10 PLANT SPECIFIC ANALYSIS

This section documents the plant specific analysis that was done for WCGS.

The plant specific study involved taking WCGS-specific parameters and implementing them into both the generic probabilistic evaluation of Section 8.2 and the deterministic evaluation of containment hole size of Section 8.3 to get actual WCGS-specific results. The purpose of this study was to determine how many more of WCGS's CIVs could be justified for longer CT relaxations in addition to those justified under the generic analysis. The generic analysis was a conservative assessment, and therefore, applicable to all Westinghouse Owner's Group plants, including WCGS. A plant specific application will result in additional CT improvements.

First, the WCGS CIVs that were unable to meet the full 168 hour CT extension under the generic analysis were identified (see Table 9-2 of Section 9). Next, the necessary input parameters relative to WCGS were obtained and the analysis of Sections 8.2 and 8.3 was repeated using the WCGS specific parameters. Re-doing the analysis plant specifically made it possible to determine whether or not longer CTs could be justified for WCGS.

The re-analysis involved a) re-calculation of the minimum containment hole size that can provide a large early release (see the methodology of Section 8.3) using WCGS specific parameters. This identified which penetration flow paths are considered as 'small lines' (in addition to those identified under the application of the generic analysis of Section 9) and are thus automatically justified for 168 hour CTs; and b) re-calculation of ICLERPs and Δ LERFs (see the methodology of Section 8.2) using WCGS specific parameters for those penetrations that were not identified as 'small lines' and those that could not be justified to the full 168 hour CT under the application of the generic analysis of Section 9.

The methodology, terminology and assumptions that were applicable in the generic analysis (of Sections 8.2 and 8.3) are all applicable to this WCGS specific analysis. The only difference is that WCGS input parameters are used, rather than generic parameters. The WCGS input parameters are listed in Tables 9-1a through 9-1e.

10.1 CALCULATIONS

The re-calculation of WCGS's containment hole size through which a large release can be expected involved substituting the inputs of Table 9-1d of Section 9.1 into the leak rate equations of Section 8.3.2. A vent diameter hole size of 6.4 inches for WCGS's dry containment at a design pressure (P_{c2}) of 74.7 psia was calculated. Therefore, any WCGS CIV not directly connected to the RCS with a pipe diameter of 6 inches or less is automatically assigned a CT of 168 hours since these hole sizes are too small to provide a large release. Note, that in the generic analysis, the containment hole size threshold for a large dry containment was 3 inches (see Section 8.3).

The WCGS-specific containment hole size analysis was then applied to those CIV penetrations that could not be justified to the full 168 hours generically (as identified in Table 9-2). Table 10-1 summarizes which CIVs received longer CTs because of the re-calculated pipe size diameter of 6 inches. They are identified as 'small lines' in the column "Re-Calculation Explanation."

For the remaining penetrations, the ICLERP and/or Δ LERF (depending on which was more limiting) was re-calculated with the WCGS-specific input parameters of Tables 9-1a, 9-1b, 9-1c, and 9-1e. The inputs were used in the appropriate ICLERP and Δ LERF equations discussed in Sections 8.2.2 through 8.2.4. Similar to Step 5 of Section 9.1, Guidelines A and B had to be followed when choosing which valve type to assume for the penetration, however this time, Guidelines A and B are Wolf-Creek specific.

• GUIDELINE A - For any penetration that contains one normally open CIV:

When given the option of choosing a CT for a variety of valve types, the CT of the same valve type as that of the normally open valve is used and this valve type is assumed to be applicable to all the valves in the penetration.

• GUIDELINE B - For any penetration that contains more than one normally open CIV:

When given the option of choosing a CT for a variety of valve types, the CT of the same valve type as that of the normally open valve that has the highest probability of failing to close is used. This valve type is assumed to be applicable to all valves within the penetration. See below for which valve types have the higher failure probabilities:

MOVs SRVs SOVs and AOVs Check Valves

higher failure-to-close probability (specific to WCGS failure probabilities – see Table 9-1b)

Table 10-1 summarizes those penetrations that could not meet the full 168 hour CT under the application of the generic analysis. It identifies which penetrations received longer CTs due to both the probabilistic re-evaluation and the deterministic re-evaluation of containment hole size, plant specifically. Note, not all CIVs were able to be justified for longer CTs due to failure probability and/or penetration configuration.

Table 10-1		d CTs for Plant Specific Analysis ose CIV penetrations that were not justified	to full 16	8 hour CT	generically	v are listed)		
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ALERF @ AOT:	Justified Generic AOT	Plant Specific ICLERP @ AOT:	Plant Specific ΔLERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation
P-13	ENHV-07	System pressure boundary maintained System pressure boundary compromised	8 hrs 4 hrs	168 hrs 168 hrs	8 hrs 4 hrs	8 hrs 8 hrs	168 hrs 168 hrs	8 hrs 8 hrs	re-calc ICLERP for calculation number 1, Group I,C of Table 8-2
P-14	EJHV-8811B	System pressure boundary maintained System pressure boundary compromised	8 hrs 4 hrs	168 hrs 168 hrs	8 hrs 4 hrs	8 hrs 8 hrs	168 hrs 168 hrs	8 hrs 8 hrs	re-calc ICLERP for calculation number 1, Group I,C of Table 8-2
	EJHV-24	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-
	EJHV-26	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-
	EJV-189	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-
P-15	EJHV-8811A	System pressure boundary maintained System pressure boundary compromised	8 hrs 4 hrs	168 hrs 168 hrs	8 hrs 4 hrs	8 hrs 8 hrs	168 hrs 168 hrs	8 hrs 8 hrs	re-calc ICLERP for calculation number 1, Group I,C of Table 8-2
	EJHV-23	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	
	EJHV-25	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	
	EJV-187	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	
P-16	ENHV-01	System pressure boundary maintained System pressure boundary compromised	8 hrs 4 hrs	168 hrs 168 hrs	8 hrs 4 hrs	8 hrs 8 hrs	168 hrs 168 hrs	8 hrs 8 hrs	re-calc ICLERP for calculation number 1, Group I,C of Table 8-2

Table 10-1 (cont.)		Re-Calculated CTs for Plant Specific Analysis (note: only those CIV penetrations that were not justified to full 168 hour CT generically are listed)											
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ΔLERF @ AOT:	Justified Generic AOT	Plant Specific ICLERP @ AOT:	Plant Specific ΔLERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation				
P-21	EJHCV-8825	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs					
	EJHV-8840	System pressure boundary maintained System pressure boundary compromised	72 hrs 72 hrs	168 hrs 168 hrs	72 hrs 72 hrs	72 hrs 72 hrs	168 hrs 168 hrs	72 hrs 72 hrs	re-calc ICLERP for calculation number 5, Group II,A of Table 8-3				
	EJV-056	System pressure boundary maintained System pressure boundary compromised	72 hrs 72 hrs	168 hrs 168 hrs	72 hrs 72 hrs	72 hrs 72 hrs	168 hrs 168 hrs	72 hrs 72 hrs	re-calc ICLERP for calculation number 5, Group II,A of Table 8-3				
	EJV-124	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs					
	EJV-122	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs					
	EJV-118,120	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs					
	EJV-175, 6,7,8	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs					
	EJ-8841A	System pressure boundary maintained System pressure boundary compromised	72 hrs 168 hrs	168 hrs 168 hrs	72 hrs 168 hrs	.72 hrs 168 hrs	168 hrs 168 hrs	72 hrs 168 hrs	re-calc ICLERP for calculation number 5, Group II,A of Table 8-3				
	EJ-8841B	System pressure boundary maintained System pressure boundary compromised	72 hrs 168 hrs	168 hrs 168 hrs	72 hrs 168 hrs	72 hrs 168 hrs	168 hrs 168 hrs	72 hrs 168 hrs	re-calc ICLERP for calculation number 5, Group II,A of Table 8-3				

Table 10-1 (cont.)	Re-Calculated (note: only the	Re-Calculated CTs for Plant Specific Analysis (note: only those CIV penetrations that were not justified to full 168 hour CT generically are listed)										
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ALERF @ AOT:	Justified Generic AOT	Plant Specific ICLERP @ AOT:	Plant Specific ΔLERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation			
P-23	BGHV-8160	System pressure boundary maintained System pressure boundary compromised	24 hrs 168 hrs	168 hrs 168 hrs	24 hrs 168 hrs	48 hrs 168 hrs	168 hrs 168 hrs	48 hrs 168 hrs	re-calc ICLERP for calculation number 1, Group II,B of Table 8-3; compute AOT for an AOV, based on Guideline B of Section 9.1			
	BGV-363	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-			
	BGHV-8152	System pressure boundary maintained System pressure boundary compromised	24 hrs 24 hrs	168 hrs 168 hrs	24 hrs 24 hrs	48 hrs 48 hrs	168 hrs 168 hrs		re-calc ICLERP for calculation number 1, Group II,B of Table 8-3; compute AOT for an AOV, based on Guideline B of Section 9.1			
P-27	EJHV-8809B	System pressure boundary maintained System pressure boundary compromised	72 hrs 72 hrs	4 hrs 4 hrs	4 hrs 4 hrs	72 hrs 72 hrs	4 hrs 4 hrs	4 hrs 4 hrs	re-calc ICLERP and ΔLERF for calculation number 6, Group II,A of Table 8-3; compute AOT for an MOV, based on Guideline A of Section 9.1			
	EJV-058	System pressure boundary maintained System pressure boundary compromised	72 hrs 72 hrs	4 hrs 4 hrs	4 hrs 4 hrs	72 hrs 72 hrs	4 hrs 4 hrs	4 hrs 4 hrs	re-calc ICLERP and <u>ALERF</u> for calculation number 6, Group II, A of Table 8-3; compute AOT for an MOV, based on Guideline A of Section 9.1			

Table 10-1 (cont.)		d CTs for Plant Specific Analysis ose CIV penetrations that were not justified	to full 16	8 hour CT	generically	are listed)		
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ΔLERF @ AOT:	Justified Generic AOT	Plant Specific ICLERP @ AOT:	Plant Specific ΔLERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation
	EJHCV-8890B	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	
	EJV-086	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	
	EJV-088,090	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	
	EP-8818C	System pressure boundary maintained System pressure boundary compromised	4 hrs 168 hrs	4 hrs 4 hrs	4 hrs 4 hrs	8 hrs 168 hrs	4 hrs 168 hrs	4 hrs 168 hrs	when pressure boundary compromised, no longer RCS connection, small
									line (< 6") according to hole size re-calc; re-calc ICLERP and \triangle LERF for calculation number 6, Group II,A of Table 8-3
									compute AOT for an MOV, based on Guideline A of Section 9.1
	EJV-179, 180, 181,182	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	

Table 10-1 (cont.)	Re-Calculated (note: only the	Re-Calculated CTs for Plant Specific Analysis (note: only those CIV penetrations that were not justified to full 168 hour CT generically are listed)											
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ΔLERF @ AOT:	Justified Generic AOT	Plant Specific ICLERP @ AOT:	Plant Specific ΔLERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation				
	EP-8818D	System pressure boundary maintained System pressure boundary compromised	4 hrs 168 hrs	4 hrs 4 hrs	4 hrs 4 hrs	8 hrs 168 hrs	4 hrs 168 hrs	4 hrs 168 hrs	when pressure boundary compromised, no longer RCS connection, small line (< 6") according to hole size re-calc; re-calc ICLERP and Δ LERF for calculation number 6, Group II,A of Table 8-3; compute AOT for an MOV, based on Guideline A of Section 9.1				
	EJV-166	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	anta da la composición de la composició Reference de la composición de la composi Reference de la composición de la compo				
P-28	EFHV-32	System pressure boundary maintained System pressure boundary compromised	72 hrs 72 hrs	168 hrs 168 hrs	72 hrs 72 hrs	168 hrs 168 hrs	168 hrs 168 hrs		re-calc ICLERP for calculation number 5, Group I,B of Table 8-2; compute AOT for an MOV, based on Guideline B of Section 9.1				
	EFHV-34	System pressure boundary maintained System pressure boundary compromised	72 hrs 48 hrs	168 hrs 168 hrs	72 hrs 48 hrs	168 hrs 168 hrs	168 hrs 168 hrs		re-calc ICLERP for calculation number 5, Group I,B of Table 8-2; compute AOT for an MOV, based on Guideline B of Section 9.1				

Table 10-1 (cont.)		Re-Calculated CTs for Plant Specific Analysis (note: only those CIV penetrations that were not justified to full 168 hour CT generically are listed)											
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ALERF @ AOT:	Justified Generic AOT	Plant Specific ICLERP @ AOT:	Plant Specific ALERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation				
	EFV-278	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-				
P-29	EFHV-46	System pressure boundary maintained System pressure boundary compromised	72 hrs 48 hrs	168 hrs 168 hrs	72 hrs 48 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	re-calc ICLERP for calculation number 5, Group I,B of Table 8-2; compute AOT for an MOV, based on Guideline B of Section 9.1				
	EFV-279	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs					
	EFHV-50	System pressure boundary maintained System pressure boundary compromised	72 hrs 72 hrs	168 hrs 168 hrs	72.hrs 72.hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	re-calc ICLERP for calculation number 5, Group I,B of Table 8-2; compute AOT for an MOV, based on Guideline B of Section 9.1				
P-34	GPV-010	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-				
	Flanges	System pressure boundary maintained System pressure boundary compromised	48 hrs 48 hrs	168 hrs 168 hrs	48 hrs 48 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	no RCS connection, small line (< 6") according to hole size re-calc				
P-48	EMHV-8802B	System pressure boundary maintained System pressure boundary compromised	72 hrs 72 hrs	168 hrs 168 hrs	72 hrs 72 hrs	72 hrs 72 hrs	168 hrs 168 hrs	 An Anna Anna Anna 	re-calc ICLERP for calculation number 5, Group II,A of Table 8-3				

Table 10-1 (cont.)	Re-Calculated (note: only the	Re-Calculated CTs for Plant Specific Analysis (note: only those CIV penetrations that were not justified to full 168 hour CT generically are listed)											
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ΔLERF @ AOT:	Justified Generic AOT	Plant Specific ICLERP @ AOT:	Plant Specific ΔLERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation				
	EMHV-8824	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	•				
	EMV-003	System pressure boundary maintained System pressure boundary compromised	72.hrs 168 hrs	168 hrs 168 hrs	72 hrs 168 hrs	72 hrs 168 hrs	168 hrs 168 hrs	72 hrs 168 hrs	re-calc ICLERP for calculation number 5, Group II,A of Table 8-3				
	EMV-004	System pressure boundary maintained System pressure boundary compromised	72 hrs 168 hrs	168 hrs 168 hrs	72 hrs 168 hrs	72 hrs 168 hrs	168 hrs 168 hrs	72 hrs 168 hrs	re-calc ICLERP for calculation number 5, Group II,A of Table 8-3				
	EMV-060, 061, 063,064 EMV-217, 169	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs					
	EMV-170,172	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs					
	EMV-059	System pressure boundary maintained System pressure boundary compromised	72 hrs 72 hrs	168 hrs 168 hrs	72 hrs 72 hrs	72 hrs 72 hrs	168 hrs 168 hrs	72 hrs 72 hrs	re-calc ICLERP or calculation number 5, Group II,A of Table 8-3				
P-49	EMHV-8835	System pressure boundary maintained System pressure boundary compromised	72 hrs 72 hrs	4 hrs 4 hrs	4 hrs 4 hrs	72 hrs 72 hrs	4 hrs 4 hrs	4 hrs 4 hrs	re-calc ICLERP and ∆LERF for calculation number 7, Group II,A of Table 8-3; compute AOT for an MOV, based on Guideline A of Section 9.1				
	EMHV-8823	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-				

Table 10-1 (cont.)	Re-Calculated CTs for Plant Specific Analysis (note: only those CIV penetrations that were not justified to full 168 hour CT generically are listed)									
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ΔLERF @ AOT:	Justified Generic AOT	Plant Specific ICLERP @ AOT:	Plant Specific ALERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation	
	EPV-020	System pressure boundary maintained System pressure boundary compromised	4 hrs 168 hrs	4 hrs 168 hrs	4 hrs 168 hrs	8 hrs 168 hrs	4 hrs 168 hrs	4 hrs 168 hrs	re-calc ICLERP and ΔLERF for calculation number 7, Group II,A of Table 8-3; compute AOT for an MOV, based on Guideline A of Section 9.1	
	EPV-010	System pressure boundary maintained System pressure boundary compromised	4 hrs 168 hrs	4 hrs 168 hrs	4 hrs 168 hrs	8 hrs 168 hrs	4 hrs 168 hrs	4 hrs 168 hrs	re-calc ICLERP and ΔLERF for calculation number 7, Group II,A of Table 8-3; compute AOT for an MOV, based on Guideline A of Section 9.1	
	EPV-040	System pressure boundary maintained System pressure boundary compromised	4 hrs 168 hrs	4 hrs 168 hrs	4 hrs 168 hrs	8 hrs 168 hrs	4 hrs 168 hrs	4 hrs 168 hrs	re-calc ICLERP and ΔLERF for calculation number 7, Group II,A of Table 8-3; compute AOT for an MOV, based on Guideline A of Section 9.1	
	EPV-030	System pressure boundary maintained System pressure boundary compromised	4 hrs 168 hrs	4 hrs 168 hrs	4 hrs 168 hrs	8 hrs 168 hrs	4 hrs 168 hrs	4 hrs 168 hrs	re-calc ICLERP and Δ LERF for calculation number 7, Group II,A of Table 8-3; compute AOT for an MOV, based on Guideline A of Section 9.1	

Table 10-1 (cont.)	Re-Calculated (note: only tho	Re-Calculated CTs for Plant Specific Analysis (note: only those CIV penetrations that were not justified to full 168 hour CT generically are listed)											
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ∆LERF @ AOT:	Justified Generic AOT	Plant Specific ICLERP @ AOT:	Plant Specific ΔLERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation				
	EMV-067	System pressure boundary maintained System pressure boundary compromised	72 hrs 72 hrs	4 hrs 4 hrs	4 hrs 4 hrs	72 hrs 72 hrs	4 hrs 4 hrs	4 hrs 4 hrs	re-calc ICLERP and ΔLERF for calculation number 7, Group II,A of Table 8-3; compute AOT for an MOV, based on Guideline A of Section 9.1				
	EMV-068 thru EMV-075	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-				
	EMV-218 EMV-162 thru EMV-168	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-				
P-52	ЕЈНУ-8701В	System pressure boundary maintained System pressure boundary compromised	4 hrs 4 hrs	4 hrs 4 hrs	4 hrs 4 hrs	4 hrs 8 hrs	4 hrs 4 hrs	4 hrs 4 hrs	re-calc ICLERP and ΔLERF for calculation number 8, Group II,A of Table 8-3				
	EJ-8708B	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs					
P-53	ECV-084	System pressure boundary maintained System pressure boundary compromised	48 hrs 48 hrs	168 hrs 168 hrs	48 hrs 48 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	no RCS connection, small line (< 6") according to hole size re-calc				
	ECV-085	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-				
	ECV-083	System pressure boundary maintained System pressure boundary compromised	48 hrs 48 hrs	168 hrs 168 hrs	48 hrs 48 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	no RCS connection, small line (< 6") according to hole size re-calc				

Table 10-1 (cont.)	Re-Calculated CTs for Plant Specific Analysis (note: only those CIV penetrations that were not justified to full 168 hour CT generically are listed)											
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ΔLERF @ AOT:	Justified Generic AOT	Plant Specific ICLERP @ AOT:	Plant Specific ΔLERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation			
P-54	ECV-087	System pressure boundary maintained System pressure boundary compromised	48 hrs 48 hrs	168 hrs 168 hrs	48 hrs 48 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	no RCS connection, small line (< 6") according to hole size re-calc			
	ECV-086	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs				
	ECV-088	System pressure boundary maintained System pressure boundary compromised	48 hrs 48 hrs	168 hrs 168 hrs	48 hrs 48 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	no RCS connection, small line (< 6") according to hole size re-calc			
P-64	SJHV-128	System pressure boundary maintained System pressure boundary compromised	24 hrs 168 hrs	168 hrs 168 hrs	24 hrs 168 hrs	24 hrs 168 hrs	168 hrs 168 hrs	24 hrs 168 hrs	re-calc ICLERP for calculation number 4, Group II,A of Table 8-3			
	SJHV-129	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-			
	SJHV-130	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-			
	SJV-106	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-			
P-65	GSHV-20	System pressure boundary maintained System pressure boundary compromised	48 hrs 48 hrs	168 hrs 168 hrs	48 hrs 48 hrs	168 hrs 168 hrs	168 hrs 168 hrs		no RCS connection, small line (< 6") according to hole size re-calc			
	GSHV-21	System pressure boundary maintained System pressure boundary compromised	48 hrs 48 hrs	168 hrs 168 hrs	48 hrs 48 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	no RCS connection, small line (< 6") according to hole size re-calc			
	GSV-041	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs				

Table 10-1 (cont.)		Re-Calculated CTs for Plant Specific Analysis (note: only those CIV penetrations that were not justified to full 168 hour CT generically are listed)											
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ΔLERF @ AOT:	Justified Generic AOT	Plant Specific ICLERP @ AOT:	Plant Specific ΔLERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation				
P-69	SJHV-12	System pressure boundary maintained System pressure boundary compromised	48 hrs 168 hrs	168 hrs 168 hrs	48 hrs 168 hrs	72 hrs 168 hrs	168 hrs 168 hrs	72 hrs 168 hrs	re-calc ICLERP for calculation number 2, Group II,A of Table 8-3				
	SJHV-13	System pressure boundary maintained System pressure boundary compromised	48 hrs 48 hrs	168 hrs 168 hrs	48 hrs 48 hrs	72 hrs 72 hrs	168 hrs 168 hrs	72 hrs 72 hrs	re-calc ICLERP for calculation number 2, Group II,A of Table 8-3				
	SJV-071	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-				
P-71	EFHV-31	System pressure boundary maintained System pressure boundary compromised	72 hrs 72 hrs	168 hrs 168 hrs	72 hrs 72 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	re-calc ICLERP for calculation number 5, Group I,B of Table 8-2; compute AOT for an MOV, based on Guideline B of Section 9.1				
	EFV-276	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs					
	EFHV-33	System pressure boundary maintained System pressure boundary compromised	72 hrs 48 hrs	168 hrs 168 hrs	72 hrs 48 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	re-calc ICLERP for calculation number 5, Group I,B of Table 8-2; compute AOT for an MOV, based on Guideline A of Section 9.1				

Table 10-1 (cont.)		ed CTs for Plant Specific Analysis ose CIV penetrations that were not justified	l to full 16	8 hour CT	generically	y are listed)		
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ΔLERF @ AOT:	Justified Generic AOT	Plant Specific ICLERP @ AOT:	Plant Specific ΔLERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation
Р-73	EFHV-45	System pressure boundary maintained System pressure boundary compromised	72 hrs 48 hrs	168 hrs 168 hrs	72 hrs 48 hrs	168 hrs 168 hrs	168 hrs 168 hrs		re-calc ICLERP for calculation number 5, Group I,B of Table 8-2; compute AOT for an MOV, based on Guideline B of Section 9.1
	EFV-277	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-
	EFHV-49	System pressure boundary maintained System pressure boundary compromised	72 hrs 72 hrs	168 hrs 168 hrs	72 hrs 72 hrs	168 hrs 168 hrs	168 hrs 168 hrs		re-calc ICLERP for calculation number 5, Group I,B of Table 8-2; compute AOT for an MOV, based on Guideline B of Section 9.1
P-75	EGHV-60	System pressure boundary maintained System pressure boundary compromised	72 hrs 48 hrs	168 hrs 168 hrs	72 hrs 48 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	re-calc ICLERP for calculation number 8, Group I,B of Table 8-2; compute AOT for an MOV, based on Guideline B of Section 9.1
	EG-V372	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	

Table 10-1 (cont.)		d CTs for Plant Specific Analysis ose CIV penetrations that were not justified	l to full 16	8 hour CT	generically	y are listed)	<u>, </u>	
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ΔLERF @ AOT:	Justified Generic AOT	Plant Specific ICLERP @ AOT:	Plant Specific ΔLERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation
	EGHV-59	System pressure boundary maintained System pressure boundary compromised	72 hrs 72 hrs	168 hrs 168 hrs	72 hrs 72 hrs	168 hrs 168 hrs	168 hrs 168 hrs		re-calc ICLERP for calculation number 8, Group I,B of Table 8-2; compute AOT for an MOV, based on Guideline A of Section 9.1
	EGHV-131	System pressure boundary maintained System pressure boundary compromised	72 hrs 72 hrs	168 hrs 168 hrs	72 hrs 72 hrs	72 hrs 72 hrs	168 hrs 168 hrs	72 hrs 72 hrs	re-calc ICLERP for calculation number 8, Group I,B of Table 8-2; compute AOT for an MOV, based on Guideline A of Section 9.1
	EGHV-130	System pressure boundary maintained System pressure boundary compromised	72 hrs 48 hrs	168 hrs 168 hrs	72 hrs 48 hrs	72 hrs 72 hrs	168 hrs 168 hrs	72 hrs 72 hrs	re-calc ICLERP for calculation number 8, Group I,B of Table 8-2; compute AOT for an MOV, based on Guideline A of Section 9.1
P-76	EGHV-62	System pressure boundary maintained System pressure boundary compromised	72 hrs 48 hrs	168 hrs 168 hrs	72 hrs 48 hrs	168 hrs 168 hrs	168 hrs 168 hrs		no RCS connection, small line (< 6") according to hole size re-calc
	EGV-371	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-

Table 10-1 (cont.)		d CTs for Plant Specific Analysis ose CIV penetrations that were not justified	to full 16	8 hour CT	generically	are listed)		
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ΔLERF @ AOT:	Justified Generic AOT	Plant Specific ICLERP @ AOT:	Plant Specific ΔLERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation
	EGHV-61	System pressure boundary maintained System pressure boundary compromised	72 hrs 72 hrs	168 hrs 168 hrs	72 hrs 72 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	no RCS connection, small line (< 6") according to hole size re-calc
	EGHV-132	System pressure boundary maintained System pressure boundary compromised	72 hrs 48 hrs	168 hrs 168 hrs	72 hrs 48 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	no RCS connection, small line (< 6") according to hole size re-calc
-	EGHV-133	System pressure boundary maintained System pressure boundary compromised	72 hrs 72 hrs	168 hrs 168 hrs	72 hrs 72 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	no RCS connection, small line (< 6") according to hole size re-calc
P-79	EJHV-8701A	System pressure boundary maintained System pressure boundary compromised	4 hrs 4 hrs	4 hrs 4 hrs	4 hrs 4 hrs	4 hrs 8 hrs	4 hrs 4 hrs	4 hrs 4 hrs	re-calc ICLERP and ALERF for calculation number 8, Group II,A of Table 8-3
	EJ8708A	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	
	EJV-154	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	
P-82	EJHV-8809A	System pressure boundary maintained System pressure boundary compromised	72 hrs 72 hrs	4 hrs 4 hrs	4 hrs 4 hrs	72 hrs 72 hrs	4 hrs 4 hrs	4 hrs 4 hrs	re-calc ICLERP and ΔLERF for calculation number 6, Group II,A of Table 8-3; compute AOT for an MOV, based on Guideline A of Section 9.1

Table 10-1 (cont.)	Re-Calculate (note: only the	ed CTs for Plant Specific Analysis ose CIV penetrations that were not justified	to full 16	8 hour CT	generically	v are listed)		
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ∆LERF @ AOT:	Justified Generic AOT	Plant Specific ICLERP @ AOT:	Plant Specific ΔLERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation
	EJV-054	System pressure boundary maintained System pressure boundary compromised	72 hrs 72 hrs	4 hrs 4 hrs	4 hrs 4 hrs	72 hrs 72 hrs	4 hrs 4 hrs	4 hrs 4 hrs	re-calc ICLERP and ΔLERF for calculation number 6, Group II,A of Table 8-3; compute AOT for an MOV, based on Guideline A of Section 9.1
	EP8818A	System pressure boundary maintained System pressure boundary compromised	4 hrs 168 hrs	4 hrs 4 hrs	4 hrs 4 hrs	8 hrs 168 hrs	4 hrs 168 hrs	4 hrs 168 hrs	when pressure boundary compromised, no longer RCS connection, small line (< 6") according to hole size re-calc; re-calc ICLERP and Δ LERF for calculation number 6, Group II,A of Table 8-3; compute AOT for an MOV, based on Guideline A of Section 9.1

Table 10-1 (cont.)		d CTs for Plant Specific Analysis ose CIV penetrations that were not justified	to full 16	8 hour CT	generically	/ are listed)		
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ΔLERF @ AOT:	Justified Generic AOT	Plant Specific ICLERP @ AOT:	Plant Specific ALERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation
	EP8818B	System pressure boundary maintained System pressure boundary compromised	4 hrs 168 hrs	4 hrs 4 hrs	4 hrs 4 hrs	8 hrs 168 hrs	4 hrs 168 hrs	4 hrs 168 hrs	when pressure boundary compromised, no longer RCS connection, small line (< 6") according to hole size re-calc; re-calc ICLERP and Δ LERF for calculation number 6, Group II,A of Table 8-3; compute AOT for an MOV, based on Guideline A of Section 9.1
	EJHCV-8890A	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-
	EJV-134, V-136	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-
	EJV-132	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-
	EJV-171, EJV-172, EJV-173, EJV-174	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-
P-87	EMHV-8802A	System pressure boundary maintained System pressure boundary compromised	72 hrs 72 hrs	168 hrs 168 hrs	72 hrs 72 hrs	72 hrs 72 hrs	168 hrs 168 hrs		re-calc ICLERP for calculation number 5, Group II,A of Table 8-3

Table 10-1 (cont.)	Re-Calculated (note: only the	d CTs for Plant Specific Analysis ose CIV penetrations that were not justified	to full 16	8 hour CT	generically	are listed)		
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ΔLERF @ AOT:	Justified Generic AOT	Plant Specific ICLERP @ AOT:	Plant Specific ALERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation
	EMHV-8881	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	
	EMV-001	System pressure boundary maintained System pressure boundary compromised	72 hrs 168 hrs	168 hrs 168 hrs	72 hrs 168 hrs	72 hrs 168 hrs	168 hrs 168 hrs	1	re-calc ICLERP for calculation number 5, Group II,A of Table 8-3
	EMV-002	System pressure boundary maintained System pressure boundary compromised	72 hrs 168 hrs	168 hrs 168 hrs	72 hrs 168 hrs	72.hrs 168 hrs	168 hrs 168 hrs	72 hrs 168 hrs	re-calc ICLERP for calculation number 5, Group II,A of Table 8-3
	EMV-052, V-053, V-055, V-056, V-184, V-185	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	
	EMV-051	System pressure boundary maintained System pressure boundary compromised	72 hrs 72 hrs	168 hrs 168 hrs	72 hrs 72 hrs	72 hrs 72 hrs	168 hrs 168 hrs	72 hrs 72 hrs	re-calc ICLERP for calculation number 5, Group II,A of Table 8-3
	EMV-186, V-187	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	
P-93	SJHV-5	System pressure boundary maintained System pressure boundary compromised	24 hrs 168 hrs	168 hrs 168 hrs	24 hrs 168 hrs	72 hrs 168 hrs	168 hrs 168 hrs	72 hrs 168 hrs	re-calc ICLERP for calculation number 3, Group II,A of Table 8-3; compute AOT for an SOV, based on Guideline B of Section 9.1

Table 10-1 (cont.)		d CTs for Plant Specific Analysis ose CIV penetrations that were not justified	to full 16	8 hour CT	generically	v are listed)		ан да ай ай <u>да до со со</u>
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ΔLERF @ AOT:	Justified Generic AOT	Plant Specific ICLERP @ AOT:	Plant Specific ΔLERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation
	SJHV-6	System pressure boundary maintained System pressure boundary compromised	24 hrs 24 hrs	168 hrs 168 hrs	24 hrs 24 hrs	72 hrs 72 hrs	168 hrs 168 hrs	72 hrs 72 hrs	re-calc ICLERP for calculation number 3, Group II,A of Table 8-3; compute AOT for an SOV, based on Guideline B of Section 9.1
	SJV-069	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-
	SJHV-127	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	
V-160	GTHZ-9	System pressure boundary maintained System pressure boundary compromised or if valve is open: System pressure boundary maintained System pressure boundary compromised	24 hrs 24 hrs 0r: 24 hrs 24 hrs 24 hrs	168 hrs 168 hrs or: 168 hrs 168 hrs	24 hrs 24 hrs or: 24 hrs 24 hrs 24 hrs	24 hrs 24 hrs 0r: 72 hrs 72 hrs	168 hrs 168 hrs or: 168 hrs 168 hrs	24 hrs or:	re-calc ICLERP for calculation number 15, Group I,A of Table 8-2 or: re-calc ICLERP for calculation number 16, Group I,A of Table 8-2; compute AOT for an AOV, based on Guideline B of Section 9.1

Table 10-1 (cont.)	Re-Calculate (note: only the	d CTs for Plant Specific Analysis ose CIV penetrations that were not justified	to full 16	8 hour CT	generically	/ are listed)		
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ∆LERF @ AOT:	Justified Generic AOT	Plant Specific ICLERP @ AOT:	Plant Specific ΔLERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation
	GTHZ-8	System pressure boundary maintained System pressure boundary compromised or if valve is open: System pressure boundary maintained System pressure boundary compromised	24 hrs 24 hrs or: 24 hrs 24 hrs	168 hrs 168 hrs or: 168 hrs 168 hrs	24 hrs 24 hrs or: 24 hrs 24 hrs	24 hrs 24 hrs or: 72 hrs 72 hrs	168 hrs 168 hrs or: 168 hrs 168 hrs	24 hrs or: 72 hrs	re-calc ICLERP for calculation number 15, Group I,A of Table 8-2 or: re-calc ICLERP for calculation number 16, Group I,A of Table 8-2; compute AOT for an AOV, based on Guideline B of Section 9.1
	GTHZ-12	System pressure boundary maintained System pressure boundary compromised or if valve is open: System pressure boundary maintained System pressure boundary compromised	24 hrs 24 hrs or: 24 hrs 24 hrs	168 hrs 168 hrs or: 168 hrs 168 hrs	24 hrs 24 hrs or: 24 hrs 24 hrs	24 hrs 24 hrs or: 72 hrs 72 hrs	168 hrs 168 hrs or: 168 hrs 168 hrs	24 hrs or: 72 hrs	re-calc ICLERP for calculation number 15, Group I,A of Table 8-2 or: re-calc ICLERP for calculation number 16, Group I,A of Table 8-2; compute AOT for an AOV, based on Guideline B of Section 9.1

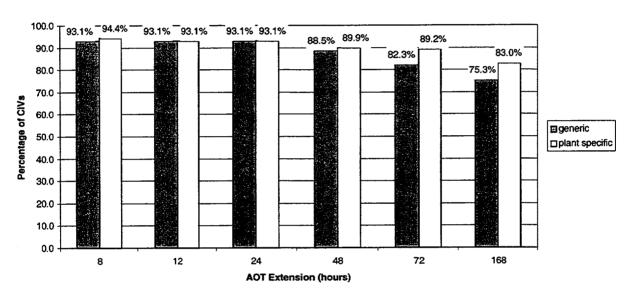
Table 10-1 (cont.)		d CTs for Plant Specific Analysis ose CIV penetrations that were not justified	l to full 16	8 hour CT	generically	are listed)		an a
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ΔLERF @ AOT:	Justified Generic AOT	Plant Specific ICLERP @ AOT:	Plant Specific ΔLERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation
	GTHZ-11	System pressure boundary maintained System pressure boundary compromised or if valve is open: System pressure boundary maintained System pressure boundary compromised	24 hrs 24 hrs or: 24 hrs 24 hrs	168 hrs 168 hrs or: 168 hrs 168 hrs	24 hrs 24 hrs or: 24 hrs 24 hrs	24 hrs 24 hrs or: 72 hrs 72 hrs	168 hrs 168 hrs or: 168 hrs 168 hrs	24 hrs or: 72 hrs	re-calc ICLERP for calculation number 15, Group I,A of Table 8-2 or: re-calc ICLERP for calculation number 16, Group I,A of Table 8-2; compute AOT for an AOV, based on Guideline B of Section 9.1
	GTV0223	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	
V-161	GTHZ-7	System pressure boundary maintained System pressure boundary compromised or if valve is open: System pressure boundary maintained System pressure boundary compromised	24 hrs 24 hrs or: 24 hrs 24 hrs	168 hrs 168 hrs or: 168 hrs 168 hrs	24 hrs 24 hrs or: 24 hrs 24 hrs	24 hrs 24 hrs or: 72 hrs 72 hrs	168 hrs 168 hrs or: 168 hrs 168 hrs	24 hrs or: 72 hrs 72 hrs	re-calc ICLERP for calculation number 15, Group I,A of Table 8-2 or: re-calc ICLERP for calculation number 16, Group I,A of Table 8-2; compute AOT for an AOV, based on Guideline B of Section 9.1

Table 10-1 (cont.)	Re-Calculated (note: only the	d CTs for Plant Specific Analysis se CIV penetrations that were not justified	to full 16	8 hour CT	generically	are listed)		
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ∆LERF @ AOT:	Justified Generic AOT	Plant Specific ICLERP @ AOT:	Plant Specific ΔLERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation
	GTHZ-5	System pressure boundary maintained System pressure boundary compromised or if valve is open: System pressure boundary maintained System pressure boundary compromised	24 hrs 24 hrs or: 24 hrs 24 hrs 24 hrs	168 hrs 168 hrs or: 168 hrs 168 hrs	24 hrs 24 hrs or: 24 hrs 24 hrs	24 hrs 24 hrs or: 72 hrs 72 hrs	168 hrs 168 hrs or: 168 hrs 168 hrs	24 hrs or:	re-calc ICLERP for calculation number 15, Group I,A of Table 8-2 or: re-calc ICLERP for calculation number 16, Group I,A of Table 8-2; compute AOT for an AOV, based on Guideline B of Section 9.1
	GTHZ-4	System pressure boundary maintained System pressure boundary compromised or if valve is open: System pressure boundary maintained System pressure boundary compromised	24 hrs 24 hrs or: 24 hrs 24 hrs 24 hrs	168 hrs 168 hrs or: 168 hrs 168 hrs	24 hrs 24 hrs or: 24 hrs 24 hrs	24 hrs 24 hrs or: 72 hrs 72 hrs	168 hrs 168 hrs or: 168 hrs 168 hrs	24 hrs or: 72 hrs	re-calc ICLERP for calculation number 15, Group I,A of Table 8-2 or: re-calc ICLERP for calculation number 16, Group I,A of Table 8-2; compute AOT for an AOV, based on Guideline B of Section 9.1

Table 10-1 (cont.)	Re-Calculated CTs for Plant Specific Analysis (note: only those CIV penetrations that were not justified to full 168 hour CT generically are listed)								,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Penetration Number	Valve	Maintenance Activity Type	Generic ICLERP @ AOT:	Generic ΔLERF @ AOT:	Justified Generic AOT	-	Plant Specific ALERF @ AOT:	Justified Plant Specific AOT	Re-Calculation Explanation
	GTHZ-6	System pressure boundary maintained System pressure boundary compromised or if valve is open: System pressure boundary maintained System pressure boundary compromised	24 hrs 24 hrs or: 24 hrs 24 hrs	168 hrs 168 hrs or: 168 hrs 168 hrs	24 hrs 24 hrs or: 24 hrs 24 hrs	24 hrs 24 hrs or: 72 hrs 72 hrs	168 hrs 168 hrs or: 168 hrs 168 hrs	24 hrs or: 72 hrs	re-calc ICLERP for calculation number 15, Group I,A of Table 8-2 or: re-calc ICLERP for calculation number 16, Group I,A of Table 8-2; compute AOT for an AOV, based on Guideline B of Section 9.1
	GTV0222	System pressure boundary maintained System pressure boundary compromised	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	168 hrs 168 hrs	-

10.2 RESULTS

The WCGS-specific analysis resulted in additional extended CTs for their CIVs than the generic application. This is related to the conservative nature of the generic analysis that is applicable to all Westinghouse NSSS plants, that used the most limiting values. Figure 10-1 displays the comparison of using the plant specific approach of Section 10 to the generic approach performed in the lead plant study of Section 9. It can be seen that out of all of WCGS's containment isolation valves, 83.0% of them can be justified for the full 168 hour CT under this plant specific analysis, which is a 7.7% increase from the generic analysis results. Also, 94.4% of the CIVs are now justified for a CT of at least 8 hours; a 1.3% increase from the generic analysis.



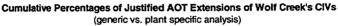


Figure 10-1 Cumulative Percentages of Justified CT Extensions of WCGS's CIVs – Generic Analysis vs. Plant Specific Analysis

11 CONCLUSIONS

Through a risk-informed evaluation of completion time extensions for containment isolation valves that is consistent with NRC acceptance criteria, the following conclusions are drawn:

- Through the deterministic approach of Section 8.3, a threshold hole size was determined at which a large release can occur for penetrations that interface with the containment atmosphere. The CTs for the CIVs in penetrations less than this size are increased to 7 days. The threshold vent diameter, or containment hole size, value is where 100% containment volume per hour leak rate occurs, which is consistent with the "EPRI PSA Applications Guide" as being defined as a large release.
- Through the probabilistic approach of Section 8.2, generic penetration configurations were evaluated for acceptable CTs. Based on this, the completion times for the generic listing of containment isolation valves should be increased to the values provided in Tables 8-2, 8-3, and 8-4. The completion time extensions account for valves of various types with different methods of maintenance. The ICLERP and ΔLERF for each penetration at the proposed CT extensions meet the acceptance criteria of Regulatory Guides of 1.174 and 1.177.
- The lead plant application of the generic analysis of Section 9 demonstrates a) that the analysis is applicable and beneficial to utilities; 75.3% of all of WCGS's CIVs were justified to the full 7 day completion time, and b) the process to follow for utility implementation.
- The plant specific analysis of Section 10 illustrates that the generic analysis is conservative and longer CTs can be achieved on a utility-specific basis. Performing the plant specific analysis with WCGS resulted in 83.0% of their CIVs being justified to the full completion time of 7 days, a 7.7% increase from the generic application.

12 **REFERENCES**

- 1. Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," July 1998.
- 2. Regulatory Guide 1.177, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications," August 1998.
- 3. "Standard Technical Specifications, Westinghouse Plants," U.S. NRC, NUREG-1431, Vol. 1, Rev. 2.
- 4. Information obtained from plant specific PRA databases for WOG plants.
- 5. "Advanced Light Water Reactor Utility Requirements Document," Volume II, ALWR Evolutionary Plant, Chapter 1, Appendix A, PRA Key Assumptions and Groundrules, Rev. 5, issued December 1992.
- 6. "Westinghouse Owners Group Application of Risk-Informed Methods to Piping Inservice Inspection Topical Report," WCAP-14572, Rev. 1-NP-A.
- 7. WesSAGE, Version 1.0 for Microsoft Windows.
- 8. "EPRI PSA Applications Guide," EPRI TR-105396, Project 3200-12, Final Report, August 1995.
- 9. Performance Capability Working Group Online Manual, http://swec0030.pgh.wec.com/sae/pcwgweb/pcwg.html, last modified 06/07/2001.
- 10. Computational Aid No. 4, "Volumetric Release Rate from Vent," the Westinghouse Owners Group Severe Accident Management Guidance, June 1994.

APPENDIX A

(MARKED UP TECHNICAL SPECIFICATIONS AND BASES)

3.6 CONTAINMENT SYSTEMS

3.6.3 Containment Isolation Valves (Atmospheric, Subatmospheric, Ice Condenser, and Dual)

LCO 3.6.3 Each containment isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

- NOTES -

- 1. Penetration flow path(s) [except for [42] inch purge valve flow paths] may be unisolated intermittently under administrative controls.
- 2. Separate Condition entry is allowed for each penetration flow path.
- 3. Enter applicable Conditions and Required Actions for systems made inoperable by containment isolation valves.
- 4. Enter applicable Conditions and Required Actions of LCO 3.6.1, "Containment," when isolation valve leakage results in exceeding the overall containment leakage rate acceptance criteria.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. -NOTE - Only applicable to penetration flow paths with two [or more] containment isolation valves. One or more penetration flow paths with one containment isolation valve inoperable [for reasons other than Condition[s] D [and E]].	 A.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured. <u>AND</u> 	Atherine J Insent 2

-Inseré 1

WOG STS

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Insert 1

AND

CIV pressure boundary intact.

Insert 2

4 hours for Category 1 CIVs

AND

8 hours for Category 2 CIVs

AND

12 hours for Category 3 CIVs

 $\underline{\text{AND}}$

24 hours for Category 4 CIVs

AND

48 hours for Category 5 CIVs

AND

72 hours for Category 6 CIVs

AND

7 days for Category 7 CIVs

CONDITION	REQUIRED ACTION	COMPLETION TIME
	 A.2 NOTES - Isolation devices in high radiation areas may be verified by use of administrative means. Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means. Verify the affected penetration flow path is isolated. 	Once per 31 days for isolation devices outside containment <u>AND</u> Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days for isolation devices inside containment

ACTIONS (continued)

Insert 3

WOG STS

Insert 3

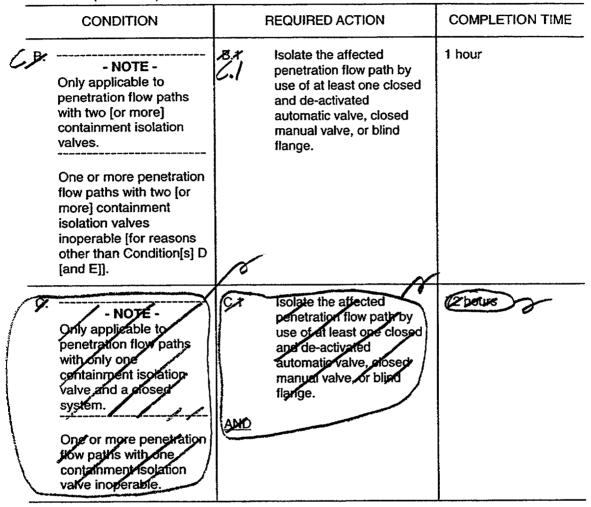
ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
 B. [One or more penetration flow paths with one containment isolation valve inoperable [for reasons other than Condition[s] D [and E]]. <u>AND</u> CIV pressure boundary not intact. 	B.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured.	4 hours for Category 8 CIVs AND 8 hours for Category 9 CIVs AND 12 hours for Category 10 CIVs AND 24 hours for Category 11 CIVs AND 48 hours for Category 11 CIVs AND 48 hours for Category 12 CIVs AND 72 hours for Category 13 CIVs AND 72 hours for Category 14 CIVs
	AND	
	 B.2	

ACTIONS	(continued)
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CONDITION	REQUIRED ACTION	COMPLETION TIME
	2. Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means.	
	Verify the affected penetration flow path is isolated.	Once per 31 days for isolation devices outside containment
		AND
		Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days for isolation devices inside containment]

ACTIONS (continued)



WOG STS

CONDITION	REQUIRED ACTION		COMPLETION TIME
	Se	 NOTES Isolation devices in high radiation areas may be verified by use of administrative means Isolation devices that are tocked, sealed, or otherwise secured may be verified by use of administrative means. Verify the affected penetration flow path is isolated 	Once per 31 days a
D. [One or more shield building bypass leakage [or purge valve leakage] not within limit.	D.1	Restore leakage within limit.	4 hours for shield building bypass leakage <u>AND</u> 24 hours for purge valve leakage]
E. [One or more penetration flow paths with one or more containment purge valves not within purge valve leakage limits.	E.1	Isolate the affected penetration flow path by use of at least one [closed and de-activated automatic valve, closed manual valve, or blind flange].	24 hours
	AND		

ACTIONS (continued)

WOG STS

BASES

ACTIONS (continued)

The ACTIONS are further modified by a third Note, which ensures appropriate remedial actions are taken, if necessary, if the affected systems are rendered inoperable by an inoperable containment isolation valve.

In the event the isolation valve leakage results in exceeding the overall containment leakage rate, Note 4 directs entry into the applicable Conditions and Required Actions of LCO 3.6.1.

A.1 and A.2

Insent 5-

Insent 6

Specified

In the event one containment isolation valve in one or more penetration flow paths is inoperable, [except for purge valve or shield building bypass leakage not within limit], the affected penetration flow path must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic containment isolation valve, a closed manual valve, a blind flange, and a check valve with flow through the valve secured. For a penetration flow path isolated in accordance with Required Action A.1, the device used to isolate the penetration should be the closest available one to containment. Required Action A.1 must be completed within the build the medication plates reactionable,

ponsidering the time required to iselate the penetration and the relative importance of supporting containment OPI2RABILITY during MODES 4, 2, 3, and 4.

For affected penetration flow paths that cannot be restored to OPERABLE status within the Daw Completion Time and that have been isolated in accordance with Required Action A.1, the affected penetration flow paths must be verified to be isolated on a periodic basis. This is necessary to ensure that containment penetrations required to be isolated following an accident and no longer capable of being automatically isolated will be in the isolation position should an event occur. This Required Action does not require any testing or device manipulation. Rather, it involves verification, through a system walkdown, that those isolation devices outside containment and capable of being mispositioned are in the correct position. The Completion Time of "once per 31 days for isolation devices outside containment" is appropriate considering the fact that the devices are operated under administrative controls and the probability of their misalignment is low. For the isolation devices inside containment, the time period specified as "prior to entering MODE 4 from MODE 5 if not performed within the

WOG STS

B 3.6.3 - 5

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Insert 4

[and the CIV pressure boundary is intact,]

Insert 5

[The CIV pressure boundary is considered to be intact when the inoperable CIV is capable of maintaining the boundary between the contained fluid and the containment or outside atmosphere. An example of CIV inoperability and associated maintenance on the CIV where the CIV pressure boundary is considered to be intact is working on the valve actuator.]

Insert 6

[the Completion Times specified for each Category of CIVs identified in [Table B 3.6.3-1]. These Completion Times are justified in Ref. 4.]

REVIEWER'S NOTE

The plant specific determination of the CIV Completion Time Categories is performed by comparing the plant specific penetration types to the generic penetration types evaluated that are identified in Table E-1 of Ref. 4.

The plant specific application of the generic analysis that justified the generic Completion Time Categories is discussed in Section 9.0 of Ref. 4.

Plant specific Completion Time Categories may also be calculated in lieu of the generic Completion Time Categories, and is discussed in Section 10.0 of Ref 4.

BASES

ACTIONS (continued) previous 92 days" is based on engineering judgment and is considered reasonable in view of the inaccessibility of the isolation devices and other administrative controls that will ensure that isolation device misalignment is an unlikely possibility. Condition A has been medified by a Note indicating that this condition onvapplicable to those penetration flow paths with two [or more] containment isolation valves, for penetration flow paths with only one containment isolation valve and a closed system, Centrum C previous sand (De appropriate actions) Insent 7 Required Action A.2 is modified by two Notes. Note 1 applies to isolation devices located in high radiation areas and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Note 2 applies to isolation devices that are locked, sealed, or otherwise secured in position and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since the function of locking, sealing, or securing components is to ensure that these devices are not inadvertently repositioned. Therefore, the probability of misalignment of these devices once they have been verified to be in the proper position, is small. Insent 8-\$ B1 C. 1 With two [or more] containment isolation valves in one or more penetration flow paths inoperable, [except for purge valve or shield building bypass leakage not within limit,] the affected penetration flow path must be isolated within 1 hour. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, and a blind flange. The 1 hour Completion Time is consistent with the ACTIONS of LCO 3.6.1. In the event the affected penetration is isolated in accordance with Required Action B.1, the affected penetration must be 6.1verified to be isolated on a periodic basis per Required Action A.2, which or B.Z remains in effect. This periodic verification is necessary to assure leak tightness of containment and that penetrations requiring isolation following an accident are isolated. The Completion Time of once per 31 days for verifying each affected penetration flow path is isolated is appropriate considering the fact that the valves are operated under administrative control and the probability of their misalignment is low.

WOG STS

B 3.6.3 - 6

Insert 7

The closed system must meet the requirements of Ref. 3.

Insert 8

[B.1 and B.2

In the event one containment isolation valve in one or more penetration flow paths is inoperable, and the CIV pressure boundary is not intact, [except for purge valve or shield building bypass leakage not within limit], the affected penetration flow path must be isolated. The CIV pressure boundary is considered not to be intact when the inoperable CIV is not capable of maintaining the boundary between the contained fluid and the containment or outside atmosphere. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic containment isolation valve, a closed manual valve, a blind flange, and a check valve with flow through the valve secured. For a penetration flow path isolated in accordance with Required Action B.1, the device used to isolate the penetration should be the closest available one to containment. Required Action B.1 must be completed within [the Completion Times specified for each Category of CIVs identified in [Table B 3.6.3-1]. These Completion Times are justified in Ref. 4.]

REVIEWER'S NOTE

The plant specific determination of the CIV Completion Time Categories is performed by comparing the plant specific penetration types to the generic penetration types evaluated that are identified in Table E-2 of Ref. 4.

The plant specific application of the generic analysis that justified the generic Completion Time Categories is discussed in Section 9.0 of Ref. 4.

Plant specific Completion Time Categories may also be calculated in lieu of the generic Completion Time Categories, and is discussed in Section 10.0 of Ref 4.

For affected penetration flow paths that cannot be restored to OPERABLE status within the specified Completion Times and that have been isolated in accordance with Required Action B.1, the affected penetration flow paths must be verified to be isolated on a periodic basis. This is necessary to ensure that containment penetrations required to be isolated following an accident and no longer capable of being automatically isolated, will be in an isolated position should an event occur. This Required Action does not require any testing or device manipulation. Rather, it involves verification, through a system walkdown, that those isolation devices outside containment and capable of being mispositioned, are in the correct position. The Completion Time of "once per 31 days for isolation devices outside containment" is appropriate considering the fact that the devices are operated under administrative controls and the probability of their misalignment is low. For isolation devices inside containment, the time period specified as "prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days" is based on engineering judgment, and is considered reasonable in view of the inaccessibility of the isolation devices and other administrative controls that will ensure that isolation device misalignment is an unlikely possibility.

Condition B is applicable to penetration flow paths with two [or more] containment isolation valves, and penetration flow paths with only one containment isolation valve and a closed system. The closed system must meet the requirements of Ref. 3.

Required Action B.2 is modified by two Notes. Note 1 applies to isolation devices located in high radiation areas and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Note 2 applies to isolation devices that are locked, sealed, or otherwise secured in position and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means areas is typically restricted. Note 2 applies to isolation devices that are locked, sealed, or otherwise secured in position and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since the function of locking, sealing, or securing components is to ensure that the devices are not inadvertently repositioned. Therefore, the probability of misalignment of these devices once they have been verified to be in the proper position, is small.]

BASES ACTIONS (continued) Condition Ers modified by a Note indicating this Condition is only applicable to penetration flow paths with two [or more] containment isolation valves. Condition A of this LCO addresses the condition of one containing is a lation valve in operable in this type of penetration how oath. Crande 2 With one-or more penetration flow paths with one containment isolation valve inoperable, the inoperable valve flow path must be restored to OPERABLE status or the affected penetration flow path must be isolated. The method of solation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, and a blind flange. A check valve may not be used to isolate the affected penetration flow path. Required Action C, I must be completed within the 72 hour Completion Time. The specified time period is reasonable considering the relative stability of the closed system (hence, reliability) to act as a penetration isolation boundary and the relative importance of maintaining containment integrity during MODES 1, 2, 3, and 4. In the event the affected penetration flow path is isolated in accordance with Required Action C.1, the affected penetration flow path must be verified to be isolated on a periodic basis. This perjedic verification is necessary to assure leak tightness of containment and that containment penetrations requiring isolation following an accident are isolated. The Completion Time of once per 31 days for verifying that each affected penetration flow path is isolated is appropriate because the valves are operated under administrative controls and the probability of their misal gnment is low. Condition C is modified by a Note indicating that this Condition is only applicable to those penetration flow paths with only one containment isolation valve and a closed system. The closed system must neet the requirements of Ref. 3. This Note is necessary since this Condition is written to specifically address those penetration flow paths in a closed system. Required Action C.2 is modified by two Notes. Noter applies to valves and blind flanges located in high radiation areas and allows these devices. to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Note 2 applies to isolation devices that are locked, sealed, or otherwise secured in position and allows these devices

WOG STS

BASES

ACTIONS (continued)

to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since the function of locking, sealing, or securing components is to ensure that these devices are not inadvertently repositioned. Therefore, the probability of misalignment of these valves, once they have been verified to be in the proper position, is small.

[D.1

With the shield building bypass leakage rate (SR 3.6.3.11) [or purge valve leakage rate (SR 3.6.3.7)] not within limit, the assumptions of the safety analyses are not met. Therefore, the leakage must be restored to within limit. Restoration can be accomplished by isolating the penetration(s) that caused the limit to be exceeded by use of one closed and de-activated automatic valve, closed manual valve, or blind flange. When a penetration is isolated the leakage rate for the isolated penetration is assumed to be the actual pathway leakage through the isolation device. If two isolation devices are used to isolate the penetration, the leakage rate is assumed to be the lesser actual pathway leakage of the two devices. The 4 hour Completion Time for shield building bypass leakage is reasonable considering the time required to restore the leakage by isolating the penetration(s) and the relative importance of secondary containment bypass leakage to the overall containment function. [The 24 hour Completion time for purge valve leakage is acceptable considering the purge valves remain closed so that a gross breach of the containment does not exist.]

- REVIEWER'S NOTE -

The bracketed options provided in ACTION D reflect options in plant design and options in adopting the associated leakage rate Surveillances.

The options (in both ACTION D and ACTION E) for purge valve leakage, are based primarily on the design - if leakage rates can be measured separately for each purge valve, ACTION E is intended to apply. This would be required to be able to implement Required Action E.3. Should the design allow only for leak testing both purge valves simultaneously, then the Completion Time for ACTION D should include the "24 hours for purge valve leakage" and ACTION E should be eliminated.]

WOG STS

B 3.6.3 - 8

BASES

ACTIONS (continued)

[E.1, E.2, and E.3

In the event one or more containment purge valves in one or more penetration flow paths are not within the purge valve leakage limits, purge valve leakage must be restored to within limits, or the affected penetration flow path must be isolated. The method of isolation must be by the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a [closed and de-activated automatic valve, closed manual valve, or blind flange]. A purge valve with resilient seals utilized to satisfy Required Action E.1 must have been demonstrated to meet the leakage requirements of SR 3.6.3.7. The specified Completion Time is reasonable, considering that one containment purge valve remains closed so that a gross breach of containment does not exist.

In accordance with Required Action E.2, this penetration flow path must be verified to be isolated on a periodic basis. The periodic verification is necessary to ensure that containment penetrations required to be isolated following an accident, which are no longer capable of being automatically isolated, will be in the isolation position should an event occur. This Required Action does not require any testing or valve manipulation. Rather, it involves verification, through a system walkdown, that those isolation devices outside containment capable of being mispositioned are in the correct position. For the isolation devices inside containment, the time period specified as "prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days" is based on engineering judgment and is considered reasonable in view of the inaccessibility of the isolation devices and other administrative controls that will ensure that isolation device misalignment is an unlikely possibility.

For the containment purge valve with resilient seal that is isolated in accordance with Required Action E.1, SR 3.6.3.7 must be performed at least once every [92] days. This assures that degradation of the resilient seal is detected and confirms that the leakage rate of the containment purge valve does not increase during the time the penetration is isolated. The normal Frequency for SR 3.6.3.7, 184 days, is based on an NRC

Initiative, Generic Issue B-20 (Ref.). Since more reliance is placed on a single valve while in this Condition, it is prudent to perform the SR more often. Therefore, a Frequency of once per [92] days was chosen and has been shown to be acceptable based on operating experience.

WOG STS

BASES

ACTIONS (continued)

Required Action E.2 is modified by two Notes. Note 1 applies to isolation devices located in high radiation areas and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Note 2 applies to isolation devices that are locked, sealed, or otherwise secured in position and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since the function of locking, sealing, or securing components is to ensure that these devices are not inadvertently repositioned.]

F.1 and F.2

If the Required Actions and associated Completion Times are not met, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE [SR 3.6.3.1 REQUIREMENTS

Each [42] inch containment purge valve is required to be verified sealed closed at 31 day intervals. This Surveillance is designed to ensure that a gross breach of containment is not caused by an inadvertent or spurious opening of a containment purge valve. Detailed analysis of the purge valves failed to conclusively demonstrate their ability to close during a LOCA in time to limit offsite doses. Therefore, these valves are required to be in the sealed closed position during MODES 1, 2, 3, and 4. A containment purge valve that is sealed closed must have motive power to the valve operator removed. This can be accomplished by de-energizing the source of electric power or by removing the air supply to the valve operator. In this application, the term "sealed" has no connotation of leak tightness. The Frequency is a result of an NRC initiative, Generic Issue B-24 (Ref. 6), related to containment purge valve use during plant operations. In the event purge valve leakage requires entry into

Condition E, the Surveillance permits opening one purge valve in a penetration flow path to perform repairs.]

WOG STS

BASES

SURVEILLANCE REQUIREMENTS (continued)

valves will remain closed when the inside containment atmosphere returns to subatmospheric conditions following a DBA. SR 3.6.3.6 requires verification of the operation of the check valves that are testable during unit operation. The Frequency of 92 days is consistent with the Inservice Testing Program requirement for valve testing on a 92 day Frequency.]

[<u>SR 3.6.3.7</u>

For containment purge valves with resilient seals, additional leakage rate testing beyond the test requirements of 10 CFR 50, Appendix J, Option [A][B], is required to ensure OPERABILITY. Operating experience has demonstrated that this type of seal has the potential to degrade in a shorter time period than do other seal types. Based on this observation and the importance of maintaining this penetration leak tight (due to the direct path between containment and the environment), a Frequency of 184 days was established as part of the NRC resolution of Generic Issue B-20, "Containment Leakage Due to Seal Deterioration" (Ref. #].

Additionally, this SR must be performed within 92 days after opening the valve. The 92 day Frequency was chosen recognizing that cycling the valve could introduce additional seal degradation (beyond that occurring to a valve that has not been opened). Thus, decreasing the interval (from 184 days) is a prudent measure after a valve has been opened.]

SR 3.6.3.8

Automatic containment isolation valves close on a containment isolation signal to prevent leakage of radioactive material from containment following a DBA. This SR ensures that each automatic containment isolation valve will actuate to its isolation position on a containment isolation signal. This surveillance is not required for valves that are locked, sealed, or otherwise secured in the required position under administrative controls. The [18] month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown that these components usually pass this Surveillance when performed at the [18] month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

WOG STS

BASES

SURVEILLANCE REQUIREMENTS (continued)

If both isolation valves in the penetration are closed, the actual leakage rate is the lesser leakage rate of the two valves. The Frequency is required by the Containment Leakage Rate Testing Program. This SR simply imposes additional acceptance criteria.

[Bypass leakage is considered part of La.

	Unl	REVIEWER'S NOTE - ess specifically exempted.]]
REFERENCES	1.	FSAR, Section [15].
	2.	FSAR, Section [6.2].
- lea	3.	Standard Review Plan 6.2.4.
Incente 9-	Å. 5	Generic Issue B-20, "Containment Leakage Due to Seal Deterioration."
	Ø.	Generic Issue B-24.

WOG STS

A-19

4. WCAP-15791, Rev. 0, "Risk-Informed Evaluation of Extensions to Containment Isolation Vale Completion Times," May 2002.

APPENDIX B

EXAMPLE WESSAGE FAULT TREES AND OUTPUT FILES

The information provided in this appendix is proprietary to Westinghouse Electric Company. Due to the volume of information, it has not been bracketed. The coding associated with this information is "a,c."

APPENDIX C

WCGS CIVS – USAR, FIGURE 6.2.4-1

VALVE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSIT	ION		APPENDIX .
N0.	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMEN
									 						
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THIS PENETRATION IS INCLUDED FOR FIGURE COMPLETENESS. NONE OF THE VALVES SHOWN ARE CONSIDERED CONTAINMENT ISOLATION VALVES.

NO. P-1 MENETRATION DESCRIPTION: MAIN STEAM LINE

REFERENCE SECTION(S) 10.3 REV. 13

WOLF CREEK UPDATED SAFETY ANALYSIS REPORT CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 1 OF 74

<u>C2</u>

May 2002

	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXINUM		VA	LVE POSITI	ON		APPENDIX J
VALVE NO	VALVE SIZE, IN	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
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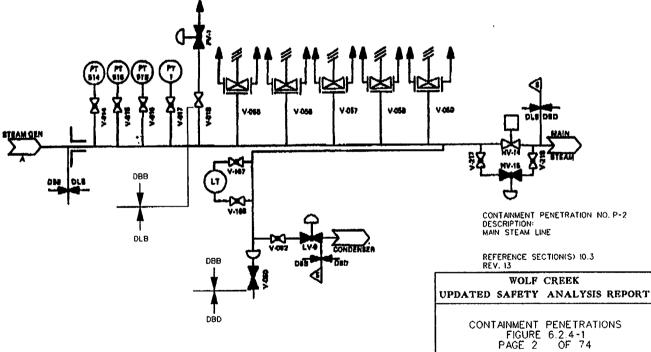
LENGTH OF PIPING ISOLATION VALVE:	TO	OUTERMOST 37.9ft
APPLICABLE GDC NO.		NONE

GENERAL COMMENTS:

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AS SHOWN ON FIGURE 19.5-1, THE STLAM BENEFATOR INVELL BITHERS TO THE VINT VALUES ON THE CONSTIMATE FOR THE DAM STRAM FLOW TRANSMITTERS.

THIS PENETRATION IS INCLUDED FOR FIGURE COMPLETENESS. NONE OF THE VALVES SHOWN ARE CONSIDERED CONTAINMENT ISOLATION VALVES.



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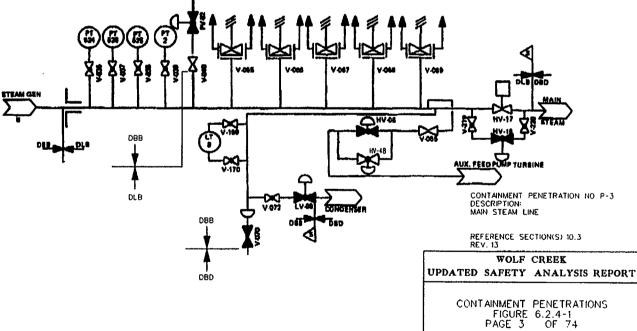
VALVE	LINE/ VALVE	INSIDE/ OUTSIDE	NORMAL FLOW	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VAL	VE POSITI	DN		APPENDIX J REQUIREMENT
VALVE NO.	SIZE, IN.	CONT.	DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAL	PRIMARY	SECONDARY	REQUIREMENT
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FLUID CONTAINED:	STEAM
LENGTH OF PIPING	TO OUTERMOST 37.9ft
APPLICABLE GDC NO.	NONE
GENERAL COMMENTS	

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THIS PENETRATION IS INCLUDED FOR FIGURE COMPLETENESS. NONE OF THE VALVES SHOWN ARE CONSIDERED CONTAINMENT ISOLATION VALVES.



May 2002

	LINE/	INSIDE /	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	VE POSIT	ON		APPENDIX J
VALVE NO.	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAL	PRIMARY	SECONDARY	REQUIREMENT
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NONE

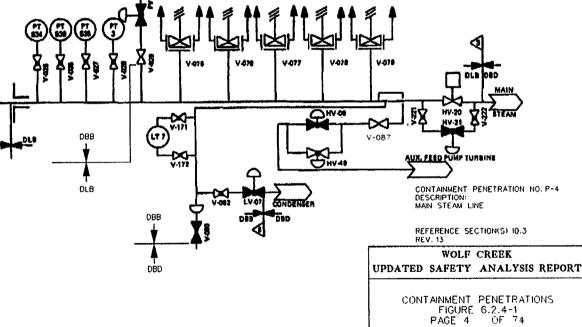
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THIS PENETRATION IS INCLUDED FOR FIGURE COMPLETENESS NONE OF THE VALVES SHOWN ARE CONSIDERED CONTAINMENT ISOLATION VALVES.



May 2002

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VALVE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI	N		APPENDIX J REQUIREMENT
NQ.	VALVE SIZE, IN.	OUTSIDE CONT	FLOW DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	AC TUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
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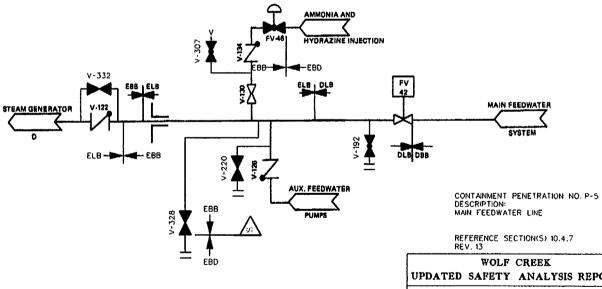
ASSOCIATED WITH A SAFETY FEATURES SYS. YES X NO

FLUID CONTAINED: WATER LENGTH OF PIPING TO OUTERMOST ISOLATION VALVE: 15ft APPLICABLE GDC NO. NONE

GENERAL COMMENTS:

THE CONTAINMENT PENETRATIONE ABBOOL ATED WITH THE STEAM GENERATORS ARE NOT BURGT TO ODCAT, BING THE CON-TAINMENT EARNER INTEGNITY IS NOT DERACHED, THE SCHURARY OR BARNIER AGAINST FIBMON PRODUCT LEARAGE TO THE ENVIRONMENT & THE INSIDE OF THE STEAM OSMERATOR THESE AND THE OUT-EIOR OF THE LINB EMANTING FROM THE STEAM GENERATOR WIELLS.

THIS PENETRATION IS INCLUDED FOR FIGURE COMPLETENESS. NONE OF THE VALVES SHOWN ARE CONSIDERED CONTAINMENT ISOLATION VALVES.



UPDATED SAFETY ANALYSIS REPORT

CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 5 OF 74

	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI	ON		APPENDIX J REQUIREMENT
VALVE NO.	VALVE SIZE, IN	OUTSIDE CONT.	FLOW DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
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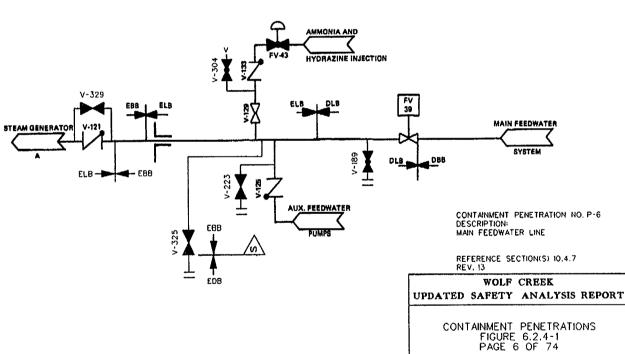
ASSOCIATED WITH A SAFETY FEATURES SYS. YES NO

FLUID CONTAINED: WATER LENGTH OF PIPING TO OUTERMOST ISOLATION VALVE: 13.4 FT APPLICABLE CDC NO. NONE

GENERAL COMMENTS:

THE CONTAINMENT PENETRATIONS ASSOCI-ATED WITH THE STEAM GENERATORS ARE NOT SUBJECT TO DOAD, SUBCE THE CON-TAINMENT BARRIER INTEGRITY IS NOT BREACHED, THE SOUNDARY OR BARRIER AGAINST FIESION PRODUCT LEAKAGE TO THE ENVIRONMENT IS THE INFIDE OF THE STEAM GENERATOR TIMES AND THE GUT-SIDE OF THE LINES EMMANTING FROM THE STEAM GENERATOR SHELLS.

THIS PENETRATION IS INCLUDED FOR FIGURE COMPLETENESS. NONE OF THE VALVES SHOWN ARE CONSIDERED CONTAINMENT ISOLATION VALVES.



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VALVE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VAL	VE POSITI	ION		APPENDIX J
NO.	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
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EATURES SYS.			1												
ENCTH OF PIPIN		ERMOST 13.4 FT							7. #	MONIA AND					
APPLICABLE		NONE	ł				ŝ	≚∝⊥⁻	FV-44 HY	VORAZINE IN.	IECTION				
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NERAL COMMEN IE CONTAINMENT PE IED WITH THE STEAL IED WITH THE STEAL IED WITH THE SOURCE IED WITH THE SOURCE IED WITH IED WITH IED IED OF THE LINES AN EAM GENERATOR SH HIS PENE TRATIO	NETRATIONS AN M GENERATOR AF, SINCE THE INTEGRITY M NDARY OR BAN THE INSIDE OF UNES AND THE LANATING PHO ILLE. N IS INCLUE PLETENESS. ALVES SHOW CONTAINME	SPOCI- d ARE d CON- s NOT RRIER SE TO P THE S OUT- M THE DE D	\subset	<u> </u>	V.120							 ⊲ - 	CONTA DESCR MAIN F REFER REV. 1	SYSTEM BYSTEM PIPTION: FEEDWATER ENCE. SECTI 3 WOLF CI	NETRATION NO. F LINE ION(S) 10.4.7

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LINE/	INSIDE/	NORMAL	1/ 41 3/5	1411	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSIT	ION		APPENDIX J REQUIREMENT
VALVE SIZE, IN.	OUTSIDE CONT.	FLOW DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	PEQUIREMENT
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		VALVE OUTSIDE	VALVE OUTSIDE FLOW	LINE/ INSIDE/ NORMAL VALVE VALVE OUTSIDE FLOW TYPE	LINE/ INSIDE/ NORMAL VALVE VALVE VALVE OUTSIDE FLOW TYPE OPERATOR	LINE/ INSIDE/ NORMAL VALVE VALVE POWER VALVE OUTSIDE FLOW TYPE OPERATOR SOURCE	LINE/ INSIDE/ NORMAL VALVE VALVE POWER PRIMARY VALVE OUTSDE FLOW TYPE OFFATOR SOURCE ACTUATION	LINE/ NSIDE/ NORMAL VALVE VALVE POWER ACTUATION ACTUATION ACTUATION ACTUATION	LINE/ INSIDE/ NORMAL VALVE VALVE POWER PRIMARY SECONDARY MAXIMUM ACTUATION ACTUATION CLOSURE	LINE/ INSIDE/ NORMAL VALVE VALVE POWER PRIMARY SECONDARY MAXIMUM ACTUATION CLOSURE NORMAL	LINE/ INSIDE/ NORMAL VALVE VALVE POWER PRIMARY SECONDARY MAXIMUM VA	LINE/ INSIDE/ NORMAL VALVE VALVE POWER PRIMARY SECONDARY MAXIMUM VALVE POSIT	LINE/ NSIDE/ NORMAL VALVE VALVE POWER ACTUATION ACTUATIO	LINE/ NSIDE/ NORMAL VALVE VALVE POWER PRIMARY SECONDARY MAXIMUM VALVE POSITION

ASSOCIATED WITH A SAFETY FEATURES SYS. YES NO

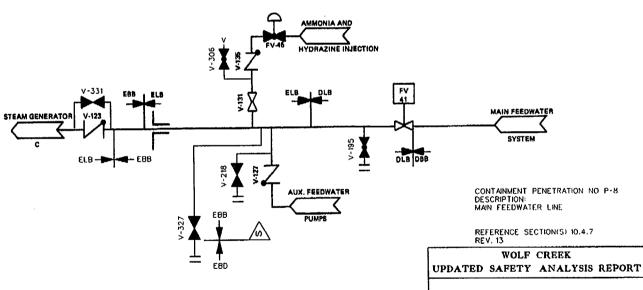
FUND CONTAINED, WATER

FLUID CONTAINED:	
LENGTH OF PIPING	TO OUTERMOST 15.2 FT
APPLICABLE GDC NO.	NONE

GENERAL COMMENTS:

THE CONTAINMENT PENETRATIONS ASSOCI-ATED WITH THE STEAM GENERATORS ARE NOT SUBJECT TO GOGAT, SINCE THE CON-TAINNENT BARRIER INTEGNITY IS NOT BREATED. THE SOUNDARY OR BARRIER AGAINST FISSION PRODUCT LEAKAGE TO THE SINICONNENT IS THE INBUG OF THE STEAM GENERATOR THERE AND THE OUT-SIDE OF THE LINES MANATING FROM THE STEAM GENERATOR SHELLS.

THIS PENETRATION IS INCLUDED FOR FIGURE COMPLETENESS. NONE OF THE VALVES SHOWN ARE CONSIDERED CONTAINMENT ISOLATION VALVES.



CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 8 OF 74

VALVE	LINE/ VALVE		NORMAL FLOW	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSIT	ION		APPENDIX J
NO.	SIZE, N.	CONT.	DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
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SOCIATED WIT			STEAN	A GEN.	I		 V-041		EAB		11		<u> </u>		
ATURES SYS.			Σ	$ \longrightarrow $				\longrightarrow	> ⁵⁶	EE P-83					
IGTH OF PIPIN	NG TO OUTE			2		M	DBB			ž					
LATION VALVE	E; 8	3.5 FT			L	a V	49	Ļ							
C NQ.		NONE				<u> </u>	42		81 - - 1 - "	n			5		
RAL COMMENT CONTAINMENT PER WITH THE STEAM BUBJECT TO GOC- WENT BARRIER CHED. THE SARRIER	NETRATIONS AN M GENERATORI 487, SINCE THE INTEGRITY 18 YOARY OF BAT	NEOCI- B ARIE CON- NOT JRIER	Σ	M GEN.				₹ ₩	A R		×4036				
CRAL COMMENT CONTAINMENT PER UNITH THE STRAN SUBJECT TO ODC. INVINCT THE BOOM MAT FREICH PRO INVINCOMMENT IS NOT THE UNIT OF THE UNIT PENE TRATION FIGURE COMPI CONSIDERED (ATION VALVES	NETRATIONS AN GENERATOR: 47, EINCE THE 197, EINCE THE 190, OF BAN DUCT LEAKAG USES AND THE LEAKAD LES INCLUDE LETENESS. VES SHOWN CONT AINMEN	BOCI- B ARE CON- NOT VILLEA P THE OUT- A THE CD	BLOW C	$ \longrightarrow $	₩			DB8			V-035	V-038	CONTA DESCR BLOWD STEAM	FLASH TANK	ETRATION NO. P-S
CAL COMMENT CONTAINMENT PEP WITH THE STRAM BUBRET TO ODC- WITH THE STRAM WITH FREIDN PRO INVIRONMENT IS OF THE LINSE BUR OF THE LINSE UN FIGURE COMPIL OF THE VAL CONSIDERED (NETRATIONS AN GENERATOR: 47, EINCE THE 197, EINCE THE 190, OF BAN DUCT LEAKAG USES AND THE LEAKAD LES INCLUDE LETENESS. VES SHOWN CONT AINMEN	BOCI- B ARE CON- NOT VILLEA P THE OUT- A THE CD	BLOW C	DOWN LINE			4-538	↓ 	∧ ×		Fil	V-038	CONTA DESCR BLOWD STEAM	FLASH TANK	ETRATION NO. P-S
RAL COMMENT CONTAINMENT PEP WITH THE STRAM BUBARCT TO ODC- WITH THE STRAM WITH FREIDW PRO INVIRONMENT IS WITH FREIDW PRO INVIRONMENT IS WITH STRATON BHI PENE TRATION FIGURE COMPIL OF THE VAL CONSIDERED (NETRATIONS AN GENERATOR: 47, EINCE THE 197, EINCE THE 190, OF BAN DUCT LEAKAG USES AND THE LEAKAD LES INCLUDE LETENESS. VES SHOWN CONT AINMEN	BOCI- B ARE CON- NOT VILLEA P THE OUT- A THE CD	BLOW C	DOWN LINE			4-538	DB8	∧ ×		Fil	[CONTA DESCR BLOWD STEAM REFERI REV. 12	FLASH TANK	ETRATION NO. P-S BLOWDOWN SYS

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	LINE/	INSIDE/	NORMAL		111110	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSIT	ION		APPENDIX J
VALVE NO.	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW DIRECTION	VALVE TYPE	VALVE OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAL	PRIMARY	SECONDARY	REQUIREMENT
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SOCIATED WI	TH A SAFET	Y NO 📋							SEI	E P-84					
UID CONTAIN						M§	DBB	SAMP		2					
GTH OF PIP	ING TO OUT	5.8 FT			L				E C						
51 40 4 DI C			1			a 🗸 z	/ W ¥		. 51/11	5			~		
DC NO.		NONE					C X ≸			አ				D	
ERAL COMMEN							C X ≩			3				D 	
DC NO. ERAL COMMENT I CONTANIMENT I ID WITH THE STE FURNECT TO G	PENETRATIONS AM GENERATO DC-87, SINCE TH	ASSOCI- RE ARE HE CON-	STEAM					Ĩ ∽7		» <u> -</u> -(×	;			
DC NO. IERAL COMMENT I DONTANIMENT ID WITH THE STE T SUBJECT TO G NMENT BARRIEL JACHED, THE BO ANNET FIREDON P	PENETRATIONS AM GENERATO DC-87, BINGE TH HINTEGRITY UNDARY OR & RODUCT LEAK	ASSOCI- RE ARE HE CON- IQ NOT ARRIER AGE TO	Σ	A GEN.			×-0	Ĩ ∽7		, L=-ć	×	A		-	
PPLICABLE DC NO. IERAL COMMENT I DWINT HIE STE ID WINT HIE STE IDWINT HIE STE IDWINT HIE STE IDWINT HIESTON ANIST FISSION P ANIST FISSION E ENVIRONMENT FAM GENERATOR I OF THE LINES	PENETRATIONS IAM GENERATO DC-37, EINCE TJ HINTEGRITY UNDARY OR & RODUCT LEAK IS THE INSIDE TUBES AND TJ EMANATING FR	ASSOCI- MS ARE HE CON- HE NOT ARRIER AGE TO OF THE HE DUT-	BLOWD	\supset	₩		-	Ĩ ∽7		, (×				
DC NO. IERAL COMMENT ID WINT THE STA THE SUBJECT TO GI INMENT BARRIET TO ANNOT BARRIET EAM GENERATOR NO THE LINES FAM GENERATOR	PENETRATIONS AM GENERATO DC-37, EINCE TO A INTEGRITY UNDARY OR & RODUCT LEAK, IS THE INSIDE TUBES AND TO EMANATING PR BHELLS.	ABBOCI- RS ARE HE CON- HE CON- HE CON- HE CON- ARRIER AGE TO OF THE HE OUT- OM THE	BLOWD		V		-			1	/-193	V-005		.G. BLOWDOWA	
C NO. CONTAINMENT COMMENT SUBJECT TO GUIDE THE STE SUBJECT TO GUIDE THE STE SUBJECT TO GUIDE THE STE SUBJECT TO GUIDE THE STE SUBJECT TO GUIDE THE STE S PENETRATIN S PENETRATIN S PENETRATIN S PENETRATIN S PENETRATIN	PENETRATIONS AM GENERATO DOGT, EINCE TA INTEGNITY UNDARY OR & RODUCT LEAK IN THE NOID TUBES AND TUBES AND THE NOID ENALS AND THE NOID THE NOID ON IS INCLU MPLETENESS	ASBOCI- RS ARE HE CON- HE CON- HE CON- RATER ARE TO GF THE HE CUT- COM THE DED	BLOWD		V		v.o	Ĩ ∽7		1	, A			G, BLOWDOWA FLASH TANK	
C NO. CONTANMENT DITA THE STE SUBJECT TO 0 UNERT BARRIEL BUVIRONMENT AM GENERATOR S PENETRATI R FIGURE COI VE OF THE LIMES CONSIDEREI	PENETRATIONS AM GENERATO OC-37, EINCE TO INTEGRITY UNDARY OR & RODUCT LEAK. IS THE NOID TUBES AND TI EMANATING PR SHELLS. ON IS INCLU MPLETENESS 'ALVES SHO' O CONTAINME	ASBOCI- RS ARE HE CON- HE CON- HE CON- RATER ARE TO GF THE HE CUT- COM THE DED	BLOWD		V		۰۷ ۲۹ ۲۹			1	, A		HV-1 BD SC CONT BLOW	G, BLOWDOWN FLASH TANK G, DRAIN PUMPS ANMENT PEN RIPTION	:
C NO. ERAL COMMEN D WITH THE STE SUBJECT TO GI ADHED, THE BO INST PISSION P ENVIRONMENT AM GENERATOR E OF THE LINES	PENETRATIONS AM GENERATO OC-37, EINCE TO INTEGRITY UNDARY OR & RODUCT LEAK. IS THE NOID TUBES AND TI EMANATING PR SHELLS. ON IS INCLU MPLETENESS 'ALVES SHO' O CONTAINME	ASBOCI- RS ARE HE CON- HE CON- HE CON- RATER ARE TO GF THE HE CUT- COM THE DED	BLOWD		V		v.o			1	, A		AD S CONT DESCI BLOW STEAU	G. BLOWDOWN FLASH TANK FLASH TANK FLASH TANK G. DRAIN FUMPS AINMENT PEN COWN LINE GENERATON RENCE SECTIO	ETRATION NO. R BLOWDOWN

AFETY ANALYSIS REPORT

CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 10 OF 74

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VALVE	LINE/ VALVE	INSIDE/ OUTSIDE	NORMAL FLOW	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSIT	ON		APPENDIX J
NO.	SIZE, IN	CONT.	DIRECTION	TYPE	OPERATOR	SOURCE	SIGNAL	ACTUATION SIGNAL	TIME (SEC)	NORMAL	SHUTDOWN	FAL	PRIMARY	SECONDARY	REQUIREMENT
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ASSOCIATED WI FEATURES SYS.	TH A SAFET		STE	AM GEN.			V-01		CLEAR						
FLUID CONTAINE	D: WATER		1 Σ				R			E P-85					
LENGTH OF PIP		ERMOST 5.3 FT		9	0		OBB	TUBING		LING					
APPLICABLE GDC NO.		NONE]		89	Y Y.T	\$ (SAM.			5		
GENERAL COMMEN	ITS:				S .		1			8			088	DBD	
THE CONTAINMENT P	INETRATIONS A	860CI-			đ	1	1			ē					.

THE CONTAINMENT PENETRATIONS ASSOCI-ATED WITH THE STEAM GENERATORS ARE NOT SUBJUCT TO ODCAT, BINGS THE CON-TAINMENT BARRIER INTEGRITY IS NOT BREACHED, THE BOUNDARY OR SARRIER AGAINST FISHION PRODUCT LEAKAGS TO THE SWIGNMENT IS THE INSIDE OF THE STEAM GENERATOR TUBES AND THE OUT-SIDE OF THE LINSE BEMAATING FROM THE STEAM GENERATOR SHELLS.

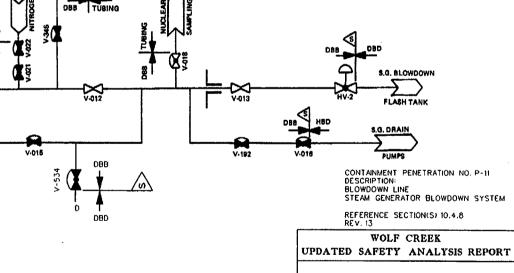
STEAM GEN.

BLOWDOWN LINE

STEAM GEN.

TUBE SHEET ORAIN

THIS PENETRATION IS INCLUDED FOR FIGURE COMPLETENESS. NONE OF THE VALVES SHOWN ARE CONSIDERED CONTAINMENT ISOLATION VALVES.



CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 11 OF 74

NA 44 NOT	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VAL	VE POSITI	ON		APPENDIX J
VALVE NO.	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
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SSOCIATED WI			576	AM GEN.		· · · · · · · · · · · · · · · · · · ·				EE P-86					
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DLATION VAL		6.8 FT			_			TUBING	u j	15					
DUCARLE			4		8	しした	z de s		¥. 3	AMP					
DC NO.		NONE	-		9 8		¢₽₹		MUC	Janys			088	BD	
DC NO. NERAL COMMENT	NTS:		-		and and a second		C X ₹			2002 2007				BD S.G. BLOWD	OWN
PPLICABLE DC NO. NERAL COMMEI E CONTAINMENT I ED WITH THE STO TO SUBJECT TO GU EACHED. THE SO	NTS: AM GENERATIONS / AM GENERATO DC-87, SINCE TH L INTEGRITY I L INTEGRITY I	NONE ABBOCI- RS ARE IS CON- IS NOT ARRIER	Σ	AM GEN.	S and		(⊈]	×	Ë.					$\rightarrow \Sigma$	>
DC NO. VERAL COMMENT TO WITH THE STIL TO WITH THE STIL TO WITH THE STIL TO WITH THE STIL AND TO THE SO AND TO THE SO AND TO STILL THE SO AND TO STILL THE SO AND TO STILL THE SO STILL THE SO TO STILL THE SO STILL T	NTS: AM GENERATO DC-F, SINCE TH UNDARY OF B RODUCT LEAKA IS THE INSIDE (TURES AND TH EMANATING FR	NONE ASSOCI- RS ARE IS CON- IS NOT ARRITR AGE TO DF THE IS OUT-	aron		S and			×-023			V-024	DBB		FLASH TA	>
DC NO. VERAL COMMEN E CONTAINMENT I ED WITH THE STA I SUBJECT TO GI INMENT BARRIES ACHED, THE BO AINST FISSION P E ENVIRONMENT E ENVIRONMENT ST OP THE LINES EAM GENERATOR	NTS: AM GINERATO Cost, Elics TH INTEGRITY UNDARY OF B RODUCT LEAKA IS THE INSIDE TUBES AND TH IMANATING FR BHELLS.	NONE ABSOCI- RS ARE IS CON- SK HOT ARTITR LOE TO OF THE IS OUT- OM THE	BLOW		S and		.	V-023			- 🔒	DBB		$\rightarrow \Sigma$	>
DC NO. ERAL COMMENT I DOWITH THE STA T SUBJECT TO GI NMENT BARNET IACHED, THE STA I ENVIRONMENT IAM GINERATOR S PENETRATIK R FIGURE CON	NTS: AM GENERATO COST, EINCE TH UNDERY ON B RODUCT LEAKS RODUCT LEAKS RODUCT RODUC	NONE ASSOCI- NS ARE IS CON- SARTIRA GE TO OF THE IS OUT- OM THE DED	aron aron		S S SS		26	V-023			V-024	UBB	HBD	FLASH TA) NK
DC NO. VERAL COMMENT TO WITH THE STIL TO WITH THE STIL TO WITH THE STIL TO WITH THE STIL AND TO THE SO AND TO THE SO AND TO STILL THE SO AND TO STILL THE SO AND TO STILL THE SO STILL THE SO TO STILL THE SO STILL T	NTS: AM GENERATO COST, EINCE TH INTEGRITY I UNDARY ON BA RODUCT LEAKA RODUCT LEAKA	NONE ABOOGI- RE ARE IE CON- IE	aron aron	VDOWN LINE	S S SS		.				- 🔒	D88 V-027	CONT DESC BLOW	FLASH TA S.G. DRAIN S.G. DRAIN PUMPS AINMENT PEIN RIPTION ZOOWN LINE	>

May 2002

SYSTEM

WOLF CREEK UPDATED SAFETY ANALYSIS REPORT

CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 12 OF 74

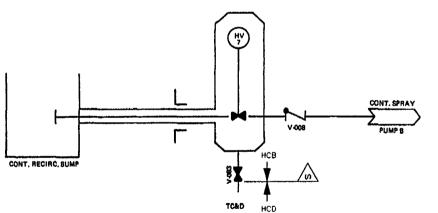
VALVE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSIT	ION		APPENDIX
NO.	VALVE SIZE, IN	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION	ACTUATION	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	F A!L	PRIMARY	SECONDARY	REQUIREMEN
ENHV-07	12/12	OUTSIDE	OUT	ÇATE	MOTOR	4	CIS-A	REM/MAN	30	CLOSED	CLOSED	AS IS	CLOSED	OPEN	A
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FEATURES SYS. YES NO

FLUID CONTAINED: WATER LENGTH OF PIPING TO OUTERMOST ISOLATION VALVE: N/A APPLICABLE GDC NO. 56 GENERAL COMMENTS:

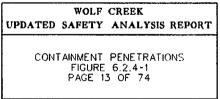
THIS PENETRATION IS ASSOCIATED WITH THE CONTAINMENT SPRAY SYSTEM, WHICH IS REQUIRED TO MITIGATE THE CONSE-GUENCES OF A LOCA. A SINGLE REMOTE-MANUAL ISOLATION IS PROVIDED, LOCAT-MANUAL ISOLATION IS PROVIDED, LOCAT-EN SYSTEM MELABILITY. A SINGLE ACTIVE OF RAMEWE PAILURE CAN BE ACCOMMO-DATED SINCE THE SYSTEM IS CLOSED OUT-SIDE THE CONTAINMENT AND IS DELIGNED AND CONSTRUCTIO COMMENSURATE WITH THE DERION AND COMMENSURATE WITH THE DERION AND COMMENSURATE WITH CONTAINMENT.

LOCAL TESTING OF THE VALVE OR THE CLOSED SYSTEM OUTSIDE THE CONTAIN-MENT (B NOT REQUIRED SINCE THE SYSTEM IS OPERATED AND INPEGTED DURING NORMAL FLANT OPERATION TO ASSURE THAT THE INTEGRITY IS BEING MAN-TAINED.



CONTAINMENT PENETRATION NO. P-13 DESCRIPTION: RECIRCULATION LINE CONTAINMENT SPRAY SYSTEM

REFERENCE SECTION(5) 6 2.2 REV. 13



	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI	ON		APPENDIX J
VALVE NO.	VALVE SIZE, IN.	OUTSIDE CONT.	DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
EJHV-8811B	14/14	OUTSIDE	ουτ	GATE	MOTOR	4	REM/MAN	SIS AND RWST-LO	N/A	CLOSED	CLOSED	AS IS	CLOSED	OPEN	A
EJHV-24	1/1	OUTSIDE	ουτ	GATE	SOLENOID	4	NONE	REM/MAN	5	CLOSED	CLOSED	CLOSED	CLOSED	OPEN	С
EJHV-26	1/1	OUTSIDE	OUT	GLOBE	SOLENOID	4	NONE	REM/MAN	5	CLOSED	CLOSED	CLOSED	CLOSED	OPEN	С
EJV-189	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
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ASSOCIATED WITH A SAFETY FEATURES SYS. YES NO

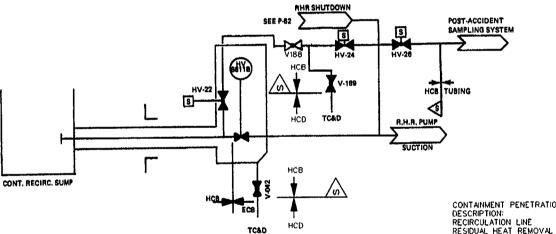
FLUID CONTAINED:	
LENGTH OF PIPING ISOLATION VALVE:	TO OUTERMOST N/A
APPLICABLE GDC NO.	56

GENERAL COMMENTS:

THIS PENETRATION IS ASSOCIATED WITH THE RHR EVETEM AND THE PORT ADDIDENT SAMPLING SYSTEM AND THE PORT ADDIDENT SAMPLING SYSTEM (PAS), RHR IS REQUIRED TO MITGATE THE CONBEQUENCES OF A LOCA. A SINGLE REMOTEMANUAL ISOLA. TION IS PROVIDED, LOCATED WITHIN A WATERTIGHT COMPARTMENT OUTSIDE THE CONTAINMENT, FOR GREATER SYSTEM RELIASILITY, ASINGLE ACTIVE OR PASEIVE RELIASILITY, ASINGLE ACTIVE OR PASEIVE THE SYSTEM IS OLGED CUTSIDE THE CON-TAINMENT, AND IS DESIGNED AND CON-STRUCTED COMMENAURATE WITH THE DESIGN AND CONSTRUCTION OF THE CON-TAINMENT.

TANMENT. LOCAL TESTING OF THE RHR VALVE OR THE CLOSED SYSTEM OUTSIDE THE COM-tainment is not required since the system is openated and impected during normal, plant openation to assure that the integrity is being manyained.

MAINTAINED. THE PAGE LINE IS PROVIDED WITH THREE BAPSTY-RELATED VALVES WHICH MEET THE REQUIREMENTS FOR CONTAINMENT BOLATION AND ARE PROVIDED WITH AN BOLATION AND ARE PROVIDED WITH AN BOLATION FOWER LOCKOUT SWITCH IN THE CONTROL ROOM CREDIT IS TAKEN ONLY FOR THE TYO VALVES GUTSIDE THE ENCAPELLATION TAKE BECAUSE THE VALVE INBUGE THE TANK CANNOT BE TYPE C THETED TESTED.



CONTAINMENT PENETRATION NO. P-14 RESIDUAL HEAT REMOVAL SYSTEM

REFERENCE SECTION(S) 5.4.7 & 6.3 REV. 13

WOLF CREEK

UPDATED SAFETY ANALYSIS REPORT

CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 14 OF 74

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VALVE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM	l	VA	LVE POSITI	ÓN		APPENDIX J
NO.	VALVE SIZE, IN	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
EJHV+8811A	14/14	OUTSIDE	OUT	GATE	MOTOR	1	REM/MAN	SIS AND RWST-LO	N/A	CLOSED	CLOSED	AS IS	CLOSED	OPEN	Ą
EJHV-23	1/1	OUTSIDE	OUT	GATE	SOLENOID	1	NONE	REM/MAN	5	CLOSED	CLOSED	CLOSED	CLOSED	OPEN	С
EJHV-25	1/1	OUTSIDE	OUT	GATE	SOLENOID	1	NONE	REM/MAN	5	CLOSED	CLOSED	CLOSED	CLOSED	OPEN	C
E.IV-187	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
	1	1													

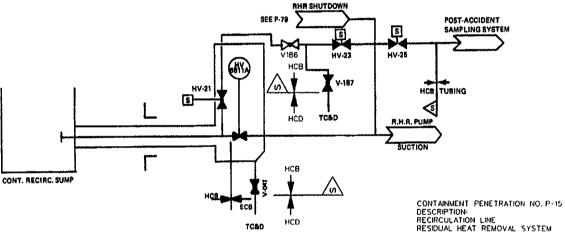
ASSOCIATED WITH A SAFETY FEATURES SYS. YES NO FLUID CONTAINED: WATER LENGTH OF PIPING TO OUTERMOST ISOLATION VALVE: N/A APPLICABLE GDC NO. 56

GENERAL COMMENTS:

THIS PENETRATION IS ASSOCIATED WITH THE RINE SYSTEM AND THE PORTACCIDENT SAMPLING SYSTEM (PASS), RINE RECORD TO MITGATE THE CONSEQUENCES OF A LOCA. A SINGLE REMOTENAMUAL ISOLA-THOM IS PROVIDED, LOCATED WITHWA WATERTIGHT COMPARTMENT OUTSIDE THE CONTAINMENT, FOR GREATER YSTEM RELIASILITY, A SINGLE ACTIVE OR PASSIVE RELIASILITY, AS INGLE ACTIVE OR PASSIVE THE SYSTEM IS CLOSED OUTSIDE THE CON-TAILURE CAN SE ACCOMMODATED SINCE THE SYSTEM IS CLOSED OUTSIDE THE CON-TAINMENT AND IS DESIGNED AND CON-STRUCTED COMMENSURATE WITH THE DESIGN AND CONSTRUCTION OF THE CON-TAINMENT.

LOCAL TESTING OF THE RHR VALVE OR THE CLOSED SYSTEM OUTSIDE THE CON-TAIMMENT IS NOT REQUIRED SINCE THE System is operated and inspected During Normal Flant Operation to Assure That the integrity is being Maintained.

THE PASE LINE IS PROVIDED WITH THREE GAPETY-RELATED VALVES WHICH MEET THE REQUIREMENTS FOR CONTAINERNT ISOLATION AND ARE PROVIDED WITH AN ISOLATION FOWER LOCKOUT SWITCH IN THE CONTROL ROOM, GREDT IS TAKEN ONLY FOR THE TWO VALVES GUTENDE THE ENCAPELATION TANK SCAUSE THE VALVE INSIDE THE TANK CANNOT BE TYPE C TESTED.



REFERENCE SECTION(S) 5.4.7 & 6.3 REV. 13

WOLF CREEK

UPDATED SAFETY ANALYSIS REPORT

CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 15 OF 74

VALVE	LINE/ VALVE	INSIDE/ OUTSIDE	NORMAL FLOW	VALVE		POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI	ION		APPENDIX J
NO.	SIZE, IN.	CONT.	DIRECTION	TYPE	OPERATOR	SOURCE	SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
ENHV-01	12/12	OUTSIDE	OUT	GATE	MOTOR	1	CIS-A	REM/MAN	30	CLOSED	CLOSED	AS IS	CLOSED	OPEN	A
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ASSOCIATED W	TH A SAFET	Y	<u> </u>	*	*							···-	L	-J	

FEATURES SYS. YES NO

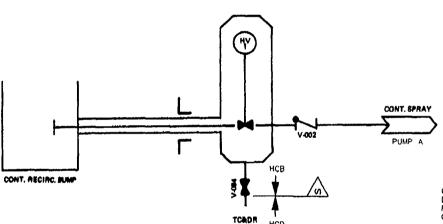
FLUID CONTAINED: WATER LENGTH OF PIPING TO OUTERMOST

ISOLATION VALVE: N/A APPLICABLE GDC NO. 56

GENERAL COMMENTS:

GENERAL COMMENTS: THIS JENETRATION IS ASSOCIATED WITH THE CONTAINMENT BRAY SYSTEM, WHICH IS REQUIRED TO MITHOATE THE CONSE-QUENCES OF A LOCA, A SINGLE REMOTE-MANUAL INCLATION IS PROVIDED, LOCAT-ED WITHIN A WATAFINGHT COMPARTMENT OUTEDE THIS CONTAINMENT, FOR GREAT-ER SYSTEM RELIABILITY, A SINGLE ADTIVE OR PABLIVE PAILURE CAN BE ACCOMMO-DATED SINGT THE SYSTEM IS CLOSED OUT SIDE THE CONTAINMENT AND IS DESIGNED AND CONSTRUCTED COMMENSURATE WITH THE DESIGN AND CONSTRUCTION OF THE CONTAINMENT.

LOCAL TESTING OF THE VALVE OR THE CLOSED BYSTEM QUISIDE THE CONTAIN-MENT IS NOT REQUIRED SINCE THE SYSTEM IS OPERATED AND INSPECTED BURING NORMAL FLANT OPERATION TO ASSURE THAT THE INTEGRITY IS BEING MAIN-TAMED.



HCD

CONTAINMENT PENETRATION NO. P-16 DESCRIPTION: RECIRCULATION LINE CONTAINMENT SPRAY SYSYTEM

REFERENCE SECTION(S) 5.2.2 REV. 13

UPDATED	-	CREEK ANALYSIS	REPORT
CONI	FIGURE	PENETRATIO 6.2.4-1 6 OF 74	ONS

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VALVE	LNE/ VALVE	NSIDE/ OUTSIDE	FLOW	VALVE	VALVE	POWER	ACTUATION	SECONDARY	MAXIMAN		V	LVE POSITI	ON		APPENDIX J
NO.	SIZE, N.	CONT,	ORECTION	TYPE	OPERATOR	SOURCE	SICHAL	SICINAL	THE (SEC.)	NORMAL	SHUTDOWN	FAL	PRIMARY	SECONDARY	REQUIREMENT
EJHCV-8825	94/94	INSIDE	H	GLOBE	AR	1	CIS-A	NONE	10	CLOSED	CLOSED	CLOSED	CLOSED	N/A	
EJHV-8840	10/10	OUTSIDE	N	GATE	MOTOR	4	NONE	REM/MAN	15	CLOSED	CLOSED	AS IS	CLOSED	OPEN	
EJV-056	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
EJV-124	1/1	INSIDE	N/A	CL.OBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
EJV-122	1/4	INSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	
EJV-118,120	1/1	INSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED				N/A
EJV-175.6.7.8	1/4/1/4	INSIDE		GLOBE	MANUAL	N/A		N/A	N/A	CLOSED		N/A	CLOSED	N/A	N/A
and the second secon	8/6	NSIDE		CHECK							CLOSED	N/A	CLOSED		N/A
					N/A	N/A	N/A	N/A	H/A	CLOSED	CLOSED	N/A	CLOSED	OPEN	A
EJ-88419	5/6	INSIDE	N N	CHECK	N/A	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	OPEN	

FEATURES SYS.	YESIX NO
FLUID CONTAINED:	WATER
LENGTH OF PIPING ISOLATION VALVE:	TO OUTERMOST
APPLICABLE GDC NO.	55

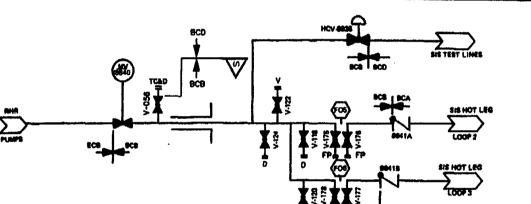
GENERAL COMMENTS:

ТНЕ РЕМЕТИЛІТИ В АВОСІЛТІО МІТИ ТНЕ ЯВОСІЛІ НАЛ ЛЕНОVАІ БУТІМ МІСНІВ В ВОСІЛЬТО ТО МУТИЛА ОСМАТСИМИСТВІ ОТ ОМУТИЛА БУТІВА ОСМАТСИМИСТВІ ОТ А СОСА. А СИНСК VALVE IS PROVIDED FOR EACH MEANCH LARI BIBLOT THE CONTAMINET. АВО А REMOTEMUSICIL BOLATION VALVE IS CAN BE ACCOMPACINED FOR EACH MEANE CAN BE ACCOMPACINED AND CONTAMINET. A SMELL ACTIVE ON PARAVE FALLINE CAN BE ACCOMPACINED AND CONTAMINET. ID COMMENSIONALE WITH THE CONTAMINET. ASD CONSTRUCTION OF THE CONTAMINET. ASD CONSTRUCTION OF THE CONTAMINET. ASD CONSTRUCTION OF THE CONTAMINET. LEALAGE SETECTION FROM THE UNE OLITIZET HE CONTAMINET FROM VIEND, AN SECTION SAL

LOCAL THETHIG OF THE VALVES ON THE CLOBED SYSTEM CUTEROE THE CONTAN-HEAT IS NOT REQUIRED BUTCTINE GYTEM IS OFFRATED AND HUPGCTED DURING NOM-SAL PLANT OFFRATED TO ADMINE THAT THE INTEGRITY IS DEAND MAINTAINED.

NOTE: ALL VENTS, DRAINS AND FLOW POINTS AS INDICATED BELOW.





FP FP

BCA BCA

CONTANNENT PENETRATION NO. P-21 Description: Hot leg injection Residual heat removal system

REFERENCE SECTION(S) 5.4.7/6.3 REV. 13

WOLF CREEK

UPDATED SAPETT ANALYSIS REPORT

CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 17 OF 74

VALVE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY		MAXIMUM		VA	VALVE POSITION					
NO.	VALVE SIZE, IN.	CONT.	FLOW DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION	ACTUATION	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT		
BBHV-8351B	2/2	OUTSIDE	iN	GLOBE	MOTOR	4	NONE	REM/MAN	N/A	OPEN	OPEN	AS IS	OPEN	CLOSED	С		
6BV-354	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A		
BBV-246	Y4/Y4	OUTSIDE	N/A	GLOBE	MANUAL.	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A		
88v148	2/2	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	OPEN	OPEN	N/A	OPEN	CLOSED	c		
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ASSOCIATED W	TH A SAFET	Y _	1								-						

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FEATURES SYS. YES NO

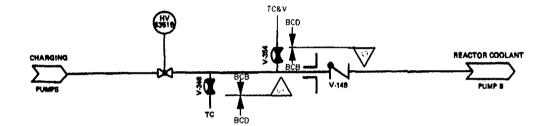
FLUID CONTAINED: WATER

LENGTH OF PIPING	TO	OUTERMOST 11.7 ft.
APPLICABLE GDC NO.		55

GENERAL COMMENTS:

THE FENETATION FINING HAS A HIGH PRESEURE WATER INFLOW WHICH PRE-CLUDES THE NEED FOR AUTOMATIC ISOLATION OF THIS PRETRATION. THE CVCI CHARGING PLANE SUPELY REACTOR COOLANT FUMP SEAL INSCRIDE WATER, AND THEME IS A FOTENTIAL FOR DAMAGE TO THE REACTOR COOLANT FUMP IF UNDERRED ISOLATION SHOULD OCCUR.

THE IBOLATION CAN BE AFFECTED BY REMOTEMANUAL CLOBURE OF THE MOTOR-OPERATED VALVE BY THE OPERATOR PRIOR TO THE CHARGING PLANE COMPLET-ING THEIR BAFETY FUNCTION.



CONTAINMENT PENETRATION NO. P-22 DESCRIPTION: RCP SEAL WATER SUPPLY REACTOR COOLANT SYSTEM

REFERENCE SECTION(S) 5.0 REV. 13

WOLF CREEK UPDATED SAFETY ANALYSIS REPORT

> CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 18 OF 74

VALVE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY							APPENDIX J
NO	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL		NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
BGHV-8160	3/3	INSIDE	τυο	GLOBE	AIR	1	CIS-A	NONE	10	OPEN	OPEN	CLOSED	CLOSED	N/A	c
BGV-363	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	NONE	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
BGHV-8152	3/3	OUTSIDE	OUT	GLOBE	AIR	4	CIS-A	NONE	10	OPEN	OPEN	CLOSED	CLOSED	N/A	¢
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ASSOCIATED WITH A SAFETY FEATURES SYS. YES NO

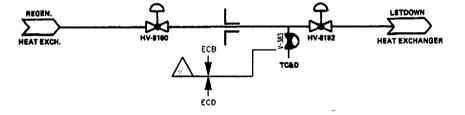
FLUID CONTAINED: WATER

LENGTH OF PIPING TO OUTERMOST ISOLATION VALVE: 11.6ft

APPLICABLE GDC NO. 55

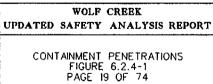
GENERAL COMMENTS:

NONE



CONTAINMENT PENETRATION NO. P-23 DESCRIPTION: NORMAL LETDOWN CHEMICAL & VOLUME CONTROL SYSTEM

REFERENCE SECTION(S) 9.3.4 REV. 13



	LINE/	INSIDE/	NORMAL	VALVE				SECONDARY	MAXIMUM		APPENDIX J				
VALVE NO.	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
BCHV-8112	2/2	INSIDE	TUO	GLOBE	MOTOR	1	CIS-A	NONE	10	OPEN	OPEN	AS IS	CLOSED	N/A	C
BGV-135	Y4/ Y4	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	C
BGHV-8100	2/2	OUTSIDE	OUT	GLOBE	MOTOR	4	CIS-A	NONE	10	OPEN	OPEN	AS IS	CLOSED	N/A	C
BGV-457	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
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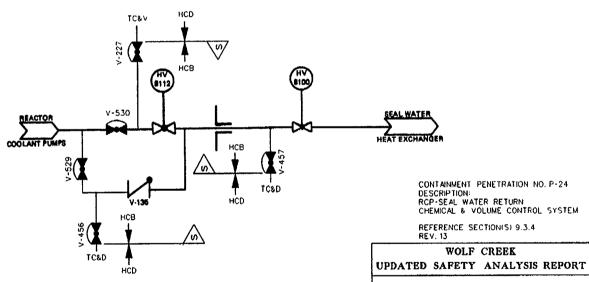
ASSOCIATED WITH A SAFETY FEATURES SYS. YES NO 🕅

FLUID CONTAINED: WATER

LENGTH OF PIPING	TO OUTERMOST
ISOLATION VALVE:	12.6ft
APPLICABLE GDC NO.	55

GENERAL COMMENTS.

NONE



CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 20 OF 74

VALVE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI	ON		APPENDIX J
NO	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
BLHV-8047	3/3	OUTSIDE	IN	DIAPHRAGM	AIR	4	CIS-A	NONE	10	OPEN	OPEN	CLOSED	CLOSED	N/A	С
BLV-054	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
BL-8046	3/3	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	OPEN	OPEN	N/A	CLOSED	N/A	с
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<u> </u>		+	<u> </u>	+		l			 						
		<u>+</u>		1											
ASSOCIATED W															
FLUID CONTAIN	ED: WATER		1												
LENGTH OF PIE		ERMOST 12.2/t								4					
APPLICABLE GDC NO.		56]			HCD		9	нсв-	-++CD					
ENERAL COMME	NTS		- RE	ACTOR MAKE	UP .		Ā						CTHE!	للسر	
ONE							HV-9047			Y					
			w/	TER TRANSF	ER			3		HQ.			SYSTER	W3	

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CONTAINMENT PENETRATION NO. P-25 DESCRIPTION: REACTOR MAKEUP WATER REACTOR MAKEUP WATER SYSTEM

REFERENCE SECTION(S) 9.2.7 REV. 11 WOLF CREEK

UPDATED SAFETY ANALYSIS REPORT

CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 21 OF 74

May 2002

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	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		V#	LVE POSITI	ON		APPENDIX J
VALVE NO.	VAL VE SIZE, IN.	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
HBHV-7176	3/3	INSIDE	OUT	DIAPHRAGM	AIR	1	CIS-A	NONE	10	OPEN	OPEN	CLOSED	CLOSED	N/A	C
HBHV-7136	3/3	OUTSIDE	100	DIAPHRAGM	AIR	4	CIS-A	NONE	10	OPEN	OPEN	CLOSED	CLOSED	N/A	c
HBV-419	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
	_														
										<u> </u>					
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ASSOCIATED W FEATURES SYS FLUID CONTAIN	S. YES		-	<u></u>	.					нс	A HC				
ISOLATION VAL APPLICABLE GDC NO. ENERAL COMME		11.9ft 56		TOR COOLANT			HV-7176								\supset
NONE			DI	TAIN TANK		нсо—	HCS	[нсв		(V7136			HOLOUP	TANK

CONTAINMENT PENETRATION NO. P-26 DESCRIPTION: REACTOR COOLANT DRAIN TANK DISCHARGE LIQUID RADWASTE SYSTEM REFERENCE SECTION(S) 11.2 REV. 13

	WOLF	CREEK	
UPDATED	SAFETY	ANALYSIS	REPORT
CON	FIGURE	PENETRATIO 6.2.4-1 2 OF 74	SNC

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N 41 NE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI	N		APPENDIX J
VALVE NO.	VALVE SIZE, IN	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE	NORMAL	SHUTDOWN	FAiL	PRIMARY	SECONDARY	REQUIREMEN
EJHV-8809B	10/10	OUTSIDE	IN	GATE	MOTOR	4	NONE	REM/MAN	N/A	OPEN	OPEN	AS IS	OPEN	CLOSED	A
EJV-058	1/1	OUTSIDE	N/A	CL OBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
EJHCV-8890B	Y4/ Y4	INSIDE	IN	GL OBE	AIR	4	CIS-A	NONE	13	CLOSED	CLOSED	CLOSED	CLOSED	N/A	A
EJV-086	1/1	INSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
EJV-088,090	Y41 Y4	INSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
EP-8818C	6/6	INSIDE	۱N	CHECK	N/A	N/A	N/A	N/A	N/A	CLOSED	OPEN	N/A	OPEN	CLOSED	A
EJV-179,180,181,182	Y41 Y4	INSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
EP-88180	6/6	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	CLOSED	OPEN	N/A	OPEN	CLOSED	A
EJV-166	Y4/ Y4	INSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A

A SAFETY YES NO
WATER
TO OUTERMOST N/A
55

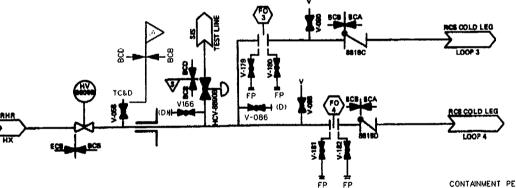
GENERAL COMMENTS:

THIS PENETRATION IS ASSOCIATED WITH THE REBURAL HEAT REMOVAL SYSTEM, WHICH IS REQURED TO MITHATE THE CONSCULENCES OF A LOOA. A CHECK VALVE IS PROVIDED FOR EACH BRANCH LINE INBURDET THE CONTAINMENT, A BINGLE ACTIVE OR PASSIVE FALLURE CAN BE ACCOMMODATED SINCE THE SYSTEM IS CLOSED OUTSIDE THE CONTAINMENT. MINT AND IS DESIGNED AND COMTAIN SOMTRUCTION OF THE CONTAINMENT. ED COMMENSURATE WITH THE DESIGN AND CONTRUCTION OF THE CONTAINMENT.

LOCAL TESTING OF THE VALVE OR THE CLOSED EVETAM OUTSIDE THE CONTAIN-MENT IS NOT REQUIRED SHICE THE EVETAM IS OFFICATED AND INFECTED DURING NORMAL FLANT OPERATION TO ASSURE THAT THE INTEGRITY IS BEING MAINTAIN-SD.

NOTE: ALL VENTS, DRAINS AND FLOW POINTS AS INDICATED BELOW.





CONTAINMENT PENETRATION NO. P-27 DESCRIPTION: COLD LEG INJECTION RESIDUAL HEAT REMOVAL SYSTEM

REFERENCE SECTION(S) 5.4.7 & 6.3 REV. 13

WOLF CREEK

UPDATED SAFETY ANALYSIS REPORT

CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 23 OF 74

	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI	0N		APPENDIX J
VAL VE NO	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL		SECONDARY	REQUIREMENT
EFHV-32	14/14	OUTSIDE	IN	BUTTERFLY	MOTOR	4	SIS	REM/MAN	N/A	OPEN	OPEN	AS IS	OPEN	CLOSED	c
EFHV-34	14/14	INSIDE	IN	BUTTERFLY	MOTOR	4	SIS	REM/MAN	N/A	OPEN	OPEN	AS IS	OPEN	CLOSED	С
EFV-278	1/1	INSIDE	N/A	GATE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
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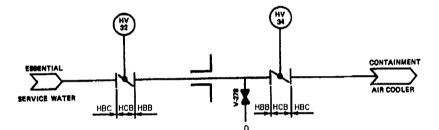
FLUID CONTAINED: WATER

LENGTH OF PIPING	TO OUTERMOST 17.2ft
APPLICABLE GDC NO.	56

GENERAL COMMENTS:

THIS PENETRATION IS ASSOCIATED WITH THIS ESSENTIAL BERVICE WATER STYTEM, WHICH IS REQUIRED TO MITIGATE THE COMBROUSINCES OF A LODA. A REMOTE MANUAL FOMER.OFRATED VALVE IS LOCATED INFLOR, AND A REMOTE MANUAL POWER.OFERATED VALVE IS LOCATED OUT-EUE THE CONTAINMENT.

THE SUR CONTAINMENT, THESE VALVES ARE FOWERED FROM THE SAME FOWER SOURCE FOR GREATER SYS-TEM RELIABILITY, A SINGLE ACTIVE OR PABULE FAR UNE CAN BE ACCOMMONGATED ENGE THE SYSTEM IS A CLOED SYSTEM INSDE THE CONTAINENT, WINCH IN DE-ENGES AND CONSTRUCTED IN ACCORD-ANCE WITH AME EDEVION II, CLAM 3 REQUIREMENT, THE SEMENTIAL BERVICE WATER LINES ARE NOT VENTED OR DRAM. ED DURING A TYPE A THEST SINCE THE AIR CONTAINMENT, A TYPE C TEST IN PERFORM-ED.



CONTAINMENT PENETRATION NO. P-28 DESCRIPTION: ESW TO CONTAINMENT AIR COOLER ESSENTIAL SERVICE WATER SYSTEM

REFERENCE SECTION(S) 6.2.2 REV. 13

WOLF CREEK UPDATED SAFETY ANALYSIS REPORT

> CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 24 OF 74

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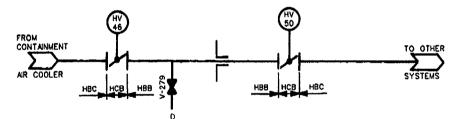
VALVE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI	ON		APPENDIX J
NQ.	VALVE SIZE, IN	OUTSIDE CONT.	FLOW DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
EFHV-46	14/14	INSIDE	OUT	BUTTERFLY	MOTOR	4	SIS	REM/MAN	N/A	OPEN	OPEN	AS IS	OPEN	CLOSED	c
EFV-279	1/1	INSIDE	N/A	GATE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
EFHV-50	14/14	OUTSIDE	OUT	BUTTERFLY	MOTOR	4	SIS	REM/MAN	N/A	OPEN	OPEN	AS IS	OPEN	CLOSED	С
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FLUID CONTAINED: WATER LENGTH OF PIPING TO OUTERMOST ISOLATION VALVE: N/A APPLICABLE GDC NO. 56 GENERAL COMMENTS:

THE PENETRATION IS ASSOCIATED WITH THE BESSITTAL BERVICE WATER GYNTEN, WHICH IS ERCURED TO INTROFTS THE COMBEDUENCES OF A LOCA A REMOTENANUAL LOCATED MERCE AND A REMOTEMANUAL FOWER OFERATED VALVE IS LOCATED GUT-ENDE THE CONTAINMENT.

THESE VALVES ARE POWERED FROM THE SAME POWER SOURCE FOR GREATEN SYS TEM RELABILITY, A SHMELE ACTIVE OR PASIVE RATURE CAN BE ACCOMBINED SHICE THE SYSTEM & A GLOBED SYSTEM WHIDE THE ONTAXEMENT, WHICH IS DE-SHENED AND CONSTRUCTED IN ACCORD-AND WITH ADME BECTION HI, CLASE 3 REGUMERMENTS.

THE EXERTIAL SERVICE WATER LINES ARE NOT VENTED ON GRAINED DURING A TYPE A THET WINCE THE ARE GOOLERE MAY SER REQUIRED TO GOOL, THE CONTAINMENT. A TYPE C TEST M PERFORMED.



CONTAINMENT PENETRATION NO. P-29 DESCRIPTION: ESW FROM CONTAINMENT AIR COOLERS ESSENTIAL SERVICE WATER SYSTEM

REFERENCE SECTION(S) 6.2.2 REV. 13

WOLF CREEK UPDATED SAFETY ANALYSIS REPORT

> CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 25 OF 74

	LINE/	INSIDE/	NORMAL			POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI	ON		APPENDIX J
VALVE NO.	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW	VALVE TYPE	VALVE OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	<u></u>	SECONDARY	REQUIREMENT
KAFY-29	11/2/2	OUTSIDE	IN	GLOBE	AIR	1	CIS-A	REM/MAN	5	OPEN	OPEN	CLOSED	CLOSED	OPEN	¢
KAV-218	11/2/11/2	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
KAV-204	11/2/11/2	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	OPEN	OPEN	N/A	CLOSED	OPEN	С
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FLUID CONTAINED: AR

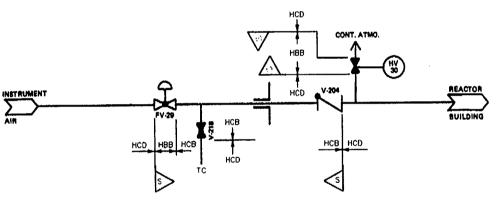
LENGTH OF PIPING TO OUTERMOST ISOLATION VALVE: 7.91t

56

APPLICABLE

GENERAL COMMENTS:

NONE



CONTAINMENT PENETRATION NO. P-30 DESCRIPTION: INST. AIR AND H $_2$ CONTROL MAKEUP AIR COMPRESSED AIR SYSTEM

REFERENCE SECTION(S) 9 3 1 REV. 13

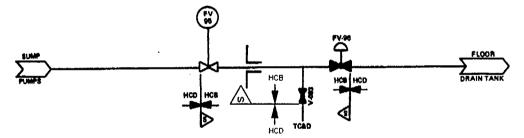
WOLF CREEK UPDATED SAFETY ANALYSIS REPORT CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 26 OF 74

VALVE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI	ON		APPENDIX J
NO.	VALVE Sizê, In.	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
LFFV-95	6/6	INSIDE	OUT	GATE	MOTOR	1	CIS-A	NONE	30	OPEN	OPEN	AS IS	CLOSED	N/A	С
LFFV-96	6/6	OUTSIDE	QUT	GLOBE	AIR	4	CIS-A	NONE	4	SEE NOTES	SEE NOTES	CLOSED	CLOSED	N/A	C
LFV-093	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
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FLUID CONTAINED: WATER LENGTH OF PIPING TO OUTERMOST ISOLATION VALVE: 18.3ft APPLICABLE GDC NO 56

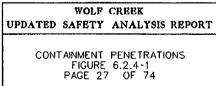
GENERAL COMMENTS:

VALUE FUSE OPENE ONLY WHEN ONE OF THE CONTAINENT BURNPLINNES ARE OPERATING. THE OWNERS' DEADE BIGMAL TO OFEN THE VALUE IS NEGATED WHEN A PROTECTION GRADE CIS-A BIGNAL IS IS RECEIVED



CONTAINMENT PENETRATION NO. P-32 DESCRIPTION: CONTAINMENT SUMP PUMP DISCHARGE FLOOR AND EQUIPMENT DRAINAGE SYSTEM

REFERENCE SECTION(S) 9.3.3 REV. 13



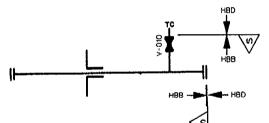
	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI	ON		APPENDIX J
VALVE NO.	VALVE SIZE, IN	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	
GPV-010	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
FLANGES	6/6	вотн	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8
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FLUID CONTAINED: AIR

1 2010 001111120	
LENGTH OF PIPING ISOLATION VALVE:	TO OUTERMOST N/A
APPLICABLE GDC NO.	56

GENERAL COMMENTS:

FLANGES ARE REMOVED DNLY DURING PERFORMANCE OF TYPE A TEST



CONTAINMENT PENETRATION NO. P-34 DESCRIPTION: CONTAINMENT PRESSURIZATION LINE ILRT PRESSURIZATION SYSTEM

REFERENCE SECTION(S) 6 2 6 REV. 13

WOLF CREEK UPDATED SAFETY ANALYSIS REPORT

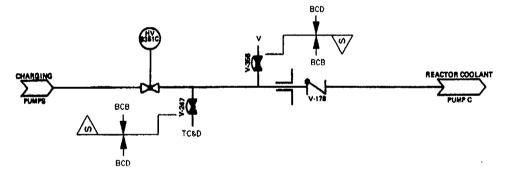
> CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 28 OF 74

VALVE	LINE/	INSIDE / OUTSIDE	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSIT	ION		APPENDIX J
NO.	VALVE SIZE, IN	CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION	ACTUATION	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
BBHV-8351C	2/2	OUTSIDE	IN	GLOBE	MOTOR	4	NONE	REM/MAN	N/A	OPEN	OPEN	AS IS	OPEN	CLOSED	С
BBV-356	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
BBV-247	Y41 Y4	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
BBV+178	2/2	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	OPEN	OPEN	N/A	OPEN	CLOSED	С
ASSOCIATED WI		<u></u>	<u> </u>	L		L		<u> </u>			1		i		<u> </u>

FEATURES SYS. YES NO TO FLUID CONTAINED: WATER LENGTH OF PIPING TO OUTERMOST ISOLATION VALVE: 17.5 APPLICABLE GDC NO. 55 GENERAL COMMENTS:

> THE PENETRATION PIPING HAE A HIGH PRESENTE WATER INFLOW WHICH PRE-CLUDES THE NEED FOR AUTOMATE ISOLATION OF THE PINETRATION. THE CVCS CHARGING PLAYS SUPELY READTOR COOLANT FURS SLAL WISCTION WATER, AND THERE IS A POTINTIAL FOR DAMAGE TO THE REACTOR COOLANT FUMP IP UNDESIRED ISOLATION SHOULD GOOUR.

THE INCLATION CAN BE AFFECTED BY REMOTEMANUAL CLOBURE OF THE MOTOR-OPERATED VALVE BY THE OPERATOR PRIOR TO THE CHARGING PLANE OPERATOR ING THEIR BAFETY PUNCTION.



CONTAINMENT PENETRATION NO. P-39 DESCRIPTION: RCP - SEAL WATER SUPPLY REACTOR COOLANT SYSTEM

REFERENCE SECTION(S) 5 0 REV. 13

WOLF CREEK UPDATED SAFETY ANALYSIS REPORT

CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 29 OF 74 Q.

	LINE/	INSIDE/	NORMAL			POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSIT	ION		APPENDIX J
VALVE NO.	VALVE SIZE, IN	OUTSIDE CONT.	FLOW	VALVE TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
BBHY-835ID	2/2	OUTSIDE	IN	GLOBE	MOTOR	4	NONE	REM/MAN	N/A	OPEN	OPEN	AS IS	OPEN	CLOSED	с
BBV-358	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
BBV-248	YAL YA	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
88V-208	2/2	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	OPEN	OPEN	N/A	OPEN	CLOSED	c
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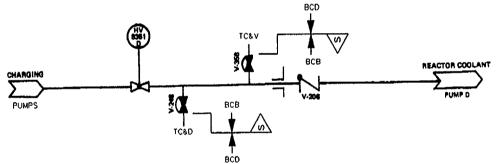
FLUID CONTAINED: WATER

LENGTH OF PIPING	TO OUTERMOST
ISOLATION VALVE:	17.5ft
APPLICABLE GDC NO.	55

GENERAL COMMENTS:

THIS PENETRATION PIPING HAS A HIGH PRESSURE WATER INFLOW WHICH PRE-CLUDES THE NEED FOR AUTOMATIC ISOLATION OF THIS PENETRATION. THE CVCS CHARGING PUMPE SUPELY REACTOR COOLANT FUNP SEAL HILGTION WATER, AND THERE IS A POTENTIAL FOR DAMAGE TO THE REACTOR COOLANT FUMP IP UNDESIRED ISOLATION SHOULD OCCUR.

THE IBOLATION CAN BE AFFECTED BY REMOTE-MANUAL CLOBURE OF THE MOTOR-OPERATED VALVE BY THE OPERATOR PRIOR TO THE CHARGING PUMPE COMPLET-ING THEIR BAFETY FUNCTION.



CONTAINMENT PENETRATION NO. P-40 DESCRIPTION: RCP - SEAL WATER SUPPLY REACTOR COOLANT SYSTEM

REFERENCE SECTION(S) 5.0 REV. 13

WOLF CREEK UPDATED SAFETY ANALYSIS REPORT CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 30 OF 74

VALVE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXINUM		VA	LVE POSITI	ON		APPENDIX J
NO.	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
BBHV-8351A	2/2	OUTSIDE	IN	GLOBE	MOTOR	4	NONE	REM/MAN	N/A	OPEN	OPEN	AS IS	OPEN	CLOSED	C
BBV-352	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
88V-245	¥41 ¥4	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
8BV-118	2/2	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	OPEN	OPEN	N/A	OPEN	CLOSED	c
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ASSOCIATED W FEATURES. SYS							,								
FLUID CONTAIN	CO. WATED	-	1												

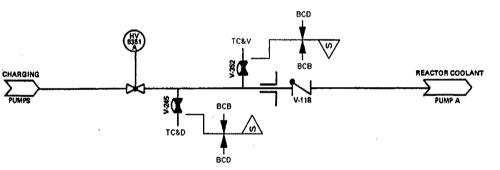
FEATURES. SYS.	
FLUID CONTAINED:	WATER
LENGTH OF PIPING ISOLATION VALVE:	TO OUTERMOST 20.0ft
APPLICABLE GDC NO.	55
ENERAL COMMENTS:	

GENERAL COMMENTS:

THIS PENETRATION PIPING HAS A HIGH PRESUME WATER INFLOW WHICH PRE-GLUDES THE NEED FOR AUTOMATIC ISOLATION OF THIS PENETRATION, THE CVCS CHARGING PUMP SUPLY REAGTOR COGLANT PIMP SEAL INSECTION WATER, AND THERE IS A FOTENTIAL FOR DAMAGE TO THE REACTOR COOLANT FUMP IP UNDESIRED ISOLATION SHOULD GOOUR.

THE IDOLATION CAN BE AFFECTED BY REMOTE-MANUAL CLOBURE OF THE MOTOR-OPERATED VALVE BY THE OPERATOR PRIOR TO THE CHARGE OWNELET-ING THEIR EAFETY FUNCTION.

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CONTAINMENT PENETRATION NO. P-41 DESCRIPTION RCP - SEAL WATER SUPPLY REACTOR COOLANT SYSTEM REFERENCE SECTION(S) 5.0 REV. 13

WOLF CREEK UPDATED SAFETY ANALYSIS REPORT

CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 31 OF 74

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May 2002

VALVE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI			
NO.	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
HDV-016	2/2	OUTSIDE	IN	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	C
HDV-023	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	N/A	N/A	CLOSED	N/A	N/A
HDV-017	2/2	INSIDE	IN	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	C
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SSOCIATED W	TH A SAFET	Y													
EATURES SYS	. YES	NO X	4												
LUID CONTAIN	ED: STEAM												•		
NGTH OF PI		ERMOST	1												
OLATION VAL	VE	14.9ft	4												
PPLICABLE DC NO.		56							<	হ					
VERAL COMME	NTS:		4		н		•		Han	HBD					
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NONE					EAM	V-018		нвв		17			RY. HEAD) NEA	
NONE					EAM	V-018	1			17			Σ) NEA	
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NONE			,		EAM	V-018	1			17		. <u></u> ,	Σ) REA	
NONE			,		EAM	V-016	ş x		v.a	17			Σ	NEA	
NONE					EAM	V-016	ş x		v.o	17		 \	VASHDOWN AN	ANMENT PEN	IETRATION NO. P-1
NONE					EAM	V-016	ş x		vo	17			CONT CONT DESCI DECO	AINMENT PEN RIPTION: NTAMINATION	STEAM
NONE					EAM	¥4016	ş x			17			CONT CONT DESCI DECO	AINMENT PEN RIPTION:	STEAM
NONE					EAM }	V-018	ş x		v.o	17			CONT DESCI DECO DECO	AINMENT PEN RIPTION: NTAMINATION NTAMINATION RENCE SECTI	STEAM SYSTEM
NONE					EAM }	V-018	ş x		v.o			······	CONT DESCI DECO REFEI	AINMENT PEN RIPTION: NTAMINATION NTAMINATION RENCE SECTI	STEAM SYSTEM ION(S) 12 3
NONE					EAM }	V-018	ş x		v.o			[CONT DESCI DECO REFEI REV.	AINMENT PEN RIPTION: NTAMINATION NTAMINATION RENCE SECTI 13 WOLF CI	STEAM SYSTEM ION(S) 12 3
NONE					EAM }	V-018	ş x		v.a			[CONT DESCI DECO REFEI REV.	AINMENT PEN RIPTION: NTAMINATION NTAMINATION RENCE SECTI 13 WOLF CI	STEAM SYSTEM ION(S) 12 3 REEK
NONE					EAM	V-018	ş x		vo			[CONT DESCI DECO DECO REFEI REV.	AINMENT PEN RIPTION: NTAMINATION NTAMINATION RENCE SECTI I3 WOLF CI AFETY A	STEAM SYSTEM ION(S) 12 3 REEK INALYSIS REI
NONE					EAM	V-018	ş x		v.o	17		[CONT DESC DECO DECO REFEI REV. DATED S.	AINMENT PEN RIPTION: NTAMINATION NTAMINATION RENCE SECTI I3 WOLF CI AFETY A	STEAM SYSTEM ION(S) 12 3 REEK INALYSIS REI ENETRATIONS

C-33

VALVE	LINE/ VALVE	INSIDE/ OUTSIDE	NORMAL FLOW	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI	N		APPENDIX J
NO.	SIZE, IN.	CONT.	DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
HBHV-7126	Ya/ Ya	INSIDE	OUT	DIAPHRAGM	AIR	1	CIS-A	NONE	10	OPEN	OPEN	CLOSED	CLOSED	N/A	c
HBHV-7150	Ya/ Ya	OUTSIDE	OUT	DIAPHRAGM	AIR	4	CIS-A	NONE	10	OPEN	OPEN	CLOSED	CLOSED	N/A	С
H8V-420	Y41 Y4	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
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SSOCIATED WIT			[[4	II			11		I	I	
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LUID CONTAINE]												
ENGTH OF PIPI OLATION VALV	NG TO OUT	RMOST 2.3ft													
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DC NO.	17.0.	56]				•			থ					
PPLICABLE DC NO. NERAL COMMEN	ITS:	56	j			L.				НВВ					
DC NO.	ITS:	56				н				H88	480				
DC NO. NERAL COMMEN	its:	56	J			н				HBB O	120		WAST	E GAS	
DC NO. NERAL COMMEN	its:	56	REACTO	R COOLANT		H		L,		Q	HBD		,wasti		
DC NO. NERAL COMMEN	ITS:	56	PEACTO			HI 					HBD		$-\Sigma$	E GAS	
DC NO. NERAL COMMEN	ITS:	56	Σ	N TANK		HI -			8	HV-7150	188		$-\Sigma$	\supset	
DC NO. IERAL COMMEN	its:	56	Σ	\supset		HI 		<u> </u>	§ D .	HV-7150			$-\Sigma$	\supset	
DC NO. IERAL COMMEN	its:	56	Σ	\supset		HI -		<u> </u>	^	HV-7150			$-\Sigma$	\supset	
DC NO. NERAL COMMEN	its:	56	Σ	\supset		HI 	HEB HV-7128	<u> </u>	8 D . > TC	HV-7150	188 1 88		COMP		ETRATION NO. P-4
DC NO. NERAL COMMEN	its:	56	Σ	\supset		HI -	HV-7128	<u> </u>	^	HV-7150			CONTA DESCR R.C.D.	NMENT PENE	LINE
DC NO. NERAL COMMEN	irs:	56	Σ	\supset		HI -	HV-7128	<u> </u>	^	HV-7150	188 1 88		CONTA DESCR R.C.D.	NMENT PENE	LINE
DC NO. NERAL COMMEN	irs:	56	Σ	\supset		H		<u> </u>	^	HV-7150	188 1 88		CONTA DESCR R.C.D. LIQUID REFERI	INMENT PENE IPTION: TANK VENT RADWASTE	LINE
DC NO. NERAL COMMEN	irs:	56	Σ	\supset		HI -			^	HV-7150	188 1 88		CONTA DESCR R.C.D. LIQUID REFERI REV. 1	NIMENT PENE IPTION: TANK VENT RADWASTE ENCE SECTIO	LINE SYSTEM DN(S) 11.2
DC NO. VERAL COMMEN	ITS:	56	Σ	\supset		Hi 		<u>_</u>	^	HV-7150	188 1 88	UPD	CONTA DESCR R.C.D. LIQUID REFERI REV. 1	NMENT PENE IPTION: TANK VENT RADWASTE ENCE SECTION WOLF CR	LINE SYSTEM DN(S) 11.2 BBK
DC NO. NERAL COMMEN	ITS:	56	Σ	\supset				<u>_</u>	^	HV-7150	188 1 88	UPD	CONTA DESCR R.C.D. LIQUID REFERI REV. 1	NMENT PENE IPTION: TANK VENT RADWASTE ENCE SECTION WOLF CR	LINE SYSTEM DN(S) 11.2
DC NO. NERAL COMMEN	ITS:	56	Σ	\supset				<u>_</u>	^	HV-7150	188 1 88	UPD	CONTA DESCR R.C.D. LIQUID REFERI REV. 12	NMENT PENE IPTION: TANK VENT TANK VENT	LINE SYSTEM IN(S) 11.2 EEK NALYSIS REF
DC NO. NERAL COMMEN	ITS:	56	Σ	\supset					^	HV-7150	188 1 88	UPD	CONTA DESCR R.C.D. LIQUID REFERI REV. 13 ATED SA	NIMENT PENE IPTION: TANK VENT TANK VENT RADWASTE ENCE SECTION WOLF CR IPETY AT	LINE SYSTEM IN(S) 11.2 EEK NALYSIS REF
DC NO. IERAL COMMEN	ITS:	56	Σ	\supset		HI 			^	HV-7150	188 1 88	UPD	CONTA DESCR R.C.D. LIQUID REFERI REV. I ATED SA	NMENT PENE IPTION: TANK VENT TANK VENT	LINE SYSTEM DN(S) 11.2 EEK NALYSIS REF NETRATIONS 2.4-1

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	LINE/	INSIDE/	NORMAL.	VALVE	1	POWER	PRIMARY	SECONDARY	MAXIMUM		٧٨	LVE POSITI	NC		APPENDIX J
VALVE NO.	VAL VE SIZE, IN.	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
EPV-046	1/1	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	c
EPV-043	Y4 1 Y4	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
EPHV-8880	1/1	OUTSIDE	IN	GLOBE	AIR	4	CIS-A	NONE	10	CLOSED	CLOSED	CLOSED	CLOSED	N/A	c
														+	
		ļ													
	1														
ASSOCIATED WI										1					
FLUID CONTAIN									\leq						
LENGTH OF PIP	ING TO OUT	ERMOST 13.0ft							C88 –	CBD					
APPLICABLE			1							ļ					
		56	J						HV-88	80					
GDC NO.	NTS:	56) •••	UMULATOR			Vois L		L L	B0 ┃					
GDC NO.	NTS:	56) Č	TANKS		^{49D}	┥╱╀╍╧	FB TC	HV 400	 			~~~~		
GDC NO.	NTS:	56	j	<u>· </u>		⁴⁰		シ▝▛᠆┐▔		 			~~~~	$\overline{}$	
GDC NO. ENERAL COMME	NTS:	56) ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	<u>· </u>		*8 <u>0</u>				 				AINMENT PER	NETRATION NO. P-4 1 LINE FETY INJECTION S
GDC NO. ENERAL COMME	NTS:	56	ا م	<u>· </u>		*• <u>D</u>				 				SUPPLY	FETY INJECTION S
GDC NO. ENERAL COMME	NTS:	56	ا م	<u>· </u>		*• <u>D</u>				 		UPI	CONT DESC NITRC ACCU REFEI REV.	AINMENT PER AINMENT PER RIPTION: JCEN SUPPLY MULATOR SA RENCE SECT 13 WOLF C	FLINE FETY INJECTION S

C-35

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VALVE	LINE /	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM			VALVE POSITION						
NQ.	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMEN			
EMHV-88028	4/4	OUTSIDE	IN	GATE	MOTOR	4	NONE	REM/MAN	N/A	CLOSED	CLOSED	AS 15	CLOSED	OPEN	A			
EMHV-8824	Y41 Y4	INSIDE	OUT	GLOBE	AIR	1	CIS-A	NONE	10	CLOSED	CLOSED	CLOSED	CLOSED	N/A	A			
EMV-003	2/2	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	OPEN	A			
EMV-004	2/2	INSIDE	IN	СНЕСК	N/A	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	OPEN	A			
EMV-060,061 063, 064 EMV-217, 169	Ya1 Ya	INSIDE	N/A	GLOBE	MANUAL	ħ/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A			
EMV-170, 172	1/1	INSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A			
EMV-059	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A			
		1																

ASSOCIATED WITH A SAFETY FEATURES SYS. YES X NO

FLUID CONTAINED:	WATER
LENGTH OF PIPING	TO OUTERMOST N/A
APPLICABLE GDC NO.	55
CENEDAL CONVENTER	

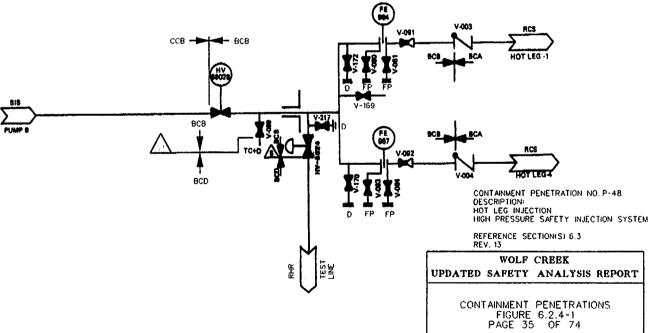
GENERAL COMMENTS:

THIS PENETRATION IS ASSOCIATED WITH THE HIGH PRESSURE GOOLANT INNECTION SYSTEM, WHICH IS REQUIRED TO MITICATE THE CONSIGUENCIE OF A LOCA. A CHECK VALVE IS PROVIDE FOR EACH BRANCH LINE INBED THE CONTAINMENT, AND A REMOTEMANUAL ISOLATION VALVE IS PROVIDED CUTEDE THE CONTAINMENT, AND A REMOTEMANUAL ISOLATION VALVE IS INGLE ACTIVE OF PASSIVE FAILURE CAN BE ACCOMMODATED BINCE THE SYSTEM IS GLOBED AUTRIDE THE CONTAINMENT AND IS DESIGNED AND COMMENT LINE CONTAINMENT SUBATE WITH THE DESIGN AND CONSTRUC-TION OF THE CONTAINMENT AND DETECTION FROM THE LINE OUTSIDE THE CONTAINMENT IS FROUNDED, AS DESIGNED IN BECTIONS 5.3.

LOCAL TESTING OF THE VALVES OR THE CLOSED SYSTEM GUTSION THE CONTAIN-MENT IS NOT REQUIRED SHILL THE CONTAIN-IS OPERATED AND INSTATED DURING NOMAL PLANT OPERATION TO ASSURE THAT THE INTEGRITY IS SEING MAINTAIN-ED.

NOTE: ALL VENTS, DRAINS AND FLOW POINTS AS INDICATED BELOW.





		LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY MAXIMU			VA	LVE POSITIO	N		APPENDIX J
	VALVE NO.	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUREMENT
	EMHV-8835	4/4	OUTSIDE	IN	GATE	MOTOR	4	NONE	REM/MAN	N/A	OPEN	OPEN	AS IS	OPEN	CLOSED	A
	EMHV-8823	3/4-3/4	INSIDE	τυο	GLOBE	AIR	1	CIS-A	NONE	10	CLOSED	CLOSED	CLOSED	CLOSED	N/A	A
	EPV-020	2/2	INSIDE	IN	CHECK	N/A	N/A	N/A .	N/A	N/A	CLOSED	CLOSED	N/A	OPEN	CLOSED	A
	EPV-010	2/2	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	OPEN	CLOSED	A
	EPV-040	2/2	INSIDE	IN	СНЕСК	N/A	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	OPEN	CLOSED	Α
<u> </u>	EPV-030	2/2	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	OPEN	CLOSED	A
	EMV 067	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
	EMV-068 thru	3/4-3/4	INSIDE	N/A	CLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
	EMV-075 EMV-218 EMV162 thru 168	1/1	INSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED /	N/A	N/A
	4020014755		ACCTV	1			1									

ASSOC FEATU	RES SYS.	A SAFET	NO NO	
FLUID	CONTAINED:	WATER		

LENGTH OF PIPING ISOLATION VALVE:	TO OUTERMOS
APPLICABLE GDC NO.	55

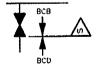
GENERAL COMMENTS

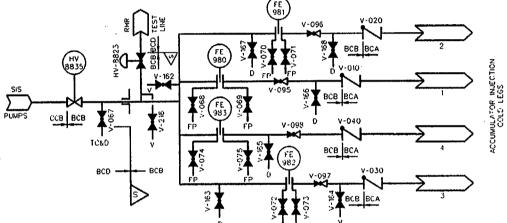
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THIS PENETRATION IS ASSOCIATED WITH THE HICH PRESSURE COOLANT INJECTION SYSTEM, WHICH IS REQUIRED TO MITIGATE THE CONSEQUENCES OF A LOCA. A CHECK VALVE IS PROVIDED FOR EACH BRANCH LINE INSIDE THE CONTAINMENT AND A REMOTE-MANUAL ISOLATION VALVE IS PROVIDED OUTSIDE THE CONTAINMENT. A SINGLE ACTIVE OR PASSIVE FAILURE CAN BE ACCOMMODATED SINCE THE SYSTEM IS CLOSED OUTSIDE THE CONTAINMENT AND IS DESIGNED AND CONSTRUCTED COMMEN-SURATE WITH THE DESIGN AND CONSTRUC-TION OF THE CONTAINMENT LEXAGE DETECTION FROM THIS LINE OUTSIDE THE CONTAINMENT IS PROVIDED, AS DESCRIBED IN SECTION 9.3.3.

LOCAL TESTING OF THE VALVES OR THE CLOSED SYSTEM OUTSIDE THE CONTANO-MENT IS NOT REQUIRED SINCE THE SYSTEM IS OPERATED AND INSPECTED DURING NORMAL PLANT OPERATION TO ASSURE THAT THE INTEGRITY IS BEING MAINTAINED.

NOTE: ALL VENTS, DRAINS AND FLOW POINTS AS INDICATED BELOW.





CONTAINMENT PENETRATION NO. P-49 DESCRIPTION: COLD LEG INJECTION HUCH PRESSURE COOLANT INJECTION SYSTEM REFERENCE SECTION (S) 6.3 REV. 14 WOLF CREEK

UPDATED SAFETY ANALYSIS REPORT

CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 (PAGE 36 OF 74)

VALVE	LINE/	INSIDE /	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSIT	ION		APPENDIX J
NO.	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL,	SHUTDOWN	F AIL	PRIMARY	SECONDARY	REQUIREMEN
GPV-011	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
GPV-012	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
FLANGES	1/1	вотн	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B
					<u> </u>										
						<u> </u>			÷						
ASSOCIATED N TEATURES SY FLUID CONTAI ENGTH OF P SOLATION VAI APPLICABLE GDC NO INERAL COMM LANGES ARE R URING PERFOR	S. YES	NO X	HE	j	- 488		HBD HBB	7]		#				
EST					>		HBD HBB	7]		fi				
			н	30	- HBB				1		μ		DESC	AINMENT PEN RIPTION: SURE SENSIN PRESSURIZAT	G LINES
					>									PRESSURIZAT RENCE SECTI	

May 2002

). P+51 PRESSURE SENSING LINES ILRT PRESSURIZATION SYSTEM

REFERENCE SECTION(S) 6.2.6 REV. 13

WOLF CREEK UPDATED SAFETY ANALYSIS REPORT CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 37 OF 74

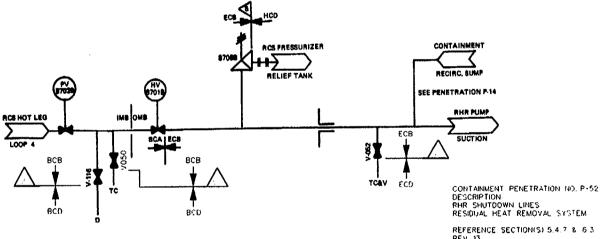
LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM	VALVE POSITION				APPENDIX J	
VALVE SIZE, IN.	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
12/12	INSIDE	OUT	GATE	MOTOR	1	REM/MAN	NONE	120	ÇLOSED	OPEN	AS IS	CLOSED	N/A	A
3/3	INSIDE	N/A	RELIEF	N/A	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	A
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1			1										<u> </u>	
			1											
	1		1	1								<u> </u>		L
	1	1	1						1					
	VALVE SIZE, IN. 12/12	VALVE OUTSIDE SIZE, IN. CONT. 12/12 INSIDE	VALVE OUTSIDE FLOW SIZE, IN. CONT. DIRECTION 12/12 INSIDE OUT	VALVE OUTSIDE FLOW VALVE SIZE, N. CONT. DIRECTION TYPE	VALVE OUTSIDE FLOW VALVE VALVE SIZE, IN. CONT. DIRECTION TYPE OPERATOR 12/12 INSIDE OUT GATE MOTOR	VALVE OUTSIDE FLOW VALVE VALVE OPERATOR SOURCE SIZE, IN. CONT. DIRECTION TYPE OPERATOR SOURCE 12/12 INSIDE OUT GATE MOTOR 1	VALVE OUTSIDE FLOW VALVE VALVE POWER ACTUATION SIZE, IN. CONT. DIRECTION TYPE OPERATOR SOURCE SIGNAL 12/12 INSIDE OUT GATE MOTOR 1 REM/MAN	VALVE OUTSIDE FLOW VALVE OPERATOR SOURCE ACTUATION ACTUATION SIGNAL SIGNAL 12/12 INSIDE OUT GATE MOTOR 1 REM/MAN NONE	VALVE OUTSIDE FLOW TYPE OPERATOR SOURCE ACTUATION ACTUATION CLOSURE SIZE, IN. CONT. DIRECTION TYPE OPERATOR SOURCE SIGNAL SIGNAL TIME (SEC.) 12/12 INSIDE OUT GATE MOTOR 1 REM/MAN NONE 120	VALVE OUTSIDE FLOW VALVE VALVE POWER ACTUATION ACTUATION CLOSURE NORMAL SIGNAL 12/12 INSIDE OUT GATE MOTOR 1 REM/MAN NONE 120 CLOSED	VALVE OUTSIDE FLOW TYPE OPERATOR SOURCE ACTUATION SIGNAL TIME (SEC.) NORMAL SHUTDOWN SIZE, IN. CONT. DIRECTION TYPE OPERATOR SOURCE 1 REM/MAN NONE 120 CLOSUE OPEN 12/12 INSIDE OUT GATE MOTOR 1 REM/MAN NONE 120 CLOSED OPEN	VALVE OUTSIDE FLOW TYPE OPERATOR SOURCE ACTUATION ACTUATION CLOSURE NORMAL SHUTDOWN FAIL SIZE, IN. CONT. DIRECTION TYPE OPERATOR SOURCE ACTUATION SIGNAL TIME (SEC.) NORMAL SHUTDOWN FAIL 12/12 INSIDE OUT GATE MOTOR 1 REM/MAN NONE 120 CLOSED OPEN AS IS	VALVE OUTSIDE OUT CATE WOTOR 1 REM/MAN NONE 120 CLOSED OPEN AS IS CLOSED	VALVE OUTSIDE FLOW TYPE OPERATOR SOURCE ACTUATION SIGNAL TIME (SEC.) NORMAL SHUTDOWN FAIL PRIMARY SECONDARY SIZE, IN. CONT. DIRECTION TYPE OPERATOR SOURCE 1 REM/MAN NONE 120 CLOSUE OPEN AS IS CLOSED N/A

FLUID CONTAINED: WATER LENGTH OF PIPING TO OUTERMOST ISOLATION VALVE: N/A APPLICABLE GDC NO. 55

GENERAL COMMENTS:

THE RESIDUAL HEAT REMOVAL SYSTEM SUCTION LINE FROM THE REACTOR COOLANT SYSTEM CONTAINS TWO NORMAL LY CLOBED, POWEN-OPERATED REMOTE MANUAL VALVES IN SERIES INSIDE THE CONTAINMENT. THE VALVES ARE ALSO INTERLOCKED TO FREVENT THEM FROM BEING INADUSTRENTLY OPENED. CONTAIN-MENT INCLATION IS ASSURED BY SYSTEM MEDIA TON NALVES CLOBET TO THE CON-TAINMENT AND THE CLOBED BY SYSTEM OF THE CONTAINMENT, WHICH BESIGN-ED AND CONSTRUCTED COMMENSURATE WITH THE DESIGN AND CONSTRUCTION OF THE CONTAINMENT, LEAKAGE DETEC TION FROM THIS LINE OUTSIDE THE CON-TAINMENT IS PROVIDED, AS DESCRIBED IN SECTION 5.3.

LOCAL TESTING OF THE VALVE OR THE CLOSED SYSTEM GUTBIDE THE CONTAIN-MERT IS NOT REQUIRED ENCE THE SYSTEM IS OPERATED AND INSPECTED DURING NORMAL PLANT OPERATION TO ASSURE THAT THE INTEGRITY IS BEING MAINTAIN-ED.



REFERENCE SECTION(S) 5.4.7 & 6.3 REV. 13 WOLF CREEK UPDATED SAFETY ANALYSIS REPORT CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 38 OF 74

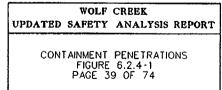
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VAL	νε	LINE/ VALVE	INSIDE/ OUTSIDE	NORMAL FLOW	VALVE	VALVE	POWER	PRIMARY ACTUATION	SECONDARY	MAXIMUM		VA	LVE POSITIO	лс		APPENDIX J
NO).	SIZE, IN.	CONT.	DIRECTION	TYPE	OPERATOR	SOURCE	SIGNAL	ACTUATION SIGNAL	TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
ECV-08	34	6/6	INSIDE	IN	GATE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	OPEN	N/A	CLOSED	N/A	C
ECV-08	5	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
ECV-08	33	6/6	OUTSIDE	IN	GATE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	OPEN	N/A	CLOSED	N/A	Ċ
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FEATURE		A SAFET														
FLUID C	ONTAINED	WATER		1							HCD					
		G TO OUT	FRUOST	-							1	TC				
ISOLATIO			6.1 FT			7										
APPLICA	BLE		56]		[\∕/ ∔	18	ৰ			
GDC NO		'S:		j REI 90(DL						нсв		HCB HCD			
OF HEIGHT	COMINE !!!	0.						V-C	44					FUEL POO	L SKIMMEAS	
NONE						·}			4				V-063		<u> </u>	
								нср	HCB	-			1.003	AND DEM!	NERALIZERS	
									4							
								1								

CONTAINMENT PENETRATION NO. P-53 DESCRIPTION: CLEANUP RETURN FUEL POOL COOLING AND CLEANUP SYSTEM REFERENCE SECTION(S) 9.1.3 REV. 13



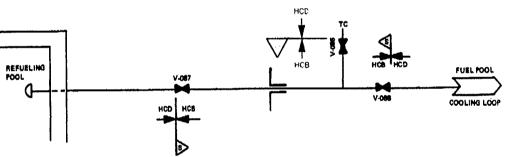
	LINE/	INSIDE/	NORMAL	VALVE	141.115	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSIT	IQN		APPENDIX J
VALVE NO	VAL VE SIZE, IN	OUTSIDE CONT.	FLOW	TYPE	VALVE OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	F AIL	PRIMARY	SECONDARY	REQUIREMENT
ECV-087	6/6	INSIDE	OUT	GATE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	OPEN	N/A	CLOSED	N/A	с
ECV-086	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
ECV-088	6/6	OUTSIDE	OUT	GATE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	OPEN	N/A	CLOSED	N/A	C
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		· · · · · · · · · · · · · · · · · · ·		1										<u> </u>	
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FLUID CONTAINED: WATER

LENGTH OF PIPING TO OUTERMOST ISOLATION VALVE: 6.1 FT APPLICABLE GDC NO. 56

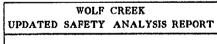
GENERAL COMMENTS:

NONE



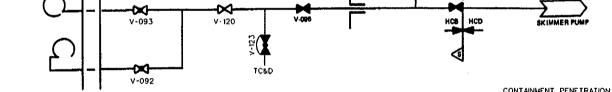
CONTAINMENT PENETRATION NO. P-54 DESCRIPTION: REFUELING POOL CLEANUP LINE FUEL POOL COOLING & CLEANUP SYSTEM

REFERENCE SECTION(S) 9.1.3 REV. 13



CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 40 OF 74

VALVE	LINE/	INSIDE /	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		٧٨	LVE POSITI	лс		APPENDIX J
NO.	VALVE Size, ini.	OUTSIDE CONT.	FLOW DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
ECV-095	3/3	INSIDE	OUT	GATE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	OPEN	N/A	CLOSED	N/A	Ċ
ECV-094	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/ A
ECV-096	3/3	OUTSIDE	OUT	GATE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	OPEN	N/A	CLOSED	N/A	¢
			 												
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ASSOCIATED WI FEATURES SYS.	YES			I	L		L	<u></u>	<u></u>	L	1			.1	.
FLUID CONTAINE LENGTH OF PIPI ISOLATION VALV	NG TO OUT	ERMOST 6.1 FT						r		нср Т	TC				
APPLICABLE GDC NO		56]						\$	w/					
GENERAL COMMEN	ITS:							нср 🗕	🗲 НСВ		T				
NONE			\sim							1		V-096		FUEL POO	L
			()						H					\rightarrow	$\overline{}$



CONTAINMENT PENETRATION NO. P-55 DESCRIPTION: REFUELING POOL SKIMMER LINES FUEL POOL COOLING & CLEANUP SYSTEM

REFERENCE SECTION(S) 9.1.3 REV. 13

WOLF CREEK

UPDATED SAFETY ANALYSIS REPORT

CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 41 OF 74

	LINE/	INSIDE/	NORMAL	VALVE		POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI	ON		APPENDIX J
VALVE NO.	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW DIRECTION	TYPE	VALVE OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMEN
GSHV-9	1/1	INSIDE	IN	GATE	SOLENOID	4	CIS-A	REM/MAN	5	CLOSED	CLOSED	CLOSED	CLOSED	OPEN	A,C
GSHV-8	1/1	OUTSIDE	IN	GATE	SOLENOID	4	CIS-A	REM/MAN	5	CLOSED	CLOSED	CLOSED	CLOSED	OPEN	A,C
GSV-032	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
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		1										l			L

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FLUID CONTAINED: CONT. ATM

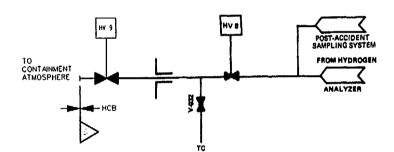
56

GENERAL COMMENTS:

THIS PENETRATION IS ASSOCIATED WITH THE POSTACCIDENT SAMPLING SYSTEM AND THE CONTAINMENT HYDROBIN CON-TROL SYSTEM, WHICH IS REQUIRED TO MIT-GATE THE CONSEQUENCES OF A LOCA.

THE HYDRO. GCH AWAYZER IS A DLOSED SYSTEM GUTSDO THE CONTARIMINT WHICH IS DESIGNED AND CONSTRUCTED COMMENSURATE WITH THE DESIGN AND CONSTRUCTION OF THE CONTAINMENT.

TO ABUNG LEAKTIGHT INTEGRITY, THE VALVES ARE SUBNICTED TO TYPE C TEST-ING, AND THE SAMPLE LINES ARE OPENED DURING THE TYPE A TESTING.



CONTAINMENT PENETRATION NO. P-56 DESCRIPTION: H2 SAMPLE RETURN HYDROGEN CONTROL SYSTEM CONTAINMENT REFERENCE SECTION(S) 6 2.5 REV. 13

WOLF CREEK UPDATED SAFETY ANALYSIS REPORT CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 42 OF 74

[LINE/	INSIDE/	NORMAL				PRIMARY	SECONDARY	MAXIMUM	r · · · · · · · · · · · · · · · · · · ·	VA	LVE POSITI			APPENDIX J
VALVE NO.	VAL VE SIZE, IN.	OUTSIDE CONT.	FLOW	VALVE TYPE	VALVE OPERATOR	POWER SOURCE	ACTUATION	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAL	PRIMARY	SECONDARY	REQUIREMENT
GSHV-38	1/1	OUTSIDE	IN	GATE	SOLENOID	1	CIS-A	REM/MAN	5	OPEN	OPEN	CLOSED	CLOSED	OPEN	С
CSHV-39	1/1	INSIDE	IN	GATE	SOLENOID	4	CIS-A	REM/MAN	5	OPEN	OPEN	CLOSED	CLOSED	OPEN	с
GSV-058	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
			1												
							1								
		1					1								
	1														
ASSOCIATED WIT													4		
			1				r	HV I			HV I		\leq		
FLUID CONTAINE			1					38			39				
LENGTH OF PIPI ISOLATION VALV		ERMOST 7.1						Ť			Ť	HĊB			
APPLICABLE GDC NO.		56]	Σ	<u> </u>			∽		<u> </u>			!		
GENERAL COMMEN	ITS			<u> </u>			ŀ			1	F 1			AINMENT	
			CON	TAINMEN'	r i i			1					ATMOSPH	IERE	

тс

HCD

нсв

HCD.

TC

ATMOSPHERE

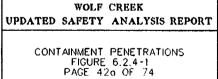
MONITOR

GT-RE-31

NONE

CONTAINMENT PENETRATION NO. P-56 DESCRIPTION: SAMPLE RETURN CONTAINMENT ATMOSPHERE MONITOR

REFERENCE SECTION(S) 9.4.6 REV. 13



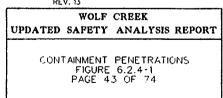
C44

	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI	ON		APPENDIX J
VALVE NO.	VALVE SIZE, IN	OUT SIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
SJHV-131	1/1	OUTSIDE	IN	GLOBE	SOLENOID	1	CIS-A	REM/MAN	5	CLOSED	CLOSED	CLOSED	CLOSED	OPEN	С
5JHV-132	1/1	OUTSIDE	IN	GLOBE	SOLENOID	4	CIS+A	REM/MAN	5	CLOSED	CLOSED	CLOSED	CLOSED	OPEN	¢
SJV-111	1/1	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	OPEN	Ċ
SJV-114	1/1	OUTSIDE	OUT	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N: A	CLOSED	N/A	N/A
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		<u> </u>	ļ	<u> </u>	J		1	<u> </u>	L	l				1	
	ITH A SAFET 5. YES⊠														
	ED: REACTOR	COOLANT	1												
		MENT SUMP	4	•				HV							
ENGTH OF PI		8.1			>			131							
PPLICABLE				BCD -	BCB	_									
DC NO.		56	J			ſ									
									0.00						
	INTS:						8	ICB	-BCD						
NERAL COMME	NTS:			ļ	ه		8		-BCD		,	7			
	INTS:		7	 	ᡘᢩ᠆		8		-BCD			ζ			
NERAL COMME				 v-	<u>}</u>		8		-8CD		DST-ACCIDE	X NT			
NERAL COMME	REA						B		-8CD		DST-ACCIDE				
NERAL COMME	REA					D	B		-8CD						
NERAL COMME	REA			8		Þ	B		– BCD						
NERAL COMME	REA		LANT	E	₩	x	β		- BCD						
NERAL COMME	REA		LANT	E									CONT	ANMENT PE	NETRATION NO P-5
NERAL COMME	REA			E	₩								DESCR	RIPTION	NETRATION NO. P-5
NERAL COMME	REA			E	₩	8							DESCI	RIPTION: LE RETURN	NETRATION NO. P-5 SAMPLING SYSTEM
NERAL COMME	REA			E	₩								DÉSCI SAMPI POST	RIPTION: LE RETURN ACCIDENT	SAMPLING SYSTEM
NERAL COMME	REA			E	₩	8							DÉSCI SAMPI POST	RIPTION: LE RETURN ACCIDENT RENCE SECT	
NERAL COMME	REA			E	₩	8							DESCE SAMPL POST REFEE	RIPTION: LE RETURN ACCIDENT RENCE SECT	Sampling System Ion(s) 18.2.3
NERAL COMME	REA			E	₩	8						'STEM	DESCH SAMPI POST REFEF REV. 1	RIPTION: LE RETURN ACCIDENT RENCE SECT 13 WOLF C	Sampling System Ion(s) 18.2.3
NERAL COMME	REA			E	₩	8						'STEM	DESCH SAMPI POST REFEF REV. 1	RIPTION: LE RETURN ACCIDENT RENCE SECT 13 WOLF C	SAMPLING SYSTEM ION(S) 18.2.3 REEK
NERAL COMME	REA			E	₩	8						'STEM	DESCH SAMPI POST REFEF REV.	REPTION: LE RETURN ACCIDENT RENCE SECT 13 WOLF C AFETY A	SAMPLING SYSTEM ION(S) 18.2.3 REEK NALYSIS REF
NERAL COMME	REA		LANT	E	₩	8						'STEM	DESCE SAMPL POST REFEE REV. DATED S	RIPTION: LE RETURN ACCIDENT RENCE SECT 13 WOLF C AFETY A INMENT P FIGURE 6	SAMPLING SYSTEM ION(S) 18.2.3 REEK ANALYSIS REF PENETRATIONS 5.2.4-1
NERAL COMME	REA		LANT	E	₩	8						'STEM	DESCE SAMPL POST REFEE REV. DATED S	RIPTION: LE RETURN ACCIDENT RENCE SECT 13 WOLF C AFETY A	SAMPLING SYSTEM ION(S) 18.2.3 REEK ANALYSIS REF PENETRATIONS 5.2.4-1

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VALVE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		٧/	LVE POSITI	ON		APPENDIX J
NO.	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAL	PRIMARY	SECONDARY	REQUIREMENT
EMV-006	1/1	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	C
EMV-182	Y41 Y4	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
EMV+123	Y4/Y4	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
EMHV-8888	1/1	OUTSIDE	IN	GLOBE	AIR	4	CIS•A	NONE	5	CLOSED	CLOSED	CLOSED	CLOSED	N/A	с
ASSOCIATED W	TH A SAFFT	<u> </u>													
FEATURES SYS FLUID CONTAIN LENGTH OF PIP ISOLATION VAL APPLICABLE GDC NO.	ED: WATER NING TO OUT														
GENERAL COMME	NI 5:			\rightarrow			ссв		<u>]</u> 1	 ca	J		<u> </u>		

CONTAINMENT PENETRATION NO. P-58 DESCRIPTION ACCUMULATOR FILL LINE HIGH PRESSURE COOLANT INJECTION SYSTEM REFERENCE SECTIONISJ 6.3 REV. 13



LENGTH OF PIPING TO OUTERMOST ISOLATION VALVE: N/A

HYDRAULIC SENSORS PROVIDE ISO-LATION OF RCS FROM THE CAPIL-LARY TUBING, THE CAPILLARY TUBING AND THE LIS'S SERVE AS THE SECOND BOUNDARY, THIS AR-RANGEMENT IS SIMILAR TO THAT

PROVIDED FOR THE CONTAINMENT PRESSURE TRANSMITTERS SHOWN

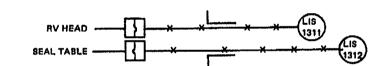
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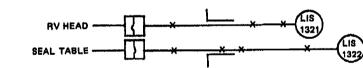
APPLICABLE GDC NO.

GENERAL COMMENTS:

ON SHEET 72 OF 74.

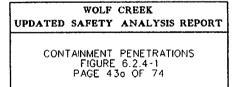
	LINE/	INSIDE /	NORMAL			0.04450	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITIC	N		APPENDIX J
VALVE NO.	VALVE SIZE, IN	OUTSIDE CONT.	FLOW	VALVE TYPE	VALVE OPERATOR	POWER SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUREMENT
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	A
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ASSOCIATED WI	YES			L		<u></u>		· · · · · · · · · · · · · · · · · · ·							
FLUID CONTAINE	D: WATER														





CONTAINMENT PENETRATION NO. P-59, 91 DESCRIPTION: RVLIS SAMPLE LINE REACTOR COOLANT SYSTEM

REFERENCE SECTION(S) 18.2.13.2 REV. 11



VALVE	LINE7	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI	0N		APPENDIX J
NO.	VALVE SIZE, IN	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC)	NORMAL	SHUTDOWN	FAL	PRIMARY	SECONDARY	REQUREMENT
BBHV-8026	1/1	INSIDE	вотн	DIAPHRAGM	AIR	1	CIS-A	NONE	10	CLOSED	OPEN	CLOSED	CLOSED	N/A	с
BBHV-8027	1/1	OUTSIDE	вотн	DIAPHRAGM	AIR	4	CIS-A	NONE	10	CLOSED	OPEN	CLOSED	CLOSED	N/A	C
		ļ	ļ				1	ļ	<u> </u>					<u> </u>	
							<u> </u>	<u> </u>		<u> </u>			<u> </u>	+	
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				1		1	1								
						I		1		<u> </u>			1	<u> </u>	L
ASSOCIATED W	TH A SAFET	Y NO [X]													
FLUID CONTAIN			1												
LENGTH OF PIE		ERMOST 12.3ft													
APPLICABLE GDC NO.	<u>-</u>	56]					HV-8026			HV-8027				
GENERAL COMME	NTS		PRE	BURIZER				X			ж.		GASEOU	Ļ	
NONE			<u>Σ</u>	$\overline{}$									<u> </u>)	
			REL	EF TANK			HCD	HCB	ł		HCB	HCD I	ADWASTE SY	STEM	
											♦				
											N.				

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CONTAINMENT PENETRATION NO. P-62 DESCRIPTION: PRESSURIZER PURGE & VENT LINE REACTOR COOLANT SYSTEM

REFERENCE SECTION(S) 5.0 REV. II WOLF CREEK

UPDATED SAFETY ANALYSIS REPORT

CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 44 OF 74

	LINE/	INSIDE/	NORMAL			POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSIT	IÓN		APPENDIX J
VALVE NO.	VAL VE SIZE, IN.	OUTSIDE CONT.	FLOW	VALVE TYPE	VALVE	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	F AIL	PRIMARY	SECONDARY	REQUIREMENT
KAV-118	4/4	OUTSIDE	IN	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	C
KAV-163	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
KAV-039	4/4	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	С
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SOCIATED WI	TH A SAFET														
		<u></u>	1												
LUID CONTAIN			4												
NGTH OF PIP		B.6ft													
			-												
PPLICABLE															
DC NO.		56				\triangleright									
DC NO.	NTS	56]		_										
APPLICABLE SDC NO. NERAL COMME	NTS:	56					:	1		V-039			RE	ACTOR	
DC NO.	NTS:	56	X	∽			•	<u></u> _		V 039					
DC NO.	NTS:	56	Σ	>		0 H10 V-118	!	<u> </u>		V 039			Σ		
DC NO. NERAL COMME	NTS:	56		>		0 H10 V-118	•	188		V-039			Σ		
DC NO. NERAL COMME	NTS:	56	Σ	}	,e.	V-118				V-039 Head Jaco	<u> </u>		Σ		
DC NO. IERAL COMME	vts:	56	Σ	}		V-118			 	V 4330 H 100 JAD	_		Σ		
DC NO. NERAL COMME	vts:	56	Σ	}		V-118	₩	<u> </u>	 	V-039 H800 JaD	_		Σ		
DC NO. NERAL COMME	NTS:	56	Σ	}	,e ,	0 110 V-110		<u> </u>	 	¥439 Head Had Had	-				NETRATION NO P-
DC NO. NERAL COMME	NTS:	56	Σ	}	,e ,	0 110 V-110	₩	<u> </u>	 		-		CONT DESC SERV	AINMENT PER RIPTION: ICE AIR	
DC NO. NERAL COMME	NTS:	56	Σ	}	,e ,	0 H	₩	<u> </u>	 		-		CONT DESC SERV		
DC NO. NERAL COMME	NTS:	56	Σ	}		0 H10	₩	<u> </u>	 	V 439			CONT DESC SERV COMP REFEI	AINMENT PER RIPTION: ICE AIR RESSED AIR RENCE SECT	SYSTEM
DC NO. NERAL COMME	NTS:	56	Σ	}		0 H10 V-118	₩	<u> </u>	 	V 439	-		CONT DESC SERV COMP	AINMENT PEI RIPTION: ICE AIR RESSED AIR RENCE SECT 13	SYSTEM ION(S) 9.3.1
ERAL COMME	NTS:	56	Σ	}		0 H10	₩	<u> </u>	 		-		CONT DESC SERV COMP REFEI REV.	AINMENT PEI RIPTION: ICE AR RESSED AIR RENCE SECT 13 WOLF C	SYSTEM ION(S) 9.3.1 REEK
DC NO.	NTS:	56	Σ	}		0 H10	₩	<u> </u>	 		-	UP	CONT DESC SERV COMP REFEI REV.	AINMENT PEI RIPTION: ICE AR RESSED AIR RENCE SECT 13 WOLF C	SYSTEM ION(S) 9.3.1
DC NO. NERAL COMME	NTS:	56	Σ	}		0 H10	₩	<u> </u>	 		-	UP	CONT DESC SERV COMP REFEI REV.	AINMENT PER RIPTION: ICE AR RESSED AIR RENCE SECT 13 WOLF C AFETY A	SYSTEM ION(S) 9.3.1 REEK ANALYSIS RE
DC NO. NERAL COMME	NTS:	56	Σ	}		0 118	₩	<u> </u>	 		-	UP	CONT DESC SERV COMP REFEI DATED S	AINMENT PER RIPTION: ICE AR RESSED AIR RENCE SECT 13 WOLF C AFETY A	SYSTEM ION(S) 9.3.1 REEK ANALYSIS RE PENETRATIONS

May 2002

VALVE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI	ON		APPENDIX J
NO.	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
SJHV-128	1/1	INSIDE	QUT	GLOBE	SOLENOID	1	CIS-A	REM/MAN	5	CLSOED	CLOSED	CLOSED	CLOSED	OPEN	С
SJHV-129	1/1	OUTSIDE	OUT	GLOBE	SOLENOID	4	CIS•A	REM/MAN	5	CLOSED	CLOSED	CLOSED	CLOSED	OPEN	С
SJHV-130	1/1	OUTSIDE	OUT	GLOBE	SOLENOID	1	CIS·A	REM/MAN	5	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	С
SJV-106	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
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SSOCIATED WI				.	•			•						- <u>t.,</u>	
LUID CONTAIN	ED: REACTOR	COOLANT							1						
ENGTH OF PIP		ERMOST 8.6						\sim							
PPLICABLE		55							8						
NERAL COMMEN	170							868 –	🗲 🗕 BCD						
DNE	N15:					HV									
	N12:			LOOP 3 HOT AND PRESSI LIQUID SAM		128	L T	V-106	V-107	HV 129 HV 130			TO POST-AC		
	N12:			AND PRESSI	URIZER	128	L F	V-108					CONTA CONTA DESCR SAMPL	SYSTEM AINMENT PEN RIPTION: E LINE	ETRATION NO. P-G
	N12:			AND PRESSI	URIZER	128	<u>L</u> F	V-106					SAMPLING : CONTA DESCR SAMPL POST-	SYSTEM	AMPLING SYSTEM
	N12:			AND PRESSI	URIZER	128	L	V-108				[CONTA DESCR SAMPL POST- REFER REV. 1	SYSTEM	AMPLING SYSTEM DN(S) 18.2.3 REEK
	N I 2:			AND PRESSI	URIZER	128	L T	V-106				[CONTA DESCR SAMPL POST- REFER REV. 1	SYSTEM	AMPLING SYSTEM DN(S) 18.2.3

May 2002

C-50

VALVE	LINE/ VALVE	INSIDE/ OUTSIDE	NORMAL FLOW	VALVE	VALVE	POWER	PRIMARY ACTUATION	SECONDARY	MAXIMUM CLOSURE		V/	LVE POSIT	ION		APPENDIX J
NO.	SIZE, IN	CONT.	DIRECTION	TYPE	OPERATOR	SOURCE	SIGNAL	SIGNAL	TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
GSHV-20	676	INSIDE	OUT	BUTTERFLY	MOTOR	1	CIS·A	REM/MAN	5	CLOSED	CLOSED	AS IS	CLOSED	OPEN	C
GSHV-21	676	OUTSIDE	ουτ	BUTTERFLY	MOTOR	4	C15-A	REM/MAN	5	CLOSED	CLOSED	AS IS	CLOSED	OPEN	с
GSV-041	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
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	WITH A SAFET						L	I	l	L	L			1	
FEATURES SY	S. YES		4												
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LENGTH OF P	PIPING TO OUT	ERMOST 5.5/l]								-				
APPLICABLE						HV	う			(HV				
	(FN76)	56	J			Le co				·	<u>ئ</u>				
ENERAL COMM	IENTS:	56	ļ												
GDC NO. ENERAL COMM	IENTS:	56	}					ş						UX, BUILDING	
ENERAL COMM	IENTS:	56] coi	TAINMENT A	IR [ھی امراب	/ /						\$		
ENERAL COMM	IENTS:	56	co	NTAINMENT AI	IR }) 1	<u>L</u>	<u></u>		J_		¥	SF FILTERS	
ENERAL COMM	IENTS:	56	<u> </u> co:	NTAINMENT AI	IR HBB		1	_ <u>L</u>	нвв	нвв			¥		
ENERAL COMM	IENTS:	56	<u>,</u>	NTAINMENT AI	HAR		/ 	- <u>-</u>	нвв	1-	J_		¥		
ENERAL COMM	IENTS:	56	0	NTAINMENT AI			4	_ <u>∟</u> Γ	нвв	нвв		 - BD	¥		
NERAL COMM	IENTS:	56	<u> </u> ∞	NTAINMENT AI			4		HBB	1-		 - 80	¥		
NERAL COMM	IENTS:	56	<u></u>	NTAINMENT AI	HBS				HBB	N N N N N N N N N N N N N N N N N N N		 - BD	 E CONTA	SF FILTERS	TRATION NO
NERAL COMM	IENTS:	56	<u>)</u> ∞	NTAINMENT AI					× ‡	1-		 - BD	CONTA CONTA DESCR CONT.	SF FILTERS	
NERAL COMM	IENTS:	56	<u> </u> co	YTAINMENT AI					× ‡	N N N N N N N N N N N N N N N N N N N		 - BD	CONTA CONTA CONTA CONTA	SF FILTERS	TRATION NO

UPDATED SAFETY ANALYSIS REPORT

CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 46 OF 74

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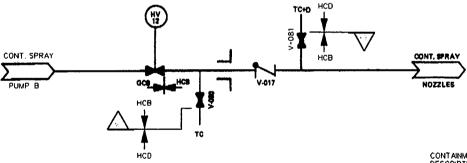
SYSTEM

VALVE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUN		VA	LVE POSIT	ION		APPENDIX J
NO	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAL	PRIMARY	SECONDARY	REQUIREMENT
ENHV-12	10/10	OUTSIDE	IN	GATE	MOTOR	4	CSAS	REM/MAN	N/A	CLOSED	CLOSED	AS IS	OPEN	CLOSED	A
ENV-080	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
ENV-017	10/10	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	OPEN	CLOSED	A
							[

FLUID CONTAINED:	WATER
LENGTH OF PIPING ISOLATION VALVE:	TO OUTERMOST
APPLICABLE GDC NO.	56
SENERAL COMMENTS	

THIS PENETRATION IS ASSOCIATED WITH THE CONTAINMENT BRAY DYSTEM, WHICH IS RECURRED TO MITICATE THE COME OURCED SHEDD THE CONTAINSMENT, AND A REPORT LANNIAL ISOLATION VALVE IS PROVIDED OUTHOR THE CONTAINSMENT, AND A ROVIDED OUTHOR THE CONTAINSMENT, AND IS DESIONADATED BHORE THE SYSTEM IS CLOSED OUTHOR THE CONTAINMENT AND IS DESIONED AND COMENTIAL SYSTEM IS CLOSED OUTHOR THE CONTAINMENT AND IS DESIONED AND COMENTIAL SYSTEM IS CLOSED OUTHOR THE CONTAINMENT AND THE CONTAINSMENT LEARAGE DITIOTION PROM THIS LINE OUTSIDE SHE CONTAINSMENT IS PROVIDED, AS DESCRIBED IN SECTION 9.3.2.

LOCAL TESTING OF THE VALVES OR THE CLOSED SYSTEM OUTSIDE THE CONTAIN-MENT IS NOT REQUIRED SINCE THE SYSTEM IS OPERATED AND INSPECTED DURING NORMAL FLANT OPERATION TO ASSURE THAT THE INTEGRITY IS BEING MAINTAIN-ED.



CONTAINMENT PENETRATION NO. P-66 DESCRIPTION: CONTAINMENT SPRAY CONTAINMENT SPRAY SYSTEM

REFERENCE SECTION(S) 6.2.2 REV. 13

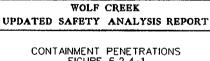


FIGURE 6.2.4-1 PAGE 47 OF 74

VALVE	LINE/	INSIDE/	NORMAL	1		POWER	PRMARY	SECONDARY	MAXIMUM		VA	LVE POSIT	ION		APPENDIX J
VAL VE NO	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW	VALVE TYPE	VALVE OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
CHV-253	4/4	OUTSIDE	IN	GATE	MOTOR	1	CIS-A	NONE	30	CLOSED	CLOSED	AS IS	CLOSED	N/A	С
CV-478	4/4	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	С
CV-431		INSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
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SOCIATED V	WITH A SAFET	Y													
ATURES SY	S. YES		4												
LUID CONTA	INED: WATER														
NGTH OF P	PING TO OUT	ERMOST	1												
OL ATION MAN	1.1/5.	15.4													
ULATION VA	L Y L ·		-												
PLICABLE	LYL.						~	2							
PPLICABLE		56]												
OLATION VAI PPLICABLE DC NO. NERAL COMM		56]												
PPLICABLE DC NO.		56]							v	478				
PPLICABLE DC NO. NERAL COMM		56	AUX. BUI	<u>LDI</u> NG					I	V.	478		RI	EACTOR	
PPLICABLE DC NO. NERAL COMM		56					ی 		╡		478		\longrightarrow		
PPLICABLE DC NO. NERAL COMM		56								*	¥		\longrightarrow	JILDING	
PPLICABLE DC NO. NERAL COMM		56	AUX BUI				ی 		НВВ	*	478		\longrightarrow		
PPLICABLE DC NO. NERAL COMM		56	AUX. BUI				ی 		HBB	*	¥	• • • • • • • • • • • • • • • • • • •	\longrightarrow		
PPLICABLE DC NO. IERAL COMM		56	AUX. BUI				ی 		HBB	*	¥		\longrightarrow		
PPLICABLE DC NO. IERAL COMM		56	AUX. <u>BUI</u>				ی 		HBB	*	¥			JILDING	
PPLICABLE DC NO. IERAL COMM		56	AUX. <u>BUI</u>				ی 		HBB	*	¥				NETRATION NO. P-6
PPLICABLE DC NO. IERAL COMM		56	AUX. <u>BUI</u>				ی 		<u> </u>	*	¥			ANMENT PEI RIPTION: PROTECTION	
PPLICABLE DC NO. NERAL COMM		56	<u>AUX. BUI</u>				ی 		<u> </u>	HBB	¥		CONT/ DESCF FIRE F	ANMENT PER RIPTION: PROTECTION PROTECTION	SYSTEM
PPLICABLE DC NO. NERAL COMM		56	A <u>ux. Bui</u>				ی 		<u> </u>	HBB	¥		CONT/ DESCF FIRE F	ANMENT PER RIPTION: PROTECTION PROTECTION RENCE SECT 13	SYSTEM ION(S) 9.5.1
PPLICABLE DC NO. NERAL COMM		56	<u>AUX. BUI</u>				ي 		<u> </u>	HBB	¥		CONT/ DESCF FIRE F REFEF REV. 1	ANMENT PER RIPTION: PROTECTION PROTECTION RENCE SECT 13 WOLF C	SYSTEM ION(S) 9.5.1 REEK
PPLICABLE DC NO. NERAL COMM		56	AUX. BUI				ي 		<u> </u>	HBB	¥	UP	CONT/ DESCF FIRE F REFEF REV. 1	ANMENT PER RIPTION: PROTECTION PROTECTION RENCE SECT 13 WOLF C	SYSTEM ION(S) 9.5.1
PLICABLE DC NO. IERAL COMM		56	AUX. BUI				ي 		<u> </u>	HBB	¥	UP	CONT DESCE FIRE I FIRE I DATED SJ CONTAI	ANMENT PER RIPTION: PROTECTION PROTECTION RENCE SECT 3 WOLF C AFETY A	SYSTEM ION(S) 9.5.1 REEK ANALYSIS REF ENETRATIONS 5.2.4-1

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VALVE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	VE POSITI	ON		APPENDIX J
NO.	VALVE SIZE, IN	OUTSIDE CONT.	FLOW DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REOUREMENT
SJHV-12	1/1	INSIDE	OUT	GATE	SOLENOID	4	CIS-A	NONE	5	CLOSED	CLOSED	CLOSED	CLOSED	N/A	С
JHV+13	1/1	OUTSIDE	OUT	GATE	SOLENOID	1	CIS-A	NONE	5	CLOSED	CLOSED	CLOSED	CLOSED	N/A	С
JV-071	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
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SSOCIATED WI	TH A SAFET	<u> </u>		I	.lł						L			1	1
ATURES SYS															
LUID CONTAIN	ED: STEAM														
NGTH OF PIP		ERMOST									[
OLATION VAL	/E:	7.7ft						HV 12			HV 13				
DC NO.		55						LLL			T				
7C NO.															
	NTS:		1												
NERAL COMMEN	115:		, where a	URIZER					L	•			7	BANPLE	
NERAL COMMEN	NTS:		Σ	\rightarrow						:			Σ		•
NERAL COMMEN	115:		Σ					.		BC		3CD	Σ	VESSEL	•
NERAL COMMEN	NTS:		Σ	\rightarrow					ВСВ			3CD	Σ		•
NE	VTS:		Σ	\rightarrow					BCB	BCI		BCD	Σ		,
ERAL COMMEN	VTS:		Σ	\rightarrow					BC8			3CD	Σ		,
ERAL COMMEN	VTS:		Σ	\rightarrow					BCB			BCD	Σ		,
ERAL COMMEN	NTS:		Σ	\rightarrow					-			BCD		VESSEL	FTRATION NO P-
ERAL COMMEN	NTS:		Σ	\rightarrow					-	T		BCD	DESCR	VESSEL	ETRATION NO. P-
NERAL COMMEN	NTS:		Σ	\rightarrow					-	T		3CD	DESCR PRESS	VESSEL	OR SAMPLE LINE
RAL COMMEN	NTS:		Σ	\rightarrow					-	T		ЭСD	DESCR PRESS NUCLE	VESSEL	OR SAMPLE LINE
ERAL COMMEN	NTS:		Σ	\rightarrow					-	T		BCD	DESCR PRESS NUCLE	VESSEL	OR SAMPLE LINE G SYSTEM
ERAL COMMEN	NTS:		Σ	\rightarrow					-	T		[DESCR PRESS NUCLE REFER REV. 1	VESSEL	OR SAMPLE LINE G SYSTEM ON(S) 9.3.2 REEK
ERAL COMMEN	NTS:		Σ	\rightarrow					-	T		[DESCR PRESS NUCLE REFER REV. 1	VESSEL	OR SAMPLE LINE G SYSTEM ON(S) 9.3.2
NERAL COMMEN	NTS:		Σ	\rightarrow					-	T		[DESCR PRESS NUCLE REFER REV. 1	VESSEL	OR SAMPLE LINE G SYSTEM ON(S) 9.3.2 REEK
ERAL COMMEN	NTS:		Σ	\rightarrow					-	T		[DESCR PRESS NUCLE REFER REV. 1: PATED SA	VESSEL	OR SAMPLE LINE G SYSTEM ON(S) 9.3.2 REEK NALYSIS RE
ERAL COMMEN	NTS:		Σ	\rightarrow					-	T		[DESCR PRESS NUCLE REFER REV. 1: PATED SA	VESSEL	OR SAMPLE LINE G SYSTEM ON(S) 9.3.2 REEK NALYSIS RE ENETRATIONS .2.4-1
ERAL COMMEN	NTS:		Σ	\rightarrow					-	T		[DESCR PRESS NUCLE REFER REV. 1: PATED SA	VESSEL	OR SAMPLE LINE G SYSTEM ON(S) 9.3.2 REEK NALYSIS RE ENETRATIONS .2.4-1

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VALVE	LINE/	INSIDE/	NORMAL			POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI	ON		APPENDIX J
VALVE NO	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW DIRECTION	VALVE TYPE	VALVE OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMEN
EFHV-31	14/14	OUTSIDE	IN	BUTTERFLY	MOTOR	1	SIS	REM/MAN	N/A	OPEN	OPEN	AS IS	OPEN	CLOSED	¢
EFV-276	1/1	INSIDE	N/A	GATE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
EFHV-33	14/14	INSIDE	IN	BUTTERFLY	MOTOR	1	SIS	REM/MAN	N/A	OPEN	OPEN	AS IS	OPEN	CLOSED	С
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FLUID CONTAINED: WATER

LENGTH OF PIPING	TO OUTERMOST
ISOLATION VALVE:	15.5 ft
APPLICABLE GDC NO.	56

GENERAL COMMENTS:

THIS PENETRATION IS ASSOCIATED WITH THIS BEARNTIAL BERVICE WATER SVETEM, WHICH IS REQUIRED TO MITIGATE THE CONTEQUENCES OF A LOCA. A REMOTE-MANUAL FOWER-CERATED VALVE IS LOCATED INSIDE, AND A REMOTE-MANUAL FOWER-CERATED VALVE IS LOCATED OUT-SIDE THS GOATA RUMMENT.

SIDE THE CONTAINMENT. THESE VALVES ARE POWERED FROM THE SAME ROWER SOURCE FOR GREATER SYS-TEM RELIABILITY. A SIMILE ACTIVE OR TABEVE PAILURE CAN SA BOOMMODATED SINCE THE SYSTEM IS A CLOBED SYSTEM INSIDE THE CONTAINMENT, WHICH IS DE-SANCE WITH ABME SECTION III, CLASS & REQUIREMENTS. THE SERENTIAL SERVICE WATER LINES ARE NOT VENTED OR DRAM. ED DURING A TYPE A TEST SINCE THE AR CONTAINMENT. A TYPE O TEST IS PERFORM-ED. ESSENTIAL SERVICE WATER SUPPLY HBC HCB HBB

D

CONTAINMENT PENETRATION NO. P-71 DESCRIPTION: ESW TO CONTAINMENT AR COULER ESSENTIAL SERVICE WATER SYSTEM

REFERENCE SECTION(S) 6.2.2 REV. 13

WOLF CREEK UPDATED SAFETY ANALYSIS REPORT CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 50 OF 74

VALVE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSIT	ION		APPENDIX J
NO.	VALVE SIZE, IN	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	TIME (SEC.)	NORMAL	SHUTDOWN	F AIL	PRIMARY	SECONDARY	REQUIREMENT
EFHV-45	14/14	INSIDE	OUT	BUTTERFLY	MOTOR	1	SIS	REM/MAN	N/A	OPEN	OPEN	AS IS	OPEN	CLOSED	c
EFV-277	1/1	INSIDE	N/A	GATE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/ A
EFHV-49	14/14	OUTSIDE	OUT	BUTTERFLY	MOTOR	1	SIS	REM/MAN	N/A	OPEN	OPEN	AS IS	OPEN	CLOSED	С
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ASSOCIATED	WITH A SAFET														
FLUID CONTA	INED: WATER		1												
	PRING TO OUT	EPHOST	4												

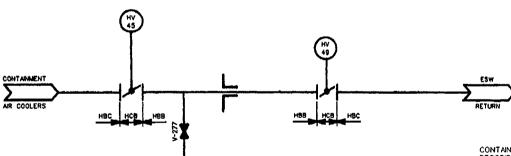
D

FLUID CONTAINED	WALER
LENGTH OF PIPING ISOLATION VALVE:	TO OUTERMOST N/A
APPLICABLE GDC NO.	56
GENERAL COMMENTS:	

THE PENETRATION & ABOCIATED WITH THE BEMINITAL BRAVIE WATER STYTEM, WHICH IS REQUIRED TO MITCALATE THE COMBEQUINCES OF A LOCA. A REMOTE MAMUAL POWER-OFFARTED VALVE IS LOCATED INMIDE AND A REMOTEMANUAL FOWER-OFFARTED VALVE IS LOCATED OUT-SIDE THE CONTAINMENT.

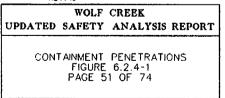
THERE VALVES ARE POWERED FROM THE SAME POWER SOURCE FOR EREATER STD-TEM RELIABILITY, A SHIGLE ACTIVE OR ASSIVE FAILURE CAN BE ACCOMMODATED SHIGD THE SYSTEM IS A GLOBED SYSTEM INHOU THE CONTAINMENT, WHICH IS DE-MEMOD THE CONTAINMENT, WHICH IS DE-MEMOD ARE CONSTRUCTED IN ACCORD-ANCS WITH ASME BECTION HI, GLASS 3 REQUIREMENTS.

THE EXCENTIAL METVICE WATER LINES ARE NOT VENTED OF DRAMED DURING A TYPE A TEST SINCE THE AIR COOLERS MAY SH REQUIRED TO DOOL THE GOMETANIMENT. A TYPE C TEST IS PERFORMED.



CONTAINMENT PENETRATION NO. P-73 DESCRIPTION. ESW FROM CONTAINMENT AIR COOLER ESSENTIAL SERVICE WATER SYSTEM

REFERENCE SECTION(S) 6.2.2 REV. 13



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_	LINE/	INSIDE/	NORMAL			POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSIT	ION		APPENDIX J
VALVE NO.	VALVE SIZE, IN	OUTSIDE CONT.	FLOW	VALVE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
EGHV-58	12/12	OUTSIDE	IN	GATE	MOTOR	1	ÇIS-B	NONE	30	OPEN	OPEN	AS IS	CLOSED	N/A	¢
EGV-090	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
	12/12	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	OPEN	OPEN	N/A	CLOSED	N/A	С
EGV-204 EGHV-127	12/12	OUTSIDE	IN	GATE	MOTOR	4	REM/MAN	NONE	N/A	CLOSED	CLOSED	AS IS	CLOSED	N/A	c
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ASSOCIATED WITH A SAFETY FEATURES SYS. YES NO

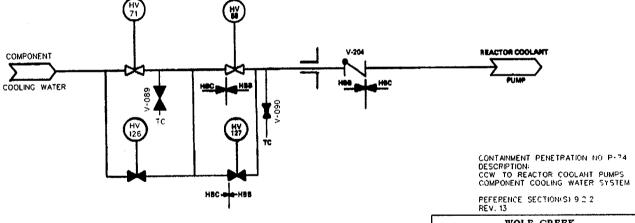
FLUID CONTAINED: WATER

LENGTH OF PIPING TO OUTERMOST ISOLATION VALVE: 11.9 ft

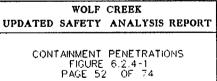
56

APPLICABLE GDC NO.

GENERAL COMMENTS: ISOLATION SWITCH PROVIDED IN THE CONTROL ROOM FOR POWER LOCKOUT OF VALVE HV-127



PEFERENCE SECTION(S) 9.2.2



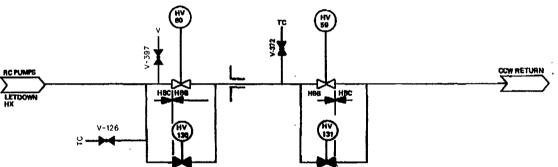
May 2002

VALVE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	NAXIMUM		VA	LVE POSIT	ON		APPENDIX J
NO.	VALVE SIZE, IN.	OUTSIDE CONT.	DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAL	PRIMARY	SECONDARY	REQUIREMENT
EGHV-60	12/12	INSIDE	OUT	GATE	MOTOR	4	CIS-B	NONE	30	OPEN	OPEN	AS IS	CLOSED	N/A	C
EG-V372	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
EGHV-59	12/12	OUTSIDE	ουτ	GATE	MOTOR	1	CIS-8	NONE	30	OPEN	OPEN	A\$ IS	CLOSED	N/A	¢
EGHV-131	12/12	OUTSIDE	OUT	GATE	MOTOR	4	REM/MAN	NONE	N/A	CLOSED	CLOSED	AS IS	CLOSED	N/A	С
EGHV-130	12/12	INSIDE	ουτ	GATE	MOTOR	1	REM/MAN	NONE	N/A	CLOSED	CLOSED	AS IS	CLOSED	N/A	¢
			1		1										
ASSOCIATED A	WITH A SAFET	Y NO 🔀													
FLUID CONTA	LUID CONTAINED: WATER														
			4												

LENGTH OF PIPING TO OUTERMOST ISOLATION VALVE: 11.1 ft APPLICABLE GDC NO. 56

GENERAL COMMENTS:

IBOLATION ANTON PROVIDED IN THE CONTINUL ROOM FOR POWER LOCKOUT OF VALVES HV-130, 131



CONTAINMENT PENETRATION NO. P-75 DESCRIPTION: CCW RETURN COMPONENT COOLING WATER SYSTEM

REFERENCE SECTION(S) 9.2.2 REV. 13

WOLF CREEK UPDATED SAFETY ANALYSIS REPORT CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 53 OF 74

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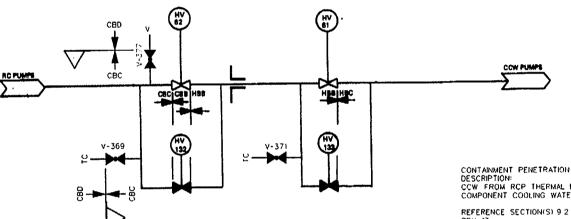
	LINE/	INSIDE/	NORMAL			POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI	ИС		APPENDIX J
VALVE NO.	VALVE SIZE, IN	OUTSIDE CONT.	FLOW	VALVE TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	F AIL	PRIMARY	SECONDARY	REQUIREMENT
EGHV-62	4/4	INSIDE	OUT	GATE	MOTOR	4	CIS-B	NONE	30	OPEN	OPEN	A\$ 1\$	CLOSED	N/A	c
EGV-371	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
EGHV-61	4/4	OUTSIDE	OUT	GATE	MOTOR	1	CIS-B	NONE	30	OPEN	OPEN	AS IS	CLOSED	N/A	C
EGHV-132	4/4	INSIDE	OUT	GATE	MOTOR	1	REM/MAN	NONE	N/A	CLOSED	CLOSED	AS IS	CLOSED	N/A	c
EGHV-133	4/4	OUTSIDE	OUT	GATE	MOTOR	4	REM/MAN	NONE	N/A	CLOSED	CLOSED	AS IS	CLOSED	N/A	с
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FLUID CONTAINED: WATER

LENGTH OF PIPING TO OUTERMOST ISOLATION VALVE: 7.9 ft. APPLICABLE GDC NO. 56

GENERAL COMMENTS:

ISOLATION SWITCH PROVIDED IN THE CONTROL ROOM FOR POWER LOCKOUT OF VALVES HV132 AND HV133



CONTAINMENT PENETRATION NO. P-76 DESCRIPTION: CCW FROM RCP THERMAL BARRIER COMPONENT COOLING WATER SYSTEM

REFERENCE SECTION(S) 9 2 2 REV. 13

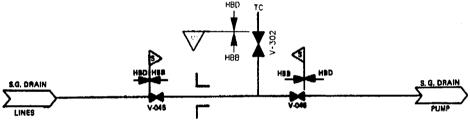
WOLF CREEK UPDATED SAFETY ANALYSIS REPORT

CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 54 OF 74

VALVE NO.	LINE/ VALVE SIZE, IN.	INSIDE/ OUTSIDE CONT.	NORMAL FLOW DIRECTION	VALVE TYPE	VALVE OPERATOR	POWER SOURCE	PRIMARY ACTUATION SIGNAL	SECONDARY ACTUATION SIGNAL	MAXIMUM CLOSURE TIME (SEC.)	VALVE POSITION					APPENDIX J
										NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
BMV-045	3/3	INSIDE	OUT	GATE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	с
BMV-302	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
BMV-046	3/3	OUTSIDE	001	GATE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	С
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ASSOCIATED V		Y NO DO													
			-												
FLUID CONTAI	NED: WATER														
LENGTH OF PI	PING TO OUT	FRMOST	1												

6.1 ft. ISOLATION VALVE: APPLICABLE GDC NO. 56 GENERAL COMMENTS:

NONE



CONTAINMENT PENETRATION NO. P-78 DESCRIPTION: STEAM GENERATOR DRAIN LINE STEAM GENERATOR BLOWDOWN SYSTEM

REFERENCE SECTION(S) 10.4.8 REV. 13

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WOLF CREEK UPDATED SAFETY ANALYSIS REPORT

CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 55 OF 74

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	LINE/	INSIDE/	NORMAL			POWER	PRIMARY	SECONDARY	MAXIMUM	ļ	VA	LVE POSITIO	N		
VALVE NO.	VAL VE SIZE, IN	OUTSIDE CONT.	FLOW	VALVE TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL		SECONDARY	REQUIREMENT
EJHV-8701A	12/12	INSIDE	OUT	GATE	MOTOR	1	REM/MAN	NONE	N/A	CLOSED	OPEN	AS IS	CLOSED	N/A	A
EJ8708A	3/3	INSIDE	N/A	RELIEF	N/A	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	A
EJV-154	Y. / Y.	INSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
				1									1		
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ASSOCIATED WITH A SAFETY FEATURES SYS. YES NO

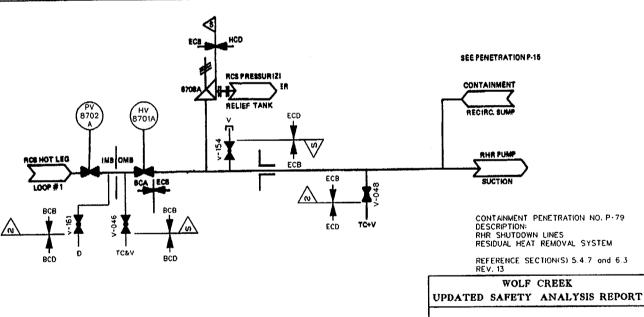
THE CONTAINED WATER

FLUID CONTAINED:	
LENGTH OF PIPING	TO OUTERMOST N/A
APPLICABLE GDC NO.	55

GENERAL COMMENTS:

THE RESIDUAL HEAT REMOVAL SYSTEM SUCTION LINE FROM THE REACTOR COLLANT SYSTEM CONTAINS TWO NORMAL VY CLOBED, POWER OPERATED REMOTE MANUAL VALVES IN BERIES INSIDE THE CONTAINMENT. THE VALVES ARE ALSO INTERLOCKED TO PREVENT THEM FROM ISOLATION VALVES ON BEALED INTERLOCKED TO PREVENT THEM FROM ISOLATION VALVES COMESTION THE CON-TAINMENT AND THE CLOBED SYSTEM OUT-SIDE THE CONTAINERT, WHICH IS DESIGN-SIDE THE CONTAINERT, WHICH IS DESIGN-SIDE THE CONTAINERT, WHICH IS DESIGN-SOT THE CONTAINERT, WHICH IS DESIGN-SOT THE CONTAINERT, SHORE OF STEE CONTAINERT AND THE CLOBED SYSTEM OUT-TON FROM THE DESIGN AND CONSTRUCTION OF THE CONTAINERT. LEAKED BETTO TOM FROM THE LINE OUTDOL THE CON-TAINMENT IS PROVIDED, AS DESORIBED IN SECTION 5.3.

LOCAL TESTING OF THE VALVE OR THE CLOSED SYSTEM OUTSIDE THE CONTAIN-MENT IS NOT REQUIRED SINCE THE SYSTEM IS OPERATED AND INFECTED DURING NORMAL PLANT OPERATION TO ASSURE THAT THE INTEGRITY IS BEING MAINTAIN-ED.



CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 56 OF 74

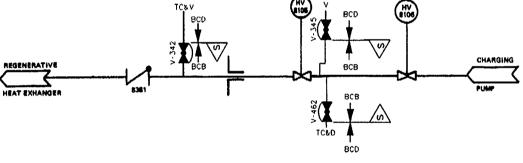
VALVE NO.	
	SECONDARY REQUIREME
BGHV-8105	N/A C
BGV-342	N/A N/A
BG8381	N/A C
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ASSOCIATED WI	
ASSOCIATED W	

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FLUID CONTAINED: WATER LENGTH OF PIPING TO OUTERMOST ISOLATION VALVE: 18.1 ft APPLICABLE GDC NO. 55

GENERAL COMMENTS:

NONE



CONTAINMENT PENETRATION NO. P-80 DESCRIPTION: CHARGING LINE CHEMICAL AND VOLUME CONTROL SYSTEM

REFERENCE SECTION(S) 9.3.4 REV. 13

WOLF CREEK

UPDATED SAFETY ANALYSIS REPORT

CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 57 OF 74

	LINE/		NORMAL	VALVE	VALVE	POWER		SECONDARY	MAXIMUM		VA	LVE POSITI	ON		APPENDIX J
VALVE NO.	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
EJHV-8809A	10/10	OUTSIDE	IN	GATE	MOTOR	1	NONE	REM/MAN	N/A	OPEN	OPEN	AS IS	OPEN	CLOSED	A
EJV-054	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
EP8818A	6/6	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	OPEN	CLOSED	A
EP88188	6/6	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	OPEN	CLOSED	A
EJHCV-8890A	Y41 Y4	INSIDE	OUT	GLOBE	AIR	1	CIS-A	NONE	13	CLOSED	CLOSED	CLOSED	CLOSED	N/A	A
EJV-134, V-136	Y ./ Y.	INSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
EJV-132	1/1	INSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
EJV-171, EJV-172 EJV-173, EJV-174	¥4/¥4	INSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/ A
ASSOCIATED WIT	H A SAFET	Y m	1		•						~				

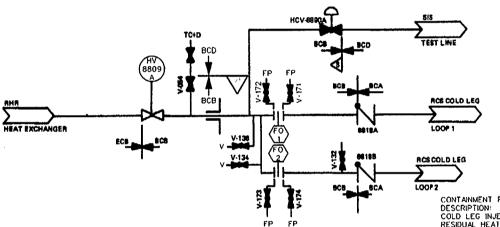
FEATURES SYS.	YES NO
FLUID CONTAINED:	WATER
LENGTH OF PIPING ISOLATION VALVE	TO OUTERMOST N/A
APPLICABLE GDC NO.	55
GENERAL COMMENTS	:

THE PENETRATION IS ABSOCIATED WITH THE HIGH PRESSURE GOOLANT INJECTION SYSTEM, WHICH IS REQUIRED TO MITHATE THE CONSCIUNCES OF A LOCA. A CHECK VALVE IS PROVIDED FOR EACH BRANCH UNE INSIDE THE CONTAINMENT, ADD A REMOTEMANUAL ISOLATION VALVE IS PROVIDED CUTRIDE THE CONTAINMENT. A SINGLE ACTIVE OR FASEIVE FAILURE CAN BE ACCOMMONATED BINGS THE SYSTEM IS CLOSED OUTSIDE THE CONTAINMENT. AND IS DESCIONS AND GONET THE SYSTEM IS CLOSED OUTSIDE THE CONTAINMENT AND IS DESCIONS AND GONET THE SYSTEM SURATE WITH THE DESCIONATION SOLATION THE ON FROM THE CONTAINMENT, LARAGE DETIGTION FROM THE LINE CUTSIDE THE CONTAINMENT IS PROVIDED, AD DESCINETO IN SECTION 8.3.3.

LOCAL TESTING OF THE VALVES OR THE CLOSED SYSTEM GUTSIDE THE CONTAIN-MENT IS NOT REQUIRED SINCE THE SYSTEM IS OPERATED AND INPEGATED UNRING NORMAL PLANT OFFRATION TO ASSURE THAT THE INTEGRITY IS SEING MAINTAIN-GO.

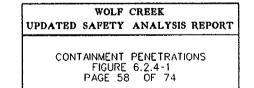
NOTE: ALL VENTS, DRAINS AND FLOW POINTS AS INDICATED BELOW.





CONTAINMENT PENETRATION NO. P-82 DESCRIPTION: COLD LEG INJECTION RESIDUAL HEAT REMOVAL SYSTEM

REFERENCE SECTION(S) 5.4.7 and 6.3 REV. 13



VALVE	LINE/ VALVE	INSIDE/	NORMAL FLOW	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	VE POSIT	ION		APPENDIX J
NO.	SIZE, IN.	CONT.	DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
		 													
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LATION VALV		N/A	4			Г						s			
RAL COMMEN		NONE			DBB TL		Ļ								
ED WITH THE I NOT SUBJECT TO ADMENT BARRI CHED, THE BOU NAT FIBLION PRI ENVIRONMENT 10 M GENERATOR T OP THE LINES (TEAM GENERATO	D GDC-67, SINC ER INTEGRITY I NDARY OR BA ODUCT LEAKAU 5 THE INSIDE O FUSES AND THI 5 EMANATING	e yhe Ie not Maier Je to F the I out:	£		V-041 TU		v-22 ■	<u>}</u> [₅]	V-04	-			SAMPLING	
HS PENETRAT OR FIGURE CO	MPLETENES	S. JWN			C	986	- TUBING	Ìş	(¥ <u>°</u>					
		ENT					5 E	O SEE P.O		DBI	D		DESCR	IPTION: GENERATO	ETRATION NO. P-8 R D SAMPLE LINE R BLOWDOWN SYS
		ENT					FROM	SEE P.9		DBI	D		DESCR STEAM STEAM	IPTION: GENERATO GENERATO ENCE SECTION	R D SAMPLE LINE R BLOWDOWN SYS
RE CONSIDERE		ENT					FRO	SEE P.9		DBI	D	UPI	DESCR STEAM STEAM REFER REF. 1	IPTION: GENERATOI GENERATOI ENCE SECTION WOLF CF	R D SAMPLE LINE R BLOWDOWN SYS DN(S) 10.4.8

C-64

	LINE/	INSIDE/	NORMAL	VALVE VALVE POWER PRIMARY SECONDARY MAXIMUM VALVE POSITION						APPENDIX J REQUIREMENT					
VALVE NO.	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
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ASSOCIATED WI	TH A SAFET	Y CT													

FEATURES SYS. YES NO

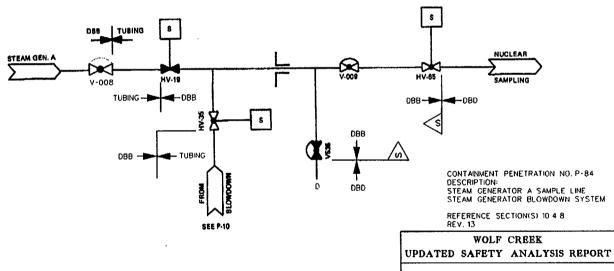
FLUID CONTAINED: WATER

LENGTH OF PIPING	10	OUTERMOST N/A
APPLICABLE GDC NO.		NONE

GENERAL COMMENTS:

THE CONTAINMENT PENETRATIONS ASSO-CLATED WITH THE STEAM GENERATORS ARE NOT SUBJECT TO GOLDAT, SINCE THE CONTAINMENT SUBJECT NO GOLDAT, SINCE THE ESTACHED. THE SOLVARY OR SARAIER AGAINST FIGHION PRODUCT LEAKAGE TO THE ENVIRONMENT IS THE INAIDE OF THE STEAM GENERATOR THESE MANATIME FROM THE STEAM GENERATOR SHELLS.

THIS PENETRATION IS INCLUDED FOR FIGURE COMPLETENESS. NONE OF THE VALVES SHOWN ARE CONSIDERED CONTAINMENT ISOLATION VALVES.



CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 60 OF 74

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VALVE	LINE/	INSIDE/ OUTSIDE	NORMAL	FIGW VALVE VALVE POWER				POWER PRIMARY SECONDARY MAXIMUM		VA	LVE POSITI	N			
NO.	VALVE SIZE, IN.	CONT.	DIRECTION	TYPE	OPERATOR	SOURCE	SIGNAL	SIGNAL	TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
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ASSOCIATED WITH A SAFETY FEATURES SYS. YES NO

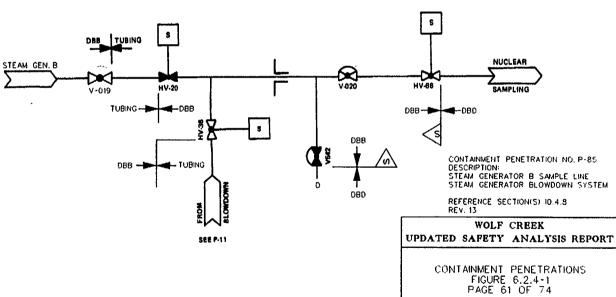
FLUID CONTAINED: WATER

LENGTH OF PIPING ISOLATION VALVE:	TO OUTERMOST N/A
APPLICABLE GDC NO.	NONE
CENEDAL COMMENTES	

GENERAL COMMENTS:

THE CONTAINMENT PENETRATIONS ASSO-CIATED WITH THE STEAM GENERATORS ARE NOT SUBJECT TO GOLO-7, SHORE THE CONTAINMENT BARRIER (INTEGNITY IS NOT REACHED. THE BUNDARY OR SARRIER AGAINST FIELDN FRODUGT LEAKAGE TO THE INVIRONMENT & THE INSIDE OF THE STEAM GENERATOR THEE SAMANTHE FROM THE STEAM GENERATOR SHELLS.

THIS PENETRATION IS INCLUDED FOR FIGURE COMPLETENESS. NONE OF THE VALVES SHOWN ARE CONSIDERED CONTAINMENT ISOLATION VALVES.



	LINE/	INSIDE/	NORMAL	VALVE		POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSIT			APPENDIX J
VALVE NO.	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW DIRECTION	TYPE	VALVE OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
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ASSOCIATED WI	TH A SAFET . YESX	Y Y NO []			<u> </u>	L		<u> </u>	<u>l</u>	L					1
FLUID CONTAIN	ED: WATER												٠		
LENGTH OF PIP	ING TO OUT	ERMOST N/A]									S			
APPLICABLE GDC NO.		NONE			008							T			
GENERAL COMME	NTS:			EN, C		_	_		L	0			N	UCLEAR	

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THE CONTAINMENT TENSTRATIONS ASSO-CLATED WITH THE STEAM GENERATORS ARE NOT SUBJECT TO GOC47, SURCE THE CONTAINMENT BARRIER INTEGRITY IS NOT BERACHED. THE BOUNDARY OR SARRIER AGAINST JIESION FRODUCT LEAKAGE TO THE SWINDONNENT IS THE WORDE OF THE STEAM GENERATOR THESE AND THE OUT. SIDE OF THE LINES EMANATING FROM THE STEAM GENERATOR SHELLS.

THIS PENETRATION IS INCLUDED FOR FIGURE COMPLETENESS. NONE OF THE VALVES SHOWN ARE CONSIDERED CONTAINMENT ISOLATION VALVES.

 \square сĸ HV-21 V-031 HV-87 SAMPLING 088-🗲-DBD -DBB TUBING ---657 5 DBB 2 'w' DBB - TUBING CONTAINMENT PENETRATION NO. P-86 ľ0 080 DESCRIPTION: STEAM GENERATOR C SAMPLE LINE STEAM GENERATOR BLOWDOWN SYSTEM REFERENCE SECTION(S) 10.4 8 REV. 13 SEE P-12 WOLF CREEK UPDATED SAFETY ANALYSIS REPORT CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 62 OF 74

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VALVE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITIO	ИС		APPENDIX J
NO.	VALVE SIZE, IN	CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
EMHV-8802A	4/4	OUTSIDE	IN	GATE	MOTOR	1	NONE	REM/MAN	N/A	CLOSED	CLOSED	AS IS	CLOSED	OPEN	A
EMHV-8881	Y41 Y4	INSIDE	OUT	GLOBE	AR	1	CIS-A	NONE	10	CLOSED	CLOSED	CLOSED	CLOSED	N/A	A
EMV-001	2/2	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	OPEN	A
EMV-002	2/2	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	OPEN	A
EMV-052, V-053, V-055, V-056, V-184, V-185	¥41¥4	INSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
EMV-051	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N.A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
EMV-186, V-187	1/1	INSIDE	N/A	GLOBE	MANUAL	N.A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A

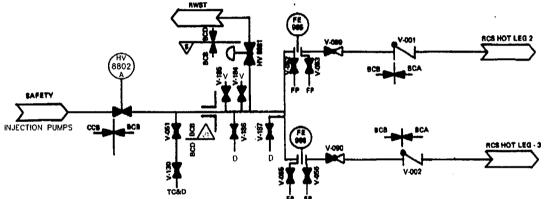
ASSOCIATED WITH	
FLUID CONTAINED:	WATER
LENGTH OF PIPING ISOLATION VALVE:	TO OUTERMOST N/A
APPLICABLE .GDC NO.	55
GENERAL COMMENTS	

THIS PENETRATION IS ABBOCIATED WITH THE HIGH PRESSURE COOLAAT INJECTION SYSTEM, WHICH IS REGURED TO MITHOATS THE CONSEQUENCES OF A LOCA. A CHECK VALVE IS PROVIDED FOR EACH BRANCH LINS INSIDE THE CONTAMMENT, AND A REMOTEMANUAL ISOLATION VALVE IS PROVIDED CUTENDE THE CONTAMMENT. A SINGLE ACTIVE OR PASSIVE FAILURE CAN BE ACCOMMONDATED SINCE THE SYSTEM IS CLOSED GUTSIDE THE CONTAINMENT AND IS DESIGNED AND CONSTRUCTED COMMENT JURATE WITH THE DESIGN AND CONSTRUC-TION OF THE CONTAINMENT AND CONTAINMENT IS PROVIDED, AS DESCRIBED IN SECTION 5.3.

LOCAL TESTING OF THE VALVEE OR THE CLOSED SYSTEM OUTBDE THE CONTAM-MENT IS NOT REQUIRED SINCE THE SYSTEM IS OFFARTED AND INSPECTED DURING NORMAL PLANT OFFATION TO ASSURE THAT THE INTEGRITY IS BEING MAINTAIN-ED.

NOTE: ALL VENTS, DRAINS AND FLOW POINTS AS INDICATED BELOW.





CONTAINMENT PENETRATION NO. P-87 DESCRIPTION: HOT LEG INJECTION HIGH PRESSURE COOLANT INJECTION SYSTEM

REFERENCE SECTION(S) 6.3 REV. 13

WOLF CREEK

UPDATED SAFETY ANALYSIS REPORT

CONTAINMENT PENETRATIONS

FIGURE 6.2.4-1 PAGE 6.3 OF 74

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	LINE/	INSIDE/	NORMAL			POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI	ON		APPENDIX J
VALVE NO.	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW	VALVE TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAL	PRIMARY	SECONDARY	REQUIREMENT
EMHV-8801A	4/4	OUTSIDE	IN	GATE	MOTOR	1	SIS	NONE	N/A	CLOSED	CLOSED	AS IS	OPEN	N/A	A
EMHV-88018	4/4	OUTSIDE	IN	GATE	MOTOR	4	SIS	NONE	N/A	CLOSED	CLOSED	AS IS	OPEN	N/A	A
EMV-077	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
EMHV-8843	Y./ Y.	INSIDE	IN	GLOBE	AIR	4	CIS-A	NONE	10	CLOSED	CLOSED	CLOSED	CLOSED	N/A	A
EMV-8815	3/3	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	OPEN	N/A	A
EMV-151	1/1	OUTSIDE	OUT	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
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		1	1										1		<u> </u>

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ASSOCIATED WITH A SAFETY FEATURES SYS. YES NO

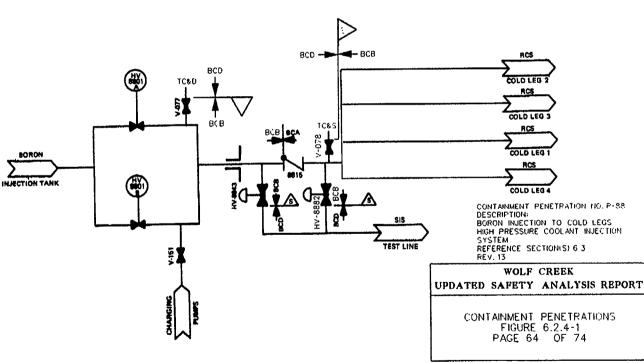
FLUID CONTAINED: WATER

LENGTH OF PIPING ISOLATION VALVE:	то	OUTERMOST N/A
APPLICABLE GDC NO.		55

GENERAL COMMENTS:

UNITAL CUMMENTS. THIS FENETRATION IS ASSOCIATED WITH THE HIGH PRESULE COLART INACTION SYSTEM, WHICH IS REQUIRED TO MITGATE THE CONSTOLUTION OF A LOCA. A CHECK VALVE IS FROVIDD FOR EACL STANDARY LINE UNEDT THE CONTAINMENT, AND B PROVIDED THOM CONTAINMENT, AND B PROVIDED FOR EACL STANDARY EL ACCOMPONENT. A INGLE CLOSED GUTSIDE THE CONTAINMENT AND BURATE WITH THE DESIGN AND CONSTEME SUBJECTION FORM TRUE THE SYSTEM IS CLOSED GUTSIDE THE CONTAINMENT AND BURATE WITH THE DESIGN AND CONSTEMENT CONTAINMENT IS PROVIDED, AS DESCRIBED IN MECTION 5.3. LOCAL TESTUDE OR THE VALVES OR THE

LOCAL TESTING OF THE VALVES OR THE CLOSED SYSTEM CUTBDE THE CONTAIN-MENT IS NOT REQUIRED SHIEL THE EVERTM IS OPERATED AND INPEGTED CUTING NORMAL FLANT OPERATION TO ASSURE THAT THE INTEGRITY IS SENIG MAINTAIN-ED.



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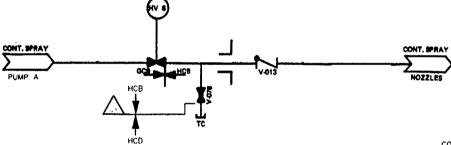
VALVE	LINE/ VALVE	INSIDE/ OUTSIDE	NORMAL FLOW	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSIT	ION		APPENDIX J
NO.	SIZE, IN.	CONT.	DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	F AIL	PRIMARY	SECONDARY	REQUIREMENT
ENHV-06	10/10	OUTSIDE	IN	GATE	MOTOR	1	CSAS	REM/MAN	N/A	CLOSED	CLOSED	AS IS	OPEN	CLOSED	A
ENV-076	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
ENV-013	10/10	INSIDE	IN	CHECK	N/A	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	OPEN	CLOSED	A
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				J					i						
ASSOCIATED V															
FLUID CONTA	NED: WATER														

FLUID CONTAINED:	WATER
LENGTH OF PIPING ISOLATION VALVE:	TO OUTERMOST
APPLICABLE GDC NO.	56
GENERAL COMMENTS:	

THE CONTAINMENT BRAN STATEM, WHICH THE CONTAINMENT BRAN STATEM, WHICH IS REQUIRED TO MITHATE THE COMBE-QUENCES OF A LOCA. A CHECK VALVE IS PROVIDED INSIDE THE CONTAINMENT, AND A REMOTE AMANUAL BOULATION VALVE IS PROVIDED OUTSIDE THE CONTAINMENT, A ISMOLE ACTIVE OR PASHVE FALLURE CAN BE ADCOMMODATED SHOE THE SYSTEM IS CLOSED OUTSIDE THE CONTAINMENT AND IS DESIGNED AND COMPTAINTER CAN BE MOLIFACTURE WITH THE DESIGN AND COM-STAUCTION OF THE CONTAINMENT AND IS DESIGNED AND COMPTAINTER CAN BENDERATE WITH THE DESIGN AND COM-STAUCTION OF THE CONTAINMENT AND DESIGNED AND DETECTION PROM THE LINE OUTSIDE THE CONTAINMENT IN FROVIDED, AS DES-CRIBED IN BECTION 5.3.

LOGAL TESTING OF THE VALVEE OR THE CLOBED SYSTEM OUTSIDE THE CONTAIN-MENT IS NOT REQUIRED SINCE THE SYSTEM IS OPERATED AND INPEGTED OUTSIO NORMAL PLANT OPERATION TO ASSURE THAT THE INTEGRITY IS SEING MAINTAIN-ED.

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CONTAINMENT PENETRATION NO. P-89 DESCRIPTION: CONTAINMENT SPRAY CONTAINMENT SPRAY SYSTEM

REFERENCE SECTION(S) 6.2.2 REV. 13

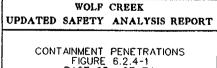


FIGURE 6.2.4-1 PAGE 65 OF 74

	LINE/	INSIDE/	NORMAL			DOWED	PRIMARY	SECONDARY	MAXIMUM	·	VA	LVE POSITI	N		APPENDIX J
VALVE NO.	VALVE SIZE, IN	OUTSIDE CONT.	FLOW	VALVE TYPE	OPERATOR	POWER	ACTUATION SIGNAL	ACTUATION SIGNAL	TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
EMHV-8964	Y4/Y4	OUTSIDE	OUT	GLOBE	AIR	1	CIS-A	NONE	10	CLOSED	CLOSED	CLOSED	CLOSED	N/A	c
EMV-153	¥4/¥4	INSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
EMHV-8871	Y4/ Y4	INSIDE	OUT	GLOBE	AIR	4	CIS-A	NONE	10	CLOSED	CLOSED	CLOSED	CLOSED	N/A	С
EMV-038	Y.1 Y.	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
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				+	+					1	1				
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		<u> </u>				L	j			J	1		<u> </u>		·
ASSOCIATED W	NTH A SAFET S. YES∐	NO 🕅													
FLUID CONTAIN			1												
LENGTH OF PI		FRUOST	4												
ISOLATION VAL		16.7 ft													

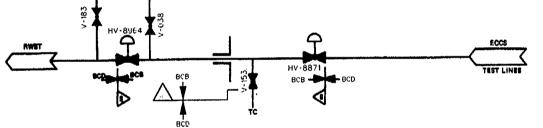
928

APPLICABLE GDC NO.

56

GENERAL COMMENTS:

NONE



CONTAINMENT PENETRATION NO. P-92 DESCRIPTION: ECCS TEST LINE RETURN HIGH PRESSURE COOLANT INJECTION SYSTEM REFERENCE SECTION(S) 6.3 REV. 13

WOLF CREEK UPDATED SAFETY ANALYSIS REPORT CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 66 OF 74

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VALVE	LINE/ VALVE	INSIDE/ OUTSIDE	NORMAL FLOW	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITIO	DN		APPENDIX J
NO.	SIZE, IN.	CONT.	DIRECTION	TYPE	OPERATOR	SOURCE	SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMEN
SJHV-5	1/1	INSIDE	OUT	GLOBE	SOLENOID	4	ÇIS-A	NONE	5	OPEN	CLOSED	CLOSED	CLOSED	N/A	C
SJHV-6	1/1	OUTSIDE	OUT	GLOBE	SOLENOID	1	CIS-A	NONE	5	OPEN	CLOSED	CLOSED	CLOSED	N/A	¢
SJV-069	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
SJHV-127	1/1	OUTSIDE	OUT	GLOBE	SOLENOID	4	CIS-A	NONE	5	CLOSED	CLOSED	CLOSED	CLOSED	N/A	c
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		1		+	+				<u> </u>				+		
FLUID CONTAIN	PING TO OUT VE1	ERMOST 10.3 ft 55	HOT LEG	SAMPLE			HV •		BCB BCD				Fs Z	POST ACCIDE SAMPLE SYS	NT EM D
													DESCR	NMENT PEN	

P-93 NE NUCLEAR SAMPLING SYSTEM

REFERENCE SECTION(S) 9.8.2 REV. 13

WOLF CREEK UPDATED SAFETY ANALYSIS REPORT CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 67 OF 74

	LINE/	INSIDE/	NORMAL			POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI	ON		APPENDIX J
VALVE NO.	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW	VALVE TYPE	VALVE OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
SJHV-18	1/1	INSIDE	OUT	GATE	SOLENOID	4	CIS-A	NONE	5	CLOSED	CLOSED	CLOSED	CLOSED	N/A	c
SJHV-19	1/1	OUTSIDE	OUT	GATE	SOLENOID	1	CIS-A	NONE	5	CLOSED	CLOSED	CLOSED	CLOSED	N/A	с
SJV-066	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
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SSOCIATED WI															
FLUID CONTAIN															
ENGTH OF PIP	VING TO OUT	IERMOST					1207				[HV]				
							HV				19				
APPLICABLE		55]				18				h the state of the				
APPLICABLE GDC NO. ENERAL COMME	NTS	55]				L ^a				Ť				
GDC NO.	NTS:	55] 					1						SAMPLE VI	ESSEL
GDC NO. ENERAL COMME	NTS:	55]					L		p					
GDC NO. ENERAL COMME	NTS:	55	Σ				18	L	ECB		ECB ECD			SAMPLE VI	
GDC NO. ENERAL COMME	NTS:	55	Σ	\supset				L	ECB			<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>		SAMPLE VI	
GDC NO.	NTS:	55	Σ	\supset			[18]	L Г ∠	ECB					SAMPLE VI	
DC NO.	NTS:	55	Σ	\supset		×		L F Z	ECB ECD	CI 80 TC		<u></u>		SAMPLE VI	
GDC NO. ENERAL COMME	NTS:	55	Σ	\supset			1 3	L F 2		C Second			CONT	<u> </u>	
GDC NO. ENERAL COMME	NTS:	55	Σ	\supset				L F 2		C Sector			DESC	AINMENT PER RIPTION: MULATOR SA	NETRATION NO. F
GDC NO. ENERAL COMME	NTS:	55	Σ	\supset				L F Z		TC			DESC ACCU NUCL	AINMENT PER RIPTION: MULATOR SA EAR SAMPLIN	NETRATION NO. F MPLING IG SYSTEM
GDC NO. ENERAL COMME	NTS:	55	Σ	\supset				<u> </u>		TC			DESC ACCU NUCL	AINMENT PER RIPTION: MULATOR SA EAR SAMPLIN RENCE SECT	NETRATION NO. F MPLING IG SYSTEM
GDC NO. ENERAL COMME	NTS:	55	Σ	\supset				L F 2		C TC			DESC ACCU NUCLI REFEI REV.	AINMENT PER RIPTION: MULATOR SA EAR SAMPLIN RENCE SECT 13 WOLF C	METRATION NO. F MPLING IG SYSTEM ION(S) 9 3.2 REEK
GDC NO. ENERAL COMME	NTS:	55	Σ	\supset				L F 2		TC		UPI	DESC ACCU NUCLI REFEI REV.	AINMENT PER RIPTION: MULATOR SA EAR SAMPLIN RENCE SECT 13 WOLF C	METRATION NO. F MPLING IG SYSTEM ION(S) 9 3.2
DC NO.	NTS:	55	Σ	\supset				L F 2		TC		UPI	DESC ACCU NUCLI REFEI REV.	AINMENT PER RIPTION: MULATOR SA EAR SAMPLIN RENCE SECT 13 WOLF C. AFETY A	METRATION NO. F MPLING IG SYSTEM ION(S) 9 3.2 REEK INALYSIS RU

VALVE	LINE7	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRMARY	SECONDARY	MAXIMUM		VA	LVE POSITIO	ON .		APPENDIX J
NO.	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
GSHV-18	1/1	INSIDE	IN	GATE	SOLENOID	1	CIS-A	REM/MAN	5	CLOSED	CLOSED	CLOSED	CLOSED	OPEN	A,C
GSHV-17	1/1	OUTSIDE	IN	GATE	SOLENOID	1	ÇIS-A	REM/MAN	5	CLOSED	CLOSED	CLOSED	CLOSED	OPEN	A,C
GSV-036	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
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ASSOCIATED WITH A SAFETY FEATURES SYS. YES NO

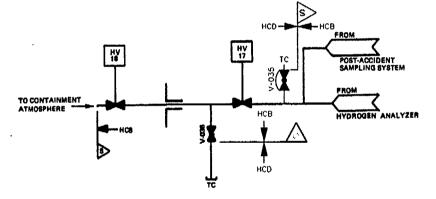
FLUID CONTAINED: CONT. AR LENGTH OF PIPING TO OUTERMOST ISOLATION VALVE: N/A APPLICABLE GDC NO. 56

GENERAL COMMENTS:

THE PERETRATION IS ASSOCIATED WITH THE POST-ACCIDENT SAMPLING SYSTEM AND THE CONTAINMENT HYDRODEN CON-TROL SYSTEM, WHICH BERGUITED TO MITH GATE THE CONSEQUENCES OF A LOCA.

THE HYDRO-CEN MALYZER IS A CLOSED BYSTEM DUTSIDE THE GONTAINMENT WHICH IS DESIGNED AND CONSTRUCTED CONSTRUCTION OF THE CONTAINMENT.

TO ABSURE LEAKTIGHT INTEGRITY, THE VALVES ARE SUBJECTED TO TYPE C TEST-ING, AND THE SAMPLE LINES ARE OPENED DURING THE TYPE A TESTING.



CONTAINMENT PENETRATION NO. P-97 DESCRIPTION: H2 SAMPLE RETURN HYDROGEN CONTROL SYSTEM

REFERENCE SECTION(S) 6.2.5 REV. 13

WOLF CREEK UPDATED SAFETY ANALYSIS REPORT CONTAINMENT PENETRATIONS

FIGURE 6.2.4-1 PAGE 69 OF 74

	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITI	QN		APPENDIX J
V AL VE NO	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
GSHV-33	1/1	OUTSIDE	IN	GATE	SOLENOID	4	CIS-A	REM/MAN	5	OPEN	OPEN	CLOSED	CLOSED	OPEN	С
GSHV-34	1/1	INSIDE	IN	GATE	SOLENOID	1	ÇIŞ-A	REM/MAN	5	OPEN	OPEN	CLOSED	CLOSED	OPEN	С
GSV-052	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
								<u> </u>	<u> </u>				1		
LENGTH OF PIF ISOLATION VAL APPLICABLE GDC NO. SENERAL COMME	VE:	TERMOST 7.8 ft. 56		NTAINMEN Sphere] }							DR		
													DESC	RIPTION:	ETRATION NO

SAMPLE RETURN CONTAINMENT ATMOSPHERE MONITOR

REFERENCE SECTION(S) 9.4.6 REV. 13

WOLF CREEK UPDATED SAFETY ANALYSIS REPORT CONTAINMENT PENETRATIONS

CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 69a OF 74

VALVE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSIT	ION		APPENDIX J
NO.	VALVE SIZE, IN	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
BV-001	2/2	INSIDE	IN	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	С
BV-002	2/2	OUTSIDE	IN	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	с
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OCIATED WI		NO 🛛	ļ												
JID CONTAINE					1	NCD HO	C B		HCB_	HOD					
IGTH OF PIPI LATION VALV		ERMOST 7.1 ft.								TCEV					
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C NO. RAL COMMEN	its:] BREATHING AIR	7>	⊲	voo			VOOE				╣ {	·	
C NO. ERAL COMMEN	4TS:			7>			10	L F	VOOE	A KROW	-00-	H HCD	┨ ססנ - -		
C NO. RAL COMMEN	ITS:			7>	√ −−	V00	91	<u>L</u> r	VQQE	A	-00-				
C NO. RAL COMMEN	ITS:			7>		8004) I	L F	VOOZ		-00-	H HCD 1	CONTA		AUXILIA BUILDIN ETRATION NO. P
C NO. RAL COMMEN	ITS:			7>		8004	1	<u>L</u>	VQQE		-00-	# HCD 1		VINMENT PEN IPTION: HING AR SU	BUILDIN
C NO. ERAL COMMEN	NTS:			7>		8004	91	<u>L</u>	VQQE		-00-	 HCD - I	CONTA DESCR BREAT	ENCE SECTION	BUILDIN ETRATION NO. P PPLY
RAL COMMEN	ITS:			7>		8004	91	<u>L</u> r	VOOZ		-00-	# HCD 1	CONTA DESCR BREAT REFER REV. 1	ENCE SECTION	ETRATION NO. P PPLY DN(S) 9.5.10
C NO.	NTS:			7>		8004	01	<u>L</u>	VOOZ		-00-		CONTA DESCR BREAT REFER REV. 1	NPTION: HING AR SU ENCE SECTIO WOLF CR	ETRATION NO. P PPLY DN(S) 9.5.10

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	LINE/	INSIDE /	NORMAL			POWER	PRIMARY	SECONDARY	MAXINUM		VA	LVE POSITI	ON		APPENDIX J
VALVE NO.	VALVE SIZE, IN	OUTSIDE CONT.	FLOW	VALVE TYPE	VALVE OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
GSHV-3	1/1	OUTSIDE	OUT	GATE	SOLENOID	4	CIS-A	REM/MAN	5	CLOSED	CLOSED	CLOSED	CLOSED	OPÉN	A,C
GSHV-4	1/1	INSIDE	OUT	GATE	SOLENOID	4	CIS-A	REM/MAN	5	CLOSED	ÇLOSED	CLOSED	CLOSED	OPEN	A.C
GSHV-5		INSIDE	OUT	GATE	SOLENOID	4	CIS-A	REM/MAN	5	CLOSED	CLOSED	CLOSED	CLOSED	OPEN	A,C
GSV-029	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
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ASSOCIATED WITH A SAFETY FEATURES SYS. YES NO

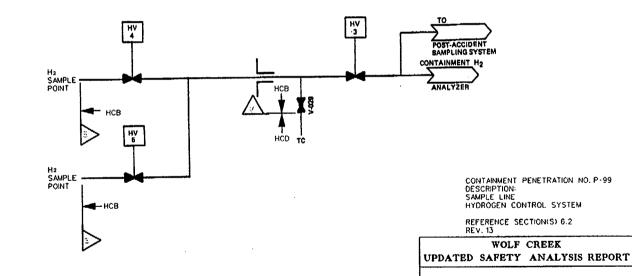
FLUID CONTAINED: CONT. ATM

LENGTH OF PIPING TO OUTERMOST ISOLATION VALVE: N/A APPLICABLE GDC NO. 56 GENERAL COMMENTS:

THIS PENETRATION IS ASSOCIATED WITH THE POST-ACCIDENT SAMPLING SYSTEM. AND THE CONTAINMENT HYDROGEN CON-THOL EYSTEM, WHICH IS REQUIRED TO MITH-GATE THE CONSEQUENCES OF A LOCA.

THE HYDRO-THE CONTAINMENT WHICH IS DESIGNED AND CONSTAUCTED COMMENSURATE WITH THE DESIGN AND CONSTAUCTION OF THE CONTAINMENT.

TO ABBURE LEAKTIGHT INTEGRITY, THE VALVES ARE BURNOTED TO TYPE O TEST-ING, AND THE SAMPLE LINES ARE OPENED DURING THE TYPE A TESTING.



CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 70 OF 74

VALVE	LINE/	INSIDE/	NORMAL	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		V		APPENDIX J		
NO.	VALVE SIZE, IN	OUTSIDE CONT.	FLOW	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
GSHV-36	1/1	INSIDE	OUT	GATE	SOLENOID	4	ÇIŞ-A	REM/MAN	5	OPEN	OPEN	CLOSED	CLOSED	OPEN	С
GSHV-37	1/1	OUTSIDE	OUT	GATE	SOLENOID	1	CIS+A	REM/MAN	5	OPEN	OPEN	CLOSED	CLOSED	OPEN	С
GSV-056	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
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														WOLF CR	EEK
												UPD	ATED SA	FETY A	NALYSIS REF
													CONTAU		NETRATIONS
														FIGURE 6.	NE TRATIONS
													P	AGE 70a	OF 74

May 2002

	LINE/	INSIDE/	NORMAL			POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITIO	DN		APPENDIX J
VALVE NO:	VALVE SIZE, IN.	OUTSIDE CONT.	FLOW	VALVE TYPE	VALVE OPERATOR	SOURCE	ACTUATION	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN		PRIMARY	SECONDARY	
GSHV-12	1/1	OUTSIDE		GATE	SOLENOID	1	CIS-A	REM/MAN	5	CLOSED	CLOSED	CLOSED	CLOSED	OPEN	A,C
GSHV-13	1/1	INSIDE	OUT	GATE	SOLENOID	1	CIS-A	REM/MAN	5	CLOSED	CLOSED	CLOSED	CLOSED	OPEN	A.C
	- 1/1	INSIDE	OUT	GATE	SOLENOID	1	CIS-A	REM/MAN	5	CLOSED	CLOSED	CLOSED	CLOSED	OPEN	A,C
GSHV-14	- 1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
GSV-033		OUTSIDE		00000					1		1		1		
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ASSOCIATED WITH A SAFETY FEATURES SYS. YES NO

FLUID CONTAINED: CONT. ATM.

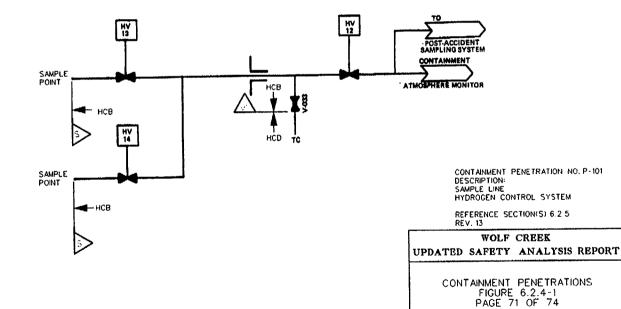
LENGTH OF PIPING TO OUTERMOST ISOLATION VALVE: N/A APPLICABLE CDC NO. 56

GENERAL COMMENTS:

THIS PENETRATION IS ASSOCIATED WITH THE POSTACCIDENT SAMPLING SYSTEM AND THE CONTAINMENT HYDRODEN CON-TROL SYSTEM, WHICH IS REQUIRED TO MITI-GATE THE CONSEQUENCES OF A LOGA.

THE HYDRO-CEN ANLYJER IS A CLOBED SYSTEM OUTBIDE THE CONTAINMENT WHICH IS DEBINED AND CONTAINTED WHITH THE DEBION AND CONSTRUCTION OF THE CONTAINMENT.

TO ASSURE LEAKTIGHT INTEGRITY, THE VALVES ARE SUBJICTED TO TYPE C TEST-ING, AND THE SAMPLE LINES ARE OPENED DURING THE TYPE A TESTING.



May 2002

VALVE	LINE/ VALVE	INSIDE/ OUTSIDE	NORMAL FLOW	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		APPENDIX J				
NO	SIZE, IN.	CONT.	DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
GSHV+31	1/1	INSIDE	QUT	GATE	SOLENOID	1	CIS-A	REM/MAN	5	OPEN	OPEN	CLOSED	CLOSED	OPEN	С
SSHV-32	1/1	OUTSIDE	OUT	GATE	SOLENOID	4	CIS-A	REM/MAN	5	OPEN	OPEN	CLOSED	CLOSED	OPEN	¢
GSV+050	1/1	OUTSIDE	N/A	GLOBE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A
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			POINT		1×			T	> ↓		7		DESCR SAMPL	IPTION: E LINE	
			POINT		1×			T	> ↓		7		DESCR SAMPL CONTA	IPTION: E LINE JINMENT ATM	OSPHERE MONITO
			POINT		1×			T	> ↓		7		DESCR SAMPL CONTA	IPTION: E LINE JINMENT ATM ENCE SECTIO	OSPHERE MONITO
			POINT		1×			T	> ↓		₹		DESCR SAMPL CONTA REFER REV. 1	IPTION: E LINE JINMENT ATM ENCE SECTIO WOLF CR	OSPHERE MONIT(DN(S) 9.4.6 EBK
			POINT	-	1×			T	> ↓		7	UPD	DESCR SAMPL CONTA REFER REV. 1	IPTION: E LINE JINMENT ATM ENCE SECTIO WOLF CR	DSPHERE MONIT
			POINT	-	1×			T	> ↓		7	UPD	DESCR SAMPL CONTA REFER REV. 1 ATED SA	IPTION: E LINE UNMENT ATM ENCE SECTION WOLF CR FETY A	OSPHERE MONITO DN(S) 9.4.6 EBK NALYSIS RE
			POINT		1×			T	> ↓		₹	UPD	DESCR SAMPL CONTA REFER REV. 1 ATED SA CONTAIN	IPTION: E LINE UNMENT ATM ENCE SECTION WOLF CR FETY AN UMENT PE FIGURE 6.	OSPHERE MONITO DN(S) 9.4.6 EEK NALYSIS RE NETRATIONS 2.4-1
			POINT		1×			T	> ↓		₹	UPD	DESCR SAMPL CONTA REFER REV. 1 ATED SA CONTAIN	IPTION: E LINE UNMENT ATM ENCE SECTION WOLF CR FETY A	OSPHERE MONITO DN(S) 9.4.6 EEK NALYSIS RE NETRATIONS 2.4-1

	LINE/	INSIDE/	NORMAL			POWER	PRIMARY	SECONDARY	MAXIMUM		VA	LVE POSITIO	N		APPENDIX J
VALVE NO.	VAL VE SIZE, IN.	OUTSIDE CONT.	FLOW	VALVE TYPE	VALVE OPERATOP	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	REQUIREMENT
PRESSURE TRANSMITTER	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/ A	N/A	N/A	Α
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ASSOCIATED WIT	TH A SAFET														

FEATURES SYS. YES X NO

FLUID CONTAINED: DOW CORNING D C 702 PURIFIED AND SUPPLIED BY WESTINGHOUSE

LENGTH OF PIPING ISOLATION VALVE:	TO	OUTERMOST N/A
APPLICABLE GDC NO.		56

GENERAL COMMENTS:

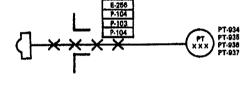
CENERAL COMMENTS: Trada, sas, sas and bar There are four instrument lines which penetrate the containment and which are reguined to remain punc-tional following a loca or steam or an antipation of the second of the Instrument atmosphere on the Instrument atmosphere on the lines of and on the cutilor, signal earby instrument atmosphere on the earby instrument atmosphere on the earby instrument atmosphere the also, upon the cutilor, signal earby instrument produce the and and the containment present the function and containment present the also, upon their containment present on the containment present on the containment present of the second of the recourse below, so used.

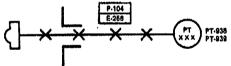
PT-536 AND PT-536 ARE THE WIDE RANGE CONTAINMENT PRESSURE TRANSMITTERS REQUIRED BY NUREG-0737 AND REQULA-TORY QUIDE 1.87.

EACH OF THE FOUR CHANNELS HAS A SEPARATE PENETRATION, AND EACH Priseurs transmitter is located immediately adjacement to the outside of the containment wall, it is con-

NECTED TO A SEALED BELLOWS, LOCATED IMMEDIATELY ADJACENT TO THE INSIDE CONTAMINENT WALL, BY MEANS OF A SEALED FLUD FILLED TUBE. THIS TUBING, ALDING WITH THE TRANSMITTER AND ALONG WITH THE TRANSMITTER AND BELLOWE, HE CONSERVATIVELY DESIGNED AND BURNET TO STRICT GUALITY CON-THOL AND TO REGULAR INSERVICE INSERVICE AND TO REGULAR INSERVICE INSERVICE AND TO REGULAR INSERVICE BARRIER GARE INSIDE AND ONE OUTSIDE BARRIER GARE INSIDE AND ONE OUTSIDE BARRIER GARE INSIDE AND ONE OUTSIDE BITWEEN THE CONTAINMENT AND THE OUTSIDE ATMOSPHERE, BHOULD A LEAR MENT, THE CONTAINMENT AND THE OUTSIDE ATMOSPHERE, BHOULD A LEAR WILL PREVENT THE BEALED BULD A LEAR COCUR OUTSIDE THE CONTAINMENT AND FULL CONTAINMENT OISIGN PRESURE, WILL PREVENT THE BEALED FOR THE CONTAIN-HE DESIGNED TO WITHFETAND FULL CONTAINMENT DISIGN PRESURE, WILL PRE-COCUR INSIDE THE CONTAINMENT, THE COCUR INSIDE THE CONTAINER, WILL CON-TAINMENT DESCARE PROM THE CONTAINS AUTOMATC DOUBLEARABLE FROM THE CONTAINS MITHOUT OWRATOR ACTION AND SOTH THE BELLOWS AND TUBHCH BERDARE SOUND A PROVIDE BUILLOWS AND TUBHCH INDOX CONTAINS INTELDING, THE DO PRE BUID PROVIDE BUILLOWS AND TUBHCH INDOX CONTAINS INTELDING, THE DO PRE BUID PROVIDE BUILLOWS AND TUBHCH TO THE COMPONE BUILLOWS AND TUBHCH TO THE COMPONE INTELDING, THE CONTAINS TO THE COMPONE INTELDING, THE BEALED DO WITHOUT BUILLOWS AND TUBHCH TO THE COMPONE INTELDING, THE DO PRE BUID PRE BUID PROVIDE BUILLOWS AND TUBHCH TO THE COMPONE INTELDING, THE DO PRE BUID PRE BUID PROVIDE BUILLOWS AND TUBHCH TO THE COMPONE INTELDING TO BUID PRE BUID PRE BUID PROVIDE BUID PROVIDE AND TUBHCH TO THE COMPONE INTELDING TO BUID PRE BUID PROVIDE BUID PROVIDE TO THE COMPONE BELLOWS, IS CONSERVATIVELY DESIGNED

BECAUSE OF THIS SEALED FLUID FILLED SYSTEM, A POSTULATED SEVERANCE OF THE LINS DURING SITHER NORMAL OPER-ATION OR ACCIDENT CONDITIONS WILL NOT RESULT IN ANY RELEASE FROM THE CONTAINMENT.





CONTAINMENT PENETRATION NO. P-103 & 104 DESCRIPTION: E-256

CONTAINMENT PRESSURE TRANSMITTERS

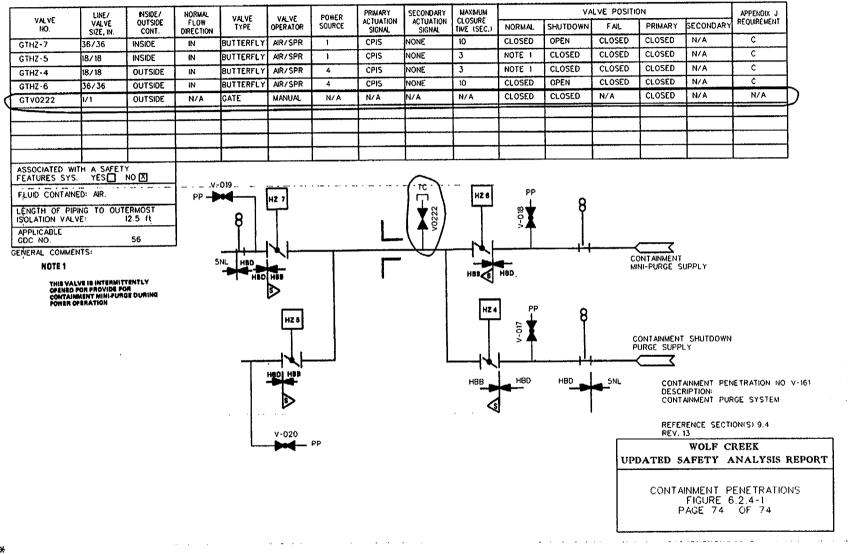
REFERENCE SECTION(S) 6.3, 9.4 REV. 11

WOLF CREEK UPDATED SAFETY ANALYSIS REPORT

> CONTAINMENT PENETRATIONS FIGURE 6.2.4-1 PAGE 72 OF 74

VALVE LINE/ INSIDE/			NORMAL FLOW	VALVE	VALVE	POWER	PRIMARY	SECONDARY	MAXIMUM		 VA	LVE POSITI	ON)
NO.	SIZE, IN	CONT.	DIRECTION	TYPE	OPERATOR	SOURCE	ACTUATION SIGNAL	ACTUATION SIGNAL	CLOSURE TIME (SEC.)	NORMAL	SHUTDOWN	FAIL	PRIMARY	SECONDARY	APPENDIX J REQUIREMENT	
GTHZ-9	36/36	OUTSIDE	OUT	BUTTERFLY	AIR/SPR	1	CPIS	NONE	10	CLOSED	OPEN	CLOSED	CLOSED	N/A	c	
GTHZ-8	36/36	INSIDE	TUO	BUTTERFLY	AIR/SPR	4	CPIS	NONE	10	CLOSED	OPEN	CLOSED	CLOSED	N/A	c	
GTHZ-12	18/18	OUTSIDE	OUT	BUTTERFLY	AIR/SPR	1	CPIS	NONE	3	NOTE 1	CLOSED	CLOSED	CLOSED	N/A		
GTHZ-11	18/18	INSIDE	OUT	BUTTERFLY	AIR/SPR	4	CPIS	NONE	3	NOTE 1	CLOSED	CLOSED	CLOSED	N/A	c	
GTV0223	- 1/1	OUTSIDE	N/A	GATE	MANUAL	N/A	N/A	N/A	N/A	CLOSED	CLOSED	N/A	CLOSED	N/A	N/A	Þ
SSOCIATED WI	TH A SAFET						TC					·····				
LUID CONTAIN				V PP 🚽	-023	HZ O	1		HZ 8	PP	0					
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C-82



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