

Rev				SUMMARY CALCULATION SHEET FOR PSV				Proj. # XXXX	Unit 00	Doc. Code CN 1545	Serial # 01	Rev. A	Page 2 of 7					
Main Valve Item				001	PSV	010	A	Additional Valve(s)										
1.0 PROTECTED EQUIPMENT																		
Item		Des. Pressure		Des. Temperature		Insulation		Fire Area		Notes								
		0		0		<input type="checkbox"/>												
		0		0		<input type="checkbox"/>												
		0		0		<input type="checkbox"/>												
		0		0		<input type="checkbox"/>												
2.0 RELIEVING CONDITIONS AND INSTALLATION																		
Installed On:						Discharge To:						LP Flare						
Set Pressure:						18	bar	G	Valve Type:				Conventional					
Rupture Disk Upstream:						No						Applicable Code:	API RP 520					
3.0 CONSIDERED EMERGENCY SCENARIOS																		
Emergency		Appl.	Phase	Relieving Temp		Sp. Gr.	MW	Cp/Cv	Relieving Rate		Calc. Orifice	Down. Temp	Notes					
Blocked Outlet		<input type="checkbox"/>																
Cooling Water Failure		<input type="checkbox"/>																
Coolant Failure (Other than CW)		<input type="checkbox"/>																
Fan Failure		<input type="checkbox"/>																
Reflux Failure (Top of Tower)		<input type="checkbox"/>																
Reflux Failure (Side Stream)		<input type="checkbox"/>																
Accidental Mixing		<input type="checkbox"/>																
Overfilling		<input type="checkbox"/>																
Accum. of Non-Condensables		<input type="checkbox"/>																
Control Valve Failure		<input type="checkbox"/>	Gas	190	°C		78.5	1.29	49101.47	kg/h	2.795	in <sup>2</sup>						
Failure of Automatic Controls		<input type="checkbox"/>																
Abnormal Heat or Vapor Input		<input type="checkbox"/>																
Press. Surge or Internal Explos.		<input type="checkbox"/>																
Chemical Reaction		<input type="checkbox"/>																
Thermal Expansion		<input type="checkbox"/>																
Cold Side of Exch. Blocked-In		<input type="checkbox"/>																
Fire		<input type="checkbox"/>	Gas	182.083	°C		78.54	1.39	70837	kg/h	3.787	in <sup>2</sup>						
Exchanger Tube Rupture		<input type="checkbox"/>																
General Power Failure		<input type="checkbox"/>																
Local Power Failure		<input type="checkbox"/>																
Blocked-In Fired Heater		<input type="checkbox"/>																
Loss of Heat		<input type="checkbox"/>																
Loss of Absorbent		<input type="checkbox"/>																
Inadvert. Loss of Segregation		<input type="checkbox"/>																
User Defined		<input type="checkbox"/>																
4.0 SELECTED PROTECTION DEVICE																		
Valve Item				Sizing Emergency			Set Pressure		Calc. Orifice		Select. Orifice		In / Out Flanges					
001	PSV	010	A	Fire			18	bar	G	3.787	in <sup>2</sup>	4.34	in <sup>2</sup>	N	4	300	6	150
5.0 PIPING CHECK																		
Inlet Piping		Nom. Diam. (in)		6	Schedule		STD	Equivalent Length		40	mt	Pressure Drop		.435	bar			
Outlet Piping		Nom. Diam. (in)		12	Schedule		STD	Equivalent Length		50	mt	Pressure Drop		.395	bar			
NOTES																		
Rev	Issue Description								Date		By							