

Annex 5D

Results of Consequence Analysis

Table 5D.1 Results of Consequence Analysis for Natural Gas Facilities

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)				
						2.5B	3.0D	7.0D	2.0F	
FG_01	Manifold extending from Yacheng fuel gas manifold to blending station	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0	
					28.3 kW m ⁻²	0	0	0	0	
					19.5 kW m ⁻²	8	8	0	8	
					9.8 kW m ⁻²	9	9	10	9	
				Flash fire	LFL	6	6	6	6	
			25		Jet fire	35.5 kW m ⁻²	20	20	22	20
						28.3 kW m ⁻²	20	21	22	20
						19.5 kW m ⁻²	22	22	24	22
				9.8 kW m ⁻²		25	25	26	25	
				Flash fire	LFL	16	16	15	16	
			50		Jet fire	35.5 kW m ⁻²	37	15	43	37
						28.3 kW m ⁻²	39	15	44	39
						19.5 kW m ⁻²	43	44	47	43
				9.8 kW m ⁻²		50	50	52	49	
				Flash fire	LFL	35	36	37	36	
			100		Jet fire	35.5 kW m ⁻²	67	68	77	67
						28.3 kW m ⁻²	70	72	80	70
						19.5 kW m ⁻²	78	79	85	77
				9.8 kW m ⁻²		92	93	96	92	
				Flash fire	LFL	75	79	82	78	
			Full bore		Fireball	Fireball radius	81	81	81	81
						35.5 kW m ⁻²	201	201	201	201
						28.3 kW m ⁻²	226	226	226	226
				19.5 kW m ⁻²		272	272	272	272	
				9.8 kW m ⁻²		381	381	381	381	
				Flash fire	LFL	389	437	461	432	
			FG_02	Manifold extending from Dachan fuel gas manifold to blending station	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0
28.3 kW m ⁻²	0	0						0	0	
19.5 kW m ⁻²	8	8						0	8	
9.8 kW m ⁻²	9	9						10	9	
Flash fire	LFL	6					6	6	6	

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
			50	Flash fire	LFL	16	16	15	16
					35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
			100	Flash fire	LFL	35	36	37	36
					35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
			100	Flash fire	LFL	75	79	82	78
					Fireball radius	81	81	81	81
					35.5 kW m ⁻²	201	201	201	201
					28.3 kW m ⁻²	226	226	226	226
					19.5 kW m ⁻²	272	272	272	272
					9.8 kW m ⁻²	381	381	381	381
			Full bore	Flash fire	LFL	389	437	461	432
					35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
FG_03	Manifold from blending station for 1 st CCGT Unit	Vapour	10	Flash fire	LFL	6	6	6	6
					35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
			25	Flash fire	9.8 kW m ⁻²	25	25	26	25
					LFL	16	16	15	16
					35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
					9.8 kW m ⁻²	50	50	52	49
					LFL	35	36	37	36
					35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
					LFL	75	79	82	78
					Fireball radius	81	81	81	81
					35.5 kW m ⁻²	201	201	201	201
					28.3 kW m ⁻²	226	226	226	226
					19.5 kW m ⁻²	272	272	272	272
					9.8 kW m ⁻²	381	381	381	381
					LFL	389	437	461	432
					35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
					LFL	6	6	6	6
					35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
					LFL	16	16	15	16
					35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
					LFL	35	36	37	36
					35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
					LFL	75	79	82	78
					35.5 kW m ⁻²	119	120	132	118

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
FG_05	1 st CCGT unit gas filter separator	Vapour	10		28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
					LFL	143	157	165	156
				Flash fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
					LFL	6	6	6	6
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
				Flash fire	LFL	16	16	15	16
			50	Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
				Flash fire	LFL	35	36	37	36
			100	Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
				Flash fire	LFL	75	79	82	78
			Full bore	Jet fire	35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
				Flash fire	LFL	143	157	165	156
FG_06	1 st CCGT unit fuel gas module	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
				Flash fire	LFL	6	6	6	6

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
				Flash fire	LFL	16	16	15	16
			50	Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
				Flash fire	LFL	35	36	37	36
			100	Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
				Flash fire	LFL	75	79	82	78
			Full bore	Jet fire	35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
				Flash fire	LFL	143	157	165	156
FG_07	Manifold for 2 nd CCGT	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
				Flash fire	LFL	6	6	6	6
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
				Flash fire	LFL	16	16	15	16
			50	Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
				Flash fire	LFL	35	36	37	36
				Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
				Flash fire	LFL	75	79	82	78
			Full bore	Fireball	Fireball radius	81	81	81	81
					35.5 kW m ⁻²	201	201	201	201
					28.3 kW m ⁻²	226	226	226	226
					19.5 kW m ⁻²	272	272	272	272
					9.8 kW m ⁻²	381	381	381	381
				Flash fire	LFL	389	437	461	432
	FG_08	Piping from manifold to 2 nd CCGT unit	Vapour	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
				Flash fire	LFL	6	6	6	6
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
				Flash fire	LFL	16	16	15	16
			50	Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
				Flash fire	LFL	35	36	37	36
			100	Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
				Flash fire	LFL	75	79	82	78
			Full bore	Jet fire	35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)				
						2.5B	3.0D	7.0D	2.0F	
FG_09	2 nd CCGT unit gas filter separator	Vapour	10	Flash fire	19.5 kW m ⁻²	138	140	148	137	
					9.8 kW m ⁻²	167	168	171	167	
					LFL	143	157	165	156	
					Jet fire	35.5 kW m ⁻²	0	0	0	0
				28.3 kW m ⁻²		0	0	0	0	
				19.5 kW m ⁻²		8	8	0	8	
				9.8 kW m ⁻²		9	9	10	9	
				Flash fire	LFL	6	6	6	6	
			25		Jet fire	35.5 kW m ⁻²	20	20	22	20
						28.3 kW m ⁻²	20	21	22	20
						19.5 kW m ⁻²	22	22	24	22
				9.8 kW m ⁻²		25	25	26	25	
			Flash fire	LFL	16	16	15	16		
				50	Jet fire	35.5 kW m ⁻²	37	15	43	37
						28.3 kW m ⁻²	39	15	44	39
						19.5 kW m ⁻²	43	44	47	43
			9.8 kW m ⁻²			50	50	52	49	
			Flash fire	LFL	35	36	37	36		
				100	Jet fire	35.5 kW m ⁻²	67	68	77	67
						28.3 kW m ⁻²	70	72	80	70
						19.5 kW m ⁻²	78	79	85	77
			9.8 kW m ⁻²			92	93	96	92	
			Flash fire	LFL	75	79	82	78		
				Full bore	Jet fire	35.5 kW m ⁻²	119	120	132	118
						28.3 kW m ⁻²	124	125	138	124
						19.5 kW m ⁻²	138	140	148	137
			9.8 kW m ⁻²			167	168	171	167	
			Flash fire	LFL	143	157	165	156		
FG_10	2 nd CCGT unit fuel gas module	Vapour		10	Jet fire	35.5 kW m ⁻²	0	0	0	0
						28.3 kW m ⁻²	0	0	0	0
						19.5 kW m ⁻²	8	8	0	8
			9.8 kW m ⁻²			9	9	10	9	
			Flash fire	LFL	6	6	6	6		
				25	Jet fire	35.5 kW m ⁻²	20	20	22	20

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
GRS_01	Above ground piping from shore end to pig receiver of Yacheng GRS	Vapour	10		28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
					LFL	16	16	15	16
				Flash fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
				Flash fire	LFL	35	36	37	36
					35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
				Flash fire	LFL	75	79	82	78
					35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
				Flash fire	LFL	143	157	165	156
					35.5 kW m ⁻²	17	17	18	17
					28.3 kW m ⁻²	18	18	19	17
					19.5 kW m ⁻²	19	19	20	19
					9.8 kW m ⁻²	22	22	22	22
				Flash fire	LFL	13	14	13	14
					35.5 kW m ⁻²	39	40	45	39
					28.3 kW m ⁻²	42	42	47	41
					19.5 kW m ⁻²	46	46	50	45
					9.8 kW m ⁻²	53	53	55	53
				Flash fire	LFL	39	40	40	40
					35.5 kW m ⁻²	71	71	81	70
					28.3 kW m ⁻²	75	76	84	73
					19.5 kW m ⁻²	82	83	89	82
					9.8 kW m ⁻²	97	98	101	97
				Flash fire	LFL	85	87	92	86

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
GRS_02	Piping from receiver to slug catcher of Yacheng GRS	Vapour	100	Jet fire	35.5 kW m ⁻²	126	126	139	125
					28.3 kW m ⁻²	131	132	145	131
					19.5 kW m ⁻²	146	147	156	144
					9.8 kW m ⁻²	177	178	180	176
				Flash fire	LFL	179	184	195	183
			Full bore	Fireball	Fireball radius	135	135	135	135
					35.5 kW m ⁻²	320	320	320	320
					28.3 kW m ⁻²	361	361	361	361
					19.5 kW m ⁻²	435	435	435	435
					9.8 kW m ⁻²	605	605	605	605
				Flash fire	LFL	767	829	875	835
			10	Jet fire	35.5 kW m ⁻²	17	17	18	17
					28.3 kW m ⁻²	18	18	19	17
					19.5 kW m ⁻²	19	19	20	19
					9.8 kW m ⁻²	22	22	22	22
				Flash fire	LFL	13	14	13	14
			25	Jet fire	35.5 kW m ⁻²	39	40	45	39
					28.3 kW m ⁻²	42	42	47	41
					19.5 kW m ⁻²	46	46	50	45
					9.8 kW m ⁻²	53	53	55	53
				Flash fire	LFL	39	40	40	40
			50	Jet fire	35.5 kW m ⁻²	71	71	81	70
					28.3 kW m ⁻²	75	76	84	73
					19.5 kW m ⁻²	82	83	89	82
					9.8 kW m ⁻²	97	98	101	97
				Flash fire	LFL	85	87	92	86
			100	Jet fire	35.5 kW m ⁻²	126	126	139	125
					28.3 kW m ⁻²	131	132	145	131
					19.5 kW m ⁻²	146	147	156	144
					9.8 kW m ⁻²	177	178	180	176
				Flash fire	LFL	179	184	195	183
			Full bore	Fireball	Fireball radius	135	135	135	135
					35.5 kW m ⁻²	320	320	320	320
					28.3 kW m ⁻²	361	361	361	361

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
GRS_03	Piping from slug catcher to inlet gas filter separators of Yacheng GRS	Vapour	10	Flash fire	19.5 kW m ⁻²	435	435	435	435
					9.8 kW m ⁻²	605	605	605	605
					LFL	767	829	875	835
				Jet fire	35.5 kW m ⁻²	17	17	18	17
					28.3 kW m ⁻²	18	18	19	17
				Flash fire	19.5 kW m ⁻²	19	19	20	19
					9.8 kW m ⁻²	22	22	22	22
					LFL	13	14	13	14
			25	Jet fire	35.5 kW m ⁻²	39	40	45	39
					28.3 kW m ⁻²	42	42	47	41
				Flash fire	19.5 kW m ⁻²	46	46	50	45
					9.8 kW m ⁻²	53	53	55	53
					LFL	39	40	40	40
			50	Jet fire	35.5 kW m ⁻²	71	71	81	70
					28.3 kW m ⁻²	75	76	84	73
				Flash fire	19.5 kW m ⁻²	82	83	89	82
					9.8 kW m ⁻²	97	98	101	97
					LFL	85	87	92	86
			100	Jet fire	35.5 kW m ⁻²	126	126	139	125
					28.3 kW m ⁻²	131	132	145	131
				Flash fire	19.5 kW m ⁻²	146	147	156	144
					9.8 kW m ⁻²	177	178	180	176
					LFL	179	184	195	183
GRS_04	Piping from inlet gas filter separator to gas heater of Yacheng GRS	Vapour	10	Full bore	Fireball	Fireball radius	135	135	135
						35.5 kW m ⁻²	320	320	320
				Flash fire	28.3 kW m ⁻²	361	361	361	361
					19.5 kW m ⁻²	435	435	435	435
				Flash fire	9.8 kW m ⁻²	605	605	605	605
					LFL	767	829	875	835
				Jet fire	35.5 kW m ⁻²	17	17	18	17
					28.3 kW m ⁻²	18	18	19	17
				Flash fire	19.5 kW m ⁻²	19	19	20	19
					9.8 kW m ⁻²	22	22	22	22

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
				Flash fire	LFL	13	14	13	14
				Jet fire	35.5 kW m ⁻²	39	40	45	39
					28.3 kW m ⁻²	42	42	47	41
					19.5 kW m ⁻²	46	46	50	45
					9.8 kW m ⁻²	53	53	55	53
				Flash fire	LFL	39	40	40	40
			50	Jet fire	35.5 kW m ⁻²	71	71	81	70
					28.3 kW m ⁻²	75	76	84	73
					19.5 kW m ⁻²	82	83	89	82
					9.8 kW m ⁻²	97	98	101	97
				Flash fire	LFL	85	87	92	86
			100	Jet fire	35.5 kW m ⁻²	126	126	139	125
					28.3 kW m ⁻²	131	132	145	131
					19.5 kW m ⁻²	146	147	156	144
					9.8 kW m ⁻²	177	178	180	176
				Flash fire	LFL	179	184	195	183
			Full bore	Fireball	Fireball radius	135	135	135	135
					35.5 kW m ⁻²	320	320	320	320
					28.3 kW m ⁻²	361	361	361	361
					19.5 kW m ⁻²	435	435	435	435
					9.8 kW m ⁻²	605	605	605	605
				Flash fire	LFL	767	829	875	835
GRS_05	Piping from gas heaters to pressure reduction station, including Pressure Reduction Station of Yacheng GRS	Vapour	10	Jet fire	35.5 kW m ⁻²	17	17	18	17
					28.3 kW m ⁻²	18	18	19	17
					19.5 kW m ⁻²	19	19	20	19
					9.8 kW m ⁻²	22	22	22	22
				Flash fire	LFL	13	14	13	14
			25	Jet fire	35.5 kW m ⁻²	39	40	45	39
					28.3 kW m ⁻²	42	42	47	41
					19.5 kW m ⁻²	46	46	50	45
					9.8 kW m ⁻²	53	53	55	53
				Flash fire	LFL	39	40	40	40
			50	Jet fire	35.5 kW m ⁻²	71	71	81	70
					28.3 kW m ⁻²	75	76	84	73

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
					19.5 kW m ⁻²	82	83	89	82
					9.8 kW m ⁻²	97	98	101	97
					LFL	85	87	92	86
			100	Jet fire	35.5 kW m ⁻²	126	126	139	125
					28.3 kW m ⁻²	131	132	145	131
					19.5 kW m ⁻²	146	147	156	144
					9.8 kW m ⁻²	177	178	180	176
					LFL	179	184	195	183
			Full bore	Fireball	Fireball radius	135	135	135	135
					35.5 kW m ⁻²	320	320	320	320
					28.3 kW m ⁻²	361	361	361	361
					19.5 kW m ⁻²	435	435	435	435
					9.8 kW m ⁻²	605	605	605	605
					LFL	767	829	875	835
					LFL	767	829	875	835
GRS_06	Piping from pressure reduction station to outlet gas filter separator of Yacheng GRS	Vapour	10	Jet fire	35.5 kW m ⁻²	17	17	18	17
					28.3 kW m ⁻²	18	18	19	17
					19.5 kW m ⁻²	19	19	20	19
					9.8 kW m ⁻²	22	22	22	22
					LFL	13	14	13	14
			25	Jet fire	35.5 kW m ⁻²	39	40	45	39
					28.3 kW m ⁻²	42	42	47	41
					19.5 kW m ⁻²	46	46	50	45
					9.8 kW m ⁻²	53	53	55	53
					LFL	39	40	40	40
			50	Jet fire	35.5 kW m ⁻²	71	71	81	70
					28.3 kW m ⁻²	75	76	84	73
					19.5 kW m ⁻²	82	83	89	82
					9.8 kW m ⁻²	97	98	101	97
					LFL	85	87	92	86
			100	Jet fire	35.5 kW m ⁻²	126	126	139	125
					28.3 kW m ⁻²	131	132	145	131
					19.5 kW m ⁻²	146	147	156	144
					9.8 kW m ⁻²	177	178	180	176
					LFL	179	184	195	183

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)						
						2.5B	3.0D	7.0D	2.0F			
GRS_07	Piping from outlet gas filter separator to manifold, including sales gas meter unit of Yacheng GRS	Vapour	10	Full bore	Fireball	Fireball radius	135	135	135	135		
						35.5 kW m ⁻²	320	320	320	320		
						28.3 kW m ⁻²	361	361	361	361		
						19.5 kW m ⁻²	435	435	435	435		
						9.8 kW m ⁻²	605	605	605	605		
				Flash fire	LFL	767	829	875	835			
					Jet fire	35.5 kW m ⁻²	0	0	0	0		
						28.3 kW m ⁻²	0	0	0	0		
						19.5 kW m ⁻²	8	0	0	8		
						9.8 kW m ⁻²	10	10	10	10		
					Flash fire	LFL	6	7	6	7		
			25	Jet fire		35.5 kW m ⁻²	20	20	22	20		
						28.3 kW m ⁻²	21	21	23	21		
						19.5 kW m ⁻²	23	23	24	22		
						9.8 kW m ⁻²	26	26	27	26		
			Flash fire	LFL	16	17	16	17				
				50	Jet fire	35.5 kW m ⁻²	38	39	44	38		
						28.3 kW m ⁻²	40	41	45	40		
						19.5 kW m ⁻²	44	45	48	44		
						9.8 kW m ⁻²	51	51	53	50		
			Flash fire	LFL	36	37	38	37				
				100	Jet fire	35.5 kW m ⁻²	69	69	78	68		
						28.3 kW m ⁻²	72	73	81	71		
						19.5 kW m ⁻²	80	80	86	79		
						9.8 kW m ⁻²	94	94	97	93		
			Flash fire	LFL	78	81	85	81				
				Full bore	Fireball	Fireball radius	83	83	83	83		
						35.5 kW m ⁻²	204	204	204	204		
						28.3 kW m ⁻²	229	229	229	229		
						19.5 kW m ⁻²	277	277	277	277		
			9.8 kW m ⁻²			387	387	387	387			
			Flash fire	LFL	426	477	501	472				
				GRS_08	Pig receiver of Yacheng GRS	Vapour	10	Jet fire	35.5 kW m ⁻²	17	17	18
			28.3 kW m ⁻²						18	18	19	17

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
					19.5 kW m ⁻²	19	19	20	19
					9.8 kW m ⁻²	22	22	22	22
					LFL	13	14	13	14
			25	Jet fire	35.5 kW m ⁻²	39	40	45	39
					28.3 kW m ⁻²	42	42	47	41
					19.5 kW m ⁻²	46	46	50	45
					9.8 kW m ⁻²	53	53	55	53
			50	Flash fire	LFL	39	40	40	40
					35.5 kW m ⁻²	71	71	81	70
					28.3 kW m ⁻²	75	76	84	73
					19.5 kW m ⁻²	82	83	89	82
					9.8 kW m ⁻²	97	98	101	97
			100	Flash fire	LFL	85	87	92	86
					35.5 kW m ⁻²	126	126	139	125
					28.3 kW m ⁻²	131	132	145	131
					19.5 kW m ⁻²	146	147	156	144
					9.8 kW m ⁻²	177	178	180	176
			Full bore	Flash fire	LFL	179	184	195	183
					Fireball radius	135	135	135	135
					35.5 kW m ⁻²	320	320	320	320
					28.3 kW m ⁻²	361	361	361	361
				Flash fire	19.5 kW m ⁻²	435	435	435	435
					9.8 kW m ⁻²	605	605	605	605
					LFL	767	829	875	835
GRS_11	Above ground piping from shore end to pig receiver of Dachan GRS	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	11	11	11	11
					9.8 kW m ⁻²	12	12	12	12
			25	Flash fire	LFL	8	8	7	8
					35.5 kW m ⁻²	24	25	27	24
					28.3 kW m ⁻²	25	25	28	25
					19.5 kW m ⁻²	27	28	30	27
					9.8 kW m ⁻²	31	31	33	31
				Flash fire	LFL	20	21	20	21

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
			50	Jet fire	35.5 kW m ⁻²	45	46	52	45
					28.3 kW m ⁻²	48	48	54	47
					19.5 kW m ⁻²	52	53	57	52
					9.8 kW m ⁻²	60	61	63	60
				Flash fire	LFL	45	47	48	46
			100	Jet fire	35.5 kW m ⁻²	80	81	49	79
					28.3 kW m ⁻²	84	85	49	83
					19.5 kW m ⁻²	93	94	49	92
					9.8 kW m ⁻²	110	111	49	110
			100	Flash fire	LFL	96	100	106	100
			Full bore	Fireball	Fireball radius	95	95	95	95
					35.5 kW m ⁻²	231	231	231	231
					28.3 kW m ⁻²	260	260	260	260
					19.5 kW m ⁻²	315	315	315	315
					9.8 kW m ⁻²	439	439	439	439
				Flash fire	LFL	309	349	366	344
GRS_12	Piping from receiver to gas filter of Dachan GRS	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	11	11	11	11
					9.8 kW m ⁻²	12	12	12	12
				Flash fire	LFL	8	8	7	8
			25	Jet fire	35.5 kW m ⁻²	24	25	27	24
					28.3 kW m ⁻²	25	25	28	25
					19.5 kW m ⁻²	27	28	30	27
					9.8 kW m ⁻²	31	31	33	31
				Flash fire	LFL	20	21	20	21
			50	Jet fire	35.5 kW m ⁻²	45	46	52	45
					28.3 kW m ⁻²	48	48	54	47
					19.5 kW m ⁻²	52	53	57	52
					9.8 kW m ⁻²	60	61	63	60
				Flash fire	LFL	45	47	48	46
			100	Jet fire	35.5 kW m ⁻²	80	81	49	79
					28.3 kW m ⁻²	84	85	49	83
					19.5 kW m ⁻²	93	94	49	92

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
GRS_13	Filter & inlet/outlet piping of Dachan GRS	Vapour	10	Flash fire	9.8 kW m ⁻²	110	111	49	110
					LFL	96	100	106	100
				Fireball	Fireball Radius	94	94	94	94
					35.5 kW m ⁻²	229	229	229	229
					28.3 kW m ⁻²	259	259	259	259
					19.5 kW m ⁻²	312	312	312	312
				Flash fire	9.8 kW m ⁻²	435	435	435	435
					LFL	303	343	360	339
			25	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	11	11	11	11
					9.8 kW m ⁻²	12	12	12	12
			50	Flash fire	LFL	8	8	7	8
					35.5 kW m ⁻²	24	25	27	24
					28.3 kW m ⁻²	25	25	28	25
					19.5 kW m ⁻²	27	28	30	27
					9.8 kW m ⁻²	31	31	33	31
			100	Flash fire	LFL	20	21	20	21
					35.5 kW m ⁻²	45	46	52	45
					28.3 kW m ⁻²	48	48	54	47
					19.5 kW m ⁻²	52	53	57	52
					9.8 kW m ⁻²	60	61	63	60
			Full bore	Fireball	LFL	45	47	48	46
					35.5 kW m ⁻²	80	81	49	79
					28.3 kW m ⁻²	84	85	49	83
					19.5 kW m ⁻²	93	94	49	92
			Flash fire	Flash fire	9.8 kW m ⁻²	110	111	49	110
					LFL	96	100	106	100
					35.5 kW m ⁻²	65	65	65	65
					35.5 kW m ⁻²	163	163	163	163
					28.3 kW m ⁻²	182	182	182	182
					19.5 kW m ⁻²	219	219	219	219
					9.8 kW m ⁻²	308	308	308	308
					LFL	335	368	389	364

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
GRS_14	Piping from filter to metering station of Dachan GRS	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	11	11	11	11
					9.8 kW m ⁻²	12	12	12	12
				Flash fire	LFL	8	8	7	8
			25	Jet fire	35.5 kW m ⁻²	24	25	27	24
					28.3 kW m ⁻²	25	25	28	25
					19.5 kW m ⁻²	27	28	30	27
					9.8 kW m ⁻²	31	31	33	31
				Flash fire	LFL	20	21	20	21
			50	Jet fire	35.5 kW m ⁻²	45	46	52	45
					28.3 kW m ⁻²	48	48	54	47
					19.5 kW m ⁻²	52	53	57	52
					9.8 kW m ⁻²	60	61	63	60
				Flash fire	LFL	45	47	48	46
			100	Jet fire	35.5 kW m ⁻²	80	81	49	79
					28.3 kW m ⁻²	84	85	49	83
					19.5 kW m ⁻²	93	94	49	92
					9.8 kW m ⁻²	110	111	49	110
				Flash fire	LFL	96	100	106	100
			Full bore	Fireball	Fireball radius	94	94	94	94
					35.5 kW m ⁻²	229	229	229	229
					28.3 kW m ⁻²	259	259	259	259
					19.5 kW m ⁻²	312	312	312	312
					9.8 kW m ⁻²	435	435	435	435
				Flash fire	LFL	303	343	360	339
GRS_15	Piping from metering station to heaters, including metering runs of Dachan GRS	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	11	11	11	11
					9.8 kW m ⁻²	12	12	12	12
				Flash fire	LFL	8	8	7	8
			25	Jet fire	35.5 kW m ⁻²	24	25	27	24
					28.3 kW m ⁻²	25	25	28	25
					19.5 kW m ⁻²	27	28	30	27

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
					9.8 kW m ⁻²	31	31	33	31
					LFL	20	21	20	21
			50	Jet fire	35.5 kW m ⁻²	45	46	52	45
					28.3 kW m ⁻²	48	48	54	47
					19.5 kW m ⁻²	52	53	57	52
					9.8 kW m ⁻²	60	61	63	60
			100	Flash fire	LFL	45	47	48	46
					35.5 kW m ⁻²	80	81	49	79
					28.3 kW m ⁻²	84	85	49	83
					19.5 kW m ⁻²	93	94	49	92
					9.8 kW m ⁻²	110	111	49	110
			Full bore	Fireball	LFL	96	100	106	100
					Fireball radius	94	94	94	94
					35.5 kW m ⁻²	229	229	229	229
					28.3 kW m ⁻²	259	259	259	259
					19.5 kW m ⁻²	312	312	312	312
					9.8 kW m ⁻²	435	435	435	435
					LFL	303	343	360	339
					Flash fire				
GRS_16	Heater Piping of Dachan GRS	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	11	11	11	11
					9.8 kW m ⁻²	12	12	12	12
			25	Flash fire	LFL	8	8	7	8
					35.5 kW m ⁻²	24	25	27	24
					28.3 kW m ⁻²	25	25	28	25
					19.5 kW m ⁻²	27	28	30	27
					9.8 kW m ⁻²	31	31	33	31
			50	Flash fire	LFL	20	21	20	21
					35.5 kW m ⁻²	45	46	52	45
					28.3 kW m ⁻²	48	48	54	47
					19.5 kW m ⁻²	52	53	57	52
					9.8 kW m ⁻²	60	61	63	60
			100	Flash fire	LFL	45	47	48	46
					35.5 kW m ⁻²	80	81	49	79

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
GRS_17	Piping from heater to Pressure Reduction Station, including Pressure Reduction Station of Dachan GRS	Vapour	10	Flash fire	28.3 kW m ⁻²	84	85	49	83
					19.5 kW m ⁻²	93	94	49	92
					9.8 kW m ⁻²	110	111	49	110
					LFL	96	100	106	100
				Fireball	Fireball radius	59	59	59	59
					35.5 kW m ⁻²	149	149	149	149
					28.3 kW m ⁻²	168	168	168	168
					19.5 kW m ⁻²	203	203	203	203
					9.8 kW m ⁻²	283	283	283	283
					LFL	300	331	348	328
				Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	11	11	11	11
					9.8 kW m ⁻²	12	12	12	12
					LFL	8	8	7	8
			25	Jet fire	35.5 kW m ⁻²	24	25	27	24
					28.3 kW m ⁻²	25	25	28	25
					19.5 kW m ⁻²	27	28	30	27
					9.8 kW m ⁻²	31	31	33	31
				Flash fire	LFL	20	21	20	21
			50	Jet fire	35.5 kW m ⁻²	45	46	52	45
					28.3 kW m ⁻²	48	48	54	47
					19.5 kW m ⁻²	52	53	57	52
					9.8 kW m ⁻²	60	61	63	60
				Flash fire	LFL	45	47	48	46
			100	Jet fire	35.5 kW m ⁻²	80	81	49	79
					28.3 kW m ⁻²	84	85	49	83
					19.5 kW m ⁻²	93	94	49	92
					9.8 kW m ⁻²	110	111	49	110
				Flash fire	LFL	96	100	106	100
			Full bore	Fireball	Fireball radius	94	94	94	94
					35.5 kW m ⁻²	229	229	229	229
					28.3 kW m ⁻²	259	259	259	259
					19.5 kW m ⁻²	312	312	312	312

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)				
						2.5B	3.0D	7.0D	2.0F	
GRS_18	Piping from Pressure Reduction Station to manifold, including HIPPS of Dachan GRS	Vapour	10	Flash fire	9.8 kW m ⁻²	435	435	435	435	
					LFL	303	343	360	339	
				Jet fire	35.5 kW m ⁻²	0	0	0	0	
					28.3 kW m ⁻²	0	0	0	0	
					19.5 kW m ⁻²	8	8	0	8	
					9.8 kW m ⁻²	9	9	10	9	
				Flash fire	LFL	6	6	6	6	
					25	Jet fire	35.5 kW m ⁻²	20	20	22
				28.3 kW m ⁻²		20	21	22	20	
					19.5 kW m ⁻²	22	22	24	22	
					9.8 kW m ⁻²	25	25	26	25	
				Flash fire	LFL	16	16	15	16	
					50	Jet fire	35.5 kW m ⁻²	37	15	43
				28.3 kW m ⁻²		39	15	44	39	
					19.5 kW m ⁻²	43	44	47	43	
					9.8 kW m ⁻²	50	50	52	49	
				Flash fire	LFL	35	36	37	36	
					100	Jet fire	35.5 kW m ⁻²	67	68	77
				28.3 kW m ⁻²		70	72	80	70	
					19.5 kW m ⁻²	78	79	85	77	
					9.8 kW m ⁻²	92	93	96	92	
				Flash fire	LFL	75	79	82	78	
					Full bore	Fireball	Fireball radius	81	81	81
				35.5 kW m ⁻²		201	201	201	201	
					28.3 kW m ⁻²	226	226	226	226	
					19.5 kW m ⁻²	272	272	272	272	
					9.8 kW m ⁻²	381	381	381	381	
					Flash fire	LFL	230	257	270	252
GRS_19	Pig receiver of Dachan GRS	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0	
					28.3 kW m ⁻²	0	0	0	0	
					19.5 kW m ⁻²	11	11	11	11	
					9.8 kW m ⁻²	12	12	12	12	
				Flash fire	LFL	8	8	7	8	
					25	Jet fire	35.5 kW m ⁻²	24	25	27

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)						
						2.5B	3.0D	7.0D	2.0F			
					28.3 kW m ⁻²	25	25	28	25			
					19.5 kW m ⁻²	27	28	30	27			
					Flash fire	9.8 kW m ⁻²	31	31	33	31		
						LFL	20	21	20	21		
						50	Jet fire	35.5 kW m ⁻²	45	46	52	45
								28.3 kW m ⁻²	48	48	54	47
					19.5 kW m ⁻²			52	53	57	52	
					9.8 kW m ⁻²			60	61	63	60	
					Flash fire	LFL	45	47	48	46		
						100	Jet fire	35.5 kW m ⁻²	80	81	49	79
								28.3 kW m ⁻²	84	85	49	83
								19.5 kW m ⁻²	93	94	49	92
					9.8 kW m ⁻²			110	111	49	110	
					Flash fire	LFL	96	100	106	100		
						Full bore	Fireball	Fireball radius	104	104	104	104
								35.5 kW m ⁻²	252	252	252	252
								28.3 kW m ⁻²	284	284	284	284
					19.5 kW m ⁻²			340	340	340	340	
					9.8 kW m ⁻²			475	475	475	475	
					LFL			351	398	417	394	
					FG_101			Yacheng manifold	Vapour	10	Jet fire	35.5 kW m ⁻²
28.3 kW m ⁻²	0	0	0	0								
19.5 kW m ⁻²	8	8	0	8								
9.8 kW m ⁻²	9	9	10	9								
Flash fire	LFL	6	6	6		6						
	25	Jet fire	35.5 kW m ⁻²	20		20	22			20		
			28.3 kW m ⁻²	20		21	22			20		
			19.5 kW m ⁻²	22		22	24			22		
9.8 kW m ⁻²			25	25		26	25					
Flash fire	LFL	16	16	15		16						
	50	Jet fire	35.5 kW m ⁻²	37		15	43			37		
			28.3 kW m ⁻²	39		15	44			39		
			19.5 kW m ⁻²	43		44	47			43		
9.8 kW m ⁻²			50	50		52	49					

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
FG_102	Dachan manifold	Vapour	10	Flash fire	LFL	35	36	37	36
				Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
				Flash fire	LFL	75	79	82	78
			Full bore	Fireball	Fireball radius	81	81	81	81
					35.5 kW m ⁻²	201	201	201	201
					28.3 kW m ⁻²	226	226	226	226
					19.5 kW m ⁻²	272	272	272	272
					9.8 kW m ⁻²	381	381	381	381
				Flash fire	LFL	389	437	461	432
			25	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
			50	Flash fire	LFL	6	6	6	6
					35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
			100	Flash fire	LFL	16	16	15	16
					35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
			Full bore	Fireball	LFL	35	36	37	36
					35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
					LFL	75	79	82	78
					35.5 kW m ⁻²	182	182	182	182

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
FG_103	Piping from manifold to Unit 1	Vapour	10		28.3 kW m ⁻²	205	205	205	205
					19.5 kW m ⁻²	248	248	248	248
					9.8 kW m ⁻²	346	346	346	346
					LFL	347	392	412	388
				Flash fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
					LFL	6	6	6	6
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
				Flash fire	LFL	16	16	15	16
			50	Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
				Flash fire	LFL	35	36	37	36
			100	Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
				Flash fire	LFL	75	79	82	78
			Full bore	Jet fire	35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
				Flash fire	LFL	143	157	165	156
FG_104	Unit 1 gas filter separator	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
				Flash fire	LFL	6	6	6	6

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
			50	Flash fire	LFL	16	16	15	16
					35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
			100	Flash fire	LFL	35	36	37	36
					35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
			Full bore	Flash fire	LFL	75	79	82	78
					35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
			Flash fire	LFL	LFL	143	157	165	156
FG_105	Unit 1 fuel gas module	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
			25	Flash fire	LFL	6	6	6	6
					35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
			50	Flash fire	LFL	16	16	15	16
					35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
FG_106	Piping from manifold to Unit 2	Vapour	10	Flash fire	LFL	35	36	37	36
				Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
				Flash fire	LFL	75	79	82	78
			Full bore	Jet fire	35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
				Flash fire	LFL	143	157	165	156
			25	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
				Flash fire	LFL	6	6	6	6
			50	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
				Flash fire	LFL	16	16	15	16
			100	Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
				Flash fire	LFL	35	36	37	36
			Full bore	Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
				Flash fire	LFL	75	79	82	78

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
FG_107	Unit 2 gas filter separator	Vapour	10		9.8 kW m ⁻²	167	168	171	167
					LFL	143	157	165	156
				Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
				Flash fire	LFL	6	6	6	6
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
				Flash fire	LFL	16	16	15	16
			50	Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
				Flash fire	LFL	35	36	37	36
			100	Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
				Flash fire	LFL	75	79	82	78
			Full bore	Jet fire	35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
				Flash fire	LFL	143	157	165	156
FG_108	Unit 2 fuel gas module	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
				Flash fire	LFL	6	6	6	6
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
					LFL	16	16	15	16
			50	Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
				Flash fire	LFL	35	36	37	36
			100	Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
				Flash fire	LFL	75	79	82	78
			Full bore	Jet fire	35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
				Flash fire	LFL	143	157	165	156
FG_109	Piping from manifold to Unit 3	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
				Flash fire	LFL	6	6	6	6
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
				Flash fire	LFL	16	16	15	16
			50	Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
				Flash fire	LFL	35	36	37	36
			100	Jet fire	35.5 kW m ⁻²	67	68	77	67

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
FG_110	Unit 3 gas filter separator	Vapour	10	Flash fire	28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
					LFL	75	79	82	78
				Jet fire	35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
					LFL	143	157	165	156
				Flash fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
					LFL	6	6	6	6
				Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
					LFL	16	16	15	16
				Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
					LFL	35	36	37	36
				Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
					LFL	75	79	82	78
				Flash fire	35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
					LFL	143	157	165	156

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
FG_111	Unit 3 fuel gas module	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
				Flash fire	LFL	6	6	6	6
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
				Flash fire	LFL	16	16	15	16
			50	Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
				Flash fire	LFL	35	36	37	36
			100	Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
				Flash fire	LFL	75	79	82	78
			Full bore	Jet fire	35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
				Flash fire	LFL	143	157	165	156
FG_112	Piping from manifold to Unit 4	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
				Flash fire	LFL	6	6	6	6
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
				Flash fire	LFL	16	16	15	16
				Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
				Flash fire	LFL	35	36	37	36
			100	Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
				Flash fire	LFL	75	79	82	78
			Full bore	Jet fire	35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
				Flash fire	LFL	143	157	165	156
FG_113	Unit 4 gas filter separator	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
				Flash fire	LFL	6	6	6	6
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
				Flash fire	LFL	16	16	15	16
			50	Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
				Flash fire	LFL	35	36	37	36
			100	Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
FG_114	Unit 4 fuel gas module	Vapour	10		9.8 kW m ⁻²	92	93	96	92
					LFL	75	79	82	78
				Full bore	Jet fire	35.5 kW m ⁻²	119	120	132
						28.3 kW m ⁻²	124	125	138
						19.5 kW m ⁻²	138	140	148
						9.8 kW m ⁻²	167	168	171
				Flash fire	LFL	143	157	165	156
				Jet fire	35.5 kW m ⁻²	0	0	0	0
						28.3 kW m ⁻²	0	0	0
						19.5 kW m ⁻²	8	8	0
						9.8 kW m ⁻²	9	9	10
				Flash fire	LFL	6	6	6	6
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20
						28.3 kW m ⁻²	20	21	22
						19.5 kW m ⁻²	22	22	24
						9.8 kW m ⁻²	25	25	26
				Flash fire	LFL	16	16	15	16
			50	Jet fire	35.5 kW m ⁻²	37	15	43	37
						28.3 kW m ⁻²	39	15	44
						19.5 kW m ⁻²	43	44	47
						9.8 kW m ⁻²	50	50	52
				Flash fire	LFL	35	36	37	36
			100	Jet fire	35.5 kW m ⁻²	67	68	77	67
						28.3 kW m ⁻²	70	72	80
						19.5 kW m ⁻²	78	79	85
						9.8 kW m ⁻²	92	93	96
				Flash fire	LFL	75	79	82	78
			Full bore	Jet fire	35.5 kW m ⁻²	119	120	132	118
						28.3 kW m ⁻²	124	125	138
						19.5 kW m ⁻²	138	140	148
						9.8 kW m ⁻²	167	168	171
				Flash fire	LFL	143	157	165	156
FG_115	Piping from manifold to Unit 5	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
					LFL	6	6	6	6
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
				Flash fire	9.8 kW m ⁻²	25	25	26	25
					LFL	16	16	15	16
			50	Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
				Flash fire	9.8 kW m ⁻²	50	50	52	49
					LFL	35	36	37	36
			100	Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
				Flash fire	9.8 kW m ⁻²	92	93	96	92
					LFL	75	79	82	78
			Full bore	Jet fire	35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
				Flash fire	9.8 kW m ⁻²	167	168	171	167
					LFL	143	157	165	156
FG_116	Unit 5 gas filter separator	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
				Flash fire	9.8 kW m ⁻²	9	9	10	9
					LFL	6	6	6	6
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
				Flash fire	9.8 kW m ⁻²	25	25	26	25
					LFL	16	16	15	16
			50	Jet fire	35.5 kW m ⁻²	37	15	43	37

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)								
						2.5B	3.0D	7.0D	2.0F					
					28.3 kW m ⁻²	39	15	44	39					
					19.5 kW m ⁻²	43	44	47	43					
					9.8 kW m ⁻²	50	50	52	49					
					LFL	35	36	37	36					
					Flash fire									
					100	Jet fire	35.5 kW m ⁻²	67	68	77	67			
					28.3 kW m ⁻²	70	72	80	70					
					19.5 kW m ⁻²	78	79	85	77					
					9.8 kW m ⁻²	92	93	96	92					
					LFL	75	79	82	78					
					Flash fire									
					Full bore	Jet fire	35.5 kW m ⁻²	119	120	132	118			
					28.3 kW m ⁻²	124	125	138	124					
					19.5 kW m ⁻²	138	140	148	137					
					9.8 kW m ⁻²	167	168	171	167					
					LFL	143	157	165	156					
					Flash fire									
					FG_117	Unit 5 fuel gas module	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
										28.3 kW m ⁻²	0	0	0	0
										19.5 kW m ⁻²	8	8	0	8
										9.8 kW m ⁻²	9	9	10	9
LFL	6	6	6	6										
Flash fire														
25	Jet fire	35.5 kW m ⁻²	20	20						22	20			
28.3 kW m ⁻²	20	21	22	20										
19.5 kW m ⁻²	22	22	24	22										
9.8 kW m ⁻²	25	25	26	25										
LFL	16	16	15	16										
Flash fire														
50	Jet fire	35.5 kW m ⁻²	37	15						43	37			
28.3 kW m ⁻²	39	15	44	39										
19.5 kW m ⁻²	43	44	47	43										
9.8 kW m ⁻²	50	50	52	49										
LFL	35	36	37	36										
Flash fire														
100	Jet fire	35.5 kW m ⁻²	67	68						77	67			
28.3 kW m ⁻²	70	72	80	70										
19.5 kW m ⁻²	78	79	85	77										
9.8 kW m ⁻²	92	93	96	92										
LFL	75	79	82	78										
Flash fire														

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
FG_118	Piping from manifold to Unit 6	Vapour	10	Jet fire	35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
				Flash fire	LFL	143	157	165	156
			25	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
				Flash fire	LFL	6	6	6	6
			50	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
				Flash fire	LFL	16	16	15	16
			100	Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
				Flash fire	LFL	35	36	37	36
FG_119	Unit 6 gas filter separator	Vapour	10	Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
				Flash fire	LFL	75	79	82	78
			Full bore	Jet fire	35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
				Flash fire	LFL	143	157	165	156
			10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
				Flash fire	LFL	6	6	6	6
				Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
				Flash fire	LFL	16	16	15	16
			50	Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
				Flash fire	LFL	35	36	37	36
			100	Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
				Flash fire	LFL	75	79	82	78
			Full bore	Jet fire	35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
				Flash fire	LFL	143	157	165	156
FG_120	Unit 6 fuel gas module	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
				Flash fire	LFL	6	6	6	6
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
				Flash fire	LFL	16	16	15	16
			50	Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
					9.8 kW m ⁻²	50	50	52	49
					LFL	35	36	37	36
					35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
					LFL	75	79	82	78
					35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
					LFL	143	157	165	156
					35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
FG_121	Piping from manifold to Unit 7	Vapour	10	Jet fire	LFL	6	6	6	6
					35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
					LFL	16	16	15	16
					35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
					LFL	35	36	37	36
					35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
					LFL	75	79	82	78
					35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
FG_122	Unit 7 gas filter separator	Vapour	10		19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
					LFL	143	157	165	156
				Jet fire	35.5 kW m ⁻²	0	0	0	0
				Flash fire	28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
					LFL	6	6	6	6
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
				Flash fire	LFL	16	16	15	16
			50	Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
				Flash fire	LFL	35	36	37	36
			100	Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
				Flash fire	LFL	75	79	82	78
			Full bore	Jet fire	35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
				Flash fire	LFL	143	157	165	156
FG_123	Unit 7 fuel gas module	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
				Flash fire	LFL	6	6	6	6
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
					LFL	16	16	15	16
					Flash fire				
			50	Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
				Flash fire	LFL	35	36	37	36
			100	Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
				Flash fire	LFL	75	79	82	78
			Full bore	Jet fire	35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
				Flash fire	LFL	143	157	165	156
FG_124	Piping from manifold to Unit 8	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
				Flash fire	LFL	6	6	6	6
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
				Flash fire	LFL	16	16	15	16
			50	Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
				Flash fire	LFL	35	36	37	36

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
FG_125	Unit 8 gas filter separator	Vapour	100	Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
				Flash fire	LFL	75	79	82	78
			Full bore	Jet fire	35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
				Flash fire	LFL	143	157	165	156
			10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
				Flash fire	LFL	6	6	6	6
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
				Flash fire	LFL	16	16	15	16
			50	Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
				Flash fire	LFL	35	36	37	36
			100	Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
				Flash fire	LFL	75	79	82	78
			Full bore	Jet fire	35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
FG_126	Unit 8 fuel gas module	Vapour	10	Flash fire	LFL	143	157	165	156
				Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	8	0	8
					9.8 kW m ⁻²	9	9	10	9
				Flash fire	LFL	6	6	6	6
			25	Jet fire	35.5 kW m ⁻²	20	20	22	20
					28.3 kW m ⁻²	20	21	22	20
					19.5 kW m ⁻²	22	22	24	22
					9.8 kW m ⁻²	25	25	26	25
				Flash fire	LFL	16	16	15	16
			50	Jet fire	35.5 kW m ⁻²	37	15	43	37
					28.3 kW m ⁻²	39	15	44	39
					19.5 kW m ⁻²	43	44	47	43
					9.8 kW m ⁻²	50	50	52	49
				Flash fire	LFL	35	36	37	36
			100	Jet fire	35.5 kW m ⁻²	67	68	77	67
					28.3 kW m ⁻²	70	72	80	70
					19.5 kW m ⁻²	78	79	85	77
					9.8 kW m ⁻²	92	93	96	92
				Flash fire	LFL	75	79	82	78
			Full bore	Jet fire	35.5 kW m ⁻²	119	120	132	118
					28.3 kW m ⁻²	124	125	138	124
					19.5 kW m ⁻²	138	140	148	137
					9.8 kW m ⁻²	167	168	171	167
				Flash fire	LFL	143	157	165	156
FG_127	Interconnecting gas pipeline from BPPS to CPPS	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	8	0	0	8
					9.8 kW m ⁻²	10	10	10	10
				Flash fire	LFL	6	7	6	7
			25	Jet fire	35.5 kW m ⁻²	20	21	22	20
					28.3 kW m ⁻²	21	21	23	21
					19.5 kW m ⁻²	23	23	25	23

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
					9.8 kW m ⁻²	26	26	27	26
				Flash fire	LFL	16	17	16	17
			50	Jet fire	35.5 kW m ⁻²	39	39	44	38
					28.3 kW m ⁻²	40	41	45	40
					19.5 kW m ⁻²	44	45	48	44
					9.8 kW m ⁻²	51	51	53	51
				Flash fire	LFL	36	37	38	37
			100	Jet fire	35.5 kW m ⁻²	69	69	78	68
					28.3 kW m ⁻²	72	73	81	71
					19.5 kW m ⁻²	80	81	87	79
					9.8 kW m ⁻²	94	95	98	94
				Flash fire	LFL	77	81	84	80
			Full bore	Jet fire	Fireball radius	75	75	75	75
					35.5 kW m ⁻²	186	186	186	186
					28.3 kW m ⁻²	209	209	209	209
					19.5 kW m ⁻²	252	252	252	252
					9.8 kW m ⁻²	351	351	351	351
				Flash fire	LFL	354	400	420	396

Table 5D.2 Results of Consequence Analysis for Hydrogen Gas Facilities

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
HY_01	Additional hydrogen road trailer for 1 st CCGT unit	Vapour	10	Jet fire	35.5 kW m ⁻²	15	16	21	14
					28.3 kW m ⁻²	17	17	22	16
					19.5 kW m ⁻²	18	18	23	17
					9.8 kW m ⁻²	21	22	24	21
				Flash fire	LFL	19	20	23	18
			25	Jet fire	35.5 kW m ⁻²	34	35	44	33
					28.3 kW m ⁻²	36	36	44	35
					19.5 kW m ⁻²	39	41	46	38
					9.8 kW m ⁻²	47	48	49	47
				Flash fire	LFL	32	33	39	30
			Catastrophic Rupture	Fireball	Fireball radius	18	18	18	18
					35.5 kW m ⁻²	37	37	37	37
					28.3 kW m ⁻²	45	45	45	45
					19.5 kW m ⁻²	58	58	58	58
					9.8 kW m ⁻²	87	87	87	87
				Flash fire	LFL	23	24	33	22
HY_02	Hydrogen manifold for 1 st CCGT	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	0	0	0	0
				Flash fire	LFL	7	8	8	7
			Full bore	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	7	7	8	7
				Flash fire	LFL	10	11	11	10
HY_03	Piping from hydrogen manifold to 1 st CCGT unit	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
HY_04	Additional hydrogen road trailer for 2 nd CCGT unit	Vapour	10	Flash fire	9.8 kW m ⁻²	0	0	0	0
					LFL	7	8	8	7
				Full bore	Jet fire	35.5 kW m ⁻²	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	7	7	8	7
				Flash fire	LFL	10	11	11	10
			25	Jet fire	35.5 kW m ⁻²	15	16	21	14
					28.3 kW m ⁻²	17	17	22	16
					19.5 kW m ⁻²	18	18	23	17
					9.8 kW m ⁻²	21	22	24	21
				Flash fire	LFL	19	20	23	18
				Jet fire	35.5 kW m ⁻²	34	35	44	33
					28.3 kW m ⁻²	36	36	44	35
					19.5 kW m ⁻²	39	41	46	38
					9.8 kW m ⁻²	47	48	49	47
				Flash fire	LFL	32	33	39	30
			Catastrophic Rupture	Fireball	Fireball radius	18	18	18	18
					35.5 kW m ⁻²	37	37	37	37
					28.3 kW m ⁻²	45	45	45	45
					19.5 kW m ⁻²	58	58	58	58
					9.8 kW m ⁻²	87	87	87	87
HY_05	Hydrogen manifold for 2 nd CCGT	Vapour	10	Flash fire	LFL	23	24	33	22
					Jet fire	35.5 kW m ⁻²	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	0	0	0	0
				Flash fire	LFL	7	8	8	7
			Full bore	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
HY_06	Piping from hydrogen manifold to 2 nd CCGT unit	Vapour	10	Flash fire	9.8 kW m ⁻²	7	7	8	7
					LFL	10	11	11	10
				Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	0	0	0	0
				Flash fire	LFL	7	8	8	7
			Full bore	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	7	7	8	7
				Flash fire	LFL	10	11	11	10
HY_11	Hydrogen road trailer for existing gas facilities	Vapour	10	Jet fire	35.5 kW m ⁻²	15	16	21	14
					28.3 kW m ⁻²	17	17	22	16
					19.5 kW m ⁻²	18	18	23	17
					9.8 kW m ⁻²	21	22	24	21
				Flash fire	LFL	19	20	23	18
			25	Jet fire	35.5 kW m ⁻²	34	35	44	33
					28.3 kW m ⁻²	36	36	44	35
					19.5 kW m ⁻²	39	41	46	38
					9.8 kW m ⁻²	47	48	49	47
				Flash fire	LFL	32	33	39	30
			Catastrophic Rupture	Fireball	Fireball radius	18	18	18	18
					35.5 kW m ⁻²	37	37	37	37
					28.3 kW m ⁻²	45	45	45	45
					19.5 kW m ⁻²	58	58	58	58
					9.8 kW m ⁻²	87	87	87	87
				Flash fire	LFL	23	24	33	22
HY_12	Hydrogen trailer at hydrogen trailer bay	Vapour	10	Jet fire	35.5 kW m ⁻²	15	16	21	14
					28.3 kW m ⁻²	17	17	22	16
					19.5 kW m ⁻²	18	18	23	17

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
			25	Flash fire	9.8 kW m ⁻²	21	22	24	21
					LFL	19	20	23	18
				Jet fire	35.5 kW m ⁻²	34	35	44	33
					28.3 kW m ⁻²	36	36	44	35
					19.5 kW m ⁻²	39	41	46	38
					9.8 kW m ⁻²	47	48	49	47
				Flash fire	LFL	32	33	39	30
				Catastrophic Rupture	Fireball	Fireball radius	18	18	18
					35.5 kW m ⁻²	37	37	37	37
					28.3 kW m ⁻²	45	45	45	45
					19.5 kW m ⁻²	58	58	58	58
					9.8 kW m ⁻²	87	87	87	87
				Flash fire	LFL	23	24	33	22
HY_13	Trailer to high pressure piping	Vapour	10	Jet fire	35.5 kW m ⁻²	15	16	21	14
					28.3 kW m ⁻²	17	17	22	16
					19.5 kW m ⁻²	18	18	23	17
					9.8 kW m ⁻²	21	22	24	21
				Flash fire	LFL	19	20	23	18
				Full bore	Jet fire	35.5 kW m ⁻²	25	26	33
					28.3 kW m ⁻²	26	27	34	26
					19.5 kW m ⁻²	29	30	35	27
					9.8 kW m ⁻²	34	35	37	34
HY_14	Trailer to low pressure piping	Vapour	10	Flash fire	LFL	26	27	32	24
				Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	0	0	0	0
				Flash fire	LFL	7	8	8	7
				Full bore	Jet fire	35.5 kW m ⁻²	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
HY_15	Hydrogen manifold	Vapour	10	Flash fire	9.8 kW m ⁻²	7	7	8	7
					LFL	10	11	11	10
				Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	0	0	0	0
				Flash fire	LFL	7	8	8	7
			Full bore	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	7	7	8	7
				Flash fire	LFL	10	11	11	10
HY_16	Piping from main supply to Unit 1	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	0	0	0	0
				Flash fire	LFL	7	8	8	7
			Full bore	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	7	7	8	7
				Flash fire	LFL	10	11	11	10
				Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	0	0	0	0
HY_17	Piping from main supply to Unit 2	Vapour	10	Flash fire	9.8 kW m ⁻²	0	0	0	0
					LFL	7	8	8	7
				Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	0	0	0	0
				Flash fire	LFL	7	8	8	7
			Full bore	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	7	7	8	7
				Flash fire	LFL	10	11	11	10

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
				Flash fire	LFL	10	11	11	10
HY_18	Piping from main supply to Unit 3	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	0	0	0	0
				Flash fire	LFL	7	8	8	7
			Full bore	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	7	7	8	7
				Flash fire	LFL	10	11	11	10
HY_19	Piping from main supply to Unit 4	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	0	0	0	0
				Flash fire	LFL	7	8	8	7
			Full bore	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	7	7	8	7
				Flash fire	LFL	10	11	11	10
HY_20	Piping from main supply to Unit 5	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	0	0	0	0
				Flash fire	LFL	7	8	8	7
			Full bore	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	7	7	8	7
				Flash fire	LFL	10	11	11	10

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
HY_21	Piping from main supply to Unit 6	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	0	0	0	0
				Flash fire	LFL	7	8	8	7
				Full bore	Jet fire	35.5 kW m ⁻²	0	0	0
						28.3 kW m ⁻²	0	0	0
						19.5 kW m ⁻²	0	0	0
						9.8 kW m ⁻²	7	7	8
						LFL	10	11	11
HY_22	Piping from main supply to Unit 7	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	0	0	0	0
				Flash fire	LFL	7	8	8	7
				Full bore	Jet fire	35.5 kW m ⁻²	0	0	0
						28.3 kW m ⁻²	0	0	0
						19.5 kW m ⁻²	0	0	0
						9.8 kW m ⁻²	7	7	8
						LFL	10	11	11
HY_23	Piping from main supply to Unit 8	Vapour	10	Jet fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	0	0	0	0
					9.8 kW m ⁻²	0	0	0	0
				Flash fire	LFL	7	8	8	7
				Full bore	Jet fire	35.5 kW m ⁻²	0	0	0
						28.3 kW m ⁻²	0	0	0
						19.5 kW m ⁻²	0	0	0
						9.8 kW m ⁻²	7	7	8
						LFL	10	11	11

Table 5D.3 Results of Consequence Analysis for Distillate Oil Facilities

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
DO_01	Distillate oil manifold for 1 st CCGT	Liquid	10	Pool fire	35.5 kW m ⁻²	6	6	7	6
					28.3 kW m ⁻²	8	8	9	7
					19.5 kW m ⁻²	11	11	13	10
					9.8 kW m ⁻²	15	15	16	15
				Flash fire	LFL	9	10	11	9
			25	Pool fire	35.5 kW m ⁻²	9	9	9	9
					28.3 kW m ⁻²	9	9	9	9
					19.5 kW m ⁻²	11	12	13	11
					9.8 kW m ⁻²	22	23	26	21
				Flash fire	LFL	13	13	14	12
			50	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	17	17	17	17
					9.8 kW m ⁻²	24	25	29	23
				Flash fire	LFL	18	18	19	17
			100	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	33	33	33	33
					9.8 kW m ⁻²	39	40	45	38
				Flash fire	LFL	23	23	24	23
			Full bore	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	40	40	40	40
					9.8 kW m ⁻²	47	48	54	46
				Flash fire	LFL	25	25	26	25
DO_02	Piping from distillate oil manifold to 1 st CCGT unit	Liquid	10	Pool fire	35.5 kW m ⁻²	6	6	7	6
					28.3 kW m ⁻²	8	8	9	7
					19.5 kW m ⁻²	11	11	13	10
					9.8 kW m ⁻²	15	15	16	15

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
				Flash fire	LFL	9	10	11	9
				Pool fire	35.5 kW m ⁻²	9	9	9	9
					28.3 kW m ⁻²	9	9	9	9
					19.5 kW m ⁻²	11	12	13	11
					9.8 kW m ⁻²	22	23	26	21
				Flash fire	LFL	13	13	14	12
			50	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	17	17	17	17
					9.8 kW m ⁻²	24	25	29	23
				Flash fire	LFL	18	18	19	17
			100	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	33	33	33	33
					9.8 kW m ⁻²	39	40	45	38
				Flash fire	LFL	23	23	24	23
			Full bore	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	14	14	14	14
					9.8 kW m ⁻²	23	24	28	22
				Flash fire	LFL	16	16	17	15
DO_03	Distillate oil manifold for 2 nd CCGT	Liquid	10	Pool fire	35.5 kW m ⁻²	6	6	7	6
					28.3 kW m ⁻²	8	8	9	7
					19.5 kW m ⁻²	11	11	13	10
					9.8 kW m ⁻²	15	15	16	15
				Flash fire	LFL	9	10	11	9
			25	Pool fire	35.5 kW m ⁻²	9	9	9	9
					28.3 kW m ⁻²	9	9	9	9
					19.5 kW m ⁻²	11	12	13	11
					9.8 kW m ⁻²	22	23	26	21
				Flash fire	LFL	13	13	14	12

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
			50	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	17	17	17	17
					9.8 kW m ⁻²	24	25	29	23
			100	Flash fire	LFL	18	18	19	17
					35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	33	33	33	33
					9.8 kW m ⁻²	39	40	45	38
			Full bore	Flash fire	LFL	23	23	24	23
					35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	40	40	40	40
					9.8 kW m ⁻²	47	48	54	46
			DO_04	Piping from distillate oil manifold to 2 nd CCGT unit	LFL	25	25	26	25
					35.5 kW m ⁻²	6	6	7	6
					28.3 kW m ⁻²	8	8	9	7
					19.5 kW m ⁻²	11	11	13	10
			25	Flash fire	9.8 kW m ⁻²	15	15	16	15
					LFL	9	10	11	9
					35.5 kW m ⁻²	9	9	9	9
					28.3 kW m ⁻²	9	9	9	9
					19.5 kW m ⁻²	11	12	13	11
					9.8 kW m ⁻²	22	23	26	21
			50	Flash fire	LFL	13	13	14	12
					35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	17	17	17	17
					9.8 kW m ⁻²	24	25	29	23
			100	Flash fire	LFL	18	18	19	17
					35.5 kW m ⁻²	0	0	0	0

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	33	33	33	33
					9.8 kW m ⁻²	39	40	45	38
					LFL	23	23	24	23
					Flash fire				
					Full bore				
					Pool fire	35.5 kW m ⁻²	0	0	0
						28.3 kW m ⁻²	0	0	0
						19.5 kW m ⁻²	14	14	14
						9.8 kW m ⁻²	23	24	28
					LFL	16	16	17	15
					Flash fire				
DO_11	Distillate oil tank #1	Liquid	10	Pool fire	35.5 kW m ⁻²	3	3	4	3
					28.3 kW m ⁻²	4	4	5	4
					19.5 kW m ⁻²	5	5	5	5
					9.8 kW m ⁻²	6	6	6	6
				Flash fire	LFL	1	1	2	1
					Catastrophic Rupture				
					Pool fire	35.5 kW m ⁻²	0	0	0
						28.3 kW m ⁻²	0	0	0
						19.5 kW m ⁻²	55	55	55
						9.8 kW m ⁻²	63	65	72
					LFL	28	28	28	37
					Flash fire				
DO_12	Distillate oil tank #2	Liquid	10	Pool fire	35.5 kW m ⁻²	3	3	4	3
					28.3 kW m ⁻²	4	4	5	4
					19.5 kW m ⁻²	5	5	5	5
					9.8 kW m ⁻²	6	6	6	6
				Flash fire	LFL	1	1	2	1
					Full bore				
					Pool fire	35.5 kW m ⁻²	0	0	0
						28.3 kW m ⁻²	0	0	0
						19.5 kW m ⁻²	55	55	55
						9.8 kW m ⁻²	63	65	72
					LFL	28	28	28	37
					Flash fire				
DO_13	Distillate oil tank #3	Liquid	10	Pool fire	35.5 kW m ⁻²	3	3	4	3
					28.3 kW m ⁻²	4	4	5	4

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
DO_14	Distillate oil pumping house	Liquid	10	Flash fire	19.5 kW m ⁻²	5	5	5	5
					9.8 kW m ⁻²	6	6	6	6
					LFL	1	1	2	1
			Full bore	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	55	55	55	55
					9.8 kW m ⁻²	63	65	72	62
				Flash fire	LFL	28	28	28	37
				Pool fire	35.5 kW m ⁻²	6	6	7	6
					28.3 kW m ⁻²	8	8	9	7
					19.5 kW m ⁻²	11	11	13	10
					9.8 kW m ⁻²	15	15	16	15
				Flash fire	LFL	9	10	11	9
			25	Pool fire	35.5 kW m ⁻²	9	9	9	9
					28.3 kW m ⁻²	9	9	9	9
					19.5 kW m ⁻²	11	12	13	11
					9.8 kW m ⁻²	22	23	26	21
				Flash fire	LFL	13	13	14	12
			50	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	17	17	17	17
					9.8 kW m ⁻²	24	25	29	23
				Flash fire	LFL	18	18	19	17
			100	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	33	33	33	33
					9.8 kW m ⁻²	39	40	45	38
				Flash fire	LFL	23	23	24	23
			Full bore	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	40	40	40	40

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
DO_15	Distillate oil manifold section 1	Liquid	10		9.8 kW m ⁻²	47	48	54	46
					LFL	25	25	26	25
				Pool fire	35.5 kW m ⁻²	6	6	7	6
					28.3 kW m ⁻²	8	8	9	7
					19.5 kW m ⁻²	11	12	14	11
					9.8 kW m ⁻²	16	16	17	15
				Flash fire	LFL	7	7	8	6
			25	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	10	10	10	10
					19.5 kW m ⁻²	11	12	12	11
					9.8 kW m ⁻²	22	23	27	21
				Flash fire	LFL	9	9	9	8
			50	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	19	19	19	19
					9.8 kW m ⁻²	25	26	30	25
				Flash fire	LFL	10	10	11	10
			100	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	36	36	36	36
					9.8 kW m ⁻²	43	44	49	41
				Flash fire	LFL	13	13	13	13
			Full bore	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	153	153	153	153
					9.8 kW m ⁻²	162	164	177	159
				Flash fire	LFL	11	11	11	11
DO_16	Distillate oil manifold section 2	Liquid	10	Pool fire	35.5 kW m ⁻²	6	6	7	6
					28.3 kW m ⁻²	8	8	9	7
					19.5 kW m ⁻²	11	11	13	10
					9.8 kW m ⁻²	15	15	16	15

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
				Flash fire	LFL	9	10	11	9
				25	Pool fire	35.5 kW m ⁻²	9	9	9
						28.3 kW m ⁻²	9	9	9
						19.5 kW m ⁻²	11	12	11
						9.8 kW m ⁻²	22	23	21
				Flash fire	LFL	13	13	14	12
			50	Pool fire	35.5 kW m ⁻²	0	0	0	0
						28.3 kW m ⁻²	0	0	0
						19.5 kW m ⁻²	17	17	17
						9.8 kW m ⁻²	24	25	23
				Flash fire	LFL	18	18	19	17
			100	Pool fire	35.5 kW m ⁻²	0	0	0	0
						28.3 kW m ⁻²	0	0	0
						19.5 kW m ⁻²	33	33	33
						9.8 kW m ⁻²	39	40	38
				Flash fire	LFL	23	23	24	23
			Full bore	Pool fire	35.5 kW m ⁻²	0	0	0	0
						28.3 kW m ⁻²	0	0	0
						19.5 kW m ⁻²	40	40	40
						9.8 kW m ⁻²	47	48	46
				Flash fire	LFL	25	25	26	25
DO_17	Distillate oil manifold section 3	Liquid	10	Pool fire	35.5 kW m ⁻²	6	6	7	6
						28.3 kW m ⁻²	8	8	7
						19.5 kW m ⁻²	11	11	10
						9.8 kW m ⁻²	15	15	15
				Flash fire	LFL	9	10	11	9
			25	Pool fire	35.5 kW m ⁻²	9	9	9	9
						28.3 kW m ⁻²	9	9	9
						19.5 kW m ⁻²	11	12	11
						9.8 kW m ⁻²	22	23	21
				Flash fire	LFL	13	13	14	12

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
			50	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	17	17	17	17
					9.8 kW m ⁻²	24	25	29	23
			100	Flash fire	LFL	18	18	19	17
					35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	33	33	33	33
					9.8 kW m ⁻²	39	40	45	38
			Full bore	Flash fire	LFL	23	23	24	23
					35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	40	40	40	40
					9.8 kW m ⁻²	47	48	54	46
			DO_18	Flash fire	LFL	25	25	26	25
					35.5 kW m ⁻²	6	6	7	6
					28.3 kW m ⁻²	8	8	9	7
					19.5 kW m ⁻²	11	11	13	10
			25	Flash fire	9.8 kW m ⁻²	15	15	16	15
					LFL	9	10	11	9
					35.5 kW m ⁻²	9	9	9	9
					28.3 kW m ⁻²	9	9	9	9
			50	Flash fire	19.5 kW m ⁻²	11	12	13	11
					9.8 kW m ⁻²	22	23	26	21
					LFL	13	13	14	12
			100	Flash fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	14	14	14	14
					9.8 kW m ⁻²	23	24	28	22
				Flash fire	LFL	16	16	17	15
					35.5 kW m ⁻²	0	0	0	0

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
DO_19	Piping from distillate oil manifold to Unit 2	Liquid	10	Flash fire	28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	14	14	14	14
					9.8 kW m ⁻²	23	24	28	22
					LFL	16	16	17	15
				Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	14	14	14	14
					9.8 kW m ⁻²	23	24	28	22
					LFL	16	16	17	15
				Flash fire	35.5 kW m ⁻²	6	6	7	6
					28.3 kW m ⁻²	8	8	9	7
					19.5 kW m ⁻²	11	11	13	10
					9.8 kW m ⁻²	15	15	16	15
					LFL	9	10	11	9
				Pool fire	35.5 kW m ⁻²	9	9	9	9
					28.3 kW m ⁻²	9	9	9	9
					19.5 kW m ⁻²	11	12	13	11
					9.8 kW m ⁻²	22	23	26	21
					LFL	13	13	14	12
				Flash fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	14	14	14	14
					9.8 kW m ⁻²	23	24	28	22
					LFL	16	16	17	15
				Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	14	14	14	14
					9.8 kW m ⁻²	23	24	28	22
					LFL	16	16	17	15
				Flash fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
DO_20	Piping from distillate oil manifold to Unit 3	Liquid	10	Flash fire	19.5 kW m ⁻²	14	14	14	14
					9.8 kW m ⁻²	23	24	28	22
					LFL	16	16	17	15
				Pool fire	35.5 kW m ⁻²	6	6	7	6
					28.3 kW m ⁻²	8	8	9	7
					19.5 kW m ⁻²	11	11	13	10
					9.8 kW m ⁻²	15	15	16	15
				Flash fire	LFL	9	10	11	9
			25	Pool fire	35.5 kW m ⁻²	9	9	9	9
					28.3 kW m ⁻²	9	9	9	9
					19.5 kW m ⁻²	11	12	13	11
					9.8 kW m ⁻²	22	23	26	21
				Flash fire	LFL	13	13	14	12
			50	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	14	14	14	14
					9.8 kW m ⁻²	23	24	28	22
				Flash fire	LFL	16	16	17	15
			100	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	14	14	14	14
					9.8 kW m ⁻²	23	24	28	22
				Flash fire	LFL	16	16	17	15
			Full bore	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	14	14	14	14
					9.8 kW m ⁻²	23	24	28	22
				Flash fire	LFL	16	16	17	15
DO_21	Piping from distillate oil manifold to Unit 4	Liquid	10	Pool fire	35.5 kW m ⁻²	6	6	7	6
					28.3 kW m ⁻²	8	8	9	7
					19.5 kW m ⁻²	11	11	13	10

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
					9.8 kW m ⁻²	15	15	16	15
					LFL	9	10	11	9
			25	Pool fire	35.5 kW m ⁻²	9	9	9	9
					28.3 kW m ⁻²	9	9	9	9
					19.5 kW m ⁻²	11	12	13	11
					9.8 kW m ⁻²	22	23	26	21
			50	Pool fire	LFL	13	13	14	12
					35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	14	14	14	14
					9.8 kW m ⁻²	23	24	28	22
			100	Pool fire	LFL	16	16	17	15
					35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	14	14	14	14
					9.8 kW m ⁻²	23	24	28	22
			Full bore	Pool fire	LFL	16	16	17	15
					35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	14	14	14	14
					9.8 kW m ⁻²	23	24	28	22
				Flash fire	LFL	16	16	17	15
					35.5 kW m ⁻²	6	6	7	6
					28.3 kW m ⁻²	8	8	9	7
					19.5 kW m ⁻²	11	11	13	10
					9.8 kW m ⁻²	15	15	16	15
DO_22	Piping from distillate oil manifold to Unit 5	Liquid	10	Pool fire	LFL	9	10	11	9
					35.5 kW m ⁻²	9	9	9	9
					28.3 kW m ⁻²	9	9	9	9
					19.5 kW m ⁻²	11	12	13	11
			25	Pool fire	9.8 kW m ⁻²	22	23	26	21

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
				Flash fire	LFL	13	13	14	12
				50	Pool fire	35.5 kW m ⁻²	0	0	0
						28.3 kW m ⁻²	0	0	0
						19.5 kW m ⁻²	14	14	14
						9.8 kW m ⁻²	23	24	22
				Flash fire	LFL	16	16	17	15
			100	Pool fire	35.5 kW m ⁻²	0	0	0	0
						28.3 kW m ⁻²	0	0	0
						19.5 kW m ⁻²	14	14	14
						9.8 kW m ⁻²	23	24	22
				Flash fire	LFL	16	16	17	15
			Full bore	Pool fire	35.5 kW m ⁻²	0	0	0	0
						28.3 kW m ⁻²	0	0	0
						19.5 kW m ⁻²	14	14	14
						9.8 kW m ⁻²	23	24	22
				Flash fire	LFL	16	16	17	15
DO_23	Piping from distillate oil manifold to Unit 6	Liquid	10	Pool fire	35.5 kW m ⁻²	6	6	7	6
						28.3 kW m ⁻²	8	8	9
						19.5 kW m ⁻²	11	11	13
						9.8 kW m ⁻²	15	15	15
				Flash fire	LFL	9	10	11	9
			25	Pool fire	35.5 kW m ⁻²	9	9	9	9
						28.3 kW m ⁻²	9	9	9
						19.5 kW m ⁻²	11	12	13
						9.8 kW m ⁻²	22	23	26
				Flash fire	LFL	13	13	14	12
			50	Pool fire	35.5 kW m ⁻²	0	0	0	0
						28.3 kW m ⁻²	0	0	0
						19.5 kW m ⁻²	14	14	14
						9.8 kW m ⁻²	23	24	22
				Flash fire	LFL	16	16	17	15

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
DO_24	Piping from distillate oil manifold to Unit 7	Liquid	100	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	14	14	14	14
					9.8 kW m ⁻²	23	24	28	22
				Flash fire	LFL	16	16	17	15
			Full bore	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	14	14	14	14
					9.8 kW m ⁻²	23	24	28	22
				Flash fire	LFL	16	16	17	15
			10	Pool fire	35.5 kW m ⁻²	6	6	7	6
					28.3 kW m ⁻²	8	8	9	7
					19.5 kW m ⁻²	11	11	13	10
					9.8 kW m ⁻²	15	15	16	15
				Flash fire	LFL	9	10	11	9
			25	Pool fire	35.5 kW m ⁻²	9	9	9	9
					28.3 kW m ⁻²	9	9	9	9
					19.5 kW m ⁻²	11	12	13	11
					9.8 kW m ⁻²	22	23	26	21
				Flash fire	LFL	13	13	14	12
			50	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	14	14	14	14
					9.8 kW m ⁻²	23	24	28	22
				Flash fire	LFL	16	16	17	15
			100	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	14	14	14	14
					9.8 kW m ⁻²	23	24	28	22
				Flash fire	LFL	16	16	17	15
			Full bore	Pool fire	35.5 kW m ⁻²	0	0	0	0

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)					
						2.5B	3.0D	7.0D	2.0F		
DO_25	Piping from distillate oil manifold to Unit 8	Liquid	10	Flash fire	28.3 kW m ⁻²	0	0	0	0		
					19.5 kW m ⁻²	14	14	14	14		
					9.8 kW m ⁻²	23	24	28	22		
					LFL	16	16	17	15		
				Pool fire	35.5 kW m ⁻²	6	6	7	6		
					28.3 kW m ⁻²	8	8	9	7		
					19.5 kW m ⁻²	11	11	13	10		
					9.8 kW m ⁻²	15	15	16	15		
				Flash fire	LFL	9	10	11	9		
					25	Pool fire	35.5 kW m ⁻²	9	9	9	9
							28.3 kW m ⁻²	9	9	9	9
							19.5 kW m ⁻²	11	12	13	11
			9.8 kW m ⁻²	22			23	26	21		
			Flash fire	LFL	13	13	14	12			
				50	Pool fire	35.5 kW m ⁻²	0	0	0	0	
						28.3 kW m ⁻²	0	0	0	0	
						19.5 kW m ⁻²	14	14	14	14	
			9.8 kW m ⁻²			23	24	28	22		
			Flash fire	LFL	16	16	17	15			
				100	Pool fire	35.5 kW m ⁻²	0	0	0	0	
						28.3 kW m ⁻²	0	0	0	0	
						19.5 kW m ⁻²	14	14	14	14	
			9.8 kW m ⁻²			23	24	28	22		
			Flash fire	LFL	16	16	17	15			
				Full bore	Pool fire	35.5 kW m ⁻²	0	0	0	0	
						28.3 kW m ⁻²	0	0	0	0	
						19.5 kW m ⁻²	14	14	14	14	
			9.8 kW m ⁻²			23	24	28	22		
			Flash fire	LFL	16	16	17	15			
DO_26	Unloading arm at oil unloading berth/ heavy load berth	Liquid		10	Pool fire	35.5 kW m ⁻²	6	6	7	6	

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
					28.3 kW m ⁻²	8	8	9	7
					19.5 kW m ⁻²	11	11	13	10
					9.8 kW m ⁻²	15	15	16	15
					LFL	9	10	11	9
					Flash fire				
					25				
					Pool fire	35.5 kW m ⁻²	9	9	9
					28.3 kW m ⁻²	9	9	9	9
					19.5 kW m ⁻²	11	12	13	11
					9.8 kW m ⁻²	22	23	26	21
					LFL	13	13	14	12
					Flash fire				
					50				
					Pool fire	35.5 kW m ⁻²	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	14	14	14	14
					9.8 kW m ⁻²	23	24	28	22
					LFL	16	16	17	15
					Flash fire				
					100				
					Pool fire	35.5 kW m ⁻²	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	14	14	14	14
					9.8 kW m ⁻²	23	24	28	22
					LFL	16	16	17	15
					Flash fire				
					Full bore				
					Pool fire	35.5 kW m ⁻²	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	14	14	14	14
					9.8 kW m ⁻²	23	24	28	22
					LFL	16	16	17	15
					Flash fire				
DO_27	Fuel oil bunkering line from unloading arm to distillate oil tanks through fuel oil strainer	Liquid	10	Pool fire	35.5 kW m ⁻²	6	6	7	6
					28.3 kW m ⁻²	8	8	9	7
					19.5 kW m ⁻²	11	11	13	10
					9.8 kW m ⁻²	15	15	16	15
					LFL	9	10	11	9
					Flash fire				
					25				
					Pool fire	35.5 kW m ⁻²	9	9	9
					28.3 kW m ⁻²	9	9	9	9
					19.5 kW m ⁻²	11	12	13	11

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
					28.3 kW m ⁻²	9	9	9	9
					19.5 kW m ⁻²	11	12	13	11
					9.8 kW m ⁻²	22	23	26	21
				Flash fire	LFL	13	13	14	12
			50	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	17	17	17	17
					9.8 kW m ⁻²	24	25	29	23
				Flash fire	LFL	18	18	19	17
			100	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	33	33	33	33
					9.8 kW m ⁻²	39	40	45	38
				Flash fire	LFL	23	23	24	23
			Full bore	Pool fire	35.5 kW m ⁻²	0	0	0	0
					28.3 kW m ⁻²	0	0	0	0
					19.5 kW m ⁻²	40	40	40	40
					9.8 kW m ⁻²	47	48	54	46
				Flash fire	LFL	25	25	26	25

Table 5D.4 Results of Consequence Analysis for Carbon Dioxide Facilities

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
CD_01	Additional carbon dioxide road tanker to 1 st CCGT unit	Liquid	25	Toxicity	107,713 ppm	4	4	4	4
					91,933 ppm	4	4	4	4
					68,902 ppm	5	5	5	5
				Toxicity	107,713 ppm	16	17	20	17
					91,933 ppm	17	18	22	18
					68,902 ppm	20	21	26	20
				Overpressure	0.3 bar	24	24	24	24
CD_02	Carbon dioxide manifold for 1 st CCGT	Vapour	10	Toxicity	107,713 ppm	1	1	1	1
					91,933 ppm	1	1	1	1
					68,902 ppm	2	2	2	2
				Toxicity	107,713 ppm	2	2	2	2
					91,933 ppm	2	2	2	2
					68,902 ppm	3	3	3	3
CD_03	Piping from carbon dioxide manifold to 1 st CCGT unit	Vapour	10	Toxicity	107,713 ppm	1	1	1	1
					91,933 ppm	1	1	1	1
					68,902 ppm	2	2	2	2
				Toxicity	107,713 ppm	2	2	2	2
					91,933 ppm	2	2	2	2
					68,902 ppm	3	3	3	3
CD_04	Additional carbon dioxide road tanker to 2 nd CCGT unit	Liquid	25	Toxicity	107,713 ppm	4	4	4	4
					91,933 ppm	4	4	4	4
					68,902 ppm	5	5	5	5
				Toxicity	107,713 ppm	16	17	20	17
					91,933 ppm	17	18	22	18
					68,902 ppm	20	21	26	20
				Overpressure	0.3 bar	24	24	24	24
CD_05	Carbon dioxide manifold for 2 nd CCGT	Vapour	10	Toxicity	107,713 ppm	1	1	1	1
					91,933 ppm	1	1	1	1

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
CD_06	Piping from carbon dioxide manifold to 2 nd CCGT unit	Vapour	10	Toxicity	68,902 ppm	2	2	2	2
					107,713 ppm	2	2	2	2
					91,933 ppm	2	2	2	2
					68,902 ppm	3	3	3	3
					107,713 ppm	1	1	1	1
					91,933 ppm	1	1	1	1
					68,902 ppm	2	2	2	2
					107,713 ppm	2	2	2	2
					91,933 ppm	2	2	2	2
					68,902 ppm	3	3	3	3
					107,713 ppm	4	4	4	4
					91,933 ppm	4	4	4	4
CD_11	Carbon dioxide road tanker to the existing facilities	Liquid	25	Toxicity	68,902 ppm	5	5	5	5
					107,713 ppm	16	17	20	17
					91,933 ppm	17	18	22	18
					68,902 ppm	20	21	26	20
					0.3 bar	24	24	24	24
					107,713 ppm	2	2	2	2
					91,933 ppm	2	2	2	2
					68,902 ppm	2	2	2	2
					107,713 ppm	4	4	4	4
					91,933 ppm	4	4	4	4
					68,902 ppm	5	5	5	5
					107,713 ppm	16	17	20	17
CD_12	Carbon dioxide storage tank	Liquid	10	Toxicity	91,933 ppm	17	18	22	18
					68,902 ppm	20	21	26	20
					0.3 bar	24	24	24	24
					107,713 ppm	16	17	20	17
					91,933 ppm	17	18	22	18
					68,902 ppm	20	21	26	20
					0.3 bar	24	24	24	24
					107,713 ppm	16	17	20	17
					91,933 ppm	17	18	22	18
					68,902 ppm	20	21	26	20
					0.3 bar	24	24	24	24
					107,713 ppm	16	17	20	17
CD_13	Carbon dioxide manifold section 1	Vapour	10	Toxicity	91,933 ppm	17	18	22	18
					68,902 ppm	20	21	26	20
					0.3 bar	24	24	24	24
					107,713 ppm	16	17	20	17
					91,933 ppm	17	18	22	18
					68,902 ppm	20	21	26	20

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)					
						2.5B	3.0D	7.0D	2.0F		
CD_14	Carbon dioxide manifold section 2	Vapour	Full bore	Toxicity	107,713 ppm	2	2	2	2		
					91,933 ppm	2	2	2	2		
					68,902 ppm	3	3	3	3		
							107,713 ppm	1	1	1	1
							91,933 ppm	1	1	1	1
							68,902 ppm	2	2	2	2
			Full bore	Toxicity	107,713 ppm	2	2	2	2		
					91,933 ppm	2	2	2	2		
					68,902 ppm	3	3	3	3		
CD_15	Piping from carbon dioxide manifold to Unit 1	Vapour	10	Toxicity	107,713 ppm	1	1	1	1		
					91,933 ppm	1	1	1	1		
					68,902 ppm	2	2	2	2		
						107,713 ppm	2	2	2	2	
						91,933 ppm	2	2	2	2	
						68,902 ppm	3	3	3	3	
		Full bore	Toxicity	107,713 ppm	2	2	2	2			
				91,933 ppm	2	2	2	2			
				68,902 ppm	3	3	3	3			
CD_16	Piping from carbon dioxide manifold to Unit 2	Vapour	10	Toxicity	107,713 ppm	1	1	1	1		
					91,933 ppm	1	1	1	1		
					68,902 ppm	2	2	2	2		
						107,713 ppm	2	2	2	2	
						91,933 ppm	2	2	2	2	
						68,902 ppm	3	3	3	3	
		Full bore	Toxicity	107,713 ppm	2	2	2	2			
				91,933 ppm	2	2	2	2			
				68,902 ppm	3	3	3	3			
CD_17	Piping from carbon dioxide manifold to Unit 3	Vapour	10	Toxicity	107,713 ppm	1	1	1	1		
					91,933 ppm	1	1	1	1		
					68,902 ppm	2	2	2	2		
						107,713 ppm	2	2	2	2	
						91,933 ppm	2	2	2	2	
						68,902 ppm	3	3	3	3	
		Full bore	Toxicity	107,713 ppm	2	2	2	2			
				91,933 ppm	2	2	2	2			
				68,902 ppm	3	3	3	3			
CD_18	Piping from carbon dioxide manifold to Unit 4	Vapour	10	Toxicity	107,713 ppm	1	1	1	1		
					91,933 ppm	1	1	1	1		
					68,902 ppm	2	2	2	2		

Section	Description	Phase	Leak Size (mm)	Hazard Effects	End Point criteria	Hazard extent (m)			
						2.5B	3.0D	7.0D	2.0F
CD_19	Piping from carbon dioxide manifold to Unit 5	Vapour	10	Toxicity	Full bore	107,713 ppm	2	2	2
						91,933 ppm	2	2	2
						68,902 ppm	3	3	3
					10	107,713 ppm	1	1	1
						91,933 ppm	1	1	1
						68,902 ppm	2	2	2
					Full bore	107,713 ppm	2	2	2
						91,933 ppm	2	2	2
						68,902 ppm	3	3	3
CD_20	Piping from carbon dioxide manifold to Unit 6	Vapour	10	Toxicity	Full bore	107,713 ppm	1	1	1
						91,933 ppm	1	1	1
						68,902 ppm	2	2	2
					10	107,713 ppm	2	2	2
						91,933 ppm	2	2	2
						68,902 ppm	3	3	3
					Full bore	107,713 ppm	2	2	2
						91,933 ppm	2	2	2
						68,902 ppm	3	3	3
CD_21	Piping from carbon dioxide manifold to Unit 7	Vapour	10	Toxicity	Full bore	107,713 ppm	1	1	1
						91,933 ppm	1	1	1
						68,902 ppm	2	2	2
					10	107,713 ppm	2	2	2
						91,933 ppm	2	2	2
						68,902 ppm	3	3	3
					Full bore	107,713 ppm	2	2	2
						91,933 ppm	2	2	2
						68,902 ppm	3	3	3
CD_22	Piping from carbon dioxide manifold to Unit 8	Vapour	10	Toxicity	Full bore	107,713 ppm	1	1	1
						91,933 ppm	1	1	1
						68,902 ppm	2	2	2
					10	107,713 ppm	2	2	2
						91,933 ppm	2	2	2
						68,902 ppm	3	3	3
					Full bore	107,713 ppm	2	2	2
						91,933 ppm	2	2	2
						68,902 ppm	3	3	3

Table 5D.5 Results of Consequence Analysis for Vapour Cloud Explosion at PESs

Tag	Hazard Effects	End Point criteria	Hazard extent (m)			
			2.5B	3.0D	7.0D	2.0F
PES 1	Overpressure	0.3 bar	55	55	55	55
		0.1 bar	163	163	163	163
PES 2	Overpressure	0.3 bar	55	55	55	55
		0.1 bar	163	163	163	163
PES 3	Overpressure	0.3 bar	55	55	55	55
		0.1 bar	163	163	163	163
PES 4	Overpressure	0.3 bar	55	55	55	55
		0.1 bar	163	163	163	163
PES 5	Overpressure	0.3 bar	55	55	55	55
		0.1 bar	163	163	163	163
PES 6	Overpressure	0.3 bar	55	55	55	55
		0.1 bar	163	163	163	163
PES 7	Overpressure	0.3 bar	55	55	55	55
		0.1 bar	163	163	163	163
PES 8	Overpressure	0.3 bar	55	55	55	55
		0.1 bar	163	163	163	163
PES 9	Overpressure	0.3 bar	48	48	48	48
		0.1 bar	143	143	143	143
PES 10	Overpressure	0.3 bar	48	48	48	48
		0.1 bar	143	143	143	143