Company: DOW CHEMICAL CO. Node: 3
Process: HDPE - POLY B Page: 1

Node: 3 Discharge Line from DR-2007 to DR-2008
Parameter: Flow Intention: Transfer Powder

GUIDEWORD	DEVIATION	POSSIBLE CAUSES	CONSEQUENCES	RECOMMENDATIONS	BY
No	No Flow	Rotary feeder trips. Too high purge. Break rotary feeder. Fused polymer.	Overload DR-2007 Plug E-2302 High press.in DR-2007	Evaluate max.purge flow. Evaluate rotary valve tripping the feed.	GH KW
More	More Flow	None	None		
AsWellAs	AsWellAs Flow	Reverse flow through RF-2008.	Water in the dry recycle solvent.	Evaluate vent to flare with filter	GH
Reverse	Reverse Flow				

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Node: 3 Discharge Line from DR-2007 to DR-2008
Parameter: Temperature Intention: Assure Dry Powder

GUIDEWORD	DEVIATION	POSSIBLE CAUSES	CONSEQUENCES	RECOMMENDATIONS	BY
More	Higher Temp	Rotary feeder clearance. Upstream temperature failure.	Fuse polymer. Plug line. See no flow.	HAZOP temperature control and DR-2007.	*
Less	Lower Temp	Failure of temp.control. Build up on wall and loss of heat transfer. E-2302 plugged. Too much cold feed.	Solvent wet polymer. Overload continuator. Emission problems.	HAZOP DR-2007. Evaluate location of temperature element in line.	* GH

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Node: 3 Discharge Line from DR-2007 to DR-2008 Parameter: Pressure Intention: Less than 1 psig					
GUIDEWORD	DEVIATION	POSSIBLE CAUSES	CONSEQUENCES	RECOMMENDATIONS	BY
More	Higher Pressure	DR-2007 overpressure and vent line plugs.	Rotary valves leak Increase isopentane load on continuator. Solvent wet powder.	Alarm high pressure.	KW

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Node: 3 Discharge Line from DR-2007 to DR-2008
Parameter: Composition Intention: Normal Product MI/Density

GUIDEWORD	DEVIATION	POSSIBLE CAUSES	CONSEQUENCES	RECOMMENDATIONS	BY
OtherThan	OtherThan Comp	Emergency shutdown. Loss of reactor control.	Fused polymer.	Write proper operating procedures. Determine MI and density limitations of dryer.	RF RF

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