

pany: DOW
 ce: SLURRY HDPE/CATALYST DECANT

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Node: 1 DECANT(D-260A/B)/HOLD(D-202C) TANKS					
Parameter: Flow			Intention: 2000#/HR INTERMITENT		
DEWORD	DEVIATION	POSSIBLE CAUSES	CONSEQUENCES	RECOMMENDATIONS	BY
a	No Flow	PLUGGED LINE INSTRUMENT MALFUNCTION OPERATIONS ERROR CONTAMINATION	INABILITY TO MAKE / CATALYST	OPERATOR TRAINING	RF
			POOR SEPARATION		
			PLANT SHUTDOWN		
			PREPARE SYSTEM FOR LINE OPENING		
			OVER FILL VESSEL IF OUTLET LINE PLUGS		
			DAMAGE PUMP IF INLET/OUTLET PLUGGED		
	More Flow	OPERATION ERROR PROGRAMMING ERROR INSTRUMENTATION MALFUNCTION	OVERFILL VESSELS	2 EVALUATE REDUNDANT LEVEL INDICATION D-202C	GC
				3 REDUNDANT LEVEL INDICATION ON D-260A/B	*
				4 EVALUATE NEED FOR P-251 FLOW INDICATION	GC
				5 FLUSH LINES AFTER USE	*
			6 OPERATIONS TRAINING		RF
			7 CATALYST LOSS INTO D-202C	REVIEW MOD V PROGRAM	EC
			8 CATALYST IN VENT HEADER	EVALUATE FAIL POSITION OF VALVES	*

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Node: 1 DECANT(D-260A/B)/HOLD(D-202C) TANKS					
Parameter: Temperature			Intention: AMBIENT TEMPERATURE		
GUIDEWORD	DEVIATION	POSSIBLE CAUSES	CONSEQUENCES	RECOMMENDATIONS	BY
Mor	Higher Temp	D-235 WET SOLVENT	OVER PRESSURE DRUM	N2 PURGE PSV LINE	*
		FLOW FROM VENT HEADER TO DRUMS	POOR QUALITY CATALYST IN D-260	2 OPERATOR TRAINING	RF
		DEAD HEAD PUMPS	P-251 CAVITATE	3 EVALUATE MINIMUM FLOW LINE FOR P-251 WITH SUFFICIENT INSTRUMENTATION TO ENSURE NO BACKFLOW FROM D-202A TO D-202C.	GC
		FIRE		4 ADEQUATE SPRINKLER COVERAGE	GC
		OPERATOR ERROR		5 ALARM AND BLOCK FEEDS ON D-260A/B AND D-202C ON HIGH TEMP.	EC

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Node: 1 DECANT(D-260A/B)/HOLD(D-202C) TANKS Parameter: Pressure Intention: CONTROL PRESSURE AS REQ'D					
GUIDEWORD	DEVIATION	POSSIBLE CAUSES	CONSEQUENCES	RECOMMENDATIONS	BY
More	Higher Pressure	FIRE	PSV OPENS /	OPERATIONS TRAINING	RF
		INSTRUMENT MALFUNCTION	BACKFLOW/TRANSFER PROBLEMS 2	SEE REVERSE FLOW THIS NODE	*
		OPERATIONS ERROR	3	ADD HIGH PRESSURE ALARMS TO BOTH TANKS	*
Less	Lower Pressure	PAD SYSTEM FAILURE	SEE REVERSE FLOW 4 THIS NODE	SEE REVERSE FLOW THIS MODE	*
		OPERATIONS ERROR			

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Worksheet

HAZOP-PC 1.00

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Node: 1 DECANT(D-260A/B)/HOLD(D-202C) TANKS					
Parameter: Level			Intention: SUFFICIENT TO RUN PUMP		
GUIDEWORD	DEVIATION	POSSIBLE CAUSES	CONSEQUENCES	RECOMMENDATIONS	BY
Less	Less Level	INSTRUMENT FAILURE	P-251 CAVITATION /	REDUNDANT LOW LEVEL INDICATION/ALARM WITH MOD V PUMP SHUTDOWN LOGIC.	EC
		OPERATIONS ERROR		2 OPERATIONS TRAINING	RF
		LEAK		3 LOCATE GAS DETECTOR IN AREA PER TC RECOMMENDATIONS	RF