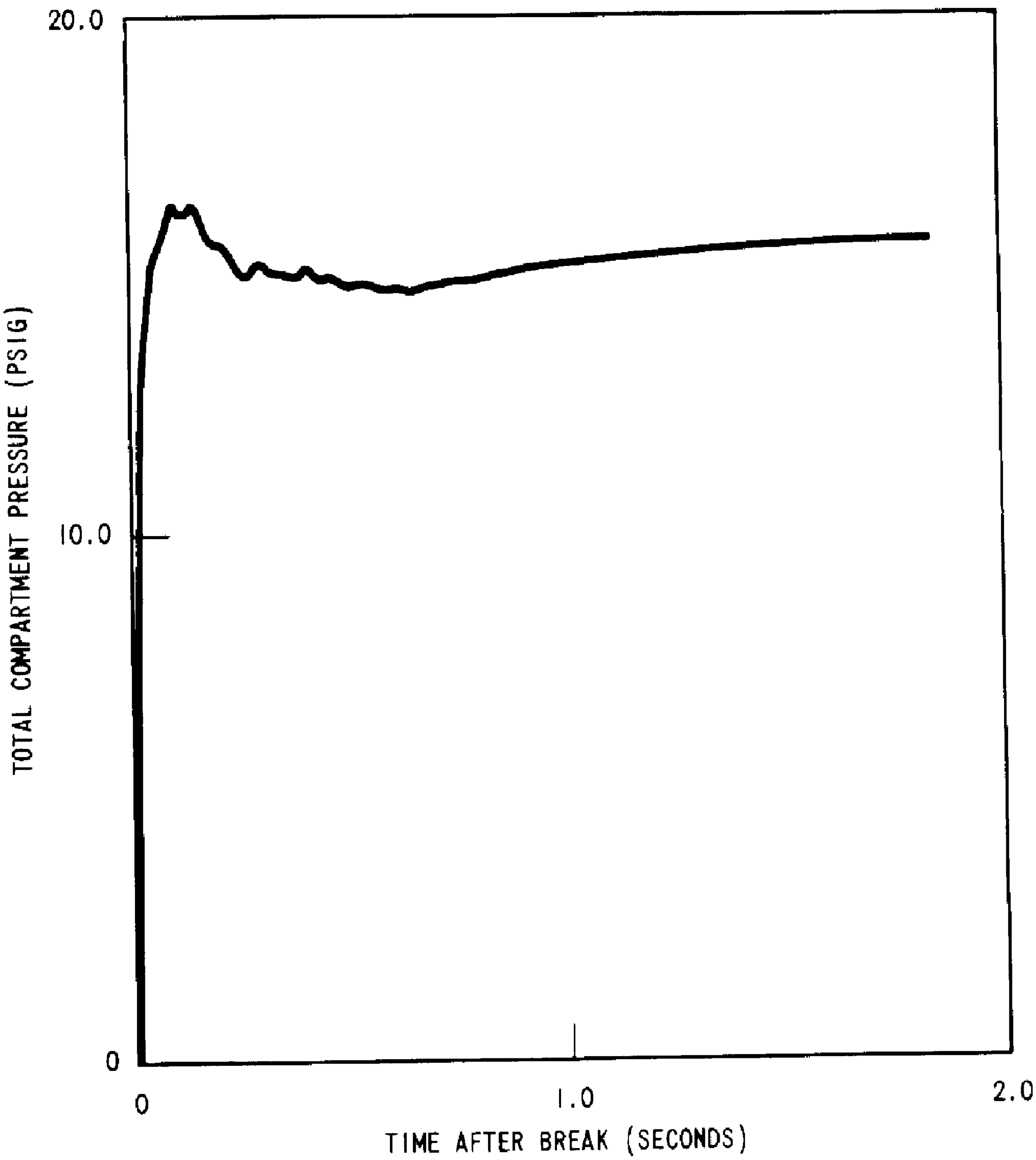


Figure 6-68. Reactor Cavity Analysis, Element 37

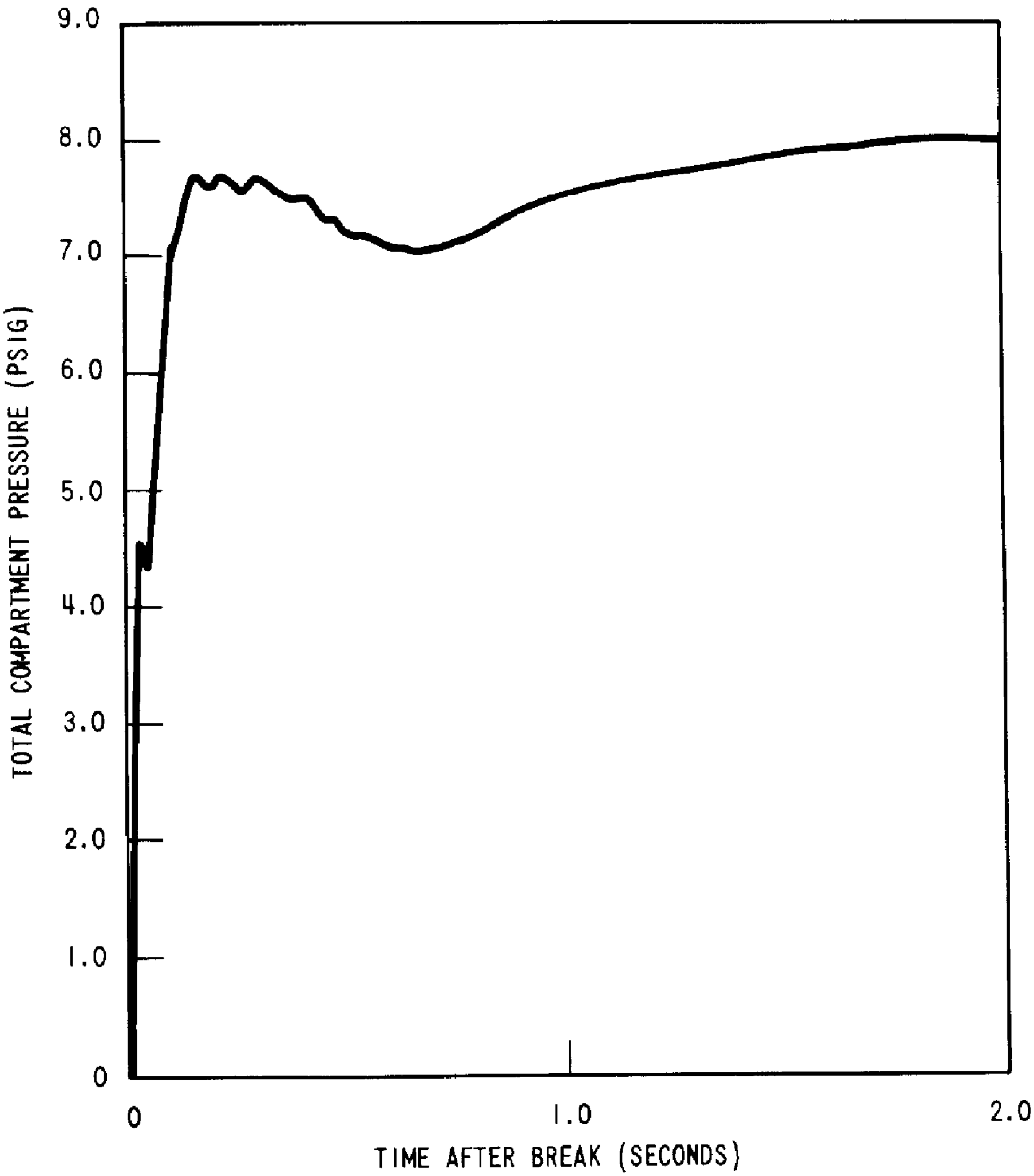


Figure 6-69. Reactor Cavity Analysis, Element 38

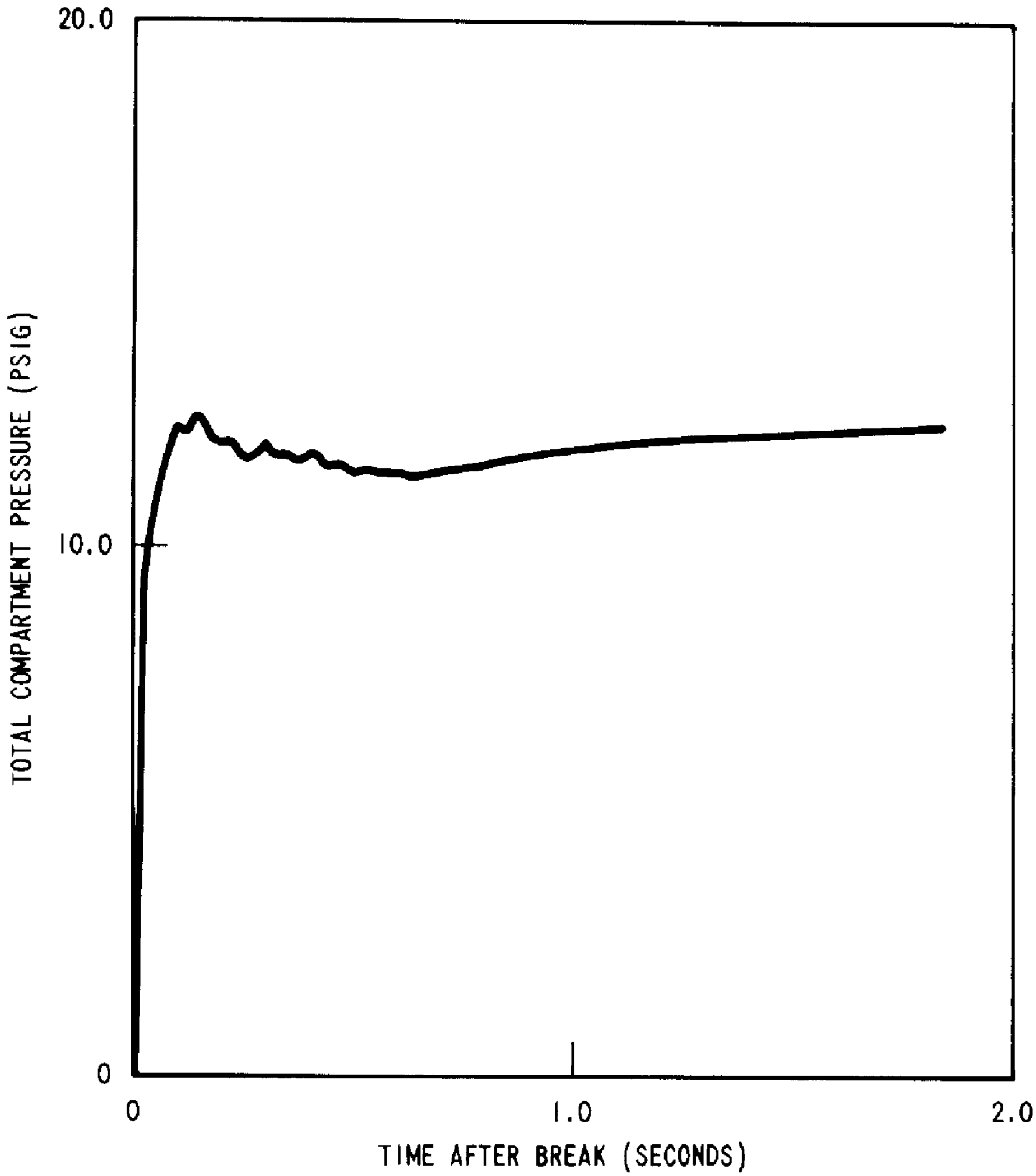


Figure 6-70. Reactor Cavity Analysis, Element 39

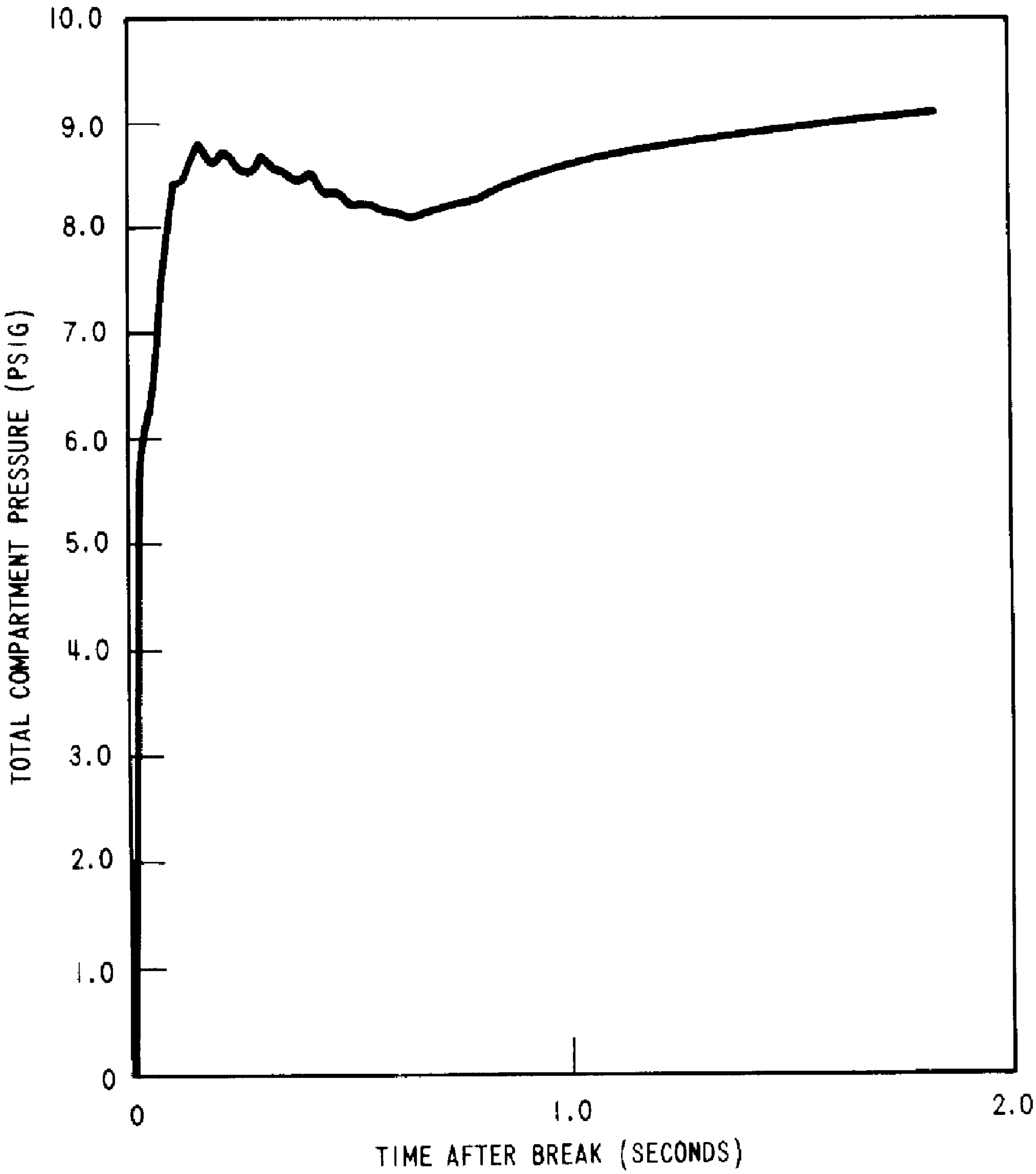


Figure 6-71. Reactor Cavity Analysis, Element 40

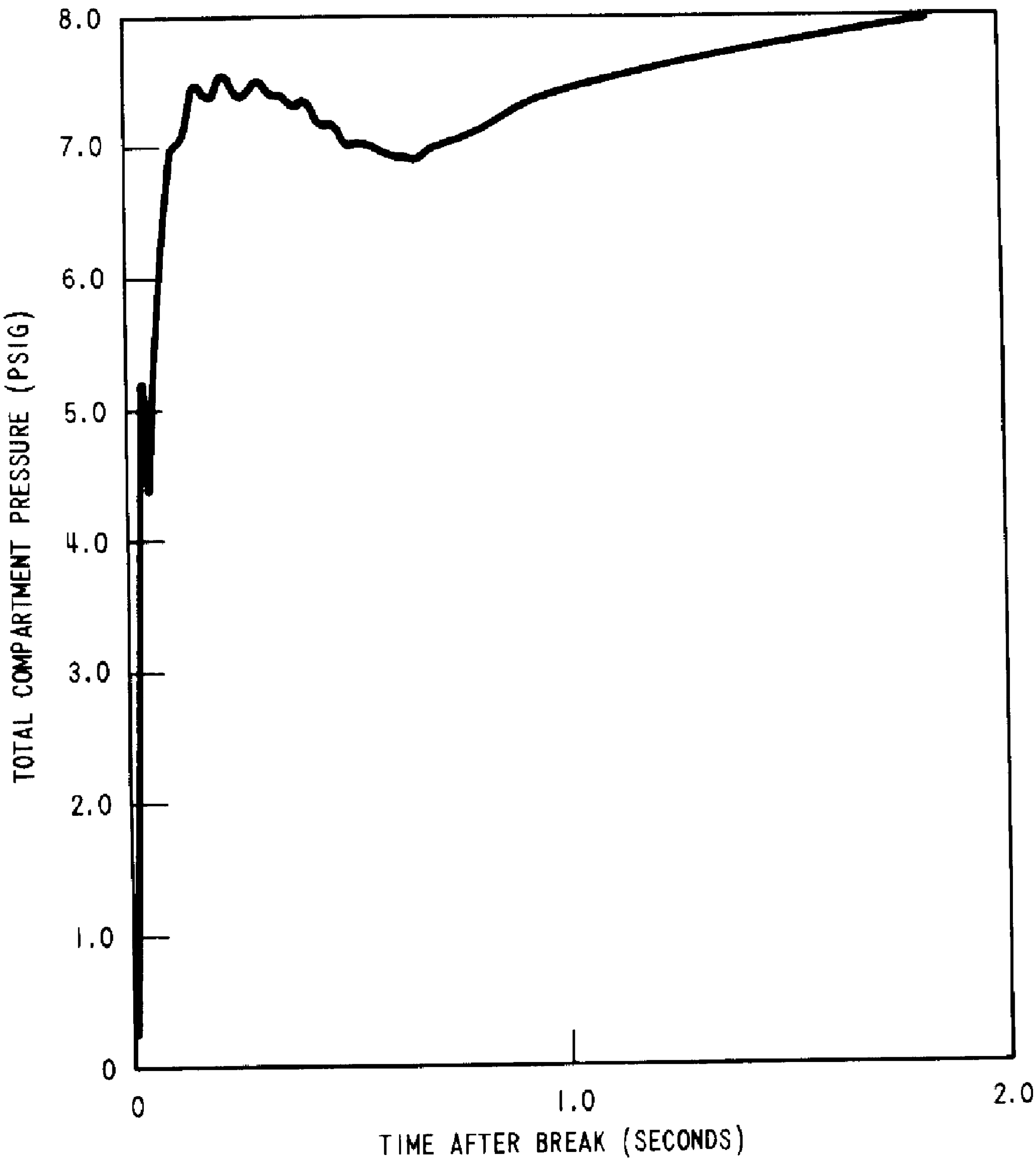


Figure 6-72. Reactor Cavity Analysis, Element 41

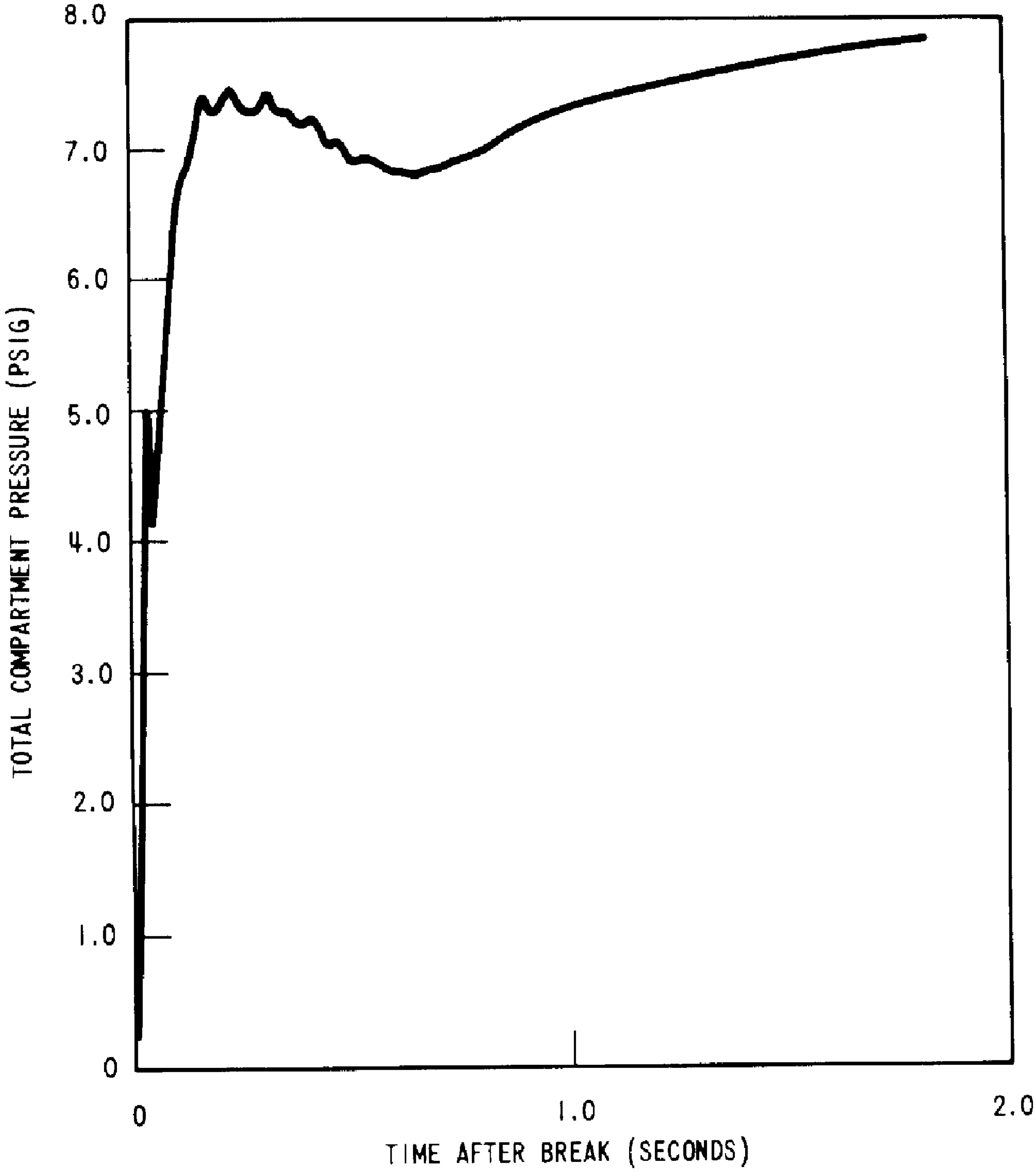


Figure 6-73. Reactor Cavity Analysis, Element 42

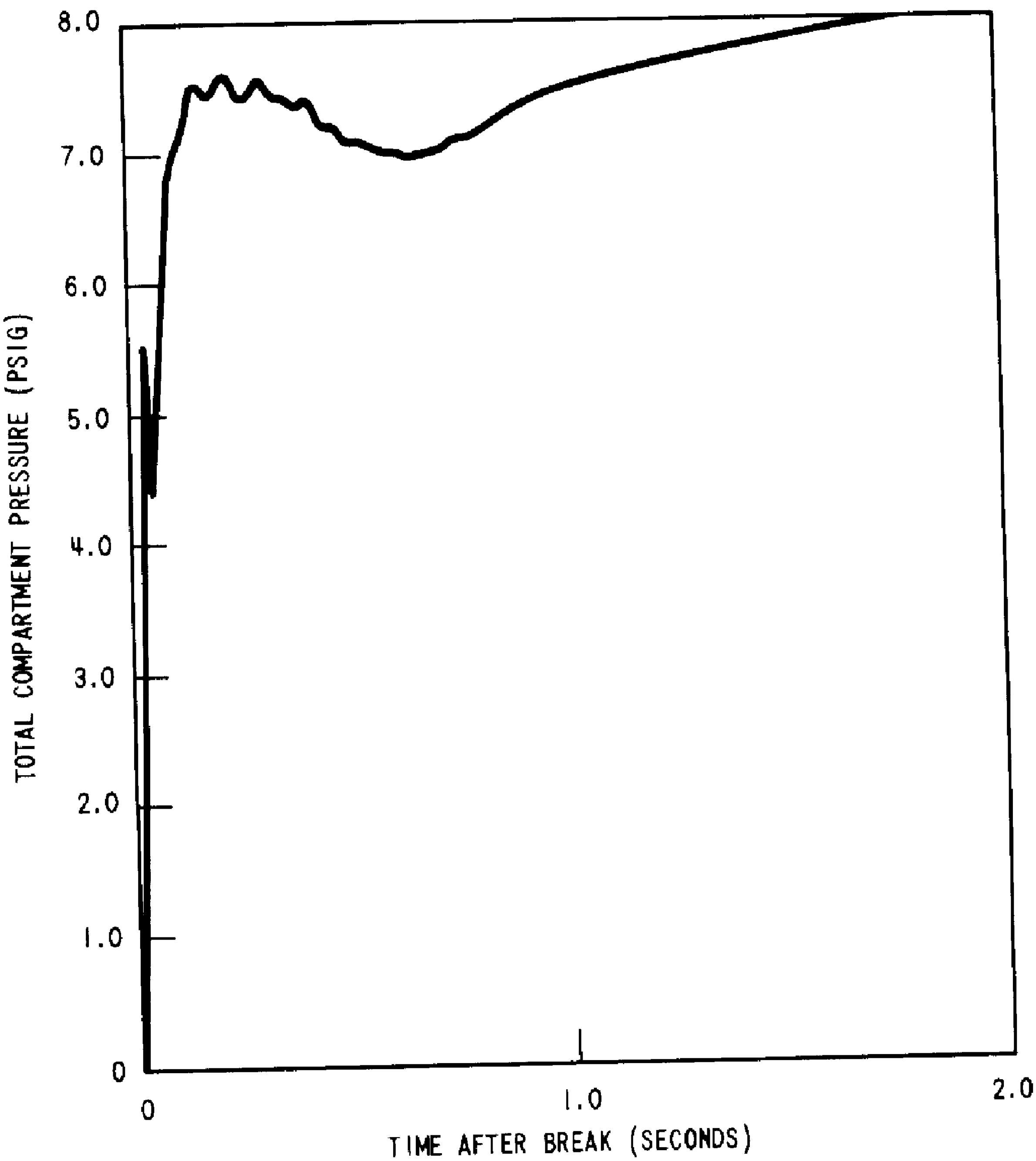


Figure 6-74. Reactor Cavity Analysis, Element 43

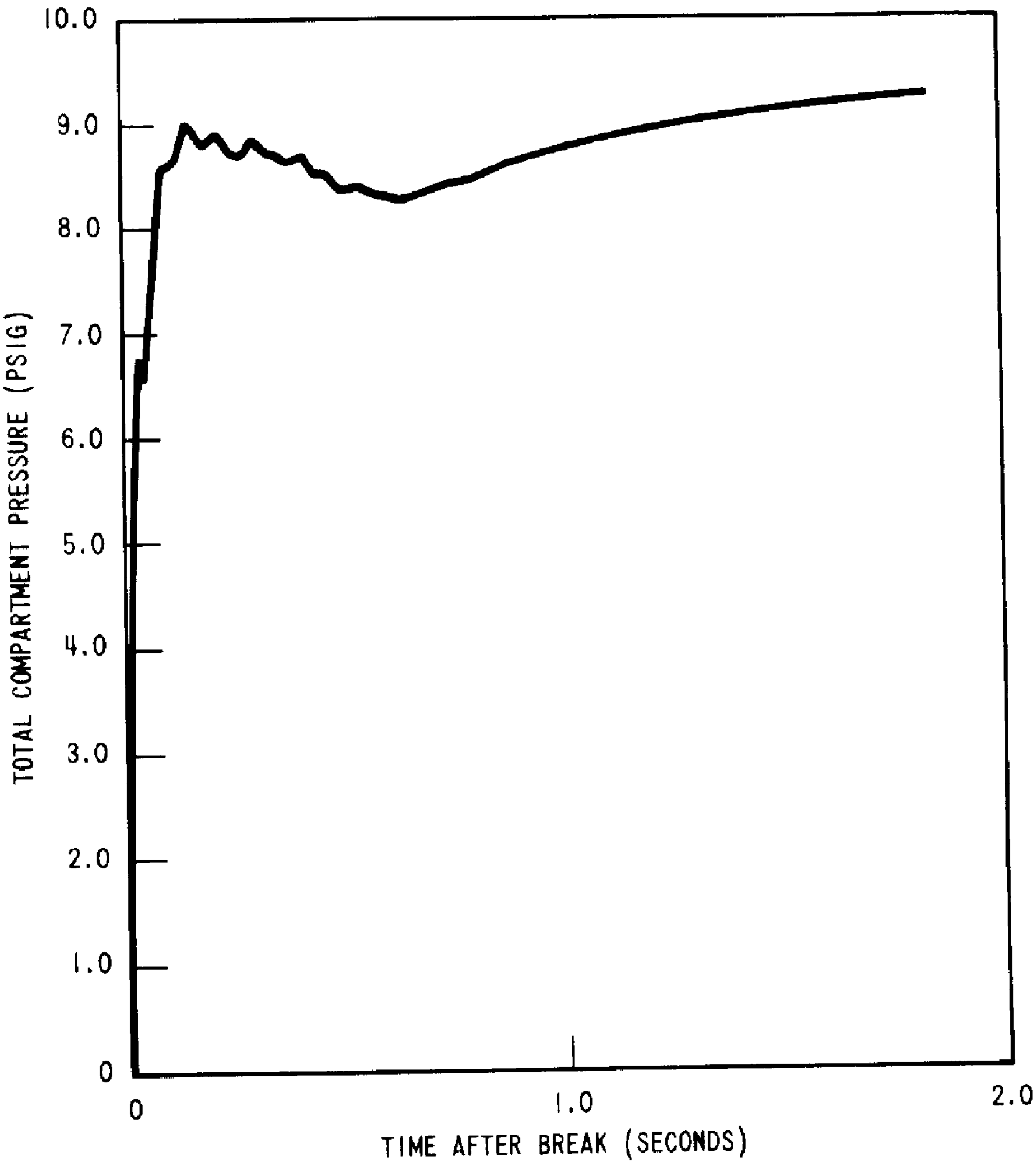


Figure 6-75. Reactor Cavity Analysis, Element 44

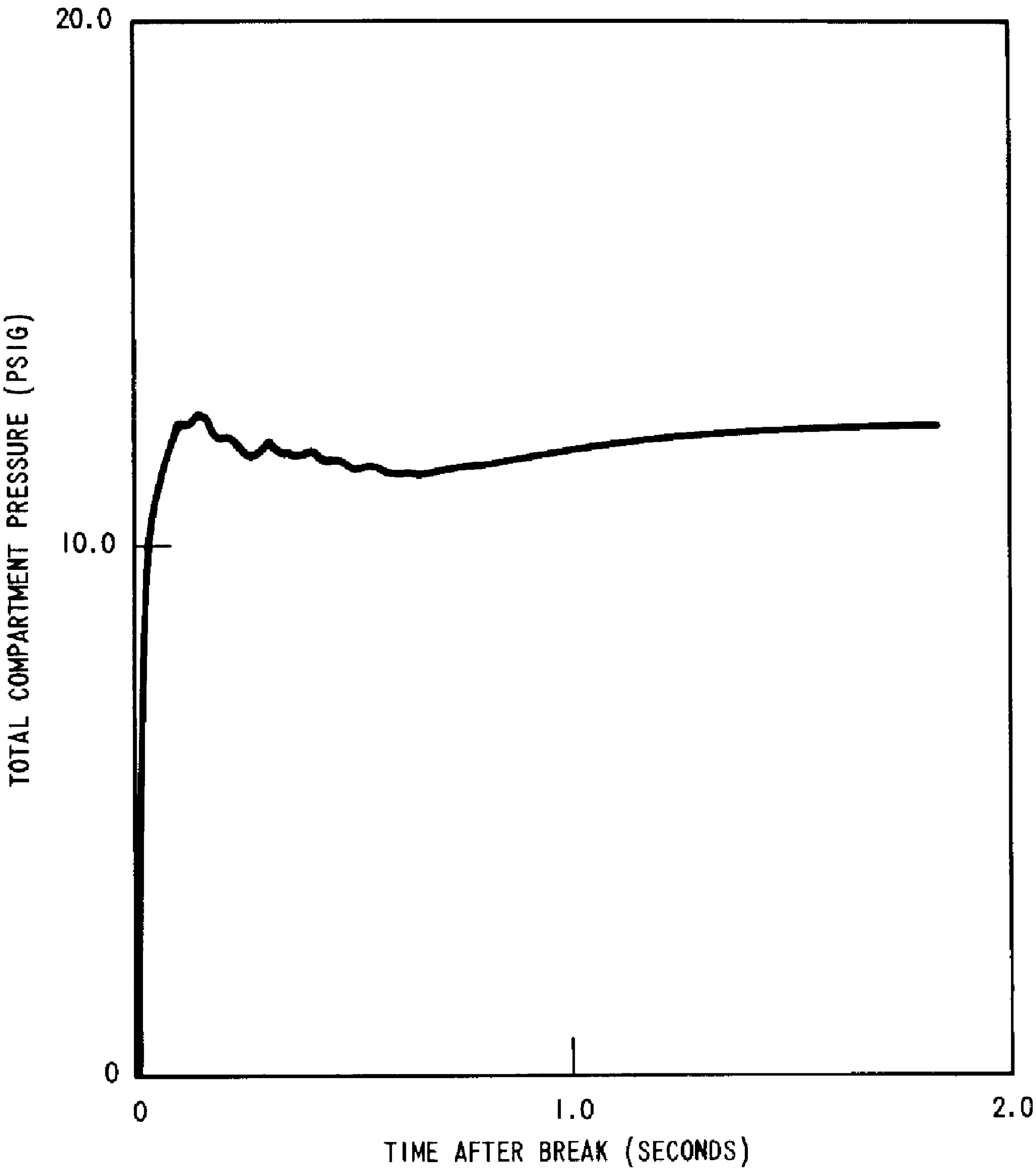


Figure 6-76. Reactor Cavity Analysis, Element 45

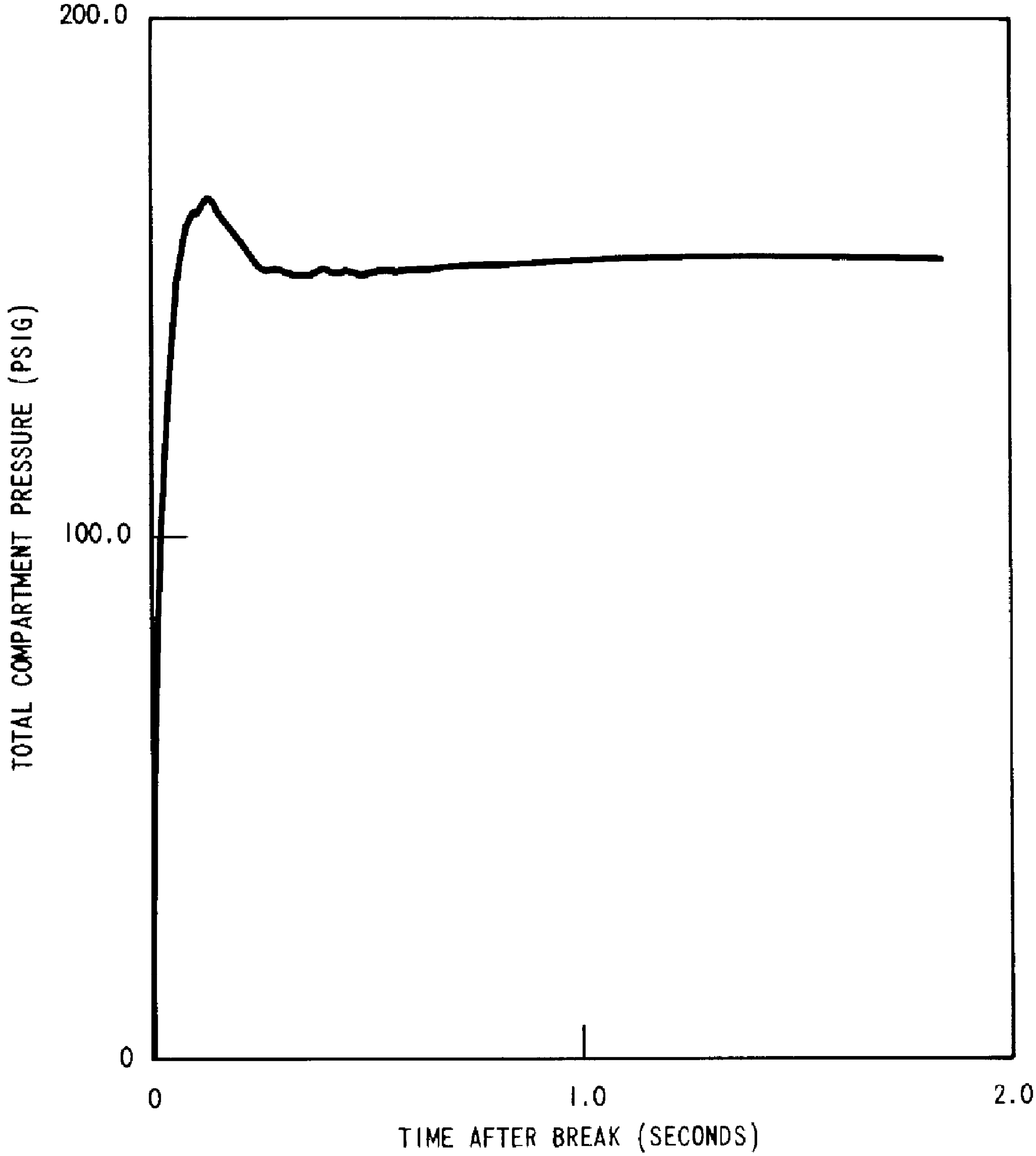


Figure 6-77. Reactor Cavity Analysis, Element 46

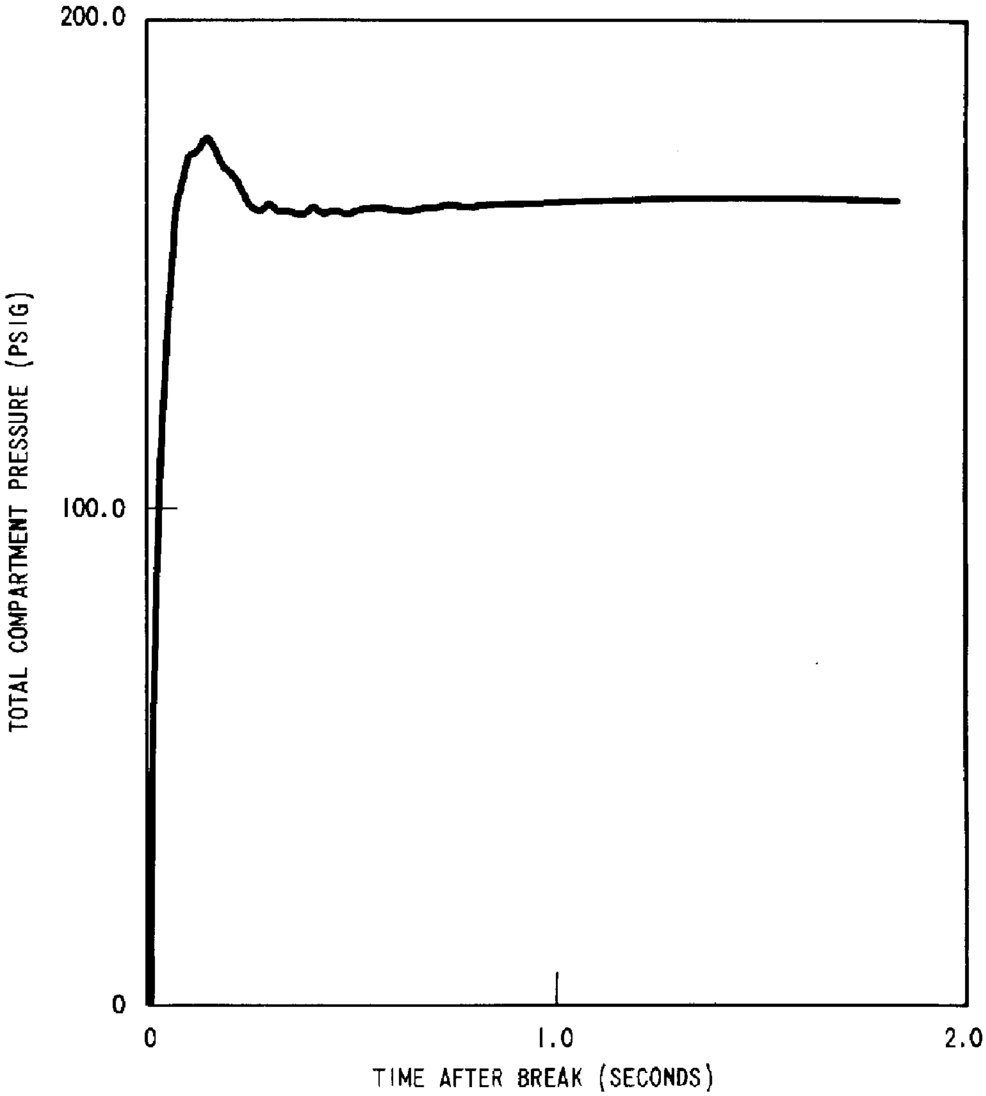


Figure 6-78. Reactor Cavity Analysis, Element 47

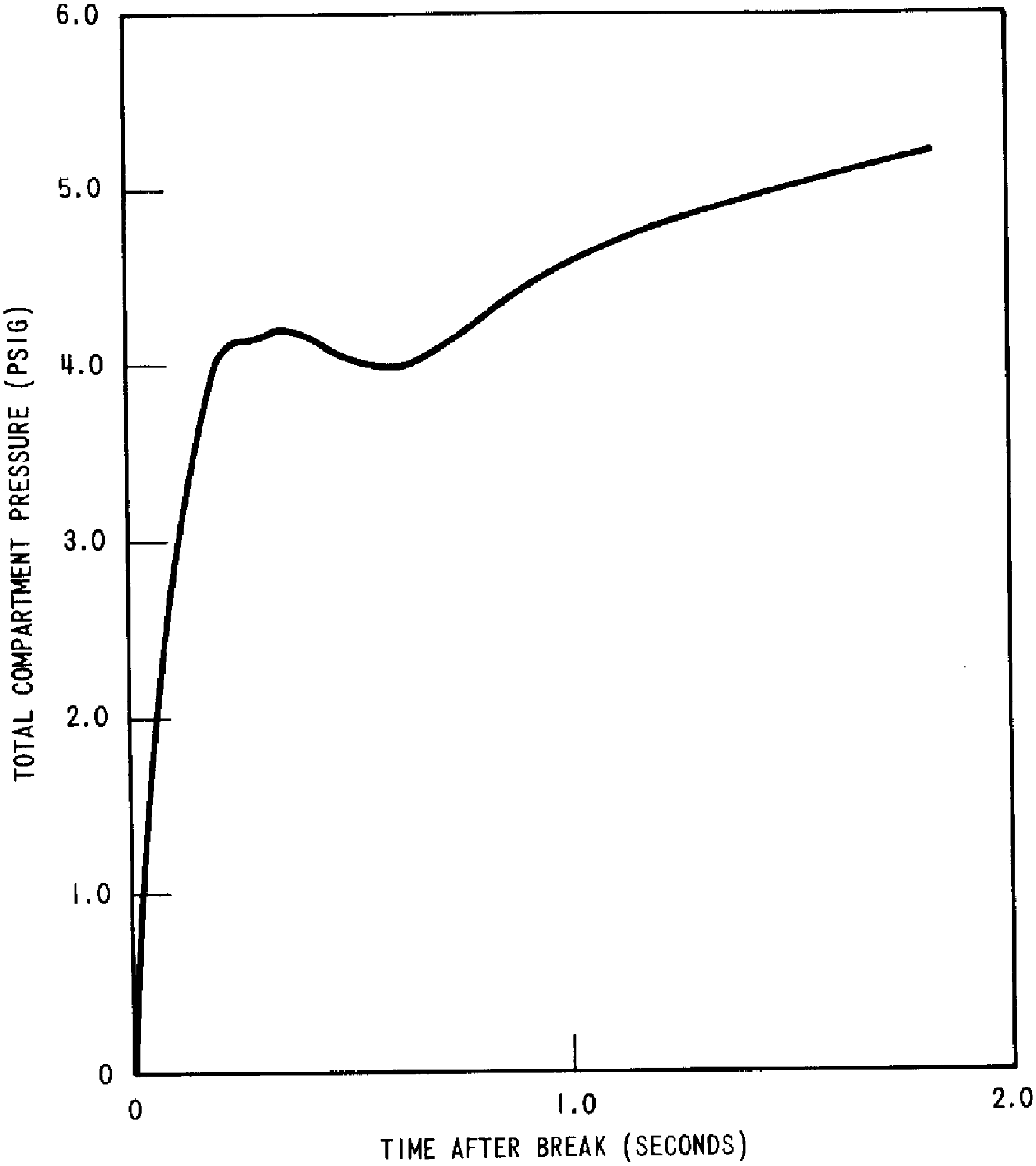


Figure 6-79. Reactor Cavity Analysis, Element 53

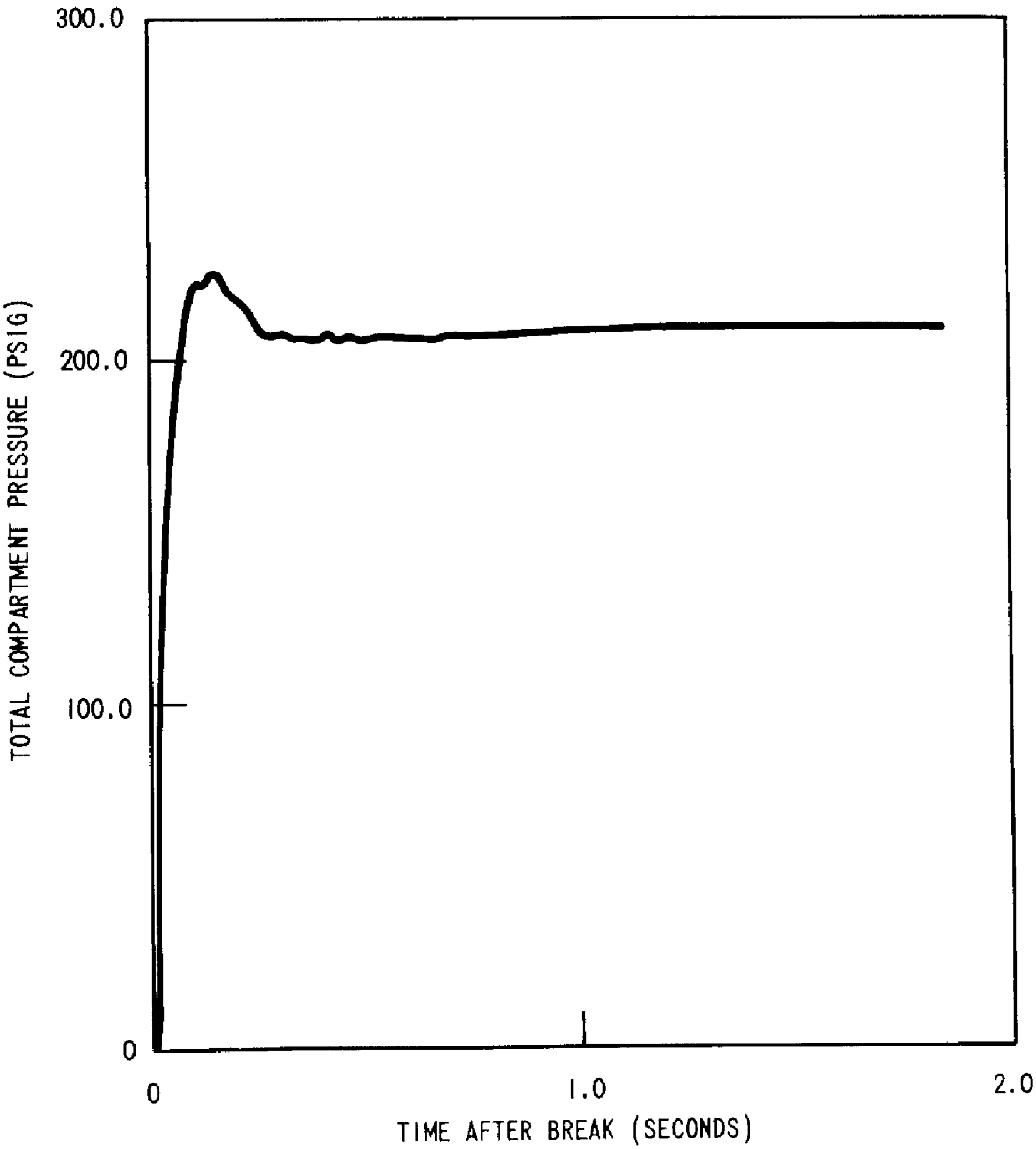


Figure 6-80. Reactor Cavity Analysis, Element 54

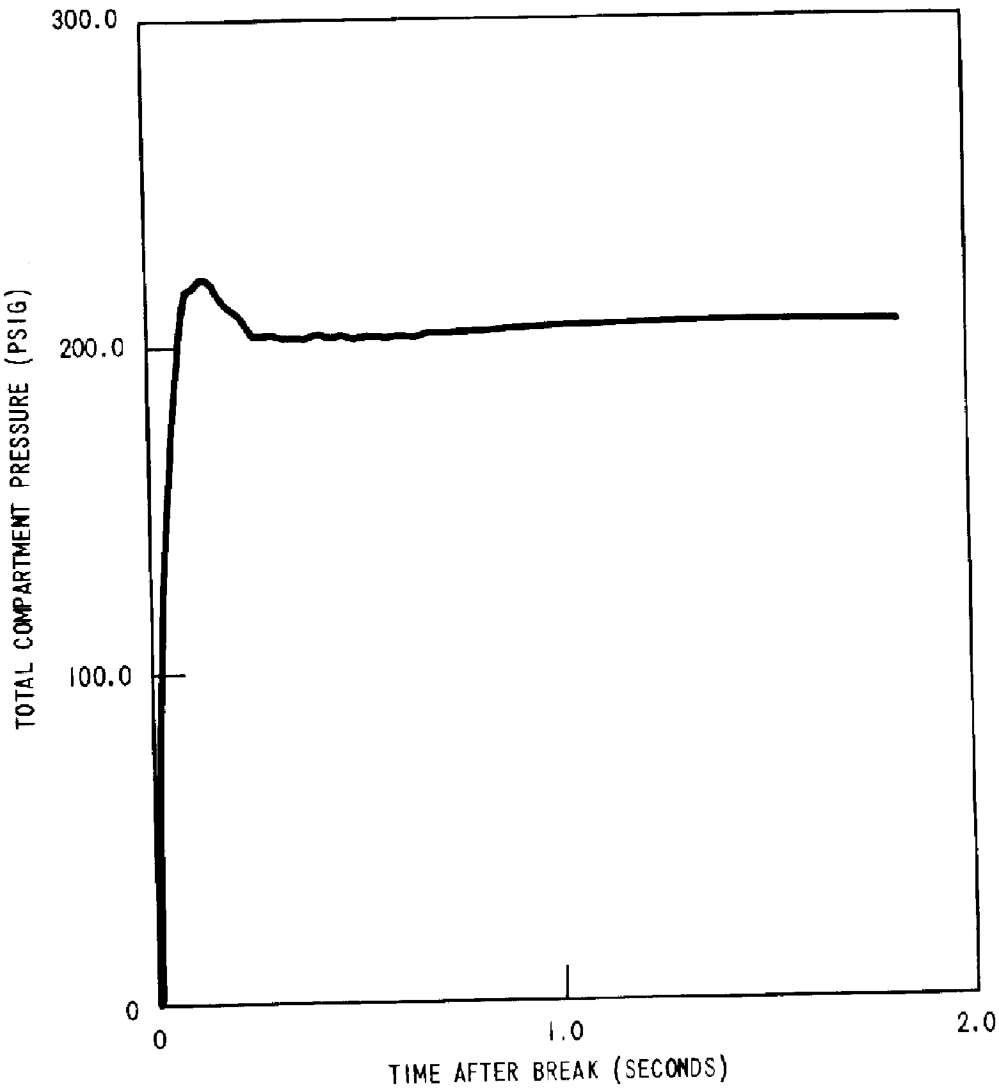


Figure 6-81. Hot Leg Double Ended Guillotine Break

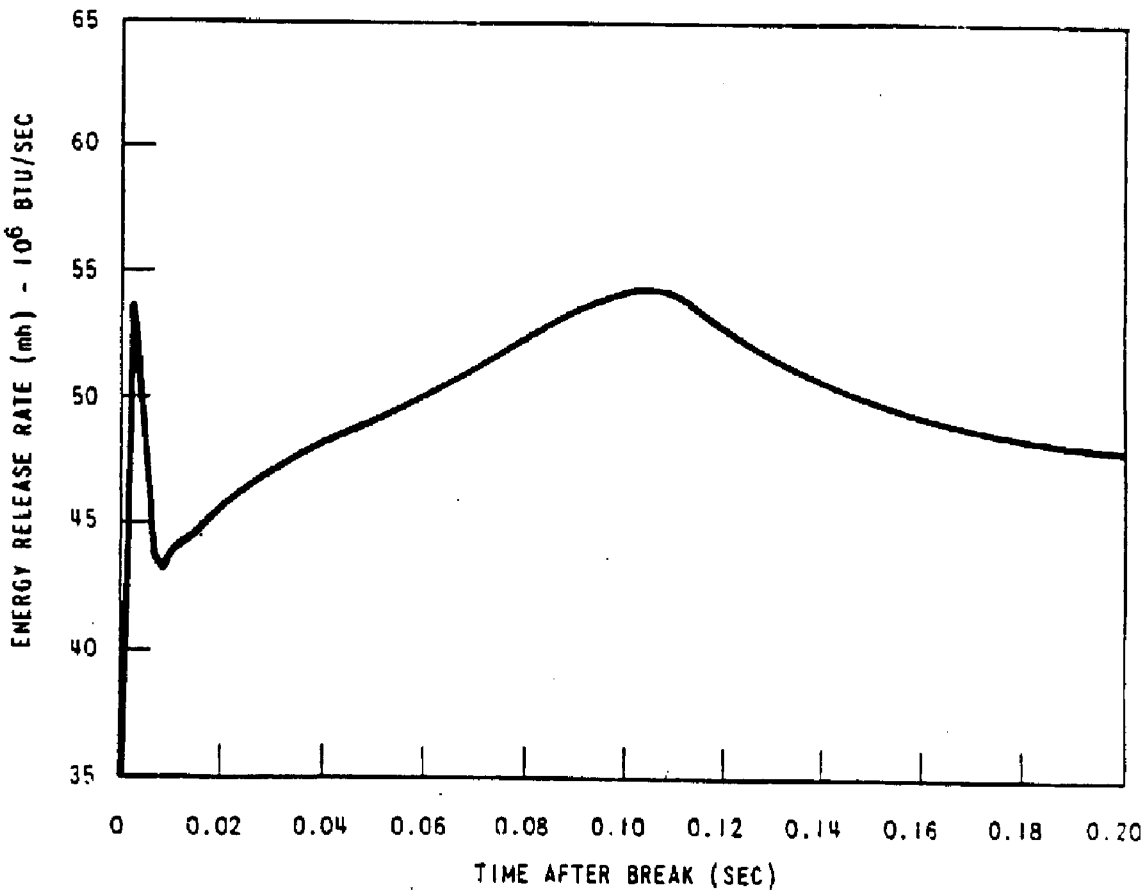


Figure 6-82. Hot Leg Double Ended Guillotine Break

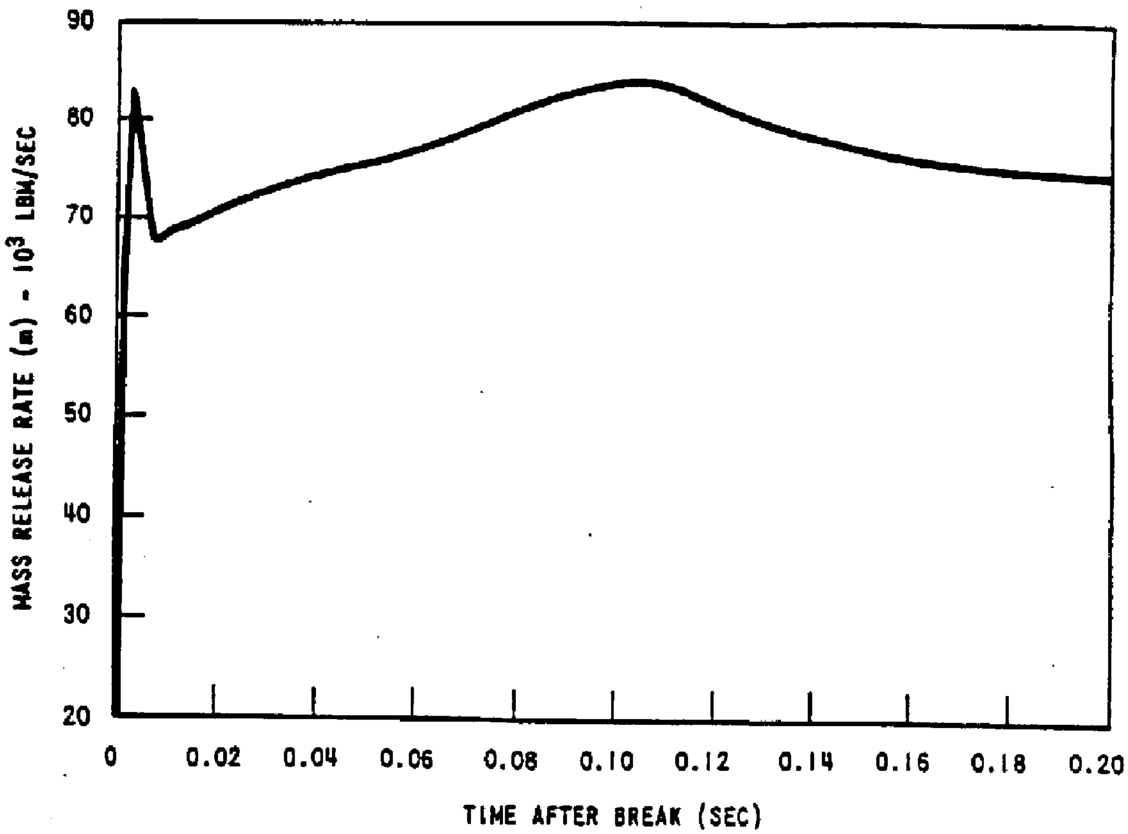


Figure 6-83. Cold Leg Double Ended Guillotine Break

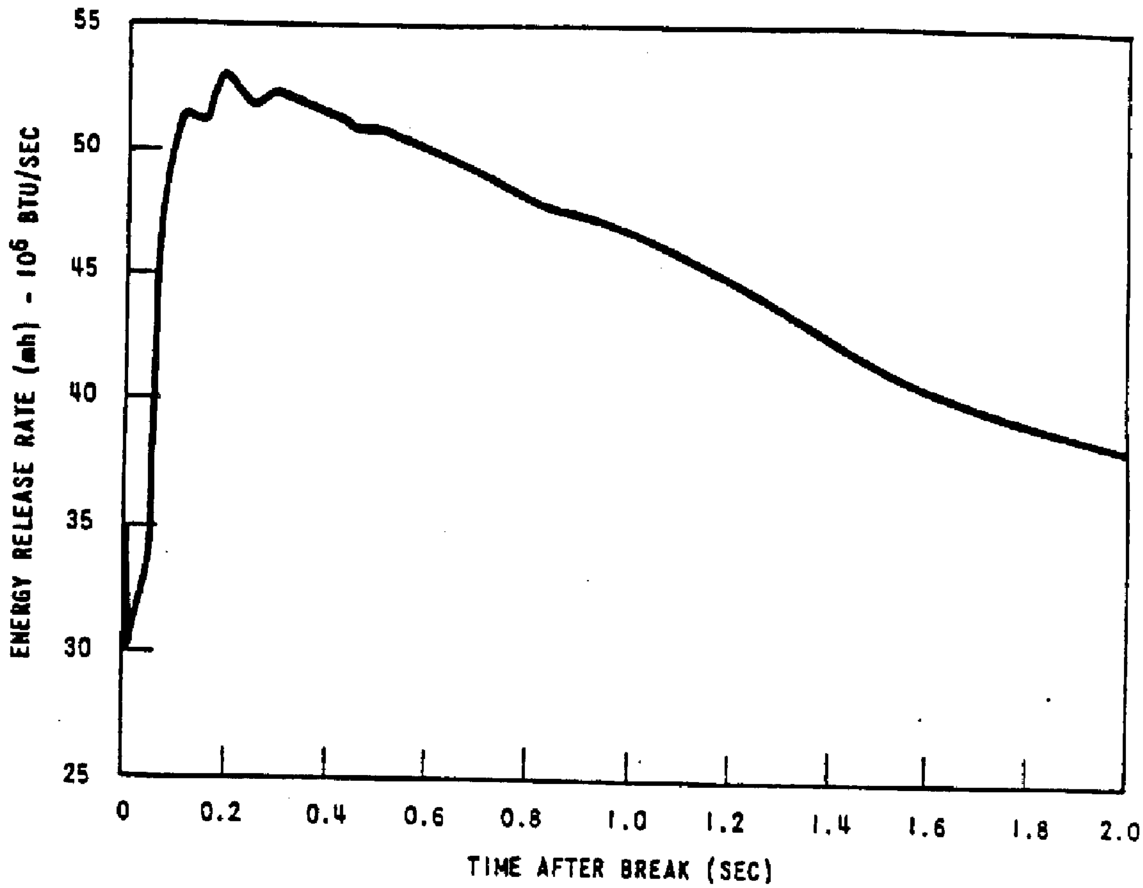


Figure 6-84. Cold Leg Double Ended Guillotine Break

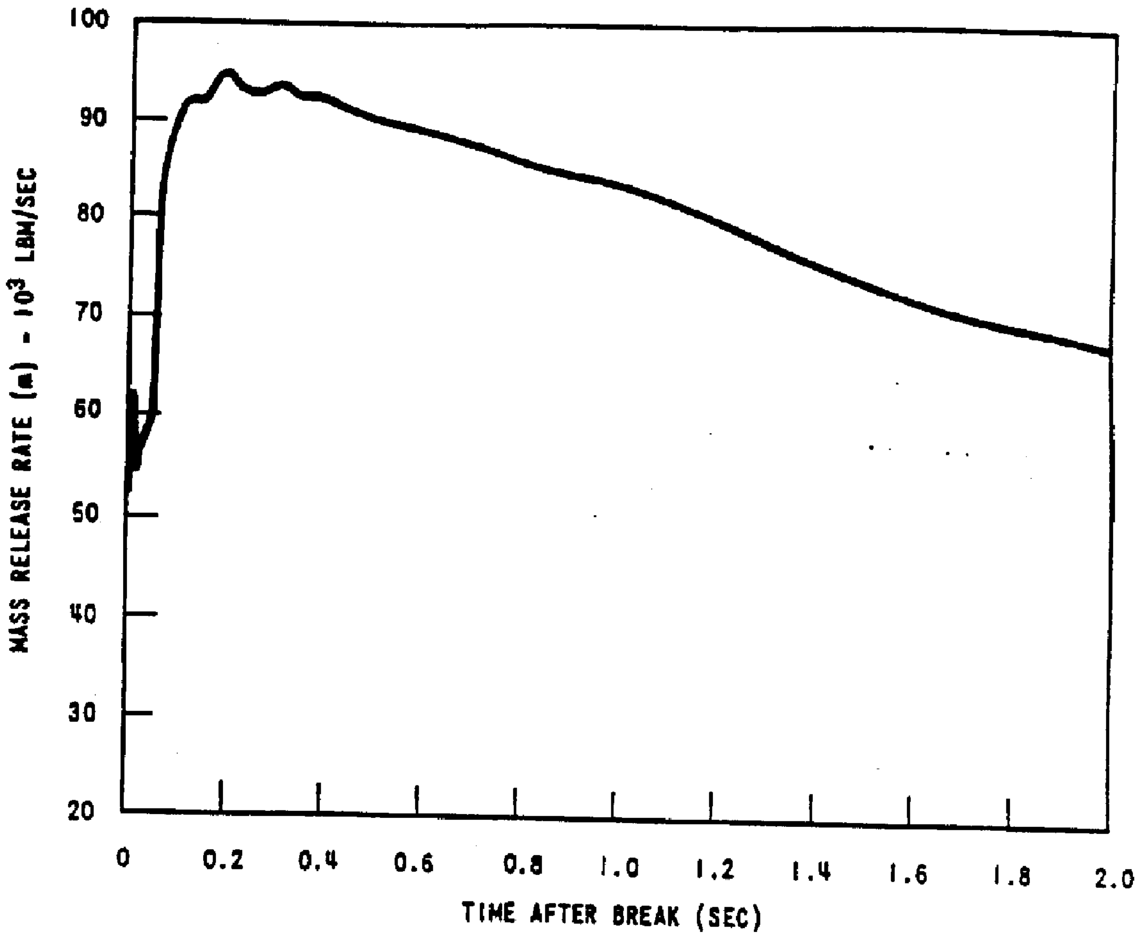


Figure 6-85. Hot Leg Single Ended Split Break

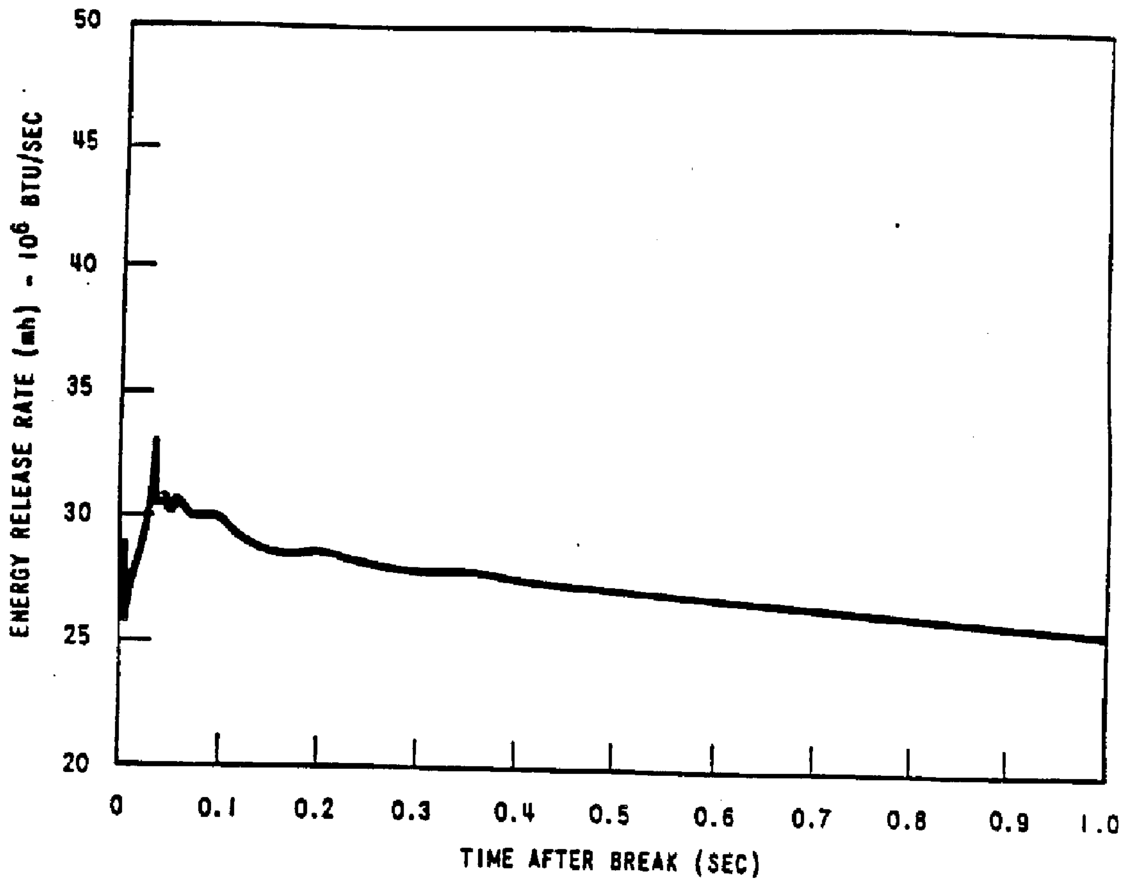


Figure 6-86. Hot Leg Single Ended Split Break

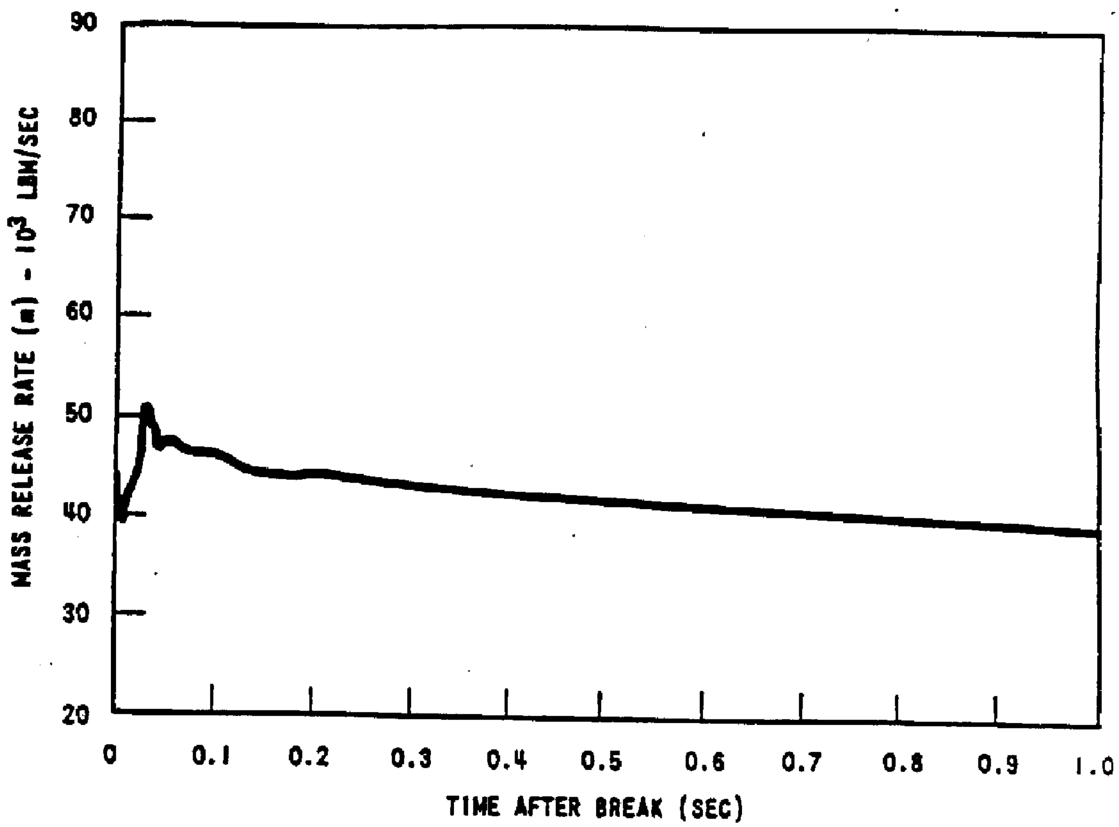


Figure 6-87. Cold Leg Single Ended Split Break

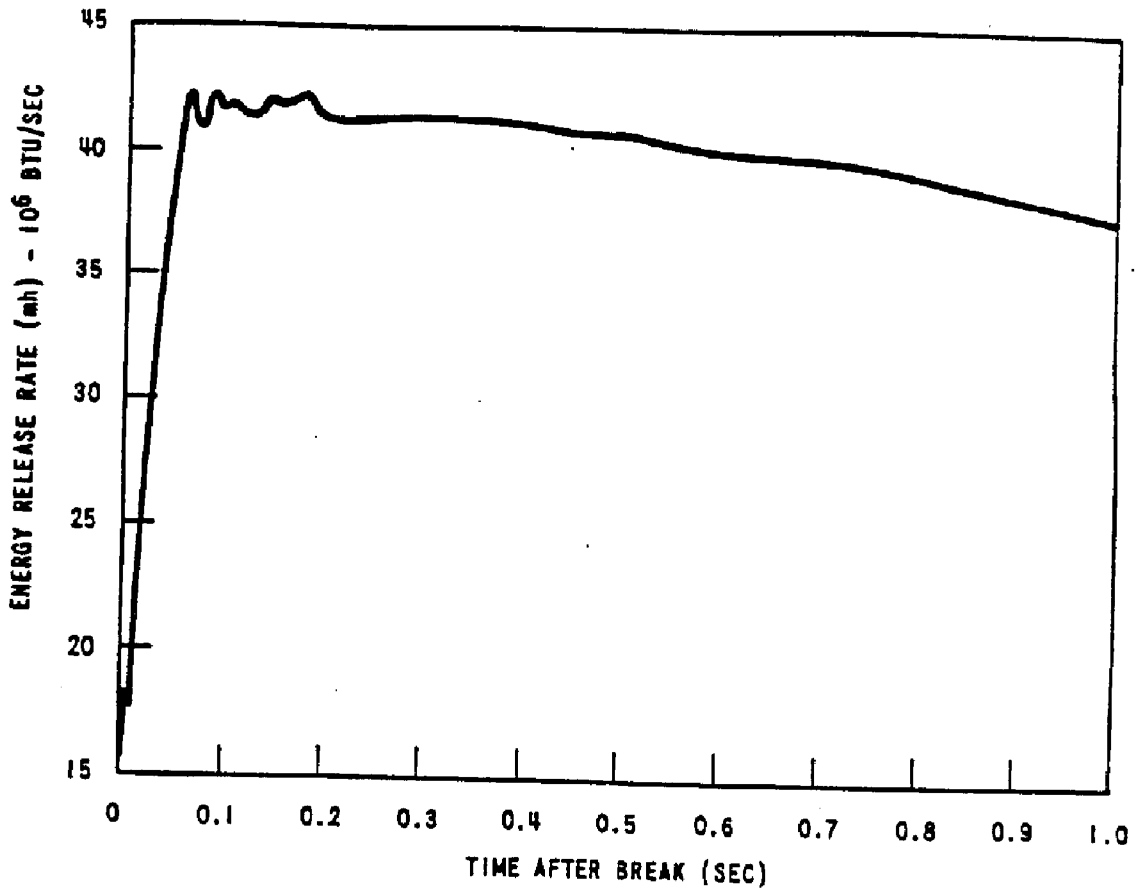


Figure 6-88. Cold Leg Single Ended Split Break

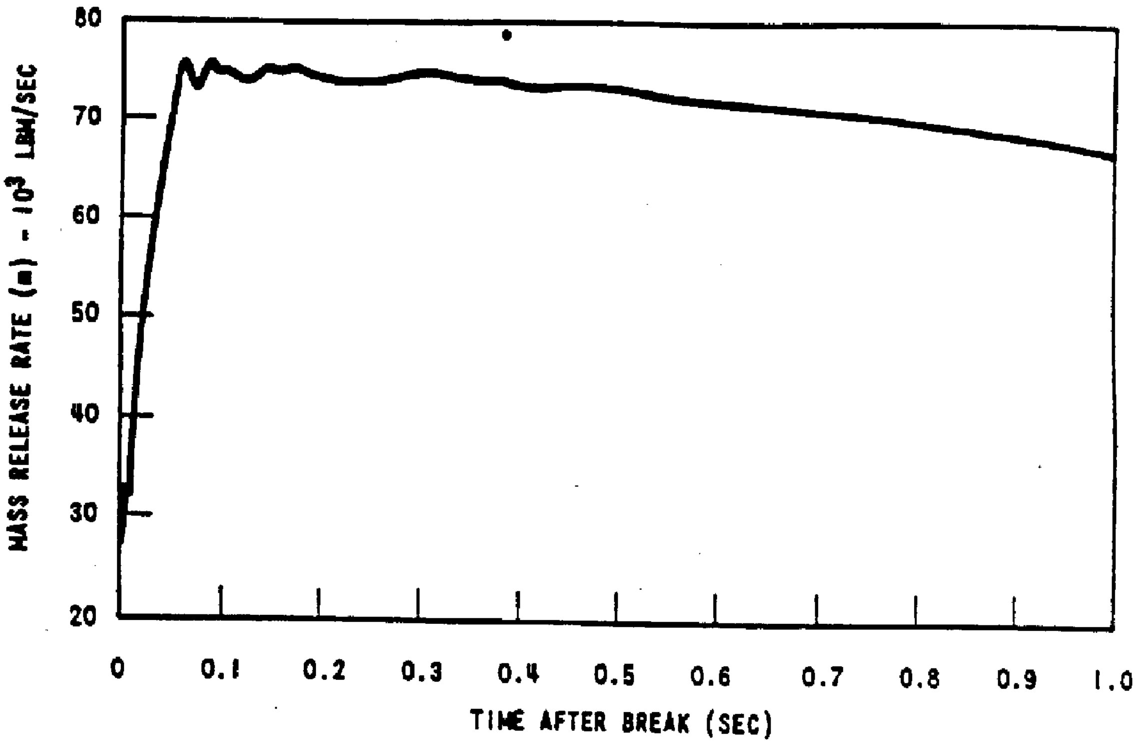


Figure 6-89. Comparison of Satan to Henry Fauske

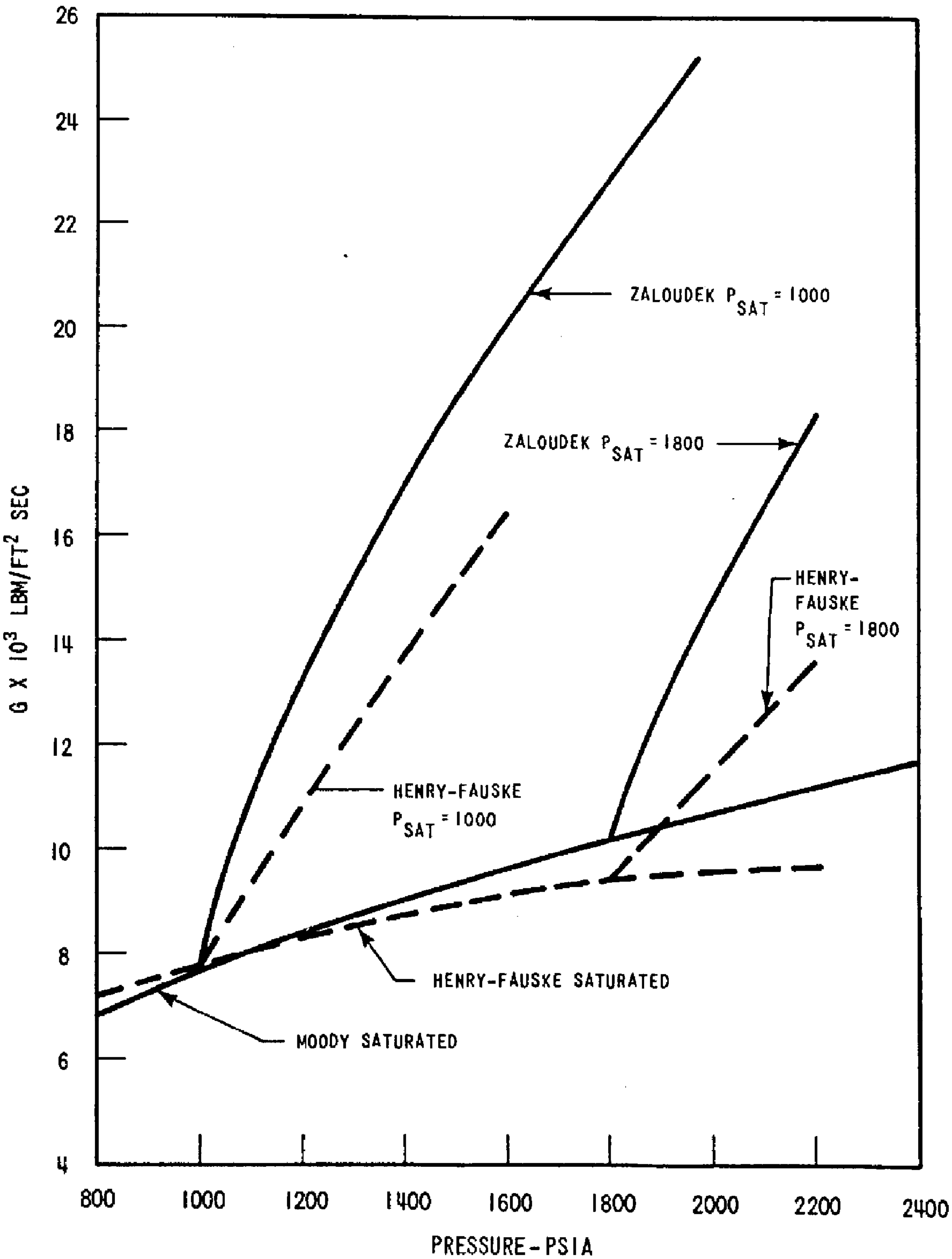


Figure 6-90. Comparison of Satan to Moody Subcooled

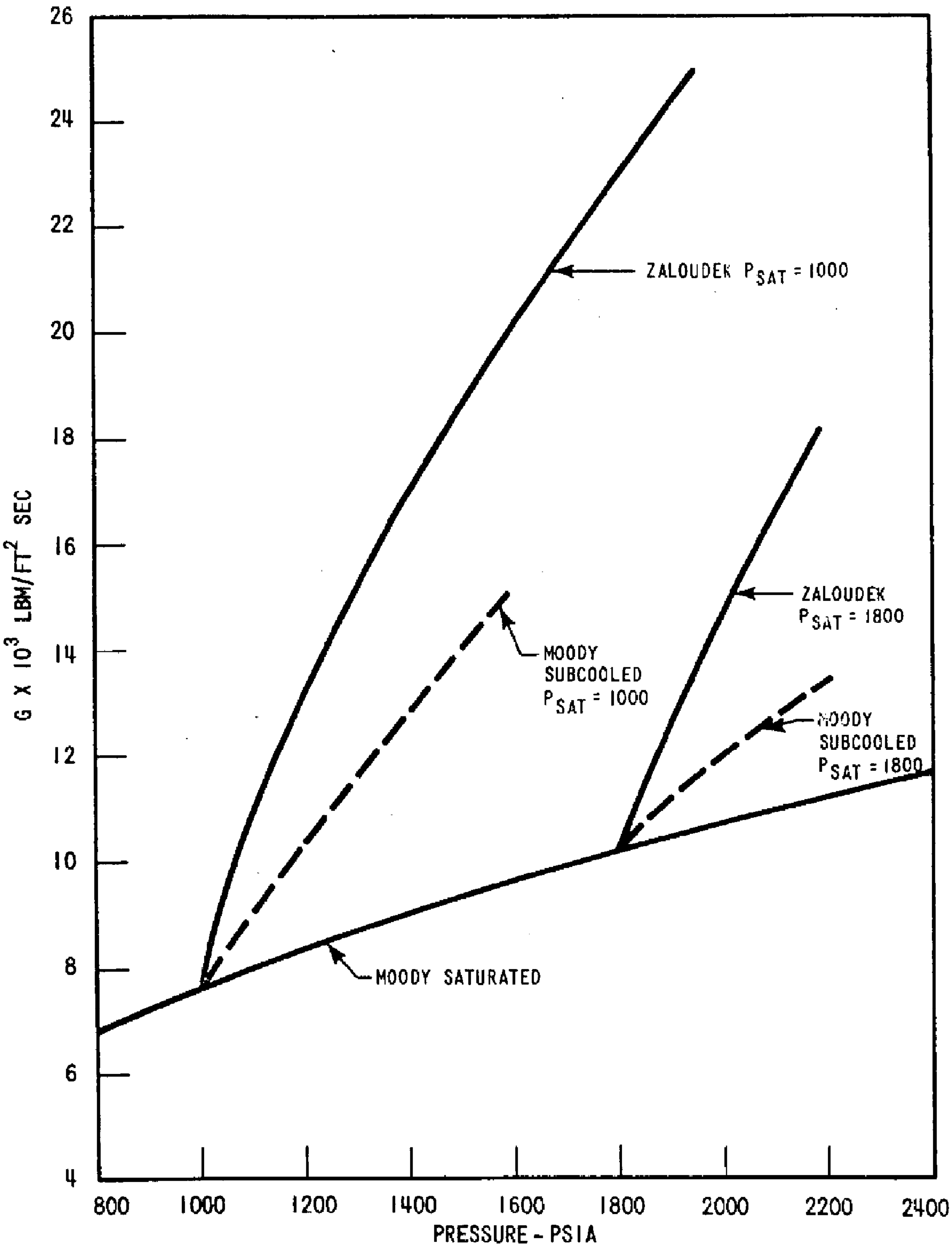


Figure 6-91. Zaloudek Measured Data Versus Modified Zaloudek Correlation

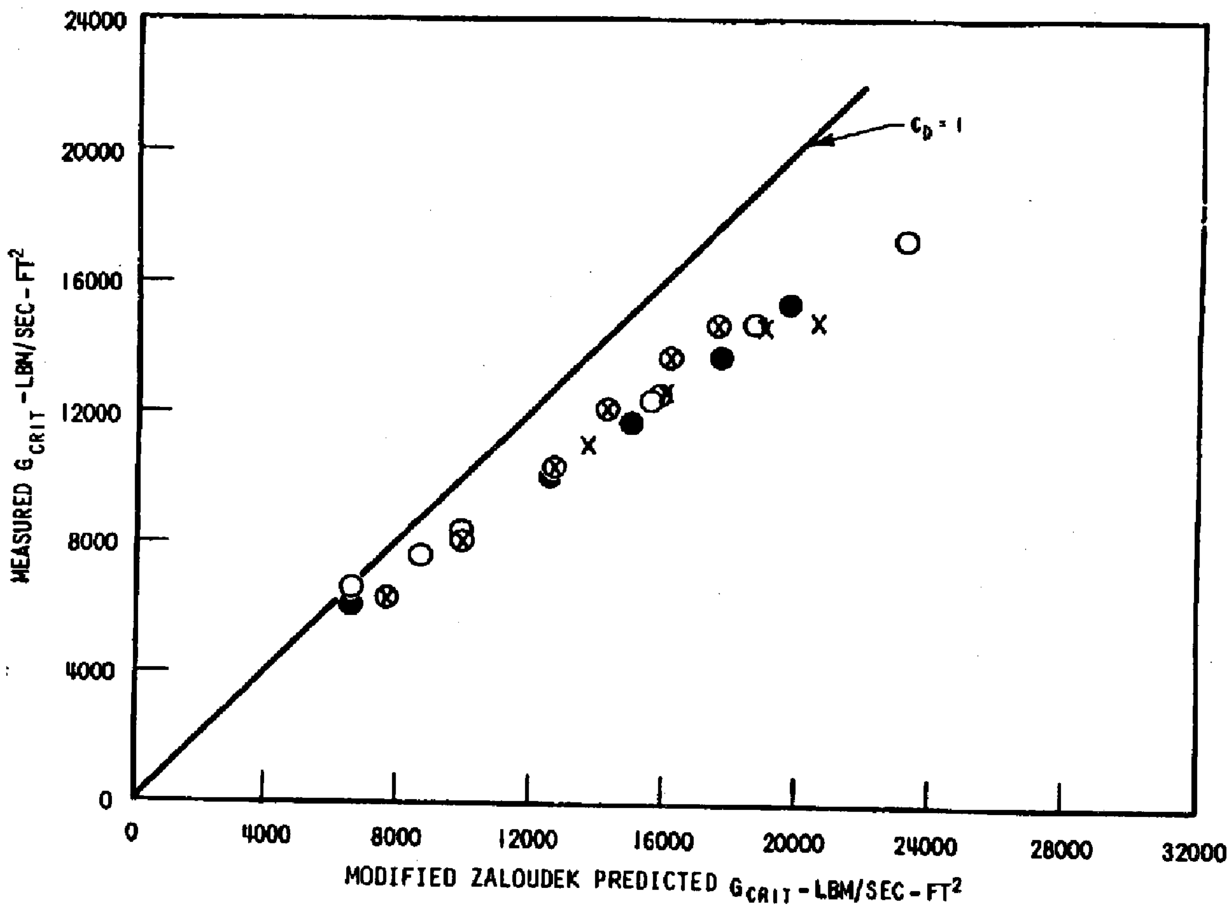


Figure 6-92. Zaloudek Short Tube Data

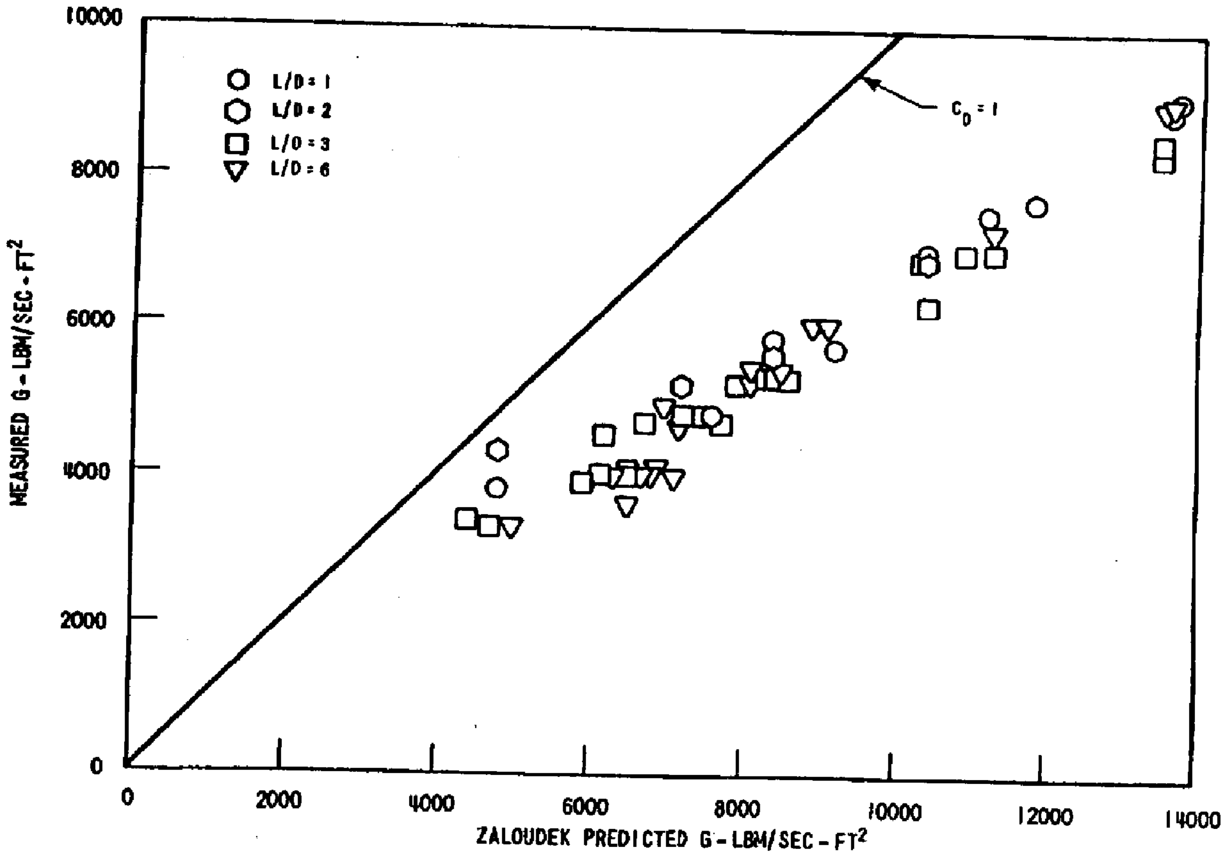


Figure 6-93. Exit Plane Quality as a Function of Upstream Pressure for Saturated Liquid

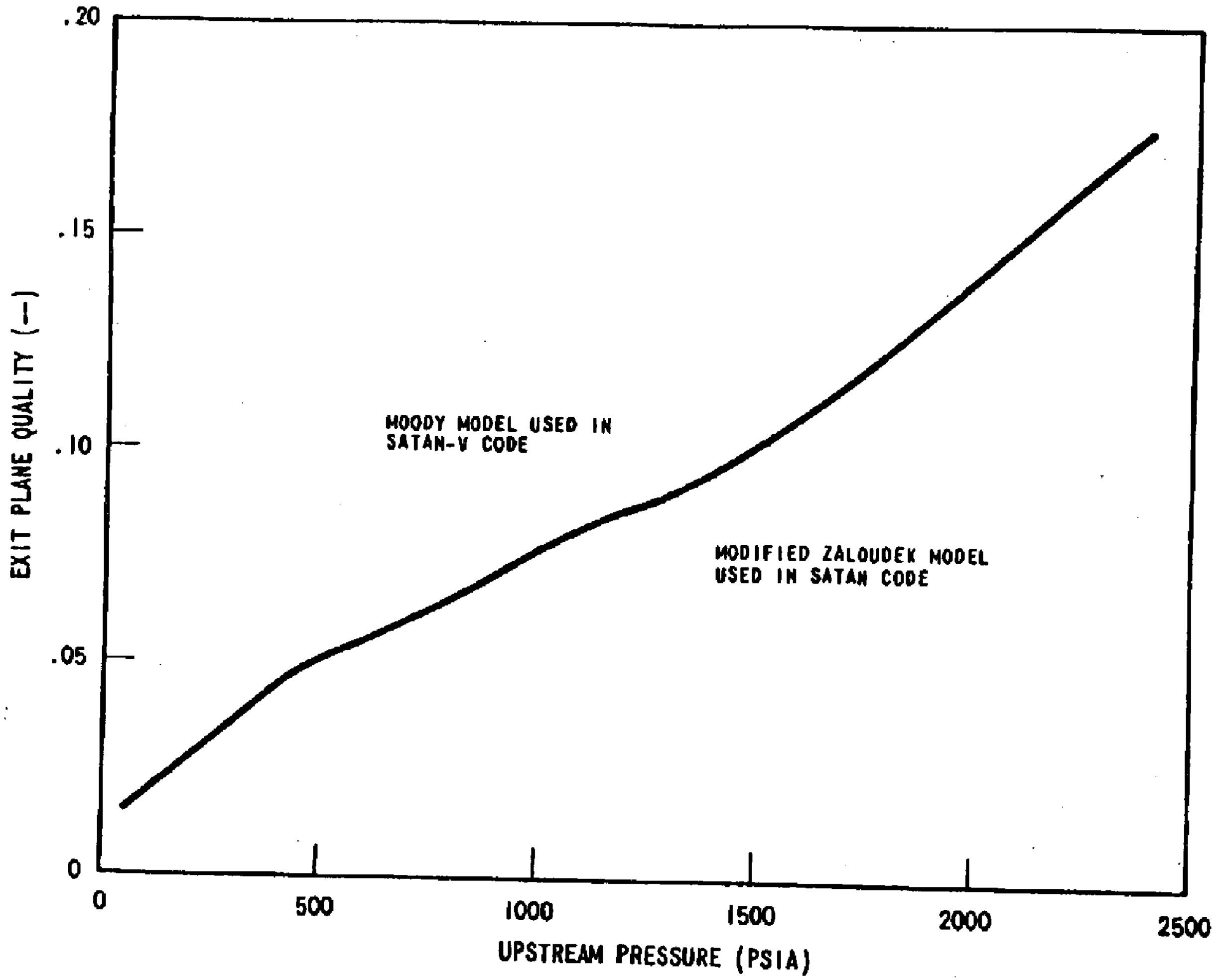


Figure 6-94. Henry ANL 7740 Data

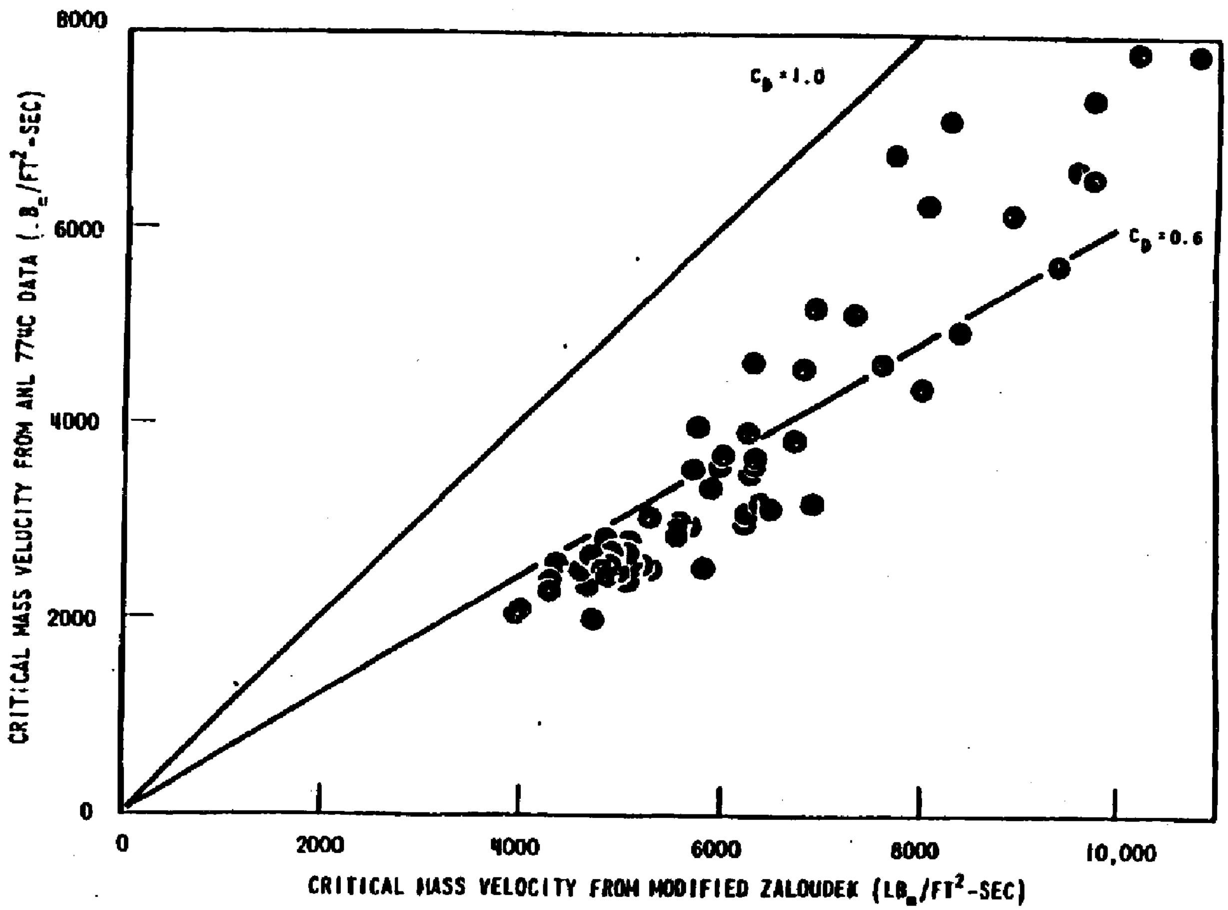


Figure 6-95. Loft Tests 809 and 813 Gage P-1

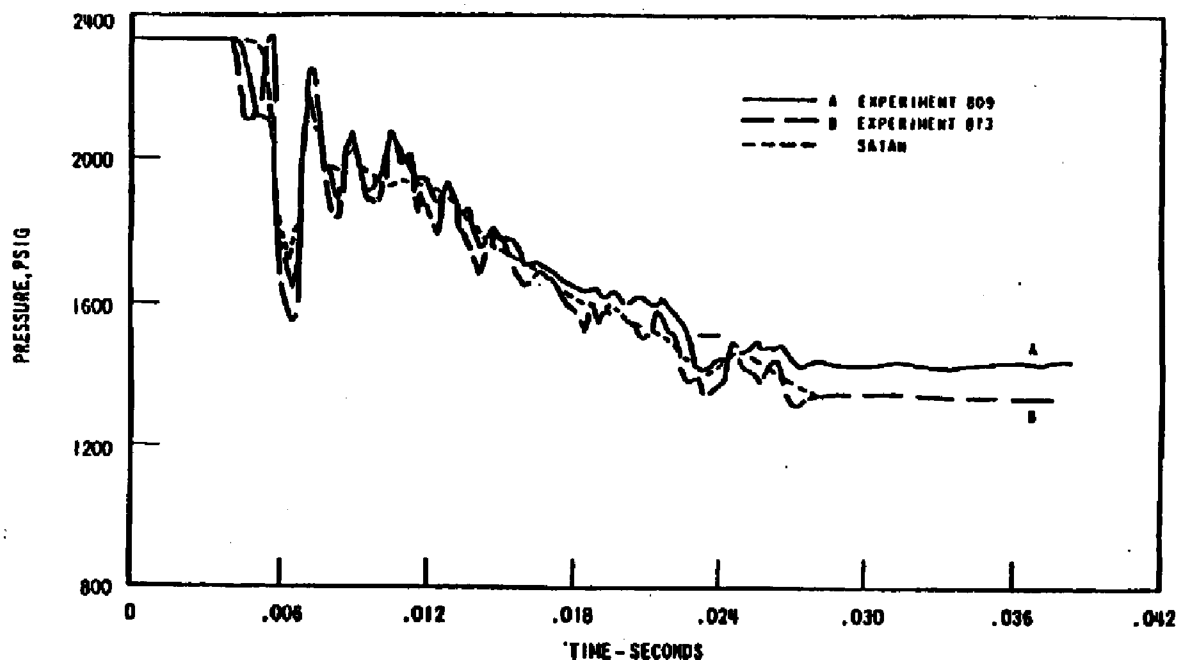


Figure 6-96. Deleted Per 2001 Update

Figure 6-97. Deleted Per 2001 Update

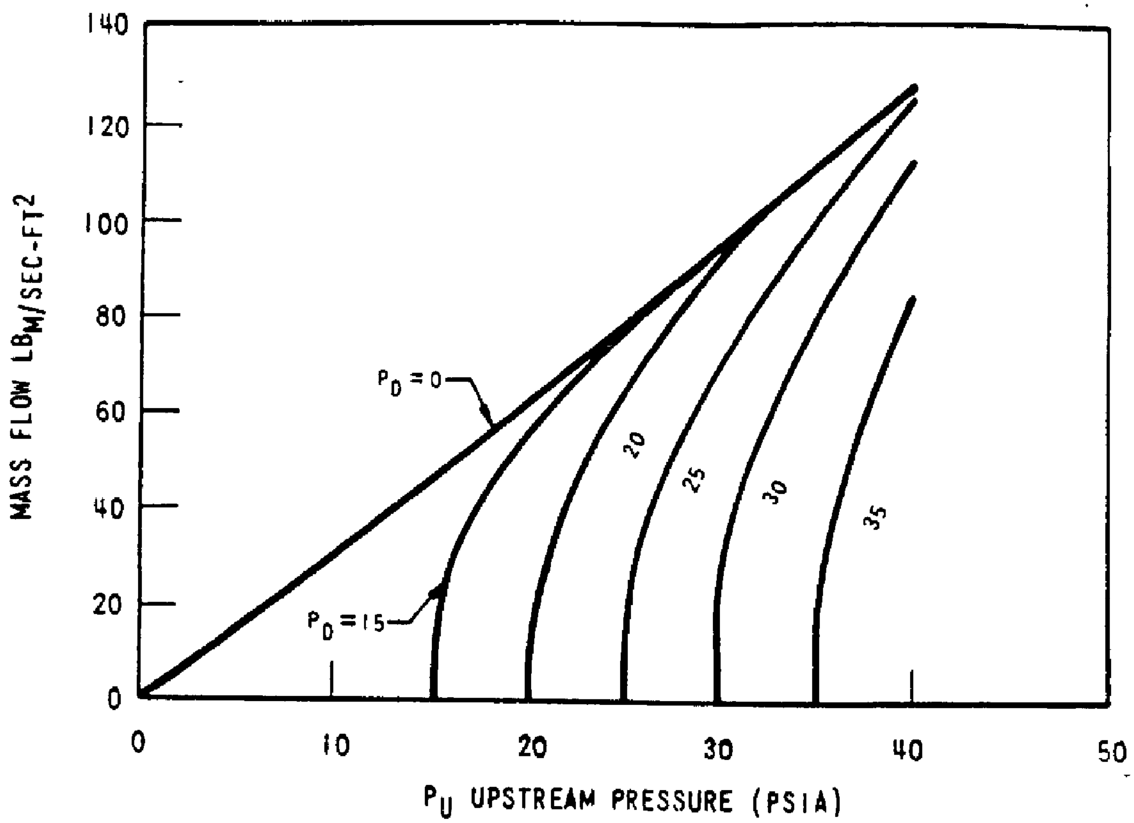
Figure 6-98. Deleted Per 2001 Update

Figure 6-99. Deleted Per 2001 Update

Figure 6-100. Deleted Per 2001 Update

Figure 6-101. Deleted Per 2001 Update

Figure 6-102. Illustration of Choked Flow Characteristics



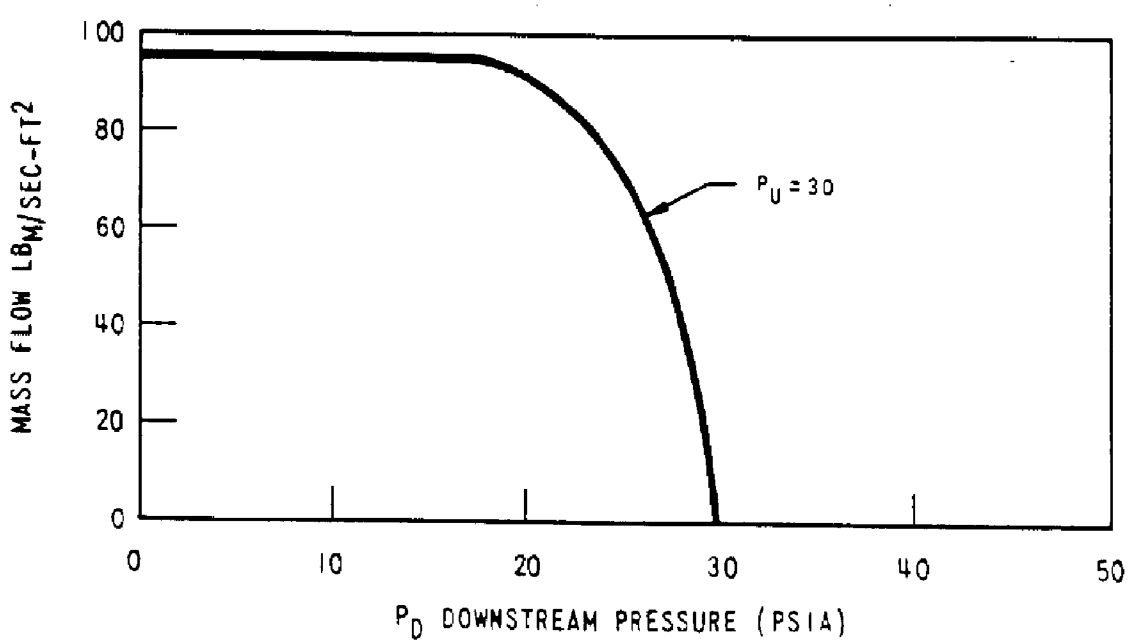


Figure 6-103. Flow Diagram of Containment Air Return Exchange & Hydrogen Skimmer System

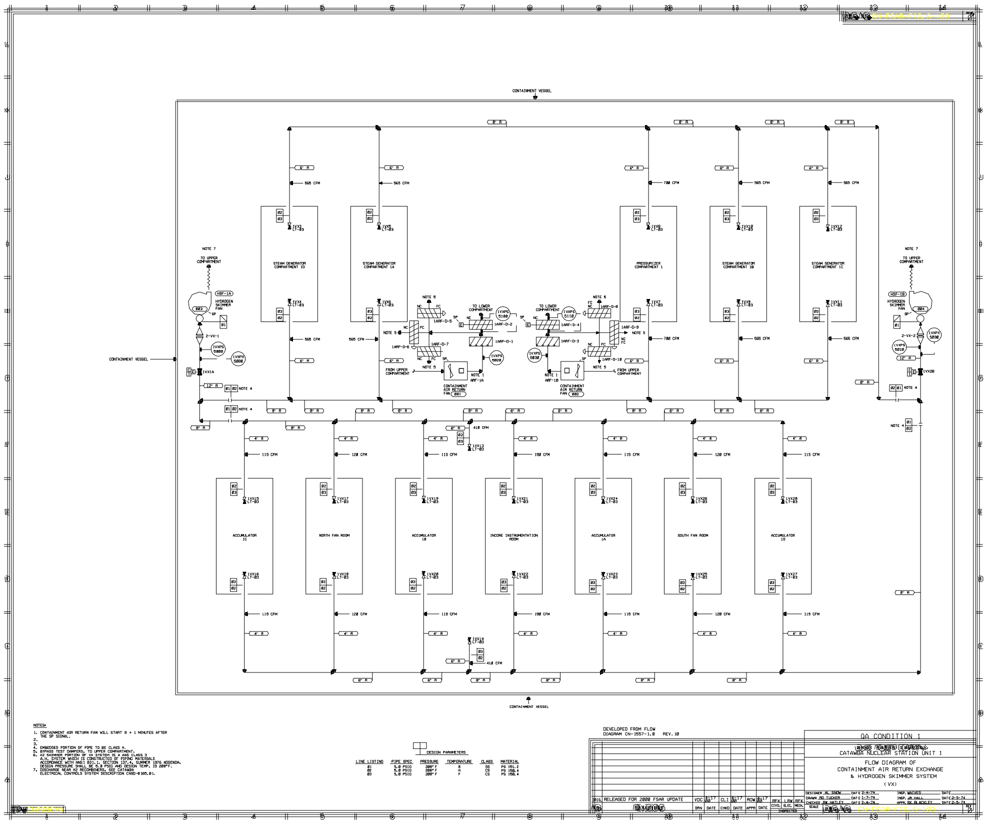


Figure 6-104. Reactor Building Plan at Elev. 565 + 3 Hydrogen Skimmer System

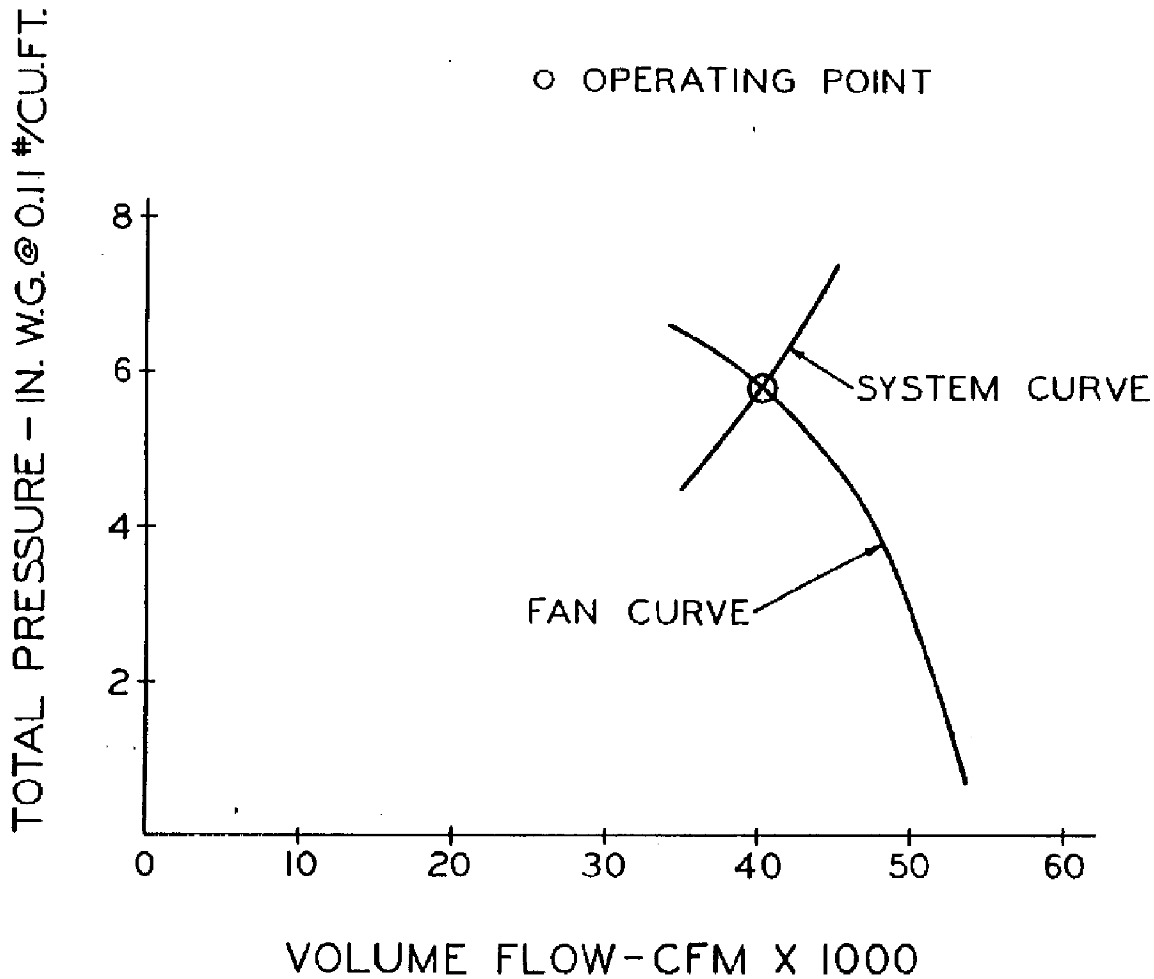
Security-Related Information, Withhold under 10 CFR 2.390

Figure 6-105. Reactor Building Hydrogen Skimmer System

Security-Related Information, Withhold under 10 CFR 2.390

[redacted]

Figure 6-106. Containment Air Return Fan Performance Curve



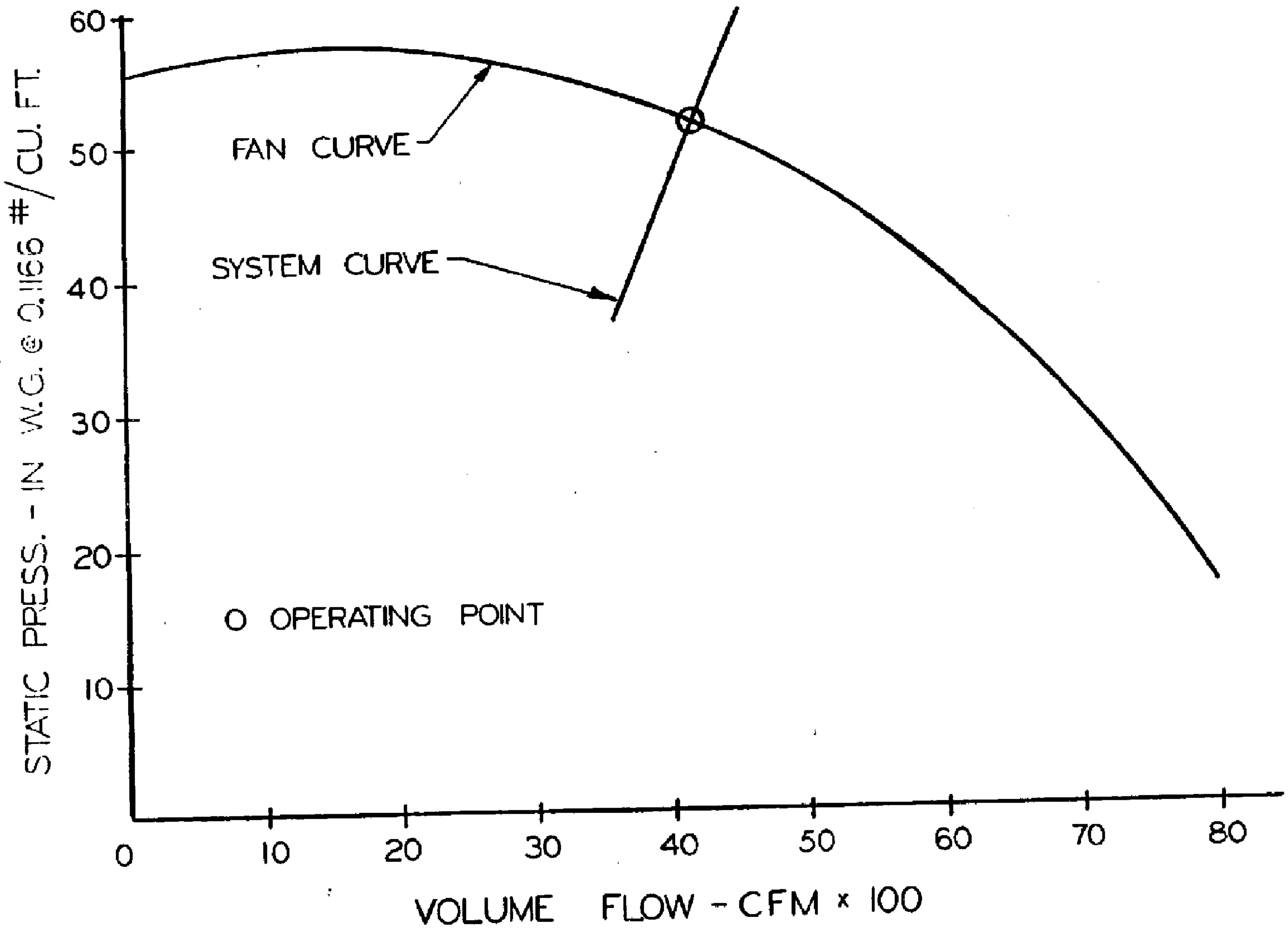


Figure 6-107. Hydrogen Skimmer Fan Performance Curve

Figure 6-108. Areas of Potential Hydrogen Pockets

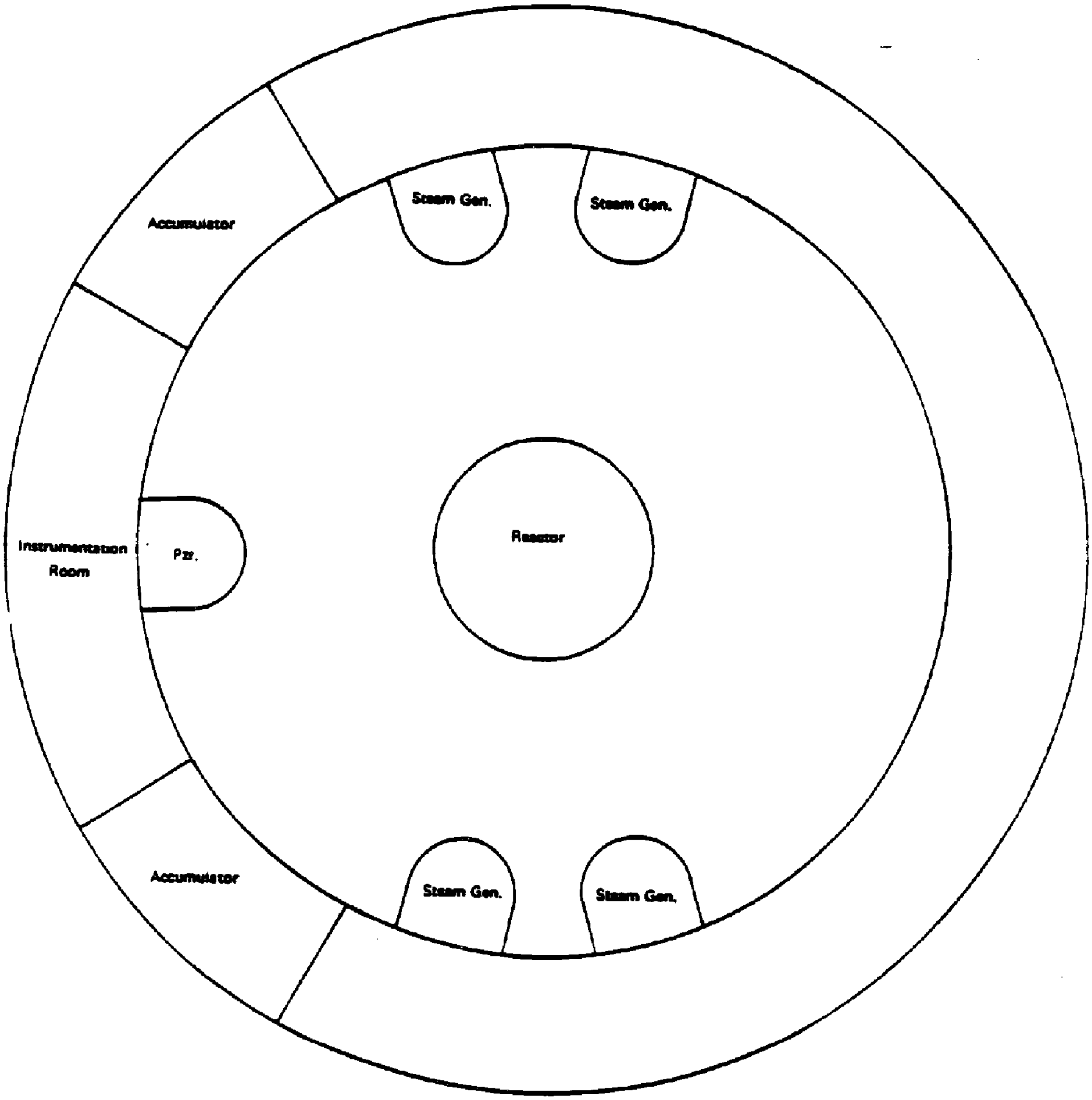
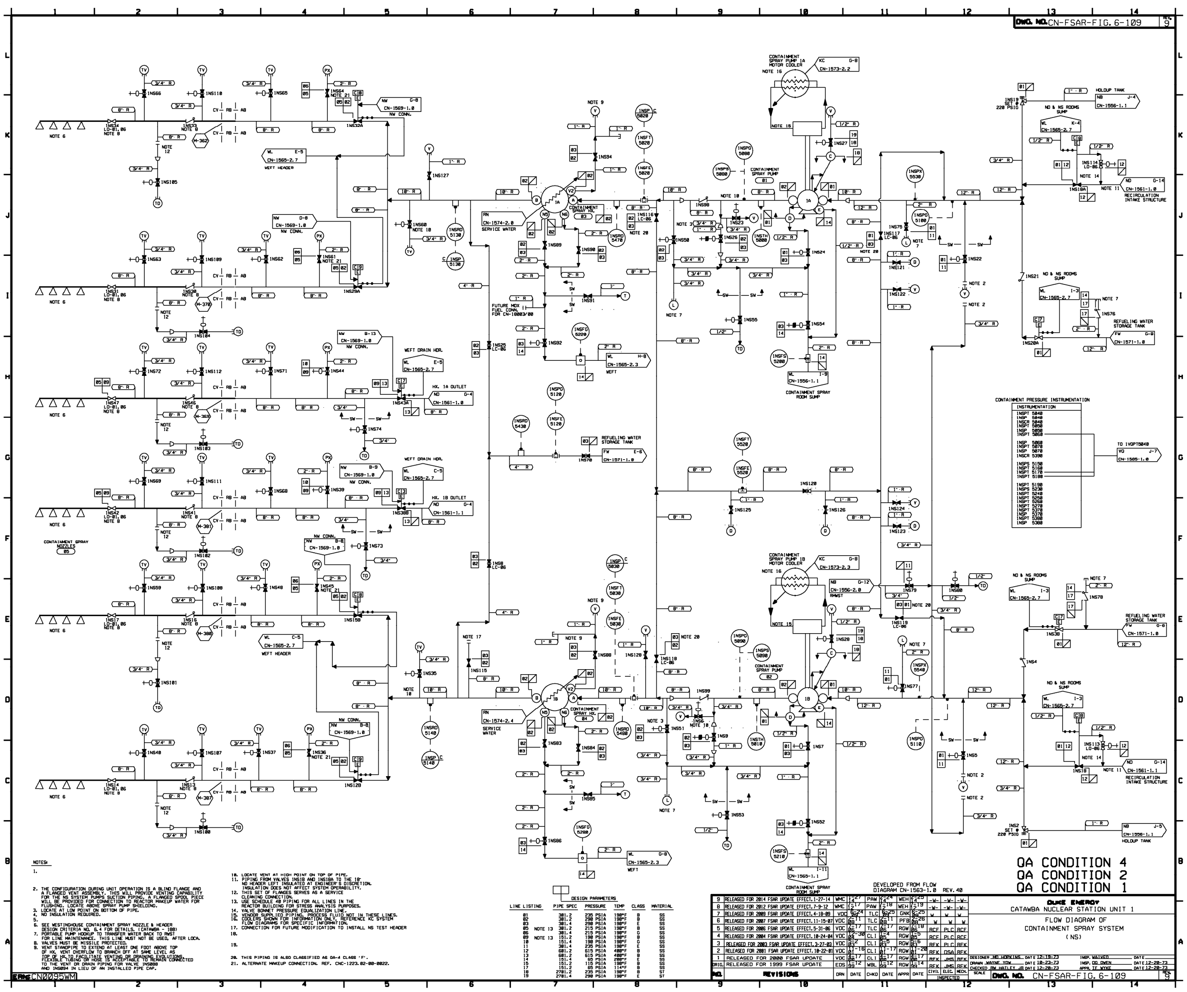


Figure 6-109. Flow Diagram of Containment Spray System



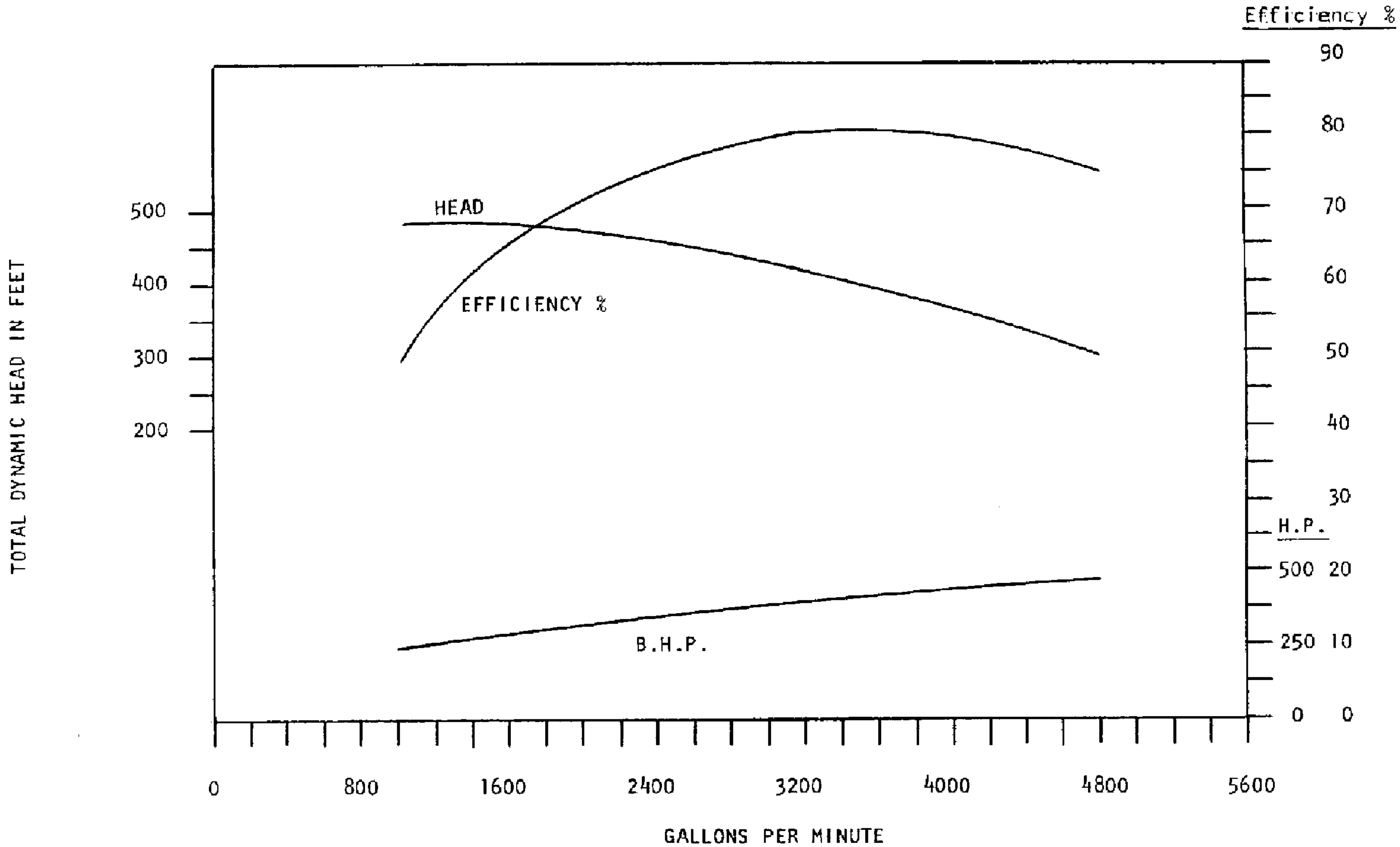


Figure 6-110. Containment Spray Pump Performance Curve

Figure 6-111. Recirculation Sump Strainer Assembly (Unit 1) (Unit 2 Similar)

Recirculation Sump Strainer Assembly

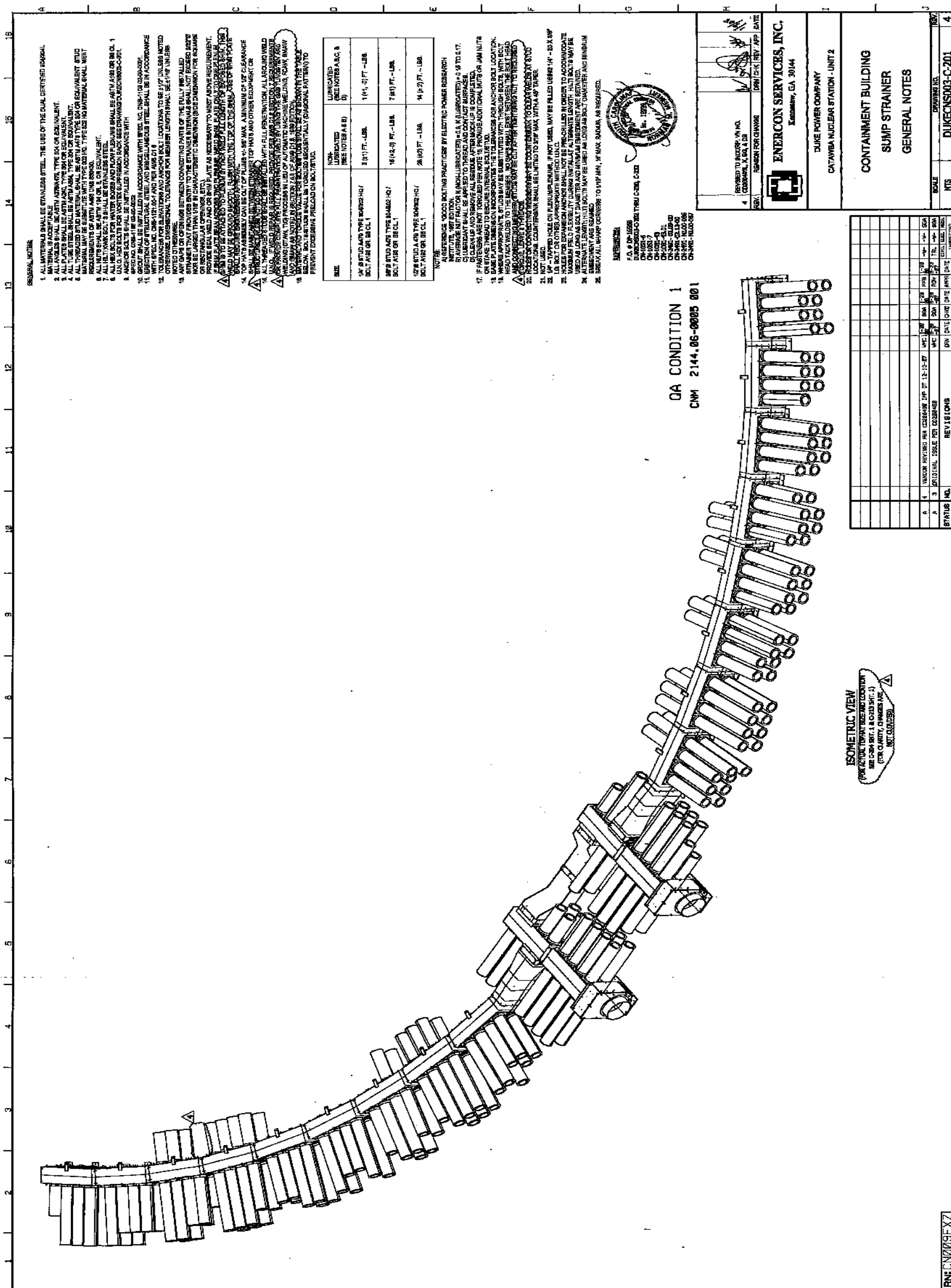


Figure 6-112. Containment Piping Penetration Valve Arrangements

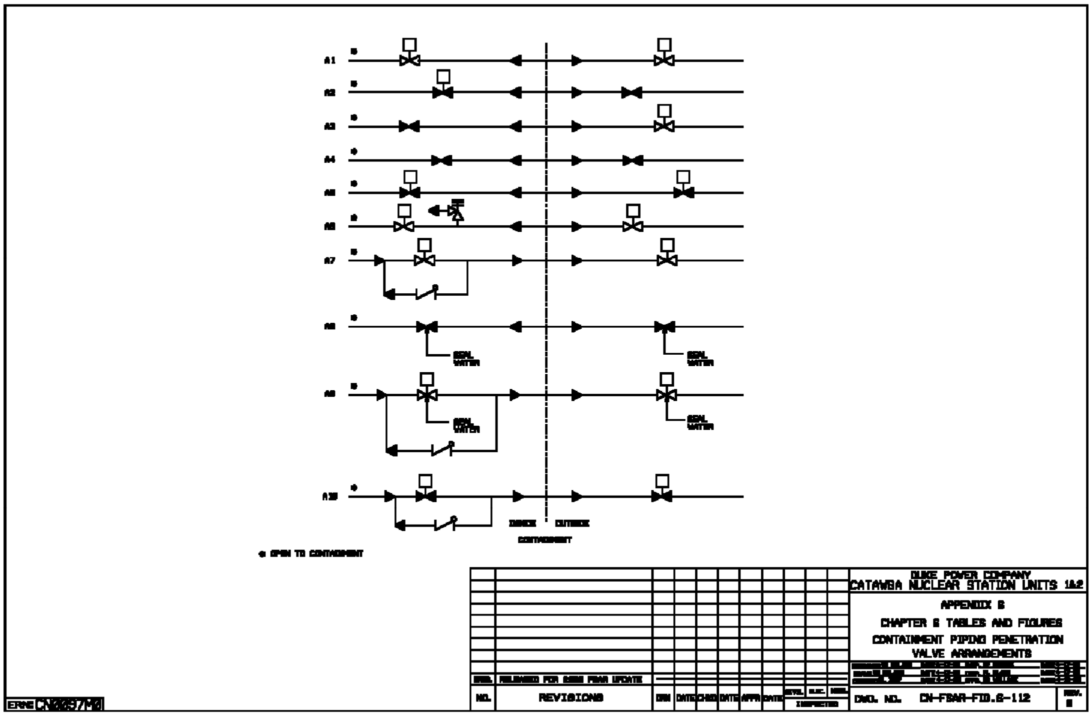


Figure 6-113. Containment Piping Penetration Valve Arrangements

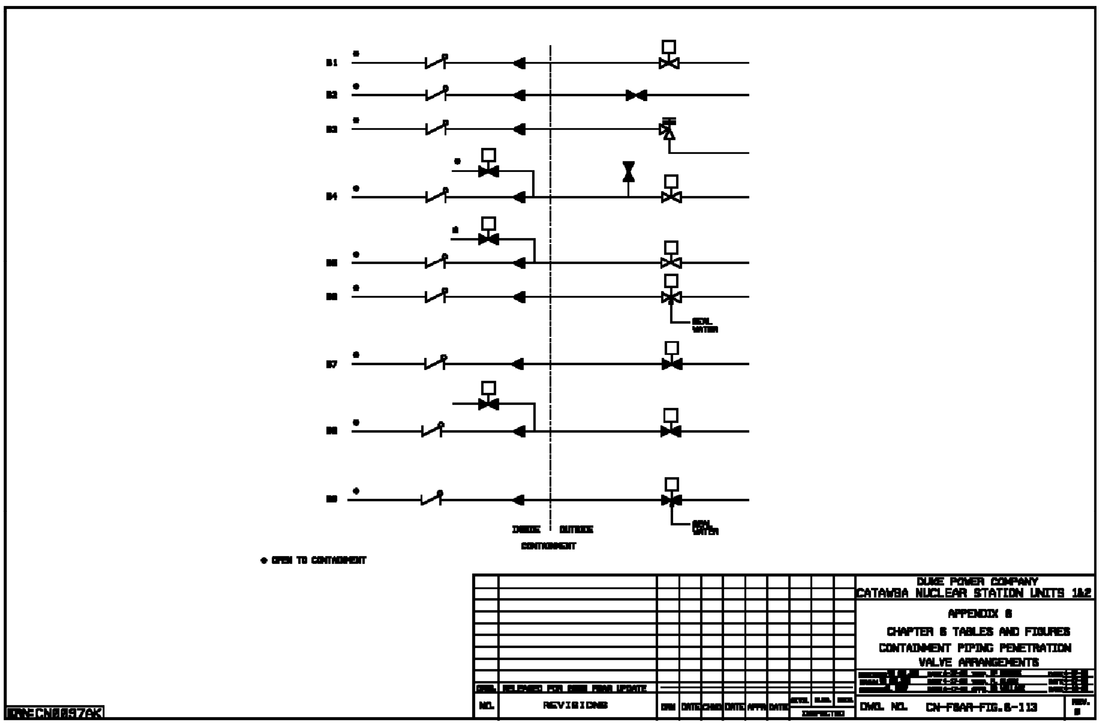


Figure 6-114. Containment Piping Penetration Valve Arrangements

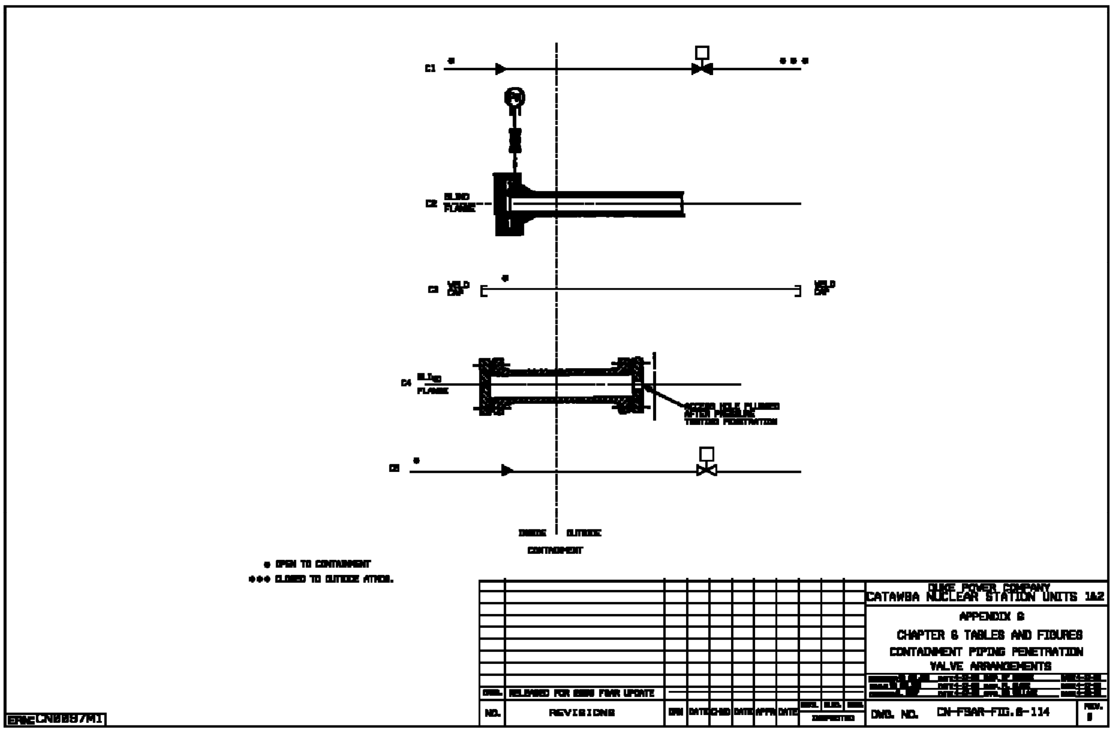


Figure 6-115. Containment Piping Penetration Valve Arrangements

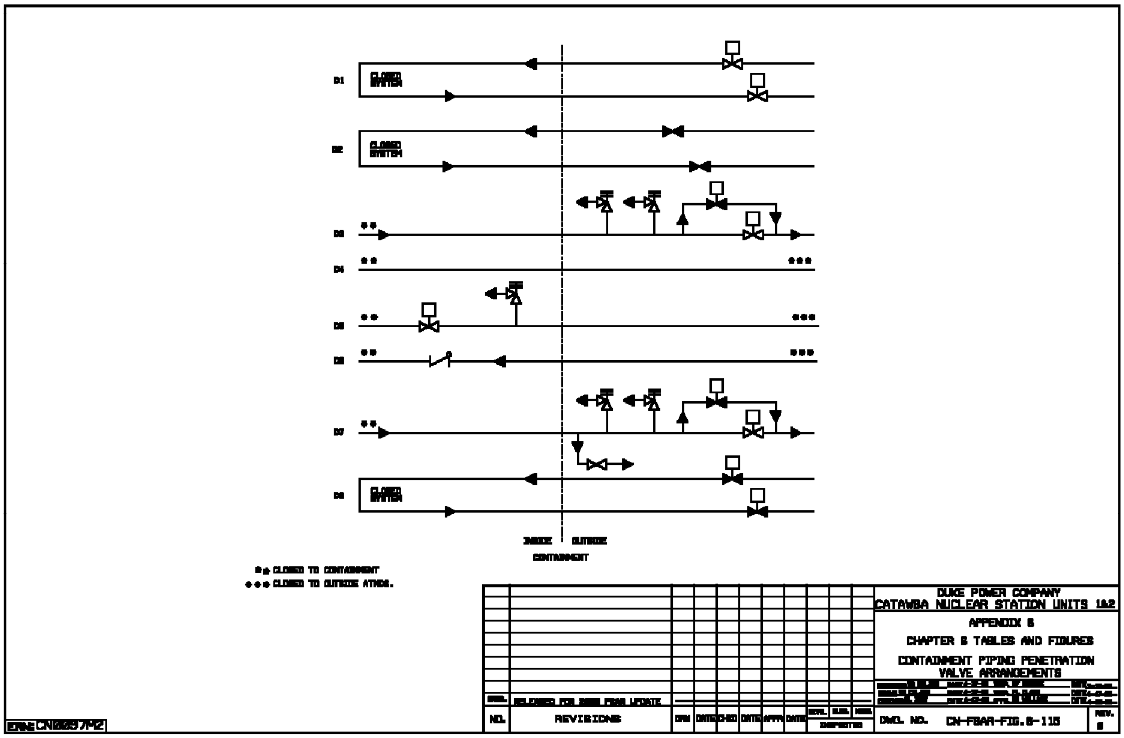


Figure 6-116. Flow Diagram of Containment Valve Injection Water System

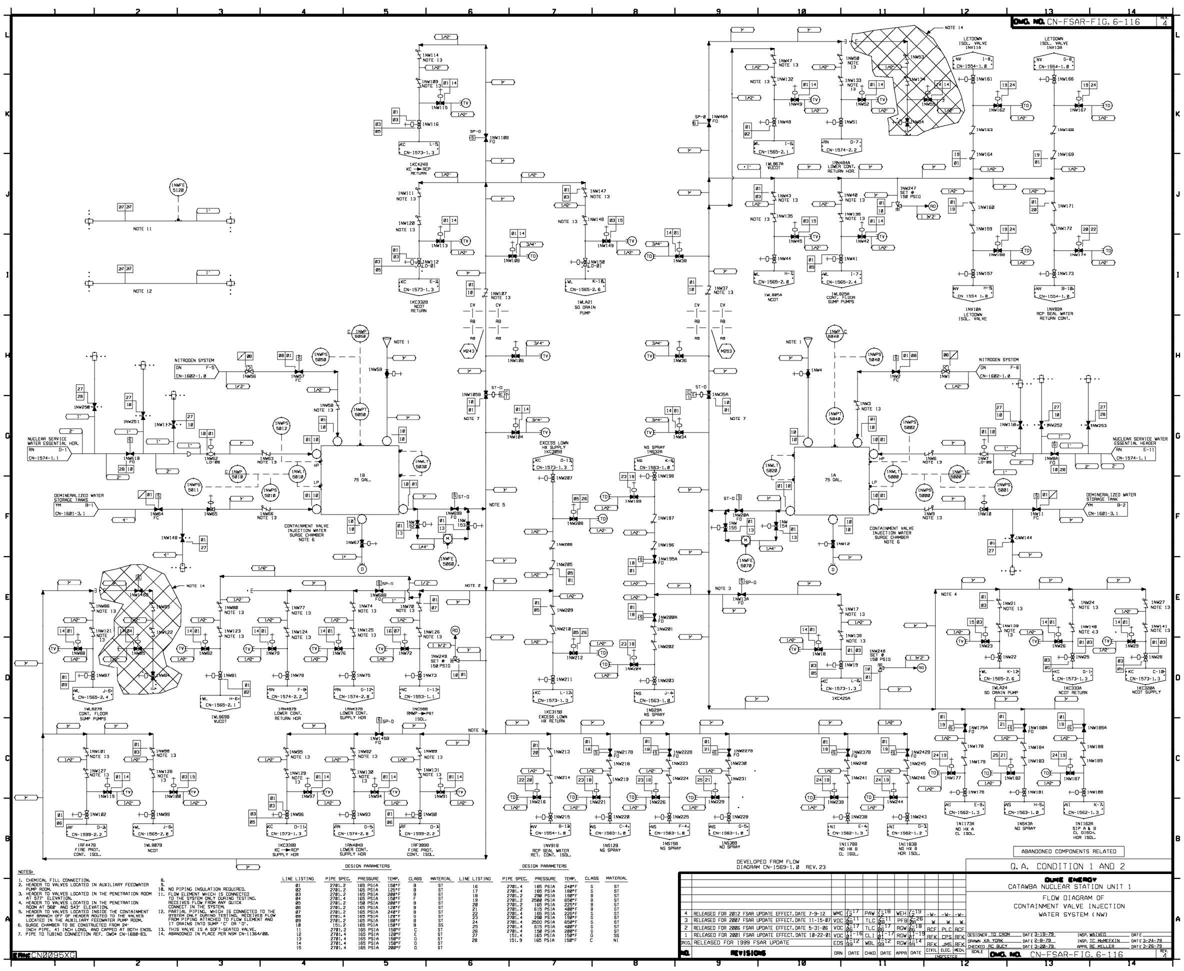


Figure 6-117. Fuel Transfer Tube

[redacted]

Security-Related Information, Withhold under 10 CFR 2.390

Figure 6-118. Model B Electric Hydrogen Recombiner-Cutaway

Historical information not required to be revised.

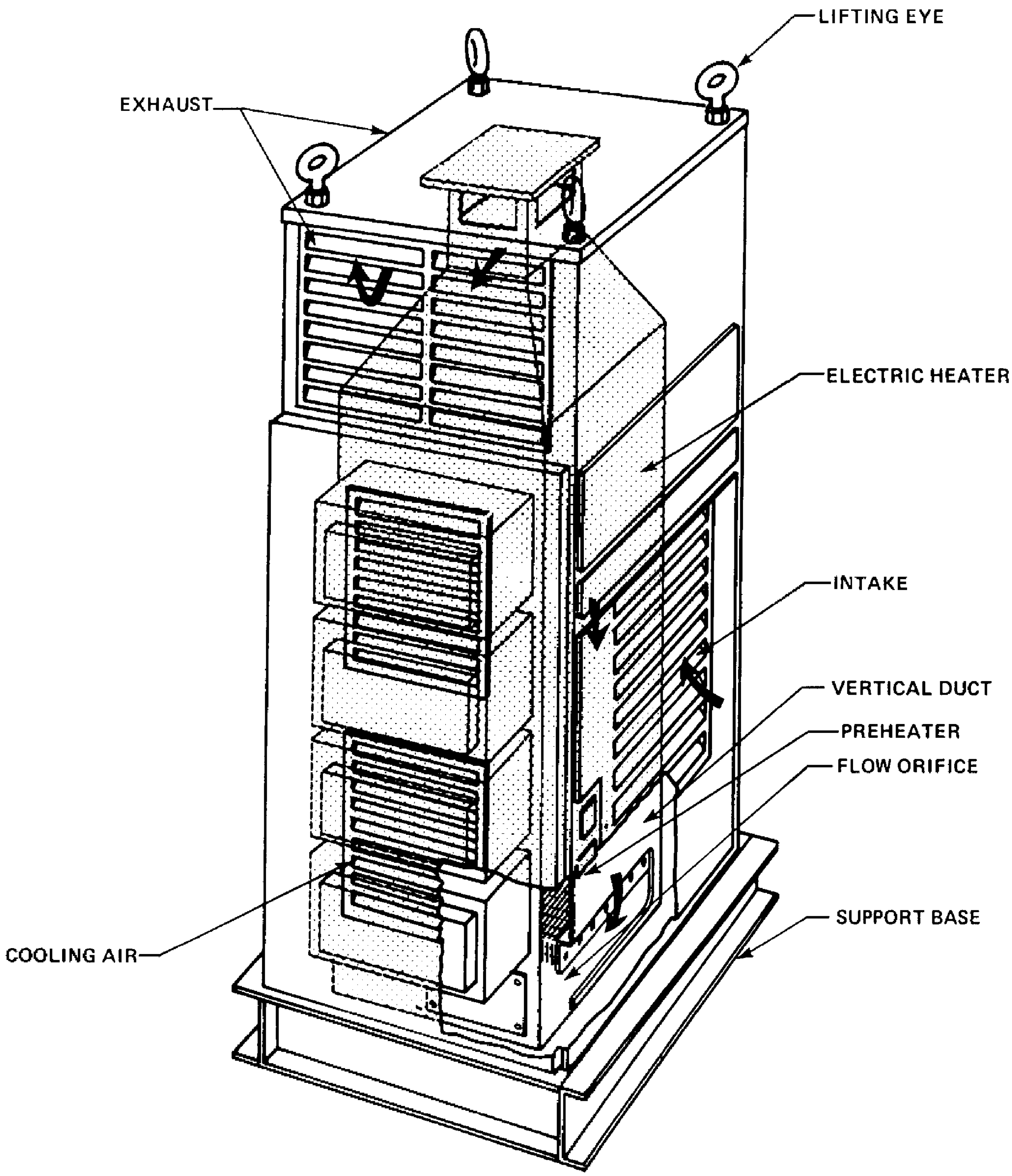


Figure 6-119. Recombiner Control System Schematic

Historical information not required to be revised.

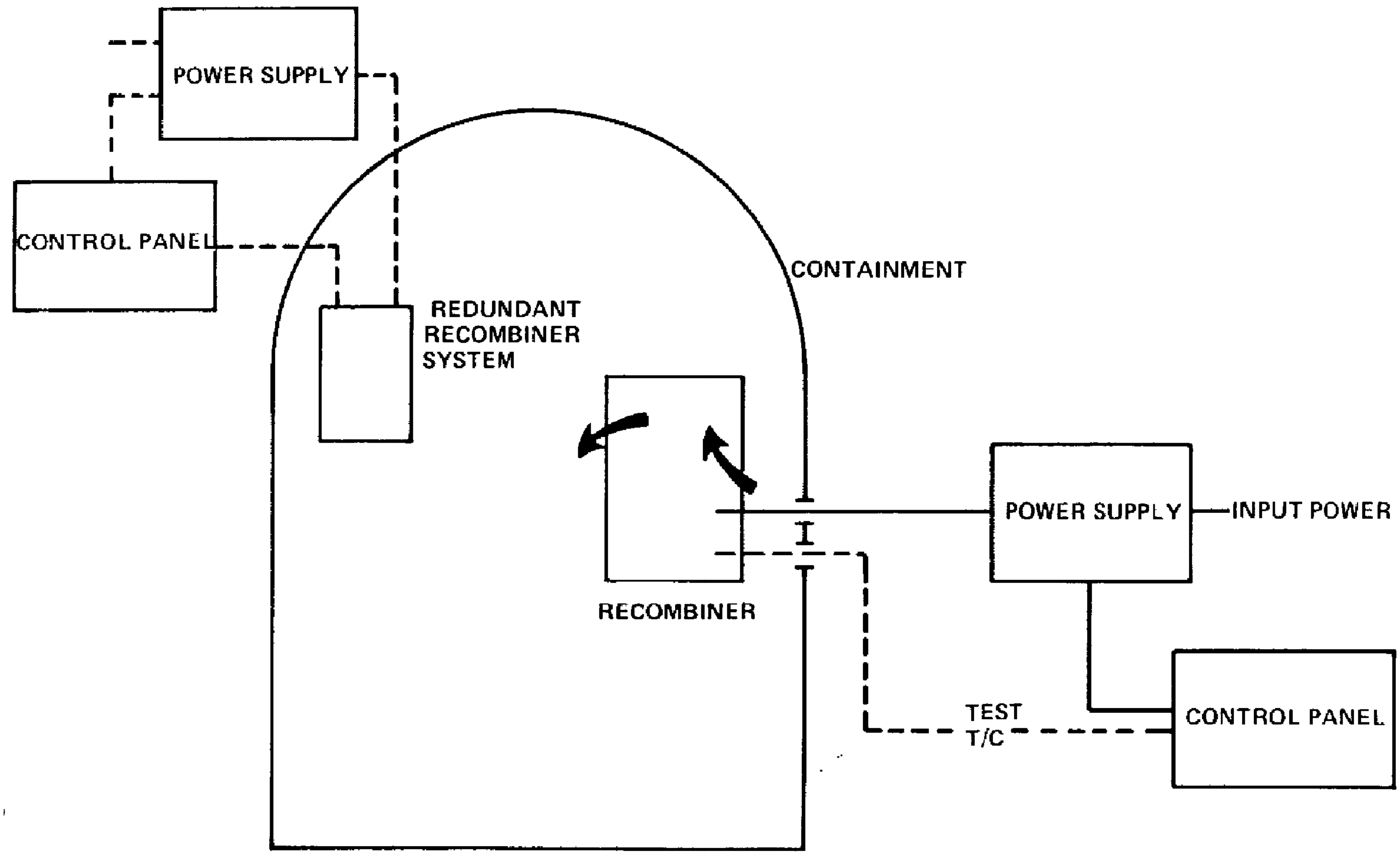


Figure 6-120. Flow Diagram of Containment Hydrogen Sample & Purge System

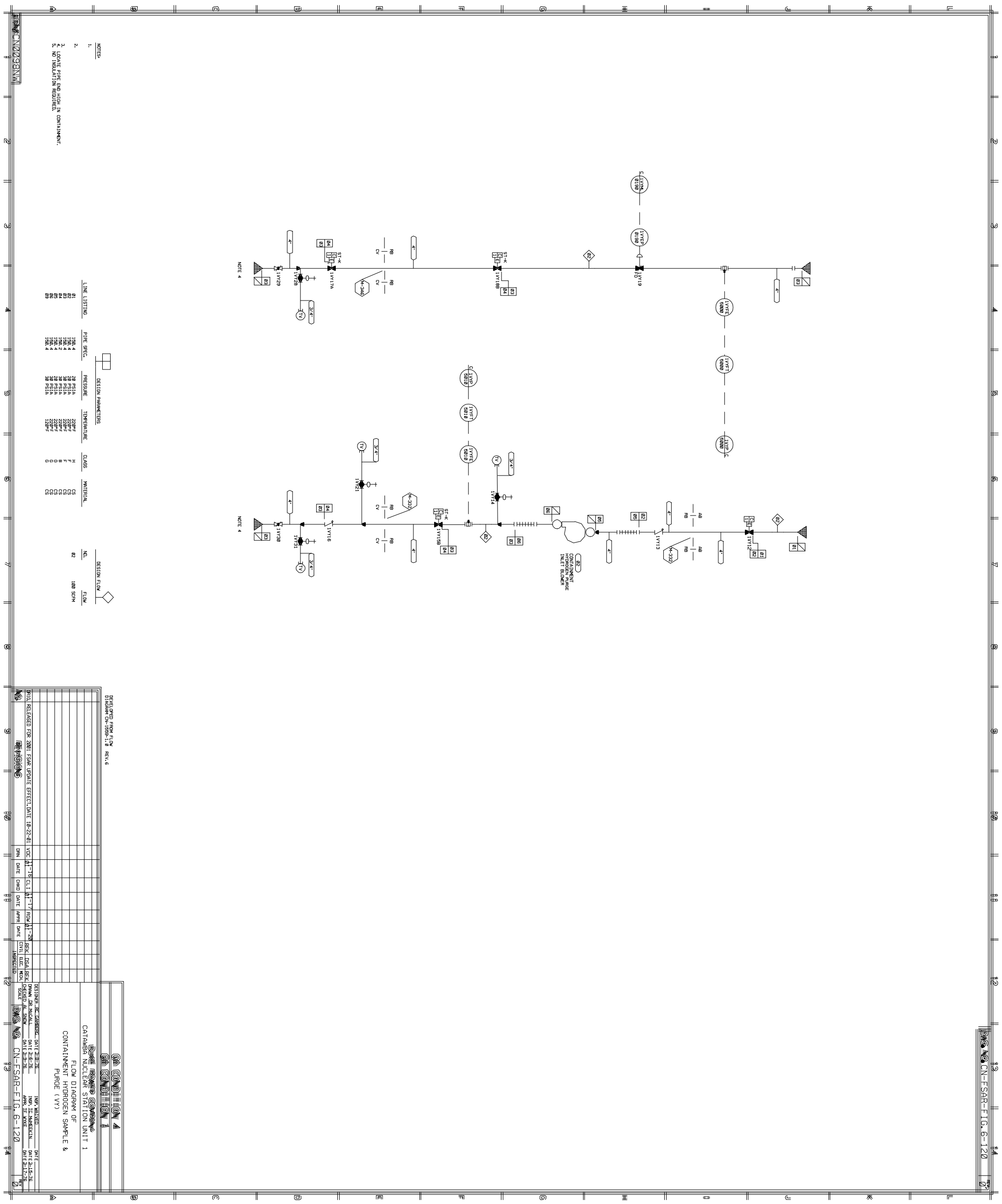


Figure 6-121. Deleted Per 1991 Update

Figure 6-122. Deleted Per 1991 Update

Figure 6-123. Deleted Per 1991 Update

Figure 6-124. Deleted Per 2004 Update

Figure 6-125. Deleted Per 2006 Update

Figure 6-126. Deleted Per 2006 Update

Figure 6-127. Deleted Per 2003 Update

Figure 6-128. Flow Diagram of Safety Injection System

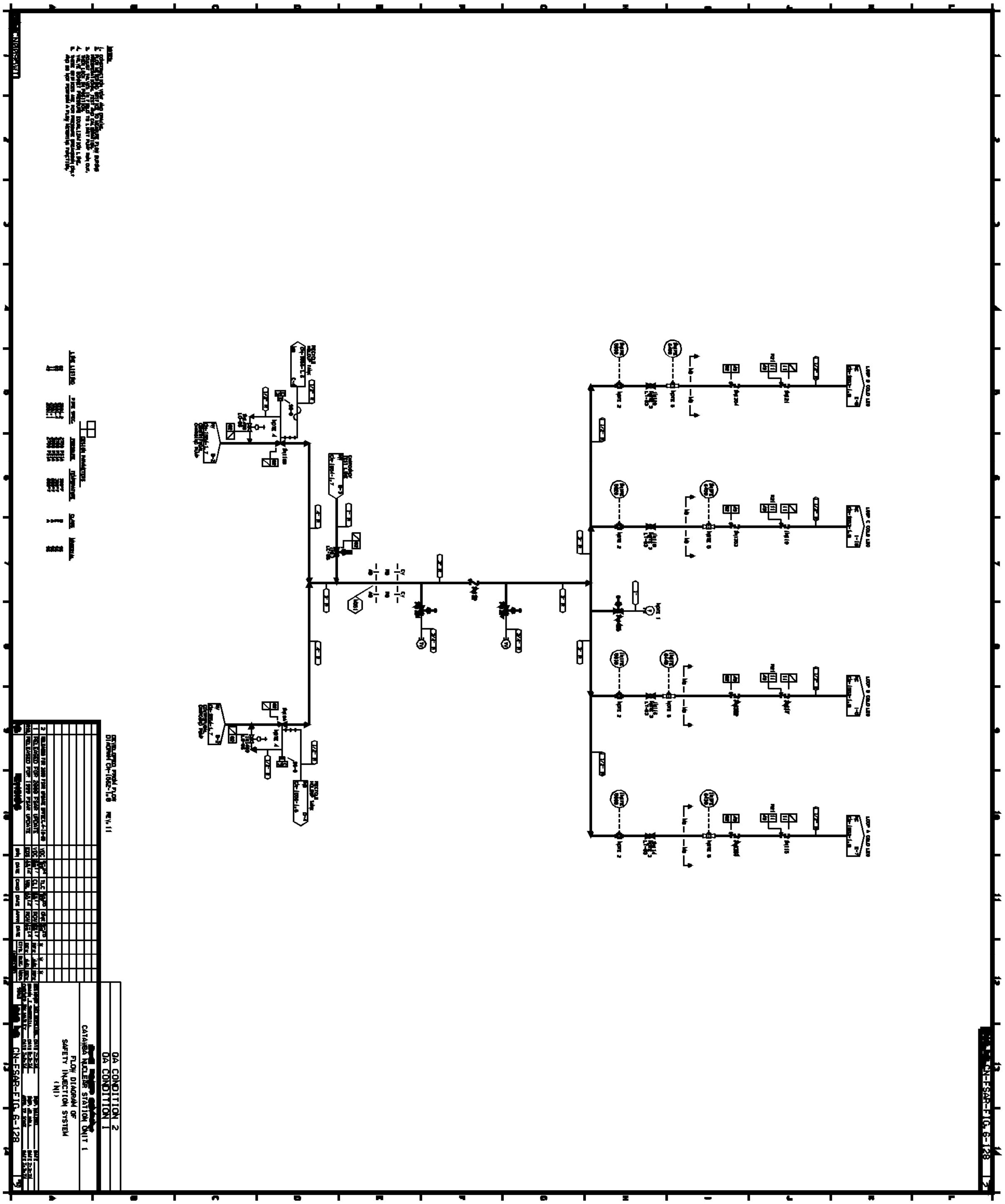


Figure 6-129. Flow Diagram of Safety Injection System

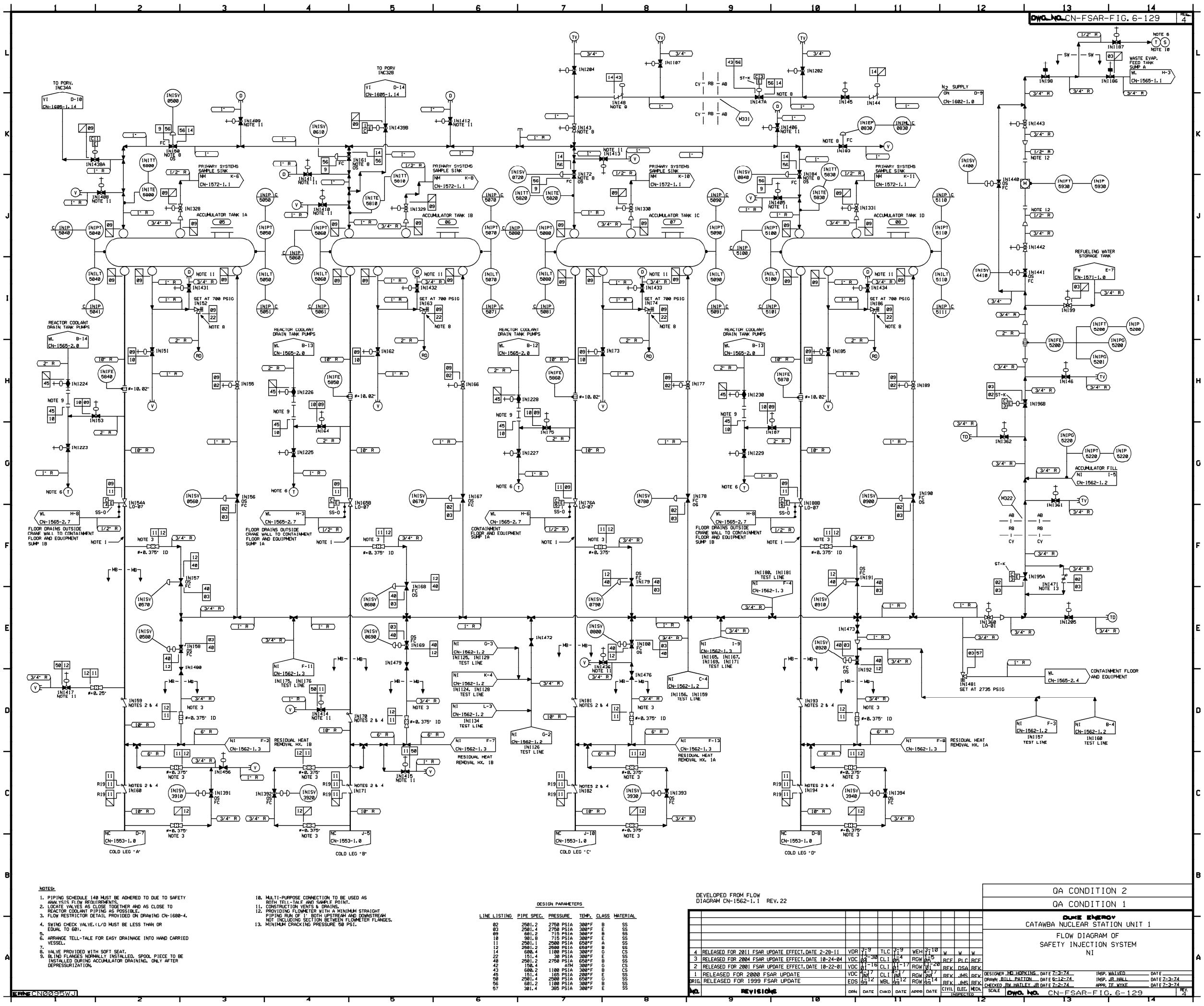


Figure 6-130. Flow Diagram of Safety Injection System

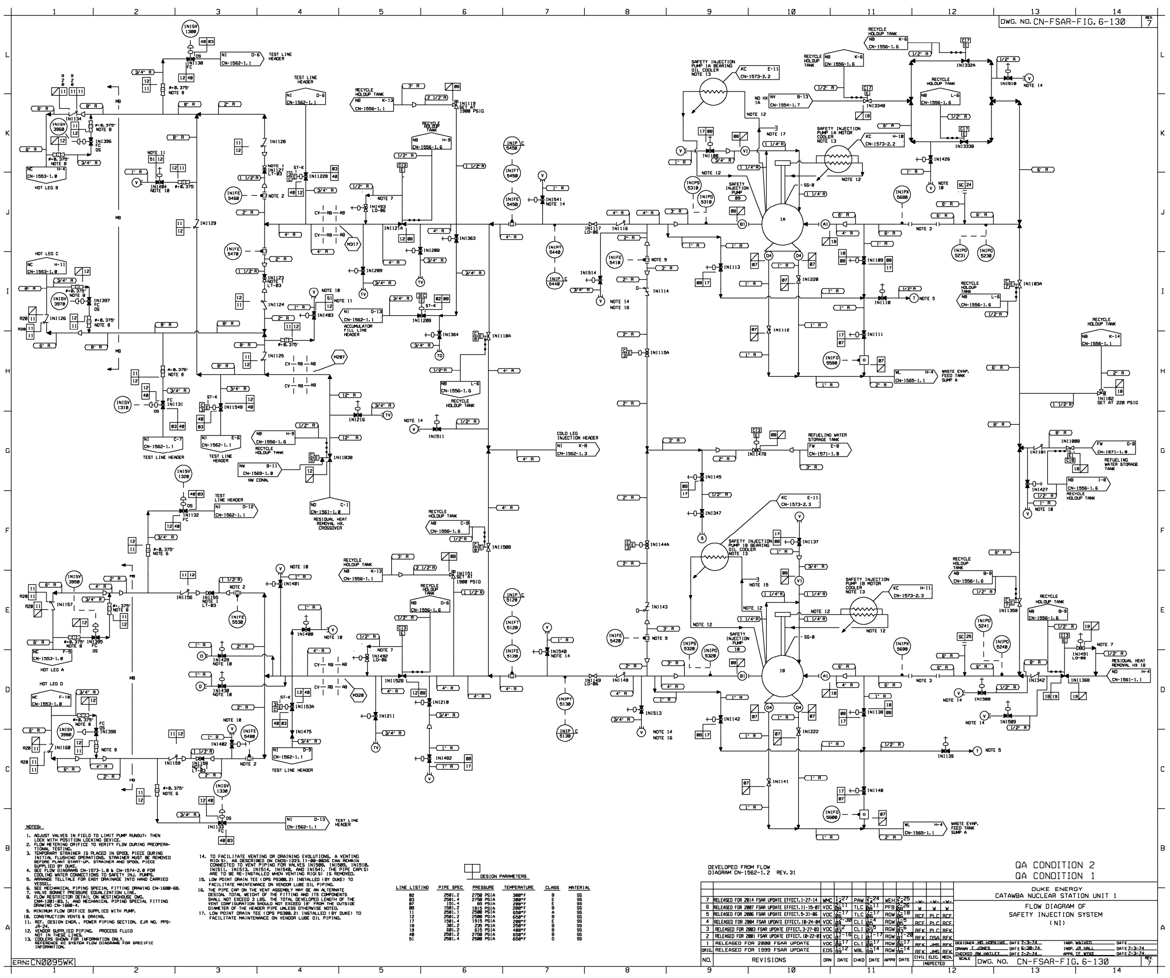


Figure 6-131. Flow Diagram of Safety Injection System

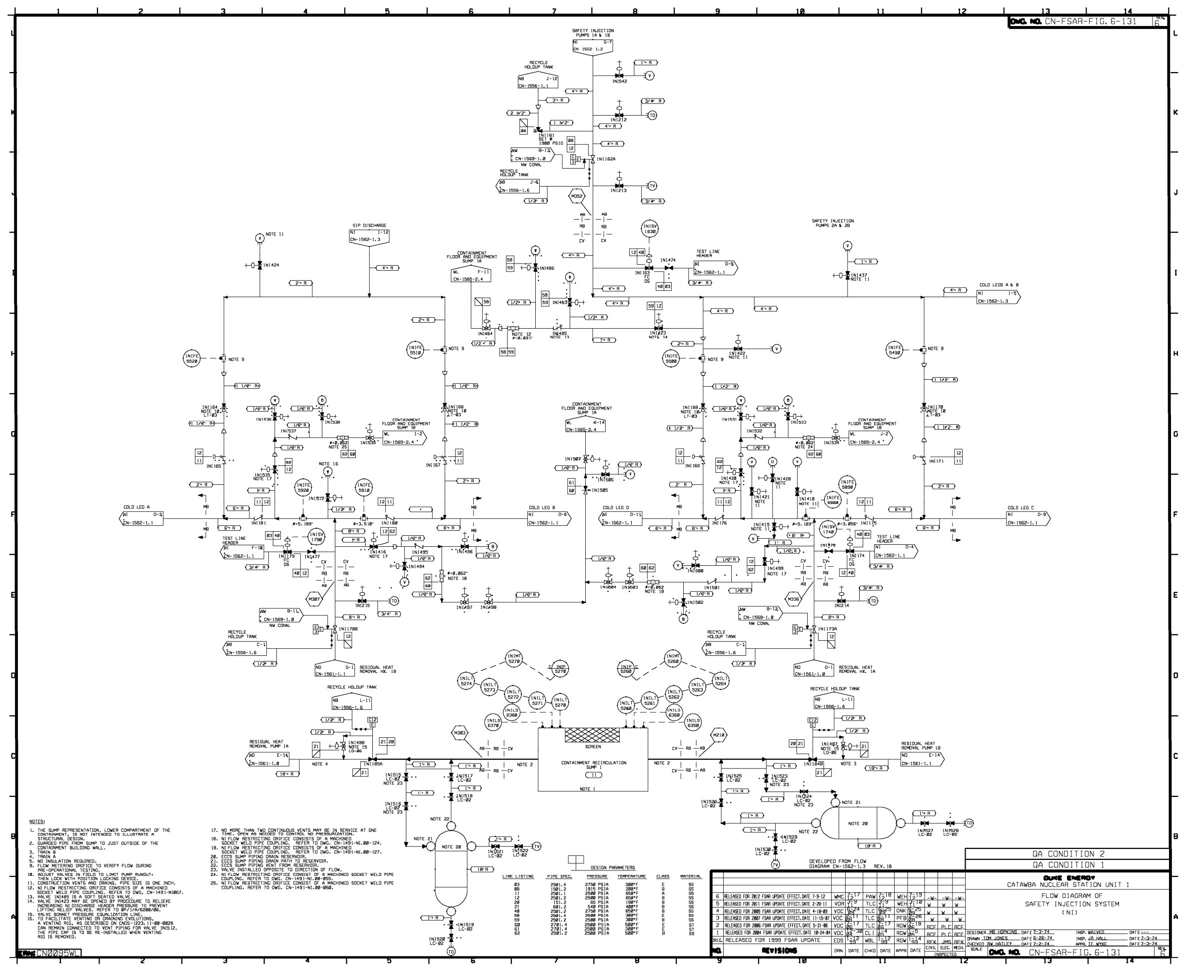


Figure 6-132. Safety Injection System

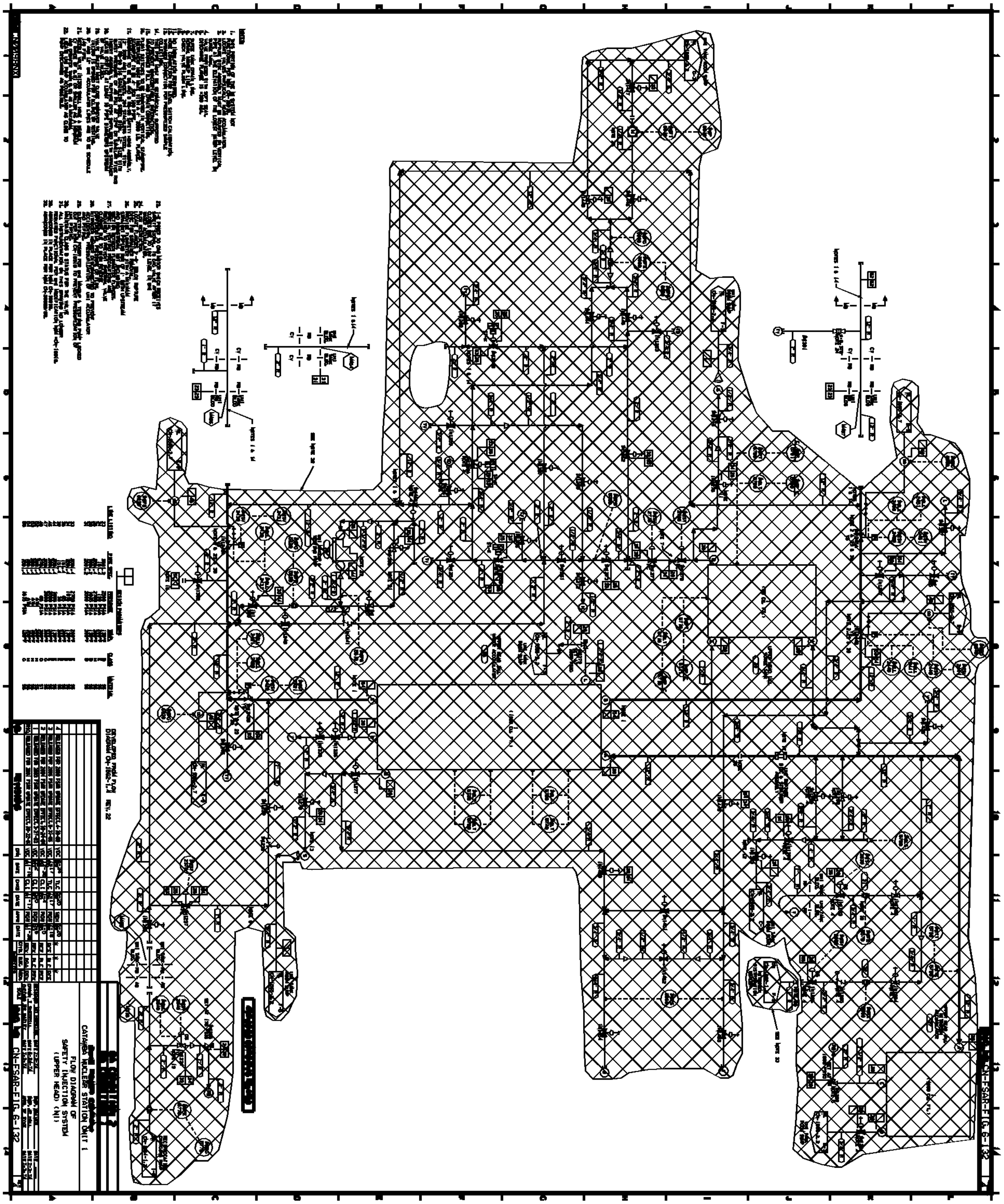


Figure 6-133. Residual Heat Removal Performance Curve

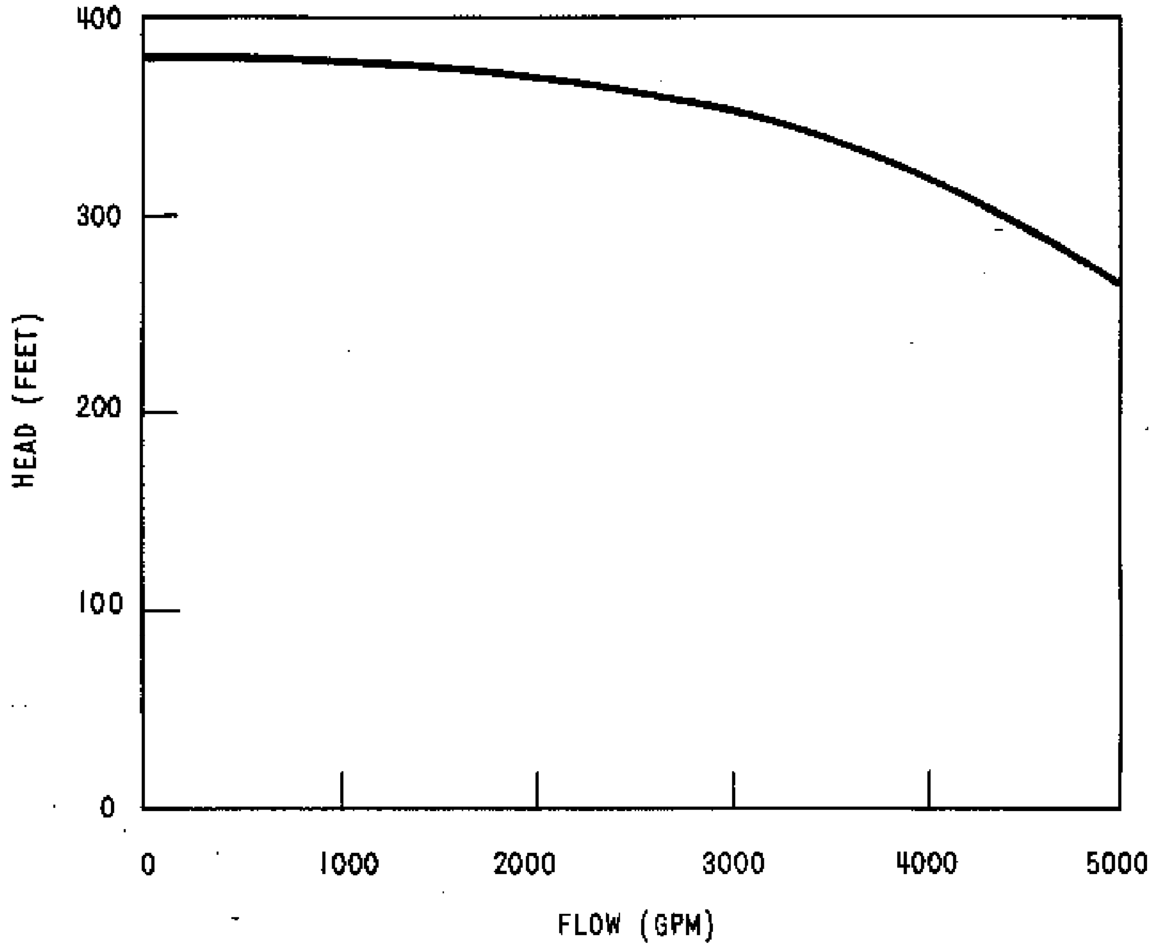


Figure 6-134. Centrifugal Charging Pump Performance Curve

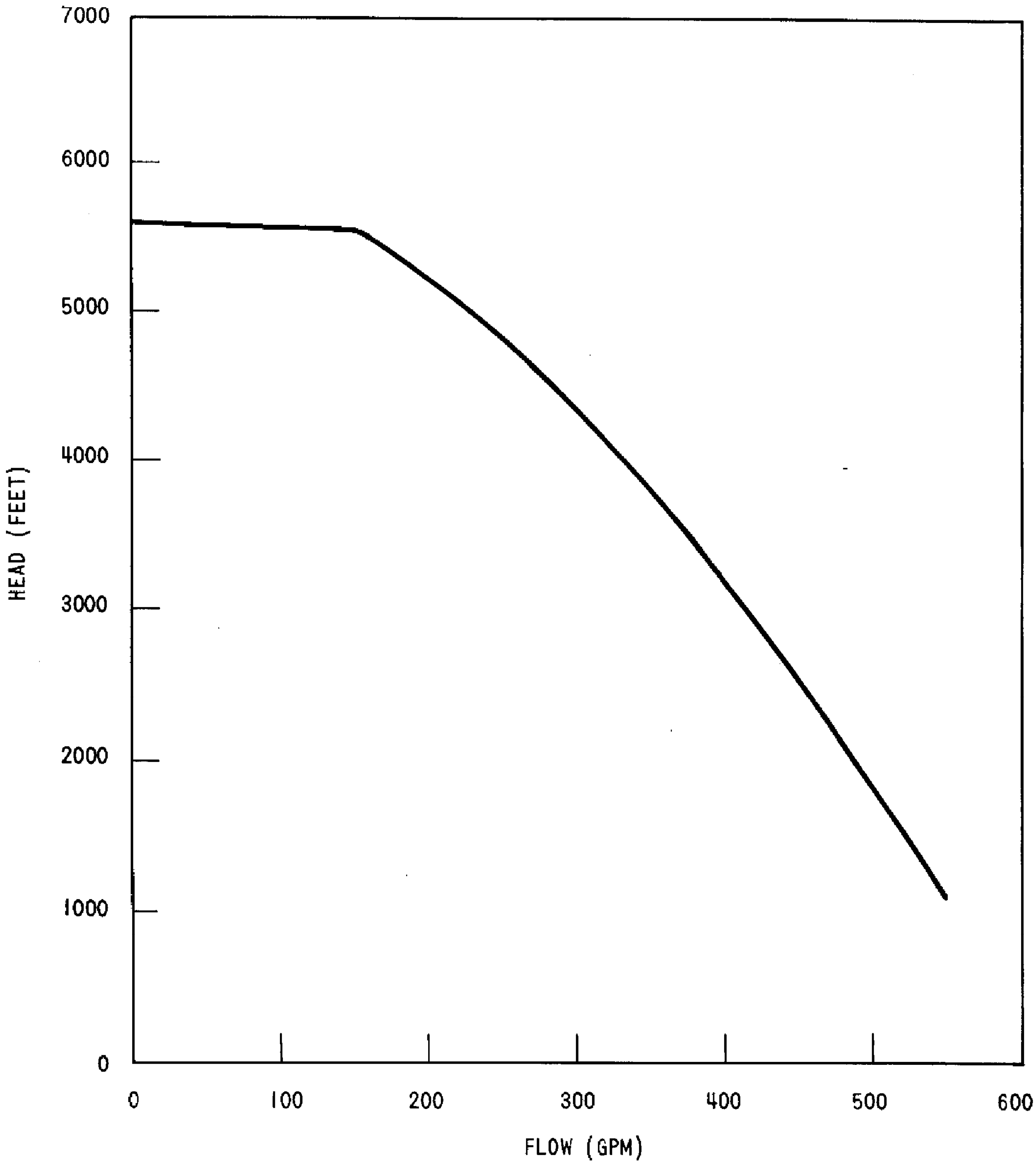


Figure 6-135. Safety Injection Pump Performance Curve

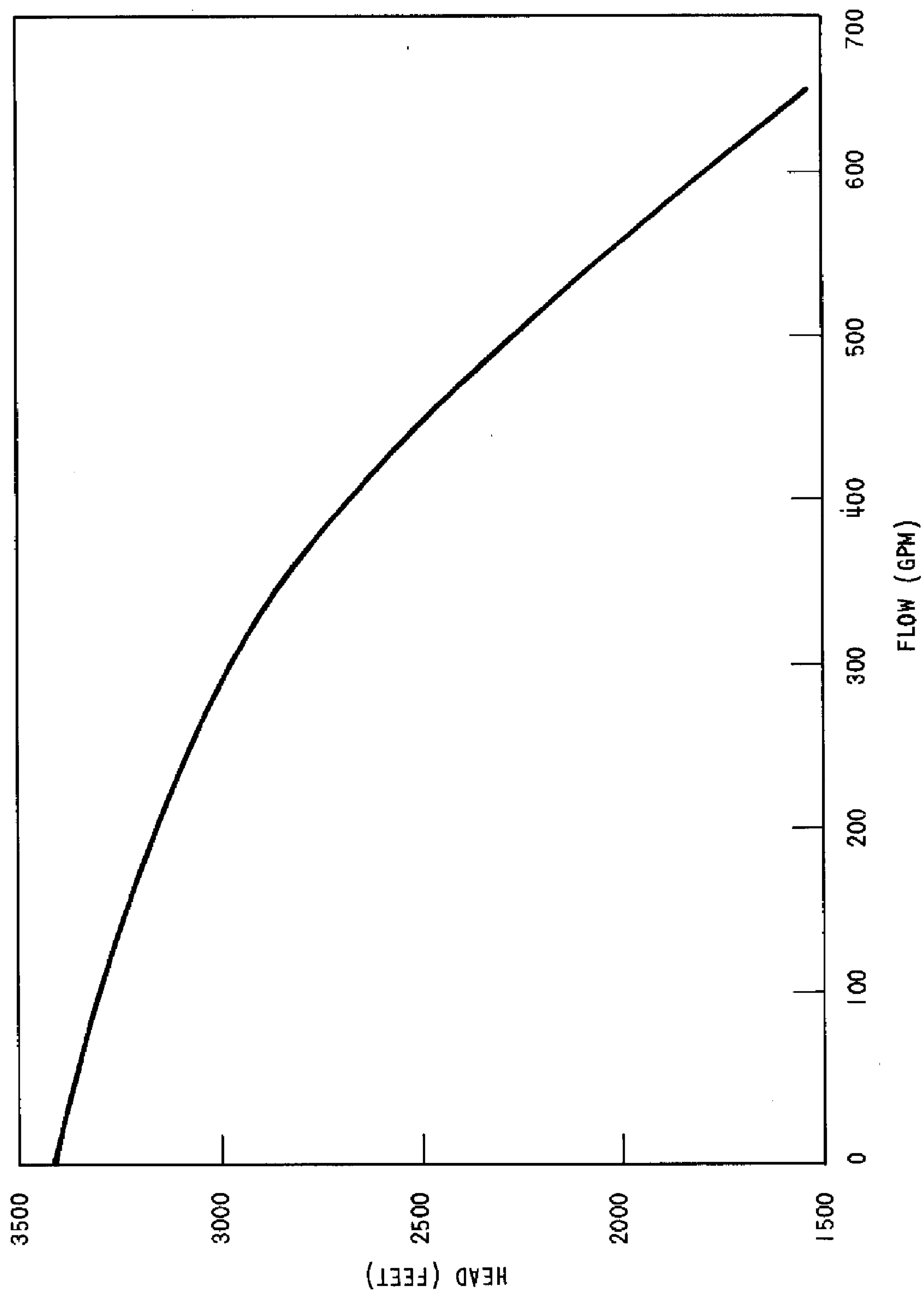
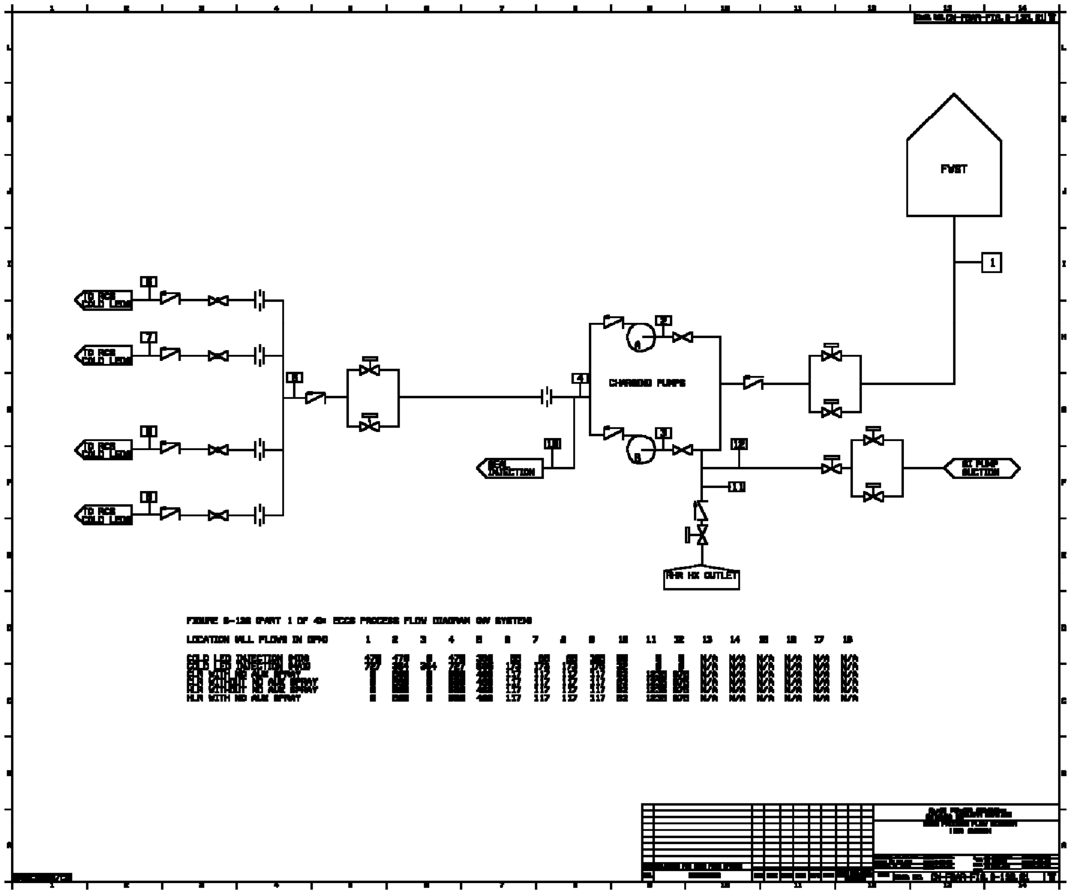


Figure 6-136. Safety Injection/Residual Heat Removal System Process Flow Diagram



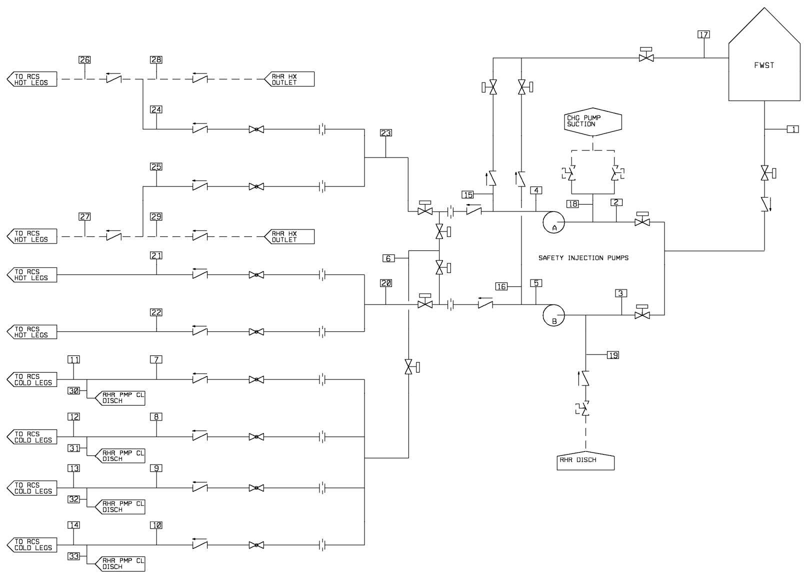


FIGURE 6-136 (PART 2 OF 4): ECCS PROCESS FLOW DIAGRAM (NI SYSTEM)

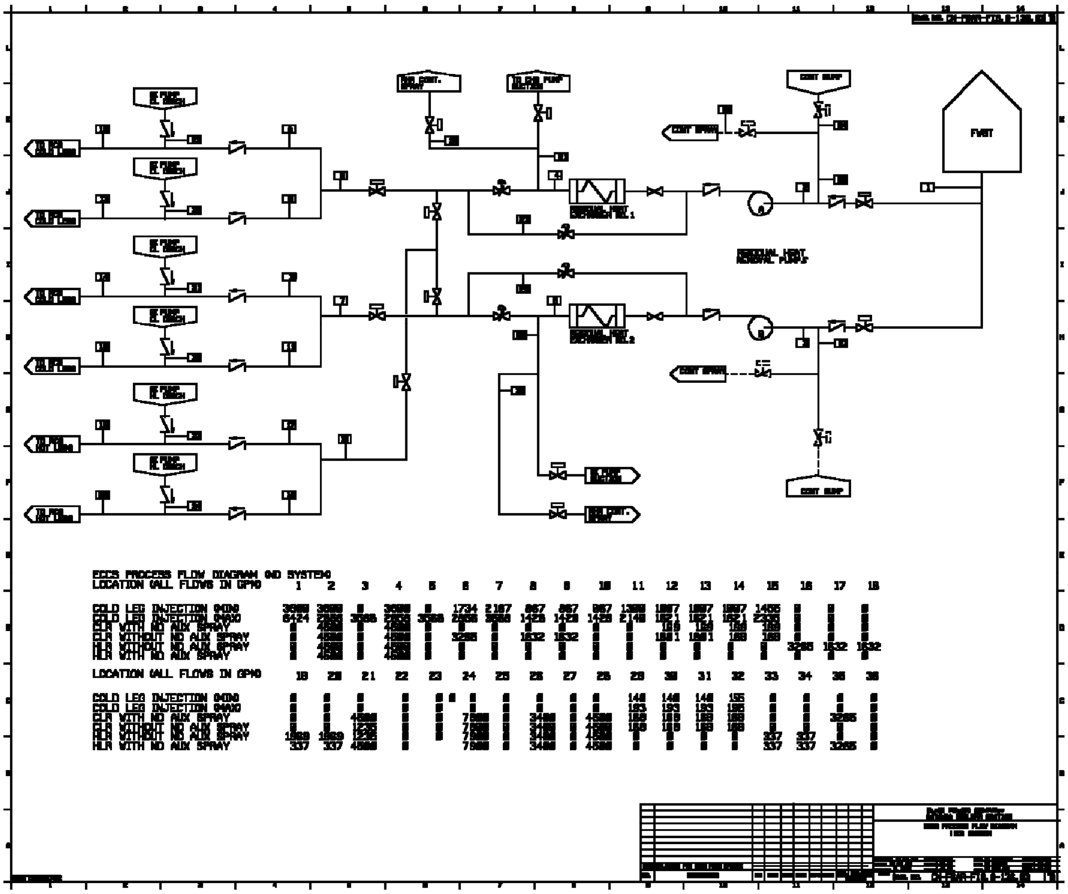
LOCATION (ALL FLOWS IN GPM)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
COLD LEG INJECTION (MIN)	600	600	0	600	0	575	140	140	140	155	1007	1007	1007	1455	25	0	25	0
COLD LEG INJECTION (MAX)	824	412	412	412	412	774	193	193	193	195	1621	1621	1621	2335	25	25	50	0
CLR WITH ND AUX SPRAY	0	0	0	675	0	675	169	169	169	169	169	169	169	169	0	0	0	675
CLR WITHOUT ND AUX SPRAY	0	0	0	675	0	675	169	169	169	169	1801	1756	169	169	0	0	0	675
HLR WITHOUT ND AUX SPRAY	0	0	0	675	0	0	0	0	0	0	0	0	0	0	0	0	0	675
HLR WITH ND AUX SPRAY	0	0	0	675	0	0	0	0	0	0	0	0	0	0	0	0	0	675

LOCATION (ALL FLOWS IN GPM)	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
COLD LEG INJECTION (MIN)	0	0	0	0	0	0	0	0	0	0	0	867	867	867	1300	N/A	N/A	N/A
COLD LEG INJECTION (MAX)	0	0	0	0	0	0	0	0	0	0	0	1428	1428	1428	2140	N/A	N/A	N/A
CLR WITH ND AUX SPRAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A
CLR WITHOUT ND AUX SPRAY	0	0	0	0	0	0	0	0	0	0	0	1801	1756	0	0	N/A	N/A	N/A
HLR WITHOUT ND AUX SPRAY	0	0	0	0	675	337	337	1801	1801	1632	1632	0	0	0	0	N/A	N/A	N/A
HLR WITH ND AUX SPRAY	0	0	0	0	675	337	337	337	337	0	0	0	0	0	0	N/A	N/A	N/A

NO.	REVISIONS	DRN	DATE	CHKD	DATE	APPR	DATE	CIVIL	ELEC.	MECH.
1	RELEASED FOR 2012 FSAR UPDATE EFFECT. 2-21-12	WMC	2-21-12	TLC	2-21-12	WEH	2-21-12	-W-	-W-	-W-
ORIG.	RELEASED FOR 2000 FSAR UPDATE									

DUKE ENERGY
CATAWBA NUCLEAR STATION
ECCS PROCESS FLOW DIAGRAM
(NI SYSTEM)

DESIGNER VD CULJAN DATE 4-17-00 INSP. JM STACKLEY DATE 4-17-00
DRAWN VD CULJAN DATE 4-17-00 INSP. RF KRAUSE DATE 4-17-00
CHECKED CL IRBY DATE 4-17-00 APPR. RG WALLACE DATE 4-17-00
DWG. NO. CN-FSAR-FIG. 6-136. 02 REV. 1


FWST
CONT SUMP
CONT SPRAY
RESIDUAL HEAT REMOVAL PUMP
ECCS PROCESS FLOW DIAGRAM (ND SYSTEM)
LOCATION (ALL FLOWS IN GPM)
COLD LEG INJECTION (MIN)
COLD LEG INJECTION (MAX)
CLR WITH ND AUX SPRAY
CLR WITHOUT ND AUX SPRAY
HLR WITHOUT ND AUX SPRAY
HLR WITH ND AUX SPRAY

NOTES TO Figure 6-136
ECCS Process Flow Diagram (Notes)

1. The cold leg injection mode of operation assumes single train ECCS operation at minimum safeguards conditions, and two train ECCS operation at maximum safeguards conditions. Minimum injection flow rates are representqative of three NV/NI lines at the minimum of the flow balance TAC windows and the single NV/NI line (attached to a broken loop) at the maximum of the flow balance TAC windows. Maximum injection flow rates are representative of all NV/NI lines at the maximum of the flow balance TAC windows.
2. Maximum water temperatures are 100°F (at the FWST) and 150°F (at the ND HX outlet) for injection and recirculation modes, respectively. Reference RCS pressure for all ECCS modes is 0 psig.
3. For minimum cold leg injection and recirculation conditions, seal injection flow rates are maximum values, thereby reducing the cold leg injection flow. For maximum cold leg injection conditions, the seal injection flow rate is a conservative nominal value of 32 gpm, thereby maximizing the cold leg injection flow rates.
4. The recirculation modes of operation assume single train ECCS operation at runout conditions. Runout flow rates are 560 gpm, 675 gpm, and 4500 gpm for a single NV, NI, and ND pump, respectively. The NV and NI injection lines are assumed to be balanced at their maximum flow balance TAC values. ND injection lines are not required to be balanced, but are assumed to be balanced equally for illustrative purposes of this diagram. The same is true for NI hot leg injection lines.
5. All flow rates are either taken directly, or indirectly determined from calculation file DPC-1552.08-00-0109, Safety Injection Flows for Safety Analysis.

Figure 6-137. Ice Condenser

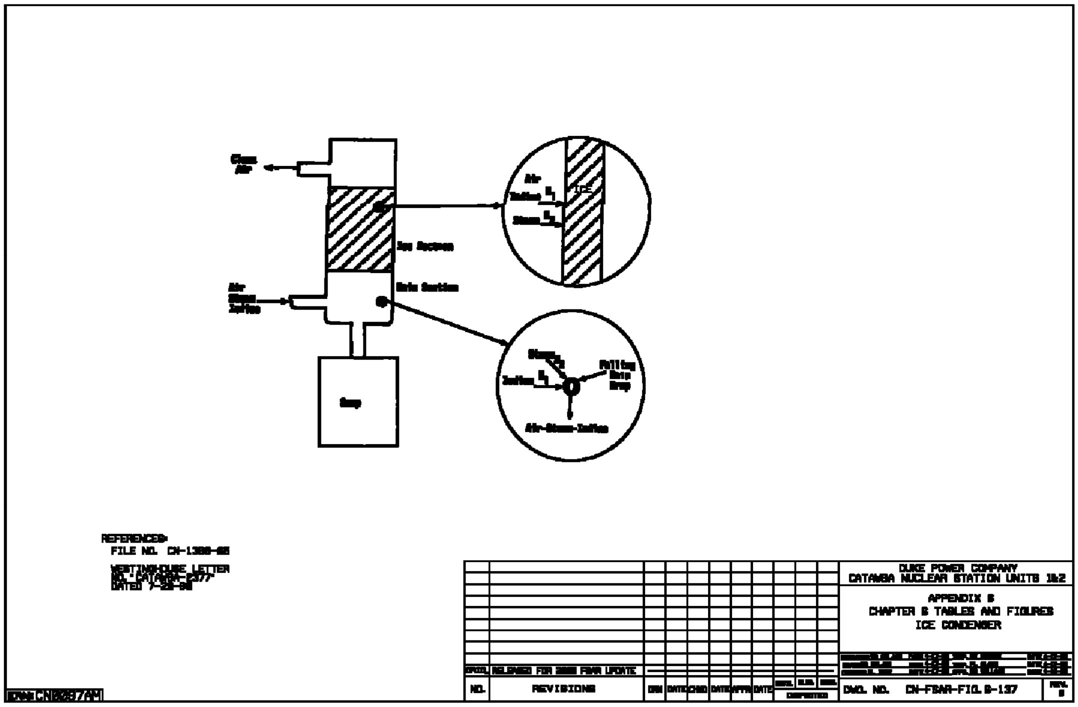


Figure 6-138. Isometric of Ice Condenser

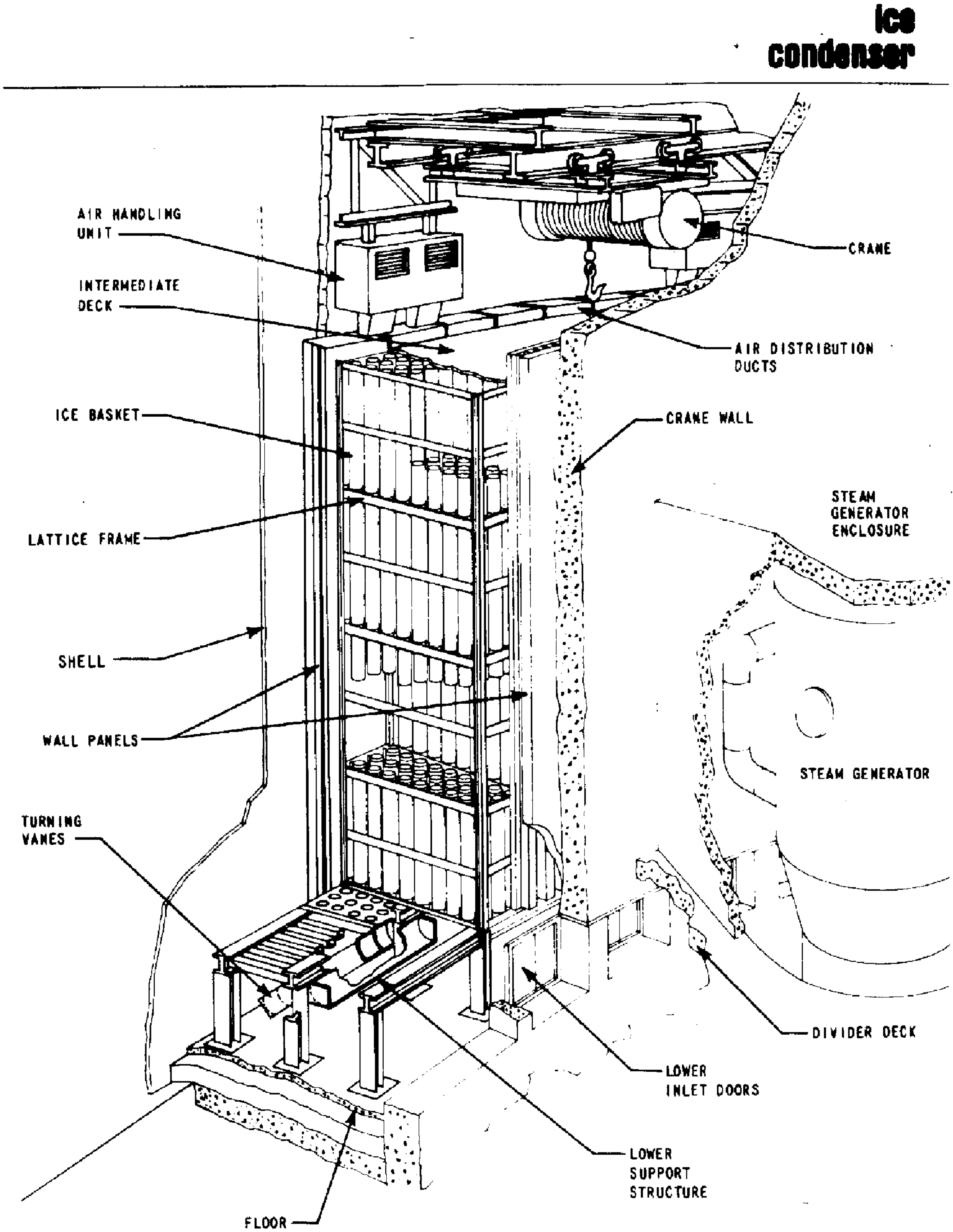


Figure 6-139. Floor Structure

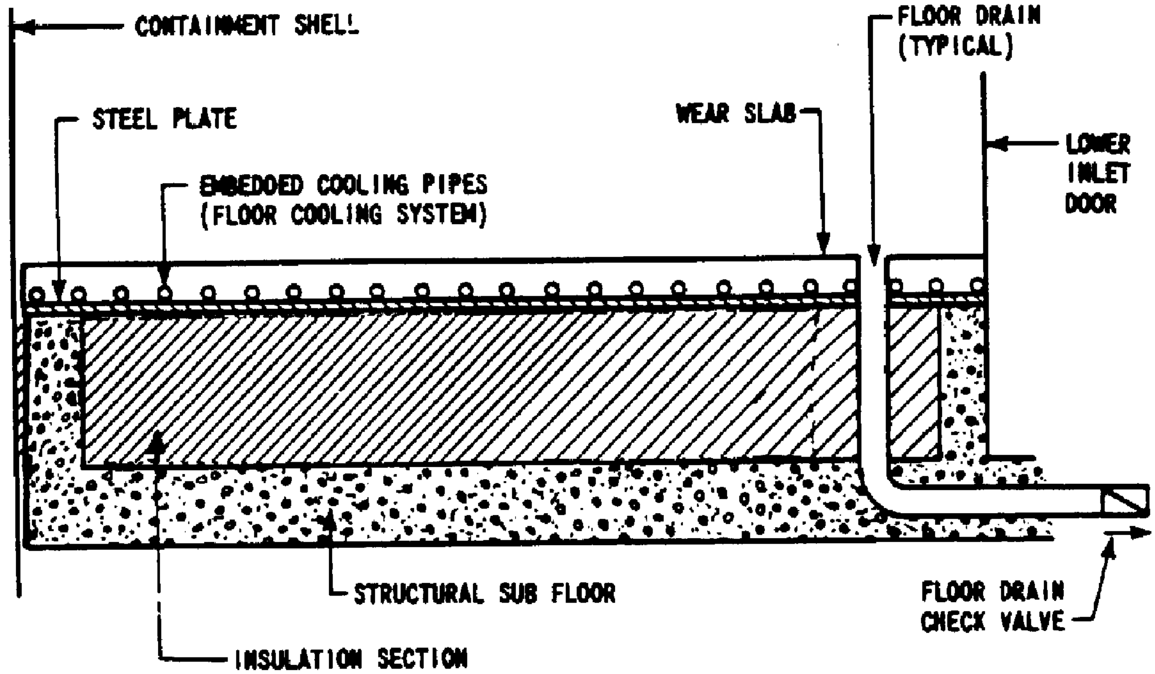


Figure 6-140. Wear Slab Top Surface Area Showing Typical Coolant Piping Layout

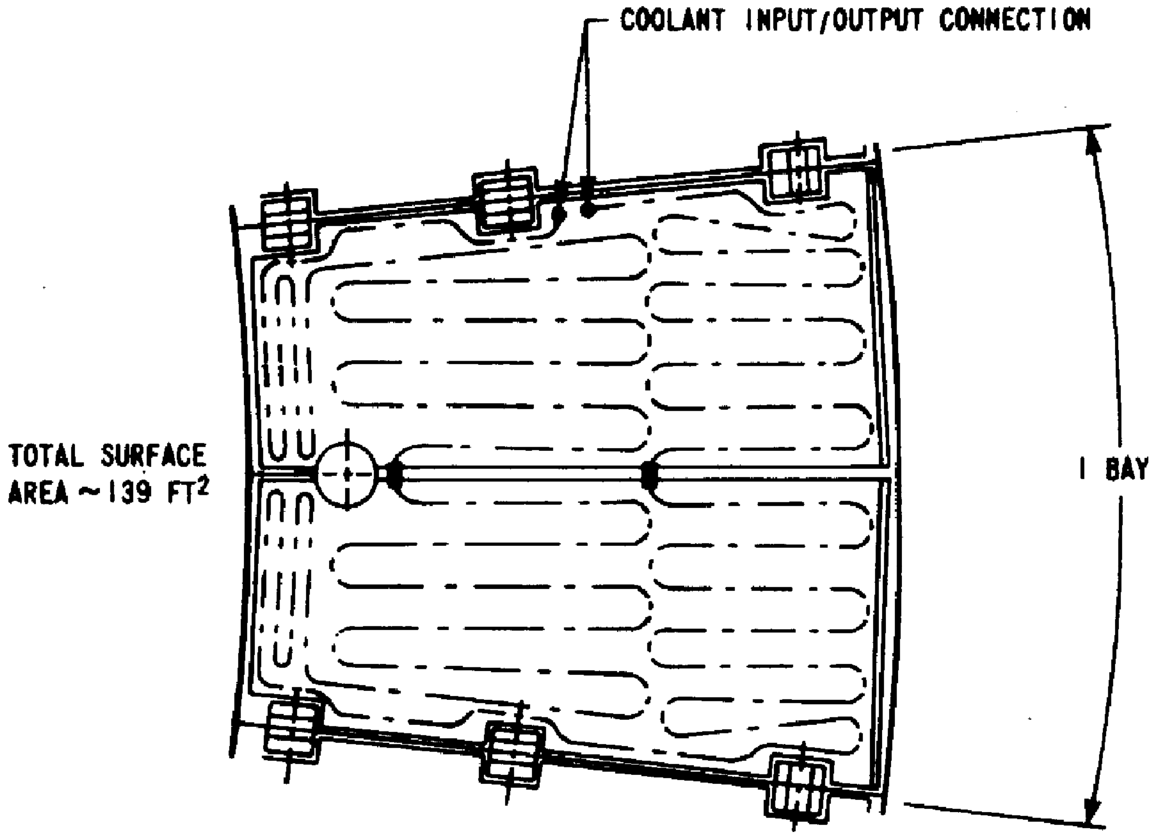
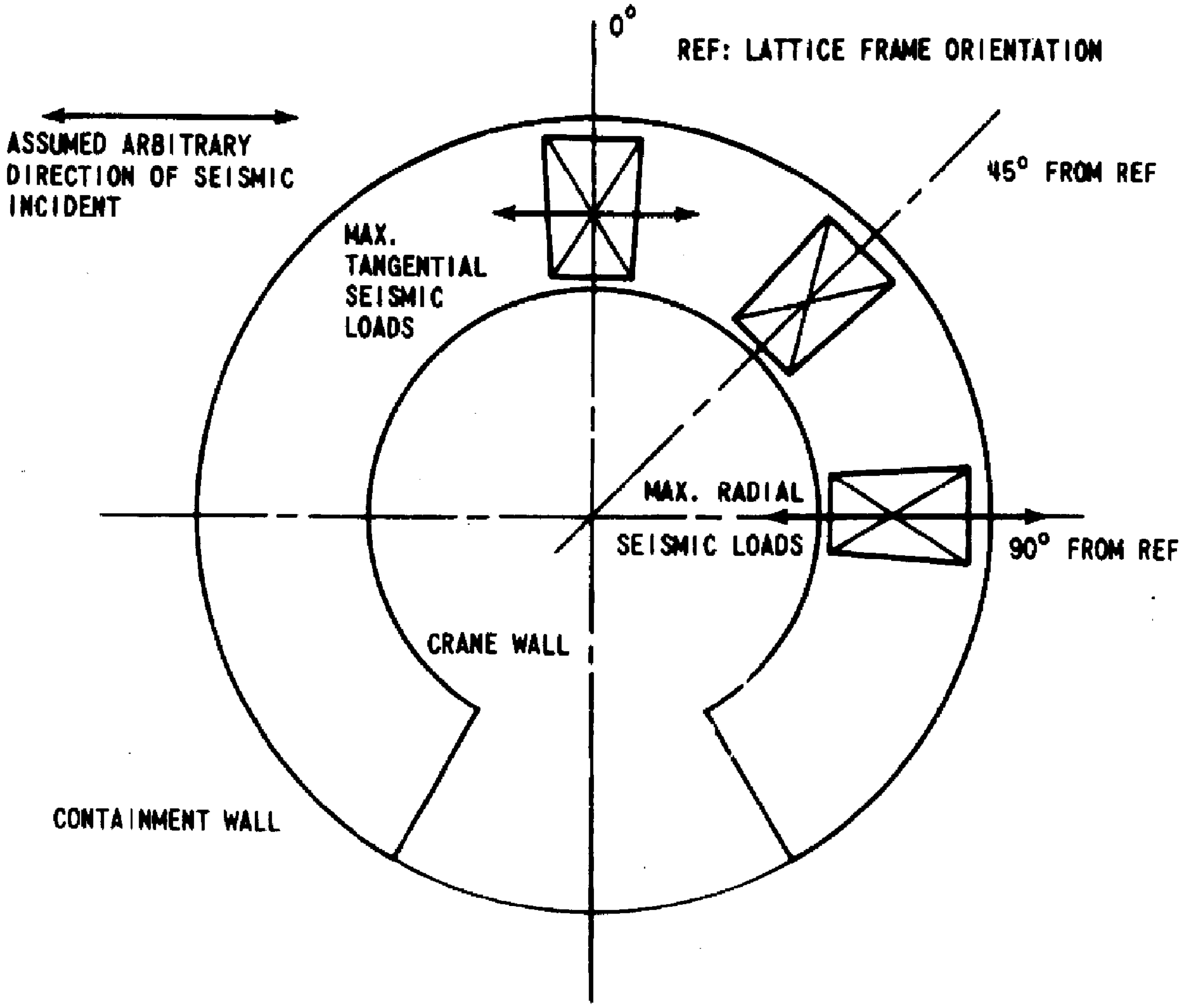


Figure 6-141. Lattice Frame Orientation



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 6-142. Load Distribution For Tangential Seismic And Blowdown Loads In Analytical Model

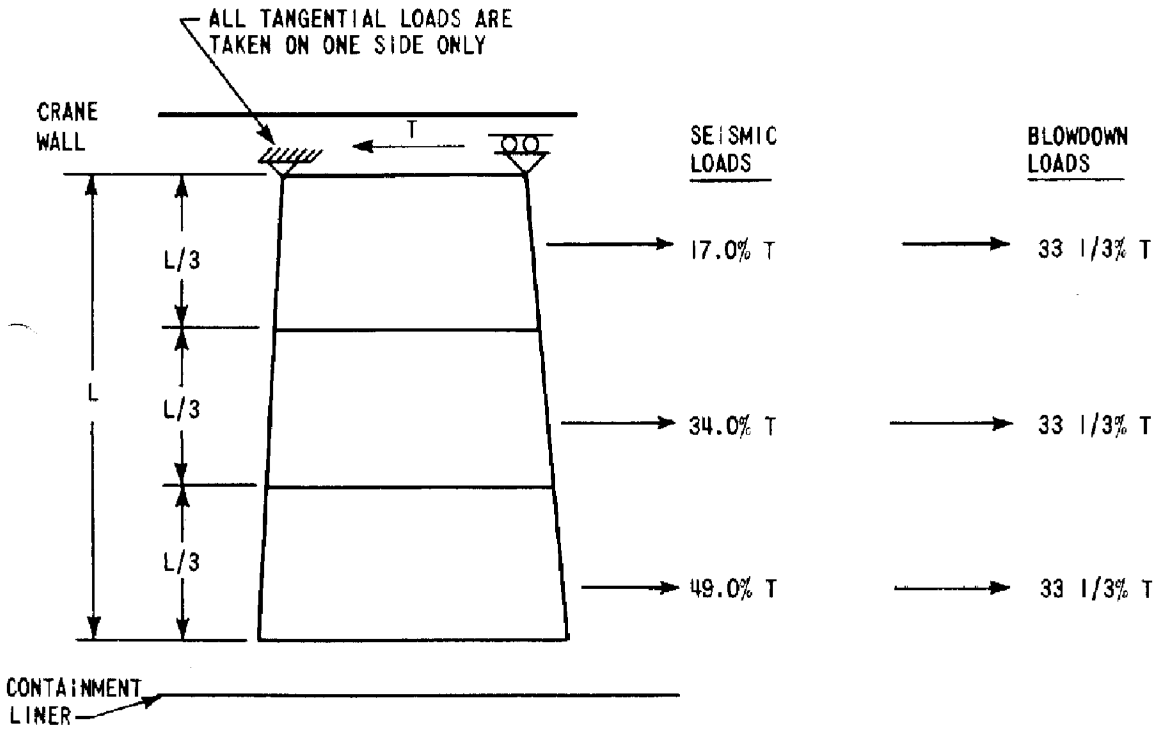
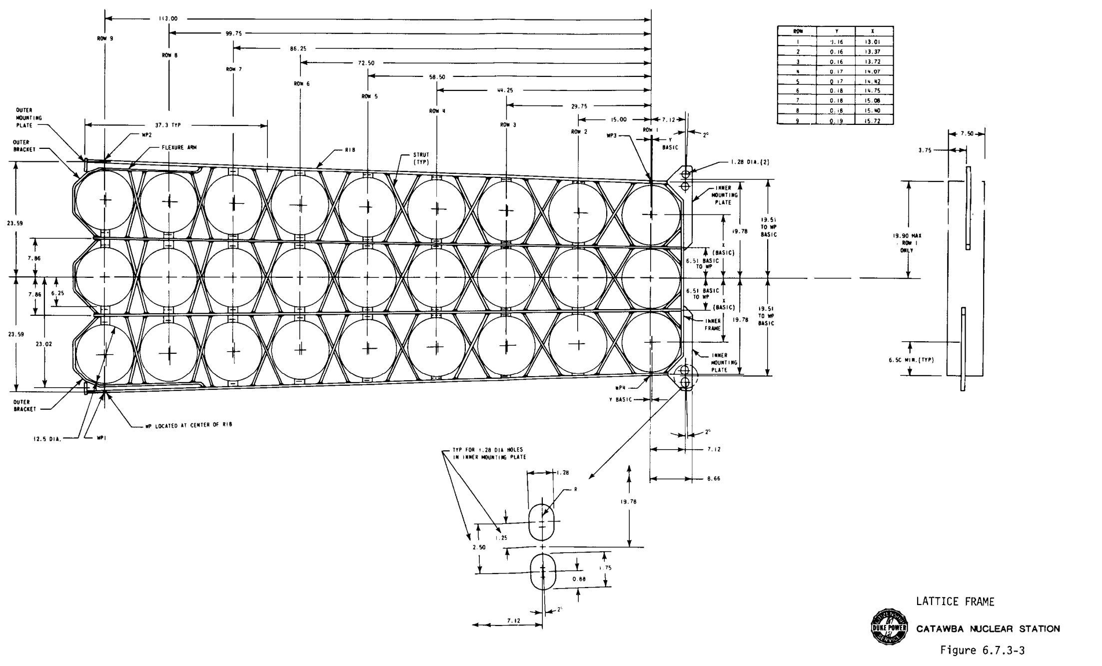


Figure 6-143. Lattice Frame



ROW	Y	X
1	0.16	13.01
2	0.16	13.37
3	0.16	13.72
4	0.17	14.07
5	0.17	14.42
6	0.18	14.75
7	0.18	15.08
8	0.18	15.40
9	0.19	15.72

Figure 6-144. Lattice Frame Analysis Model

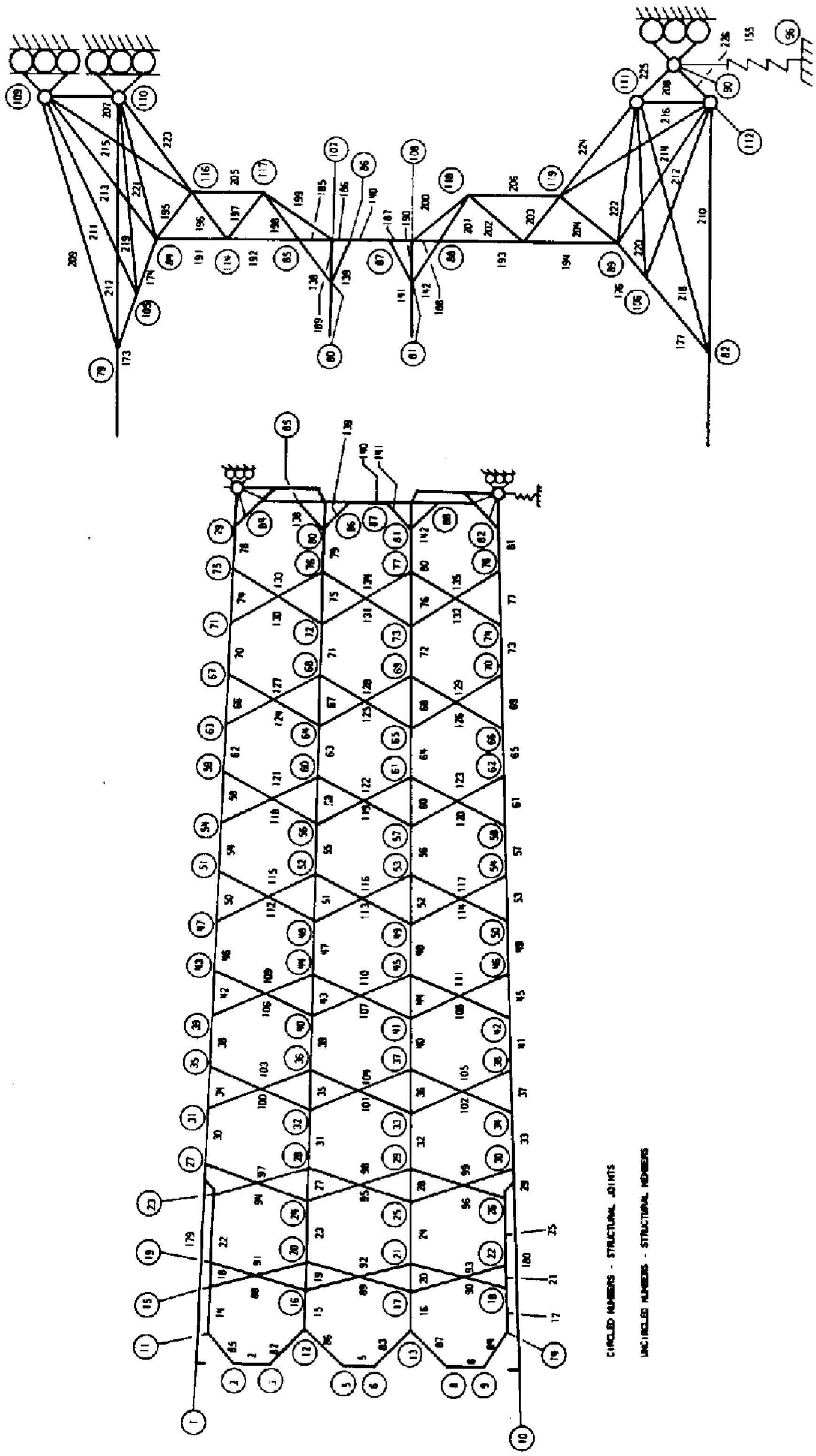
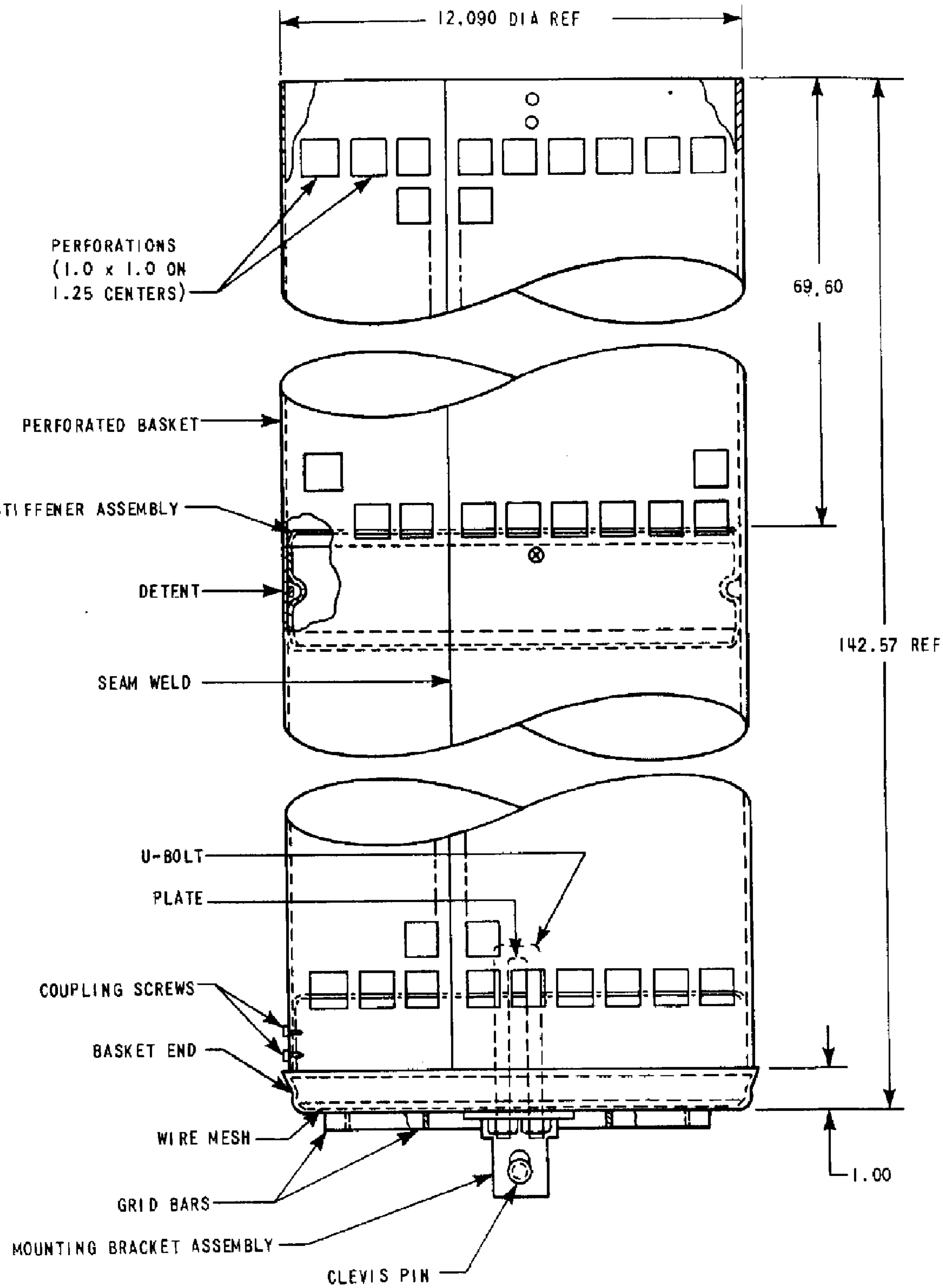


Figure 6-145. Typical Bottom Ice Basket Assembly



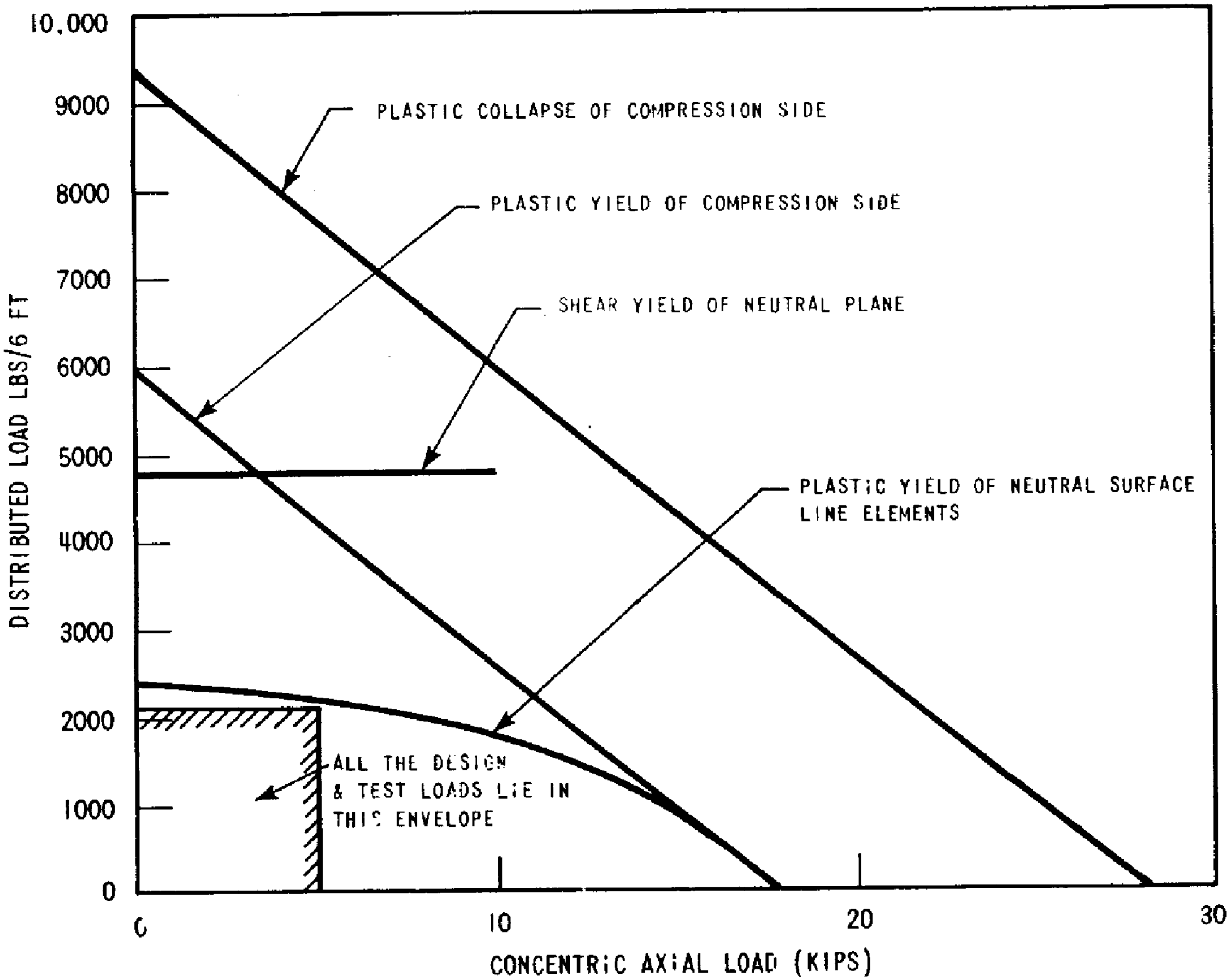
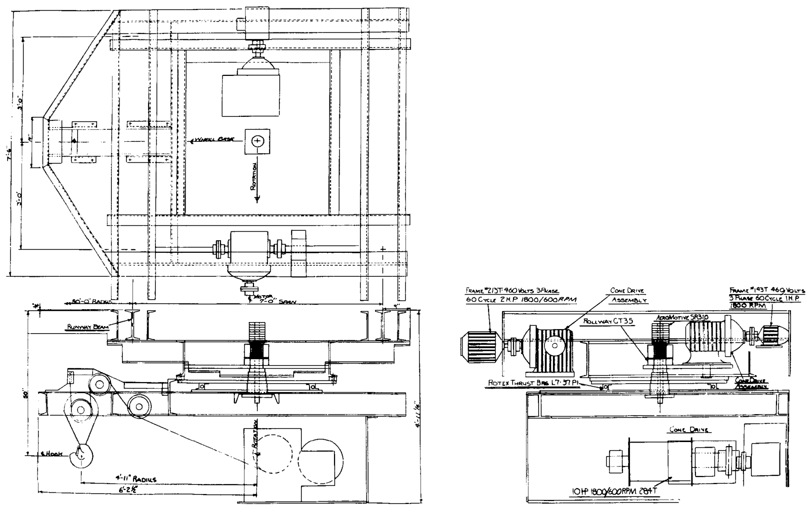


Figure 6-146. Combinations of Concentric Axial Load and Distribution Load

Figure 6-147. Crane Assembly

Security-Related Information, Withhold under 10 CFR 2.390

Figure 6-148. Crane Rail Assembly

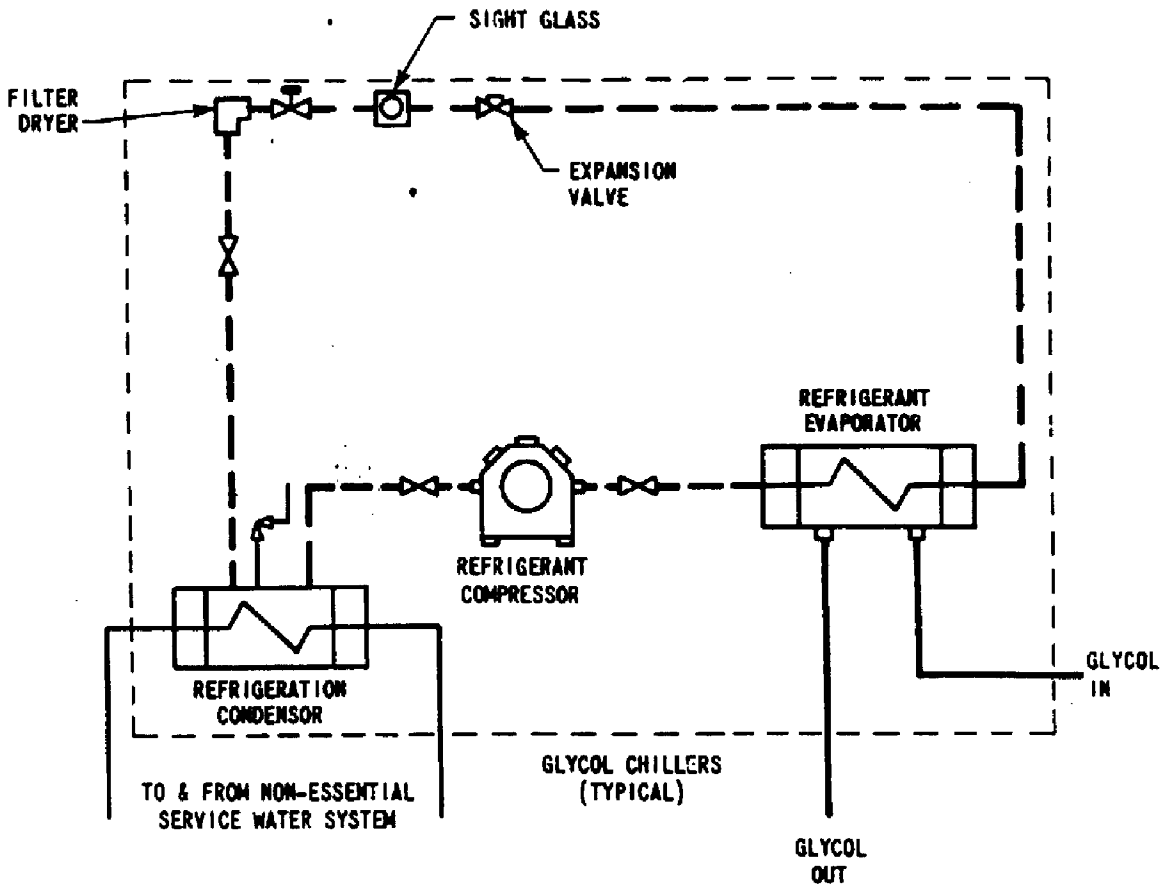


CRANE RAIL ASSEMBLY

CATAWBA NUCLEAR STATION

Figure 6.7.5-2

Figure 6-149. Refrigerant Cycle Diagram



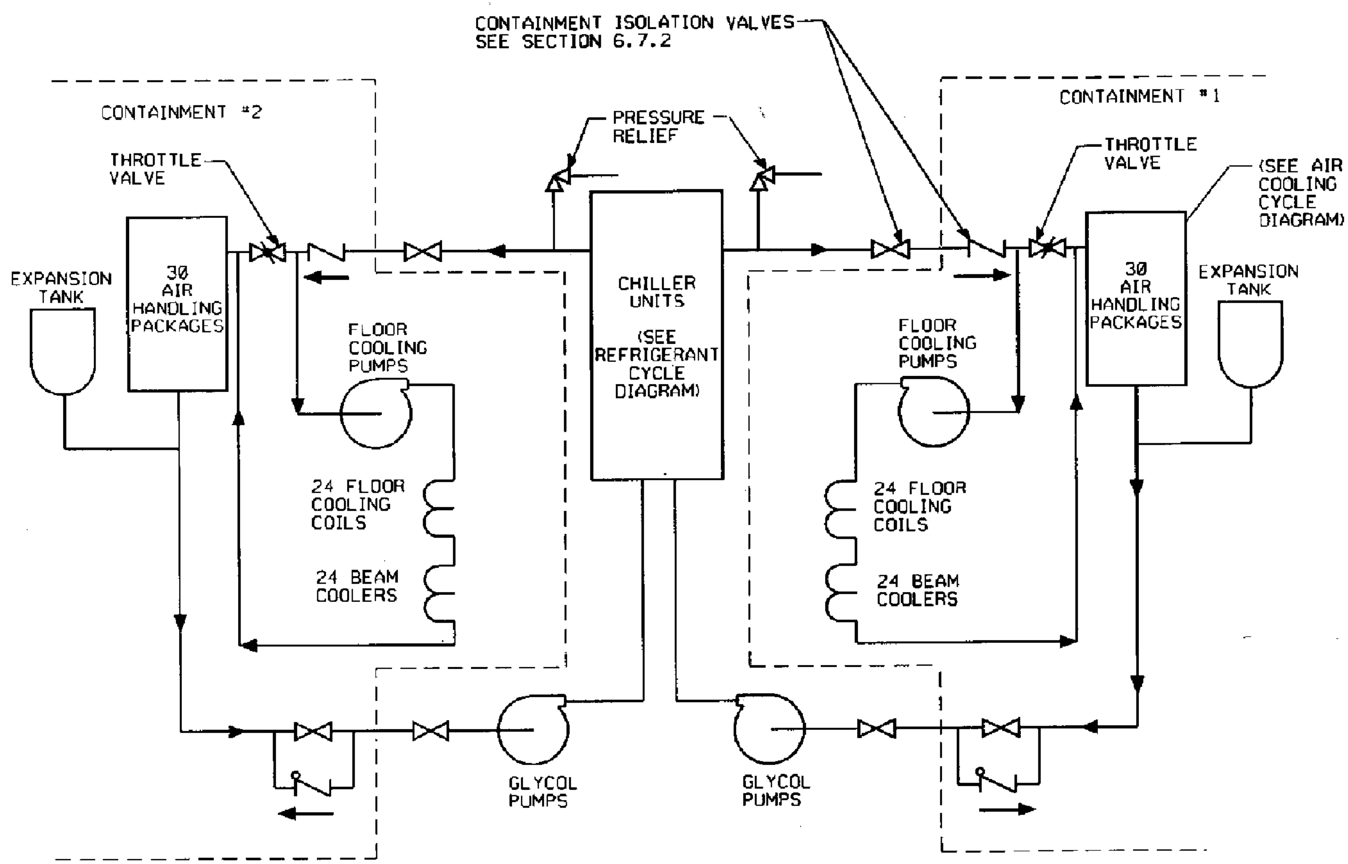


Figure 6-150. Glycol Cycle to Each Containment

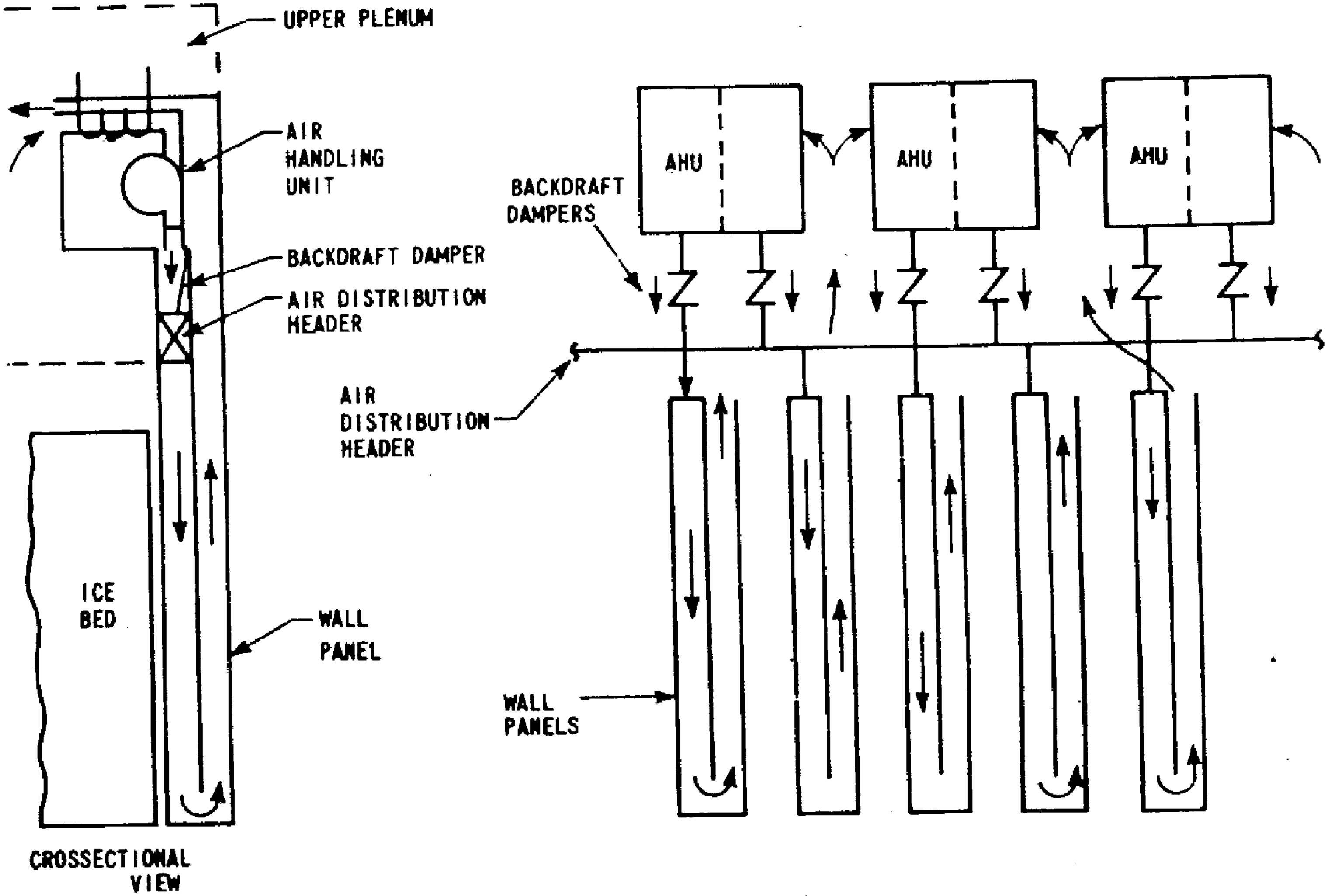


Figure 6-151. Schematic Flow Diagrams of Air Cooling Cycle

Figure 6-152. Air Handling Unit Support Structure

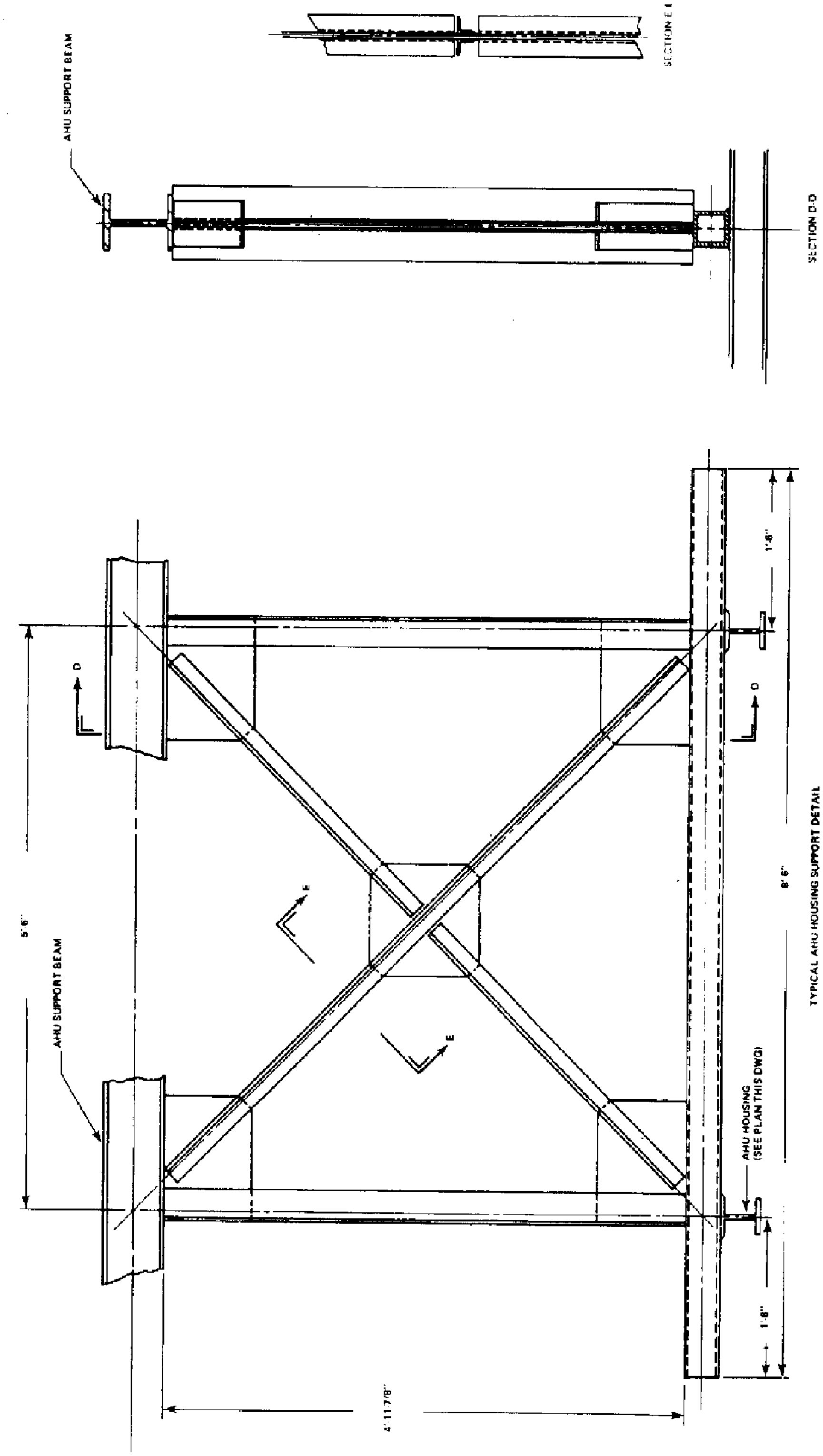
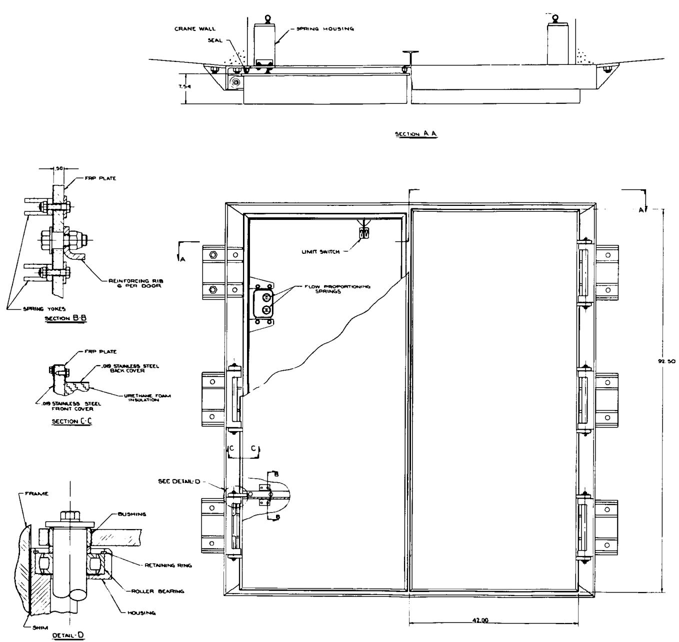


Figure 6-153. Deleted Per 2010 Update

Figure 6-154. Lower Inlet Door Assembly



LOWER INLET DOOR ASSEMBLY
CATAWBA NUCLEAR STATION
Figure 6.7.8-2

Figure 6-155. Details of Lower Inlet Door Showing Hinge, Proportioning Mechanism Limit Switches and Seals

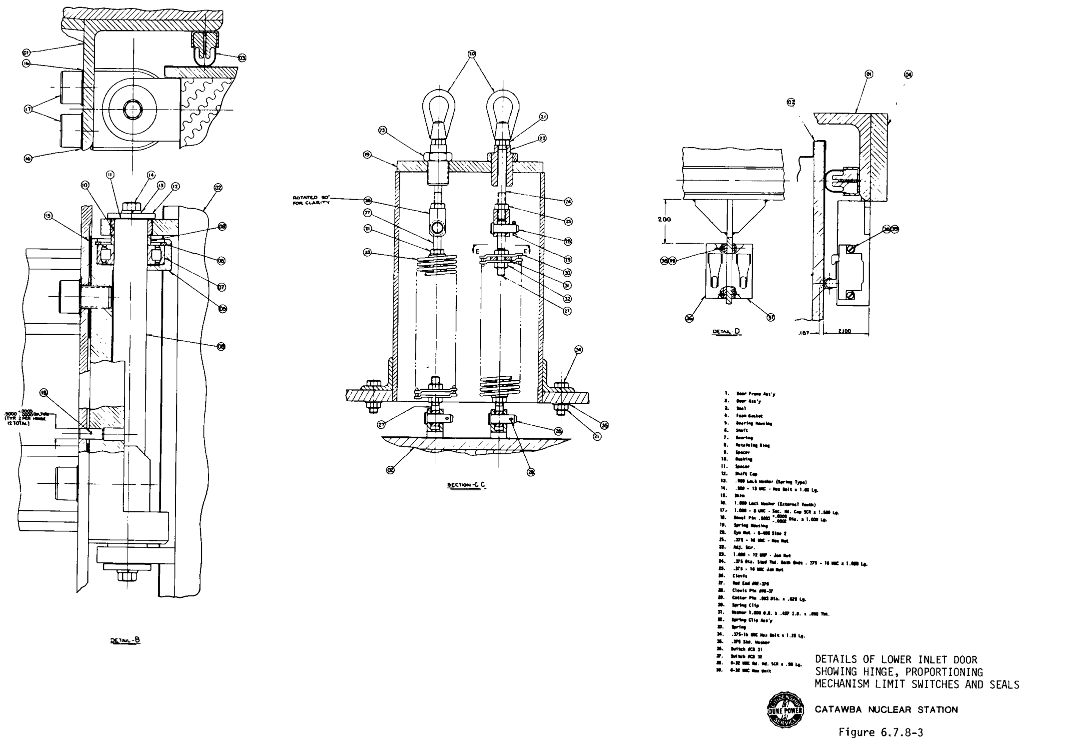


Figure 6-156. Inlet Door Frame Assembly

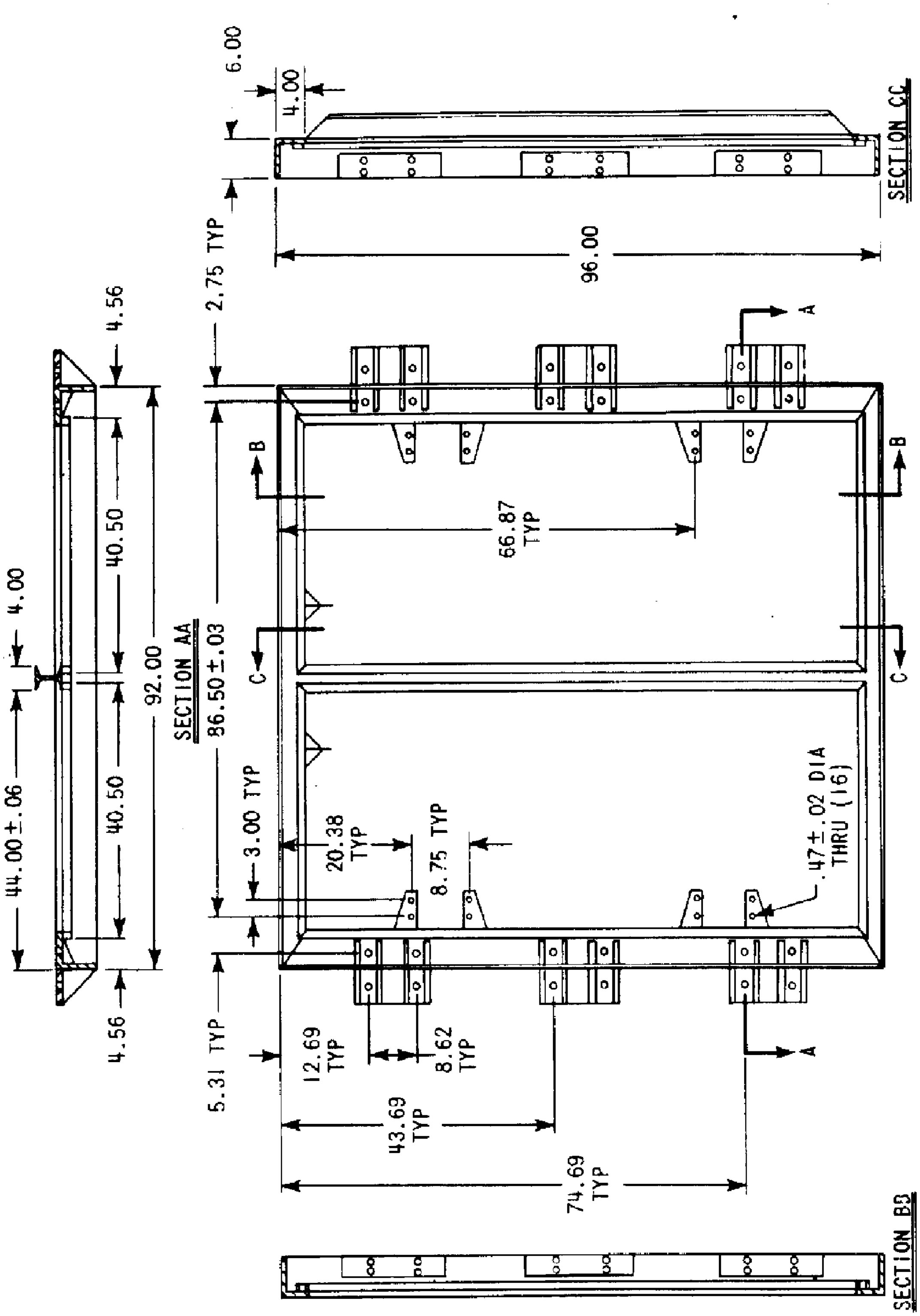


Figure 6-157. Inlet Door Panel Assembly

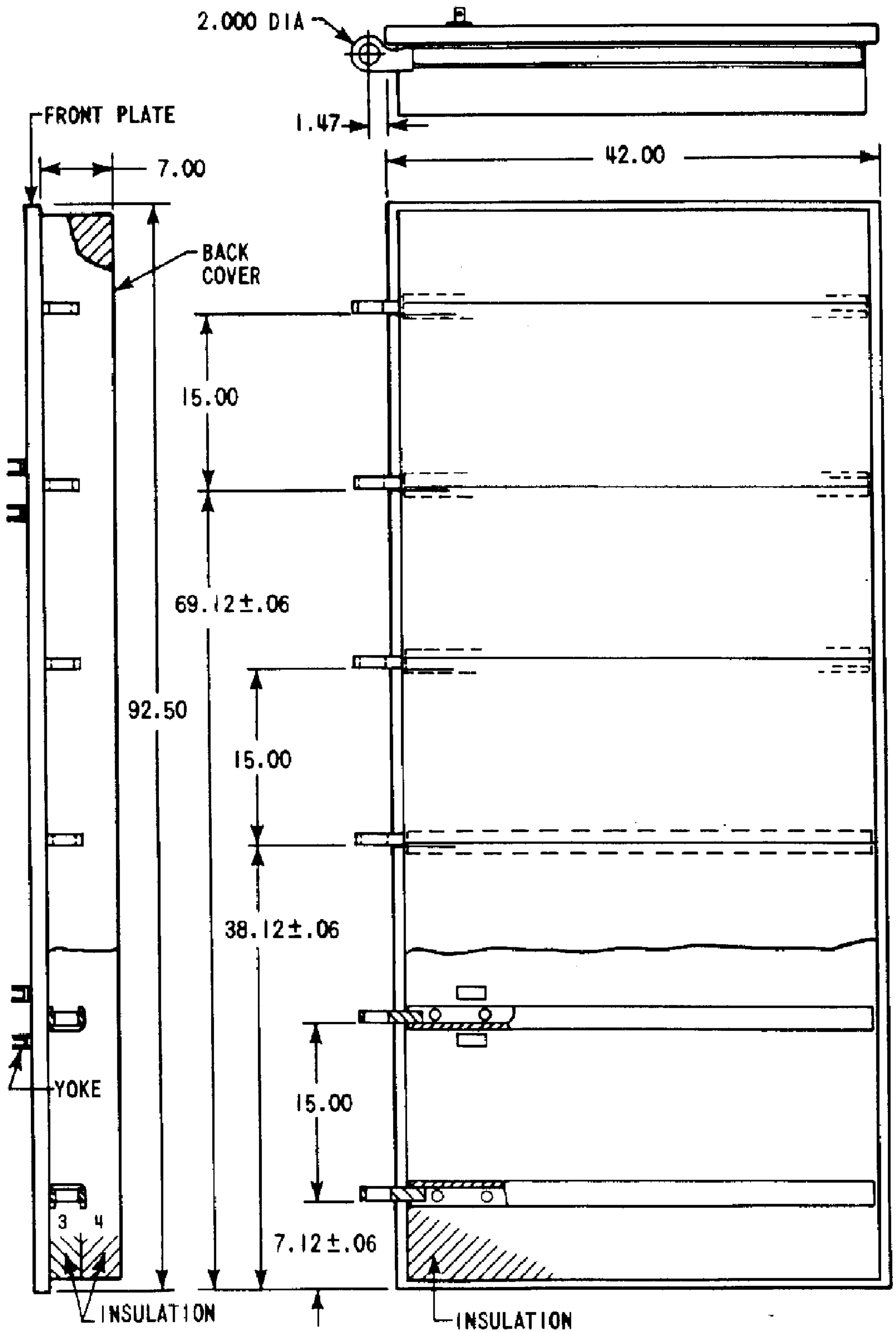


Figure 6-158. Lower Inlet Door Shock Absorber Assembly

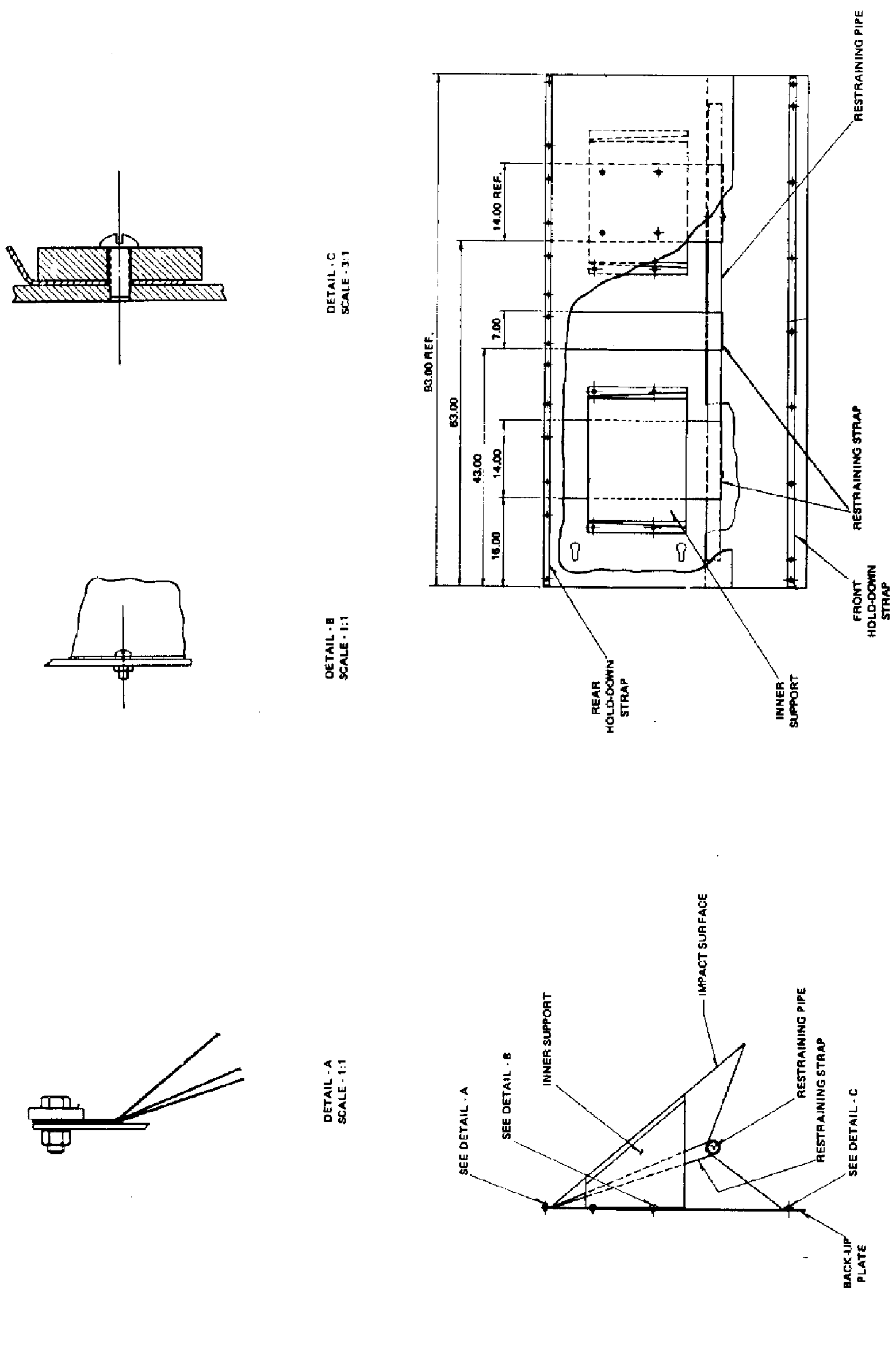


Figure 6-159. Four Loop Ice Condenser Lower Support Structure Conceptual Plan and Sections

Security-Related Information, Withhold under 10 CFR 2.390

Figure 6-160. Four Loop Ice Condenser Lower Support Structure General Assembly

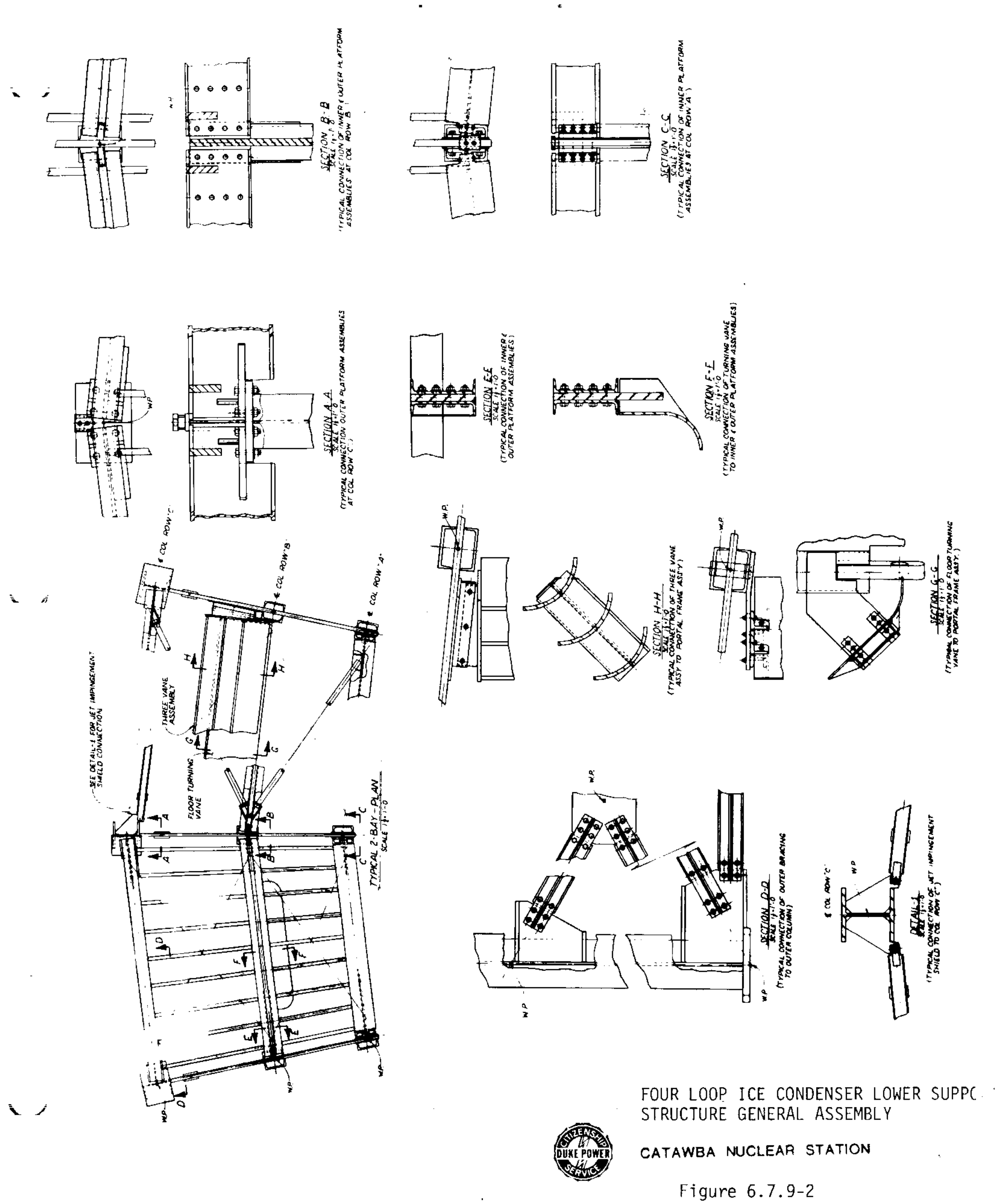
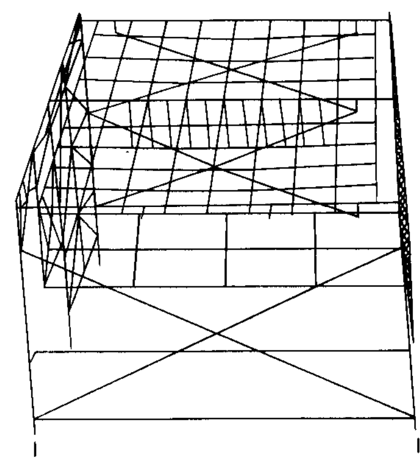


Figure 6-161. Ansys Model Assembly



ANSYS MODEL ASSEMBLY

CATAWBA NUCLEAR STATION

Figure 6.7.9-3

Figure 6-162. Finite Element Model of Postal Frame

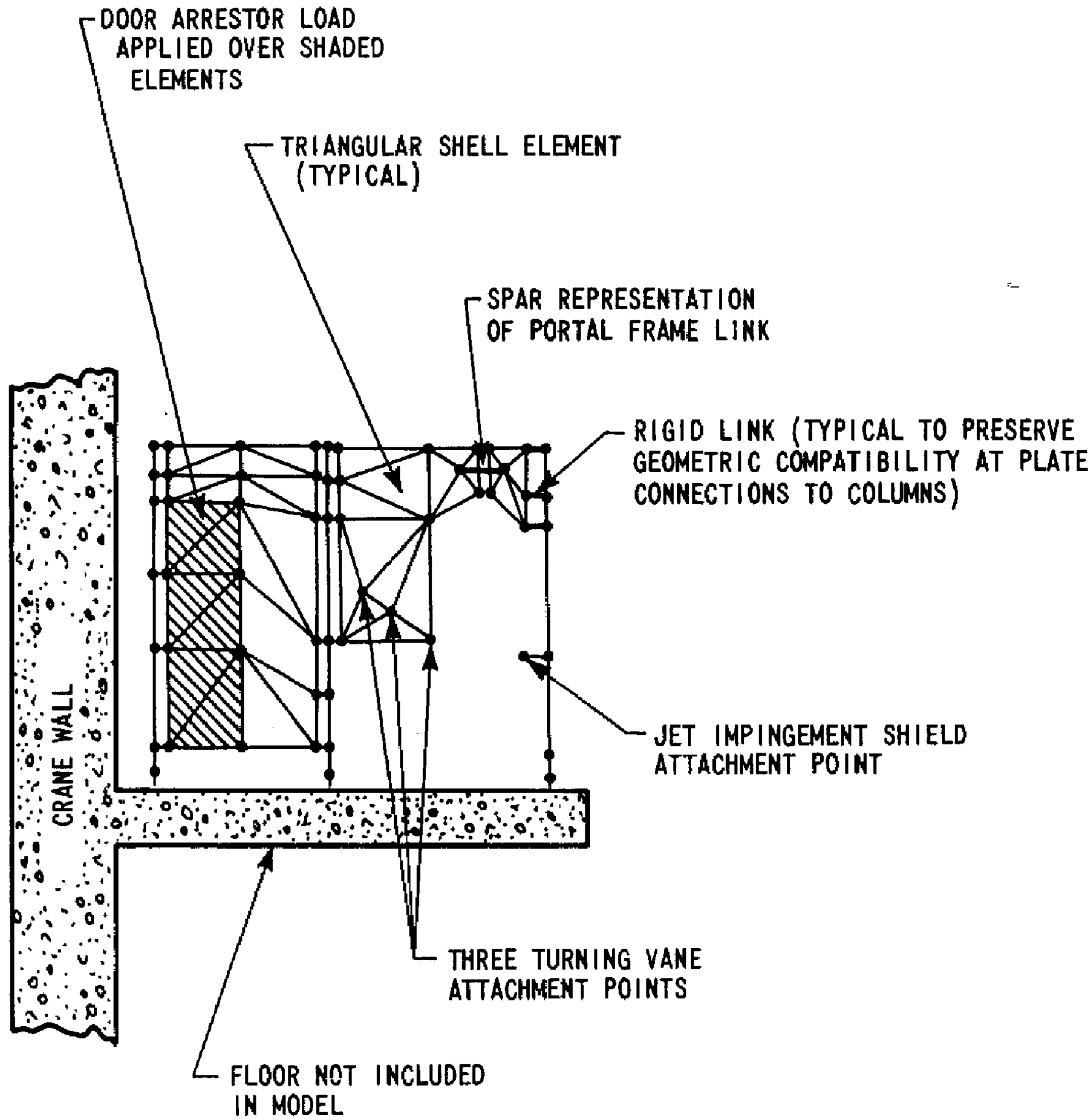


Figure 6-163. Schematic Diagram of Force Applied to Three Pier Lower Support Structure

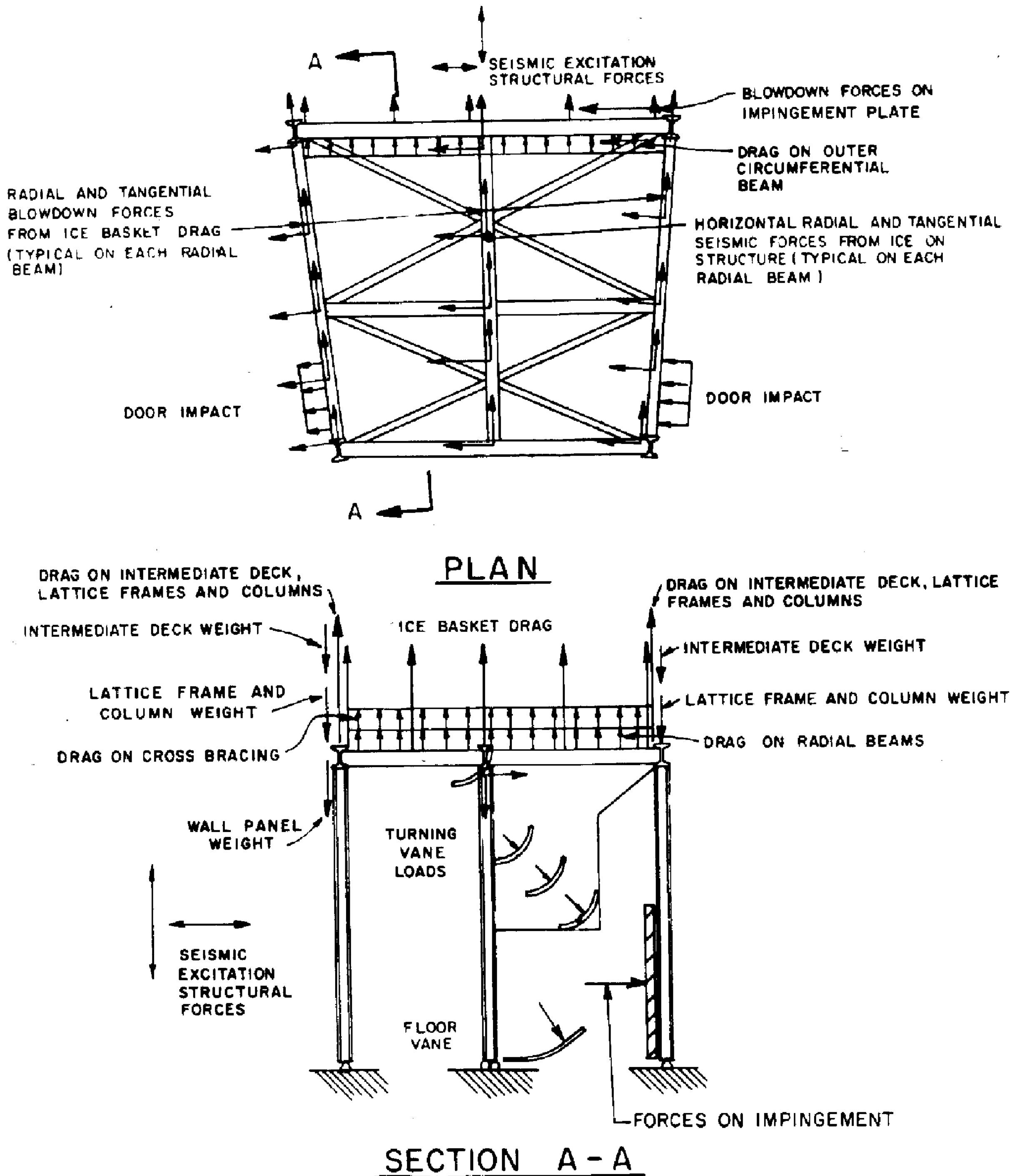
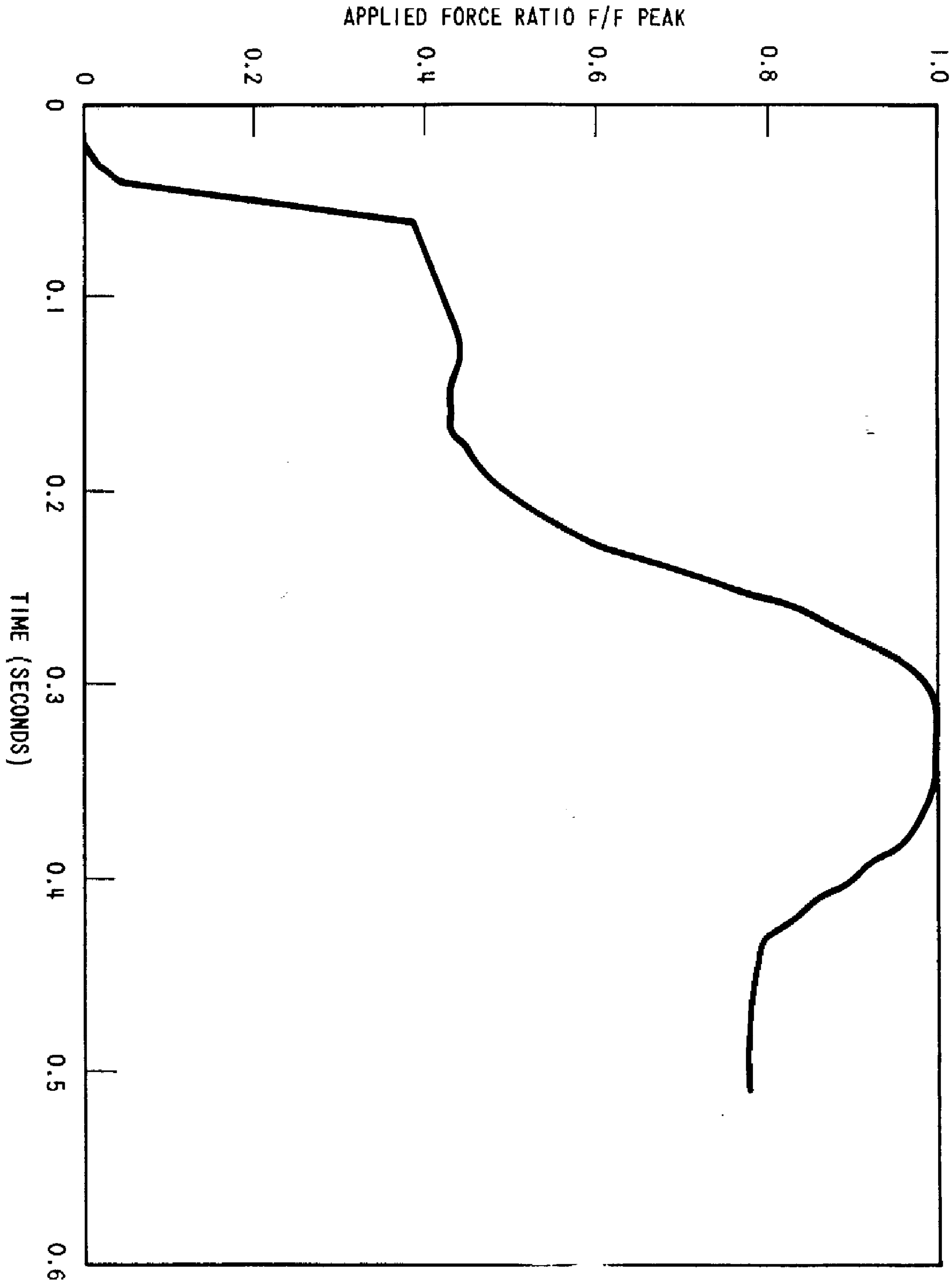


Figure 6-164. Force Transient Hot Leg Break



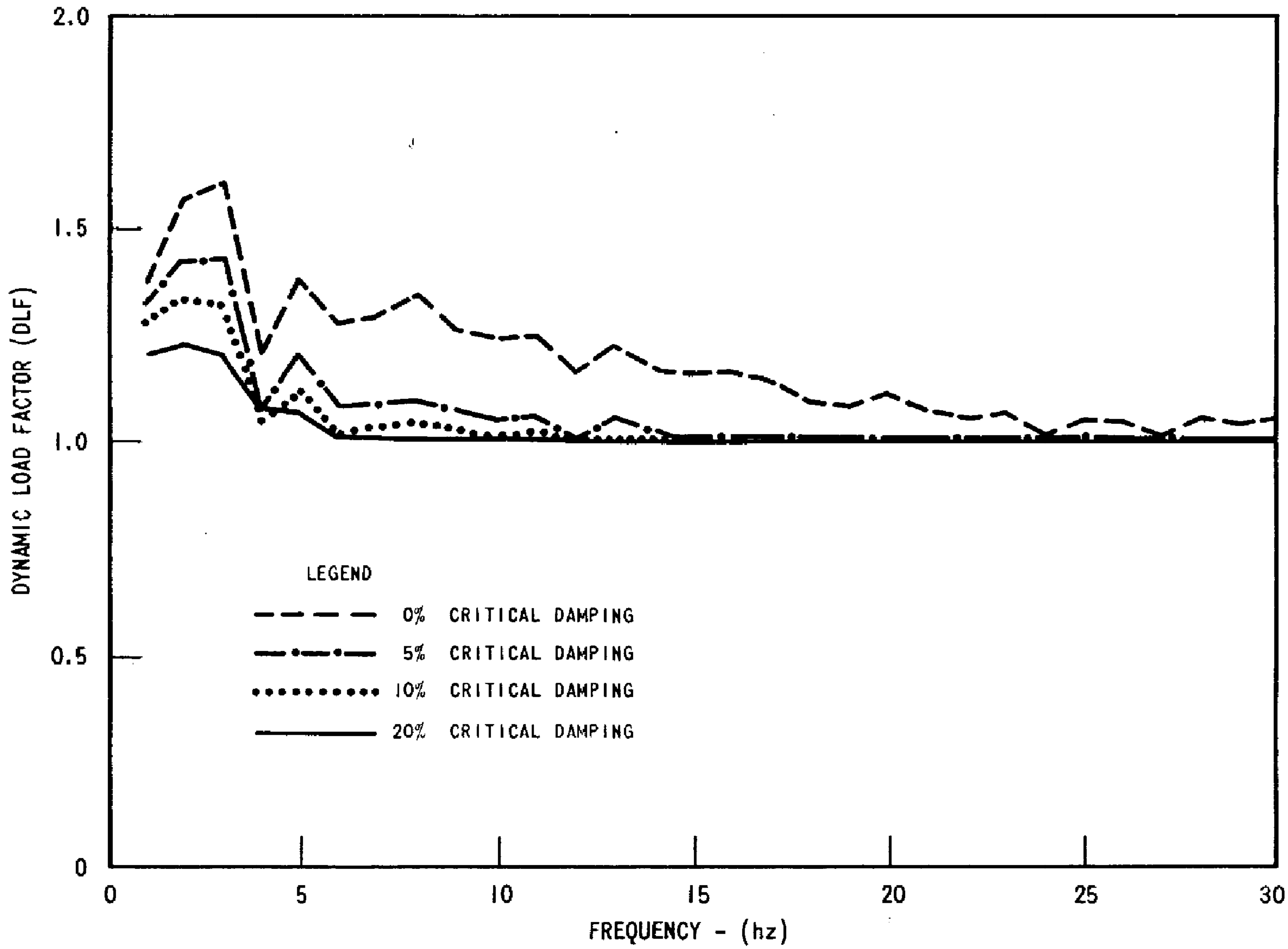
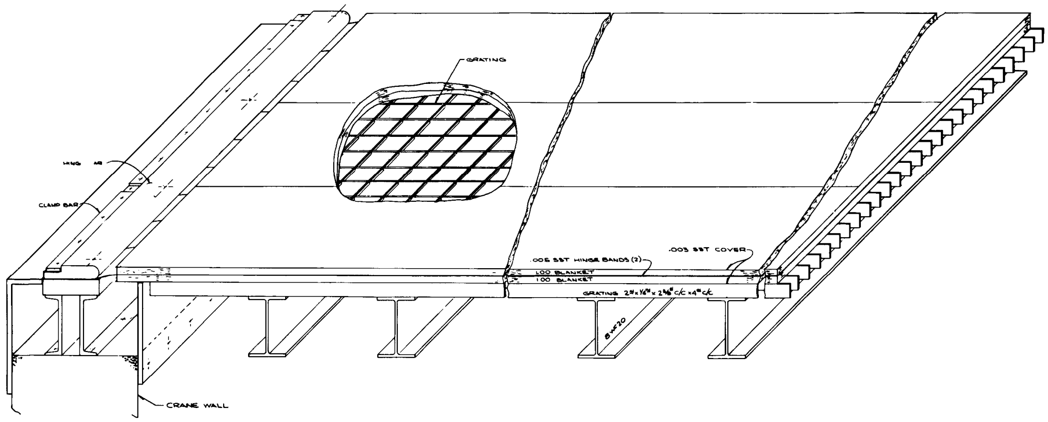


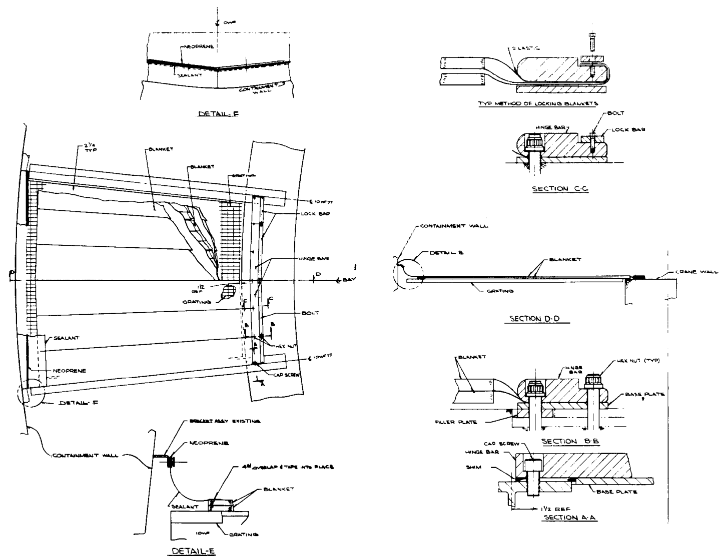
Figure 6-165. DLF Spectra Hot Leg Break Force Transient

Figure 6-166. Top Deck Test Assembly



TOP DECK TEST ASSEMBLY
CATAWBA NUCLEAR STATION
Figure 6.7.10-1

Figure 6-167. Details of Top Deck Door Assembly



DETAILS OF TOP DECK DOOR ASSEMBLY

CATAWBA NUCLEAR STATION

Figure 6.7.10-2

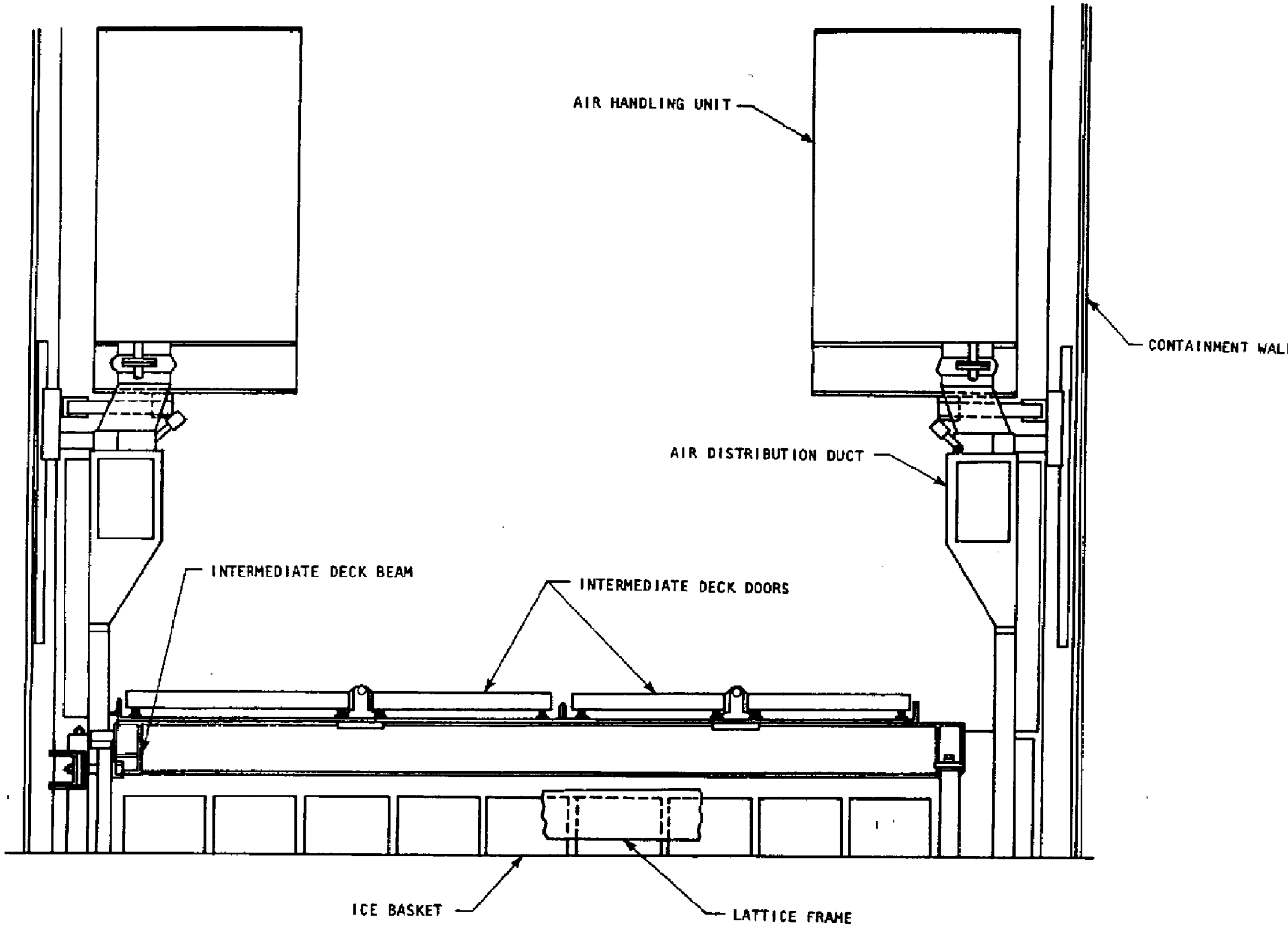


Figure 6-168. Intermediate Deck Door Assembly

Figure 6-169. Air Distribution Duct

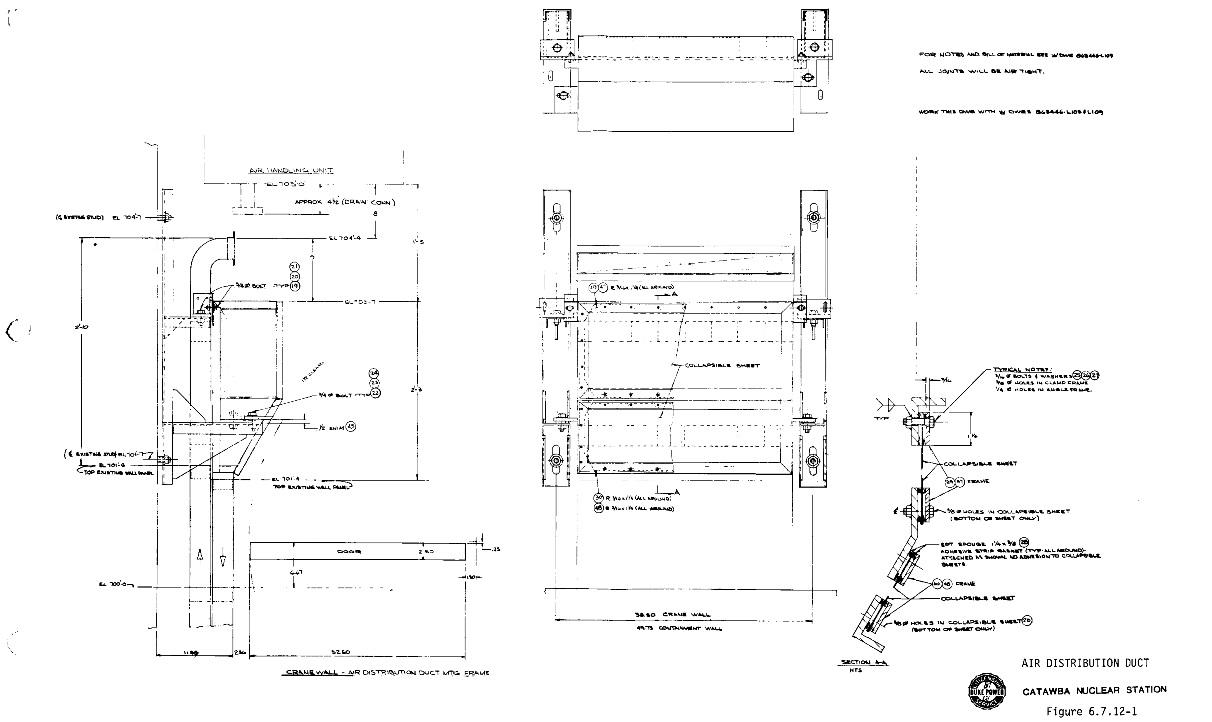


Figure 6-170. Air Distribution Duct

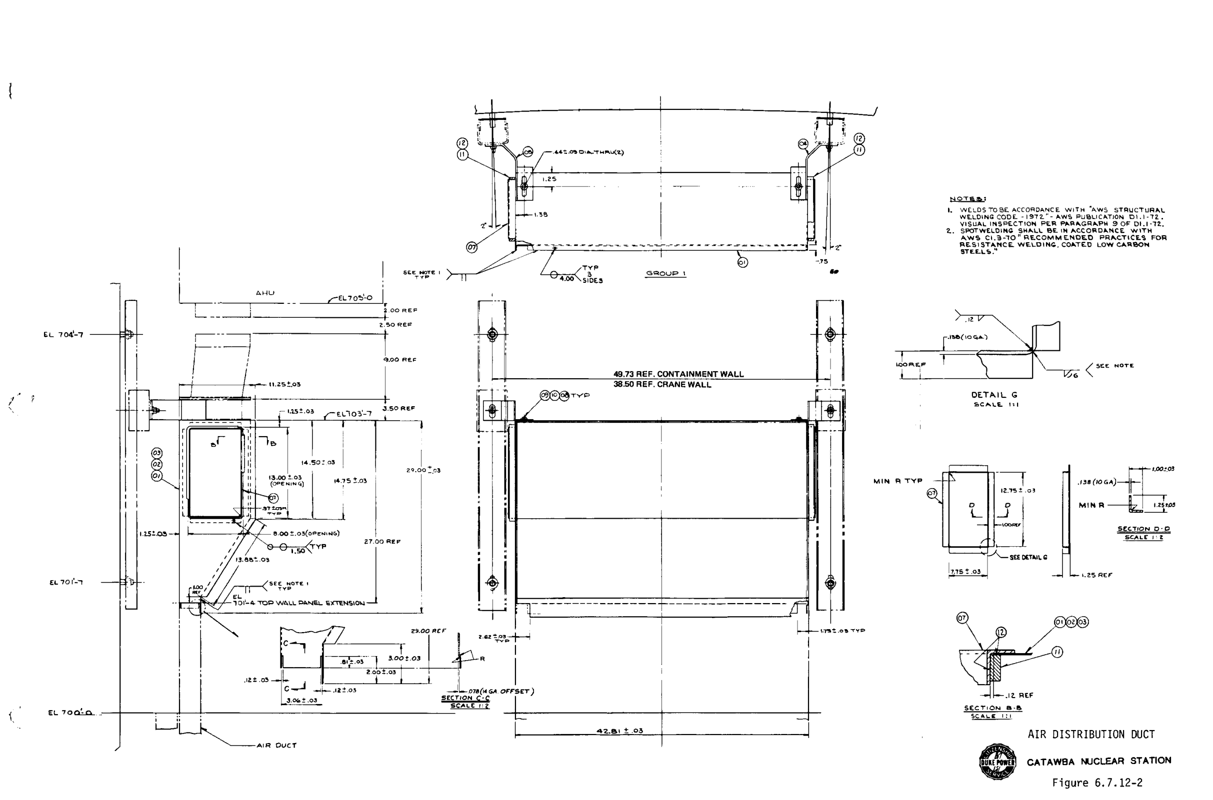


Figure 6-171. Phase Diagram for $Na_2B_4O_7$ - .10 H_20 System at One Atmosphere

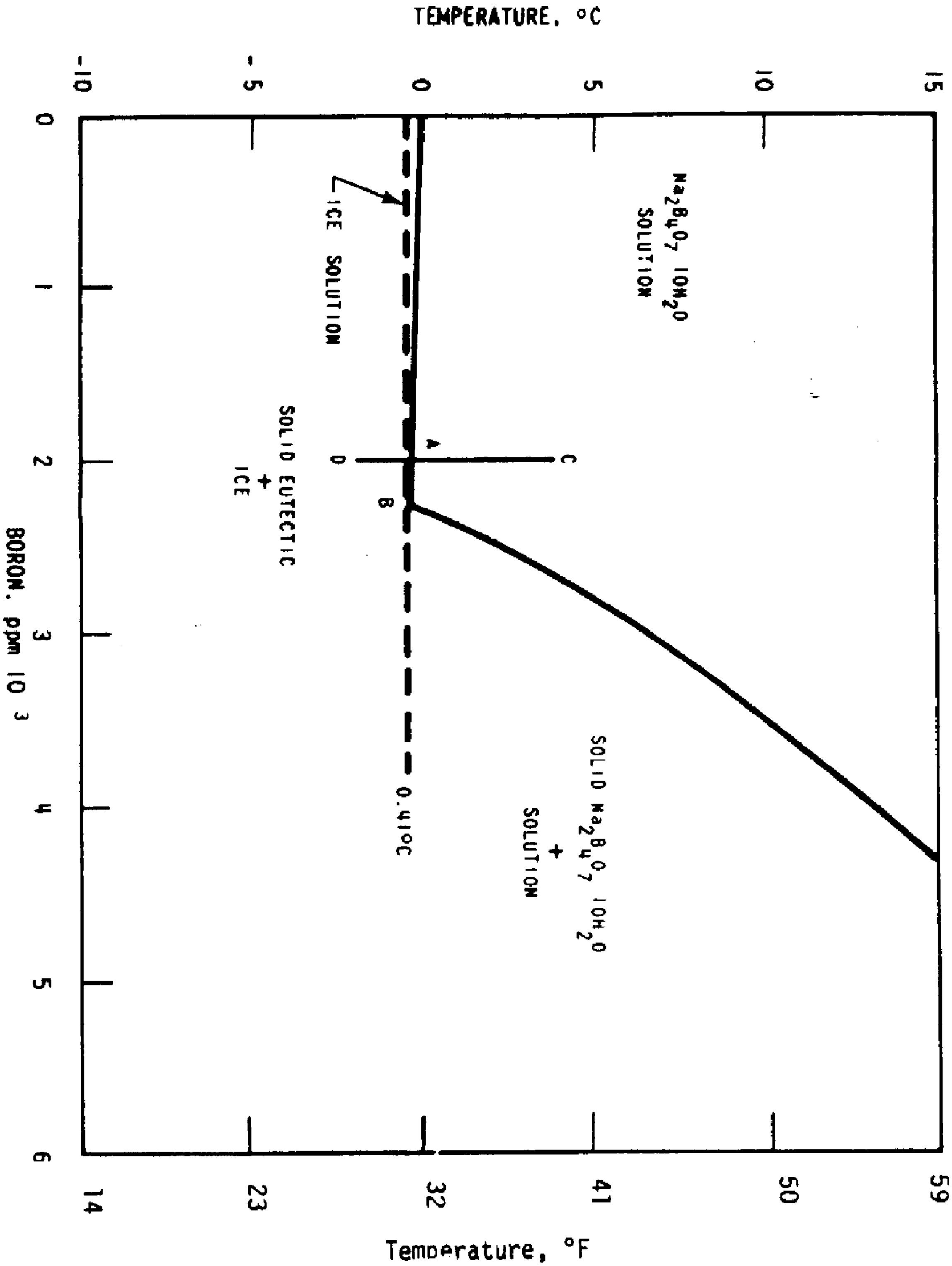


Figure 6-172. Ice Bed Compaction Versus Time

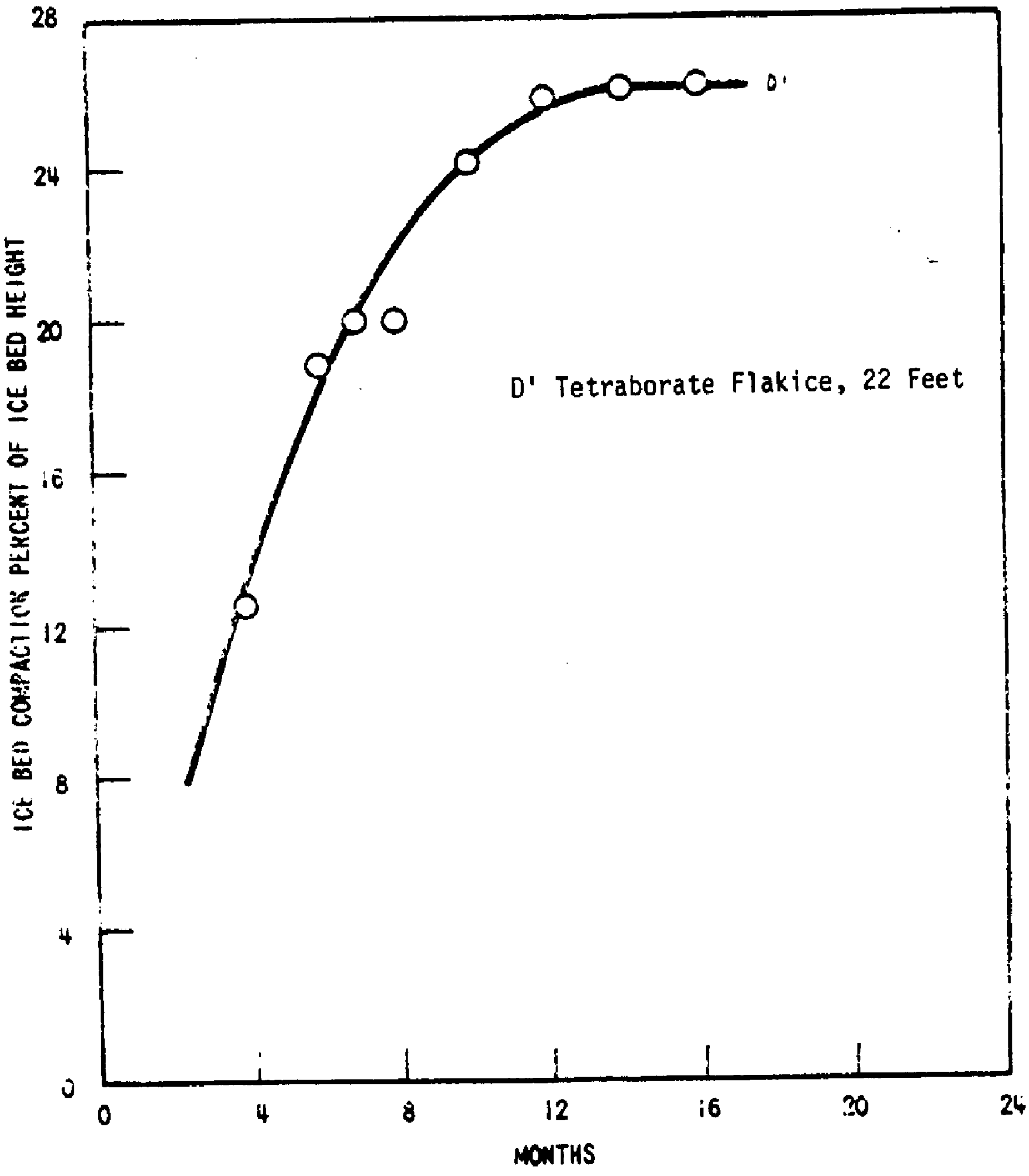


Figure 6-173. Test Ice Bed Compaction Versus Ice Bed Height

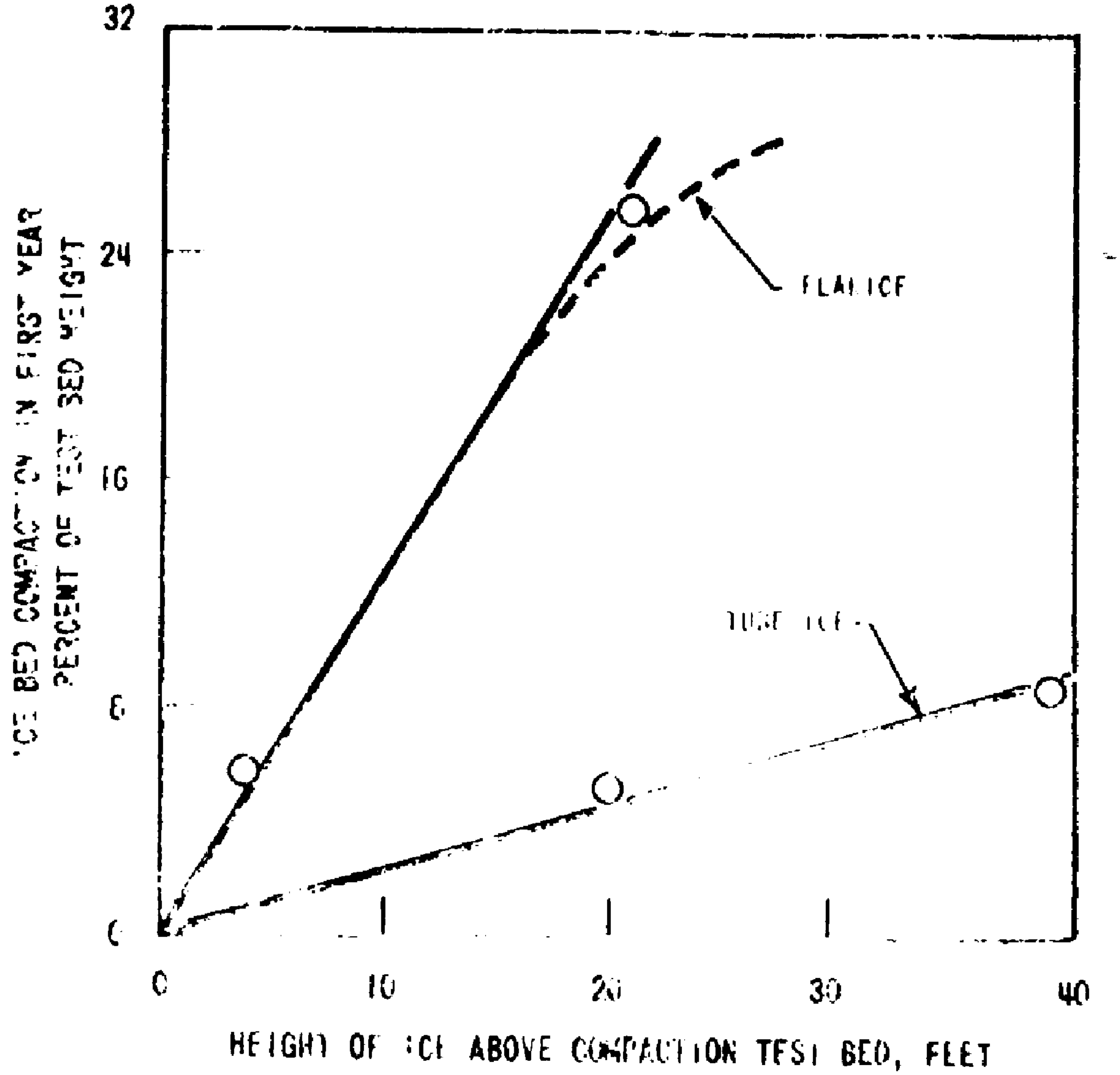


Figure 6-174. Total Ice Compaction Versus Ice Bed Height

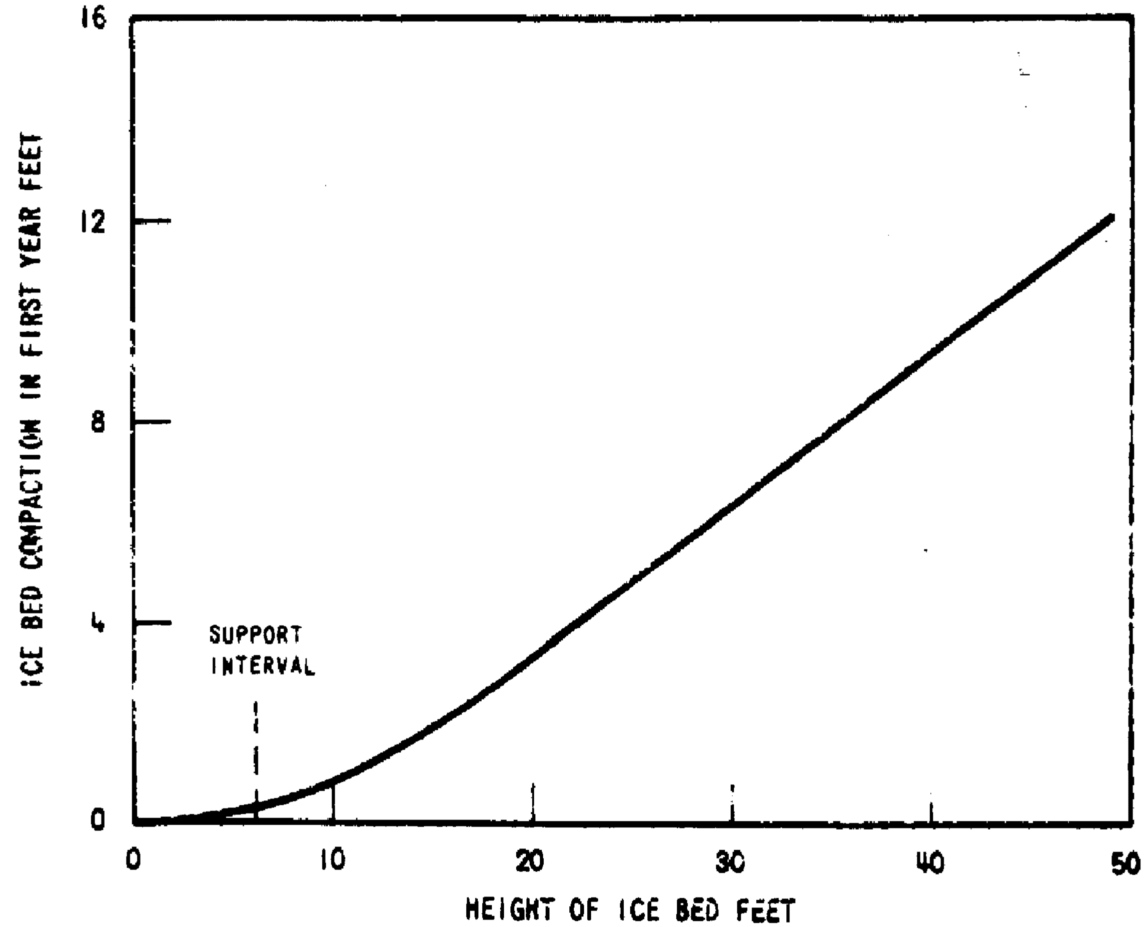
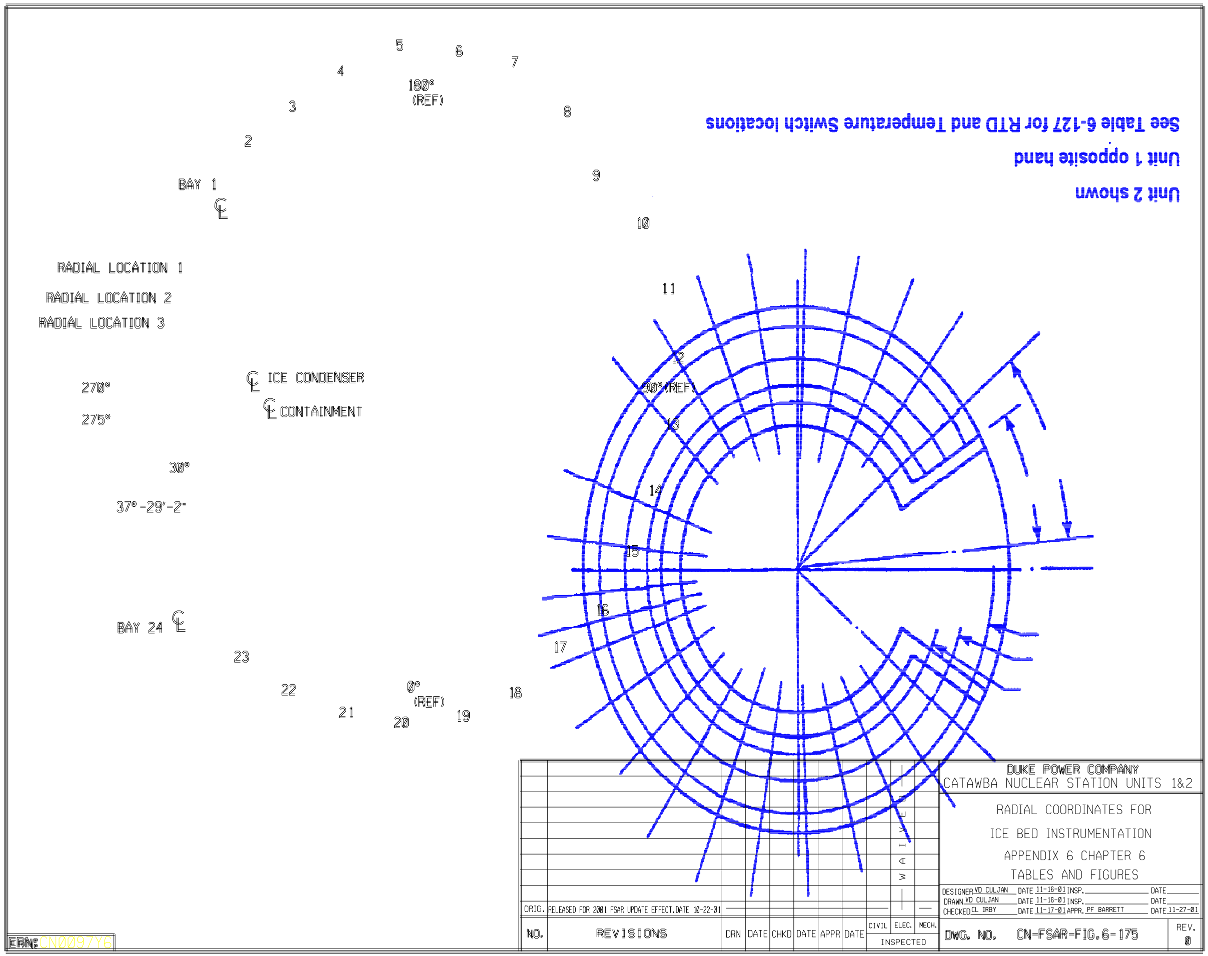


Figure 6-175. Ice Condenser RTD Location



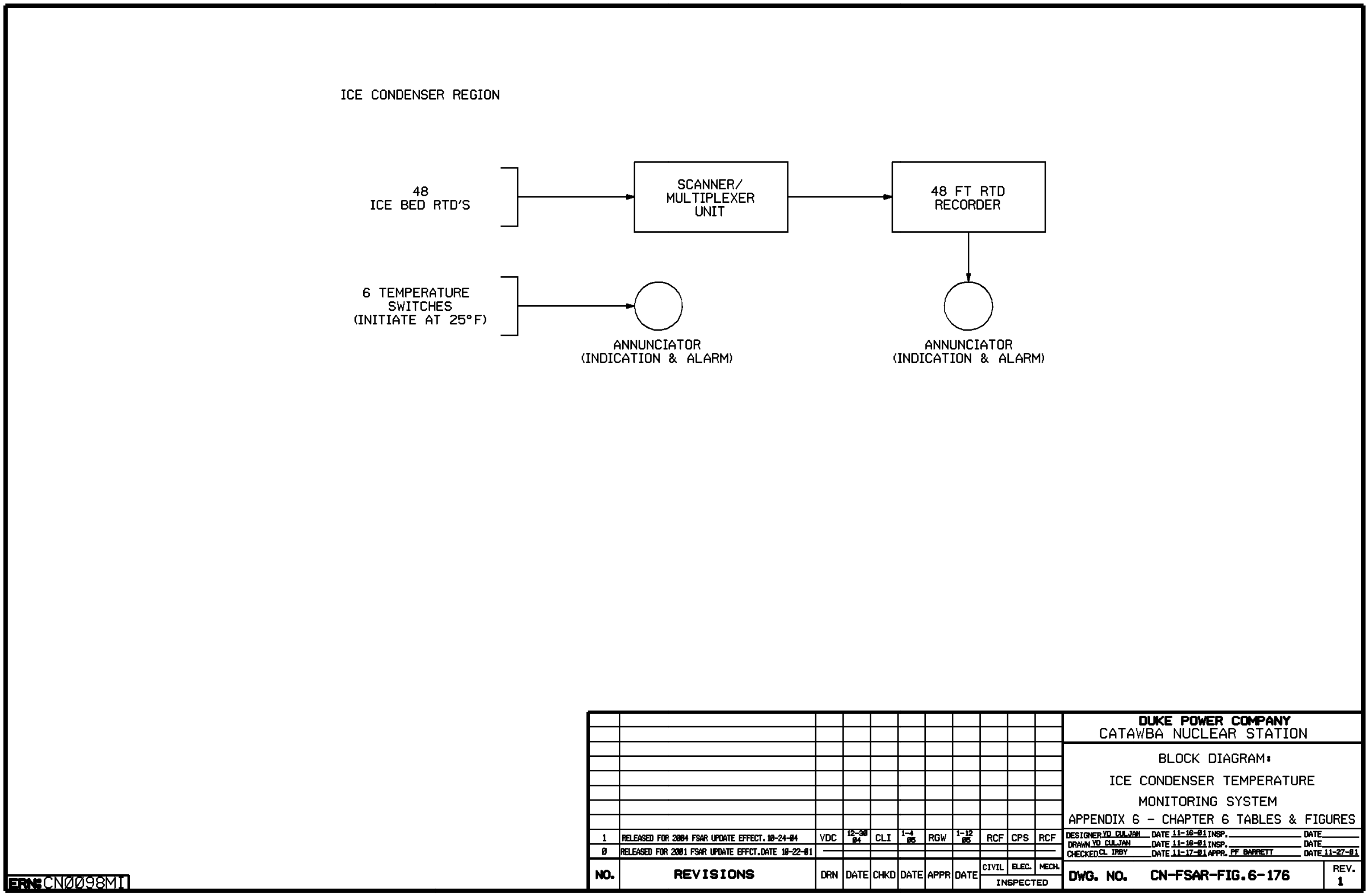


Figure 6-176. Block Diagram: Ice Condenser Temperature Monitoring System

Figure 6-177. Door Monitoring Zones

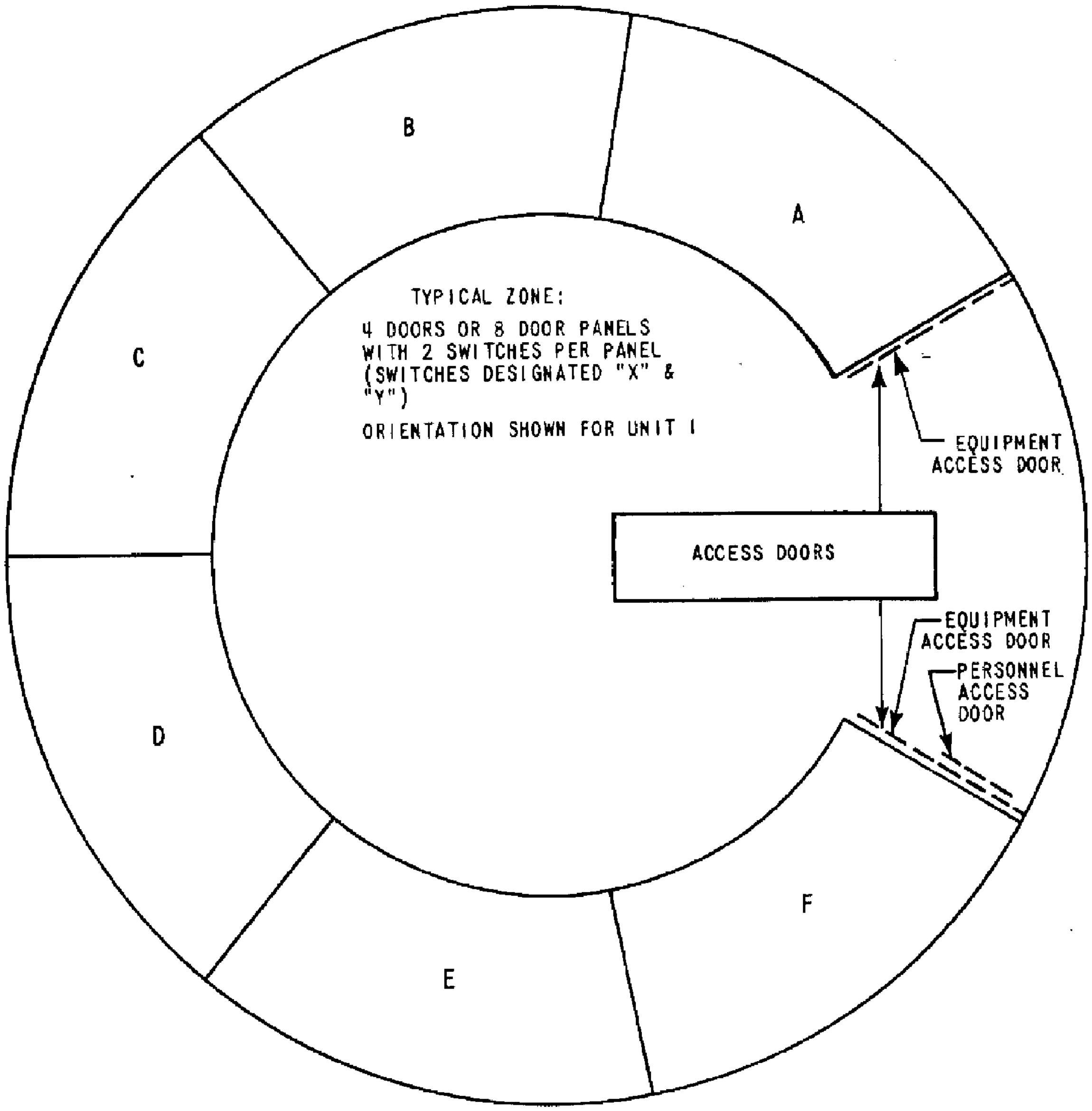


Figure 6-178. Wiring Diagram: "Y" Switch

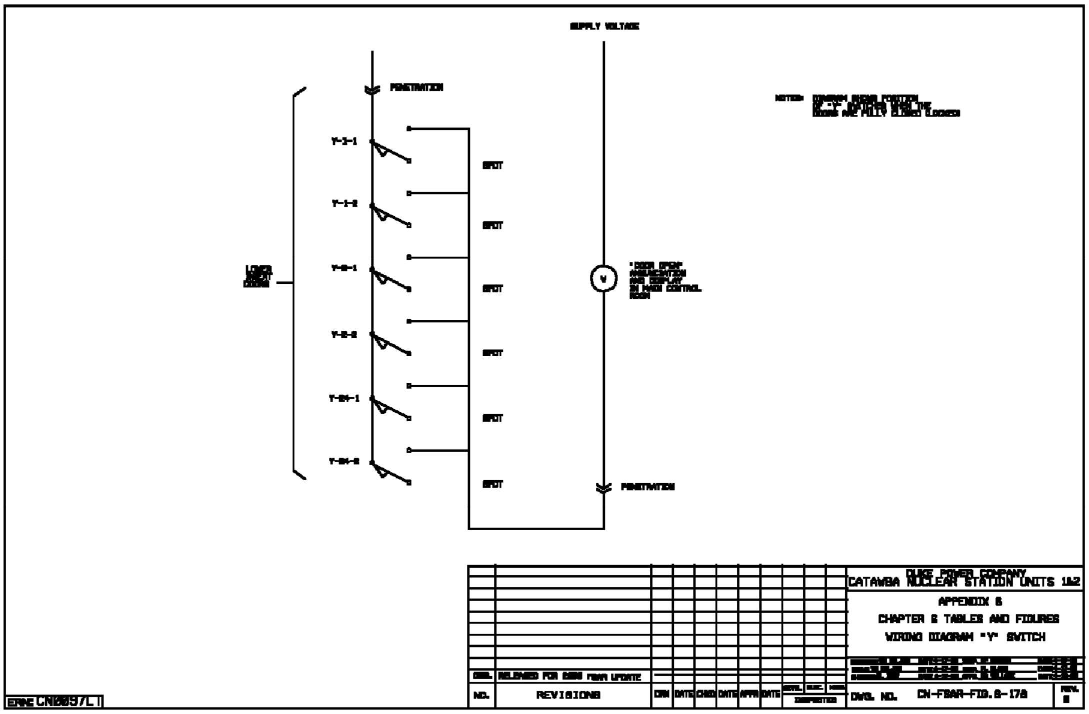


Figure 6-179. Wiring Diagram: "X" Switches Lower Inlet Doors

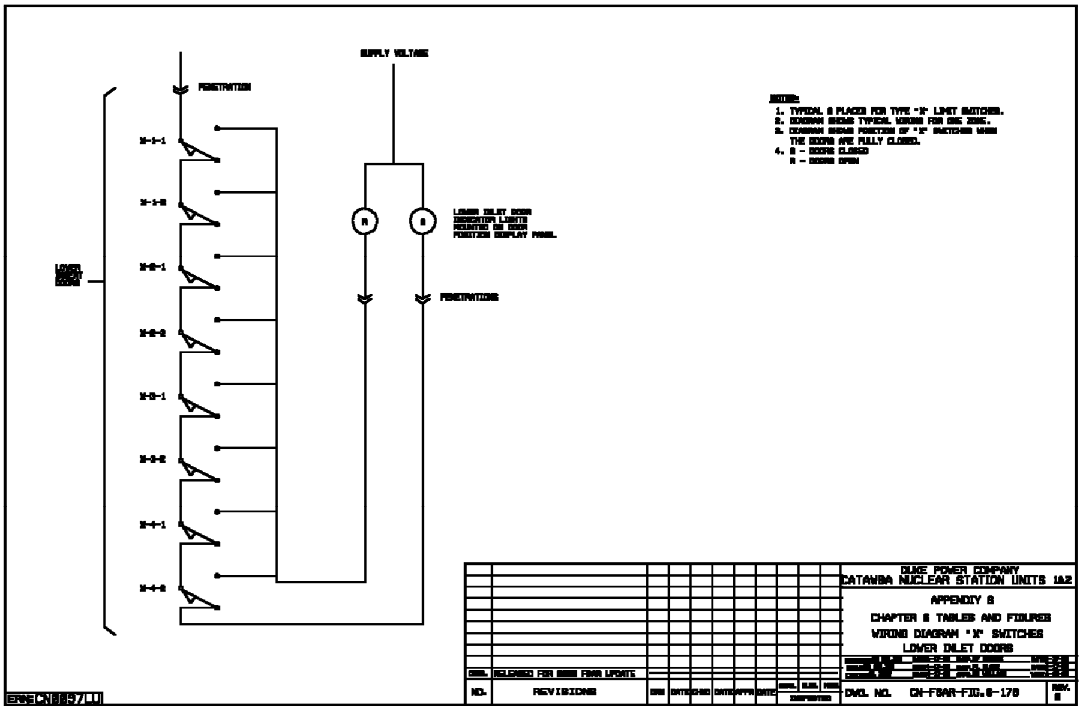


Figure 6-180. Deleted Per 2001 Update

Figure 6-181. Model of Horizontal Lattice Frame Structure

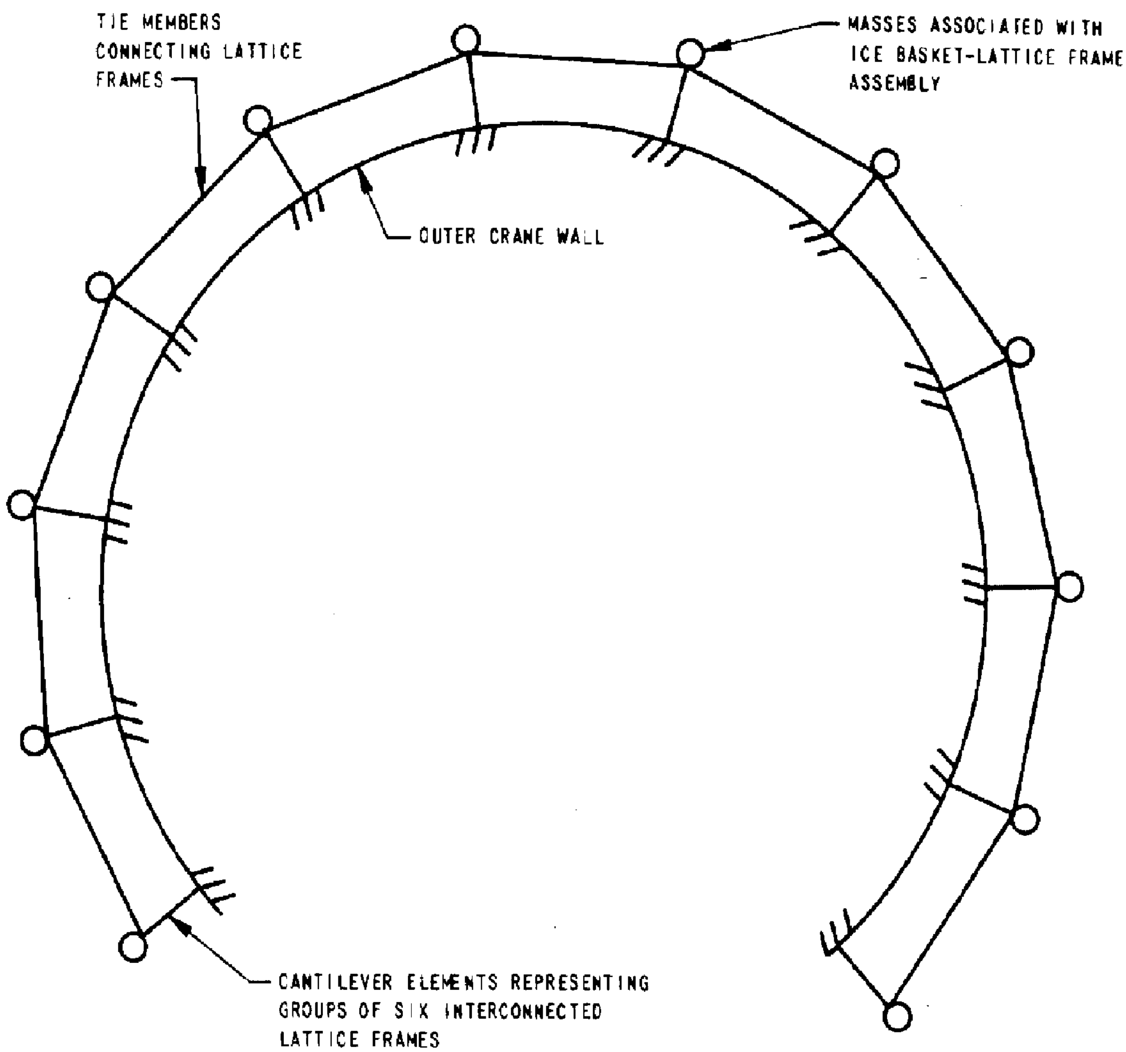


Figure 6-182. Group of Six Interconnected Lattice Frames

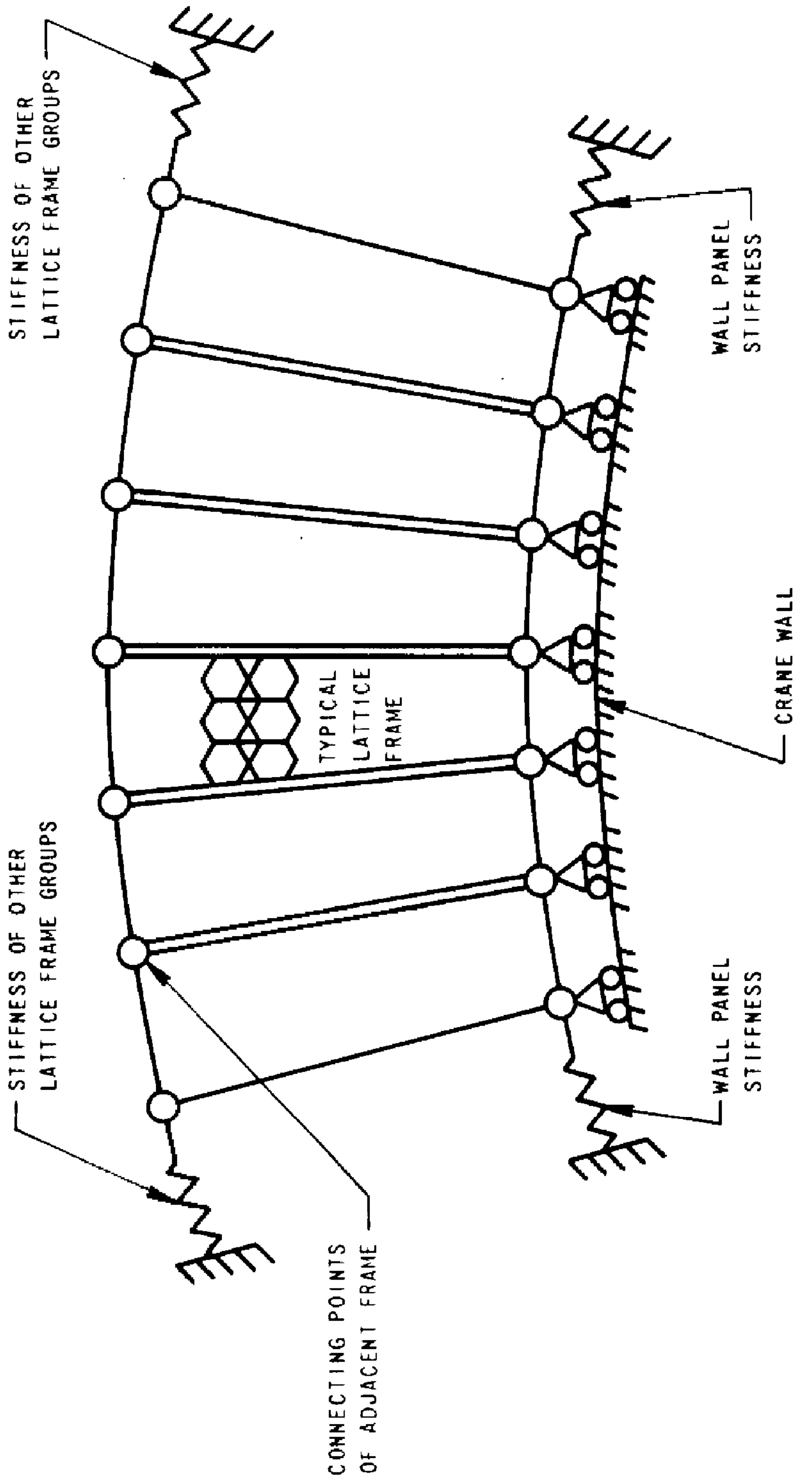


Figure 6-183. Lattice Frame Ice Basket Gap

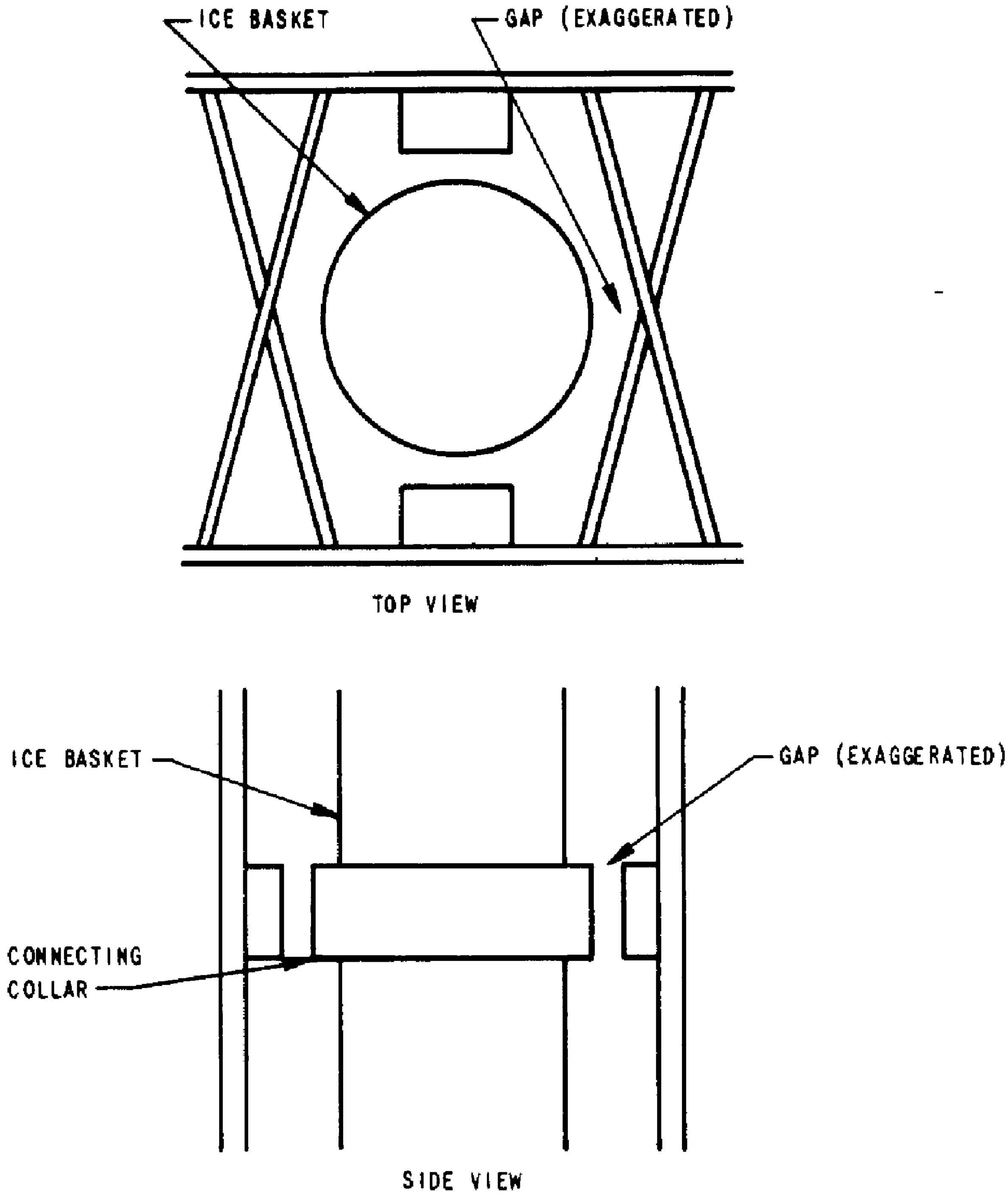


Figure 6-184. Typical Displacement Time History for 12 Foot Basket with End Supports - Pluck Test

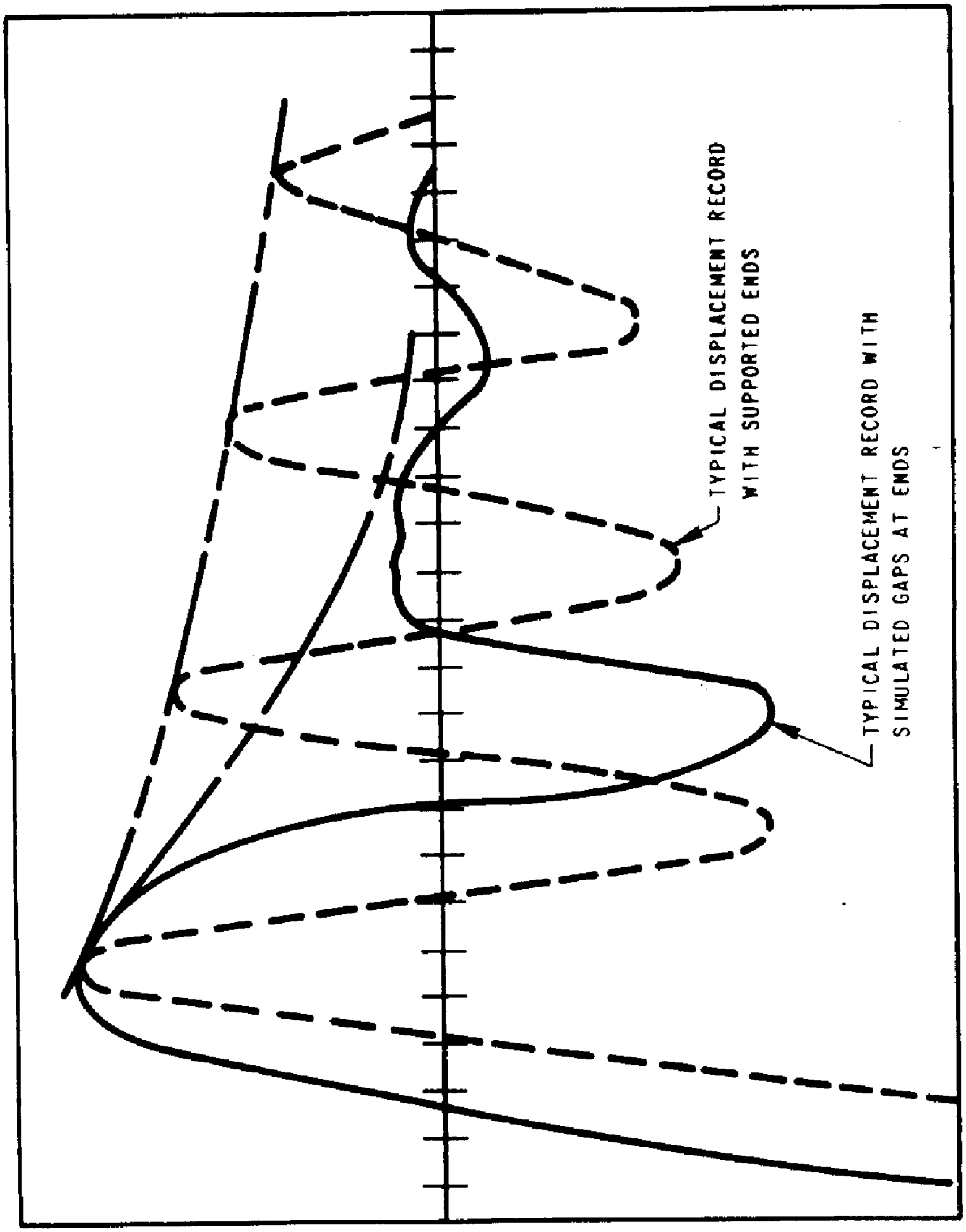


Figure 6-185. Non Linear Dynamic Model

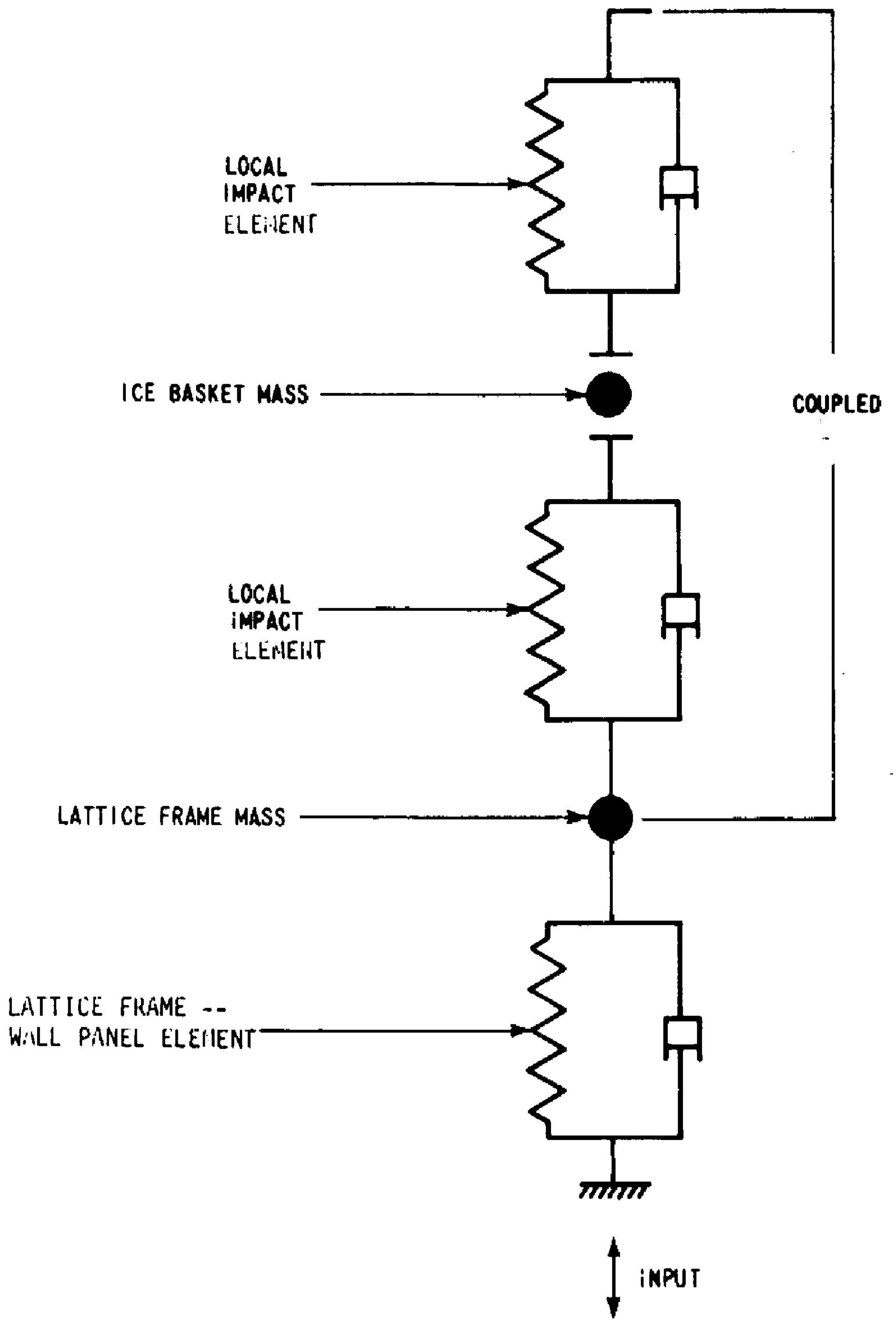


Figure 6-186. 3 Mass Tangential Ice Basket Model

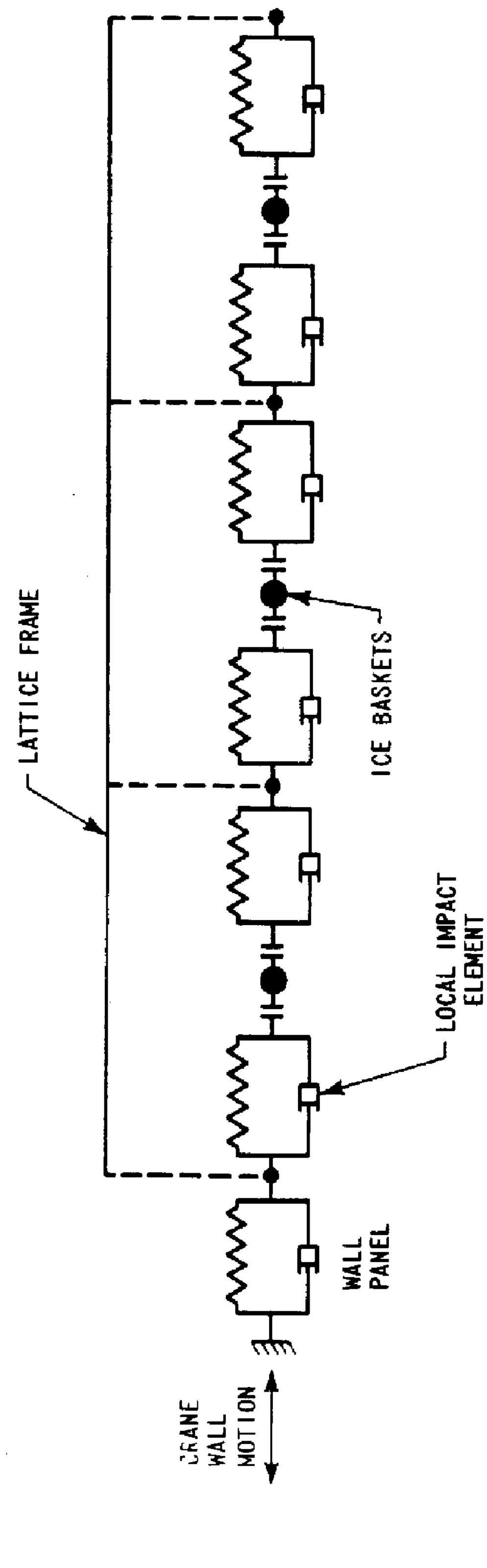


Figure 6-187. 9 Mass Radial Ice Basket Model

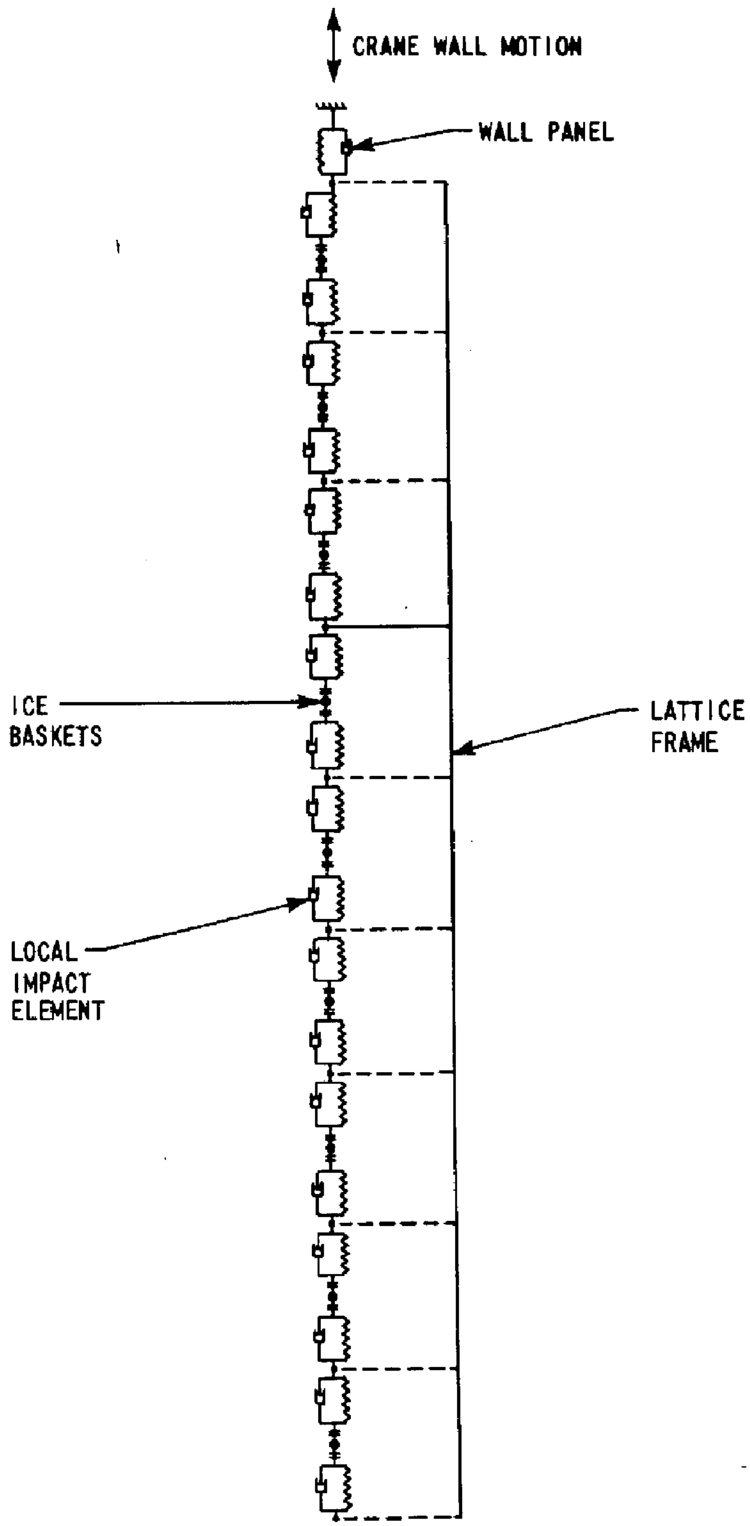


Figure 6-188. 48 Foot Beam Model

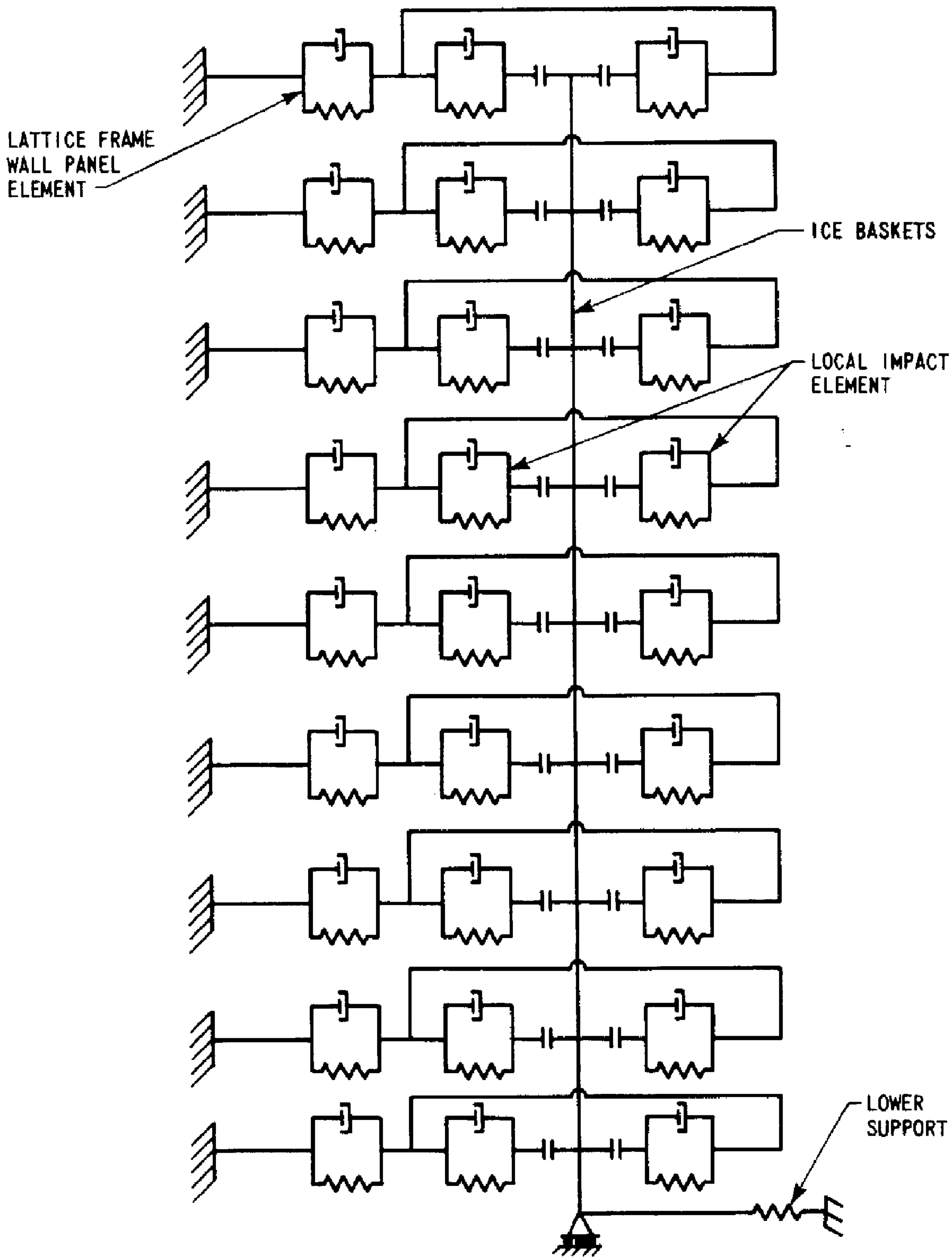


Figure 6-189. Phasing Mass Model of Adjacent Lattice Frame Bays

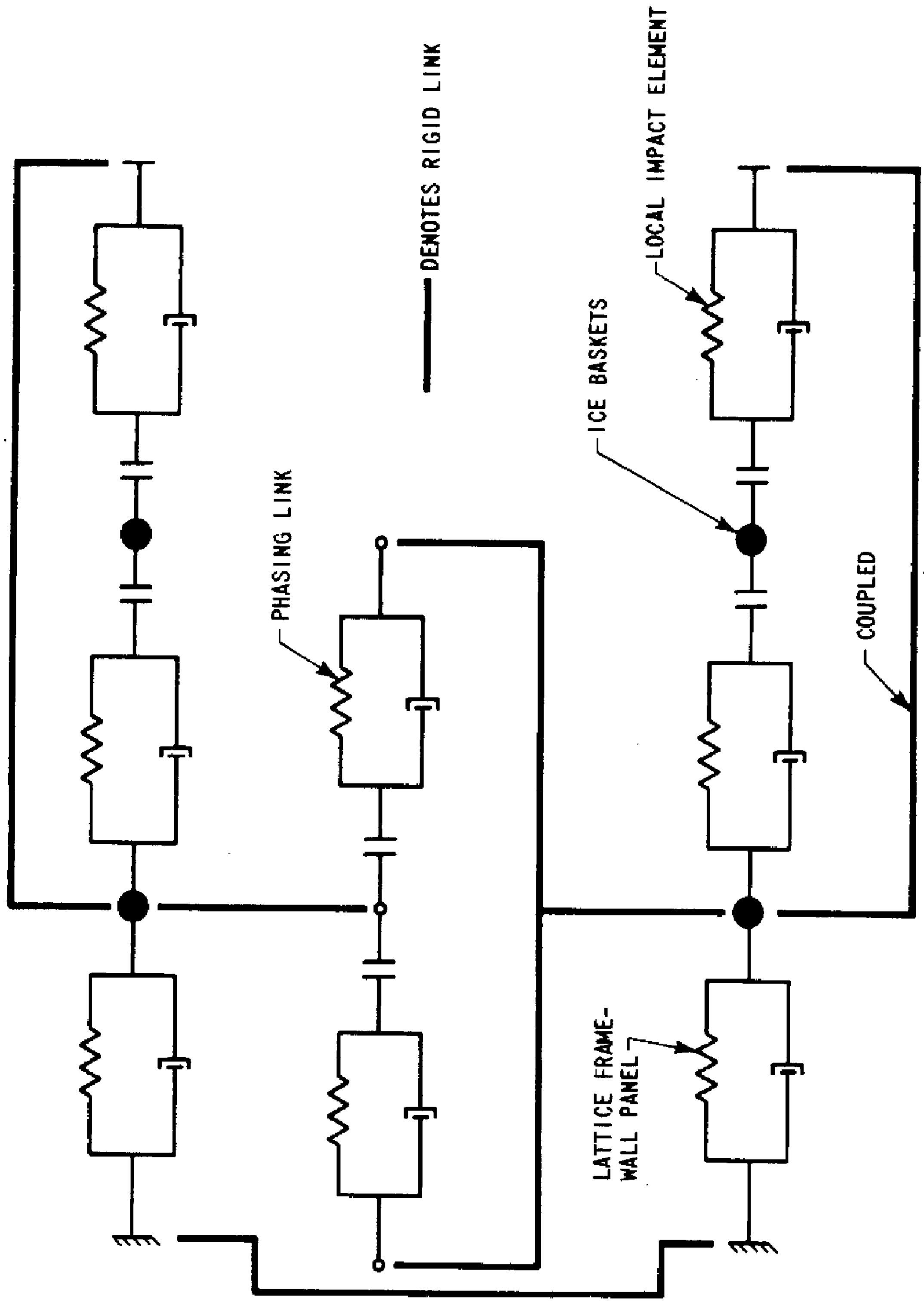


Figure 6-190. Phasing Study Model, 1 Level Lattice Frame 300 Degrees Non-Linear Model

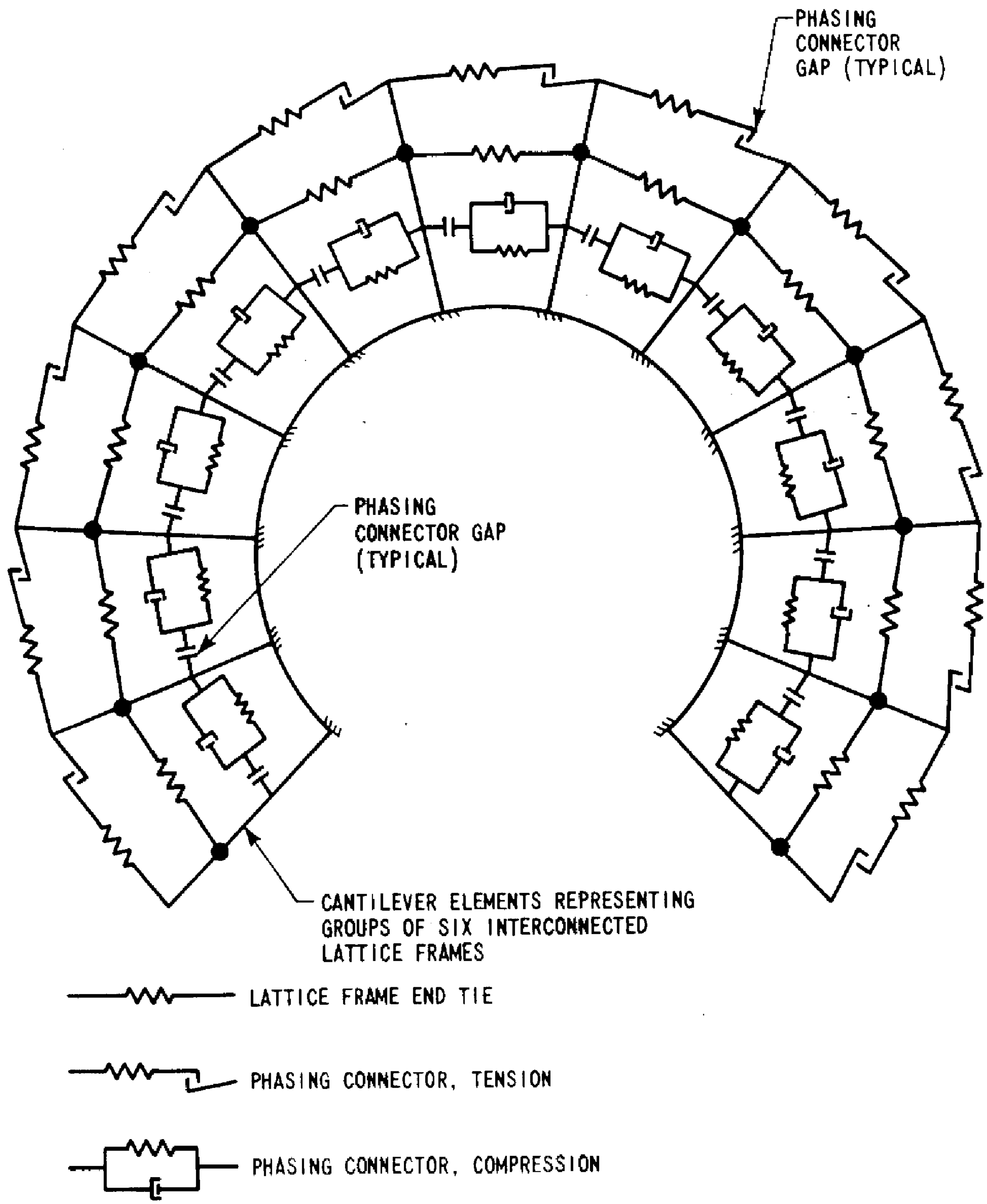


Figure 6-191. Typical Crane Wall Displacement

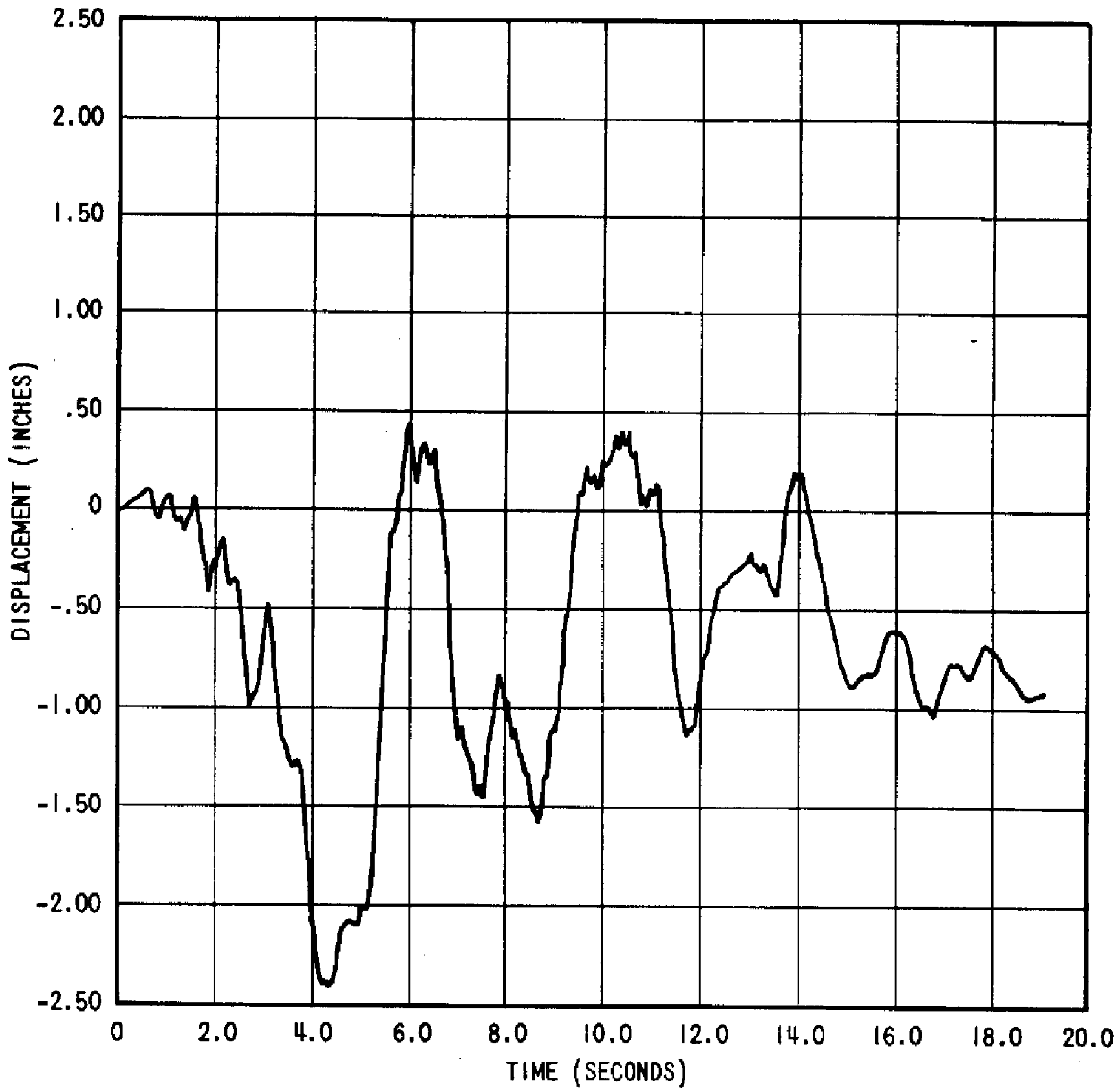


Figure 6-192. Typical Ice Basket Displacement Response

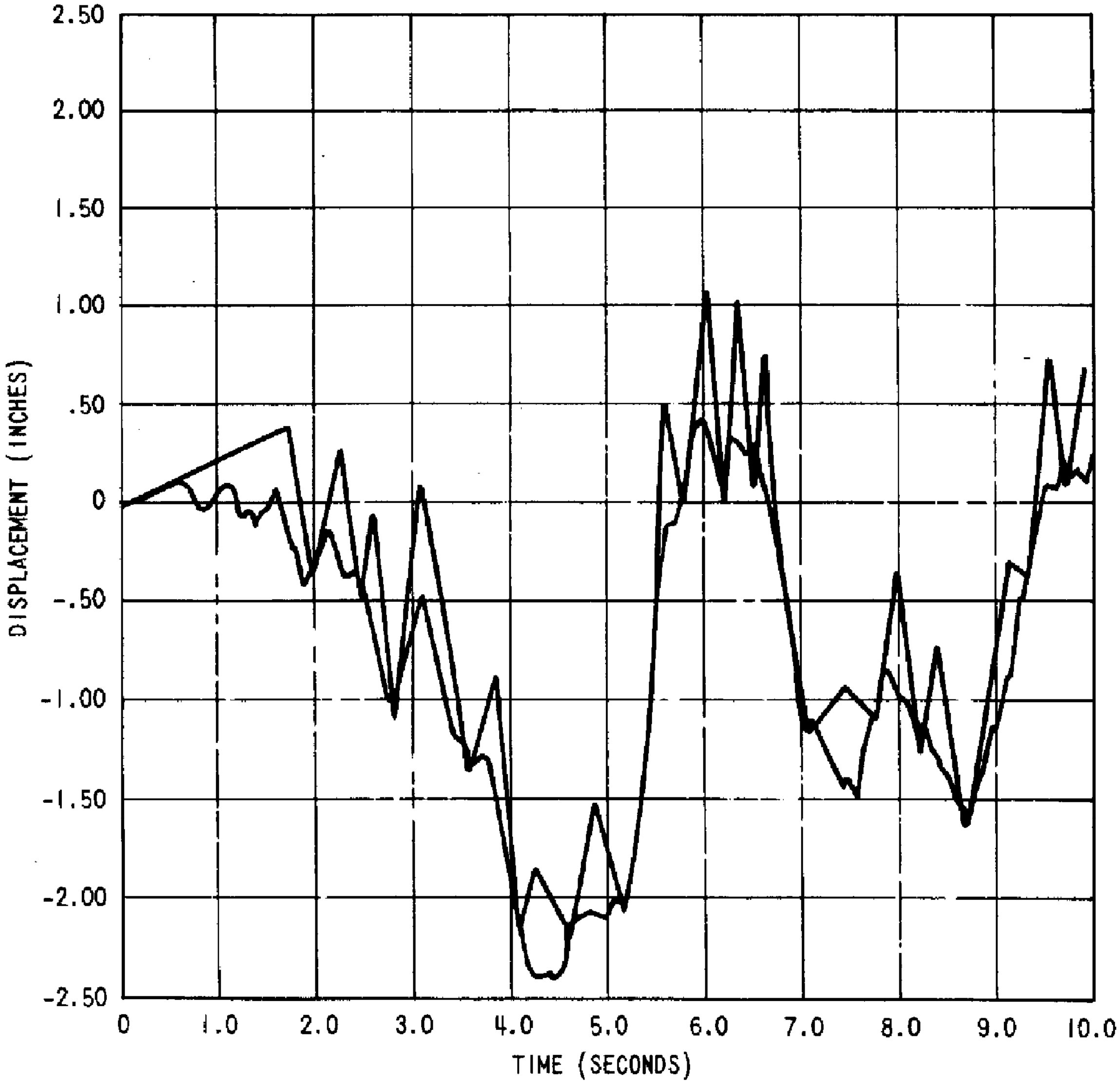


Figure 6-193. Typical Ice Basket Impact Force Response

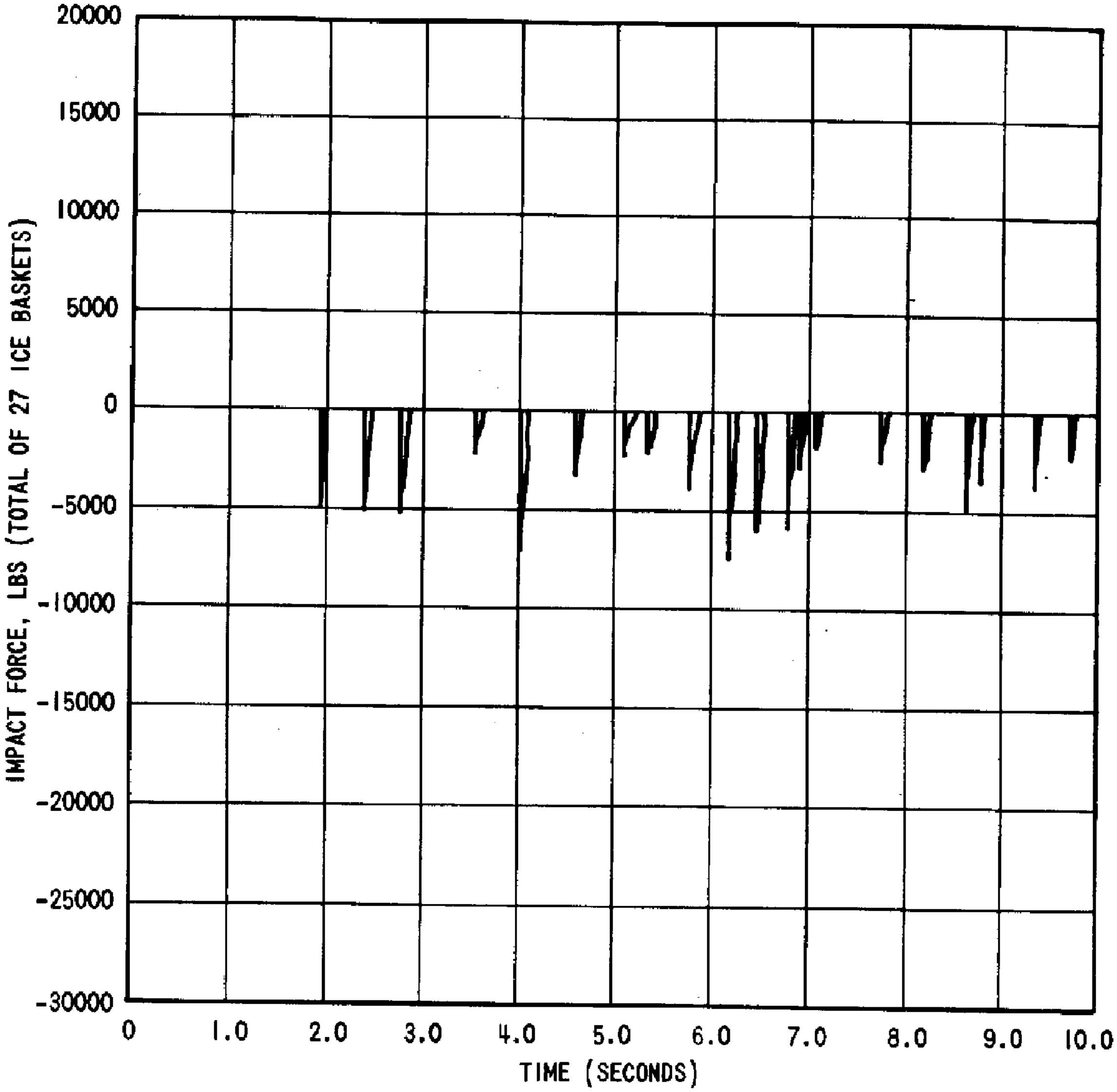


Figure 6-194. Typical Crane Wall Panel Load Response

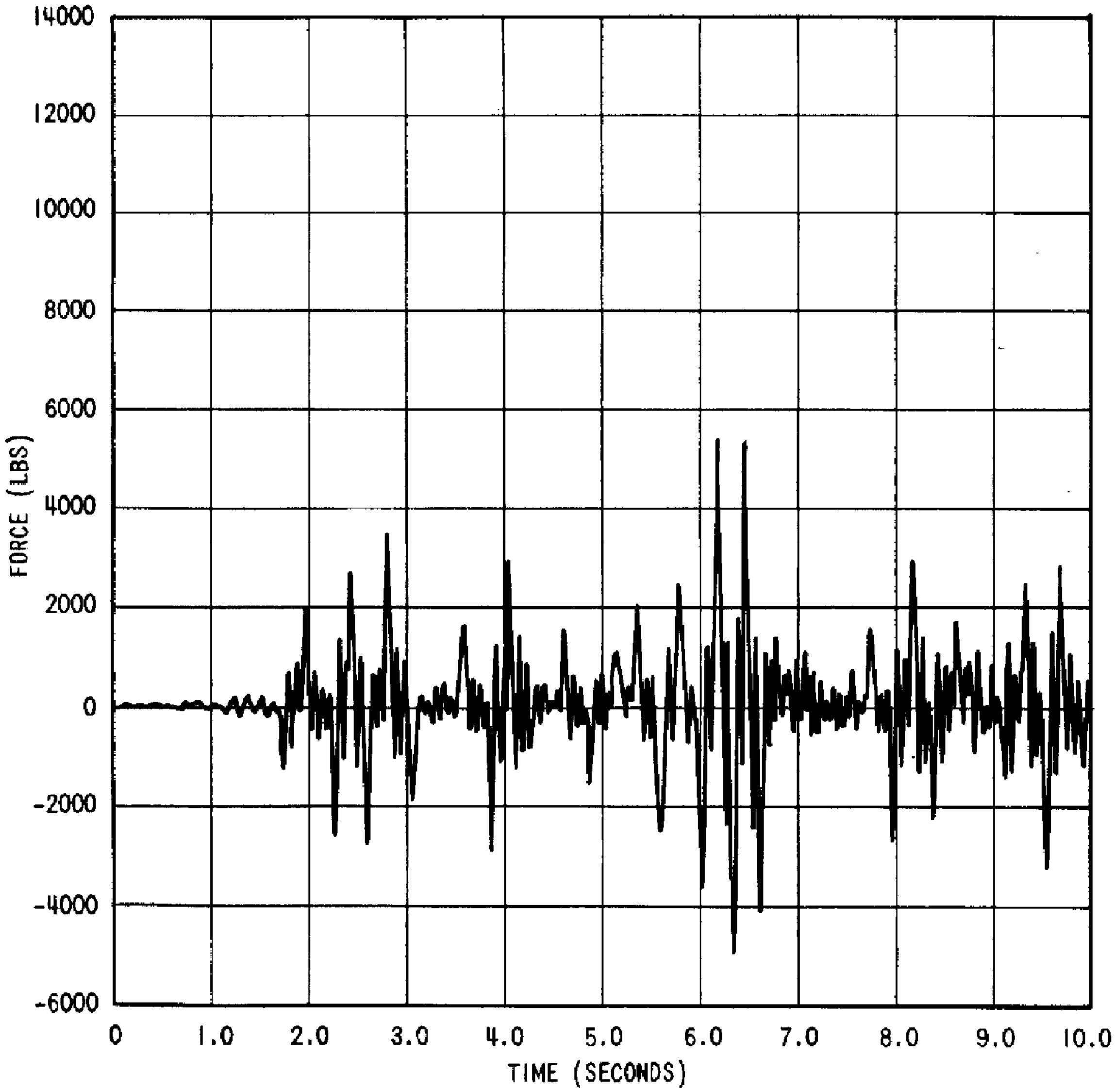


Figure 6-195. Wall Panel Design Load Distribution Obtained Using the 48-Foot Beam Model Tangential Case

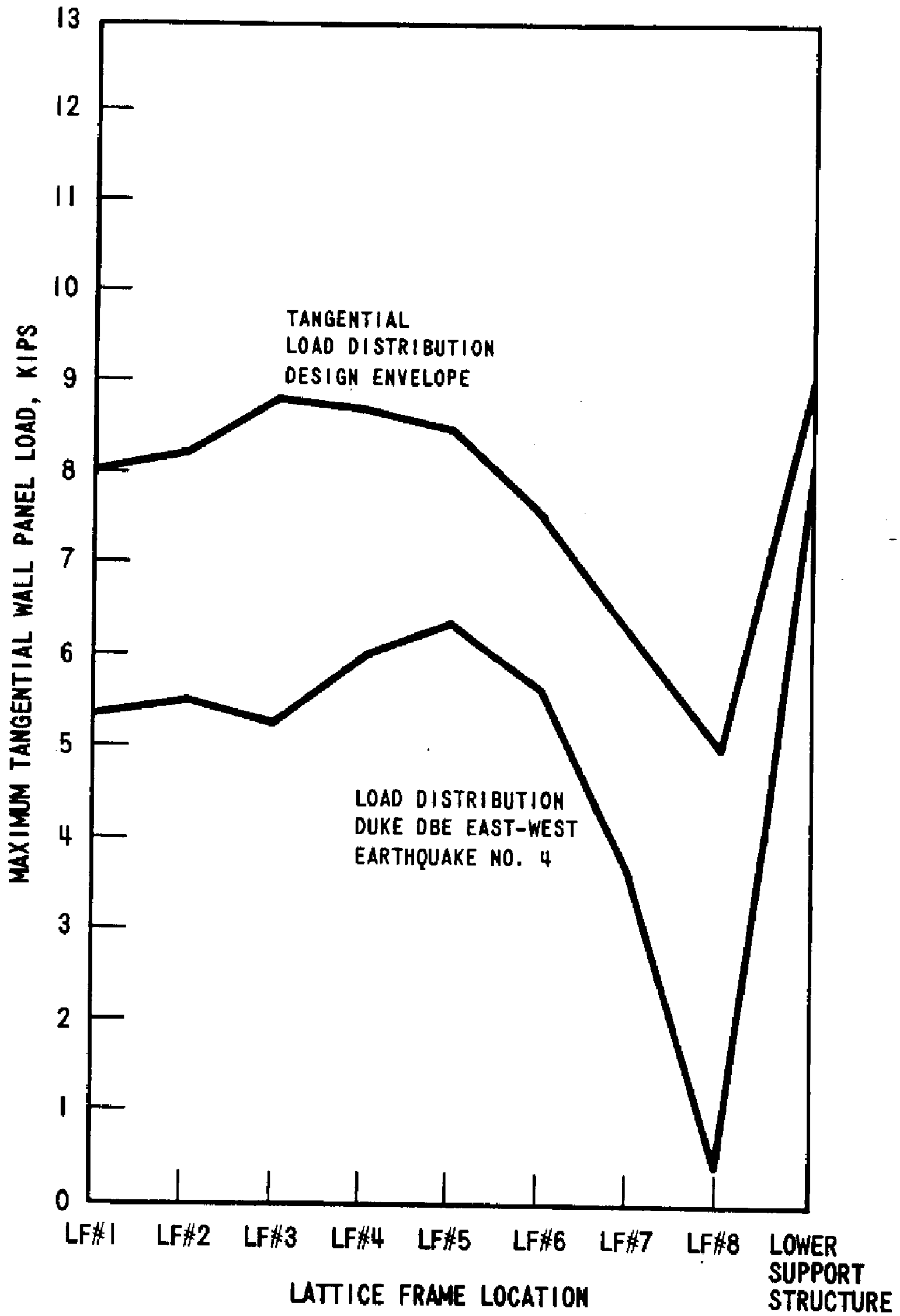


Figure 6-196. Wall Panel Design Load Distribution Obtained Using the 48-Foot Beam Model Radial Case

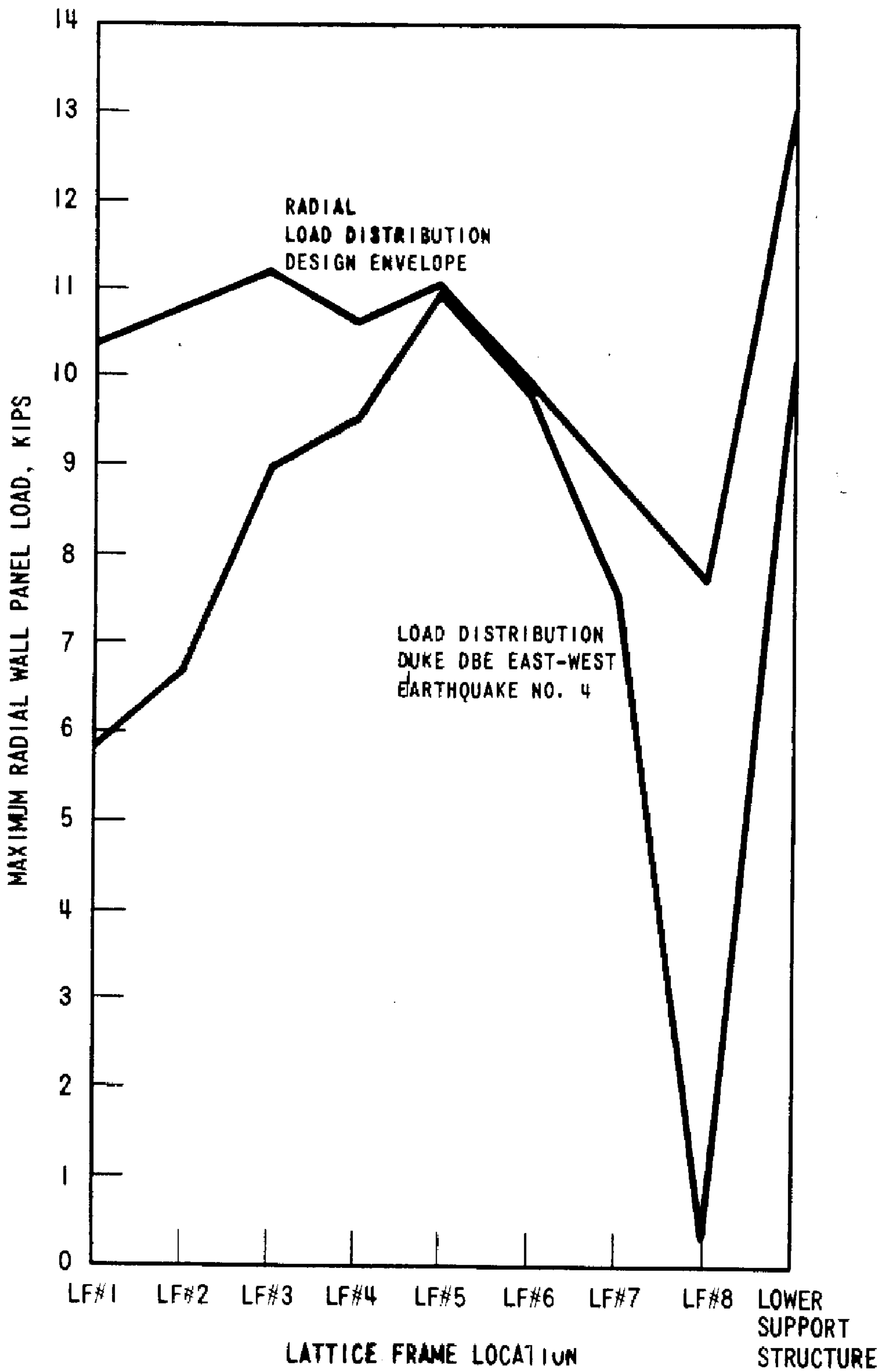


Figure 6-197. Ice Basket Swivel Bracket Assembly

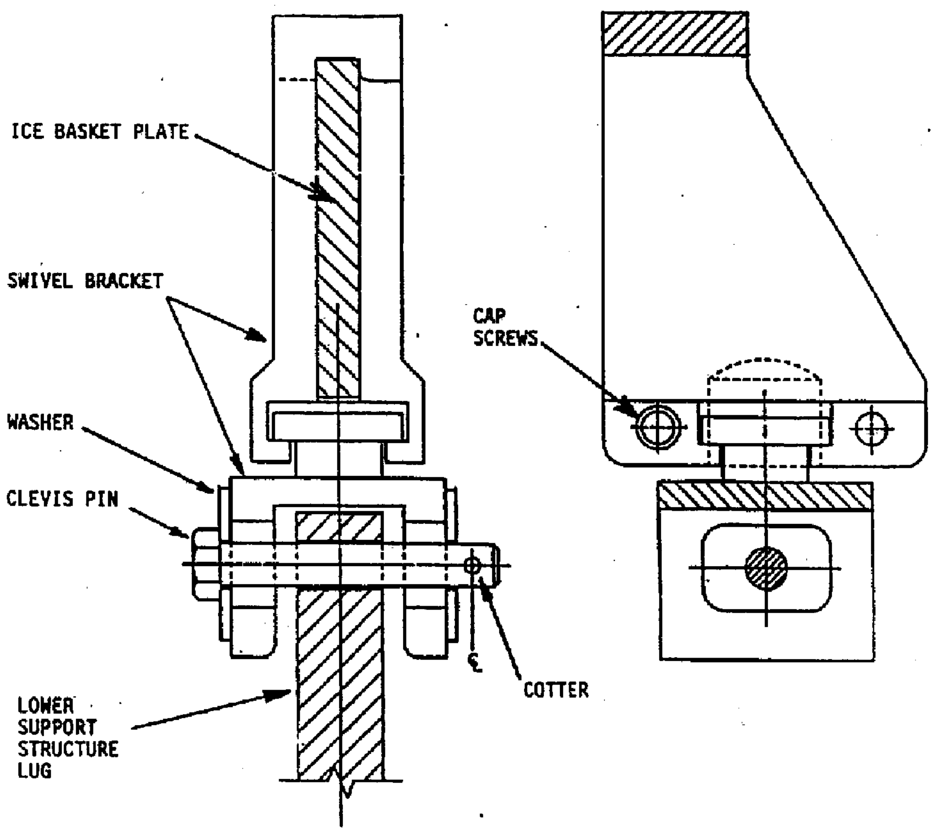


Figure 6-198. Block Ice Minimum Restriction Basket Assembly

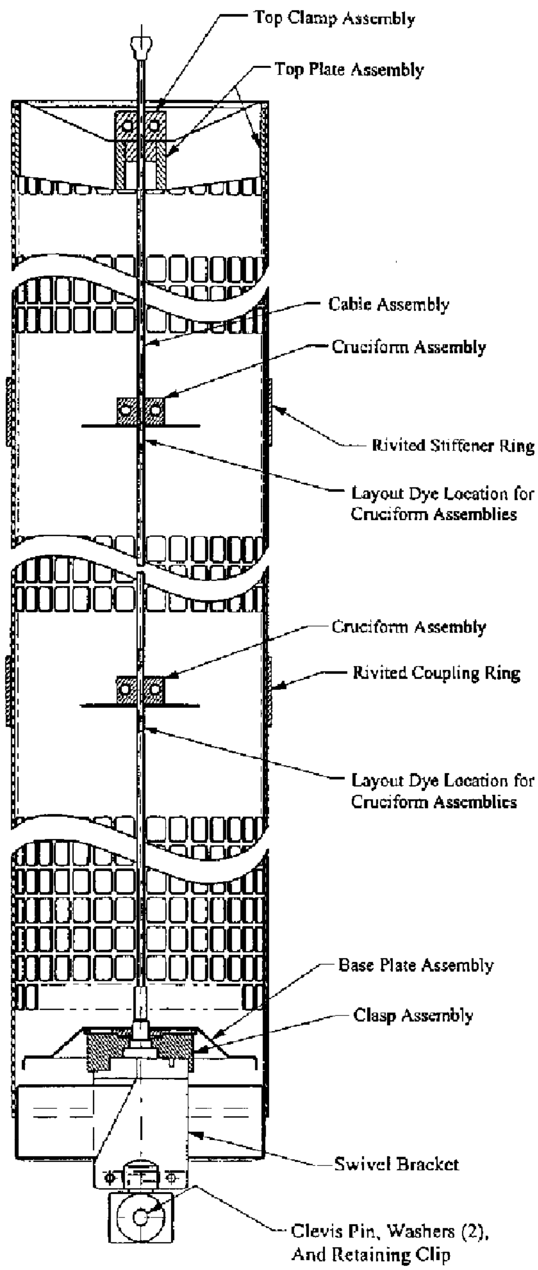


Figure 6-199. CNS-1 Double-Ended LBLOCA Mass and Energy Release Analyses

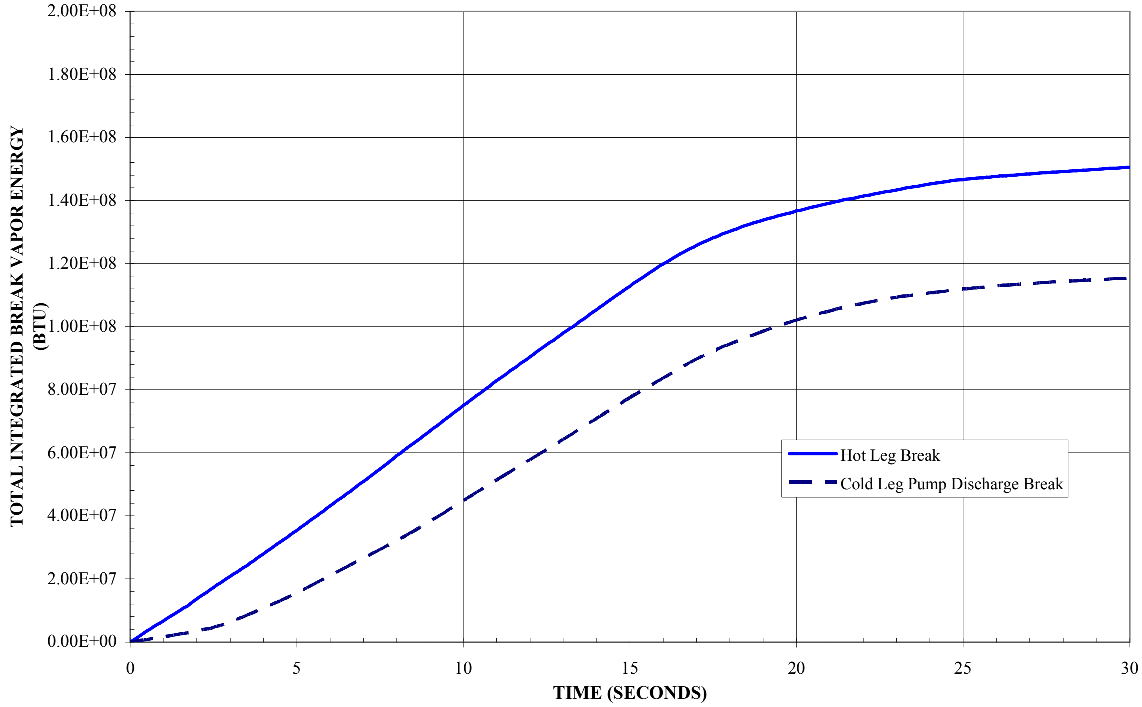


Figure 6-200. CNS-1 Double-Ended LBLOCA Mass and Energy Release Analyses

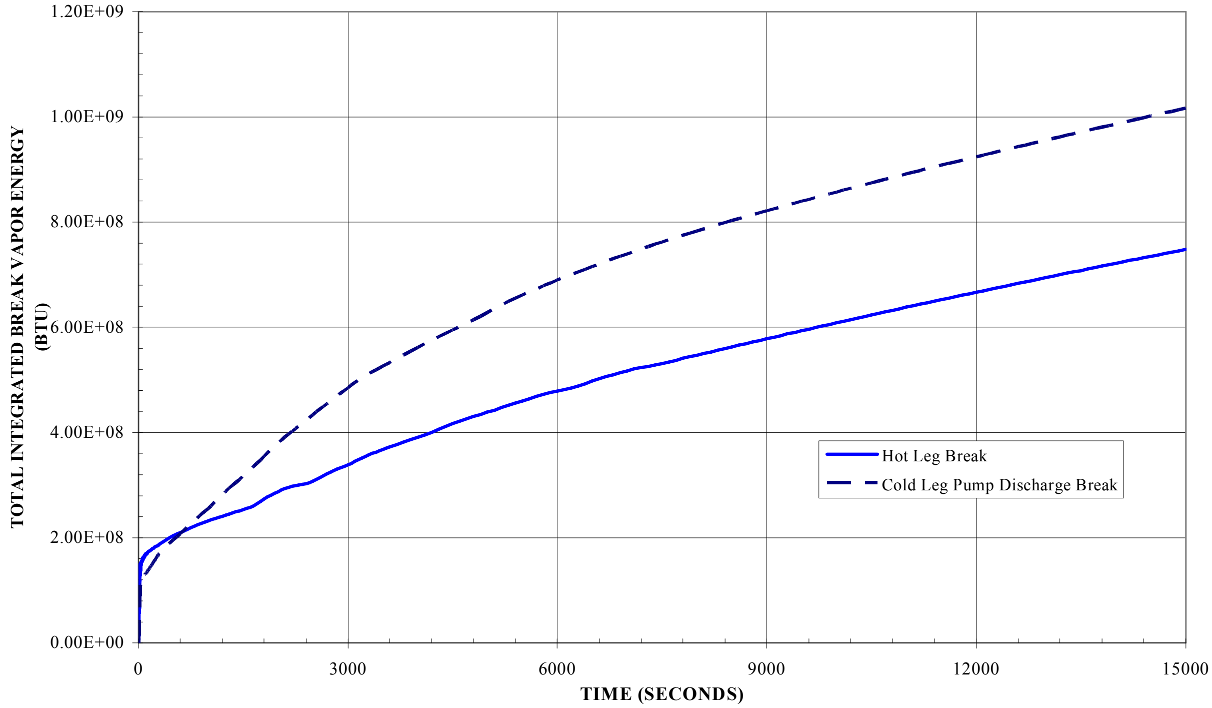


Figure 6-201. CNS-1 Double-Ended LBLOCA Mass and Energy Release Analyses

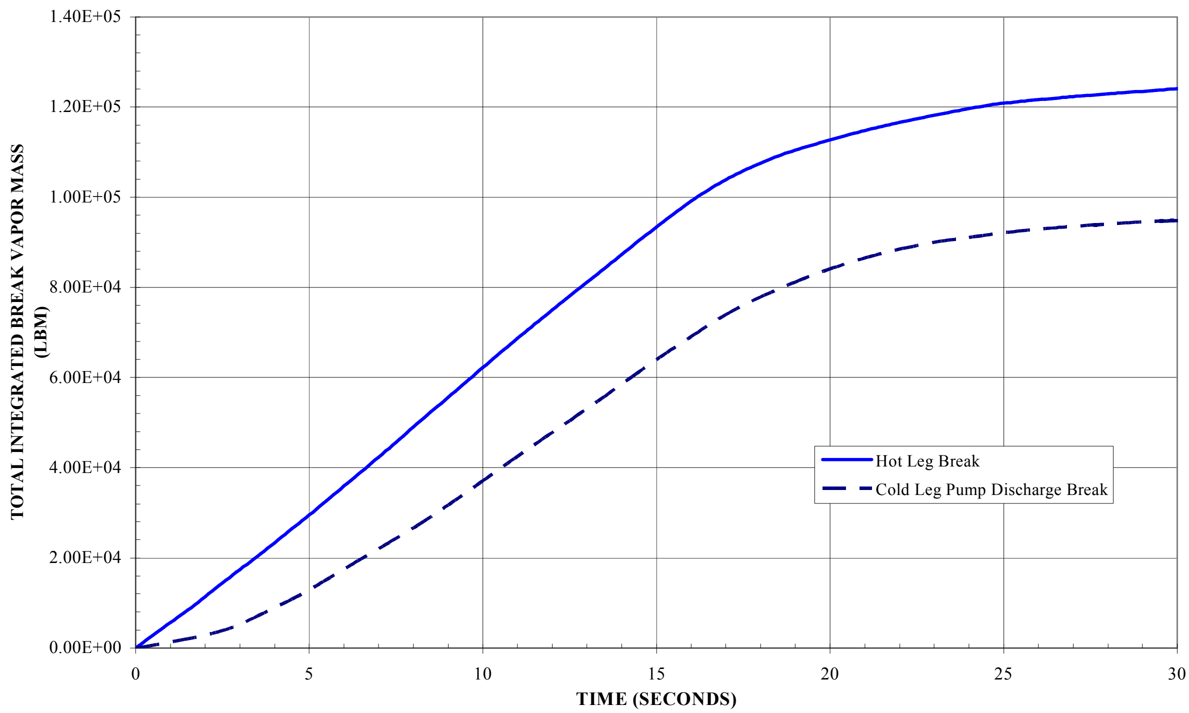


Figure 6-202. CNS-1 Double-Ended LBLOCA Mass and Energy Release Analyses

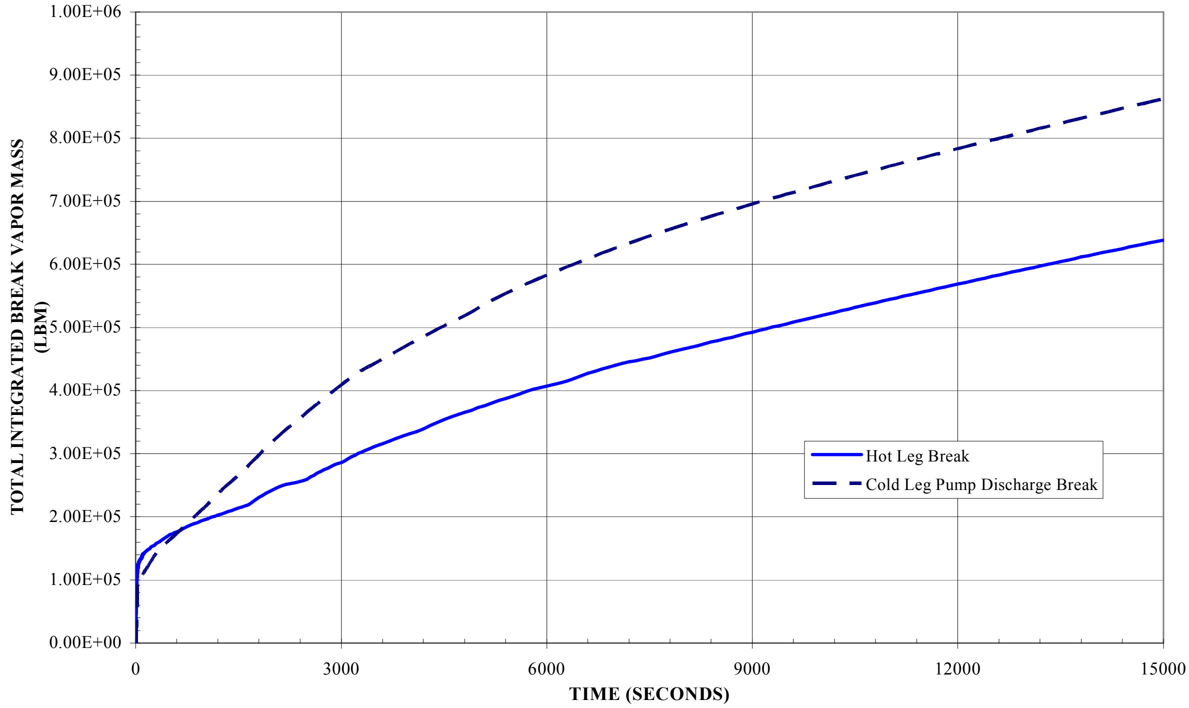


Figure 6-203. Deleted Per 2000 Update.

Figure 6-204. Upper and Lower Compartment Pressure, Min. Pressure Analysis

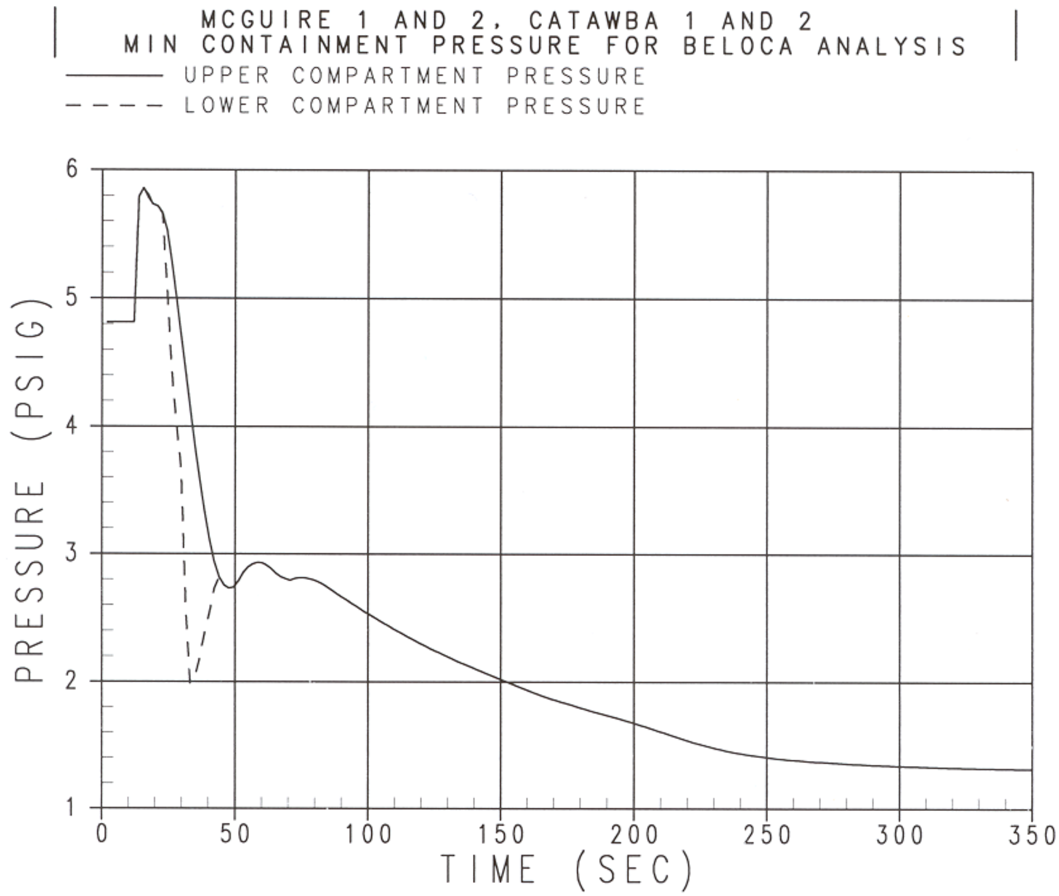


Figure 6-205. Upper Compartment Heat Removal Rate, Min. Pressure Analysis

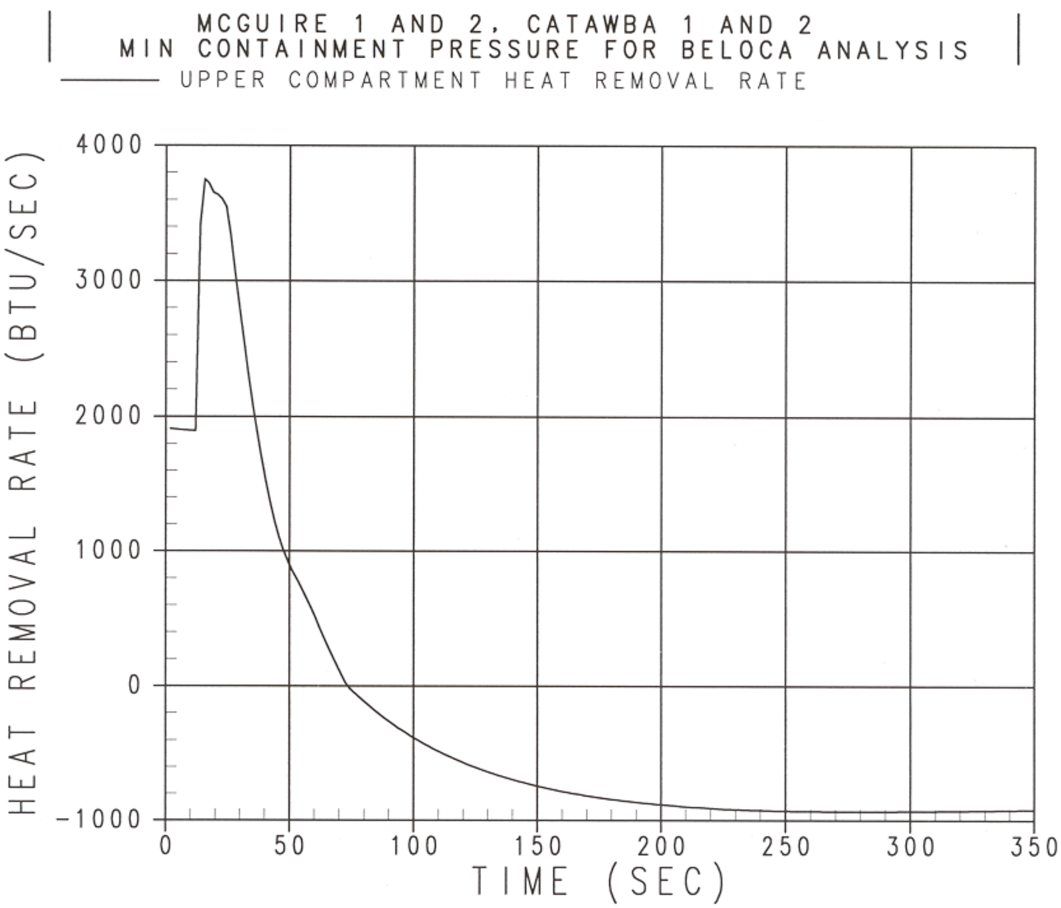


Figure 6-206. Lower Compartment Heat Removal Rate, Min. Pressure Analysis

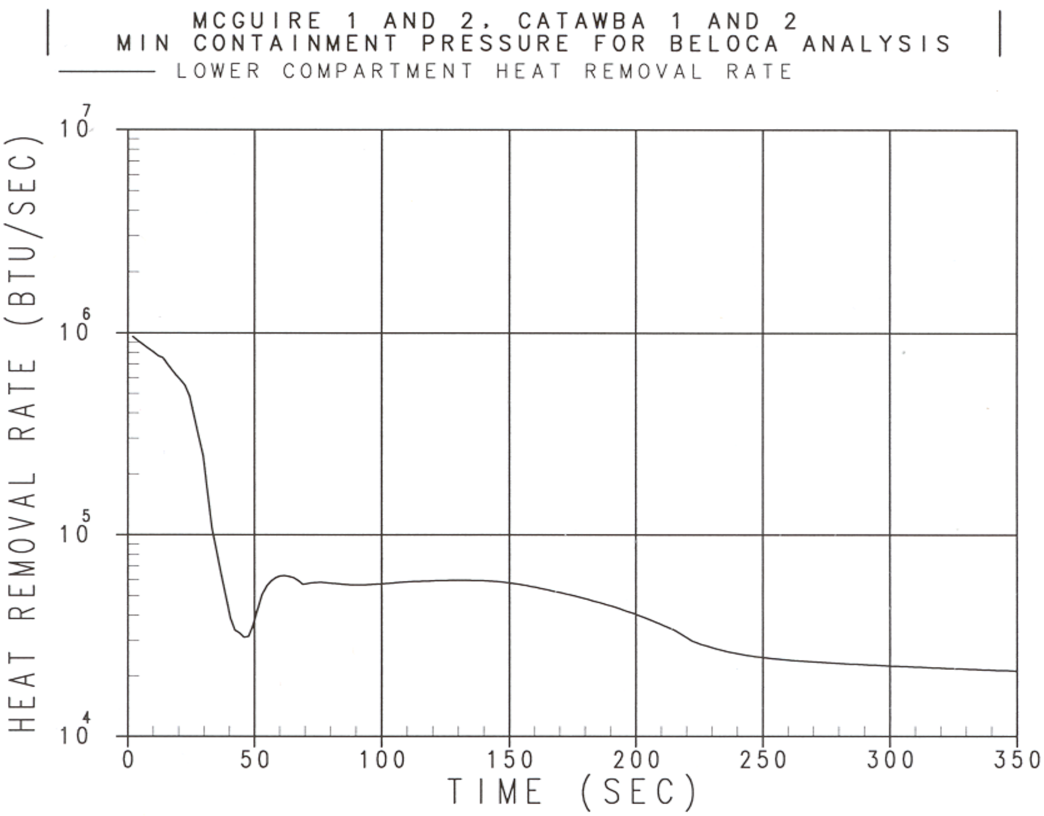


Figure 6-207. Upper and Lower Compartment Temperature, Min. Pressure Analysis

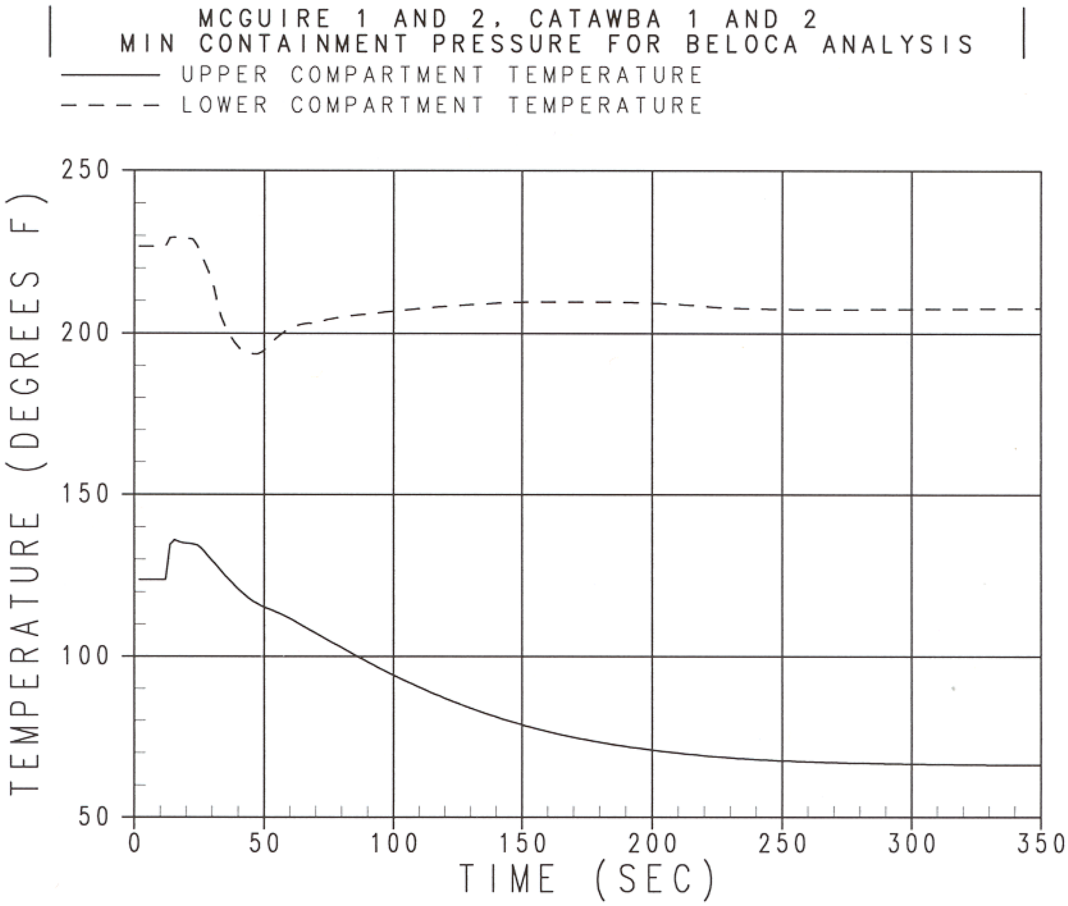


Figure 6-208. Ice Bed Heat Removal Rate, Min. Pressure Analysis

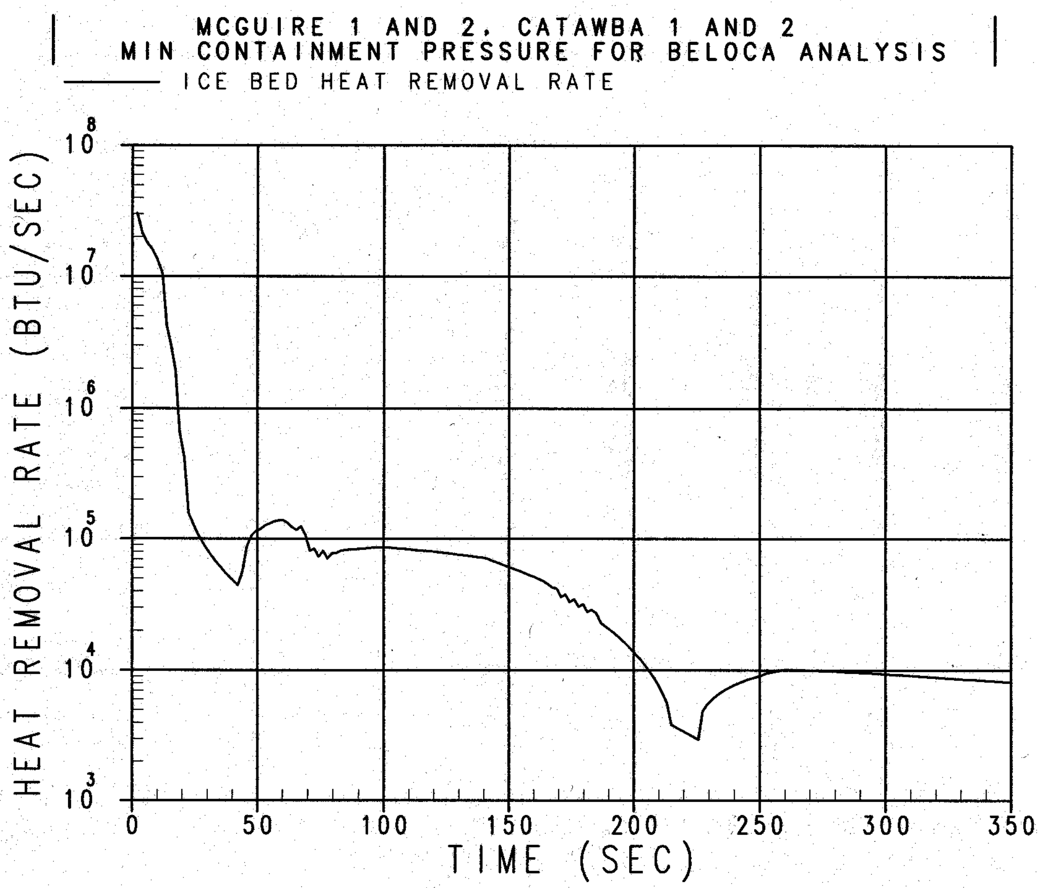


Figure 6-209. Heat Removal Rate by Lower Compartment Drain, Min. Pressure Analysis

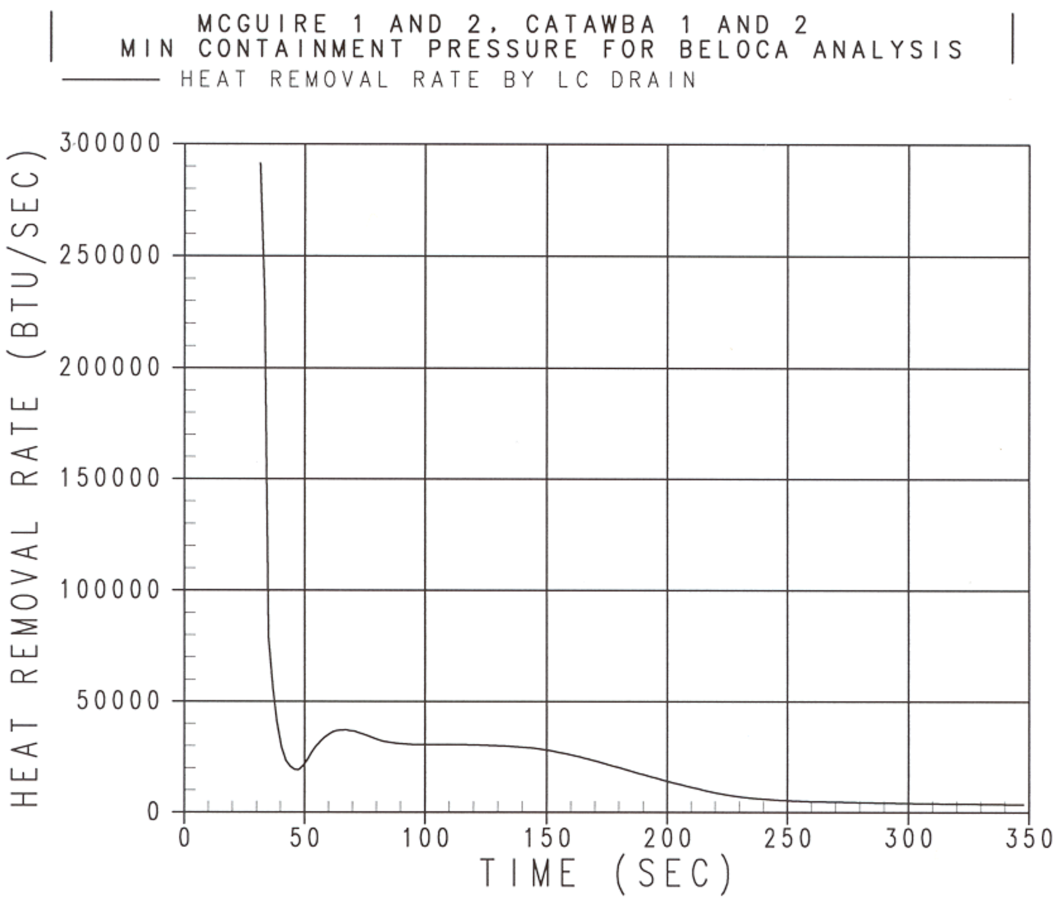


Figure 6-210. Heat Removal Rate by Sump and Spray, Min. Pressure Analysis