

Table 3. The statistical analysis of MGPS maintenance defect risks.

System Component	Maintenance Issue	Probability			Impact		RI		Ranking
		RII	Weighted Mean	SD	RII	Weighted Mean	SD	SD	
Area Alarms/ AVSU	1	56.4%	2.82	3.411	65.5%	3.27	3.490	9.22	18
	2	54.5%	2.73	3.191	67.3%	3.36	4.068	9.17	19
Bulk Systems	3	36.4%	1.82	1.907	78.2%	3.91	3.593	7.11	39
	4	38.2%	1.91	3.593	74.5%	3.73	3.766	7.12	38
	5	72.7%	3.64	3.247	76.4%	3.82	2.763	13.88	2
	6	56.4%	2.82	4.200	60.0%	3.00	2.828	8.45	28
	7	41.8%	2.09	3.303	54.5%	2.73	3.191	5.70	50
	8	58.2%	2.91	2.985	63.6%	3.18	3.104	9.26	17
	9	60.0%	3.00	3.464	54.5%	2.73	3.766	8.18	33
	10	40.0%	2.00	3.464	58.2%	2.91	3.593	5.82	49
Manifolds Room	11	38.2%	1.91	2.985	76.4%	3.82	3.693	7.29	37
	12	47.3%	2.36	3.542	83.6%	4.18	3.693	9.88	11
	13	58.2%	2.91	3.303	54.5%	2.73	3.490	7.93	34
	14	63.6%	3.18	3.104	41.8%	2.09	3.593	6.65	44
	15	58.2%	2.91	3.303	74.5%	3.73	3.191	10.84	7
	16	61.8%	3.09	2.216	78.2%	3.91	2.216	12.08	4
Master Alarms	17	45.5%	2.27	3.191	74.5%	3.73	3.191	8.47	26
	18	58.2%	2.91	2.629	74.5%	3.73	3.191	10.84	7
	19	58.2%	2.91	2.216	80.0%	4.00	2.449	11.64	5
Medical Air Treatment Systems	20	43.6%	2.18	3.104	78.2%	3.91	3.303	8.53	25
	21	54.5%	2.73	3.191	54.5%	2.73	3.490	7.44	36
	22	58.2%	2.91	2.629	41.8%	2.09	3.593	6.08	47
	23	54.5%	2.73	2.486	78.2%	3.91	3.593	10.66	9
	24	54.5%	2.73	3.490	65.5%	3.27	3.766	8.93	21
	25	41.8%	2.09	3.303	80.0%	4.00	2.000	8.36	31
	26	45.5%	2.27	2.486	78.2%	3.91	3.303	8.88	22
	27	61.8%	3.09	2.629	56.4%	2.82	3.411	8.71	23
Outlets and Inlets (terminal units)	28	49.1%	2.45	1.651	78.2%	3.91	2.216	9.60	13
	29	41.8%	2.09	2.985	65.5%	3.27	3.191	6.84	41
	30	56.4%	2.82	3.693	74.5%	3.73	3.490	10.50	10
	31	58.2%	2.91	3.303	65.5%	3.27	2.486	9.52	15
Piping Network	32	74.5%	3.73	2.486	78.2%	3.91	1.706	14.57	1
	33	56.4%	2.82	3.104	61.8%	3.09	2.985	8.71	23
	34	58.2%	2.91	3.861	61.8%	3.09	3.303	8.99	20
	35	56.4%	2.82	2.763	43.6%	2.18	3.104	6.15	46
	36	38.2%	1.91	1.706	65.5%	3.27	3.766	7.64	45
	37	63.6%	3.18	2.763	61.8%	3.09	2.216	9.83	12
	38	54.5%	2.73	1.477	61.8%	3.09	0.953	8.43	30
	39	74.5%	3.73	2.045	61.8%	3.09	2.629	11.52	6

Table 3. Cont.

System Component	Maintenance Issue	Probability			Impact		RI		Ranking
		RII	Weighted Mean	SD	RII	Weighted Mean	SD	SD	
Piping Network	40	63.6%	3.18	2.763	60.0%	3.00	2.449	9.55	14
	41	45.5%	2.27	2.860	74.5%	3.73	2.486	8.47	26
Vacuum Pumps	42	36.4%	1.82	1.279	74.5%	3.73	3.191	6.78	43
	43	38.2%	1.91	2.629	61.8%	3.09	3.303	5.90	48
	44	56.4%	2.82	3.104	54.5%	2.73	2.860	7.69	35
	45	36.4%	1.82	2.374	61.8%	3.09	3.861	5.62	51
	46	36.4%	1.82	1.279	76.4%	3.82	2.374	6.94	40
	47	80.0%	4.00	3.464	63.6%	3.18	1.279	12.73	3
Valves	48	43.6%	2.18	3.104	76.4%	3.82	2.763	8.33	32
	49	61.8%	3.09	4.573	34.5%	1.73	2.045	5.34	52
	50	56.4%	2.82	2.763	60.0%	3.00	1.414	8.45	28
	51	61.8%	3.09	4.112	60.0%	3.00	2.449	9.27	16
	52	45.5%	2.27	2.045	60.0%	3.00	1.414	6.82	42