

HyNet Hydrogen Production Plant 1 – Technical Note

EPR Response 19a – Risk assessment for abnormal CO2 venting emissions

Summary

Identify all the discrete emission points venting CO2 and provide their location (either coordinates or a map);

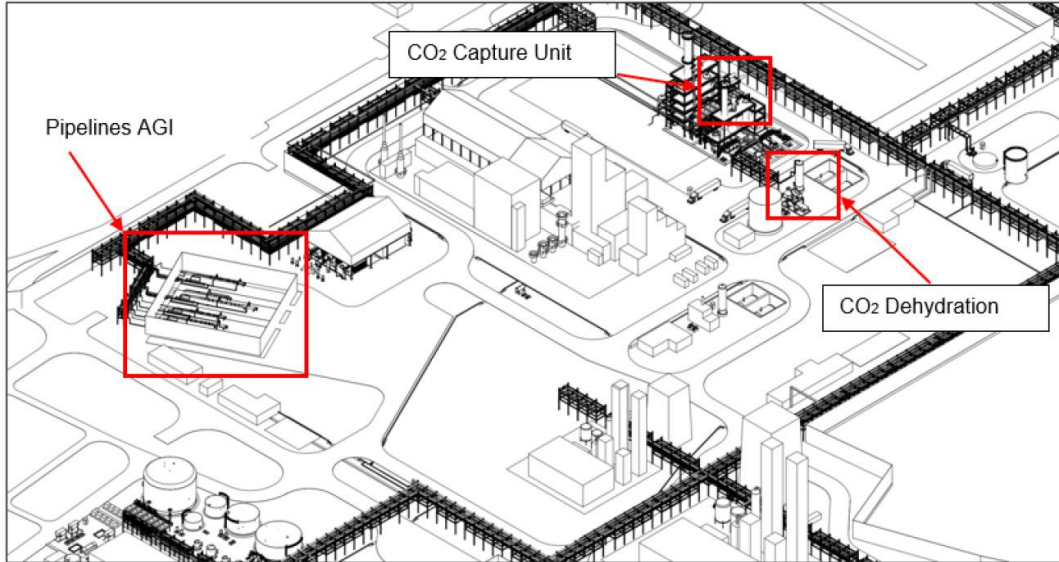
Details

Figure 1. CO₂ Venting Scenarios

Plant Area	Vent	Description	Case
Pipelines AGI	PSV-0002 (on CO ₂ export pipeline pig launcher)	Emergency Pressure Relief	PSV-0002_1
	PSV-0025 (on Protos pipeline pig receiver)	Emergency Pressure Relief	PSV-0025_1
	BDV-0010 (on pipeline from Protos)	Case 1 - Automatic Blowdown (Fire)	BDV-0010_1
		Case 2 - Automatic Blowdown (Ambient)	BDV-0010_2
		Case 3 - Automatic Blowdown (Cold)	BDV-0010_3
	CO ₂ metering package 10-AAH-U-001	Venting to isolate instrumentation for maintenance	10-AAH-U-001_1
	BDV-0001 (on CO ₂ export pipework)	Case 1 - Automatic Blowdown (Fire)	BDV-0001_1
Case 2 - Automatic Blowdown (Ambient)		BDV-0001_2	
Case 3 - Automatic Blowdown (Cold)		BDV-0001_3	
CO ₂ Dehydration	TEG Regeneration Skid 10-FAB-U-102	Case 1 - Normal Continuous Off-gas Vent	10-FAB-U-102_1
		Case 2 - Emergency Pressure Relief	10-FAB-U-102_2
CO ₂ Capture Unit	CO ₂ Absorber Column Reflux Drum V-117 (via PCV-0014)	Case 1 - Normal Operation -balancing and start-up	CCU_1
		Case 2 - Fire Case	CCU_2
		Case 3 - Safety - Tube Rupture of E-106	CCU_3
		Case 4 - Nitrogen Purge	CCU_4
		Case 5 - Normal Operation (Turndown Case) - balancing and start-up	CCU_5

The general locations of the equipment vents are illustrated in Figure 2-1.

Figure 2-1 Vent Locations



The approximate location of the CO2 Capture Unit vent is shown in Figure 2-2.

Figure 2-2 Vent Locations - CO₂ Capture Unit

