

Table 4 : IGNITION DETAILS

NOTES :

1. The following table contains detailed information on all of the ignitions which have been reported and recorded in the Hydrocarbon Releases Database between 1 October, 1992 and 31 March, 2002.
2. The table is in three parts :
 - (a) Release parameters
 - (b) Mode of Operation/ignition sources and sequences
 - (c) Detection modes and emergency actions
3. Each ignition has a reference number, and so it is possible to read all the details supplied for any one incident by referring to its unique reference number in each of the three parts.

Table 4(a) : IGNITIONS - RELEASE PARAMETERS

Year	Ref.	Hydrocarbon Type	Non Process Type	Severity	System	Type* of Installation	Gravity/Density (kgs/m3)	Amount Released (kgs)	@Actual Pressure (barg)	Release Duration (mins)	Equivalent Hole** (mm)
1992/93	1	Non Process	Lub Oil	Minor	Utilities, Oil, Heat Transfer Oil	CF	799.12	6.00	3.72	1.00	3.00
	2	Oil		Minor	Export, Oil	CF	799.12	47.90	0.00	5.00	508.00
	3	Oil		Significant	Separation, Oil Test	CF	839.08	266.78	4.14	15.00	N/A
	4	Gas		Significant	Utilities, Gas, Fuel Gas	SF	9.00	54.00	10.00	30.00	5.00
Total = 4											
1993/94	5	Non Process	Lub Oil	Significant	Gas Compression	CF	876.04	876.04	3.45	20.00	25.00
	6	Non Process	Lub Oil	Minor	Gas Compression	CF	799.12	3.00	5.00	5.00	1.00
	7	Non Process	Lub Oil	Minor	Gas Compression	CF	799.12	0.16	5.00	5.00	1.00
	8	Non Process	Methanol	Significant	Manifold, Other, (Condensate, Methanol, Etc)	SMJ	799.12	525.00	0.00	5.00	50.80
	9	Non Process	Methanol	Minor	Processing, Gas, Chemical Injection	NF	799.12	0.80	0.00	5.00	25.40
	10	Non Process	Glycol	Significant	Processing, Gas, Dehydration	SF	1123.76	766.20	0.07	300.00	10.00
	11	Non Process	Glycol	Significant	Processing, Gas, Dehydration	SF	799.12	588.00	1.03	10.00	12.70
	12	Non Process	Diesel	Minor	Utilities, Gas, Power Gen Turbines	NF	799.12	7.26	0.00	10.00	N/A
	13	Non Process	Diesel	Minor	Utilities, Gas, Power Gen Turbines	NF	799.12	3.63	0.00	0.50	N/A
	14	Non Process	Diesel	Minor	Utilities, Gas, Power Gen Turbines	NF	799.12	18.16	0.00	10.00	6.70
	15	Non Process	Diesel	Significant	Utilities, Oil, diesel	CF	799.12	132.00	0.00	5.00	25.40
	16	Non Process	Heat Trans Oil	Significant	Utilities, Oil, Heat Transfer Oil	CF	799.12	1044.00	10.34	10.00	9.53
	17	Non Process	Lub Oil	Minor	Utilities, Oil, Power Gen Turbines	CF	877.03	1.00	3.93	2.00	1.00
	18	Oil		Significant	Separation, Oil Production	CF	839.08	666.94	4.14	20.00	N/A
	19	Oil		Minor	Separation, Oil Test	CF	799.12	3.63	0.00	1.00	12.70
	20	Condensate		Minor	Flare, HP	CF	599.34	10.00	10.00	5.00	76.20
	21	Condensate		Minor	Processing, Gas, LPG/Condensate	SF	599.34	27.00	0.00	5.00	12.70
	22	Gas		Minor	Flowlines, Oil	CF	74.60	0.60	75.86	1.00	1.00
	23	Gas		Minor	Utilities, Gas, Fuel Gas	NF	12.70	0.03	12.41	0.25	1.00
	24	Gas		Significant	Utilities, Gas, Fuel Gas	CF	1.60	153.00	1.00	17.00	25.40
	25	Gas		Significant	Utilities, Gas, Fuel Gas	SF	1.60	210.00	1.00	10.00	38.10
	26	Gas		Significant	Vent, HP	SF	0.78	41.10	0.00	0.25	152.40
	27	Gas		Minor	Vent, HP	SF	0.80	0.04	0.00	6.00	1.00
	28	Gas		Minor	Vent, HP	SF	0.80	0.06	0.00	8.00	1.00
	29	Gas		Minor	Vent, HP	SF	0.80	0.06	0.00	8.00	1.00
	30	Gas		Significant	Vent, LP	SF	0.80	210.00	0.00	5.00	76.20
Total = 26											
1994/95	31	Non Process	Lub Oil	Minor	Export, Oil	NF	799.12	36.00	100.00	10.00	1.00

*where C=Central, S=Southern, N=Northern areas, F=Fixed, MS=Semisub, MJ=Jackup

**N/A signifies holesize not applicable to mode of release

Table 4(a) : IGNITIONS - RELEASE PARAMETERS

Year	Ref.	Hydrocarbon Type	Non Process Type	Severity	System	Type* of Installation	Gravity/Density (kgs/m3)	Amount Released (kgs)	@Actual Pressure (barg)	Release Duration (mins)	Equivalent Hole** (mm)
	32	Non Process	Lub Oil	Minor	Export, Oil	CF	799.12	3.63	0.00	5.00	N/A
	33	Non Process	Lub Oil	Significant	Gas Compression	CF	799.12	964.80	70.00	2.00	12.70
	34	Non Process	Lub Oil	Minor	Gas Compression	SF	799.12	3.00	5.00	5.00	1.00
	35	Non Process	Lub Oil	Minor	Gas Compression	NF	799.12	3.00	5.00	5.00	1.00
	35	Non Process	Lub Oil	Minor	Gas Compression	NF	799.12	3.00	5.00	5.00	1.00
	36	Non Process	Diesel	Minor	Gas Compression	CF	799.12	7.26	5.00	30.00	N/A
	37	Non Process	Glycol	Minor	Processing, Gas, Chemical Injection	SF	799.12	6.00	5.00	2.00	2.00
	38	Non Process	Glycol	Minor	Processing, Gas, Dehydration	SF	1048.85	4.30	0.07	36.00	1.00
	39	Non Process	Glycol	Minor	Processing, Gas, Dehydration	SF	799.12	22.00	1.03	60.00	1.00
	40	Non Process	Diesel	Minor	Utilities, Gas, Power Gen Turbines	SMJ	799.12	18.00	30.00	10.00	1.00
	41	Non Process	Fuel Oil	Significant	Utilities, Gas, Power Gen Turbines	NMS	799.12	141.00	10.00	5.00	5.00
	42	Non Process	Diesel	Minor	Utilities, Oil, Diesel	NF	799.12	3.63	0.00	30.00	N/A
	43	Non Process	Lub Oil	Minor	Utilities, Oil, Heat Transfer Oil	CF	799.12	0.30	4.80	1.00	1.00
	44	Non Process	Lub Oil	Minor	Utilities, Oil, Heat Transfer Oil	CF	799.12	10.90	4.83	3.00	1.80
	45	Non Process	Heli-Fuel	Minor	Utilities, Oil, Heli-Fuel / Jet-Fuel	CMJ	799.12	0.60	0.00	15.00	1.00
	46	Non Process	Diesel	Significant	Utilities, Oil, Power Gen Turbines	CF	835.00	835.00	30.00	3.00	11.80
	47	Non Process	Diesel	Significant	Utilities, Oil, Power Gen Turbines	CF	835.00	835.00	30.00	3.00	11.80
	48	Oil		Significant	Utilities, Oil, Power Gen Turbines	NMS	799.12	7291.20	250.00	2.00	25.40
	49	Condensate		Minor	Flare, HP	CF	799.12	10.00	0.00	5.00	N/A
	50	Condensate		Minor	Processing, Gas, Sour (H2S/CO2) Treatment	CF	599.34	5.99	5.00	0.50	25.40
	51	Gas		Significant	Flare, HP	NF	1.50	40.50	0.79	165.00	N/A
	52	Gas		Minor	Gas Compression	NF	4.90	0.20	5.00	5.00	1.00
	53	Gas		Minor	Utilities, Oil, Heat Transfer Oil	NF	9.00	0.10	10.00	1.00	1.00
	54	Gas		Minor	Vent, LP	NF	1.00	0.10	0.01	1.00	3.90
Total = 24											
1995/96	55	Non Process	Lub Oil	Minor	Gas Compression	CF	859.05	0.20	0.00	15.00	1.00
	56	Non Process	Lub Oil	Significant	Gas Compression	NF	869.04	60.83	10.00	7.00	2.70
	57	Non Process	Glycol	Minor	Processing, Gas, Dehydration	CF	799.12	29.30	0.00	720.00	1.00
	58	Non Process	Diesel	Minor	Utilities, Gas, Power Gen Turbines	CF	835.00	0.84	30.00	5.00	1.00
	59	Non Process	Diesel	Minor	Utilities, Oil, diesel	CF	835.00	0.84	30.00	0.08	2.30
	60	Non Process	Lub Oil	Minor	Utilities, Oil, Heat Transfer Oil	NF	799.12	0.08	5.00	1.00	1.00
	61	Non Process	Lub Oil	Minor	Utilities, Oil, Heat Transfer Oil	CF	884.03	7.00	0.00	16.00	38.10
	62	Gas		Significant	Processing, Gas, LPG/Condensate	SF	1.20	14.40	0.69	8.00	12.70

*where C=Central, S=Southern, N=Northern areas, F=Fixed, MS=Semisub, MJ=Jackup

**N/A signifies holesize not applicable to mode of release

Table 4(a) : IGNITIONS - RELEASE PARAMETERS

Year	Ref.	Hydrocarbon Type	Non Process Type	Severity	System	Type* of Installation	Gravity/Density (kgs/m3)	Amount Released (kgs)	@Actual Pressure (barg)	Release Duration (mins)	Equivalent Hole** (mm)
	63	Gas		Minor	Vent, LP	CF	1.00	0.50	0.00	2.00	6.00
Total = 9											
1996/97	64	Non Process	Lub Oil	Minor	Export, Oil	CF	799.12	0.40	17.24	7.00	1.00
	65	Non Process	Lub Oil	Significant	Utilities, Gas, Power Gen Turbines	CF	799.12	79.91	2.40	5.00	5.40
	66	Non Process	Diesel	Minor	Utilities, Gas, Power Gen Turbines	CF	799.12	1.60	9.00	1.30	1.00
	67	Non Process	Diesel	Minor	Utilities, Oil, Diesel	SMJ	849.07	0.85	2.00	3.00	1.00
	68	Non Process	Diesel	Minor	Utilities, Oil, Diesel	NF	849.07	0.85	2.07	2.00	1.00
	69	Non Process	Diesel	Minor	Utilities, Oil, Diesel	NF	799.12	0.80	0.00	2.00	12.70
	70	Non Process	Diesel	Significant	Utilities, Oil, Diesel	NF	799.12	150.00	103.45	8.00	12.70
	71	Non Process	Diesel	Significant	Utilities, Oil, Diesel	NF	799.12	70.00	103.45	32.00	12.70
	72	Non Process	Diesel	Minor	Utilities, Oil, Diesel	CF	799.12	0.40	23.00	1.00	1.00
	72	Non Process	Diesel	Minor	Utilities, Oil, Diesel	CF	799.12	0.40	23.00	1.00	1.00
	73	Non Process	Lub Oil	Minor	Utilities, Oil, Diesel	CF	799.12	0.80	0.00	20.00	1.00
	74	Non Process	Lub Oil	Minor	Gas Compression	NF	799.12	15.98	1.75	1.00	N/A
	75	Oil		Significant	Flare, HP	CF	799.12	127.04	0.17	3.00	N/A
	76	Condensate		Minor	Gas Compression	SF	599.34	2.72	0.00	0.50	N/A
	77	Condensate		Minor	Import, Gas	SF	699.23	0.70	0.00	1.00	1.00
	78	Gas		Minor	Drains, Closed	CF	0.70	0.07	0.00	2.00	N/A
	79	Gas		Minor	Drilling, Development, Gas Well, <100 Metres	SF	0.80	0.80	0.00	1.00	9.10
	80	Gas		Significant	Processing, Gas, Sour (H2S/CO2) Treatment	CF	0.80	2.00	0.00	1.00	203.20
	81	Gas		Significant	Utilities, Gas, Power Gen Turbines	NF	9.00	5.00	10.00	2.00	N/A
Total = 18											
1997/98	82	Non Process	Diesel	Minor	Utilites, Oil, Diesel	CF	799.12	0.80	50.00	2.00	1.00
	83	Non Process	Diesel	Minor	Utilites, Oil, Diesel	CF	799.12	10.00		16.70	3.00
	84	Non Process	Diesel	Minor	Utilites, Oil, Diesel	CF	799.12	5.00	68.97	5.00	1.00
	85	Gas		Minor	Drilling, Development, Gas Well, <100 Metres	SF	68.25	0.15	82.89	0.25	1.00
	86	Gas		Minor	Export, Oil	CF	0.80	0.90	0.00	0.50	25.40
	87	Gas		Minor	Import, Oil	NF	0.85	0.10	0.00	0.10	25.00
	88	Gas		Significant	Metering, Oil	NF	0.70	6.00	0.00	5.00	12.70
	89	Gas		Significant	Processing, Gas, LPG/Condensate	NF	52.20	121.90	49.00	300.00	1.00
	90	Gas		Significant	Utilities, Gas, Fuel Gas	NF	9.00	25.50	10.00	0.50	25.40
Total = 9											

*where C=Central, S=Southern, N=Northern areas, F=Fixed, MS=Semisub, MJ=Jackup

**N/A signifies holesize not applicable to mode of release

Table 4(a) : IGNITIONS - RELEASE PARAMETERS

Year	Ref.	Hydrocarbon Type	Non Process Type	Severity	System	Type* of Installation	Gravity/Density (kgs/m3)	Amount Released (kgs)	@Actual Pressure (barg)	Release Duration (mins)	Equivalent Hole** (mm)
1998/99	91	Non Process	Lub Oil	Significant	Gas Compression	NF	869.04	465.00	100.00	5.00	5.00
	92	Non Process	Glycol	Minor	Processing, Gas, Dehydration	SF	799.12	1.20	10.34	1.00	1.00
	93	Non Process	Lub Oil	Minor	Utilities, Gas, Power Gen Turbines	NF	799.12	7.10	1.75	15.00	1.00
	94	Non Process	Lub Oil	Minor	Utilities, Gas, Power Gen Turbines	NF	799.12	2.40	1.75	5.00	1.00
	95	Non Process	Lub Oil	Significant	Utilities, Gas, Power Gen Turbines	CF	799.12	180.00	1.75	15.00	5.00
	96	Non Process	Hydraulic Oil	Significant	Utilities, Gas, Power Gen Turbines	CF	799.12	163.82	81.00	5.00	3.20
	97	Non Process	Lub Oil	Minor	Utilities, Gas, Power Gen Turbines	CF	799.12	9.00	3.00	15.00	1.00
	98	Non Process	Diesel	Minor	Utilities, Oil, Diesel	CF	799.12	0.05	5.00	0.08	1.00
	99	Non Process	Diesel	Minor	Utilities, Oil, Diesel	CF	799.12	0.80	82.80	3.00	1.00
	100	Non Process	Diesel	Minor	Utilities, Oil, Diesel	CF	799.12	0.00	9.00	5.00	1.00
	101	Oil		Minor	Processing, Gas, Dehydration	NF	799.12	5.00	0.00	1.00	N/A
	102	Condensate		Minor	Processing, Gas, Dehydration	CF	599.34	0.20	0.00	5.00	N/A
	103	Gas		Minor	Drains, Closed	NF	0.80	0.90	0.00	0.50	457.20
	104	Gas		Significant	Export, Oil	CF	0.68	1.00	0.00	0.50	N/A
	105	Gas		Minor	Separation, Oil Test	CF	0.80	0.10	0.00	0.50	N/A
	106	Gas		Significant	Utilities, Gas, Power Gen Turbines	CF	9.00	5.00	10.00	2.00	N/A
	107	Gas		Significant	Vent, HP	NF	0.75	0.03	0.00	5.00	1.00
	108	Gas		Minor	Vent, LP	NF	0.80	0.10	0.00	13.80	1.00
Total = 18											
1999/00	109	Non Process	Diesel	Minor	Utilities, Gas, Power Gen Turbines	NF	799.12	1.00	5.00	4.00	N/A
	110	Non Process	Diesel	Minor	Utilities, Oil, Diesel	CF	799.12	11.99	124.00	4.50	1.40
	111	Non Process	Diesel	Minor	Utilities, Oil, Diesel	NF	799.12	1.60	3.45	10.00	1.00
	112	Non Process	Diesel	Minor	Utilities, Oil, Diesel	CF	799.12	31.96	124.00	4.00	1.40
	113	Non Process	Lub Oil	Significant	Utilities, Oil, Power Gen Turbines	NF	849.07	85.00	10.00	20.00	1.90
	114	Condensate		Significant	Flare, LP	CF	471.00	100.00	8.50	2.00	N/A
	115	Gas		Minor	Export, Oil	CF	0.80	0.80	0.00	1.00	9.10
	116	Gas		Minor	Manifold, Oil	CF	1.20	0.09	0.14	10.00	1.00
	117	Gas		Minor	Utilities, Gas, Fuel Gas	NF	3.20	0.01	2.62	0.06	N/A
	118	Gas		Minor	Utilities, Gas, Power Gen Turbines	SF	2.90	0.00	2.76	0.50	3.50
Total = 10											
2000/01	119	Non Process	Lub Oil	Minor	Utilities, Oil, Diesel	CF	799.12	0.40	5.00	2.50	1.00
	120	Non Process	Diesel	Minor	Gas Compression	CF	799.12	15.98	5.00	0.50	6.30
	121	Non Process	Diesel	Minor	Utilities, Oil, Diesel	CF	799.12	4.00	123.99	0.42	1.60
	122	Non Process	Diesel	Minor	Utilities, Oil, Diesel	CF	799.12	2.00	40.00	2.00	1.00
	123	Non Process	Diesel	Minor	Utilities, Oil, Diesel	CF	799.12	3.40	110.00	5.00	1.00

*where C=Central, S=Southern, N=Northern areas, F=Fixed, MS=Semisub, MJ=Jackup

**N/A signifies holesize not applicable to mode of release

Table 4(a) : IGNITIONS - RELEASE PARAMETERS

Year	Ref.	Hydrocarbon Type	Non Process Type	Severity	System	Type* of Installation	Gravity/Density (kgs/m3)	Amount Released (kgs)	@Actual Pressure (barg)	Release Duration (mins)	Equivalent Hole** (mm)
	124	Non Process	Diesel	Minor	Utilities, Oil, Diesel	CF	849.07	0.42	0.07	1.30	1.00
	125	Non Process	Lub Oil	Minor	Gas Compression	CF	886.02	44.30	80.99	5.00	1.60
	126	Non Process	Diesel	Significant	Utilities, Gas, Power Gen Turbines	NF	799.12	79.91	0.55	1.00	17.20
	127	Oil		Minor	Export, Oil	NF	799.12	0.20	0.00	1.00	2.20
	128	Gas		Minor	Utilities, Gas, Fuel Gas	CF	19.90	0.70	17.00	6.00	1.00
	129	Gas		Significant	Export, Gas	SF	85.00	1.80	103.45	3.00	1.00
	130	Gas		Minor	Gas Compression	NF	0.80	0.03	0.00	0.25	4.10
	131	Gas		Minor	Utilities, Gas, Fuel Gas	CF	20.00	0.02	20.69	0.16	1.00
Total = 13											
2001/02	132	Condensate		Minor	Flare, LP	SMJ	798.40	57.11	1.00	1.00	11.54
	133	Gas		Significant	Vent, LP	NF	0.88	2.30	0.01	30.00	999
	134	Gas		Minor	Well, Oil Production, Surface	CF	0.82	0.90	0.01	1.00	999
	135	Non Process	Diesel	Minor	Utilities, Oil, Diesel	CF	860.00	6.00	3.00	3.00	1.76
	136	Non Process	Hydraulic Oil	Minor	Gas Compression	CF	798.40	3.43	0.01	6.00	4.00
	137	Non Process	Lub Oil	Minor	Utilities, Oil, Heat Transfer Oil	CF	798.40	0.80	0.01	5.00	2.12
	138	Non Process	Lub Oil	Minor	Utilities, Oil, Diesel	CF	0.80	0.50	3.80	1.00	0.85
	139	Non Process	Lub Oil	Minor	Utilities, Oil, Power Gen Turbines	CF	798.40	3.75	0.49	60.00	0.50
	140	Non Process	Lub Oil	Minor	Utilities, Oil, Power Gen Turbines	CF	798.40	3.75	0.49	60.00	0.50
	141	Non Process	Lub Oil	Minor	Utilities, Oil, Power Gen Turbines	NF	798.40	1.00	1.75	1.00	2.06
	142	Non Process	Lub Oil	Minor	Utilities, Oil, Heat Transfer Oil	NF	798.40	1.00	83.00	1.00	999
	143	Non Process	Lub Oil	Minor	Utilities, Oil, Diesel	NF	0.80	0.08	2.50	1.00	0.38
Total = 12											

*where C=Central, S=Southern, N=Northern areas, F=Fixed, MS=Semisub, MJ=Jackup

**N/A signifies holesize not applicable to mode of release

Table 4(b) : IGNITIONS - MODE OF OPERATION & IGNITION SOURCES/SEQUENCES

Year	Ref.	Hydrocarbon Type	Non Process Type	Severity	Mode of Operation	Ignition Source	Delay Time(s)	Ignition Sequence*			
								Flash	Explosion	Jet	Pool
1992/93	1	Non Process	Lub Oil	Minor	Testing	Impinging on Hot Exhaust Manifold.	30	1			
	2	Oil		Minor	Construction Hot Work	Sparks from welding operation ignited hydrocarbons.					1
	3	Oil		Significant	Start-up	The HP flare, which was lit at the time of oil carryover.					1
	4	Gas		Significant	Shutting down	Following shutdown to platform gas turbine driven generator, caused by loss of fuel gas pressure, fire started inside turbines inlet air plenum.		1			
Total = 4											
1993/94	5	Non Process	Lub Oil	Significant	Testing	Hot surface on the turbine exhaust pipework.		1			
	6	Non Process	Lub Oil	Minor	Normal Production	Hot surface of power turbine exhaust cowling.	60	1			
	7	Non Process	Lub Oil	Minor	Start-up	On restart, after shutdown, natural temperature rise flashed off pool of oil.	30				1
	8	Non Process	Methanol	Significant	Drilling	Fluid ran down to a beam where a welder was working, welders sparks ignited release.					1
	9	Non Process	Methanol	Minor	Maintenance Hot Work	Hot welding spelter falling from above. Hot work had been suspended, as was reinstated after drain down. At this point spillage occurred and was ignited.					1
	10	Non Process	Glycol	Significant	Normal Production	Reboiler flame itself. The reboiler tube fails allowing glycol into contact with the heat source, ie the flame.				1	2
	11	Non Process	Glycol	Significant	Normal Production	Glycol entered fire tube.					1
	12	Non Process	Diesel	Minor	Reinstatement	Diesel in turbine exhaust space ignited by hot gases of combustion.					1
	13	Non Process	Diesel	Minor	Reinstatement	Ignited by burning gas / exhaust gases.		1			
	14	Non Process	Diesel	Minor	Reinstatement	Hot exhaust gases and hot surface caused ignition of diesel fuel in duct.					1
	15	Non Process	Diesel	Significant	Maintenance Cold Work	Hot surface of diesel engine exhaust diffuser.	4800				1
	16	Non Process	Heat Trans Oil	Significant	Testing	Oil reached ignition temperature upon contact with a hot, unlagged flange.					1
	17	Non Process	Lub Oil	Minor	Maintenance Cold Work	Vaporised oil ignited from hot turbine exhaust.	180				1
	18	Oil		Significant	Start-up	Ignition source was flare system, which was lit at the time of the carryover		1			
	19	Oil		Minor	Maintenance Cold Work	Possibly static electricity from container and/or from operators clothing.		1			
	20	Condensate		Minor	Start-up	Gas condensate spilled onto flare tip platform and ignited.					1
	21	Condensate		Minor	Construction Hot Work	Welder cutting into redundant pipework.					1
	22	Gas		Minor	Maintenance Hot Work	Welders spark from hot work site adjacent to (and above) the leak. This produced a "gas ring" type of flame, - steady blue circular flame, two or three inches high.				1	
	23	Gas		Minor	Inspection	Spark from a 24 volt lead going to earth.		1			

Table 4(b) : IGNITIONS - MODE OF OPERATION & IGNITION SOURCES/SEQUENCES

Year	Ref.	Hydrocarbon Type	Non Process Type	Severity	Mode of Operation	Ignition Source	Delay Time(s)	Ignition Sequence*			
								Flash	Explosion	Jet	Pool
	24	Gas		Significant	Start-up	Hot gases ignited in exhaust stack.				1	
	25	Gas		Significant	Shut Down	Hot exhaust stack.				1	
	26	Gas		Significant	Construction Hot Work	Local welding activity.		1			
	27	Gas		Minor	Normal Production	Snow squall - lightning.		1			
	28	Gas		Minor	Normal Production	Snow/sleet squall - lightning.		1			
	29	Gas		Minor	Normal Production	Sleet squall - lightning.		1			
	30	Gas		Significant	Normal Production	Lightning strike.				1	
Total = 26											
1994/95	31	Non Process	Lub Oil	Minor	Reinstatement	Damaged seal ring blocked circulation of seal oil, causing localised heating.					1
	32	Non Process	Lub Oil	Minor	Construction Hot Work	Stray welding spark from work ongoing.					1
	33	Non Process	Lub Oil	Significant	Normal Production	Hot surfaces of running machinery within turbine enclosure. (Particularly exhaust system)		1			
	34	Non Process	Lub Oil	Minor	Normal Production	Hot exhaust duct.					1
	35	Non Process	Lub Oil	Minor	Start-up	Lub oil mist ignited on hot surface. (Turbine output shaft)				1	
	36	Non Process	Diesel	Minor	Reinstatement	Exhaust gases.		2	1		
	37	Non Process	Glycol	Minor	Construction Hot Work	Welding work in progress.				1	
	38	Non Process	Glycol	Minor	Start-up	Mechanical tube failure led to glycol ignition inside fire tube. Ignited glycol burnt the flame arrestor which allowed burning glycol to exit the reboiler and drop to the deck with a resultant pool fire.					1
	39	Non Process	Glycol	Minor	Normal Production	Flame was present in addition to normal burner flame in central fire tube of regenerator.				1	
	40	Non Process	Diesel	Minor	Normal Production	Hot surface.					1
	41	Non Process	Fuel Oil	Significant	Normal Production	Burst line on no.1 engine spraying fuel onto no.4 engine exhaust manifold		1			2
	42	Non Process	Diesel	Minor	Reinstatement	Excess diesel ignited in the transition duct (wet start on a hot engine) causing explosion and flame migration into engine compartment due to diesel drain in duct being partially blocked.		2	1		
	43	Non Process	Lub Oil	Minor	Testing	Turbocharger hot surface.		1			
	44	Non Process	Lub Oil	Minor	Normal Production	Hot surface of pump body had apparently ignited contaminants within the perfecto fluid.	60	1			
	45	Non Process	Heli-Fuel	Minor	Maintenance Cold Work	Heli-fuel made contact with engine exhausts.		1			
	46	Non Process	Diesel	Significant	Normal Production	Hot surface of gas turbine.				1	
	47	Non Process	Diesel	Significant	Normal Production	Hot surface of machine.				1	

Table 4(b) : IGNITIONS - MODE OF OPERATION & IGNITION SOURCES/SEQUENCES

Year	Ref.	Hydrocarbon Type	Non Process Type	Severity	Mode of Operation	Ignition Source	Delay Time(s)	Ignition Sequence*			
								Flash	Explosion	Jet	Pool
	48	Oil		Significant	Drilling	Fuel pipe fractured on no.1 diesel, spraying fuel onto no.4 engine. No.4 engine exhaust manifold caused fuel to ignite.		1			
	49	Condensate		Minor	Construction Cold Work	Flare tip ignited condensate/vapour causing internal explosions within the flare system. A series of explosions resulted. (Approx. 12 in number)			1		
	50	Condensate		Minor	Sampling	Condensate ignited due to electrostatic source. (Unsatisfactory earthing bond)		1			
	51	Gas		Significant	Normal Production	A series of explosions caused by ignition of low volume, low pressure, gas combined with air and inert gases from adjacent system. Flare itself was source of ignition.		1	2		
	52	Gas		Minor	Start-up	Internal combustion of extraneous material/gas in exhaust ducting.			1		
	53	Gas		Minor	Construction Hot Work	Sparks from welding of pipe supports above.				1	
	54	Gas		Minor	Maintenance Hot Work	Wind blown sparks from 'burning' hot work approx. 10ft from ignition.				1	
Total = 24											
1995/96	55	Non Process	Lub Oil	Minor	Normal Production	The heat from exhaust was sufficient to cause a small flash fire when the lagging was disturbed during damping down /removal.		1			
	56	Non Process	Lub Oil	Significant	Normal Production	Hot surface of exhaust ducting or power turbine.	30	1			2
	57	Non Process	Glycol	Minor	Normal Production	Not known - surface temp of still column, 180 oC.	715			1	
	58	Non Process	Diesel	Minor	Reinstatement	Hot surface of machine.		1			
	59	Non Process	Diesel	Minor	Reinstatement	Hot surface of machine.		1			
	60	Non Process	Lub Oil	Minor	Reinstatement	Turbine exhaust collector.		1			
	61	Non Process	Lub Oil	Minor	Testing	Suspect heat from engine turbocharger.		1			
	62	Gas		Significant	Construction Hot Work	Flame from burning torch. (Oxyacetylene)		1			
	63	Gas		Minor	Construction Hot Work	Sparks from welding operations.				1	
Total = 9											
1996/97	64	Non Process	Lub Oil	Minor	Reinstatement	Heat generated between the rotating stationery mechanical seal faces was the source of ignition.		1			
	65	Non Process	Lub Oil	Significant	Shutting Down	Hot metal surface of turbine casing.	300	1			
	66	Non Process	Diesel	Minor	Testing	Thought to be hot surface of burner inlet pipework.		1			
	67	Non Process	Diesel	Minor	Normal Production	Exhaust of number one main engine.		1			
	68	Non Process	Diesel	Minor	Normal Production	High temperature on top of caterpillar engine.	60	1			
	69	Non Process	Diesel	Minor	Maintenance Cold Work	Flash fire on hot turbine exhaust.		1			

Table 4(b) : IGNITIONS - MODE OF OPERATION & IGNITION SOURCES/SEQUENCES

Year	Ref.	Hydrocarbon Type	Non Process Type	Severity	Mode of Operation	Ignition Source	Delay Time(s)	Ignition Sequence*			
								Flash	Explosion	Jet	Pool
	70	Non Process	Diesel	Significant	Start-up	Fire caused by ignition of some burners while diesel fuel from the unlit burner poured into transition cone and eventually ignited.	480				1
	71	Non Process	Diesel	Significant	Reinstatement	Excess liquid fuel ignited by gas burners.	1620				1
	72	Non Process	Diesel	Minor	Start-up	Residual heat.	45	1			
	73	Non Process	Lub Oil	Minor	Normal Production	Leaking engine exhaust and oil from leaking lube oil lines along with high temperatures.	1200	1			
	74	Non Process	Lub Oil	Minor	Reinstatement	Lub oil/water wash fluid contact with hot exhaust.	60				1
	75	Oil		Significant	Start-up	This was a flaring incident, therefore no actual ignition occurred. A flame was already present.	60	1			
	76	Condensate		Minor	Start-up	Condensate heavy ends in fuel. Detected by heat detector causing shutdown.		1			
	77	Condensate		Minor	Construction Cold Work	While removing a check valve from 12" flowline using a 110 volt grinder to remove the bolts.					1
	78	Gas		Minor	Maintenance Hot Work	Oxyacetylene burning torch.		1			
	79	Gas		Minor	Maintenance Hot Work	Gas ignition caused by welding torch at wellhead.		1			
	80	Gas		Significant	Maintenance Hot Work	Welding operations.		1			
	81	Gas		Significant	Start-up	Unspent gas entered the exhaust resulting in combustion and overpressure within the exhaust ducting.			1		
Total = 18											
1997/98	82	Non Process	Diesel	Minor	Reinstatement	Hot turbine surface.		1			
	83	Non Process	Diesel	Minor	Maintenance Hot Work	Sparks from welding on the process deck above dripping through to the marine deck.				1	
	84	Non Process	Diesel	Minor	Start-up	Hot turbine casing.	240	1			
	85	Gas		Minor	Drilling	Cutting torch.				1	
	86	Gas		Minor	Maintenance Hot Work	Welding Equipment.		1			
	87	Gas		Minor	Sampling	Static, caused by poor electrical continuity of earth strap.		1			
	88	Gas		Significant	Maintenance Hot Work	Arc welding of flange to pipe stub.			1	2	
	89	Gas		Significant	Normal Production	Spark from damaged trace heating cable.	9999			1	
	90	Gas		Significant	Start-up	Excess gas ignited by burners.	30		1		
Total = 9											
1998/99	91	Non Process	Lub Oil	Significant	Start-up	Heat from heat exhaust ignited oil saturated lagging.	3600	1			
	92	Non Process	Glycol	Minor	Normal Production	Glycol entered the boiler flame tube and ignited.		1			
	93	Non Process	Lub Oil	Minor	Maintenance Cold Work	Turbine exhaust (two UV flame detectors activated		1			

Table 4(b) : IGNITIONS - MODE OF OPERATION & IGNITION SOURCES/SEQUENCES

Year	Ref.	Hydrocarbon Type	Non Process Type	Severity	Mode of Operation	Ignition Source	Delay Time(s)	Ignition Sequence*			
								Flash	Explosion	Jet	Pool
						and CO2 manually discharged). Turbine had been shutdown for approx 15 minutes prior to alarm.					
	94	Non Process	Lub Oil	Minor	Shut Down	Turbine exhaust - single UV flame detection (alarm on central control room fire and gas panel). CO2 operated manually by production operator. It is believed that a small fire was caused by oil coming in contact with the hot exhaust.	15	1			
	95	Non Process	Lub Oil	Significant	Normal Production	Hot surface.	15	1			
	96	Non Process	Hydraulic Oil	Significant	Normal Production	Not Known.	60			1	
	97	Non Process	Lub Oil	Minor	Shutting Down	Lub oil ignited by the hot surface of the power turbine casing.					1
	98	Non Process	Diesel	Minor	Reinstatement	Hot surface of burner inlet pipework.		1			
	99	Non Process	Diesel	Minor	Start-up	Hot surface of turbine fuel pipework at gas generator, within turbine enclosure.		1			
	100	Non Process	Diesel	Minor	Normal Production	Hot surface of burner. Quantity so small no automatic detection picked up. Area operator noticed small amount of smoke from turbine vent.		1			
	101	Oil		Minor	Cleaning	Filter basket had been removed from pipeline hydrocarbon present. The basket was removed, and a blue flash was apparent when it was flushed with water. It is thought that the hose was not anti-static and was source of ignition.		1			
	102	Condensate		Minor	Maintenance Hot Work	There was no hydrocarbon release. Affected system was completely isolated from hydrocarbon sources and had been isolated, purged, flushed, a small residue was contained in a section of pipe being cut up for removal. Ignited by sparks/heat from a grinder.		1			
	103	Gas		Minor	Maintenance Cold Work	Presumed to be static. Not proven. Other ignition sources considered. Residual current in the pump motor and the cathodic protection.		1			
	104	Gas		Significant	Start-up	Hot surfaces in turbine.			1		
	105	Gas		Minor	Construction Hot Work	Air operated grinder.		1			
	106	Gas		Significant	Construction Cold Work	Flames were seen at turbine exhaust - unburnt gas reached exhaust due to delay in ignition sequence software.		1			
	107	Gas		Significant	Normal Production	Lightning		1			
	108	Gas		Minor	Normal Production	Lightning during snow squalls.		1			
Total = 18											
1999/00	109	Non Process	Diesel	Minor	Reinstatement	Exhaust temperature. (ie hot exhaust)	480			1	
	110	Non Process	Diesel	Minor	Normal Production	Suspect hot turbine casing surface. No flame was		1			

Table 4(b) : IGNITIONS - MODE OF OPERATION & IGNITION SOURCES/SEQUENCES

Year	Ref.	Hydrocarbon Type	Non Process Type	Severity	Mode of Operation	Ignition Source	Delay Time(s)	Ignition Sequence*			
								Flash	Explosion	Jet	Pool
						seen during this incident. On the basis that 2xIR Detectors had activated it is believed that a flash fire had occurred, investigations are ongoing.					
	111	Non Process	Diesel	Minor	Reinstatement	Smoke caused by diesel supply fitting to one of the combustion cans leaking onto hot surfaces.		1			
	112	Non Process	Diesel	Minor	Reinstatement	On removal of the heat shield an area of black carbon could be seen around the lower half of the turbine casing this indicated that ignition did occur. Suspect hot turbine casing surface as ignition source.	120	1			
	113	Non Process	Lub Oil	Significant	Shut Down	Hot surfaces within the enclosure.		1			
	114	Condensate		Significant	Normal Production	Platform flare tip.					1
	115	Gas		Minor	Construction Hot Work	Welders arc.		1			
	116	Gas		Minor	Maintenance Hot Work	Burning torch from adjacent red hot work.				1	
	117	Gas		Minor	Maintenance Hot Work	Welding operation. (Being undertaken)		1			
	118	Gas		Minor	Normal Production	Very small ignition on backfire, resulting in flame path.		1			
Total = 10											
2000/01	119	Non Process	Lub Oil	Minor	Routine Maintenance	Hot exhaust		1			
	120	Non Process	Diesel	Minor	Maintenance Replacement	Hot exhaust trunking		1			
	121	Non Process	Diesel	Minor	Normal Production	Conducted heat on combustion chamber		1			
	122	Non Process	Diesel	Minor	Normal Production	Hot surface of the turbine casing					1
	123	Non Process	Diesel	Minor	Normal Production	Diesel onto hot surface		1			
	124	Non Process	Diesel	Minor	Normal Production	Hot surface				1	
	125	Non Process	Lub Oil	Minor	Normal Production	Assumed to be wet surfaces within enclosure		1			
	126	Non Process	Diesel	Significant	Start Up	Diesel fuel seeped into combustion system and ignited producing excessive smoke		1			
	127	Oil		Minor	Construction Hotwork	Source of ignition was spark from grinding of pipe with disc grinder					1
	128	Gas		Minor	Normal Production	Hot tubing casing		1			
	129	Gas		Significant	Construction Hotwork	Assumed to be as a result of welding work ongoing near the flange in a specially constructed habitat. No witness statements can confirm or deny this	60			1	
	130	Gas		Minor	Maintenance Hotwork	Ignition occurred when shell was being pre-heated by means of naked flame, oxy-acetylene was the flame		1			
	131	Gas		Minor	Normal Production	Hot surface				1	
Total = 13											
2001/02	132	Condensate		Minor	Drilling	Condensate was injected into the gas line for burning in flare, and some fell into sea whilst burning.					1
	133	Gas		Significant	Normal Production	Lightening		1			
	134	Gas		Minor	Well Operation	Ignition due to use of unsuitable equipment, which	60	1			

Table 4(b) : IGNITIONS - MODE OF OPERATION & IGNITION SOURCES/SEQUENCES

Year	Ref.	Hydrocarbon Type	Non Process Type	Severity	Mode of Operation	Ignition Source	Delay Time(s)	Ignition Sequence*			
								Flash	Explosion	Jet	Pool
						resulted in static build-up and discharge.					
2001/02	135	Non Process	Diesel	Minor	Shut Down	Surface temperature of the turbine				1	
	136	Non Process	Hydraulic Oil	Minor	Normal Production	Hydraulic oil released onto turbine exhaust lagging and heated above auto ignition.	360	1			
	137	Non Process	Lub Oil	Minor	Normal Production	Hot exhaust surface.	180			1	
	138	Non Process	Lub Oil	Minor	Testing	Not known.		1			
	139	Non Process	Lub Oil	Minor	Normal Production	Lube oil soaked and baked into lagging, eventually reached hot surface of turbine exhaust underneath the insulation and reached its flash point.	360	1			
	140	Non Process	Lub Oil	Minor	Normal Production	Lube oil soaked into the turbine exhaust lagging and eventually seeped through to the hot exhaust surface underneath. Oil baked solid and reached ignition temperature when machine was operating at full load.	360	1			
	141	Non Process	Lub Oil	Minor	Normal Production	Initial investigations show source was oil mist soaked gasket in the exhaust system		1			
	142	Non Process	Lub Oil	Minor	Normal Production	Overheating of auxilliary pump casing located within hydraulic reservoir.	15	1			
	143	Non Process	Lub Oil	Minor	Normal Production	Engine exhaust - 1/4" pipe blew off lub oil filter.		1			
Total = 12											

Table 4(c) : IGNITIONS - DETECTION MODES & EMERGENCY ACTIONS

Year	Ref.	Hydrocarbon Type	Non Process Type	Severity	Mode of Detection	Emergency Actions Taken
1992/93	1	Non Process	Lub Oil	Minor	Visual	Manual Shutdown, Manual CO2/Halon
	2	Oil		Minor	Visual	Other Action
	3	Oil		Significant	Visual	Manual Shutdown
	4	Gas		Significant	Heat	Auto Shutdown, Auto CO2/Halon
Total = 4						
1993/94	5	Non Process	Lub Oil	Significant	Visual	Manual Shutdown, Muster at Stations, Other Action
	6	Non Process	Lub Oil	Minor	Visual	Manual Shutdown, Other Action
	7	Non Process	Lub Oil	Minor	Flame	Manual Shutdown, Manual Blowdown, Other Action
	8	Non Process	Methanol	Significant	Visual	None
	9	Non Process	Methanol	Minor	Visual	Other Action
	10	Non Process	Glycol	Significant	Flame	Auto Shutdown, Auto Blowdown, Manual Deluge, Manual CO2/Halon, Muster at Stations, Other Action
	11	Non Process	Glycol	Significant	Visual	Manual Shutdown, Other Action
	12	Non Process	Diesel	Minor	Visual	None
	13	Non Process	Diesel	Minor	Visual	Auto Shutdown, Auto CO2/Halon
	14	Non Process	Diesel	Minor	Smoke, Flame	Manual CO2/Halon
	15	Non Process	Diesel	Significant	Visual	Manual Shutdown, Manual CO2/Halon, Muster at Stations
	16	Non Process	Heat Transfer Oil	Significant	Visual	Other Action
	17	Non Process	Lub Oil	Minor	Visual	Manual Shutdown, Other Action
	18	Oil		Significant	Visual	Auto Shutdown
	19	Oil		Minor	Flame	Auto Shutdown, Auto Blowdown, Auto Deluge, Muster at Lifeboats, Other Action
	20	Condensate		Minor	Visual	None
	21	Condensate		Minor	Visual	Other Action
	22	Gas		Minor	Visual	Muster at Lifeboats, Other Action
	23	Gas		Minor	Gas	Other Action
	24	Gas		Significant	Temperature Change	Auto Shutdown, Muster at Stations, Other Action
	25	Gas		Significant	Visual	Auto Shutdown, Manual CO2/Halon, Other Action
	26	Gas		Significant	Visual	Other Action
	27	Gas		Minor	Visual	Manual CO2/Halon
	28	Gas		Minor	Visual	Manual CO2/Halon
	29	Gas		Minor	Visual	Manual CO2/Halon
	30	Gas		Significant	Visual	Manual Shutdown, Manual CO2/Halon

Table 4(c) : IGNITIONS - DETECTION MODES & EMERGENCY ACTIONS

Year	Ref.	Hydrocarbon Type	Non Process Type	Severity	Mode of Detection	Emergency Actions Taken
Total = 26						
1994/95	31	Non Process	Lub Oil	Minor	Visual	Manual Shutdown, Other Action
	32	Non Process	Lub Oil	Minor	Visual	Muster at Stations, Other Action
	33	Non Process	Lub Oil	Significant	Heat	Auto Shutdown, Auto Blowdown, Manual CO2/Halon, Muster at Stations, Other Action
	34	Non Process	Lub Oil	Minor	Visual	Other Action
	35	Non Process	Lub Oil	Minor	Visual	Manual Shutdown, Muster at Stations, Other Action
	36	Non Process	Diesel	Minor	Sound	Manual Shutdown, Other Action
	37	Non Process	Glycol	Minor	Visual	Other Action
	38	Non Process	Glycol	Minor	Flame	Auto Shutdown, Manual Blowdown, Manual Deluge, Manual CO2/Halon, Muster at Stations, Other Action
	39	Non Process	Glycol	Minor	Visual	Manual Shutdown, Other Action
	40	Non Process	Diesel	Minor	Visual	Muster at Stations, Other Action
	41	Non Process	Fuel Oil	Significant	Visual	Manual Shutdown, Other Action
	42	Non Process	Diesel	Minor	Flame	Auto CO2/Halon
	43	Non Process	Lub Oil	Minor	Flame	Manual Shutdown, Auto Deluge, Other Action
	44	Non Process	Lub Oil	Minor	Visual	Other Action
	45	Non Process	Heli-Fuel	Minor	Visual	Other Action
	46	Non Process	Diesel	Significant	Flame	Manual Shutdown
	47	Non Process	Diesel	Significant	Flame	Manual Shutdown
	48	Oil		Significant	Smoke	Manual Shutdown, Manual CO2/Halon, Muster at Stations, Other Action
	49	Condensate		Minor	Sound	Manual Shutdown, Muster at Stations, Other Action
	50	Condensate		Minor	Visual	Auto Deluge
	51	Gas		Significant	Sound	Other Action
	52	Gas		Minor	Sound	Other Action
	53	Gas		Minor	Visual	Other Action
	54	Gas		Minor	Visual	Other Action
Total = 24						
1995/96	55	Non Process	Lub Oil	Minor	Visual	Manual Shutdown, Muster at Stations, Other Action
	56	Non Process	Lub Oil	Significant	Heat	Auto Shutdown, Manual Blowdown, Manual CO2/Halon, Other Action
	57	Non Process	Glycol	Minor	Visual	Manual Shutdown, Muster at Stations
	58	Non Process	Diesel	Minor	Flame	Manual Shutdown
	59	Non Process	Diesel	Minor	Flame	Auto Shutdown, Auto CO2/Halon, Muster at Stations
	60	Non Process	Lub Oil	Minor	Visual	Other Action

Table 4(c) : IGNITIONS - DETECTION MODES & EMERGENCY ACTIONS

Year	Ref.	Hydrocarbon Type	Non Process Type	Severity	Mode of Detection	Emergency Actions Taken
	61	Non Process	Lub Oil	Minor	Heat	Manual Shutdown, Auto Deluge, Muster at Stations, Other Action
	62	Gas		Significant	Visual	Other Action
	63	Gas		Minor	Visual	Manual Shutdown, Manual CO2/Halon, Muster at Stations, Other Action
Total = 9						
1996/97	64	Non Process	Lub Oil	Minor	Flame	Auto Shutdown, Auto Deluge, Muster at Stations, Other Action
	65	Non Process	Lub Oil	Significant	Smoke, Flame	Auto Shutdown, Auto CO2/Halon, Muster at Stations
	66	Non Process	Diesel	Minor	Flame	Auto Shutdown, Auto CO2/Halon, Muster at Stations
	67	Non Process	Diesel	Minor	Smoke	Manual Shutdown, Other Action
	68	Non Process	Diesel	Minor	Visual	Manual Shutdown, Other Action
	69	Non Process	Diesel	Minor	Visual	Other Action
	70	Non Process	Diesel	Significant	Flame	Manual Shutdown, Muster at Stations, Other Action
	71	Non Process	Diesel	Significant	Flame	Manual CO2/Halon
	72	Non Process	Diesel	Minor	Flame	Manual Shutdown
	73	Non Process	Lub Oil	Minor	Smoke	Manual Shutdown
	74	Non Process	Lub Oil	Minor	Visual	Auto Shutdown, Manual CO2/Halon, Muster at Stations
	75	Oil		Significant	Visual	Manual Shutdown, Manual Blowdown, Muster at Stations
	76	Condensate		Minor	Heat	Auto Shutdown
	77	Condensate		Minor	Visual	Other Action
	78	Gas		Minor	Visual	Muster at Stations, Other Action
	79	Gas		Minor		Other Action
	80	Gas		Significant	Visual	Other Action
	81	Gas		Significant	Visual	Other Action
Total = 18						
1997/98	82	Non Process	Diesel	Minor	Flame	Auto Shutdown, CO2/Halon, Muster at Stations
	83	Non Process	Diesel	Minor	Visual	Other Action
	84	Non Process	Diesel	Minor	Visual	Manual Shutdown, Auto CO2/Halon
	85	Gas		Minor	Visual	Other Action
	86	Gas		Minor	Gas	Other Action
	87	Gas		Minor	Visual	Other Action
	88	Gas		Significant	Visual	Other Action
	89	Gas		Significant	Flame	Auto Shutdown, Auto Blowdown, Auto Deluge, Muster at Stations
	90	Gas		Significant	Sound	None
Total = 9						

Table 4(c) : IGNITIONS - DETECTION MODES & EMERGENCY ACTIONS

Year	Ref.	Hydrocarbon Type	Non Process Type	Severity	Mode of Detection	Emergency Actions Taken
1998/99	91	Non Process	Lub Oil	Significant	Visual	Muster at Stations, Other Action
	92	Non Process	Glycol	Minor	Visual, Flame	Manual Shutdown, Manual CO2/Halon, Muster at Stations, Other Action
	93	Non Process	Lub Oil	Minor	Visual	Manual CO2/Halon
	94	Non Process	Lub Oil	Minor	Flame	Auto Shutdown, Manual CO2/Halon
	95	Non Process	Lub Oil	Significant	Visual	Manual Shutdown, Other Action
	96	Non Process	Hydraulic Oil	Significant	Flame	Auto Shutdown, Manual CO2/Halon, Muster at Stations
	97	Non Process	Lub Oil	Minor	Visual	Other Action
	98	Non Process	Diesel	Minor	Flame	Manual Shutdown, Manual CO2/Halon
	99	Non Process	Diesel	Minor	Flame	Auto Shutdown, Manual CO2/Halon
	100	Non Process	Diesel	Minor	Visual	Manual Shutdown
	101	Oil		Minor	Gas	Other Action
	102	Condensate		Minor		Other Action
	103	Gas		Minor	Flame, Gas	Auto Shutdown, Auto Blowdown, Auto Deluge, Muster at Stations
	104	Gas		Significant	Sound	Manual Shutdown, Other Action
	105	Gas		Minor	Visual	Other Action
	106	Gas		Significant	Visual	None
	107	Gas		Significant	Flame	Auto Shutdown, Manual CO2/Halon
	108	Gas		Minor	Heat	Manual CO2/Halon
Total = 18						
1999/00	109	Non Process	Diesel	Minor	Flame	Other Action
	110	Non Process	Diesel	Minor	Flame	Auto Shutdown, Muster at Stations
	111	Non Process	Diesel	Minor	Heat, Gas	Manual Shutdown
	112	Non Process	Diesel	Minor	Visual, Flame	Auto Shutdown, Muster at Stations
	113	Non Process	Lub Oil	Significant	Flame	Auto Shutdown, Auto CO2/Halon, Muster at Stations
	114	Condensate		Significant	Visual	Manual Shutdown
	115	Gas		Minor	Visual	Other Action
	116	Gas		Minor	Visual	Muster at Stations
	117	Gas		Minor	Visual	Other Action
	118	Gas		Minor	Visual	Manual Shutdown, Manual Blowdown, Other Action
Total = 10						
2000/01	119	Non Process	Lub Oil	Minor	Visual	Other Action, Muster at Lifeboats
	120	Non Process	Diesel	Minor	Flame	Auto CO2 / Halon, Other Action
	121	Non Process	Diesel	Minor	Flame	Auto Shutdown, Manual CO2/Halon, Other Action

Table 4(c) : IGNITIONS - DETECTION MODES & EMERGENCY ACTIONS

Year	Ref.	Hydrocarbon Type	Non Process Type	Severity	Mode of Detection	Emergency Actions Taken
	122	Non Process	Diesel	Minor	Flame	Manual Shutdown
	123	Non Process	Diesel	Minor	Visual	Manual Shutdown
	124	Non Process	Diesel	Minor	Flame	Manual Shutdown, Manual CO2/Halon
	125	Non Process	Lub Oil	Minor	Flame	Auto Shutdown, Auto Blowdown, Auto CO2 / Halon, Muster at Stations
	126	Non Process	Diesel	Significant	Smoke	Manual Shutdown, Muster at Stations
	127	Oil		Minor	Flame, Visual	Other Action
	128	Gas		Minor	Gas	Auto Shutdown, Auto Blowdown, Muster at Stations, Other Action
	129	Gas		Significant	Flame, Visual	Manual Shutdown, Other Action
	130	Gas		Minor	Flame, Visual	None
	131	Gas		Minor	Flame	Auto Shutdown, Auto CO2 / Halon
Total = 13						
2001/02	132	Condensate		Minor	Smoke	Manual Shutdown, Other Action
	133	Gas		Significant	Visual	Manual Shutdown
	134	Gas		Minor	Flame, Visual	Auto Shutdown
	135	Non Process	Diesel	Minor	Visual	Auto Shutdown, Manual CO2/Halon, Muster at Stations, Other Action
	136	Non Process	Hydraulic Oil	Minor	Visual	Manual Shutdown, Manual Blowdown, Muster at Stations , Other Action
	137	Non Process	Lub Oil	Minor	Smoke	Manual Shutdown, Manual CO2/Halon, Other Action
	138	Non Process	Lub Oil	Minor	Visual	Manual Shutdown, Other Action
	139	Non Process	Lub Oil	Minor	Flame	Auto Shutdown, Manual CO2/Halon, Muster at Stations, Other Action
	140	Non Process	Lub Oil	Minor	Flame	Auto Shutdown, Auto CO2 / Halon, Muster at Stations
	141	Non Process	Lub Oil	Minor	Flame	Auto Shutdown, Auto CO2 / Halon, Muster at Stations
	142	Non Process	Lub Oil	Minor	Level Change	Other Action
	143	Non Process	Lub Oil	Minor	Flame	Auto Shutdown, Manual Deluge, Muster at Stations, Other Action
Total = 12						