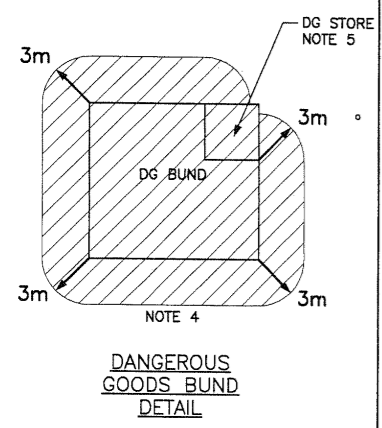
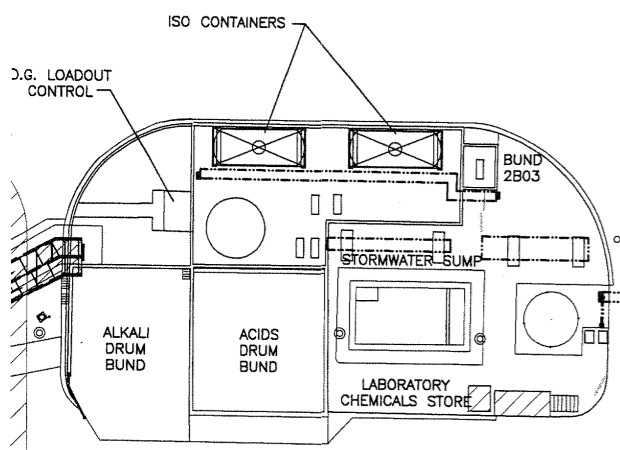
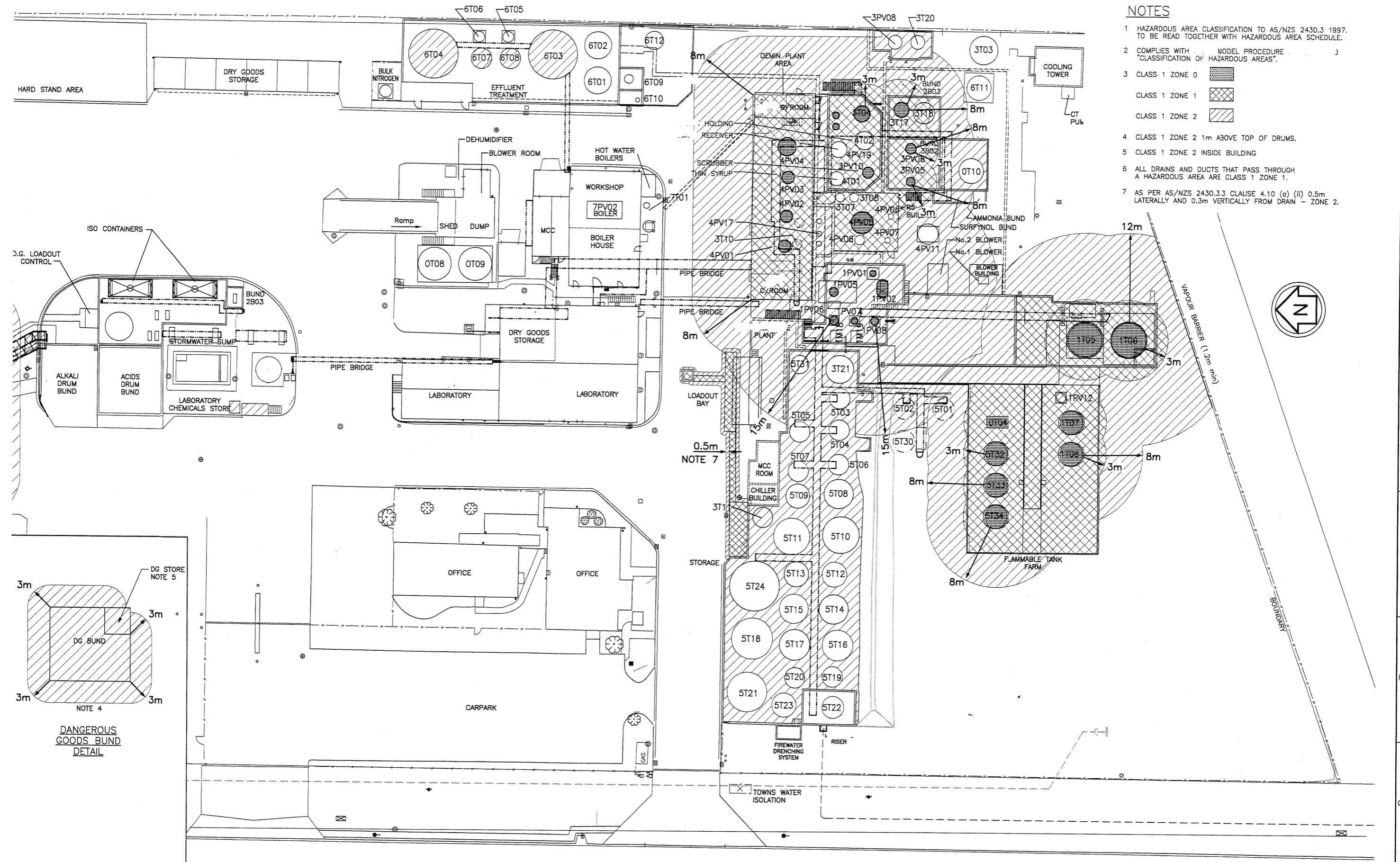
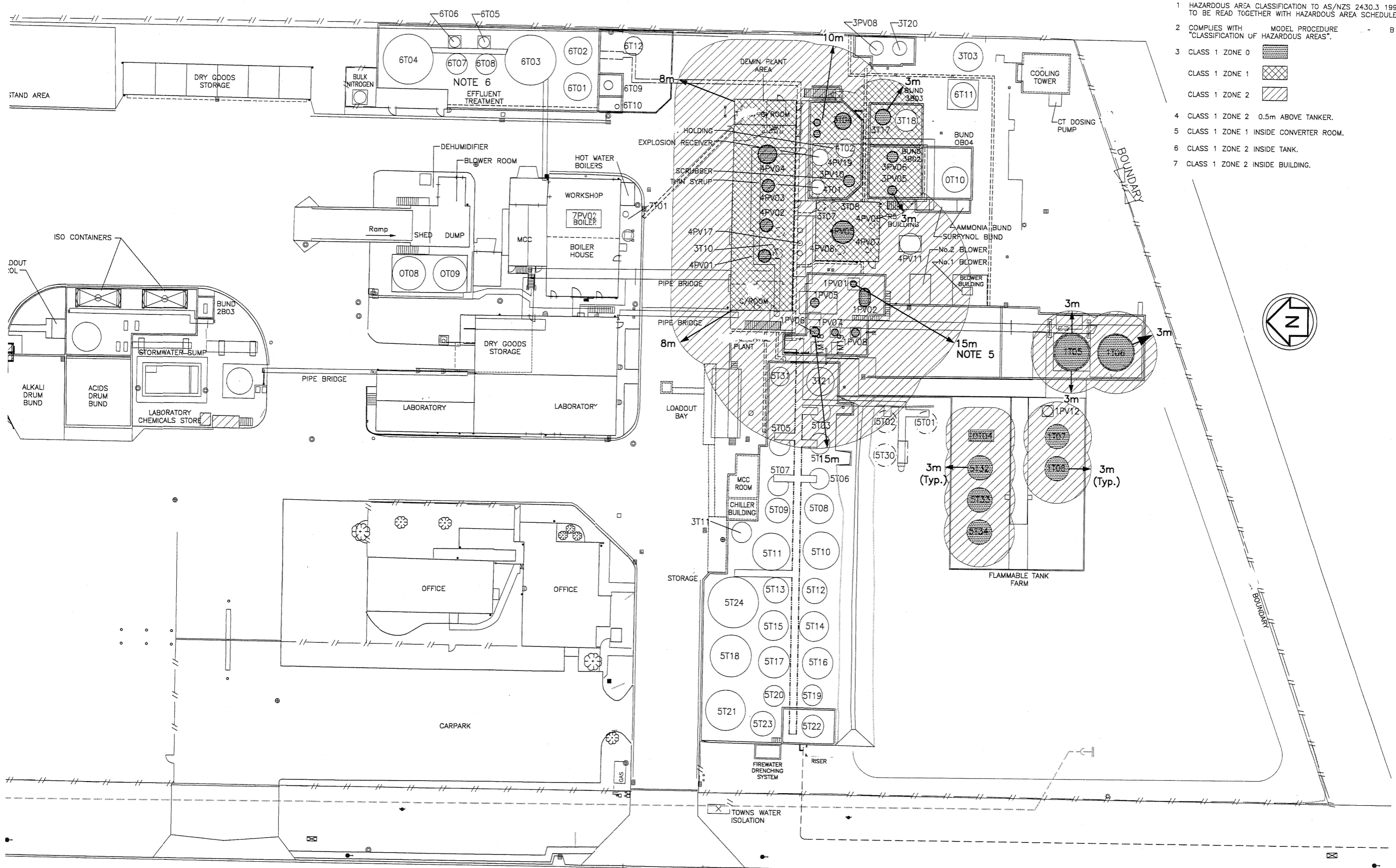


NOTES

- 1 HAZARDOUS AREA CLASSIFICATION TO AS/NZS 2430.3 1997. TO BE READ TOGETHER WITH HAZARDOUS AREA SCHEDULE.
- 2 COMPLIES WITH MODEL PROCEDURE "CLASSIFICATION OF HAZARDOUS AREAS".
- 3 CLASS 1 ZONE 0 CLASS 1 ZONE 1 CLASS 1 ZONE 2
- 4 CLASS 1 ZONE 2 1m ABOVE TOP OF DRUMS.
- 5 CLASS 1 ZONE 2 INSIDE BUILDING
- 6 ALL DRAINS AND DUCTS THAT PASS THROUGH A HAZARDOUS AREA ARE CLASS 1 ZONE 1.
- 7 AS PER AS/NZS 2430.3.3 CLAUSE 4.10 (a) (ii) 0.5m LATERALLY AND 0.3m VERTICALLY FROM DRAIN - ZONE 2.



	Tab Layout1		HAZARDOUS ATMOSPHERE ZONES									
	Scales		HAZARDOUS ATMOSPHERE ZONE									
	1:250 (A1) 1:500 (A3)		0 < EL ≤ 1.5m									
	Original Size A1		Status AS BUILT									
I AS BUILT			Drawing Number									
Rev	Revision Description		Revision									
			I									



NOTES

- 1 HAZARDOUS AREA CLASSIFICATION TO AS/NZS 2430.3 1997. TO BE READ TOGETHER WITH HAZARDOUS AREA SCHEDULE.
- 2 COMPLIES WITH MODEL PROCEDURE "CLASSIFICATION OF HAZARDOUS AREAS".
- 3 CLASS 1 ZONE 0 CLASS 1 ZONE 1 CLASS 1 ZONE 2
- 4 CLASS 1 ZONE 2 0.5m ABOVE TANKER.
- 5 CLASS 1 ZONE 1 INSIDE CONVERTER ROOM.
- 6 CLASS 1 ZONE 2 INSIDE TANK.
- 7 CLASS 1 ZONE 2 INSIDE BUILDING.



Rev	AS BUILT	Revision Description	Designed	Drawn	Checked	Approved	Date

Tab	Layout1
Scales	1:250 (A1) 1:500 (A3)
Original Size	A1

HAZARDOUS ATMOSPHERE ZONES

HAZARDOUS ATMOSPHERE ZONE
1.5 < EL ≤ 4m

Status	AS BUILT
Drawing Number	
Revision	H

Site

REV	Description	Prepared By	Reviewed By	Authorised By	Date
A	DRAFT				
B	GENERAL REVISION	G. Farrelly			
C	GENERAL REVISION	G. Farrelly			
D	GENERAL REVISION (Upgrade Stages 2A & 2B)				

REV	Equipment Area		Flammable Material					Process Conditions		Ventilation (ref. AS/NZS 2430.3.1 1997 Appendix B)	Source of Release		Hazardous Area Distances						Code Ref. AS/NZS 2430.3 1997	Comments	
	Location	Name	Name	Fl.P. (°C)	Auto. Ignit.n Temp. (°C)	LEL (% by Vol.)	Vap. SG (Air = 1)	Elec. Equip. Class.n to AS 2380	Temp. (°C)		Press. (kPa.g)	Description	Grade	Zone 0		Zone 1		Zone 2			
														Horizontal	Vertical	Horizontal	Vertical	Horizontal			Vertical
	BUILDINGS	Raw Material Weigh Tanks 4 PV 05, 4 PV 23	Methanol	10	386	6	1.1	T2 IIA	Amb.	Atm.	Inadequate	Leak, spill, piping connections, valves	Primary	Inside tank		Inside Building	8m from openings	Top of openings to ground	Part 3.3 4.5 (b)		
		4 PV 01 No. 1 4 PV 02 No. 2 4 PV 03 No. 3 4 PV 04 No. 4 4 PV 05 No. 5	Methanol	10	386	6	1.1	T2 IIA	100	-100/225	Inadequate	Manway, piping, seals etc.	Primary	Inside Reactors		Inside Building	8m from openings	Top of openings to ground	Part 3.3 4.5 (b)		
	SERVICES AREA	R5 Distillate Tank 3T17 10 kL	Methanol	10	386	6	1.1	T2 IIA	Amb.	Atm.	Adequate	Vents, Hatches	Primary	Inside Tank	EL. <= 4m to bund EL. >4m 3m	3m above tank 4m above ground	7m	1m	Part 3.3 4.1.2		
		R5 Distillate Pump 4M24	Methanol	10	386	6	1.1	T2 IIA	Amb.	220	Adequate	Leaky seals	Secondary	-	-	0.3m from seal	0.3m from seal	8m	2m above pump	Part 3.3 4.5	
		R5 Condensate Receiver 3 PV 03, < 4 kL	Methanol	10	386	6	1.1	T2 IIA	30	-100/200	Adequate	Vent, piping conn.	Primary	Inside Tank	EL. <= 4m to bund EL. >4m 3m	3m above tank 4m above ground	5m	1m	Part 3.3 4.1.2		
		R5 Condensate Pump 3M20	Methanol	10	386	6	1.1	T2 IIA	30	140	Adequate	Leaky seals	Secondary	-	-	0.3m from seal	0.3m from seal	8m	2m above pump	Part 3.3 4.5	
		R5 Scrubber Pump 3M17	Methanol	10	386	6	1.1	T2 IIA	60	550	Adequate	Leaky seals	Secondary	-	-	0.3m from seal	0.3m from seal	8m	2m above pump	Part 3.3 4.5	
		R5 Scrubber 3 PV 05	Methanol	10	386	6	1.1	T2 IIA	60	-2/5	Adequate	Fan Discharge point	Primary	-	-	3m in all directions from flame arrester				Part 3.3 4.1.3	Area changed to Zone 1
		R5 Vacuum Pump Flame Arrester	Methanol	10	386	6	1.1	T2 IIA	30	101.3	Adequate	Fan Discharge point	Secondary	-	-	3m in all directions from flame arrester				Part 3.3 4.1.3	
		R5 Receiver Vent	Methanol	10	386	6	1.1	T2 IIA	180	263	Adequate	Uncontrolled Reaction	Secondary	-	-	5m in all directions from vent				Estimate	
		R1 Condensate Receiver 4 PV 16, <4 kL	Methanol	10	386	6	1.1	T2 IIA	30	-100/200	Adequate	Vent, piping conn.	Primary	Inside Tank	EL. <= 4m to bund EL. >4m 3m	3m above tank 4m above ground	5m	1m	Part 3.3 4.1.2		
		R2 Condensate Receiver 4 PV 17, <4 kL	Methanol	10	386	6	1.1	T2 IIA	30	-100/200	Adequate	Vent, piping conn.	Primary	Inside Tank	EL. <= 4m to bund EL. >4m 3m	3m above tank 4m above ground	5m	1m	Part 3.3 4.1.2		
		R2 Condensate Pump 3 M 04	Methanol	10	386	6	1.1	T2 IIA	30	140	Adequate	Leaky seals	Secondary	-	-	0.3m from seal	0.3m from seal	8m	2m above pump	Part 3.3 4.5	
		R2 R3 R4 Scrubber 3 PV 10	Methanol/Water	10	386	6	1.1	T2 IIA	Amb.	Atm.	Adequate	Fan Discharge point	Primary	-	-	3m in all directions from flame arrester				Part 3.3 4.1.3	Area changed to Zone 1
		UF Condensate Tank - 3 T 04 15 kL	Methanol/Water	10	386	6	1.1	T2 IIA	Amb.	Atm.	Adequate	Piping, Vents, Hatches	Primary	Inside Tank	EL. <= 4m to bund EL. >4m 3m	3m above tank 4m above ground	8m	1m	Part 3.3 4.1.2		
	R1 Explosion Rec. - 4 PV 18 R2, R3, R4 Expl. Rec. - 4 PV 19 R5 Explosion Rec. - 4 PV 11	Methanol/Water	10	386	6	1.1	T2 IIA	120	Atm.	Adequate	Uncontrolled Reaction	Secondary	-	-	5m in all directions from vent				Estimate		
	PLANT	1 PV 01 Distillation Column 1 PV 02 Vapouriser 1 PV 03 Super Heater 1 PV 05 Quench Column 1 PV 06 No.1 Absorber	Methanol	10	386	6	1.1	T2 IIA	105	Atm. - 50	Adequate	Piping, Vents, Hatches	Primary	Inside Vessels	-	-	EL. <=8m 15m EL. > 8m 8m	8m	Part 3.5 4.2.2		
		1 PV 07 No.2 Absorber 1 PV 08 Buble Plate Column 1 PV 09 St. Tanks Scrubber 1 PV 11 Quench Vap. Separator 1 PV 04 Converter	Methanol	10	386	6	1.1	T2 IIA	105	27€	Adequate	Stack Vents	Primary	-	-	3m in all directions from vent				Part 3.3 4.1.3	Area changed to Zone 1
	RECOVERY PLANT	6 PV 01 Stripper Column 6 PV 02 Rectifier Column 6 PV 03 Reflux Drum 6 PV 04 Re-Boiler	Methanol	10	386	6	1.1	T2 IIA	105	27€	Adequate	Piping, Vents, Hatches, Flanges	Primary	Inside Vessels	-	-	EL. <=8m 10m EL. > 8m 6m	8m	Part 3.5 4.2.2 - zones reduced as the plant is a semi-batch process		
												Stack Vents	Primary	-	-	3m in all directions from vent				Part 3.3 4.1.3	Area changed to Zone 1

REV	Description	Prepared By	Reviewed By	Authorised By	Date
A	DRAFT				
B	GENERAL REVISION	G. Farrelly			
C	GENERAL REVISION	G. Farrelly			
D	GENERAL REVISION				

REV	Equipment Area		Flammable Material						Process Conditions		Ventilation (ref. AS/NZS 2430.3.1 1997 Appendix B)	Source of Release		Hazardous Area Distances						Code Ref. AS/NZS 2430.3 1997	Comments
	Location	Name	Name	Fl.Pt. (°C)	Auto. Ignit.n Temp. (°C)	LEL (% by Vol.)	Vap. SG (Air = 1)	Elec. Equip. Class.n to AS 2380	Temp. (°C)	Press. (kPa.g)		Description	Grade	Zone 0		Zone 1		Zone 2			
														Horizontal	Vertical	Horizontal	Vertical	Horizontal	Vertical		
D	BULK FLAMMABLE GOODS BUND	5 T 01 R25 Tank 30m³ 5 T 02 R15 Tank 36 m³	Resorcinol Resins	127	608	1.4	3.8	T2 IIA	Amb.	Atm.	Adequate	Piping, Vents, Hatches	Primary	Inside Tank	EL. <= 4m to bund EL. >4m 3m	3m above tank 4m above ground	9m	1m	Part 3.3 4.1.2	To be decommissioned as a result of methanol upgrade Stage 2B	
		Methanol Tank - 0T03 1100 m³	Methanol	10	386	6	1.1	T2 IIA	Amb.	Atm.	Adequate	Piping, Vents, Hatches	Primary	Inside Tank	EL. <= 4m to bund EL. >4m 3m	3m above tank 4m above ground	15m	1m	Part 3.3 4.1.3	To be decommissioned as a result of methanol upgrade Stage 2A	
		Slops Tank - 0T05 3.6m³ Slops Tank - 0T06 3.6m³	Methanol / Water, Caustic	10	386	6	1.1	T2 IIA	Amb.	Atm.	Adequate	Piping, Vents, Hatches	Primary	Inside Tank	EL. <= 4m to bund EL. >4m 3m	3m above tank 4m above ground	8m	1m	Part 3.3 4.1.3	To be decommissioned as a result of methanol upgrade Stage 2A	
		Methanol Tank - 0T04 6.3 m³	Methanol	10	386	6	1.1	T2 IIA	Amb.	Atm.	Adequate	Piping, Vents, Hatches	Primary	Inside Tank	EL. <= 4m to bund EL. >4m 3m	3m above tank 4m above ground	8m	1m	Part 3.3 4.1.3	To be relocated to F/Y bund temporarily in Stage 2A	
D	TANKS	ST32 Tank 30m³	Resorcinol Resins	127	608	1.4	3.8	T2 IIA	Amb.	Atm.	Adequate	Piping, Vents, Hatches	Primary	Inside Tank	EL. <= 4m to bund EL. >4m 3m	3m above tank 4m above ground	9m	1m	Part 3.3 4.1.2	New Tank. (2002)	
		ST33 Tank 30m³	Resorcinol Resins	127	608	1.4	3.8	T2 IIA	Amb.	Atm.	Adequate	Piping, Vents, Hatches	Primary	Inside Tank	EL. <= 4m to bund EL. >4m 3m	3m above tank 4m above ground	9m	1m	Part 3.3 4.1.2	New Tank. (2002)	
		ST34 Tank 30m³	Methanol	10	386	6	1.1	T2 IIA	Amb.	Atm.	Adequate	Piping, Vents, Hatches	Primary	Inside Tank	EL. <= 4m to bund EL. >4m 3m	3m above tank 4m above ground	9m	1m	Part 3.3 4.1.3	New Tank. (2002)	
D	TANKS	1T05 Tank No.5 - 130m³ 1T06 Tank No.6 - 132.5m³ 1T07 Tank No.7 - 30m³ 1T08 Tank No.8 - 30m³	Methanol	10	386	6	1.1	T2 IIA	Amb.	Atm.	Adequate	Piping, Vents, Hatches	Primary	Inside Tank	EL. <= 4m to bund EL. >4m 3m	3m above tank 4m above ground	12m >50kL 9m >25kL	1m	Part 3.3 4.1.3	F/Y tank No. 4 removed from the site. F/Y Tanks 7 & 8 Added. F/Y Tanks 1 - 3 to be decommissioned	
D	DG LOADOUT BAY	Methanol Tanker Discharge	Methanol	10	386	6	1.1	T2 IIA	Amb.	Atm.	Adequate	Vents, hatches, hose connections	Primary	Inside Tanker	1.5m from Hose conn. & Filters	1.5m from Hose conn. & Filters	6.0m	3.5m above ground	Part 3.3 4.6.2(a) & 4.6.4	Revised.	
	EFFLUENT TREATMENT PLANT	6 T 03 No. 1 Aerator Tank 6 T 04 No. 2 Aerator Tank 6 T 07 No. 1 Sludge Thickener 6 T 08 No. 2 Sludge Thickener	Methane	Gas	537	5	0.6	T2 IIA	Amb.	Atm.	Adequate	Surface of tank liquid	Sec.	-	-	-	-	Inside Tanks	Based on Part 3.7 5.2.2		
		6 T 14 Effluent Sump	Methanol	10	386	6	1.1	T2 IIA	Amb.	Atm.	Inadequate	Various process areas	Primary	-	-	Inside Sump	-	-	Part 3.3 4.9		
	SUMPS, PITS, TRENCHES		Methanol	10	386	6	1.1	T2 IIA	Amb.	Atm.	Inadequate	Vapour from other Hazardous Areas	Primary	-	-	Inside Sump, Pit or Trench	-	-	Part 3.3 4.9	Any drain or trench that passes through a hazardous area becomes hazardous	
	DG STORES AND DRUM COMPOUND	DG Store and Lab. Chemicals Store	Various Toluene typical	4	480	1.1	3.1	T2 IIA	Amb.	Attr.	Inadequate	Leaking seals, spills	Secondary	-	-	-	-	Inside Building	Part 3.3 4.3	Packages remain closed	
		Drum Compound	Various Ethanol typical	13	363	3.3	1.6	T2 IIA	Amb.	Attr.	Adequate	Leaking seals, spills	Secondary	-	-	-	3m	1m above drums	Part 3.3 4.3 (a) (ii)	Packages remain closed	