

HAZOP STUDY WORKSHEET



Project:	t2	NODE	node1
Design Intent :		System	
Design Conditions:		HAZOP Boundary	
Operating Conditions:			
PFD, PID No. :		Date	

Guide Word	Deviation	Causes	Consequences	CAT	Unmitigated Risk Assessment			Major Accident Event (Y/N)	Existing Safeguards	Mitigated Risk Assessment Matrix			Recommendations	Action No.	Action by
				(P/A/E/R/Q)	S	L	R			S	L	R			
Less/Low Flow	Less of	x1			4	4	H	Y	ex1	4	3	H	r1	rat (TOP-XX)	
MisdirectedFlow	Misdirected	x2	c1						41				r2	rat (TOP-XX)	
More/HighFlow	More of	x3	c2											rat (TOP-XX)	
No Flow	None	x4	c3											rat (TOP-XX)	
Reverse Flow	Reverse	x5	c4											rat (TOP-XX)	
MLess/Low Pressure	Less of	x6												rat (TOP-XX)	
More/High Pressure	More of	x7												rat (TOP-XX)	

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Project:	t2	NODE	node2
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Guide Word	Deviation	Causes	Consequences	CAT (P/A/E/R/Q)	Unmitigated Risk Assessment			Major Accident Event (Y/N)	Existing Safeguards	Mitigated Risk Assessment Matrix			Recommendations	Action No.	Action by
					S	L	R			S	L	R			
Less/Low Flow	Less of	c1			4	3	H		5400	3	3	M	r1	MDP-Jaruwat P.	
MisdirectedFlow	Misdirected	c2			4	2	M		5400	3	2	L	r2	MDP-Jaruwat P.	
More/HighFlow	More of	c3												MDP-Jaruwat P.	
No Flow	None	c4												MDP-Jaruwat P.	
Reverse Flow	Reverse	c5												MDP-Jaruwat P.	
MLess/Low Pressure	Less of	c6												MDP-Jaruwat P.	
More/High Pressure	More of	c7												MDP-Jaruwat P.	

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				(P/A/E/R/Q)	S	L	R			S	L	R			
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MisdirectedFlow	Misdirected	x2	c1						41				r2	rat (TOP-XX)	
More/HighFlow	More of	x3	c2											rat (TOP-XX)	
No Flow	None	x4	c3											rat (TOP-XX)	
Reverse Flow	Reverse	x5	c4											rat (TOP-XX)	
MLess/Low Pressure	Less of	x6												rat (TOP-XX)	
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					S	L	R			S	L	R			
Less/Low Flow	Less of	c1			4	3	H		5400	3	3	M	r1	MDP-Jaruwat P.	
MisdirectedFlow	Misdirected	c2			4	2	M		5400	3	2	L	r2	MDP-Jaruwat P.	
More/HighFlow	More of	c3												MDP-Jaruwat P.	
No Flow	None	c4												MDP-Jaruwat P.	
Reverse Flow	Reverse	c5												MDP-Jaruwat P.	
MLess/Low Pressure	Less of	c6												MDP-Jaruwat P.	
More/High Pressure	More of	c7												MDP-Jaruwat P.	