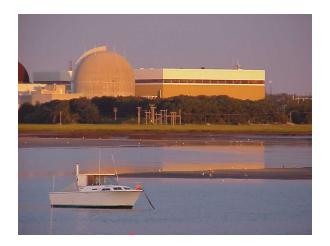
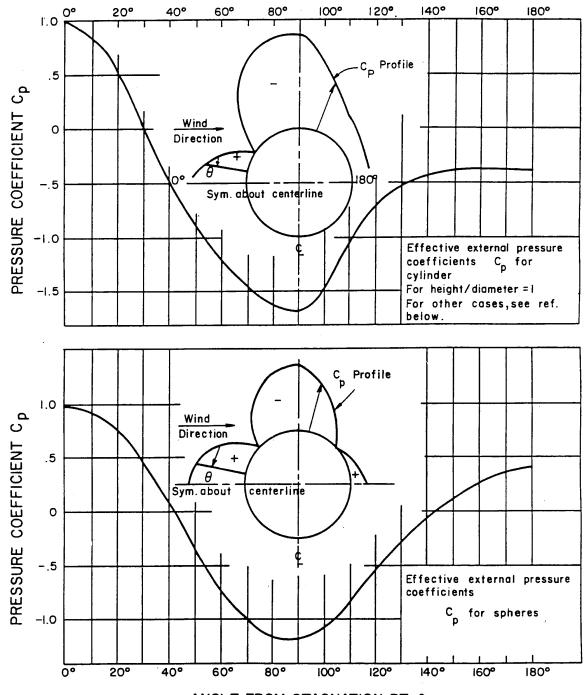
## SEABROOK STATION UPDATED FINAL SAFETY ANALYSIS REPORT

## CHAPTER 3

## DESIGN OF STRUCTURES, COMPONENTS, EQUIPMENT AND SYSTEMS

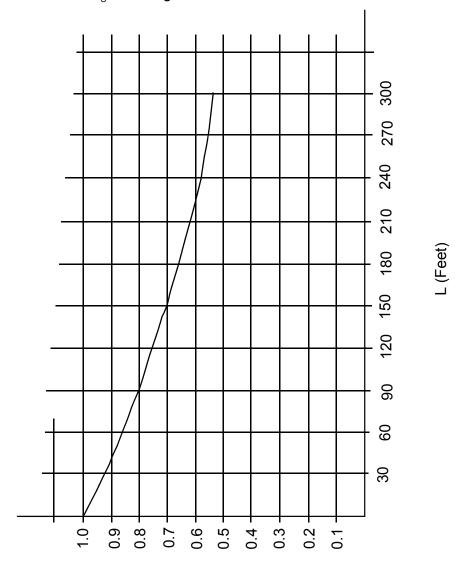
FIGURES





ANGLE FROM STAGNATION PT.  $\theta$ 

SEABROOK STATION UPDATED FINAL SAFETY	Pressure Coefficients Dist	tribution for Cylind	lers and Spheres
ANALYSIS REPORT		Figure	3.3-1



Size Factor  $C_s$  = Average Pressure/Max. Tornado Pressure

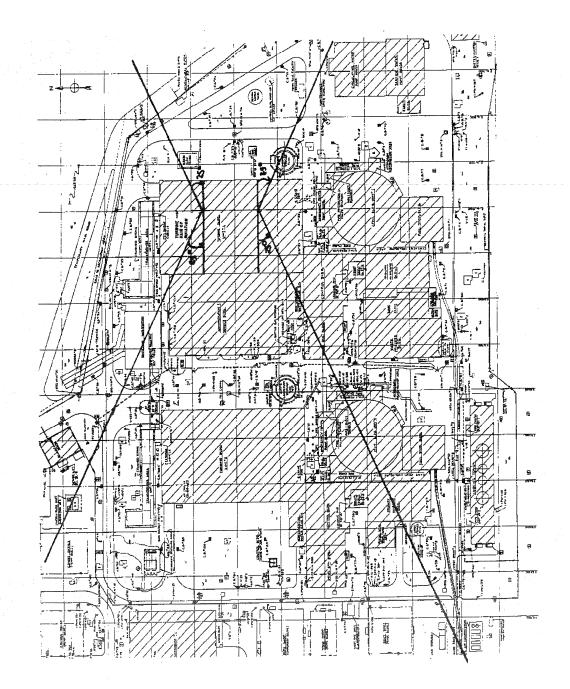
Size Factor  $\rm C_{\rm S}$  = Average Pressure/Max. Tornado Pressure

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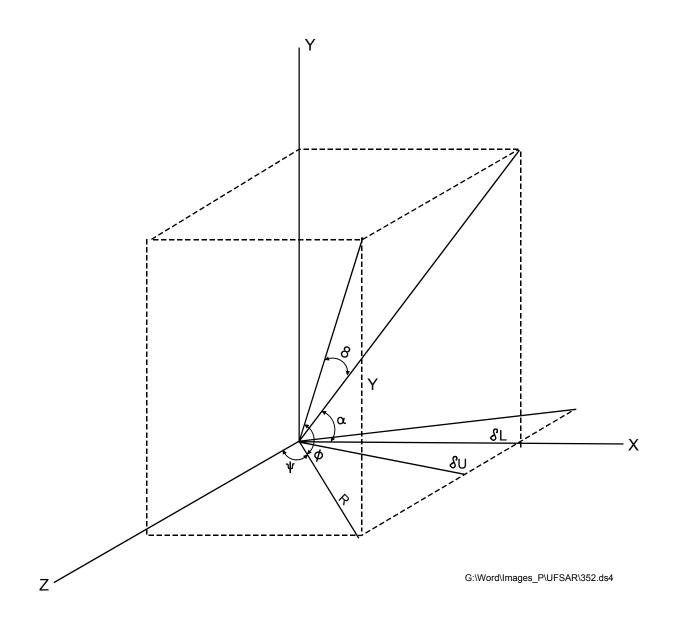
SEABROOK STATION UPDATED FINAL SAFETY	Tornado Size Factor C <sub>s</sub> V	ersus Building Leng	;th (L)
ANALYSIS REPORT		Figure	3.3-2

See 101696

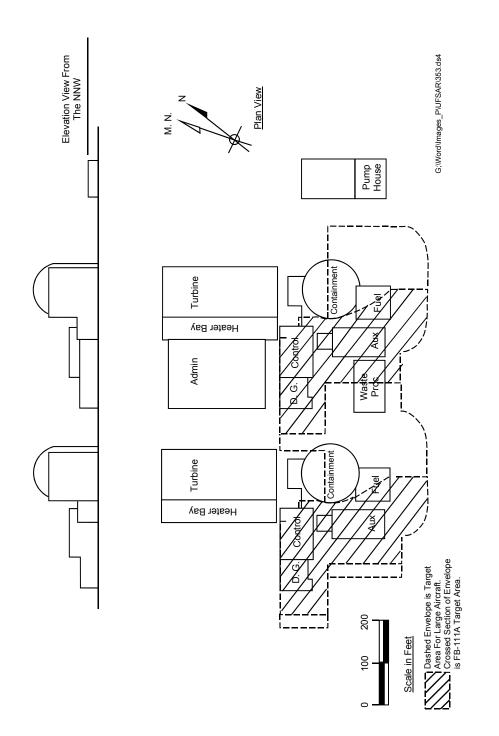
SEABROOK STATION UPDATED FINAL SAFETY	Waterproofing Concrete	Typical Details
ANALYSIS REPORT		Figure 3.4-1



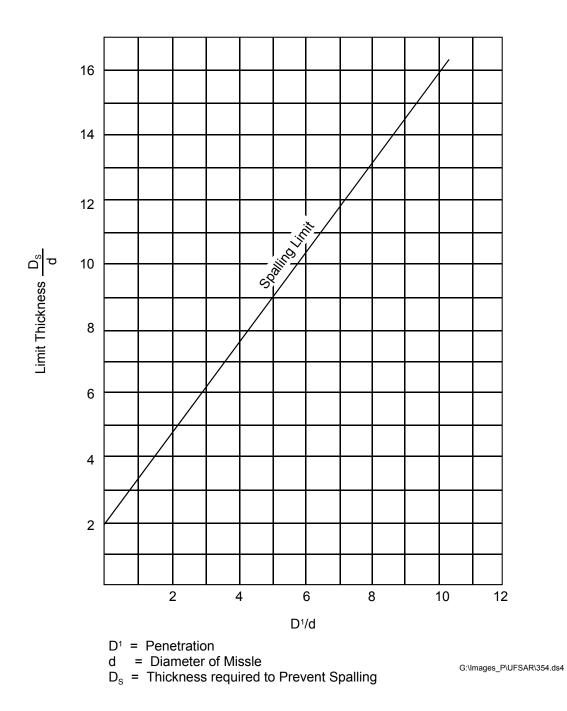
SEABROOK STATION UPDATED FINAL SAFETY	Possible Turbine Missile	Trajectory	
ANALYSIS REPORT		Figure	3.5-1



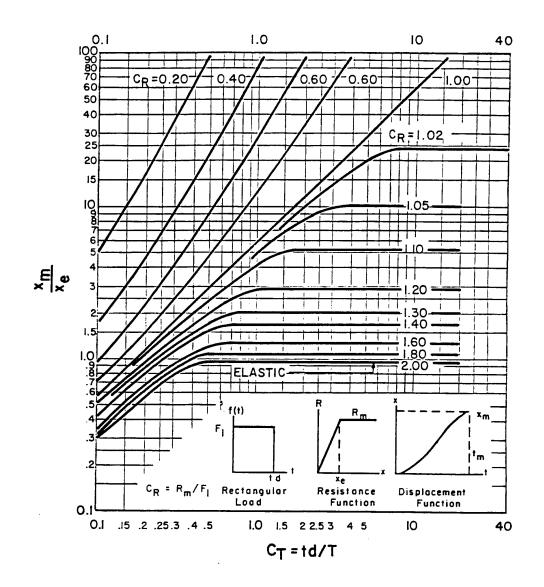
SEABROOK STATION UPDATED FINAL SAFETY	Coordinate Systems			
ANALYSIS REPORT		Figur	e 3.5-2	



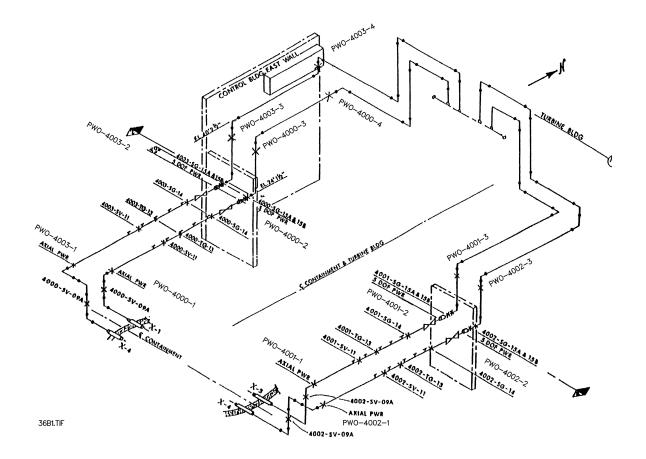
SEABROOK STATION UPDATED FINAL SAFETY	Plot Plan and Elevation V Area	view Showing Effecti	ive Target
ANALYSIS REPORT		Figure	3.5-3



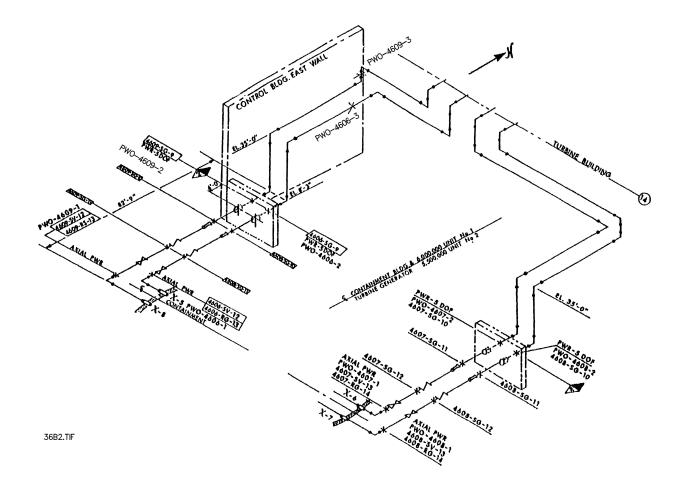
SEABROOK STATION UPDATED FINAL SAFETY	Relationship of Penetratic (Reference 12)	on to Scabbing Limit Thickness
ANALYSIS REPORT		Figure 3.5-4



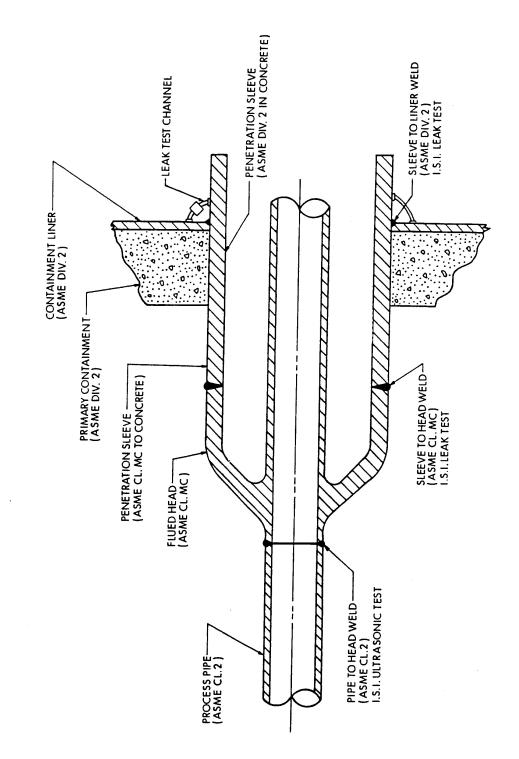
SEABROOK STATION UPDATED FINAL SAFETY	X <sub>m</sub> /X <sub>e</sub> Curves for Elasto- Load (Reference 15)	Plastic System Rect	angular Impulse
ANALYSIS REPORT		Figure	3.5-5



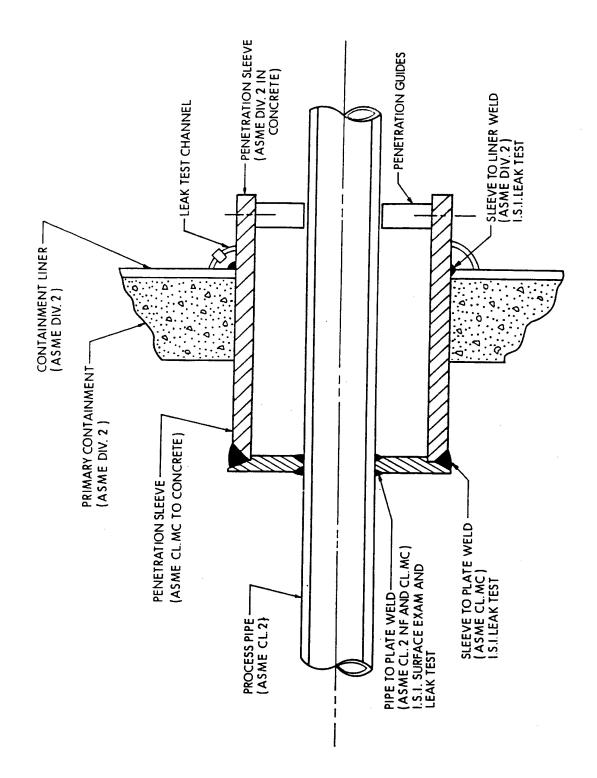
SEABROOK STATION UPDATED FINAL SAFETY	Main Steam Piping Outside Containment	
ANALYSIS REPORT	Figure 3.6(B)-1	



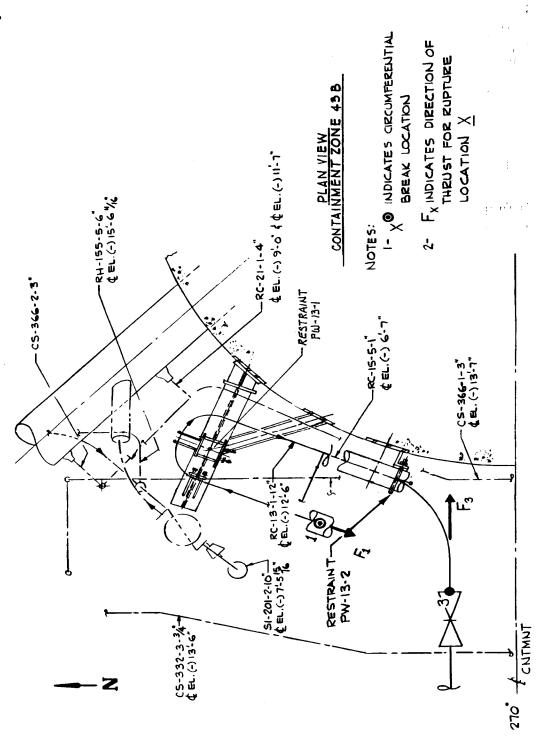
SEABROOK STATION UPDATED FINAL SAFETY	Feedwater Piping Outside	e Containment
ANALYSIS REPORT		Figure 3.6(B)-2



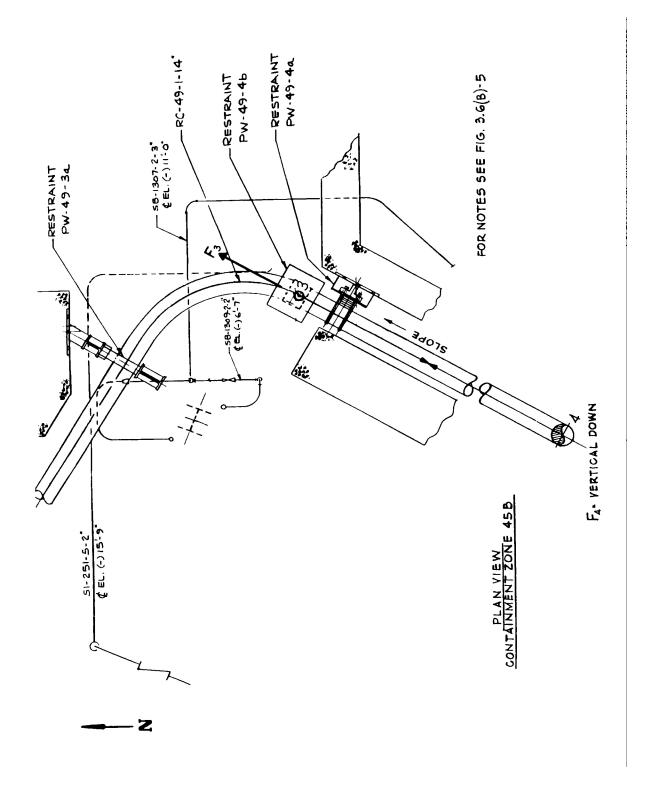
SEABROOK STATION UPDATED FINAL SAFETY	Containment Penetration	(Hot High Energy	Lines)
ANALYSIS REPORT		Figure	3.6(B)-3



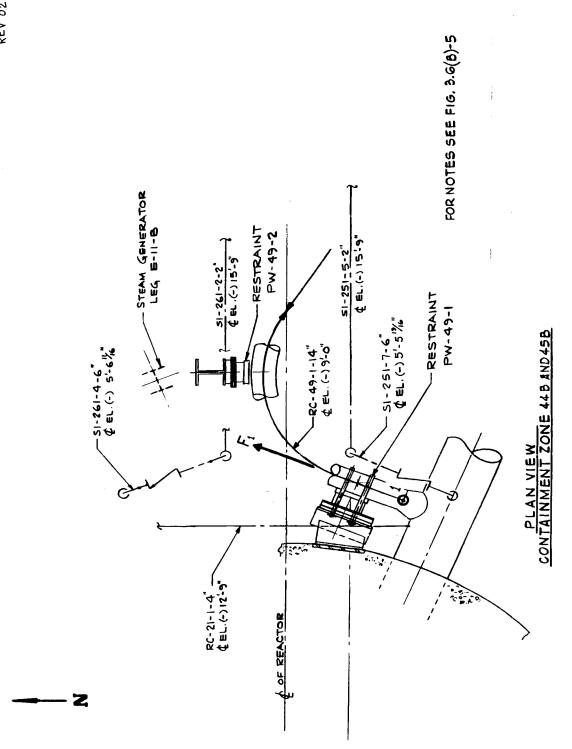
SEABROOK STATION UPDATED FINAL SAFETY	Containment Penetration	(Cold High Energy	r Lines)
ANALYSIS REPORT		Figure	3.6(B)-4



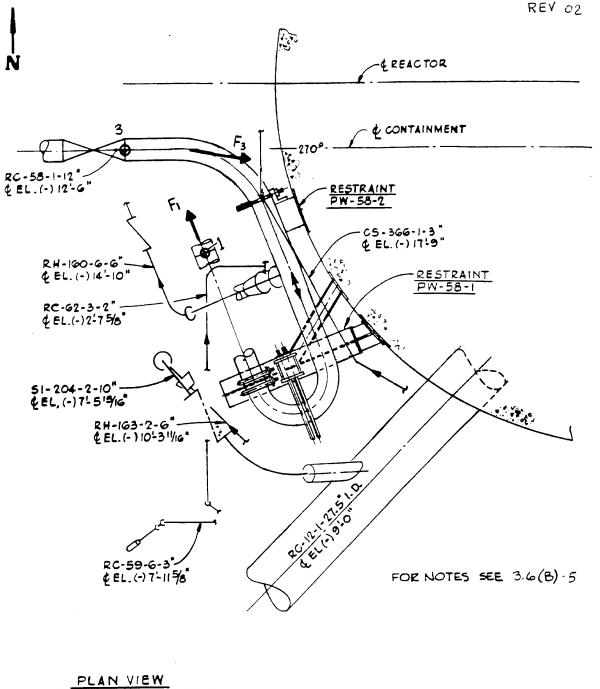
SEABROOK STATION UPDATED FINAL SAFETY	RC Line 13 Pipe Whip Re Lines and Valves - Conta		CS, RC and RH
ANALYSIS REPORT		Figure	3.6(B)-5



SEABROOK STATION UPDATED FINAL SAFETY	Pressurizer Surge Line Pipe Whip Restraint Protecting Generator Blowdown and Safety Injection Lines - Containment Zone 45B		-
ANALYSIS REPORT		Figure	3.6(B)-6



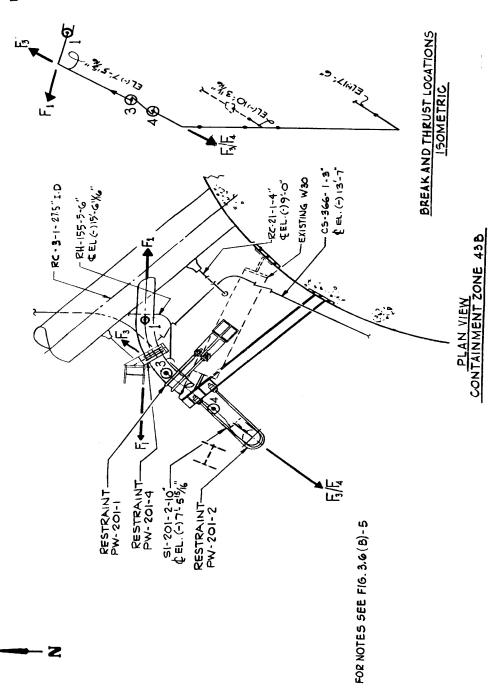
SEABROOK STATION UPDATED FINAL SAFETY	Pressurizer Surge Line Pipe W Generator Support, Reactor C Lines -Containment Zone 44E	Coolant and Sat	
ANALYSIS REPORT		Figure	3.6(B)-7



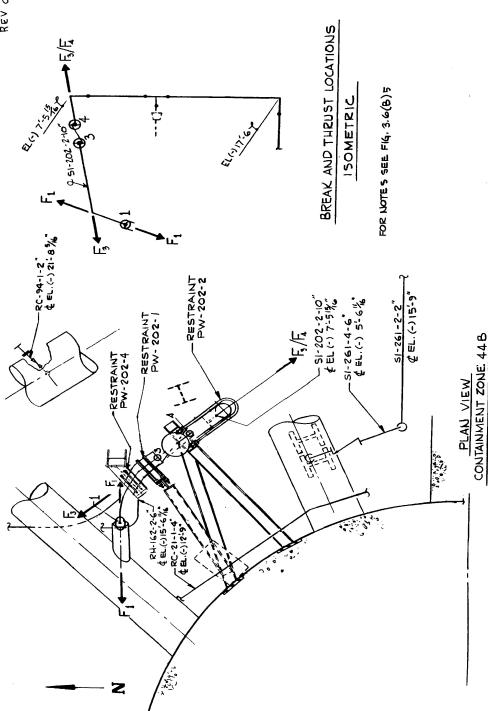
CONTAINMENT ZONE 46 B

SEABROOK STATION UPDATED FINAL SAFETY	RC-58 Pipe Whip Restrai and Valves - Containmen	•	RH, and SI Lines
ANALYSIS REPORT		Figure	3.6(B)-8

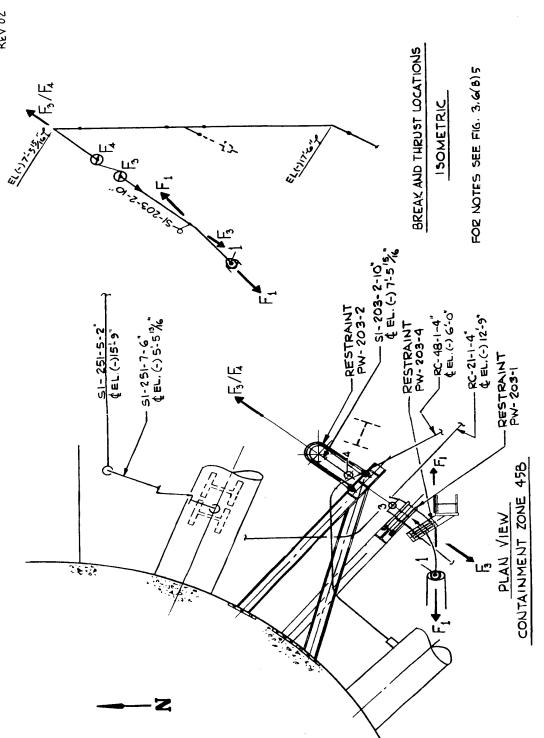




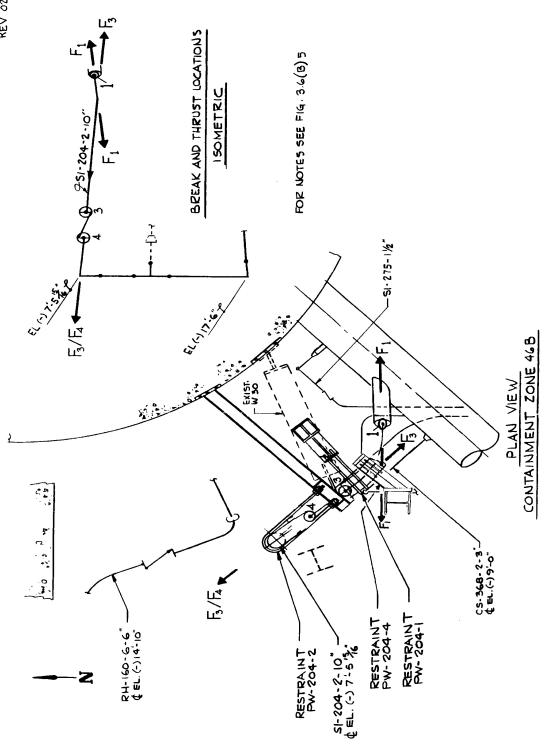
UPDATED FINAL SAFETY	Safety Injection Accumulator Line Pipe Whip Restraint Protecting CS, RH and RC Lines and Valves - Containment Zone 43B	
ANALYSIS REPORT		Figure 3.6(B)-9



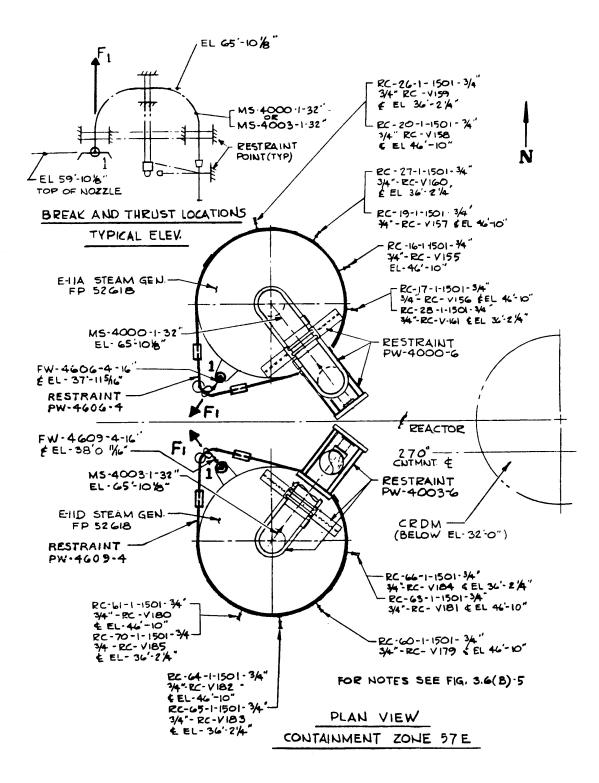
SEABROOK STATION UPDATED FINAL SAFETY	SI Line Pipe Whip Restra Lines and Valves - Conta	0	, ,
ANALYSIS REPORT		Figure	3.6(B)-10



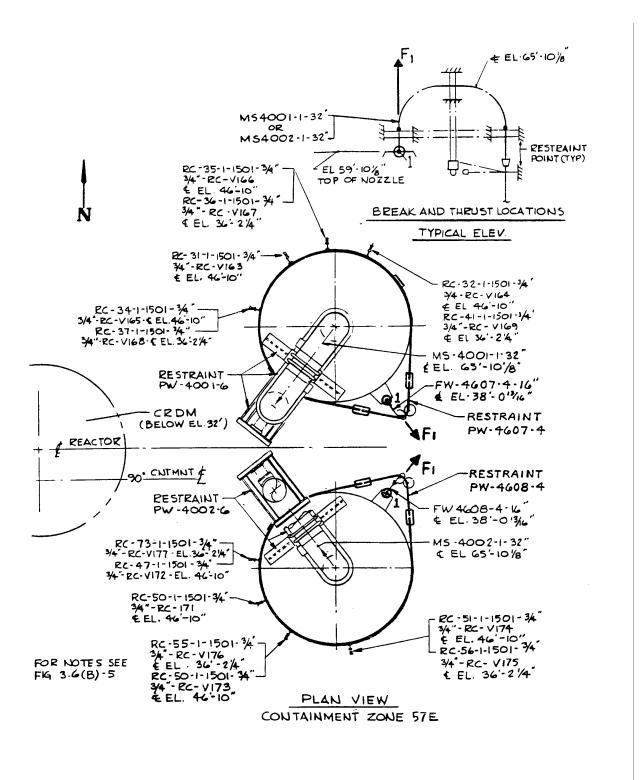
SEABROOK STATION UPDATED FINAL SAFETY	SI Pipe Whip Restraint Pr Valves -Containment Zon	U U	SI Lines and
ANALYSIS REPORT		Figure	3.6(B)-11



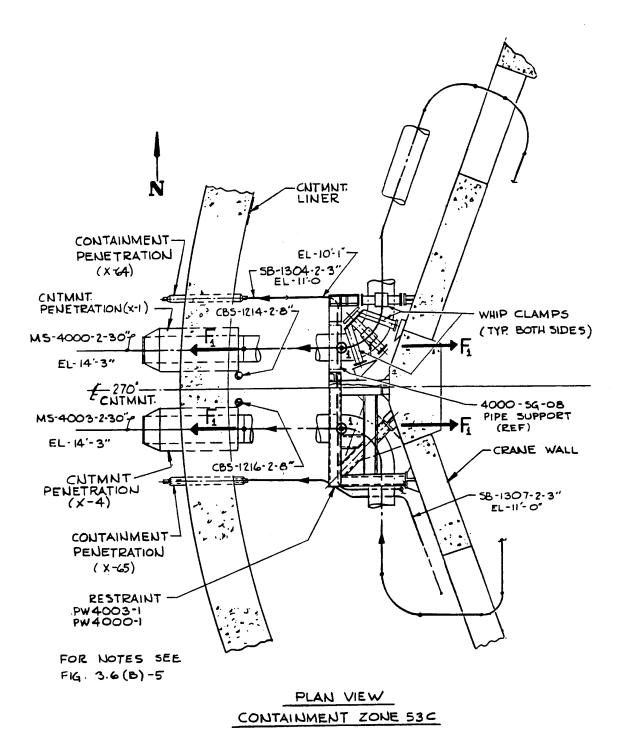
SEABROOK STATION UPDATED FINAL SAFETY	SI Pipe Whip Restraint Pr and Valves - Containmen	•	, RH and SI Lines
ANALYSIS REPORT		Figure	3.6(B)-12



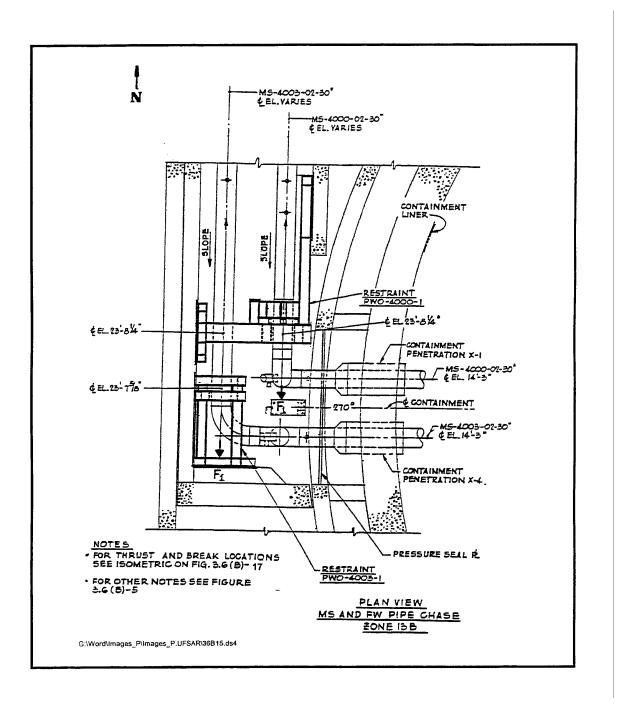
SEABROOK STATION UPDATED FINAL SAFETY	MS & FW Pipe Whip Res Lines, Upper Level Taps Containment Zone 57E [2	and CRDM Assembly	
ANALYSIS REPORT		Figure 3.6(B)-13	Sh. 1 of 2



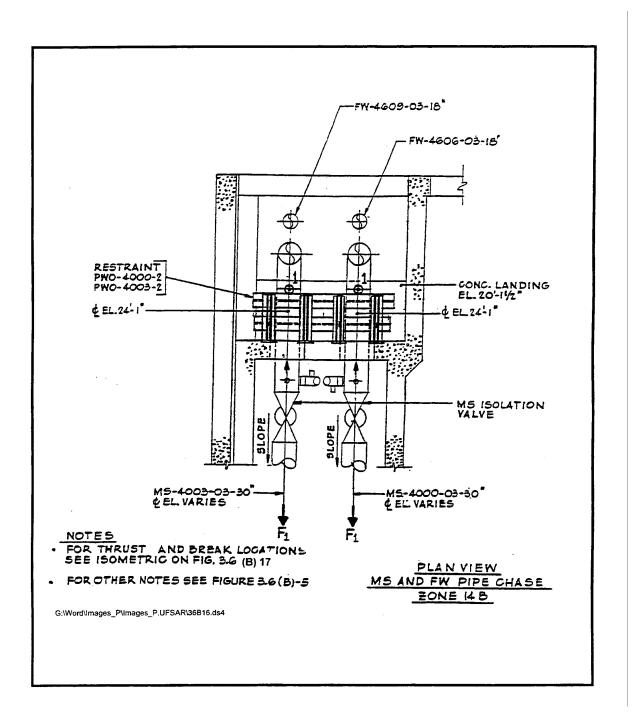
UPDATED FINAL SAFETY	MS & FW Pipe Whip Res Lines, Upper Level Taps Containment Zone 57E [2	and CRDM Assembly	
ANALYSIS REPORT		Figure 3.6(B)-13	Sh. 2 of 2



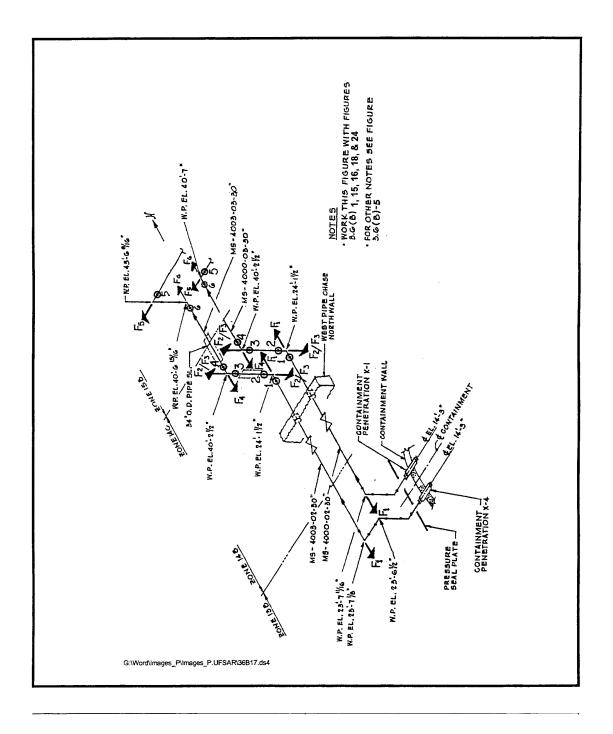
SEABROOK STATION UPDATED FINAL SAFETY	Main Steam Pipe Whip R Valves and Containment Zone 53C		<b>U</b>
ANALYSIS REPORT		Figure	3.6(B)-14



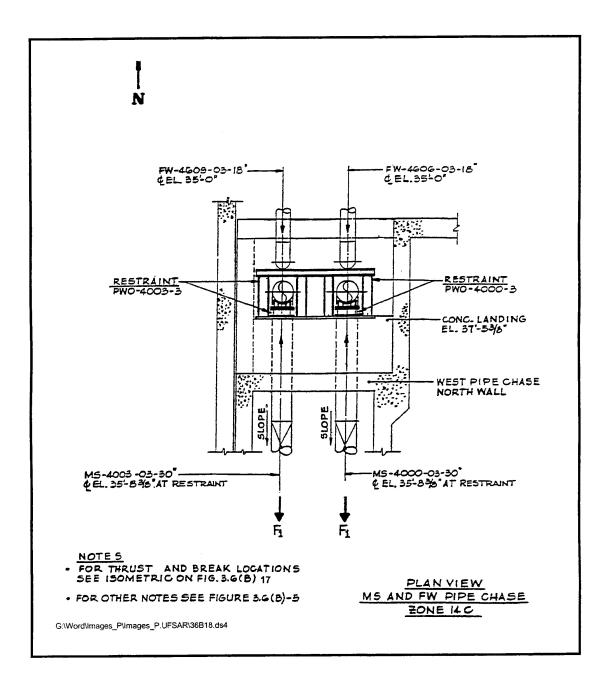
UPDATED FINAL SAFETY	TED FINAL SAFETY Containment Penetrations	ipe Whip Restraints Protecting s - MS and FW Pipe Chase Zone
ANALYSIS REPORT		Figure 3.6(B)-15



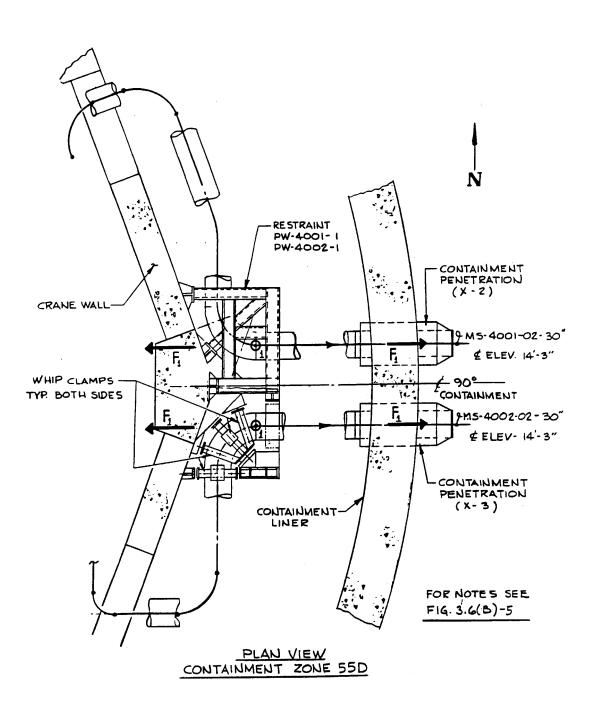
SEABROOK STATION UPDATED FINAL SAFETY	estraints Protecting the Main Steam Containment Penetrations - MS and
ANALYSIS REPORT	Figure 3.6(B)-16



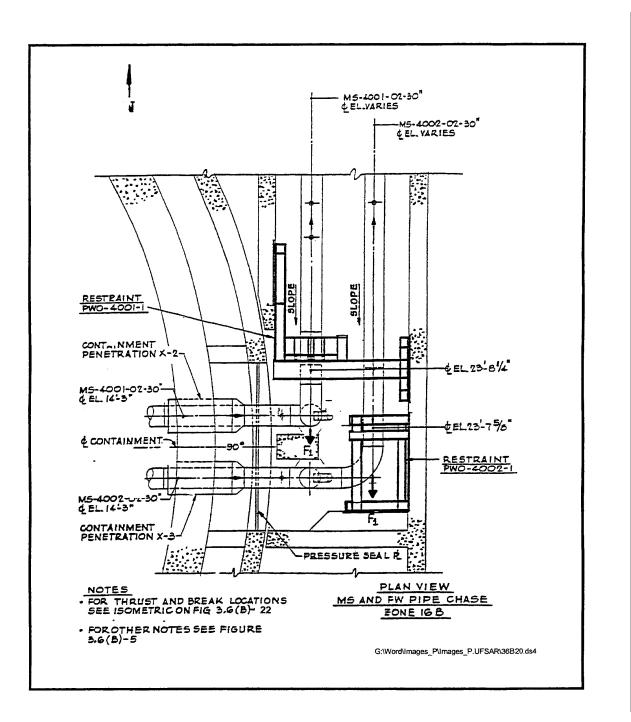
SEABROOK STATION	Break and Thrust Locations Isometric for MS Pipes in West	
UPDATED FINAL SAFETY	Pipe Chase	
ANALYSIS REPORT		Figure 3.6(B)-17



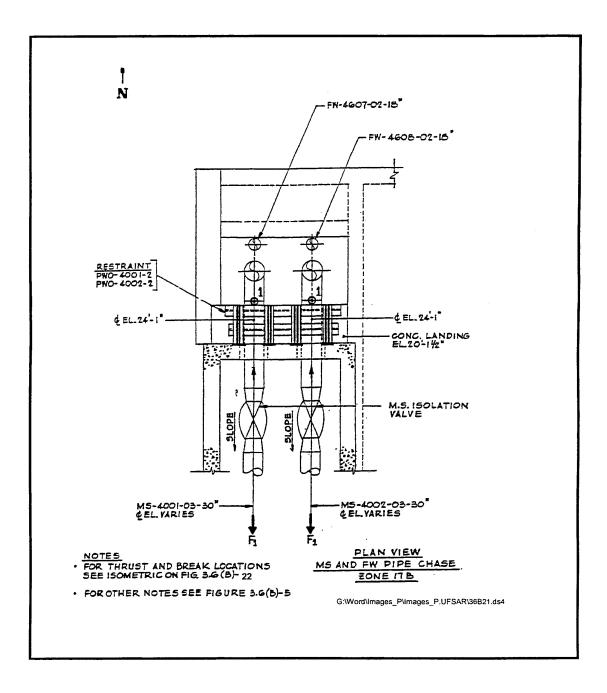
UPDATED FINAL SAFETY		ipe Whip Restraints Protecting s-MS and FW Pipe Chase Zone 16B
ANALYSIS REPORT	Figure 3.6(B)-18	



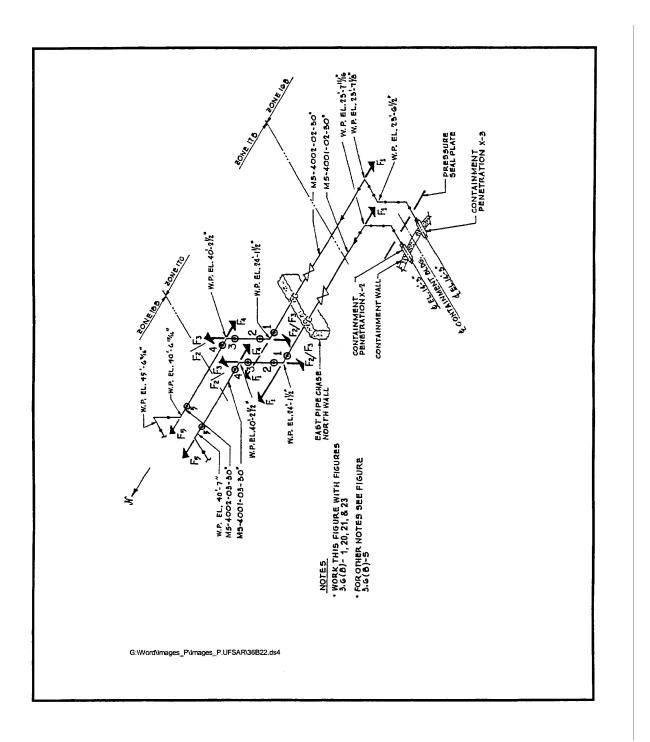
SEABROOK STATION UPDATED FINAL SAFETY	Main Steam Pipe Whip R Liner and Penetrations - C		0
ANALYSIS REPORT		Figure	3.6(B)-19



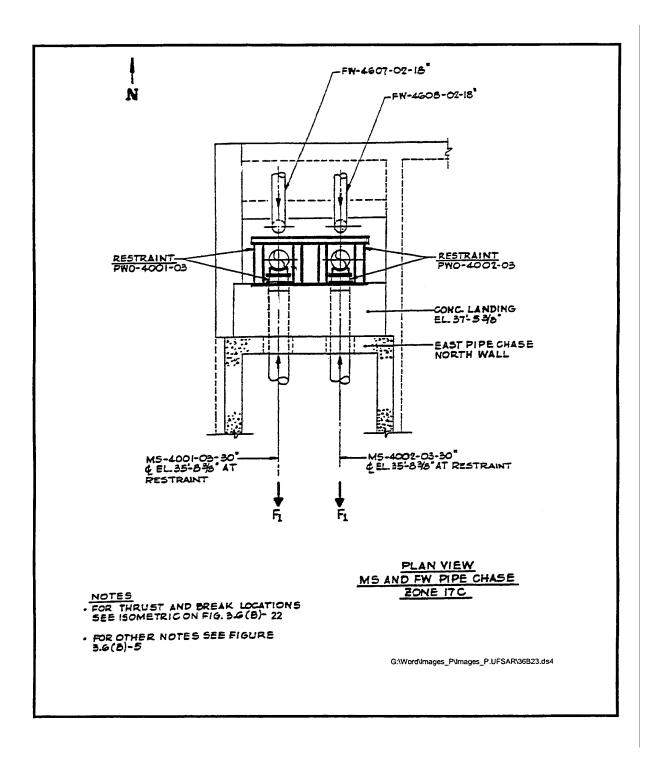
SEABROOK STATION UPDATED FINAL SAFETY ANALYSIS REPORT	Main Steam Line Axial Pipe Whip Restraints Protecting Containment Penetrations - MS and FW Pipe Chase Zone 16B	
		Figure 3.6(B)-20



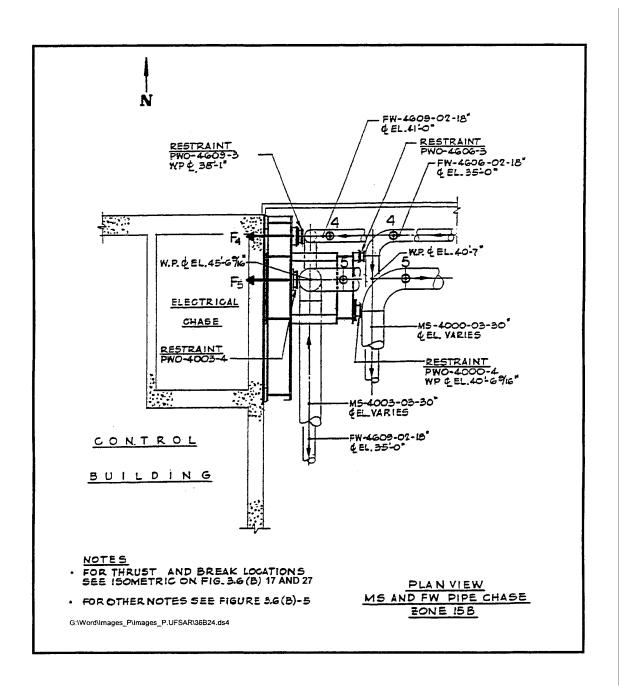
SEABROOK STATION UPDATED FINAL SAFETY	Main Steam Pipe Whip Restraints Protecting the Main Stea Isolation Valves and Containment Penetrations - MS and F Pipe Chase Zone 17B	
ANALYSIS REPORT		Figure 3.6(B)-21



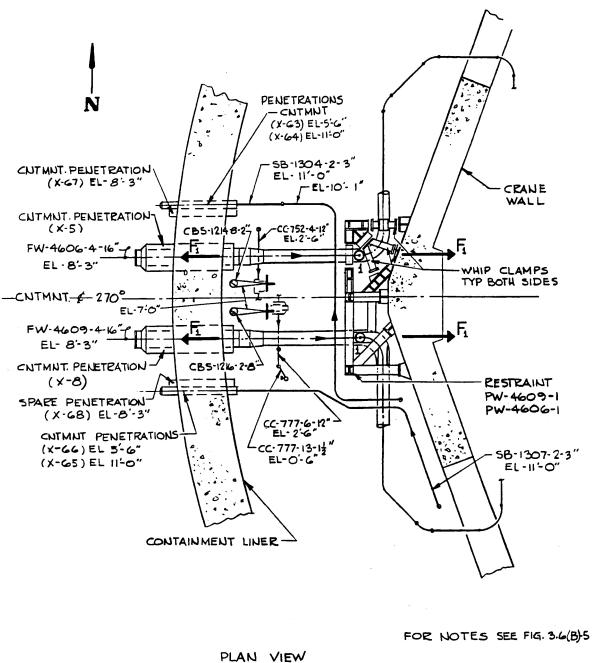
SEABROOK STATION	Break and Thrust Locations Isometric for MS Pipes in East	
UPDATED FINAL SAFETY	Pipe Chase	
ANALYSIS REPORT		Figure 3.6(B)-22



SEABROOK STATION	Main Steam Pipe Whip Restraints Protecting West Pipe	
UPDATED FINAL SAFETY	Chase North Wall - MS and FW Pipe Chase Zone 17C	
ANALYSIS REPORT		Figure 3.6(B)-23

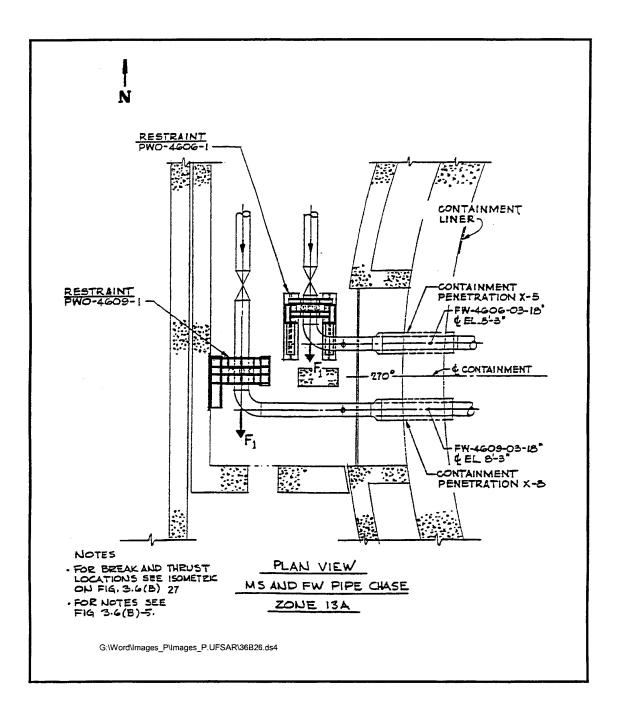


SEABROOK STATION UPDATED FINAL SAFETY	Main Steam and Feedwater Pipe Whip Restraints Protectin East Wall of Control Building and Electrical Chase - MS a FW Pipe Chase Zone 15B	
ANALYSIS REPORT		Figure 3.6(B)-24

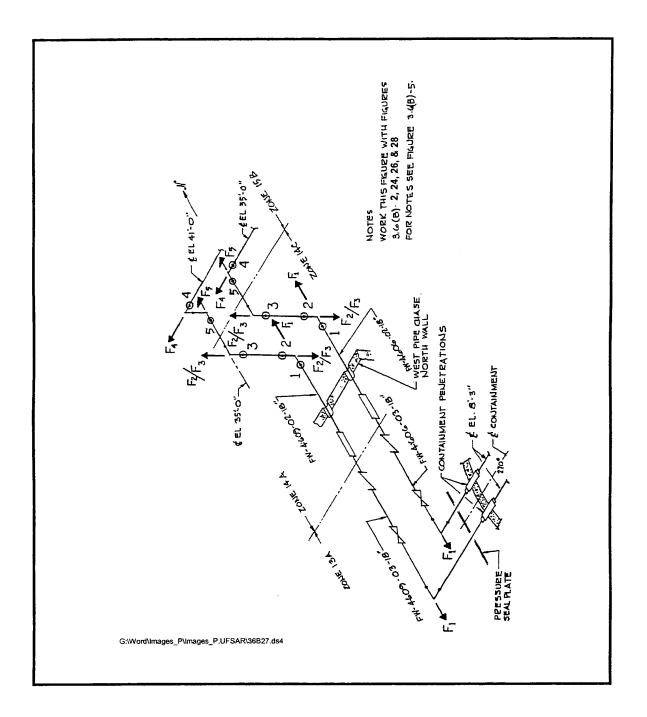


PLAN VIEW CONTAINMENT ZONE 53C

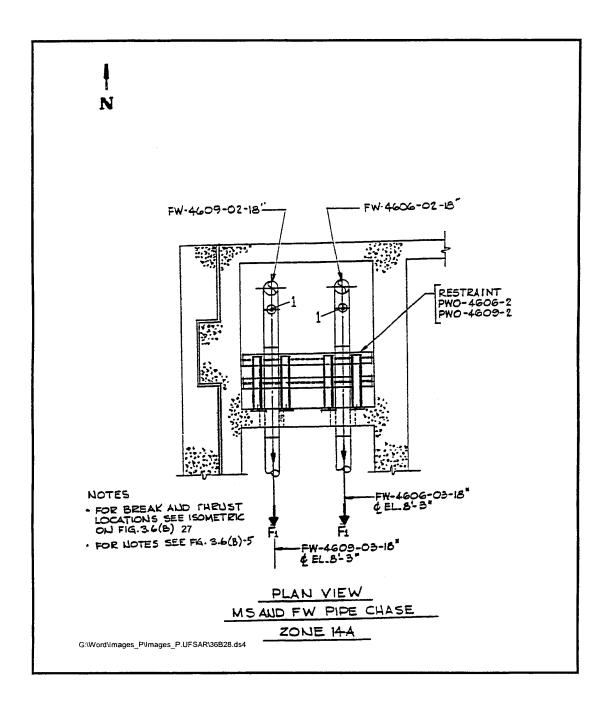
UPDATED FINAL SAFETY	Feedwater Pipe Whip Res Liner and Penetrations an Containment Zone 53C		
ANALYSIS REPORT		Figure	3.6(B)-25



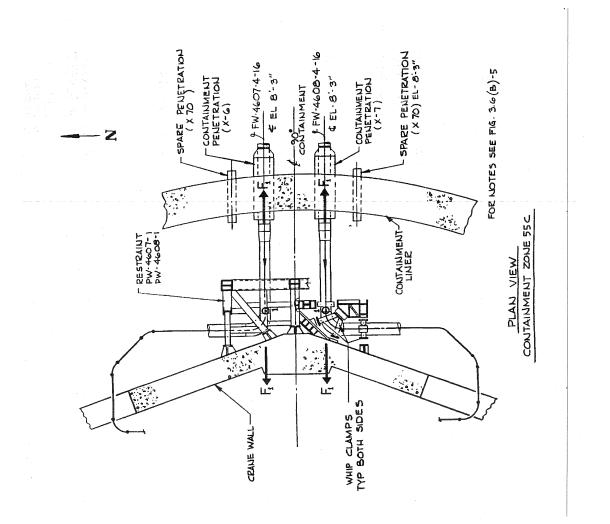
SEABROOK STATION	Feedwater Pipe Whip Restraints Protecting Containment	
UPDATED FINAL SAFETY	Liner and Penetrations - MS and FW Pipe Chase Zone 13A	
ANALYSIS REPORT		Figure 3.6(B)-26



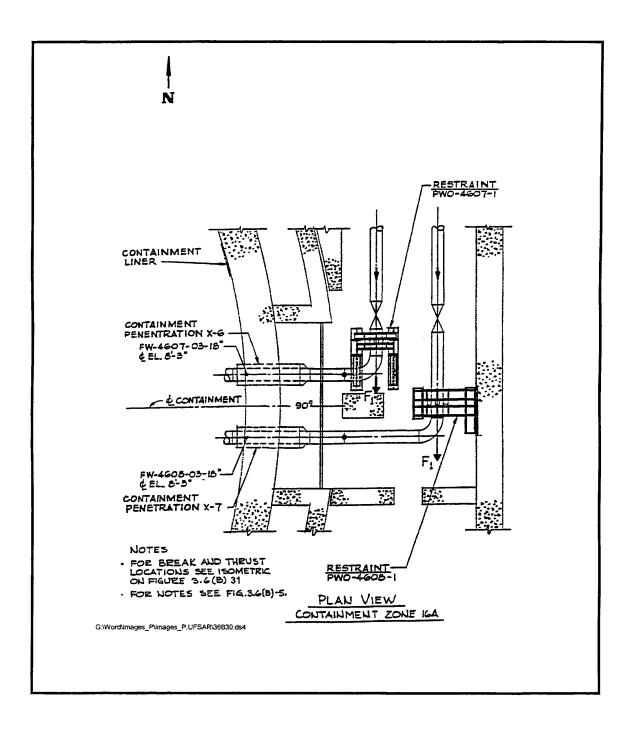
SEABROOK STATION	Break and Thrust Locations Isometric for FW Pipes in West	
UPDATED FINAL SAFETY	Pipe Chase	
ANALYSIS REPORT		Figure 3.6(B)-27



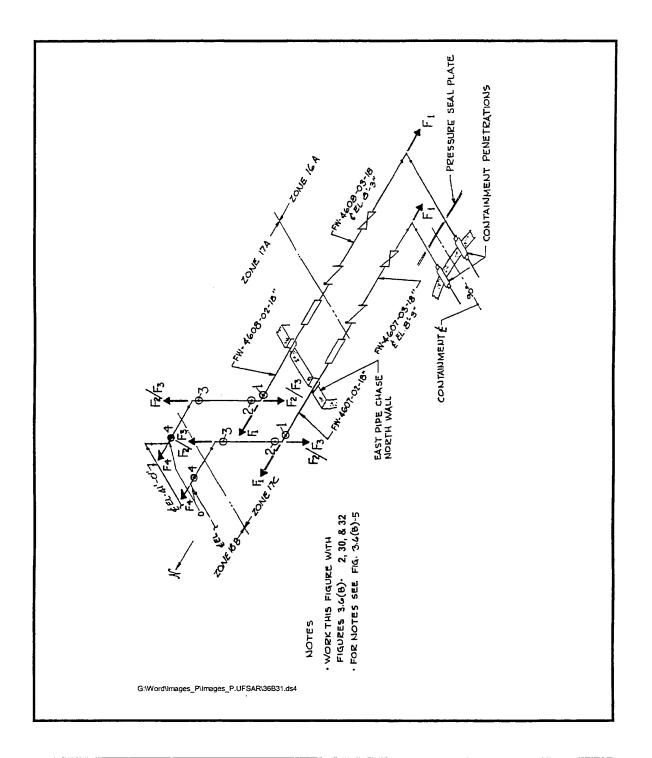
SEABROOK STATION	Feedwater Pipe Whip Restraints Protecting Containment	
UPDATED FINAL SAFETY	Liner and Penetrations - MS and FW Pipe Chase Zone 14A	
ANALYSIS REPORT		Figure 3.6(B)-28



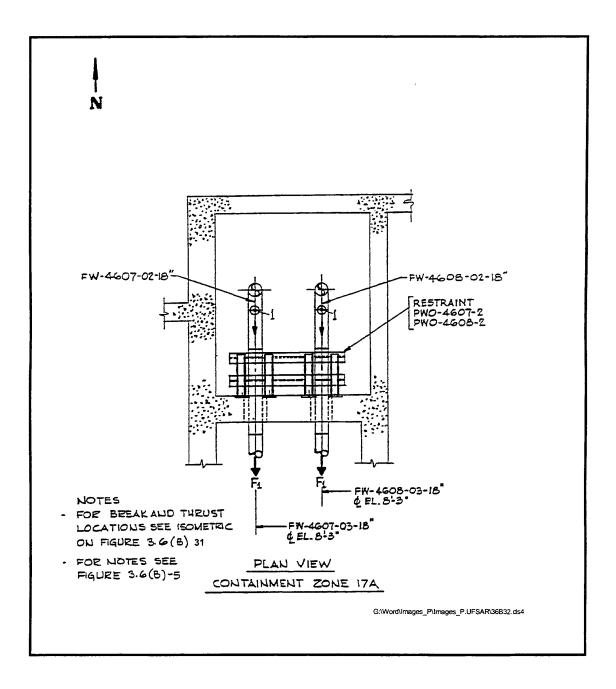
SEABROOK STATION	Feedwater Pipe Whip Restraints Protecting Containment		
UPDATED FINAL SAFETY	Liner and Penetrations - Containment Zone 55C		
ANALYSIS REPORT		Figure	3.6(B)-29



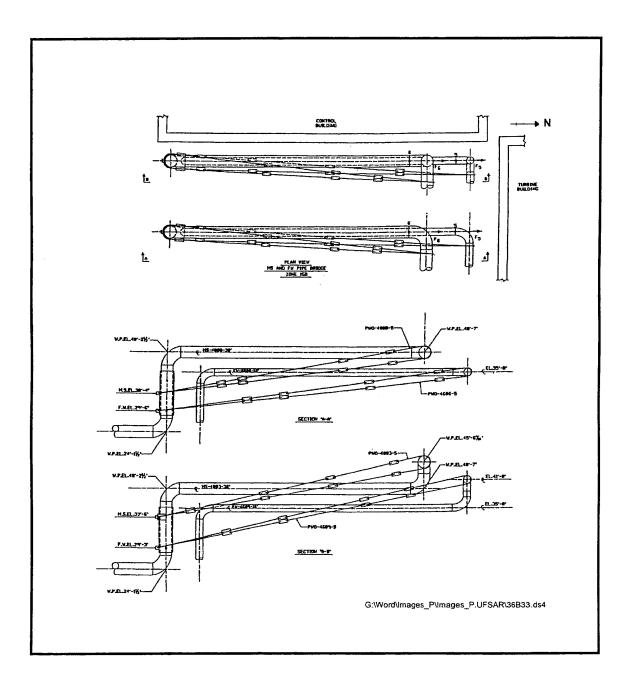
SEABROOK STATION	Feedwater Pipe Whip Restraints Protecting Containment	
UPDATED FINAL SAFETY	Liner and Penetrations - Containment Zone 16A	
ANALYSIS REPORT		Figure 3.6(B)-30



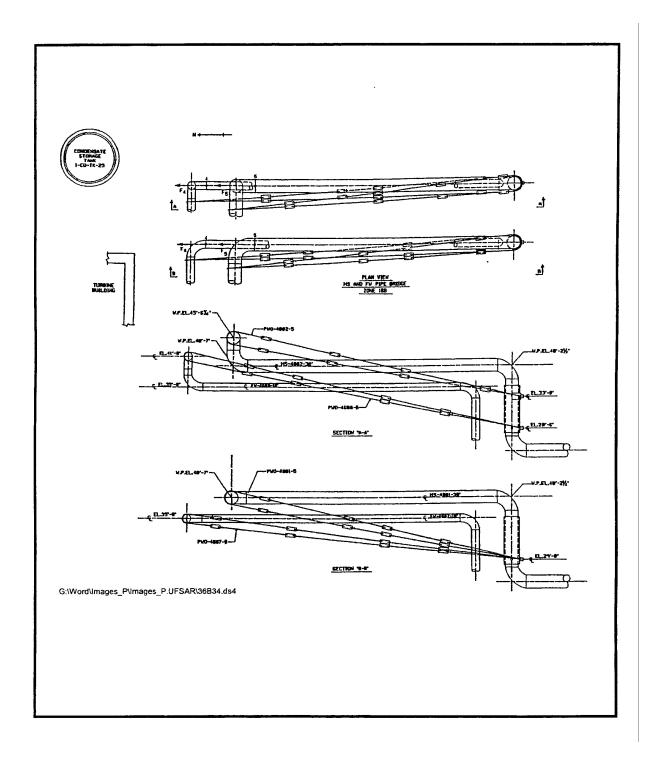
SEABROOK STATION UPDATED FINAL SAFETY	Break and Thrust Locatio Chase	ns Isometric for FW Pipes in East
ANALYSIS REPORT		Figure 3.6(B)-31



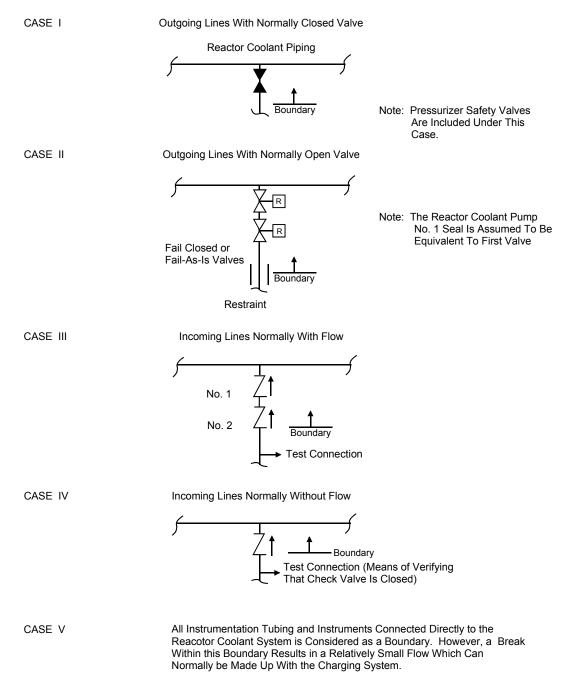
SEABROOK STATION	Feedwater Pipe Whip Restraints Protecting Containment	
UPDATED FINAL SAFETY	Liner and Penetrations - Containment Zone 17A	
ANALYSIS REPORT		Figure 3.6(B)-32



SEABROOK STATION	Pipe Bridge West Main Steam and Feedwater Pipe Whip	
UPDATED FINAL SAFETY	Restraints Protecting Turbine and Control Buildings	
ANALYSIS REPORT		Figure 3.6(B)-33

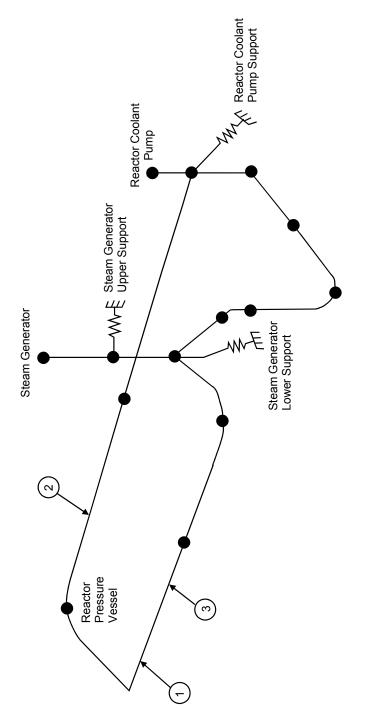


SEABROOK STATION Updated Final Safety Analysis Report	Pipe Bridge East Main Steam and Feedwater Pipe Whip Restraints Protecting Turbine Building and Condensate Storage Tank	
	¥	Figure 3.6(B)-34



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SEABROOK STATION UPDATED FINAL SAFETY	Loss of Reactor Coolant A	Accident Boundary	Limits
ANALYSIS REPORT		Figure	3.6(N)-1



SEABROOK STATION UPDATED FINAL SAFETY	Reactor Coolant System, Locations	Pipe Break and Whip Restraint
ANALYSIS REPORT		Figure 3.6(N)-2

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See 805067

SEABROOK STATION UPDATED FINAL SAFETY	Composite Piping Zones	(Nuclear) Key Plan
ANALYSIS REPORT		Figure 3A-1

See 202117

SEABROOK STATION UPDATED FINAL SAFETY	Turbine Building Zone Key Plan Piping	
ANALYSIS REPORT	Figure 3A-2	

See 202118

SEABROOK STATION UPDATED FINAL SAFETY	Auxiliary Building Zone Key Plan Piping	
ANALYSIS REPORT		Figure 3A-3