

Surry NUREG-1150																				
Master List of Sequences																				
(Based on LLNL Seismic Hazard Curve)																				

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26	SPDS06	SAPB06	seismic (> 0.6g) LOCA - LOOP, electrical failures (not DGs)	VB, no CF	7.5E-06	yes	3.1%	yes	1.6E-06	0.7%		3.1E-07	5.1E-13	0.0%		7.5E-07	1.2E-12	0.0%	
27	IPDS03	SAPB07	transient - AFWS failed and primary feed-and-bleed failed	no VB	1.8E-06	yes	0.7%		1.4E-06	0.6%		9.7E-08	1.3E-13	0.0%		8.0E-08	1.1E-13	0.0%	
28	SPDS06	SAPB04	seismic (> 0.6g) LOCA - LOOP, electrical failures (not DGs)	VB, BMT or late CF	7.5E-06	yes	3.1%	yes	9.3E-07	0.4%		1.1E-04	1.1E-10	0.1%		1.2E-04	1.1E-10	0.3%	
29	SPDS02	SAPB02	seismic (< 0.6g) LOCA and SBO (LOOP and DG failures)	VB, RCS > 200 psi, early CF	6.8E-05	yes	27.9%	yes	8.2E-07	0.3%		2.4E-03	1.9E-09	1.0%	yes	5.9E-04	4.8E-10	1.5%	yes
30	SPDS05	SAPB03	seismic (> 0.6g) LOCA and SBO (LOOP and DG failures)	VB, RCS < 200 psi, early CF	1.1E-05	yes	4.5%	yes	7.9E-07	0.3%		3.0E-02	2.3E-08	12.1%	yes	2.0E-03	1.6E-09	4.7%	yes
31	IPDS02	SAPB06	ATWS	VB, no CF	1.4E-06	yes	0.6%		7.3E-07	0.3%		5.0E-08	3.7E-14	0.0%		4.9E-08	3.6E-14	0.0%	
32	IPDS02	SAPB07	ATWS	no VB	1.4E-06	yes	0.6%		4.9E-07	0.2%		9.7E-08	4.8E-14	0.0%		7.9E-08	3.9E-14	0.0%	
33	SPDS01	SAPB02	seismic (< 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	VB, RCS > 200 psi, early CF	8.1E-05	yes	33.3%	yes	4.9E-07	0.2%		2.4E-03	1.1E-09	0.6%	yes	5.9E-04	2.9E-10	0.9%	yes
34	SPDS02	SAPB01	seismic (< 0.6g) LOCA and SBO (LOOP and DG failures)	VB, alpha mode, early CF	6.8E-05	yes	27.9%	yes	4.1E-07	0.2%		1.9E-03	7.8E-10	0.4%		1.7E-03	7.0E-10	2.1%	yes
35	SPDS01	SAPB01	seismic (< 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	VB, alpha mode, early CF	8.1E-05	yes	33.3%	yes	4.1E-07	0.2%		1.9E-03	7.7E-10	0.4%		1.7E-03	7.0E-10	2.1%	yes
36	IPDS03	SAPB06	transient - AFWS failed and primary feed-and-bleed failed	VB, no CF	1.8E-06	yes	0.7%		3.9E-07	0.2%		5.0E-08	2.0E-14	0.0%		4.9E-08	1.9E-14	0.0%	
37	IPDS04	SAPB04	LOCA - all sizes, required ECCS failed, may have LPIS operating but not injecting	VB, BMT or late CF	6.1E-06	yes	2.5%	yes	3.4E-07	0.1%		2.0E-05	6.6E-12	0.0%		2.4E-04	8.1E-11	0.2%	
38	FPDS01	SAPB02	fire - all locations, damage to ECCS circuits, concurrent RCP seal or PORV LOCA	VB, RCS > 200 psi, early CF	1.1E-05	yes	4.5%	yes	1.4E-07	0.1%		8.9E-04	1.3E-10	0.1%		5.0E-05	7.2E-12	0.0%	
39	IPDS01	SAPB02	SBOs - slow (AFWP runs until battery depletion) and fast (AFWP fails on demand)	VB, RCS > 200 psi, early CF	2.8E-05	yes	11.5%	yes	1.4E-07	0.1%		2.0E-03	2.7E-10	0.1%		2.6E-04	3.6E-11	0.1%	
40	SPDS02	SAPB05	seismic (< 0.6g) LOCA and SBO (LOOP and DG failures)	bypass	6.8E-05	yes	27.9%	yes	1.4E-07	0.1%		1.2E-02	1.6E-09	0.8%	yes	2.6E-03	3.6E-10	1.1%	yes
41	SPDS05	SAPB02	seismic (> 0.6g) LOCA and SBO (LOOP and DG failures)	VB, RCS > 200 psi, early CF	1.1E-05	yes	4.5%	yes	1.3E-07	0.1%		1.2E-02	1.6E-09	0.8%	yes	8.2E-04	1.1E-10	0.3%	
42	IPDS02	SAPB05	ATWS	bypass	1.4E-06	yes	0.6%		1.1E-07	0.0%		4.2E-03	4.5E-10	0.2%		5.8E-04	6.3E-11	0.2%	
43	SPDS03	SAPB01	seismic (< 0.6g) LOCA - LOOP, electrical failures (not DGs)	VB, alpha mode, early CF	1.5E-05	yes	6.2%	yes	9.0E-08	0.0%		1.9E-03	1.7E-10	0.1%		1.7E-03	1.6E-10	0.5%	yes
44	IPDS01	SAPB01	SBOs - slow (AFWP runs until battery depletion) and fast (AFWP fails on demand)	VB, alpha mode, early CF	2.8E-05	yes	11.5%	yes	8.4E-08	0.0%		1.1E-02	8.9E-10	0.5%		4.2E-04	3.5E-11	0.1%	
45	IPDS01	SAPB05	SBOs - slow (AFWP runs until battery depletion) and fast (AFWP fails on demand)	bypass	2.8E-05	yes	11.5%	yes	8.4E-08	0.0%		3.1E-03	2.6E-10	0.1%		3.3E-04	2.8E-11	0.1%	
46	SPDS01	SAPB05	seismic (< 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	bypass	8.1E-05	yes	33.3%	yes	8.1E-08	0.0%		1.2E-02	9.7E-10	0.5%	yes	2.6E-03	2.1E-10	0.6%	yes
47	SPDS05	SAPB01	seismic (> 0.6g) LOCA and SBO (LOOP and DG failures)	VB, alpha mode, early CF	1.1E-05	yes	4.5%	yes	6.6E-08	0.0%		7.0E-02	4.6E-09	2.4%	yes	3.1E-03	2.0E-10	0.6%	yes
48	IPDS02	SAPB04	ATWS	VB, BMT or late CF	1.4E-06	yes	0.6%		6.4E-08	0.0%		2.1E-05	1.3E-12	0.0%		1.7E-04	1.1E-11	0.0%	
49	SPDS04	SAPB02	seismic (> 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	VB, RCS > 200 psi, early CF	9.4E-06	yes	3.9%	yes	5.6E-08	0.0%		1.2E-02	6.8E-10	0.3%		8.2E-04	4.6E-11	0.1%	
50	FPDS01	SAPB01	fire - all locations, damage to ECCS circuits, concurrent RCP seal or PORV LOCA	VB, alpha mode, early CF	1.1E-05	yes	4.5%	yes	5.5E-08	0.0%		4.7E-03	2.6E-10	0.1%		4.7E-04	2.6E-11	0.1%	
51	SPDS04	SAPB01	seismic (> 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	VB, alpha mode, early CF	9.4E-06	yes	3.9%	yes	4.7E-08	0.0%		7.0E-02	3.3E-09	1.7%	yes	3.1E-03	1.5E-10	0.4%	
52	SPDS06	SAPB01	seismic (> 0.6g) LOCA - LOOP, electrical failures (not DGs)	VB, alpha mode, early CF	7.5E-06	yes	3.1%	yes	4.5E-08	0.0%		6.9E-02	3.1E-09	1.6%	yes	3.1E-03	1.4E-10	0.4%	
53	SPDS01	SAPB03	seismic (< 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	VB, RCS < 200 psi, early CF	8.1E-05	yes	33.3%	yes	4.1E-08	0.0%		6.0E-03	2.4E-10	0.1%		1.3E-03	5.1E-11	0.2%	
54	SPDS02	SAPB07	seismic (< 0.6g) LOCA and SBO (LOOP and DG failures)	no VB	6.8E-05	yes	27.9%	yes	3.4E-08	0.0%		6.3E-05	2.1E-12	0.0%		1.6E-05	5.5E-13	0.0%	
55	IPDS04	SAPB01	LOCA - all sizes, required ECCS failed, may have LPIS operating but not injecting	VB, alpha mode, early CF	6.1E-06	yes	2.5%	yes	3.1E-08	0.0%		4.2E-03	1.3E-10	0.1%		4.6E-04	1.4E-11	0.0%	
56	IPDS03	SAPB04	transient - AFWS failed and primary feed-and-bleed failed	VB, BMT or late CF	1.8E-06	yes	0.7%		2.3E-08	0.0%		2.1E-05	4.8E-13	0.0%		2.7E-04	6.4E-12	0.0%	
57	SPDS05	SAPB05	seismic (> 0.6g) LOCA and SBO (LOOP and DG failures)	bypass	1.1E-05	yes	4.5%	yes	2.2E-08	0.0%		5.2E-02	1.1E-09	0.6%	yes	5.3E-03	1.2E-10	0.4%	

58	IPDS01	SAPB03	SBOs - slow (AFWP runs until battery depletion) and fast (AFWP fails on demand)	VB, RCS < 200 psi, early CF	2.8E-05	yes	11.5%	yes	1.4E-08	0.0%		4.8E-03	6.7E-11	0.0%		2.2E-04	3.1E-12	0.0%	
59	IPDS03	SAPB05	transient - AFWS failed and primary feed-and-bleed failed	bypass	1.8E-06	yes	0.7%		1.3E-08	0.0%		4.0E-03	5.1E-11	0.0%		7.0E-04	8.9E-12	0.0%	
60	SPDS04	SAPB05	seismic (> 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	bypass	9.4E-06	yes	3.9%	yes	9.4E-09	0.0%		5.2E-02	4.9E-10	0.3%		5.3E-03	5.0E-11	0.2%	
61	SPDS03	SAPB02	seismic (< 0.6g) LOCA - LOOP, electrical failures (not DGs)	VB, RCS > 200 psi, early CF	1.5E-05	yes	6.2%	yes	7.5E-09	0.0%		2.4E-03	1.8E-11	0.0%		5.9E-04	4.4E-12	0.0%	
62	SPDS03	SAPB05	seismic (< 0.6g) LOCA - LOOP, electrical failures (not DGs)	bypass	1.5E-05	yes	6.2%	yes	7.5E-09	0.0%		1.2E-02	8.9E-11	0.0%		2.6E-03	2.0E-11	0.1%	
63	IPDS04	SAPB02	LOCA - all sizes, required ECCS failed, may have LPIS operating but not injecting	VB, RCS > 200 psi, early CF	6.1E-06	yes	2.5%	yes	6.1E-09	0.0%		1.8E-03	1.1E-11	0.0%		2.6E-04	1.6E-12	0.0%	
64	FPDS01	SAPB03	fire - all locations, damage to ECCS circuits, concurrent RCP seal or PORV LOCA	VB, RCS < 200 psi, early CF	1.1E-05	yes	4.5%	yes	5.5E-09	0.0%		4.4E-02	2.4E-10	0.1%		1.0E-03	5.8E-12	0.0%	
65	FPDS01	SAPB05	fire - all locations, damage to ECCS circuits, concurrent RCP seal or PORV LOCA	bypass	1.1E-05	yes	4.5%	yes	5.5E-09	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
66	FPDS01	SAPB07	fire - all locations, damage to ECCS circuits, concurrent RCP seal or PORV LOCA	no VB	1.1E-05	yes	4.5%	yes	5.5E-09	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
67	SPDS05	SAPB07	seismic (> 0.6g) LOCA and SBO (LOOP and DG failures)	no VB	1.1E-05	yes	4.5%	yes	5.5E-09	0.0%		3.9E-04	2.1E-12	0.0%		2.3E-05	1.3E-13	0.0%	
68	SPDS04	SAPB03	seismic (> 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	VB, RCS < 200 psi, early CF	9.4E-06	yes	3.9%	yes	4.7E-09	0.0%		3.0E-02	1.4E-10	0.1%		2.0E-03	9.2E-12	0.0%	
69	IPDS02	SAPB01	ATWS	VB, alpha mode, early CF	1.4E-06	yes	0.6%		4.2E-09	0.0%		9.2E-03	3.9E-11	0.0%		4.3E-04	1.8E-12	0.0%	
70	SPDS06	SAPB02	seismic (> 0.6g) LOCA - LOOP, electrical failures (not DGs)	VB, RCS > 200 psi, early CF	7.5E-06	yes	3.1%	yes	3.8E-09	0.0%		1.2E-02	4.5E-11	0.0%		8.2E-04	3.1E-12	0.0%	
71	SPDS06	SAPB05	seismic (> 0.6g) LOCA - LOOP, electrical failures (not DGs)	bypass	7.5E-06	yes	3.1%	yes	3.8E-09	0.0%		5.2E-02	1.9E-10	0.1%		5.3E-03	2.0E-11	0.1%	
72	IPDS04	SAPB03	LOCA - all sizes, required ECCS failed, may have LPIS operating but not injecting	VB, RCS < 200 psi, early CF	6.1E-06	yes	2.5%	yes	3.1E-09	0.0%		4.4E-03	1.3E-11	0.0%		2.2E-04	6.8E-13	0.0%	
73	IPDS04	SAPB05	LOCA - all sizes, required ECCS failed, may have LPIS operating but not injecting	bypass	6.1E-06	yes	2.5%	yes	3.1E-09	0.0%		3.1E-03	9.5E-12	0.0%		3.2E-04	9.7E-13	0.0%	
74	IPDS03	SAPB02	transient - AFWS failed and primary feed-and-bleed failed	VB, RCS > 200 psi, early CF	1.8E-06	yes	0.7%		1.8E-09	0.0%		2.0E-03	3.6E-12	0.0%		2.7E-04	4.8E-13	0.0%	
75	IPDS03	SAPB01	transient - AFWS failed and primary feed-and-bleed failed	VB, alpha mode, early CF	1.8E-06	yes	0.7%		9.0E-10	0.0%		9.2E-03	8.3E-12	0.0%		4.4E-04	4.0E-13	0.0%	
76	IPDS03	SAPB03	transient - AFWS failed and primary feed-and-bleed failed	VB, RCS < 200 psi, early CF	1.8E-06	yes	0.7%		9.0E-10	0.0%		4.8E-03	4.3E-12	0.0%		2.3E-04	2.0E-13	0.0%	
77	IPDS02	SAPB02	ATWS	VB, RCS > 200 psi, early CF	1.4E-06	yes	0.6%		7.0E-10	0.0%		2.0E-03	1.4E-12	0.0%		2.6E-04	1.8E-13	0.0%	
78	IPDS02	SAPB03	ATWS	VB, RCS < 200 psi, early CF	1.4E-06	yes	0.6%		7.0E-10	0.0%		4.7E-03	3.3E-12	0.0%		2.2E-04	1.6E-13	0.0%	
79	IPDS05	SAPB01	Event V (LPSI line rupture) or SGTR	VB, alpha mode, early CF	3.4E-06	yes	1.4%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
80	IPDS05	SAPB02	Event V (LPSI line rupture) or SGTR	VB, RCS > 200 psi, early CF	3.4E-06	yes	1.4%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
81	IPDS05	SAPB03	Event V (LPSI line rupture) or SGTR	VB, RCS < 200 psi, early CF	3.4E-06	yes	1.4%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
82	IPDS05	SAPB04	Event V (LPSI line rupture) or SGTR	VB, BMT or late CF	3.4E-06	yes	1.4%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
83	IPDS05	SAPB06	Event V (LPSI line rupture) or SGTR	VB, no CF	3.4E-06	yes	1.4%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
84	IPDS05	SAPB07	Event V (LPSI line rupture) or SGTR	no VB	3.4E-06	yes	1.4%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	

Surry NUREG-1150																		
Master List of Sequences																		
(Based on EPRI Seismic Hazard Curve)																		
									8.0E-05				3.2E-08				5.6E-09	
No.	Sequence	Plant Damage State	Summary Accident Progression Bin	PDS freq	SOARCA sig	PDS contr	PDS sig	accident freq	AF contr	AF sig	IEF cond risk	IEF	IEF contr	IEF sig	ILCF cond risk	ILCF	ILCF contr	ILCF sig
1	IPDS01	SAPB07	SBOs - slow (AFWP runs until battery depletion) and fast (AFWP fails on demand)	2.8E-05	yes	35.1%	yes	1.7E-05	21.0%	yes	9.7E-08	1.6E-12	0.0%		7.9E-08	1.3E-12	0.0%	
2	IPDS01	SAPB06	SBOs - slow (AFWP runs until battery depletion) and fast (AFWP fails on demand)	2.8E-05	yes	35.1%	yes	8.7E-06	10.9%	yes	5.0E-08	4.4E-13	0.0%		4.9E-08	4.3E-13	0.0%	
3	FPDS01	SAPB06	fire - all locations, damage to ECCS circuits, concurrent RCP seal or PORV LOCA	1.1E-05	yes	13.8%	yes	7.6E-06	9.5%	yes	n/a	0.0E+00	0.0%		3.2E-07	2.4E-12	0.0%	
4	SPDS01	SAPB06	seismic (< 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	1.4E-05	yes	17.5%	yes	5.7E-06	7.2%	yes	4.3E-07	2.8E-13	0.0%		1.8E-06	4.7E-12	0.1%	
5	SPDS01	SAPB07	seismic (< 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	1.4E-05	yes	17.5%	yes	4.8E-06	6.1%	yes	4.0E-04	9.1E-11	0.3%		1.0E-04	4.0E-11	0.7%	yes
6	SPDS02	SAPB06	seismic (< 0.6g) LOCA and SBO (LOOP and DG failures)	8.4E-06	yes	10.5%	yes	4.6E-06	5.7%	yes	6.1E-07	2.2E-13	0.0%		2.5E-06	3.7E-12	0.1%	
7	IPDS04	SAPB06	LOCA - all sizes, required ECCS failed, may have L PIS operating but not injecting	6.1E-06	yes	7.6%	yes	3.6E-06	4.5%	yes	5.0E-08	1.8E-13	0.0%		4.9E-08	1.8E-13	0.0%	
8	IPDS05	SAPB05	Event V (LPSI line rupture) or SGTR	3.4E-06	yes	4.3%	yes	3.4E-06	4.3%	yes	3.3E-03	1.1E-08	34.9%	yes	3.1E-04	1.0E-09	18.7%	yes
9	SPDS01	SAPB04	seismic (< 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	1.4E-05	yes	17.5%	yes	3.2E-06	4.1%	yes	9.7E-05	3.0E-11	0.1%		4.4E-04	2.3E-10	4.1%	yes
10	FPDS01	SAPB04	fire - all locations, damage to ECCS circuits, concurrent RCP seal or PORV LOCA	1.1E-05	yes	13.8%	yes	3.2E-06	4.0%	yes	n/a	0.0E+00	0.0%		2.4E-05	7.9E-11	1.4%	yes
11	SPDS02	SAPB04	seismic (< 0.6g) LOCA and SBO (LOOP and DG failures)	8.4E-06	yes	10.5%	yes	3.2E-06	4.0%	yes	1.5E-04	3.0E-11	0.1%		6.6E-04	2.2E-10	4.0%	yes
12	IPDS01	SAPB04	SBOs - slow (AFWP runs until battery depletion) and fast (AFWP fails on demand)	2.8E-05	yes	35.1%	yes	2.2E-06	2.8%	yes	2.1E-05	4.6E-11	0.1%		1.4E-04	3.1E-10	5.6%	yes
13	IPDS04	SAPB07	LOCA - all sizes, required ECCS failed, may have L PIS operating but not injecting	6.1E-06	yes	7.6%	yes	2.1E-06	2.7%	yes	9.7E-08	2.1E-13	0.0%		7.9E-08	1.7E-13	0.0%	
14	IPDS03	SAPB07	transient - AFWS failed and primary feed-and-bleed failed	1.8E-06	yes	2.3%	yes	1.4E-06	1.7%	yes	9.7E-08	1.3E-13	0.0%		8.0E-08	1.1E-13	0.0%	
15	SPDS03	SAPB03	seismic (< 0.6g) LOCA - LOOP, electrical failures (not DGs)	2.5E-06	yes	3.1%	yes	8.1E-07	1.0%	yes	3.5E-02	2.4E-09	7.6%	yes	1.1E-02	1.2E-09	21.9%	yes
16	SPDS03	SAPB07	seismic (< 0.6g) LOCA - LOOP, electrical failures (not DGs)	2.5E-06	yes	3.1%	yes	7.7E-07	1.0%	yes	3.7E-04	1.4E-11	0.0%		9.7E-05	6.3E-12	0.1%	
17	IPDS02	SAPB06	ATWS	1.4E-06	yes	1.8%	yes	7.3E-07	0.9%	yes	5.0E-08	3.7E-14	0.0%		4.9E-08	3.6E-14	0.0%	
18	SPDS05	SAPB06	seismic (> 0.6g) LOCA and SBO (LOOP and DG failures)	1.1E-06	yes	1.4%	yes	6.0E-07	0.8%	yes	3.1E-06	1.7E-13	0.0%		7.3E-06	1.2E-12	0.0%	
19	SPDS03	SAPB06	seismic (< 0.6g) LOCA - LOOP, electrical failures (not DGs)	2.5E-06	yes	3.1%	yes	5.7E-07	0.7%	yes	4.4E-07	2.8E-14	0.0%		1.8E-06	4.6E-13	0.0%	
20	IPDS02	SAPB07	ATWS	1.4E-06	yes	1.8%	yes	4.9E-07	0.6%	yes	9.7E-08	4.8E-14	0.0%		7.9E-08	3.9E-14	0.0%	
21	SPDS04	SAPB06	seismic (> 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	1.1E-06	yes	1.4%	yes	4.5E-07	0.6%	yes	2.6E-06	1.3E-13	0.0%		6.1E-06	9.0E-13	0.0%	
22	SPDS05	SAPB04	seismic (> 0.6g) LOCA and SBO (LOOP and DG failures)	1.1E-06	yes	1.4%	yes	4.2E-07	0.5%	yes	1.1E-03	2.3E-11	0.1%		1.2E-03	2.8E-10	5.1%	yes
23	SPDS02	SAPB03	seismic (< 0.6g) LOCA and SBO (LOOP and DG failures)	8.4E-06	yes	10.5%	yes	4.2E-07	0.5%	yes	7.0E-02	2.5E-09	7.7%	yes	1.5E-02	8.4E-10	15.1%	yes
24	IPDS03	SAPB06	transient - AFWS failed and primary feed-and-bleed failed	1.8E-06	yes	2.3%	yes	3.9E-07	0.5%		5.0E-08	2.0E-14	0.0%		4.9E-08	1.9E-14	0.0%	
25	SPDS04	SAPB07	seismic (> 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	1.1E-06	yes	1.4%	yes	3.8E-07	0.5%		3.6E-03	7.2E-11	0.2%		2.2E-04	6.2E-12	0.1%	

26	SPDS03	SAPB04	seismic (< 0.6g) LOCA - LOOP, electrical failures (not DGs)	VB, BMT or late CF	2.5E-06	yes	3.1%	yes	3.4E-07	0.4%		9.9E-05	3.2E-12	0.0%		4.5E-04	2.4E-11	0.4%	
27	IPDS04	SAPB04	LOCA - all sizes, required ECCS failed, may have L PIS operating but not injecting	VB, BMT or late CF	6.1E-06	yes	7.6%	yes	3.4E-07	0.4%		2.0E-05	6.6E-12	0.0%		2.4E-04	8.1E-11	1.4%	yes
28	SPDS06	SAPB03	seismic (> 0.6g) LOCA - LOOP, electrical failures (not DGs)	VB, RCS < 200 psi, early CF	9.8E-07		1.2%	yes	3.2E-07	0.4%		2.2E-01	6.9E-09	21.3%	yes	1.7E-02	1.6E-10	2.9%	yes
29	SPDS06	SAPB07	seismic (> 0.6g) LOCA - LOOP, electrical failures (not DGs)	no VB	9.8E-07		1.2%	yes	3.0E-07	0.4%		2.9E-03	5.6E-11	0.2%		1.8E-04	4.9E-12	0.1%	
30	SPDS04	SAPB04	seismic (> 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	VB, BMT or late CF	1.1E-06	yes	1.4%	yes	2.6E-07	0.3%		9.0E-04	1.4E-11	0.0%		9.3E-04	1.7E-10	3.1%	yes
31	SPDS06	SAPB06	seismic (> 0.6g) LOCA - LOOP, electrical failures (not DGs)	VB, no CF	9.8E-07		1.2%	yes	2.2E-07	0.3%		2.3E-06	6.5E-14	0.0%		5.4E-06	4.4E-13	0.0%	
32	FPDS01	SAPB02	fire - all locations, damage to ECCS circuits, concurrent RCP seal or PORV LOCA	VB, RCS > 200 psi, early CF	1.1E-05	yes	13.8%	yes	1.4E-07	0.2%		8.9E-04	1.3E-10	0.4%		5.0E-05	7.2E-12	0.1%	
33	IPDS01	SAPB02	SBOs - slow (AFWP runs until battery depletion) and fast (AFWP fails on demand)	VB, RCS > 200 psi, early CF	2.8E-05	yes	35.1%	yes	1.4E-07	0.2%		2.0E-03	2.7E-10	0.9%	yes	2.6E-04	3.6E-11	0.6%	yes
34	SPDS06	SAPB04	seismic (> 0.6g) LOCA - LOOP, electrical failures (not DGs)	VB, BMT or late CF	9.8E-07		1.2%	yes	1.3E-07	0.2%		7.9E-04	7.4E-12	0.0%		8.2E-04	8.7E-11	1.6%	yes
35	SPDS02	SAPB02	seismic (< 0.6g) LOCA and SBO (LOOP and DG failures)	VB, RCS > 200 psi, early CF	8.4E-06	yes	10.5%	yes	1.2E-07	0.1%		1.6E-02	2.2E-11	0.1%		4.1E-03	2.3E-11	0.4%	
36	IPDS02	SAPB05	ATWS	bypass	1.4E-06	yes	1.8%	yes	1.1E-07	0.1%		4.2E-03	4.5E-10	1.4%	yes	5.8E-04	6.3E-11	1.1%	yes
37	IPDS01	SAPB01	SBOs - slow (AFWP runs until battery depletion) and fast (AFWP fails on demand)	VB, alpha mode, early CF	2.8E-05	yes	35.1%	yes	8.4E-08	0.1%		1.1E-02	8.9E-10	2.8%	yes	4.2E-04	3.5E-11	0.6%	yes
38	IPDS01	SAPB05	SBOs - slow (AFWP runs until battery depletion) and fast (AFWP fails on demand)	bypass	2.8E-05	yes	35.1%	yes	8.4E-08	0.1%		3.1E-03	2.6E-10	0.8%	yes	3.3E-04	2.8E-11	0.5%	yes
39	SPDS01	SAPB01	seismic (< 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	VB, alpha mode, early CF	1.4E-05	yes	17.5%	yes	8.4E-08	0.1%		9.2E-03	4.5E-10	1.4%	yes	8.3E-03	1.2E-10	2.1%	yes
40	SPDS01	SAPB02	seismic (< 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	VB, RCS > 200 psi, early CF	1.4E-05	yes	17.5%	yes	8.4E-08	0.1%		1.4E-02	1.6E-11	0.0%		3.4E-03	1.6E-11	0.3%	
41	IPDS02	SAPB04	ATWS	VB, BMT or late CF	1.4E-06	yes	1.8%	yes	6.4E-08	0.1%		2.1E-05	1.3E-12	0.0%		1.7E-04	1.1E-11	0.2%	
42	FPDS01	SAPB01	fire - all locations, damage to ECCS circuits, concurrent RCP seal or PORV LOCA	VB, alpha mode, early CF	1.1E-05	yes	13.8%	yes	5.5E-08	0.1%		4.7E-03	2.6E-10	0.8%	yes	4.7E-04	2.6E-11	0.5%	yes
43	SPDS05	SAPB03	seismic (> 0.6g) LOCA and SBO (LOOP and DG failures)	VB, RCS < 200 psi, early CF	1.1E-06	yes	1.4%	yes	5.5E-08	0.1%		4.3E-01	2.9E-09	9.0%	yes	2.8E-02	2.8E-11	0.5%	yes
44	SPDS02	SAPB01	seismic (< 0.6g) LOCA and SBO (LOOP and DG failures)	VB, alpha mode, early CF	8.4E-06	yes	10.5%	yes	5.0E-08	0.1%		1.5E-02	2.7E-10	0.8%	yes	1.4E-02	6.9E-11	1.2%	yes
45	IPDS04	SAPB01	LOCA - all sizes, required ECCS failed, may have L PIS operating but not injecting	VB, alpha mode, early CF	6.1E-06	yes	7.6%	yes	3.1E-08	0.0%		4.2E-03	1.3E-10	0.4%		4.6E-04	1.4E-11	0.3%	
46	IPDS03	SAPB04	transient - AFWS failed and primary feed-and-bleed failed	VB, BMT or late CF	1.8E-06	yes	2.3%	yes	2.3E-08	0.0%		2.1E-05	4.8E-13	0.0%		2.7E-04	6.4E-12	0.1%	
47	SPDS03	SAPB01	seismic (< 0.6g) LOCA - LOOP, electrical failures (not DGs)	VB, alpha mode, early CF	2.5E-06	yes	3.1%	yes	1.8E-08	0.0%		9.8E-03	9.1E-11	0.3%		8.9E-03	2.4E-11	0.4%	yes
48	SPDS05	SAPB02	seismic (> 0.6g) LOCA and SBO (LOOP and DG failures)	VB, RCS > 200 psi, early CF	1.1E-06	yes	1.4%	yes	1.5E-08	0.0%		1.0E-01	2.8E-10	0.9%	yes	7.1E-03	3.0E-11	0.5%	yes
49	IPDS01	SAPB03	SBOs - slow (AFWP runs until battery depletion) and fast (AFWP fails on demand)	VB, RCS < 200 psi, early CF	2.8E-05	yes	35.1%	yes	1.4E-08	0.0%		4.8E-03	6.7E-11	0.2%		2.2E-04	3.1E-12	0.1%	
50	SPDS01	SAPB05	seismic (< 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	bypass	1.4E-05	yes	17.5%	yes	1.4E-08	0.0%		6.9E-02	3.8E-10	1.2%	yes	1.5E-02	5.0E-11	0.9%	yes
51	IPDS03	SAPB05	transient - AFWS failed and primary feed-and-bleed failed	bypass	1.8E-06	yes	2.3%	yes	1.3E-08	0.0%		4.0E-03	5.1E-11	0.2%		7.0E-04	8.9E-12	0.2%	
52	SPDS02	SAPB05	seismic (< 0.6g) LOCA and SBO (LOOP and DG failures)	bypass	8.4E-06	yes	10.5%	yes	8.4E-09	0.0%		1.9E-01	2.3E-10	0.7%	yes	4.2E-02	3.0E-11	0.5%	yes
53	SPDS01	SAPB03	seismic (< 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	VB, RCS < 200 psi, early CF	1.4E-05	yes	17.5%	yes	7.0E-09	0.0%		3.5E-02	4.1E-11	0.1%		7.3E-03	1.4E-11	0.3%	
54	SPDS06	SAPB01	seismic (> 0.6g) LOCA - LOOP, electrical failures (not DGs)	VB, alpha mode, early CF	9.8E-07		1.2%	yes	6.9E-09	0.0%		4.5E-01	2.4E-10	0.7%	yes	2.0E-02	1.8E-11	0.3%	
55	SPDS04	SAPB01	seismic (> 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	VB, alpha mode, early CF	1.1E-06	yes	1.4%	yes	6.6E-09	0.0%		5.0E-01	2.5E-10	0.8%	yes	2.2E-02	1.8E-11	0.3%	
56	SPDS04	SAPB02	seismic (> 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	VB, RCS > 200 psi, early CF	1.1E-06	yes	1.4%	yes	6.6E-09	0.0%		1.0E-01	1.2E-10	0.4%		7.0E-03	1.3E-11	0.2%	

57	SPDS05	SAPB01	seismic (> 0.6g) LOCA and SBO (LOOP and DG failures)	VB, alpha mode, early CF	1.1E-06	yes	1.4%	yes	6.6E-09	0.0%		7.0E-01	2.5E-10	0.8%	yes	3.1E-02	1.8E-11	0.3%	
58	IPDS04	SAPB02	LOCA - all sizes, required ECCS failed, may have L PIS operating but not injecting	VB, RCS > 200 psi, early CF	6.1E-06	yes	7.6%	yes	6.1E-09	0.0%		1.8E-03	1.1E-11	0.0%		2.6E-04	1.6E-12	0.0%	
59	FPDS01	SAPB03	fire - all locations, damage to ECCS circuits, concurrent RCP seal or PORV LOCA	VB, RCS < 200 psi, early CF	1.1E-05	yes	13.8%	yes	5.5E-09	0.0%		4.4E-02	2.4E-10	0.8%	yes	1.0E-03	5.8E-12	0.1%	
60	FPDS01	SAPB05	fire - all locations, damage to ECCS circuits, concurrent RCP seal or PORV LOCA	bypass	1.1E-05	yes	13.8%	yes	5.5E-09	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
61	FPDS01	SAPB07	fire - all locations, damage to ECCS circuits, concurrent RCP seal or PORV LOCA	no VB	1.1E-05	yes	13.8%	yes	5.5E-09	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
62	IPDS02	SAPB01	ATWS	VB, alpha mode, early CF	1.4E-06	yes	1.8%	yes	4.2E-09	0.0%		9.2E-03	3.9E-11	0.1%		4.3E-04	1.8E-12	0.0%	
63	SPDS02	SAPB07	seismic (< 0.6g) LOCA and SBO (LOOP and DG failures)	no VB	8.4E-06	yes	10.5%	yes	4.2E-09	0.0%		5.1E-04	7.9E-14	0.0%		1.3E-04	3.4E-14	0.0%	
64	IPDS04	SAPB03	LOCA - all sizes, required ECCS failed, may have L PIS operating but not injecting	VB, RCS < 200 psi, early CF	6.1E-06	yes	7.6%	yes	3.1E-09	0.0%		4.4E-03	1.3E-11	0.0%		2.2E-04	6.8E-13	0.0%	
65	IPDS04	SAPB05	LOCA - all sizes, required ECCS failed, may have L PIS operating but not injecting	bypass	6.1E-06	yes	7.6%	yes	3.1E-09	0.0%		3.1E-03	9.5E-12	0.0%		3.2E-04	9.7E-13	0.0%	
66	IPDS03	SAPB02	transient - AFWS failed and primary feed-and-bleed failed	VB, RCS > 200 psi, early CF	1.8E-06	yes	2.3%	yes	1.8E-09	0.0%		2.0E-03	3.6E-12	0.0%		2.7E-04	4.8E-13	0.0%	
67	SPDS03	SAPB02	seismic (< 0.6g) LOCA - LOOP, electrical failures (not DGs)	VB, RCS > 200 psi, early CF	2.5E-06	yes	3.1%	yes	1.3E-09	0.0%		1.4E-02	2.3E-13	0.0%		3.5E-03	2.4E-13	0.0%	
68	SPDS03	SAPB05	seismic (< 0.6g) LOCA - LOOP, electrical failures (not DGs)	bypass	2.5E-06	yes	3.1%	yes	1.3E-09	0.0%		7.2E-02	3.4E-11	0.1%		1.6E-02	4.4E-12	0.1%	
69	SPDS04	SAPB05	seismic (> 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	bypass	1.1E-06	yes	1.4%	yes	1.1E-09	0.0%		4.4E-01	1.2E-10	0.4%		4.6E-02	1.1E-11	0.2%	
70	SPDS05	SAPB05	seismic (> 0.6g) LOCA and SBO (LOOP and DG failures)	bypass	1.1E-06	yes	1.4%	yes	1.1E-09	0.0%		1.0E+00	1.2E-10	0.4%		1.1E-01	1.1E-11	0.2%	
71	IPDS03	SAPB01	transient - AFWS failed and primary feed-and-bleed failed	VB, alpha mode, early CF	1.8E-06	yes	2.3%	yes	9.0E-10	0.0%		9.2E-03	8.3E-12	0.0%		4.4E-04	4.0E-13	0.0%	
72	IPDS03	SAPB03	transient - AFWS failed and primary feed-and-bleed failed	VB, RCS < 200 psi, early CF	1.8E-06	yes	2.3%	yes	9.0E-10	0.0%		4.8E-03	4.3E-12	0.0%		2.3E-04	2.0E-13	0.0%	
73	IPDS02	SAPB02	ATWS	VB, RCS > 200 psi, early CF	1.4E-06	yes	1.8%	yes	7.0E-10	0.0%		2.0E-03	1.4E-12	0.0%		2.6E-04	1.8E-13	0.0%	
74	IPDS02	SAPB03	ATWS	VB, RCS < 200 psi, early CF	1.4E-06	yes	1.8%	yes	7.0E-10	0.0%		4.7E-03	3.3E-12	0.0%		2.2E-04	1.6E-13	0.0%	
75	SPDS04	SAPB03	seismic (> 0.6g) LOOP (no SBO) - AFWS failed and primary feed-and-bleed failed	VB, RCS < 200 psi, early CF	1.1E-06	yes	1.4%	yes	5.5E-10	0.0%		2.5E-01	2.9E-11	0.1%		1.7E-02	2.8E-13	0.0%	
76	SPDS05	SAPB07	seismic (> 0.6g) LOCA and SBO (LOOP and DG failures)	no VB	1.1E-06	yes	1.4%	yes	5.5E-10	0.0%		3.9E-03	1.0E-13	0.0%		2.3E-04	9.0E-15	0.0%	
77	SPDS06	SAPB02	seismic (> 0.6g) LOCA - LOOP, electrical failures (not DGs)	VB, RCS > 200 psi, early CF	9.8E-07		1.2%	yes	4.9E-10	0.0%		9.2E-02	9.0E-12	0.0%		6.3E-03	9.5E-13	0.0%	
78	SPDS06	SAPB05	seismic (> 0.6g) LOCA - LOOP, electrical failures (not DGs)	bypass	9.8E-07		1.2%	yes	4.9E-10	0.0%		4.0E-01	5.3E-11	0.2%		4.1E-02	4.8E-12	0.1%	
79	IPDS05	SAPB01	Event V (LPSI line rupture) or SGTR	VB, alpha mode, early CF	3.4E-06	yes	4.3%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
80	IPDS05	SAPB02	Event V (LPSI line rupture) or SGTR	VB, RCS > 200 psi, early CF	3.4E-06	yes	4.3%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
81	IPDS05	SAPB03	Event V (LPSI line rupture) or SGTR	VB, RCS < 200 psi, early CF	3.4E-06	yes	4.3%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
82	IPDS05	SAPB04	Event V (LPSI line rupture) or SGTR	VB, BMT or late CF	3.4E-06	yes	4.3%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
83	IPDS05	SAPB06	Event V (LPSI line rupture) or SGTR	VB, no CF	3.4E-06	yes	4.3%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
84	IPDS05	SAPB07	Event V (LPSI line rupture) or SGTR	no VB	3.4E-06	yes	4.3%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	

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21	FPDS04	SAPB3	fire LOOP with failure of PCS, venting, and most CHR, random CHR failures, HPCI fails on high pool temperature, LPCI fails when SRVs close on high containment pressure	VB, early CF, DW failure, RCS > 200 psi	1.1E-06	yes	1.1%	yes	8.9E-07	0.9%	yes	1.3E-04	1.1E-10	0.0%		1.8E-04	1.6E-10	0.0%	
22	SPDS14	SAPB4	seismic (>0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, early CF, DW failure, RCS < 200 psi	1.4E-06	yes	1.4%	yes	8.4E-07	0.9%	yes	5.4E-02	4.6E-08	2.8%	yes	9.0E-03	7.6E-09	2.2%	yes
23	SPDS13	SAPB2	seismic (>0.6g) MLOCA, SBO due to cooling water failure, HPCI works until RVP is depressurized	VB, early CF, WW failure, RCS < 200 psi	3.9E-06	yes	3.9%	yes	7.7E-07	0.8%	yes	1.6E-02	1.2E-08	0.8%		4.1E-03	3.1E-09	0.9%	yes
24	FPDS02	SAPB6	fire SBO - LOOP with random ESW failure, HPCI works until battery depletion or high pool temperature	VB, late CF, DW failure	5.9E-06	yes	5.9%	yes	7.4E-07	0.7%	yes	1.4E-05	1.0E-11	0.0%		2.0E-04	1.5E-10	0.0%	
25	FPDS01	SAPB3	fire in MCR or cable spreading room, auto-actuation fails, remote control lost	VB, early CF, DW failure, RCS > 200 psi	6.8E-06	yes	6.9%	yes	6.3E-07	0.6%	yes	9.1E-05	5.7E-11	0.0%		3.2E-04	2.0E-10	0.1%	
26	FPDS03	SAPB6	fire SBO - LOOP with DG failure to run, HPCI works until high pool temperature	VB, late CF, DW failure	5.7E-06	yes	5.7%	yes	6.2E-07	0.6%	yes	1.3E-05	7.7E-12	0.0%		1.7E-04	1.1E-10	0.0%	
27	IPDS08	SAPB3	ATWS after loss of AC bus or PCS, SLC failed	VB, early CF, DW failure, RCS > 200 psi	1.5E-06	yes	1.5%	yes	6.0E-07	0.6%	yes	2.2E-05	1.3E-11	0.0%		1.4E-04	8.3E-11	0.0%	
28	SPDS06	SAPB4	seismic (<0.6g) MLOCA, SBO due to cooling water failure, HPCI works until RVP is depressurized	VB, early CF, DW failure, RCS < 200 psi	7.5E-07		0.8%		5.5E-07	0.6%	yes	1.3E-03	7.3E-10	0.0%		9.5E-04	5.2E-10	0.2%	
29	FPDS03	SAPB1	fire SBO - LOOP with DG failure to run, HPCI works until high pool temperature	VB, early CF, WW failure, RCS > 200 psi	5.7E-06	yes	5.7%	yes	4.4E-07	0.4%	yes	7.9E-06	3.4E-12	0.0%		1.3E-04	5.5E-11	0.0%	
30	SPDS12	SAPB6	seismic (>0.6g) SBO, HPCI fails initially upon Radwaste/Turbine Building failure	VB, late CF, DW failure	1.8E-06	yes	1.8%	yes	4.0E-07	0.4%	yes	4.7E-03	1.9E-09	0.1%		3.1E-03	1.3E-09	0.4%	
31	SPDS14	SAPB6	seismic (>0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, late CF, DW failure	1.4E-06	yes	1.4%	yes	3.9E-07	0.4%	yes	1.7E-02	6.6E-09	0.4%		6.1E-03	2.4E-09	0.7%	
32	FPDS02	SAPB1	fire SBO - LOOP with random ESW failure, HPCI works until battery depletion or high pool temperature	VB, early CF, WW failure, RCS > 200 psi	5.9E-06	yes	5.9%	yes	3.7E-07	0.4%	yes	8.3E-06	3.0E-12	0.0%		1.6E-04	6.0E-11	0.0%	
33	IPDS08	SAPB7	ATWS after loss of AC bus or PCS, SLC failed	VB, vent	1.5E-06	yes	1.5%	yes	3.5E-07	0.4%	yes	1.9E-06	6.6E-13	0.0%		1.2E-04	4.4E-11	0.0%	
34	FPDS01	SAPB6	fire in MCR or cable spreading room, auto-actuation fails, remote control lost	VB, late CF, DW failure	6.8E-06	yes	6.9%	yes	3.2E-07	0.3%	yes	1.9E-05	6.1E-12	0.0%		2.0E-04	6.4E-11	0.0%	
35	SPDS05	SAPB6	seismic (<0.6g) SBO, HPCI fails initially upon Radwaste/Turbine Building failure	VB, late CF, DW failure	1.4E-06	yes	1.4%	yes	3.1E-07	0.3%	yes	7.1E-06	2.2E-12	0.0%		9.4E-05	2.9E-11	0.0%	
36	SPDS04	SAPB5	seismic (<0.6g) SBO, HPCI works until battery depletion or high pool temperature	VB, late CF, WW failure	2.0E-05	yes	20.2%	yes	2.8E-07	0.3%	yes	4.4E-07	1.2E-13	0.0%		4.7E-05	1.3E-11	0.0%	
37	IPDS08	SAPB4	ATWS after loss of AC bus or PCS, SLC failed	VB, early CF, DW failure, RCS < 200 psi	1.5E-06	yes	1.5%	yes	2.4E-07	0.2%	yes	1.4E-05	3.5E-12	0.0%		1.0E-04	2.5E-11	0.0%	
38	SPDS03	SAPB4	seismic (<0.6g) LLOCA, SBO with DC failure, and containment failure	VB, early CF, DW failure, RCS < 200 psi	2.4E-07		0.2%		2.4E-07	0.2%	yes	8.4E-04	2.0E-10	0.0%		9.5E-04	2.3E-10	0.1%	
39	SPDS11	SAPB5	seismic (>0.6g) SBO, HPCI works until battery depletion or high pool temperature	VB, late CF, WW failure	1.7E-05	yes	17.1%	yes	2.4E-07	0.2%		2.4E-04	5.6E-11	0.0%		6.6E-04	1.6E-10	0.0%	
40	IPDS05	SAPB4	long-term SBO, either battery depletion or HPCI and RCIC fails on high pool temperature or high containment pressure	VB, early CF, DW failure, RCS < 200 psi	1.9E-06	yes	1.9%	yes	2.1E-07	0.2%		1.4E-05	2.9E-12	0.0%		1.1E-04	2.3E-11	0.0%	
41	FPDS04	SAPB7	fire LOOP with failure of PCS, venting, and most CHR, random CHR failures, HPCI fails on high pool temperature, LPCI fails when SRVs close on high containment pressure	VB, vent	1.1E-06	yes	1.1%	yes	1.7E-07	0.2%		3.1E-05	5.2E-12	0.0%		2.3E-04	3.9E-11	0.0%	
42	IPDS05	SAPB8	long-term SBO, either battery depletion or HPCI and RCIC fails on high pool temperature or high containment pressure	VB, no CF	1.9E-06	yes	1.9%	yes	1.7E-07	0.2%		3.3E-09	5.6E-16	0.0%		5.1E-07	8.6E-14	0.0%	

43	IPDS05	SAPB9	long-term SBO, either battery depletion or HPCI and RCIC fails on high pool temperature or high containment pressure	No VB	1.9E-06	yes	1.9%	yes	1.6E-07	0.2%		4.9E-07	7.9E-14	0.0%		3.0E-05	4.9E-12	0.0%	
44	IPDS05	SAPB7	long-term SBO, either battery depletion or HPCI and RCIC fails on high pool temperature or high containment pressure	VB, vent	1.9E-06	yes	1.9%	yes	1.6E-07	0.2%		1.9E-06	3.0E-13	0.0%		1.3E-04	2.1E-11	0.0%	
45	FPDS01	SAPB7	fire in MCR or cable spreading room, auto-actuation fails, remote control lost	VB, vent	6.8E-06	yes	6.9%	yes	1.6E-07	0.2%		3.2E-05	5.0E-12	0.0%		2.6E-04	4.0E-11	0.0%	
46	SPDS06	SAPB2	seismic (<0.6g) MLOCA, SBO due to cooling water failure, HPCI works until RVP is depressurized	VB, early CF, WW failure, RCS < 200 psi	7.5E-07		0.8%		1.5E-07	0.1%		1.8E-04	2.7E-11	0.0%		9.5E-04	1.4E-10	0.0%	
47	FPDS01	SAPB2	fire in MCR or cable spreading room, auto-actuation fails, remote control lost	VB, early CF, WW failure, RCS < 200 psi	6.8E-06	yes	6.9%	yes	1.4E-07	0.1%		9.7E-07	1.4E-13	0.0%		5.8E-05	8.3E-12	0.0%	
48	IPDS01	SAPB8	LLOCA or MLOCA with loss of injection	VB, no CF	2.6E-07		0.3%		1.4E-07	0.1%		3.3E-09	4.7E-16	0.0%		5.1E-07	7.2E-14	0.0%	
49	SPDS13	SAPB6	seismic (>0.6g) MLOCA, SBO due to cooling water failure, HPCI works until RVP is depressurized	VB, late CF, DW failure	3.9E-06	yes	3.9%	yes	1.3E-07	0.1%		5.4E-03	7.2E-10	0.0%		3.6E-03	4.8E-10	0.1%	
50	SPDS13	SAPB7	seismic (>0.6g) MLOCA, SBO due to cooling water failure, HPCI works until RVP is depressurized	VB, vent	3.9E-06	yes	3.9%	yes	1.3E-07	0.1%		1.0E-01	1.3E-08	0.8%		1.5E-02	2.0E-09	0.6%	
51	IPDS06	SAPB8	ATWS with HPCI and SLC working, vessel not manually depressurized, injection fails on high pool temperature	VB, no CF	3.0E-07		0.3%		1.3E-07	0.1%		3.3E-09	4.3E-16	0.0%		5.0E-07	6.4E-14	0.0%	
52	IPDS08	SAPB8	ATWS after loss of AC bus or PCS, SLC failed	VB, no CF	1.5E-06	yes	1.5%	yes	1.2E-07	0.1%		3.3E-09	4.0E-16	0.0%		5.2E-07	6.2E-14	0.0%	
53	IPDS02	SAPB8	transient with 2 stuck-open SRVs and loss of injection, CRD and CHR working	VB, no CF	2.2E-07		0.2%		1.2E-07	0.1%		3.3E-09	3.9E-16	0.0%		5.1E-07	6.1E-14	0.0%	
54	IPDS05	SAPB6	long-term SBO, either battery depletion or HPCI and RCIC fails on high pool temperature or high containment pressure	VB, late CF, DW failure	1.9E-06	yes	1.9%	yes	1.2E-07	0.1%		1.0E-05	1.2E-12	0.0%		1.7E-04	1.9E-11	0.0%	
55	SPDS07	SAPB4	seismic (<0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, early CF, DW failure, RCS < 200 psi	1.9E-07		0.2%		1.1E-07	0.1%		8.6E-04	9.8E-11	0.0%		9.5E-04	1.1E-10	0.0%	
56	IPDS08	SAPB9	ATWS after loss of AC bus or PCS, SLC failed	No VB	1.5E-06	yes	1.5%	yes	1.1E-07	0.1%		5.0E-07	5.4E-14	0.0%		2.6E-05	2.8E-12	0.0%	
57	SPDS14	SAPB2	seismic (>0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, early CF, WW failure, RCS < 200 psi	1.4E-06	yes	1.4%	yes	1.0E-07	0.1%		2.1E-02	2.2E-09	0.1%		4.1E-03	4.2E-10	0.1%	
58	IPDS05	SAPB1	long-term SBO, either battery depletion or HPCI and RCIC fails on high pool temperature or high containment pressure	VB, early CF, WW failure, RCS > 200 psi	1.9E-06	yes	1.9%	yes	1.0E-07	0.1%		1.9E-06	1.9E-13	0.0%		1.1E-04	1.1E-11	0.0%	
59	SPDS04	SAPB7	seismic (<0.6g) SBO, HPCI works until battery depletion or high pool temperature	VB, vent	2.0E-05	yes	20.2%	yes	1.0E-07	0.1%		5.1E-04	5.1E-11	0.0%		1.2E-03	1.2E-10	0.0%	
60	IPDS01	SAPB4	LLOCA or MLOCA with loss of injection	VB, early CF, DW failure, RCS < 200 psi	2.6E-07		0.3%		9.4E-08	0.1%		2.3E-05	2.1E-12	0.0%		1.3E-04	1.2E-11	0.0%	
61	SPDS12	SAPB4	seismic (>0.6g) SBO, HPCI fails initially upon Radwaste/Turbine Building failure	VB, early CF, DW failure, RCS < 200 psi	1.8E-06	yes	1.8%	yes	9.2E-08	0.1%		3.3E-02	3.0E-09	0.2%		6.6E-03	6.1E-10	0.2%	
62	SPDS11	SAPB7	seismic (>0.6g) SBO, HPCI works until battery depletion or high pool temperature	VB, vent	1.7E-05	yes	17.1%	yes	8.5E-08	0.1%		4.9E-02	4.2E-09	0.3%		1.0E-02	8.9E-10	0.3%	
63	FPDS02	SAPB5	fire SBO - LOOP with random ESW failure, HPCI works until battery depletion or high pool temperature	VB, late CF, WW failure	5.9E-06	yes	5.9%	yes	8.3E-08	0.1%		2.7E-07	2.2E-14	0.0%		1.5E-04	1.2E-11	0.0%	
64	IPDS02	SAPB4	transient with 2 stuck-open SRVs and loss of injection, CRD and CHR working	VB, early CF, DW failure, RCS < 200 psi	2.2E-07		0.2%		7.9E-08	0.1%		2.1E-05	1.7E-12	0.0%		1.3E-04	1.0E-11	0.0%	
65	SPDS05	SAPB4	seismic (<0.6g) SBO, HPCI fails initially upon Radwaste/Turbine Building failure	VB, early CF, DW failure, RCS < 200 psi	1.4E-06	yes	1.4%	yes	7.1E-08	0.1%		8.3E-04	6.0E-11	0.0%		9.3E-04	6.6E-11	0.0%	
66	IPDS04	SAPB8	short-term SBO with DC failed, possible stuck-open SRV	VB, no CF	2.1E-07		0.2%		6.9E-08	0.1%		3.3E-09	2.3E-16	0.0%		5.1E-07	3.5E-14	0.0%	

67	FPDS03	SAPB5	fire SBO - LOOP with DG failure to run, HPCI works until high pool temperature	VB, late CF, WW failure	5.7E-06	yes	5.7%	yes	6.8E-08	0.1%		2.7E-07	1.8E-14	0.0%		1.2E-04	8.4E-12	0.0%	
68	IPDS06	SAPB4	ATWS with HPCI and SLC working, vessel not manually depressurized, injection fails on high pool temperature	VB, early CF, DW failure, RCS < 200 psi	3.0E-07		0.3%		6.5E-08	0.1%		1.5E-05	1.0E-12	0.0%		4.6E-05	3.0E-12	0.0%	
69	IPDS06	SAPB9	ATWS with HPCI and SLC working, vessel not manually depressurized, injection fails on high pool temperature	No VB	3.0E-07		0.3%		6.1E-08	0.1%		4.9E-07	3.0E-14	0.0%		1.9E-05	1.1E-12	0.0%	
70	FPDS01	SAPB1	fire in MCR or cable spreading room, auto-actuation fails, remote control lost	VB, early CF, WW failure, RCS > 200 psi	6.8E-06	yes	6.9%	yes	5.4E-08	0.1%		8.2E-06	4.4E-13	0.0%		1.4E-04	7.8E-12	0.0%	
71	IPDS07	SAPB4	ATWS after stuck-open SRV, SLC failed	VB, early CF, DW failure, RCS < 200 psi	1.1E-07		0.1%		5.3E-08	0.1%		2.9E-05	1.6E-12	0.0%		1.5E-04	7.9E-12	0.0%	
72	IPDS04	SAPB9	short-term SBO with DC failed, possible stuck-open SRV	No VB	2.1E-07		0.2%		5.3E-08	0.1%		5.0E-07	2.7E-14	0.0%		2.9E-05	1.5E-12	0.0%	
73	SPDS07	SAPB6	seismic (<0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, late CF, DW failure	1.9E-07		0.2%		5.2E-08	0.1%		7.1E-06	3.7E-13	0.0%		9.5E-05	5.0E-12	0.0%	
74	IPDS04	SAPB4	short-term SBO with DC failed, possible stuck-open SRV	VB, early CF, DW failure, RCS < 200 psi	2.1E-07		0.2%		5.0E-08	0.1%		6.0E-05	3.0E-12	0.0%		1.7E-04	8.4E-12	0.0%	
75	SPDS14	SAPB5	seismic (>0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, late CF, WW failure	1.4E-06	yes	1.4%	yes	4.6E-08	0.0%		2.4E-04	1.1E-11	0.0%		6.6E-04	3.1E-11	0.0%	
76	SPDS12	SAPB5	seismic (>0.6g) SBO, HPCI fails initially upon Radwaste/Turbine Building failure	VB, late CF, WW failure	1.8E-06	yes	1.8%	yes	4.3E-08	0.0%		2.4E-04	1.0E-11	0.0%		6.6E-04	2.8E-11	0.0%	
77	FPDS03	SAPB7	fire SBO - LOOP with DG failure to run, HPCI works until high pool temperature	VB, vent	5.7E-06	yes	5.7%	yes	4.0E-08	0.0%		4.5E-05	1.8E-12	0.0%		2.4E-04	9.6E-12	0.0%	
78	IPDS07	SAPB7	ATWS after stuck-open SRV, SLC failed	VB, vent	1.1E-07		0.1%		3.4E-08	0.0%		1.9E-06	6.5E-14	0.0%		1.6E-04	5.3E-12	0.0%	
79	SPDS05	SAPB5	seismic (<0.6g) SBO, HPCI fails initially upon Radwaste/Turbine Building failure	VB, late CF, WW failure	1.4E-06	yes	1.4%	yes	3.4E-08	0.0%		4.4E-07	1.5E-14	0.0%		4.7E-05	1.6E-12	0.0%	
80	FPDS04	SAPB1	fire LOOP with failure of PCS, venting, and most CHR, random CHR failures, HPCI fails on high pool temperature, LPCI fails when SRVs close on high containment pressure	VB, early CF, WW failure, RCS > 200 psi	1.1E-06	yes	1.1%	yes	3.2E-08	0.0%		8.1E-06	2.6E-13	0.0%		1.4E-04	4.5E-12	0.0%	
81	FPDS02	SAPB7	fire SBO - LOOP with random ESW failure, HPCI works until battery depletion or high pool temperature	VB, vent	5.9E-06	yes	5.9%	yes	3.0E-08	0.0%		3.2E-05	9.4E-13	0.0%		2.4E-04	7.1E-12	0.0%	
82	FPDS01	SAPB5	fire in MCR or cable spreading room, auto-actuation fails, remote control lost	VB, late CF, WW failure	6.8E-06	yes	6.9%	yes	2.7E-08	0.0%		2.6E-07	7.2E-15	0.0%		2.0E-04	5.5E-12	0.0%	
83	SPDS06	SAPB6	seismic (<0.6g) MLOCA, SBO due to cooling water failure, HPCI works until RVP is depressurized	VB, late CF, DW failure	7.5E-07		0.8%		2.6E-08	0.0%		7.1E-06	1.8E-13	0.0%		9.3E-05	2.4E-12	0.0%	
84	SPDS06	SAPB7	seismic (<0.6g) MLOCA, SBO due to cooling water failure, HPCI works until RVP is depressurized	VB, vent	7.5E-07		0.8%		2.6E-08	0.0%		5.1E-04	1.3E-11	0.0%		1.3E-03	3.2E-11	0.0%	
85	IPDS06	SAPB3	ATWS with HPCI and SLC working, vessel not manually depressurized, injection fails on high pool temperature	VB, early CF, DW failure, RCS > 200 psi	3.0E-07		0.3%		2.5E-08	0.0%		1.6E-05	4.0E-13	0.0%		7.4E-05	1.9E-12	0.0%	
86	SPDS14	SAPB7	seismic (>0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, vent	1.4E-06	yes	1.4%	yes	2.4E-08	0.0%		1.3E-01	3.2E-09	0.2%		1.4E-02	3.2E-10	0.1%	
87	IPDS01	SAPB6	LLOCA or MLOCA with loss of injection	VB, late CF, DW failure	2.6E-07		0.3%		1.9E-08	0.0%		1.1E-05	2.1E-13	0.0%		1.6E-04	3.1E-12	0.0%	
88	IPDS05	SAPB2	long-term SBO, either battery depletion or HPCI and RCIC fails on high pool temperature or high containment pressure	VB, early CF, WW failure, RCS < 200 psi	1.9E-06	yes	1.9%	yes	1.9E-08	0.0%		2.9E-06	5.5E-14	0.0%		9.6E-05	1.8E-12	0.0%	
89	IPDS09	SAPB3	ATWS after LOOP, SLC failed	VB, early CF, DW failure, RCS > 200 psi	4.4E-08		0.0%		1.8E-08	0.0%		2.7E-05	4.7E-13	0.0%		1.7E-04	3.0E-12	0.0%	
90	IPDS02	SAPB6	transient with 2 stuck-open SRVs and loss of injection, CRD and CHR working	VB, late CF, DW failure	2.2E-07		0.2%		1.6E-08	0.0%		1.1E-05	1.7E-13	0.0%		1.6E-04	2.6E-12	0.0%	

91	IPDS06	SAPB6	ATWS with HPCI and SLC working, vessel not manually depressurized, injection fails on high pool temperature	VB, late CF, DW failure	3.0E-07		0.3%		1.5E-08	0.0%		1.0E-05	1.5E-13	0.0%		1.0E-04	1.5E-12	0.0%	
92	SPDS07	SAPB2	seismic (<0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, early CF, WW failure, RCS < 200 psi	1.9E-07		0.2%		1.4E-08	0.0%		1.8E-04	2.5E-12	0.0%		9.5E-04	1.3E-11	0.0%	
93	IPDS04	SAPB3	short-term SBO with DC failed, possible stuck open SRV	VB, early CF, DW failure, RCS > 200 psi	2.1E-07		0.2%		1.4E-08	0.0%		1.9E-05	2.7E-13	0.0%		1.4E-04	1.9E-12	0.0%	
94	IPDS08	SAPB6	ATWS after loss of AC bus or PCS, SLC failed	VB, late CF, DW failure	1.5E-06	yes	1.5%	yes	1.4E-08	0.0%		1.0E-05	1.4E-13	0.0%		1.5E-04	2.1E-12	0.0%	
95	IPDS05	SAPB5	long-term SBO, either battery depletion or HPCI and RCIC fails on high pool temperature or high containment pressure	VB, late CF, WW failure	1.9E-06	yes	1.9%	yes	1.3E-08	0.0%		3.2E-07	4.2E-15	0.0%		1.2E-04	1.6E-12	0.0%	
96	IPDS04	SAPB6	short-term SBO with DC failed, possible stuck open SRV	VB, late CF, DW failure	2.1E-07		0.2%		1.3E-08	0.0%		1.1E-05	1.5E-13	0.0%		7.5E-05	9.9E-13	0.0%	
97	SPDS12	SAPB1	seismic (>0.6g) SBO, HPCI fails initially upon Radwaste/Turbine Building failure	VB, early CF, WW failure, RCS > 200 psi	1.8E-06	yes	1.8%	yes	1.3E-08	0.0%		3.4E-02	4.3E-10	0.0%		2.3E-03	2.9E-11	0.0%	
98	IPDS08	SAPB1	ATWS after loss of AC bus or PCS, SLC failed	VB, early CF, WW failure, RCS > 200 psi	1.5E-06	yes	1.5%	yes	1.2E-08	0.0%		1.9E-06	2.3E-14	0.0%		1.1E-04	1.3E-12	0.0%	
99	SPDS13	SAPB5	seismic (>0.6g) MLOCA, SBO due to cooling water failure, HPCI works until RVP is depressurized	VB, late CF, WW failure	3.9E-06	yes	3.9%	yes	1.2E-08	0.0%		2.4E-04	2.8E-12	0.0%		6.6E-04	7.7E-12	0.0%	
100	IPDS09	SAPB7	ATWS after LOOP, SLC failed	VB, vent	4.4E-08		0.0%		1.0E-08	0.0%		1.9E-06	2.0E-14	0.0%		1.5E-04	1.5E-12	0.0%	
101	SPDS04	SAPB2	seismic (<0.6g) SBO, HPCI works until battery depletion or high pool temperature	VB, early CF, WW failure, RCS < 200 psi	2.0E-05	yes	20.2%	yes	1.0E-08	0.0%		1.8E-04	1.8E-12	0.0%		9.5E-04	9.5E-12	0.0%	
102	SPDS04	SAPB4	seismic (<0.6g) SBO, HPCI works until battery depletion or high pool temperature	VB, early CF, DW failure, RCS < 200 psi	2.0E-05	yes	20.2%	yes	1.0E-08	0.0%		8.4E-04	8.4E-12	0.0%		9.4E-04	9.4E-12	0.0%	
103	SPDS05	SAPB1	seismic (<0.6g) SBO, HPCI fails initially upon Radwaste/Turbine Building failure	VB, early CF, WW failure, RCS > 200 psi	1.4E-06	yes	1.4%	yes	9.8E-09	0.0%		1.7E-05	1.7E-13	0.0%		7.6E-04	7.4E-12	0.0%	
104	IPDS07	SAPB8	ATWS after stuck-open SRV, SLC failed	VB, no CF	1.1E-07		0.1%		9.0E-09	0.0%		3.3E-09	3.0E-17	0.0%		5.1E-07	4.6E-15	0.0%	
105	SPDS11	SAPB2	seismic (>0.6g) SBO, HPCI works until battery depletion or high pool temperature	VB, early CF, WW failure, RCS < 200 psi	1.7E-05	yes	17.1%	yes	8.5E-09	0.0%		1.6E-02	1.4E-10	0.0%		4.0E-03	3.4E-11	0.0%	
106	SPDS11	SAPB4	seismic (>0.6g) SBO, HPCI works until battery depletion or high pool temperature	VB, early CF, DW failure, RCS < 200 psi	1.7E-05	yes	17.1%	yes	8.5E-09	0.0%		4.3E-02	3.7E-10	0.0%		7.7E-03	6.5E-11	0.0%	
107	IPDS07	SAPB9	ATWS after stuck-open SRV, SLC failed	No VB	1.1E-07		0.1%		8.1E-09	0.0%		4.9E-07	4.0E-15	0.0%		2.7E-05	2.2E-13	0.0%	
108	IPDS01	SAPB2	LLOCA or MLOCA with loss of injection	VB, early CF, WW failure, RCS < 200 psi	2.6E-07		0.3%		7.3E-09	0.0%		2.9E-06	2.1E-14	0.0%		9.6E-05	7.0E-13	0.0%	
109	IPDS09	SAPB4	ATWS after LOOP, SLC failed	VB, early CF, DW failure, RCS < 200 psi	4.4E-08		0.0%		7.2E-09	0.0%		2.3E-05	1.6E-13	0.0%		1.2E-04	8.7E-13	0.0%	
110	SPDS07	SAPB5	seismic (<0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, late CF, WW failure	1.9E-07		0.2%		6.3E-09	0.0%		4.4E-07	2.7E-15	0.0%		4.7E-05	2.9E-13	0.0%	
111	IPDS02	SAPB2	transient with 2 stuck-open SRVs and loss of injection, CRD and CHR working	VB, early CF, WW failure, RCS < 200 psi	2.2E-07		0.2%		6.2E-09	0.0%		2.9E-06	1.8E-14	0.0%		9.6E-05	5.9E-13	0.0%	
112	IPDS08	SAPB2	ATWS after loss of AC bus or PCS, SLC failed	VB, early CF, WW failure, RCS < 200 psi	1.5E-06	yes	1.5%	yes	6.0E-09	0.0%		2.9E-06	1.8E-14	0.0%		9.5E-05	5.7E-13	0.0%	
113	IPDS06	SAPB2	ATWS with HPCI and SLC working, vessel not manually depressurized, injection fails on high pool temperature	VB, early CF, WW failure, RCS < 200 psi	3.0E-07		0.3%		5.1E-09	0.0%		2.9E-06	1.5E-14	0.0%		8.4E-05	4.3E-13	0.0%	
114	IPDS04	SAPB2	short-term SBO with DC failed, possible stuck open SRV	VB, early CF, WW failure, RCS < 200 psi	2.1E-07		0.2%		5.0E-09	0.0%		3.0E-06	1.5E-14	0.0%		9.7E-05	4.9E-13	0.0%	
115	IPDS04	SAPB7	short-term SBO with DC failed, possible stuck open SRV	VB, vent	2.1E-07		0.2%		5.0E-09	0.0%		1.9E-06	9.5E-15	0.0%		1.3E-04	6.7E-13	0.0%	
116	IPDS09	SAPB8	ATWS after LOOP, SLC failed	VB, no CF	4.4E-08		0.0%		3.5E-09	0.0%		3.3E-09	1.2E-17	0.0%		5.1E-07	1.8E-15	0.0%	
117	SPDS07	SAPB7	seismic (<0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, vent	1.9E-07		0.2%		3.2E-09	0.0%		5.1E-04	1.7E-12	0.0%		1.3E-03	4.1E-12	0.0%	
118	IPDS09	SAPB9	ATWS after LOOP, SLC failed	No VB	4.4E-08		0.0%		3.2E-09	0.0%		4.9E-07	1.6E-15	0.0%		2.7E-05	8.7E-14	0.0%	

119	FPDS02	SAPB2	fire SBO - LOOP with random ESW failure, HPCI works until battery depletion or high pool temperature	VB, early CF, WW failure, RCS < 200 psi	5.9E-06	yes	5.9%	yes	3.0E-09	0.0%		9.6E-07	2.8E-15	0.0%		5.8E-05	1.7E-13	0.0%	
120	FPDS02	SAPB4	fire SBO - LOOP with random ESW failure, HPCI works until battery depletion or high pool temperature	VB, early CF, DW failure, RCS < 200 psi	5.9E-06	yes	5.9%	yes	3.0E-09	0.0%		3.7E-05	1.1E-13	0.0%		1.3E-04	3.8E-13	0.0%	
121	FPDS02	SAPB8	fire SBO - LOOP with random ESW failure, HPCI works until battery depletion or high pool temperature	VB, no CF	5.9E-06	yes	5.9%	yes	3.0E-09	0.0%		9.4E-09	2.8E-17	0.0%		2.2E-06	6.4E-15	0.0%	
122	FPDS02	SAPB9	fire SBO - LOOP with random ESW failure, HPCI works until battery depletion or high pool temperature	No VB	5.9E-06	yes	5.9%	yes	3.0E-09	0.0%		1.6E-08	4.6E-17	0.0%		3.2E-07	9.3E-16	0.0%	
123	FPDS03	SAPB2	fire SBO - LOOP with DG failure to run, HPCI works until high pool temperature	VB, early CF, WW failure, RCS < 200 psi	5.7E-06	yes	5.7%	yes	2.9E-09	0.0%		9.7E-07	2.8E-15	0.0%		5.8E-05	1.7E-13	0.0%	
124	FPDS03	SAPB4	fire SBO - LOOP with DG failure to run, HPCI works until high pool temperature	VB, early CF, DW failure, RCS < 200 psi	5.7E-06	yes	5.7%	yes	2.9E-09	0.0%		3.7E-05	1.1E-13	0.0%		1.3E-04	3.6E-13	0.0%	
125	FPDS03	SAPB8	fire SBO - LOOP with DG failure to run, HPCI works until high pool temperature	VB, no CF	5.7E-06	yes	5.7%	yes	2.9E-09	0.0%		9.4E-09	2.7E-17	0.0%		2.2E-06	6.2E-15	0.0%	
126	FPDS03	SAPB9	fire SBO - LOOP with DG failure to run, HPCI works until high pool temperature	No VB	5.7E-06	yes	5.7%	yes	2.9E-09	0.0%		1.6E-08	4.5E-17	0.0%		3.2E-07	9.0E-16	0.0%	
127	SPDS06	SAPB5	seismic (<0.6g) MLOCA, SBO due to cooling water failure, HPCI works until RVP is depressurized	VB, late CF, WW failure	7.5E-07		0.8%		2.3E-09	0.0%		4.4E-07	9.8E-16	0.0%		4.7E-05	1.0E-13	0.0%	
128	FPDS04	SAPB6	fire LOOP with failure of PCS, venting, and most CHR, random CHR failures, HPCI fails on high pool temperature, LPCI fails when SRVs close on high containment pressure	VB, late CF, DW failure	1.1E-06	yes	1.1%	yes	2.2E-09	0.0%		1.4E-05	3.2E-14	0.0%		1.9E-04	4.2E-13	0.0%	
129	SPDS13	SAPB1	seismic (>0.6g) MLOCA, SBO due to cooling water failure, HPCI works until RVP is depressurized	VB, early CF, WW failure, RCS > 200 psi	3.9E-06	yes	3.9%	yes	2.0E-09	0.0%		1.0E-02	2.0E-11	0.0%		2.3E-03	4.5E-12	0.0%	
130	SPDS13	SAPB3	seismic (>0.6g) MLOCA, SBO due to cooling water failure, HPCI works until RVP is depressurized	VB, early CF, DW failure, RCS > 200 psi	3.9E-06	yes	3.9%	yes	2.0E-09	0.0%		1.8E-02	3.6E-11	0.0%		5.9E-03	1.2E-11	0.0%	
131	IPDS03	SAPB7	transient with 2 stuck-open SRVs and loss of injection, CRD working, CHR failed	VB, vent	6.1E-09		0.0%		1.7E-09	0.0%		1.9E-06	3.1E-15	0.0%		1.0E-04	1.7E-13	0.0%	
132	IPDS03	SAPB4	transient with 2 stuck-open SRVs and loss of injection, CRD working, CHR failed	VB, early CF, DW failure, RCS < 200 psi	6.1E-09		0.0%		1.6E-09	0.0%		2.0E-05	3.3E-14	0.0%		9.4E-05	1.5E-13	0.0%	
133	IPDS03	SAPB9	transient with 2 stuck-open SRVs and loss of injection, CRD working, CHR failed	No VB	6.1E-09		0.0%		1.5E-09	0.0%		4.9E-07	7.6E-16	0.0%		2.6E-05	3.9E-14	0.0%	
134	IPDS06	SAPB1	ATWS with HPCI and SLC working, vessel not manually depressurized, injection fails on high pool temperature	VB, early CF, WW failure, RCS > 200 psi	3.0E-07		0.3%		1.5E-09	0.0%		1.9E-06	2.9E-15	0.0%		1.1E-04	1.6E-13	0.0%	
135	IPDS07	SAPB6	ATWS after stuck-open SRV, SLC failed	VB, late CF, DW failure	1.1E-07		0.1%		1.3E-09	0.0%		1.0E-05	1.4E-14	0.0%		1.6E-04	2.1E-13	0.0%	
136	IPDS07	SAPB2	ATWS after stuck-open SRV, SLC failed	VB, early CF, WW failure, RCS < 200 psi	1.1E-07		0.1%		1.2E-09	0.0%		2.9E-06	3.5E-15	0.0%		9.5E-05	1.1E-13	0.0%	
137	IPDS04	SAPB5	short-term SBO with DC failed, possible stuck-open SRV	VB, late CF, WW failure	2.1E-07		0.2%		1.1E-09	0.0%		3.2E-07	3.4E-16	0.0%		1.2E-04	1.3E-13	0.0%	
138	SPDS12	SAPB2	seismic (>0.6g) SBO, HPCI fails initially upon Radwaste/Turbine Building failure	VB, early CF, WW failure, RCS < 200 psi	1.8E-06	yes	1.8%	yes	9.0E-10	0.0%		1.6E-02	1.5E-11	0.0%		4.1E-03	3.6E-12	0.0%	
139	SPDS12	SAPB7	seismic (>0.6g) SBO, HPCI fails initially upon Radwaste/Turbine Building failure	VB, vent	1.8E-06	yes	1.8%	yes	9.0E-10	0.0%		8.5E-02	7.6E-11	0.0%		1.3E-02	1.2E-11	0.0%	
140	IPDS01	SAPB7	LLOCA or MLOCA with loss of injection	VB, vent	2.6E-07		0.3%		7.8E-10	0.0%		1.9E-06	1.5E-15	0.0%		1.3E-04	1.0E-13	0.0%	
141	IPDS08	SAPB5	ATWS after loss of AC bus or PCS, SLC failed	VB, late CF, WW failure	1.5E-06	yes	1.5%	yes	7.5E-10	0.0%		3.2E-07	2.4E-16	0.0%		1.2E-04	8.9E-14	0.0%	
142	SPDS05	SAPB2	seismic (<0.6g) SBO, HPCI fails initially upon Radwaste/Turbine Building failure	VB, early CF, WW failure, RCS < 200 psi	1.4E-06	yes	1.4%	yes	7.0E-10	0.0%		1.8E-04	1.3E-13	0.0%		9.5E-04	6.7E-13	0.0%	

143	SPDS05	SAPB7	seismic (<0.6g) SBO, HPCI fails initially upon Radwaste/Turbine Building failure	VB, vent	1.4E-06	yes	1.4%	yes	7.0E-10	0.0%		5.1E-04	3.6E-13	0.0%		1.2E-03	8.6E-13	0.0%	
144	SPDS14	SAPB1	seismic (>0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, early CF, WW failure, RCS > 200 psi	1.4E-06	yes	1.4%	yes	7.0E-10	0.0%		1.0E-02	7.3E-12	0.0%		2.3E-03	1.6E-12	0.0%	
145	SPDS14	SAPB3	seismic (>0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, early CF, DW failure, RCS > 200 psi	1.4E-06	yes	1.4%	yes	7.0E-10	0.0%		1.8E-02	1.3E-11	0.0%		5.9E-03	4.1E-12	0.0%	
146	IPDS02	SAPB7	transient with 2 stuck-open SRVs and loss of injection, CRD and CHR working	VB, vent	2.2E-07		0.2%		6.6E-10	0.0%		1.9E-06	1.2E-15	0.0%		1.3E-04	8.5E-14	0.0%	
147	FPDS04	SAPB2	fire LOOP with failure of PCS, venting, and most CHR, random CHR failures, HPCI fails on high pool temperature, LPCI fails when SRVs close on high containment pressure	VB, early CF, WW failure, RCS < 200 psi	1.1E-06	yes	1.1%	yes	5.5E-10	0.0%		9.7E-07	5.3E-16	0.0%		5.8E-05	3.2E-14	0.0%	
148	FPDS04	SAPB4	fire LOOP with failure of PCS, venting, and most CHR, random CHR failures, HPCI fails on high pool temperature, LPCI fails when SRVs close on high containment pressure	VB, early CF, DW failure, RCS < 200 psi	1.1E-06	yes	1.1%	yes	5.5E-10	0.0%		3.7E-05	2.0E-14	0.0%		1.3E-04	7.0E-14	0.0%	
149	FPDS04	SAPB5	fire LOOP with failure of PCS, venting, and most CHR, random CHR failures, HPCI fails on high pool temperature, LPCI fails when SRVs close on high containment pressure	VB, late CF, WW failure	1.1E-06	yes	1.1%	yes	5.5E-10	0.0%		2.7E-07	1.5E-16	0.0%		1.5E-04	8.1E-14	0.0%	
150	FPDS04	SAPB8	fire LOOP with failure of PCS, venting, and most CHR, random CHR failures, HPCI fails on high pool temperature, LPCI fails when SRVs close on high containment pressure	VB, no CF	1.1E-06	yes	1.1%	yes	5.5E-10	0.0%		9.4E-09	5.2E-18	0.0%		2.2E-06	1.2E-15	0.0%	
151	FPDS04	SAPB9	fire LOOP with failure of PCS, venting, and most CHR, random CHR failures, HPCI fails on high pool temperature, LPCI fails when SRVs close on high containment pressure	No VB	1.1E-06	yes	1.1%	yes	5.5E-10	0.0%		1.6E-08	8.7E-18	0.0%		3.2E-07	1.7E-16	0.0%	
152	IPDS03	SAPB6	transient with 2 stuck-open SRVs and loss of injection, CRD working, CHR failed	VB, late CF, DW failure	6.1E-09		0.0%		5.1E-10	0.0%		1.0E-05	5.3E-15	0.0%		1.4E-04	7.2E-14	0.0%	
153	IPDS03	SAPB8	transient with 2 stuck-open SRVs and loss of injection, CRD working, CHR failed	VB, no CF	6.1E-09		0.0%		4.8E-10	0.0%		3.3E-09	1.6E-18	0.0%		7.1E-07	3.4E-16	0.0%	
154	IPDS09	SAPB6	ATWS after LOOP, SLC failed	VB, late CF, DW failure	4.4E-08		0.0%		4.0E-10	0.0%		1.0E-05	4.1E-15	0.0%		1.5E-04	6.1E-14	0.0%	
155	SPDS06	SAPB1	seismic (<0.6g) MLOCA, SBO due to cooling water failure, HPCI works until RVP is depressurized	VB, early CF, WW failure, RCS > 200 psi	7.5E-07		0.8%		3.8E-10	0.0%		1.7E-05	6.5E-15	0.0%		7.6E-04	2.8E-13	0.0%	
156	SPDS06	SAPB3	seismic (<0.6g) MLOCA, SBO due to cooling water failure, HPCI works until RVP is depressurized	VB, early CF, DW failure, RCS > 200 psi	7.5E-07		0.8%		3.8E-10	0.0%		2.6E-06	9.8E-16	0.0%		5.5E-04	2.1E-13	0.0%	
157	IPDS09	SAPB1	ATWS after LOOP, SLC failed	VB, early CF, WW failure, RCS > 200 psi	4.4E-08		0.0%		3.5E-10	0.0%		1.9E-06	6.8E-16	0.0%		1.1E-04	4.0E-14	0.0%	
158	IPDS03	SAPB5	transient with 2 stuck-open SRVs and loss of injection, CRD working, CHR failed	VB, late CF, WW failure	6.1E-09		0.0%		2.8E-10	0.0%		3.2E-07	8.9E-17	0.0%		1.1E-04	3.2E-14	0.0%	
159	IPDS09	SAPB2	ATWS after LOOP, SLC failed	VB, early CF, WW failure, RCS < 200 psi	4.4E-08		0.0%		1.8E-10	0.0%		2.9E-06	5.1E-16	0.0%		9.5E-05	1.7E-14	0.0%	
160	IPDS06	SAPB5	ATWS with HPCI and SLC working, vessel not manually depressurized, injection fails on high pool temperature	VB, late CF, WW failure	3.0E-07		0.3%		1.5E-10	0.0%		3.2E-07	4.8E-17	0.0%		1.2E-04	1.8E-14	0.0%	
161	IPDS06	SAPB7	ATWS with HPCI and SLC working, vessel not manually depressurized, injection fails on high pool temperature	VB, vent	3.0E-07		0.3%		1.5E-10	0.0%		1.9E-06	2.8E-16	0.0%		1.3E-04	1.9E-14	0.0%	
162	IPDS01	SAPB1	LLOCA or MLOCA with loss of injection	VB, early CF, WW failure, RCS > 200 psi	2.6E-07		0.3%		1.3E-10	0.0%		1.9E-06	2.5E-16	0.0%		1.1E-04	1.5E-14	0.0%	
163	IPDS01	SAPB3	LLOCA or MLOCA with loss of injection	VB, early CF, DW failure, RCS > 200 psi	2.6E-07		0.3%		1.3E-10	0.0%		1.7E-05	2.2E-15	0.0%		1.3E-04	1.7E-14	0.0%	
164	IPDS01	SAPB5	LLOCA or MLOCA with loss of injection	VB, late CF, WW failure	2.6E-07		0.3%		1.3E-10	0.0%		3.2E-07	4.1E-17	0.0%		1.2E-04	1.6E-14	0.0%	
165	IPDS01	SAPB9	LLOCA or MLOCA with loss of injection	No VB	2.6E-07		0.3%		1.3E-10	0.0%		4.9E-07	6.4E-17	0.0%		2.7E-05	3.5E-15	0.0%	

166	IPDS02	SAPB1	transient with 2 stuck-open SRVs and loss of injection, CRD and CHR working	VB, early CF, WW failure, RCS > 200 psi	2.2E-07		0.2%		1.1E-10	0.0%		1.9E-06	2.1E-16	0.0%		1.1E-04	1.2E-14	0.0%	
167	IPDS02	SAPB3	transient with 2 stuck-open SRVs and loss of injection, CRD and CHR working	VB, early CF, DW failure, RCS > 200 psi	2.2E-07		0.2%		1.1E-10	0.0%		1.7E-05	1.9E-15	0.0%		1.3E-04	1.4E-14	0.0%	
168	IPDS02	SAPB5	transient with 2 stuck-open SRVs and loss of injection, CRD and CHR working	VB, late CF, WW failure	2.2E-07		0.2%		1.1E-10	0.0%		3.2E-07	3.5E-17	0.0%		1.2E-04	1.3E-14	0.0%	
169	IPDS02	SAPB9	transient with 2 stuck-open SRVs and loss of injection, CRD and CHR working	No VB	2.2E-07		0.2%		1.1E-10	0.0%		4.9E-07	5.4E-17	0.0%		2.7E-05	3.0E-15	0.0%	
170	IPDS04	SAPB1	short-term SBO with DC failed, possible stuck-open SRV	VB, early CF, WW failure, RCS > 200 psi	2.1E-07		0.2%		1.1E-10	0.0%		1.9E-06	2.0E-16	0.0%		1.1E-04	1.2E-14	0.0%	
171	SPDS07	SAPB1	seismic (<0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, early CF, WW failure, RCS > 200 psi	1.9E-07		0.2%		9.5E-11	0.0%		1.7E-05	1.6E-15	0.0%		7.6E-04	7.2E-14	0.0%	
172	SPDS07	SAPB3	seismic (<0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, early CF, DW failure, RCS > 200 psi	1.9E-07		0.2%		9.5E-11	0.0%		2.6E-06	2.5E-16	0.0%		5.5E-04	5.2E-14	0.0%	
173	IPDS07	SAPB1	ATWS after stuck-open SRV, SLC failed	VB, early CF, WW failure, RCS > 200 psi	1.1E-07		0.1%		5.5E-11	0.0%		1.9E-06	1.1E-16	0.0%		1.1E-04	6.2E-15	0.0%	
174	IPDS07	SAPB3	ATWS after stuck-open SRV, SLC failed	VB, early CF, DW failure, RCS > 200 psi	1.1E-07		0.1%		5.5E-11	0.0%		1.7E-05	9.4E-16	0.0%		1.3E-04	7.0E-15	0.0%	
175	IPDS07	SAPB5	ATWS after stuck-open SRV, SLC failed	VB, late CF, WW failure	1.1E-07		0.1%		5.5E-11	0.0%		3.2E-07	1.7E-17	0.0%		1.2E-04	6.6E-15	0.0%	
176	IPDS09	SAPB5	ATWS after LOOP, SLC failed	VB, late CF, WW failure	4.4E-08		0.0%		2.2E-11	0.0%		3.2E-07	7.0E-18	0.0%		1.2E-04	2.6E-15	0.0%	
177	IPDS03	SAPB1	transient with 2 stuck-open SRVs and loss of injection, CRD working, CHR failed	VB, early CF, WW failure, RCS > 200 psi	6.1E-09		0.0%		3.1E-12	0.0%		1.9E-06	5.9E-18	0.0%		1.1E-04	3.4E-16	0.0%	
178	IPDS03	SAPB2	transient with 2 stuck-open SRVs and loss of injection, CRD working, CHR failed	VB, early CF, WW failure, RCS < 200 psi	6.1E-09		0.0%		3.1E-12	0.0%		2.9E-06	8.9E-18	0.0%		9.5E-05	2.9E-16	0.0%	
179	IPDS03	SAPB3	transient with 2 stuck-open SRVs and loss of injection, CRD working, CHR failed	VB, early CF, DW failure, RCS > 200 psi	6.1E-09		0.0%		3.1E-12	0.0%		1.7E-05	5.2E-17	0.0%		1.3E-04	3.9E-16	0.0%	
180	SPDS01	SAPB1	seismic (<0.6g) RPV rupture, LOOP, and containment failure	VB, early CF, WW failure, RCS > 200 psi	1.6E-06	yes	1.6%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
181	SPDS01	SAPB2	seismic (<0.6g) RPV rupture, LOOP, and containment failure	VB, early CF, WW failure, RCS < 200 psi	1.6E-06	yes	1.6%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
182	SPDS01	SAPB3	seismic (<0.6g) RPV rupture, LOOP, and containment failure	VB, early CF, DW failure, RCS > 200 psi	1.6E-06	yes	1.6%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
183	SPDS01	SAPB5	seismic (<0.6g) RPV rupture, LOOP, and containment failure	VB, late CF, WW failure	1.6E-06	yes	1.6%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
184	SPDS01	SAPB6	seismic (<0.6g) RPV rupture, LOOP, and containment failure	VB, late CF, DW failure	1.6E-06	yes	1.6%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
185	SPDS01	SAPB7	seismic (<0.6g) RPV rupture, LOOP, and containment failure	VB, vent	1.6E-06	yes	1.6%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
186	SPDS02	SAPB1	seismic (<0.6g) LLOCA, SBO, and containment failure	VB, early CF, WW failure, RCS > 200 psi	2.9E-06	yes	2.9%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
187	SPDS02	SAPB2	seismic (<0.6g) LLOCA, SBO, and containment failure	VB, early CF, WW failure, RCS < 200 psi	2.9E-06	yes	2.9%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
188	SPDS02	SAPB3	seismic (<0.6g) LLOCA, SBO, and containment failure	VB, early CF, DW failure, RCS > 200 psi	2.9E-06	yes	2.9%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
189	SPDS02	SAPB5	seismic (<0.6g) LLOCA, SBO, and containment failure	VB, late CF, WW failure	2.9E-06	yes	2.9%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
190	SPDS02	SAPB6	seismic (<0.6g) LLOCA, SBO, and containment failure	VB, late CF, DW failure	2.9E-06	yes	2.9%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
191	SPDS02	SAPB7	seismic (<0.6g) LLOCA, SBO, and containment failure	VB, vent	2.9E-06	yes	2.9%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
192	SPDS03	SAPB1	seismic (<0.6g) LLOCA, SBO with DC failure, and containment failure	VB, early CF, WW failure, RCS > 200 psi	2.4E-07		0.2%		0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
193	SPDS03	SAPB2	seismic (<0.6g) LLOCA, SBO with DC failure, and containment failure	VB, early CF, WW failure, RCS < 200 psi	2.4E-07		0.2%		0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
194	SPDS03	SAPB3	seismic (<0.6g) LLOCA, SBO with DC failure, and containment failure	VB, early CF, DW failure, RCS > 200 psi	2.4E-07		0.2%		0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	

195	SPDS03	SAPB5	seismic (<0.6g) LLOCA, SBO with DC failure, and containment failure	VB, late CF, WW failure	2.4E-07		0.2%		0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
196	SPDS03	SAPB6	seismic (<0.6g) LLOCA, SBO with DC failure, and containment failure	VB, late CF, DW failure	2.4E-07		0.2%		0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
197	SPDS03	SAPB7	seismic (<0.6g) LLOCA, SBO with DC failure, and containment failure	VB, vent	2.4E-07		0.2%		0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
198	SPDS08	SAPB1	seismic (>0.6g) RPV rupture, LOOP, and containment failure	VB, early CF, WW failure, RCS > 200 psi	7.2E-06	yes	7.3%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
199	SPDS08	SAPB2	seismic (>0.6g) RPV rupture, LOOP, and containment failure	VB, early CF, WW failure, RCS < 200 psi	7.2E-06	yes	7.3%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
200	SPDS08	SAPB3	seismic (>0.6g) RPV rupture, LOOP, and containment failure	VB, early CF, DW failure, RCS > 200 psi	7.2E-06	yes	7.3%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
201	SPDS08	SAPB5	seismic (>0.6g) RPV rupture, LOOP, and containment failure	VB, late CF, WW failure	7.2E-06	yes	7.3%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
202	SPDS08	SAPB6	seismic (>0.6g) RPV rupture, LOOP, and containment failure	VB, late CF, DW failure	7.2E-06	yes	7.3%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
203	SPDS08	SAPB7	seismic (>0.6g) RPV rupture, LOOP, and containment failure	VB, vent	7.2E-06	yes	7.3%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
204	SPDS09	SAPB1	seismic (>0.6g) LLOCA, SBO, and containment failure	VB, early CF, WW failure, RCS > 200 psi	1.4E-05	yes	14.1%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
205	SPDS09	SAPB2	seismic (>0.6g) LLOCA, SBO, and containment failure	VB, early CF, WW failure, RCS < 200 psi	1.4E-05	yes	14.1%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
206	SPDS09	SAPB3	seismic (>0.6g) LLOCA, SBO, and containment failure	VB, early CF, DW failure, RCS > 200 psi	1.4E-05	yes	14.1%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
207	SPDS09	SAPB5	seismic (>0.6g) LLOCA, SBO, and containment failure	VB, late CF, WW failure	1.4E-05	yes	14.1%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
208	SPDS09	SAPB6	seismic (>0.6g) LLOCA, SBO, and containment failure	VB, late CF, DW failure	1.4E-05	yes	14.1%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
209	SPDS09	SAPB7	seismic (>0.6g) LLOCA, SBO, and containment failure	VB, vent	1.4E-05	yes	14.1%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
210	SPDS10	SAPB1	seismic (>0.6g) LLOCA, SBO with DC failure, and containment failure	VB, early CF, WW failure, RCS > 200 psi	2.8E-06	yes	2.8%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
211	SPDS10	SAPB2	seismic (>0.6g) LLOCA, SBO with DC failure, and containment failure	VB, early CF, WW failure, RCS < 200 psi	2.8E-06	yes	2.8%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
212	SPDS10	SAPB3	seismic (>0.6g) LLOCA, SBO with DC failure, and containment failure	VB, early CF, DW failure, RCS > 200 psi	2.8E-06	yes	2.8%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
213	SPDS10	SAPB5	seismic (>0.6g) LLOCA, SBO with DC failure, and containment failure	VB, late CF, WW failure	2.8E-06	yes	2.8%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
214	SPDS10	SAPB6	seismic (>0.6g) LLOCA, SBO with DC failure, and containment failure	VB, late CF, DW failure	2.8E-06	yes	2.8%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	
215	SPDS10	SAPB7	seismic (>0.6g) LLOCA, SBO with DC failure, and containment failure	VB, vent	2.8E-06	yes	2.8%	yes	0.0E+00	0.0%		n/a	0.0E+00	0.0%		n/a	0.0E+00	0.0%	

Peach Bottom NUREG-1150			
Master List of Sequences (Based on EPRI Seismic Hazard Curve)			
No.	Sequence	Plant Damage State	Summary Accident Progression Bin
1	FPDS02 SAPB3	fire SBO - LOOP with random ESW failure, HPCI works until battery depletion or high pool temperature	VB, early CF, DW failure, RCS > 200 psi
2	FPDS03 SAPB3	fire SBO - LOOP with DG failure to run, HPCI works until high pool temperature	VB, early CF, DW failure, RCS > 200 psi
3	FPDS01 SAPB8	fire in MCR or cable spreading room, auto-actuation fails, remote control lost	VB, no CF
4	FPDS01 SAPB9	fire in MCR or cable spreading room, auto-actuation fails, remote control lost	No VB
5	FPDS01 SAPB4	fire in MCR or cable spreading room, auto-actuation fails, remote control lost	VB, early CF, DW failure, RCS < 200 psi
6	IPDS05 SAPB3	long-term SBO, either battery depletion or HPCI and RCIC fails on high pool temperature or high containment pressure	VB, early CF, DW failure, RCS > 200 psi
7	FPDS04 SAPB3	fire LOOP with failure of PCS, venting, and most CHR, random CHR failures, HPCI fails on high pool temperature, LPCI fails when SRVs close on high containment pressure	VB, early CF, DW failure, RCS > 200 psi
8	SPDS01 SAPB3	seismic (<0.6g) RPV rupture, LOOP, and containment failure	VB, early CF, DW failure, RCS > 200 psi
9	FPDS02 SAPB6	fire SBO - LOOP with random ESW failure, HPCI works until battery depletion or high pool temperature	VB, late CF, DW failure
10	FPDS01 SAPB3	fire in MCR or cable spreading room, auto-actuation fails, remote control lost	VB, early CF, DW failure, RCS > 200 psi
11	FPDS03 SAPB6	fire SBO - LOOP with DG failure to run, HPCI works until high pool temperature	VB, late CF, DW failure
12	IPDS08 SAPB3	ATWS after loss of AC bus or PCS, SLC failed	VB, early CF, DW failure, RCS > 200 psi
13	SPDS06 SAPB4	seismic (<0.6g) MLOCA, SBO due to cooling water failure, HPCI works until RVP is depressurized	VB, early CF, DW failure, RCS < 200 psi
14	SPDS08 SAPB3	seismic (>0.6g) RPV rupture, LOOP, and containment failure	VB, early CF, DW failure, RCS > 200 psi
15	FPDS03 SAPB1	fire SBO - LOOP with DG failure to run, HPCI works until high pool temperature	VB, early CF, WW failure, RCS > 200 psi
16	FPDS02 SAPB1	fire SBO - LOOP with random ESW failure, HPCI works until battery depletion or high pool temperature	VB, early CF, WW failure, RCS > 200 psi
17	IPDS08 SAPB7	ATWS after loss of AC bus or PCS, SLC failed	VB, vent
18	FPDS01 SAPB6	fire in MCR or cable spreading room, auto-actuation fails, remote control lost	VB, late CF, DW failure
19	SPDS05 SAPB4	seismic (<0.6g) SBO, HPCI fails initially upon Radwaste/Turbine Building failure	VB, early CF, DW failure, RCS < 200 psi
20	IPDS08 SAPB4	ATWS after loss of AC bus or PCS, SLC failed	VB, early CF, DW failure, RCS < 200 psi
21	IPDS05 SAPB4	long-term SBO, either battery depletion or HPCI and RCIC fails on high pool temperature or high containment pressure	VB, early CF, DW failure, RCS < 200 psi

22	FPDS04	SAPB7	fire LOOP with failure of PCS, venting, and most CHR, random CHR failures, HPCI fails on high pool temperature, LPCI fails when SRVs close on high containment pressure	VB, vent	9.8E-07		3.6%	yes	1.7E-07	0.6%	yes	3.1E-05	5.2E-12	0.0%		2.3E-04	3.9E-11	0.3%	
23	IPDS05	SAPB8	long-term SBO, either battery depletion or HPCI and RCIC fails on high pool temperature or high containment pressure	VB, no CF	5.9E-06	yes	21.7%	yes	1.7E-07	0.6%	yes	3.3E-09	5.6E-16	0.0%		5.1E-07	8.6E-14	0.0%	
24	IPDS05	SAPB9	long-term SBO, either battery depletion or HPCI and RCIC fails on high pool temperature or high containment pressure	No VB	5.9E-06	yes	21.7%	yes	1.6E-07	0.6%	yes	4.9E-07	7.9E-14	0.0%		3.0E-05	4.9E-12	0.0%	
25	IPDS05	SAPB7	long-term SBO, either battery depletion or HPCI and RCIC fails on high pool temperature or high containment pressure	VB, vent	5.9E-06	yes	21.7%	yes	1.6E-07	0.6%	yes	1.9E-06	3.0E-13	0.0%		1.3E-04	2.1E-11	0.2%	
26	FPDS01	SAPB7	fire in MCR or cable spreading room, auto-actuation fails, remote control lost	VB, vent	1.9E-06	yes	7.0%	yes	1.6E-07	0.6%	yes	3.2E-05	5.0E-12	0.0%		2.6E-04	4.0E-11	0.3%	
27	FPDS01	SAPB2	fire in MCR or cable spreading room, auto-actuation fails, remote control lost	VB, early CF, WW failure, RCS < 200 psi	1.9E-06	yes	7.0%	yes	1.4E-07	0.5%	yes	9.7E-07	1.4E-13	0.0%		5.8E-05	8.3E-12	0.1%	
28	IPDS01	SAPB8	LLOCA or MLOCA with loss of injection	VB, no CF	1.1E-08		0.0%		1.4E-07	0.5%	yes	3.3E-09	4.7E-16	0.0%		5.1E-07	7.2E-14	0.0%	
29	IPDS06	SAPB8	ATWS with HPCI and SLC working, vessel not manually depressurized, injection fails on high pool temperature	VB, no CF	3.7E-08		0.1%		1.3E-07	0.5%	yes	3.3E-09	4.3E-16	0.0%		5.0E-07	6.4E-14	0.0%	
30	SPDS01	SAPB6	seismic (<0.6g) RPV rupture, LOOP, and containment failure	VB, late CF, DW failure	1.1E-06	yes	4.0%	yes	1.2E-07	0.5%	yes	0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
31	IPDS08	SAPB8	ATWS after loss of AC bus or PCS, SLC failed	VB, no CF	7.9E-08		0.3%		1.2E-07	0.4%	yes	3.3E-09	4.0E-16	0.0%		5.2E-07	6.2E-14	0.0%	
32	SPDS07	SAPB4	seismic (<0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, early CF, DW failure, RCS < 200 psi	6.3E-07		2.3%	yes	1.2E-07	0.4%	yes	8.2E-04	7.3E-12	0.0%		9.0E-04	1.2E-11	0.1%	
33	IPDS02	SAPB8	transient with 2 stuck-open SRVs and loss of injection, CRD and CHR working	VB, no CF	5.0E-07		1.8%	yes	1.2E-07	0.4%	yes	3.3E-09	3.9E-16	0.0%		5.1E-07	6.1E-14	0.0%	
34	IPDS05	SAPB6	long-term SBO, either battery depletion or HPCI and RCIC fails on high pool temperature or high containment pressure	VB, late CF, DW failure	5.9E-06	yes	21.7%	yes	1.2E-07	0.4%	yes	1.0E-05	1.2E-12	0.0%		1.7E-04	1.9E-11	0.1%	
35	SPDS10	SAPB4	seismic (>0.6g) LLOCA, SBO with DC failure, and containment failure	VB, early CF, DW failure, RCS < 200 psi	6.8E-06	yes	25.0%	yes	1.1E-07	0.4%	yes	1.4E+00	4.5E-09	8.5%	yes	2.6E-01	8.0E-10	5.8%	yes
36	IPDS08	SAPB9	ATWS after loss of AC bus or PCS, SLC failed	No VB	7.9E-08		0.3%		1.1E-07	0.4%	yes	5.0E-07	5.4E-14	0.0%		2.6E-05	2.8E-12	0.0%	
37	IPDS05	SAPB1	long-term SBO, either battery depletion or HPCI and RCIC fails on high pool temperature or high containment pressure	VB, early CF, WW failure, RCS > 200 psi	5.9E-06	yes	21.7%	yes	1.0E-07	0.4%	yes	1.9E-06	1.9E-13	0.0%		1.1E-04	1.1E-11	0.1%	
38	IPDS01	SAPB4	LLOCA or MLOCA with loss of injection	VB, early CF, DW failure, RCS < 200 psi	1.1E-08		0.0%		9.4E-08	0.3%	yes	2.3E-05	2.1E-12	0.0%		1.3E-04	1.2E-11	0.1%	
39	FPDS02	SAPB5	fire SBO - LOOP with random ESW failure, HPCI works until battery depletion or high pool temperature	VB, late CF, WW failure	3.0E-07		1.1%	yes	8.3E-08	0.3%	yes	2.7E-07	2.2E-14	0.0%		1.5E-04	1.2E-11	0.1%	
40	IPDS02	SAPB4	transient with 2 stuck-open SRVs and loss of injection, CRD and CHR working	VB, early CF, DW failure, RCS < 200 psi	5.0E-07		1.8%	yes	7.9E-08	0.3%	yes	2.1E-05	1.7E-12	0.0%		1.3E-04	1.0E-11	0.1%	
41	SPDS08	SAPB6	seismic (>0.6g) RPV rupture, LOOP, and containment failure	VB, late CF, DW failure	2.1E-07		0.8%		7.9E-08	0.3%	yes	0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
42	SPDS02	SAPB3	seismic (<0.6g) LLOCA, SBO, and containment failure	VB, early CF, DW failure, RCS > 200 psi	4.4E-08		0.2%		6.9E-08	0.3%	yes	0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
43	IPDS04	SAPB8	short-term SBO with DC failed, possible stuck-open SRV	VB, no CF	1.2E-07		0.4%		6.9E-08	0.3%		3.3E-09	2.3E-16	0.0%		5.1E-07	3.5E-14	0.0%	
44	FPDS03	SAPB5	fire SBO - LOOP with DG failure to run, HPCI works until high pool temperature	VB, late CF, WW failure	1.1E-07		0.4%		6.8E-08	0.3%		2.7E-07	1.8E-14	0.0%		1.2E-04	8.4E-12	0.1%	
45	IPDS06	SAPB4	ATWS with HPCI and SLC working, vessel not manually depressurized, injection fails on high pool temperature	VB, early CF, DW failure, RCS < 200 psi	3.7E-08		0.1%		6.5E-08	0.2%		1.5E-05	1.0E-12	0.0%		4.6E-05	3.0E-12	0.0%	
46	SPDS09	SAPB3	seismic (>0.6g) LLOCA, SBO, and containment failure	VB, early CF, DW failure, RCS > 200 psi	6.1E-09		0.0%		6.3E-08	0.2%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
47	IPDS06	SAPB9	ATWS with HPCI and SLC working, vessel not manually depressurized, injection fails on high pool temperature	No VB	3.7E-08		0.1%		6.1E-08	0.2%		4.9E-07	3.0E-14	0.0%		1.9E-05	1.1E-12	0.0%	

48	SPDS01	SAPB1	seismic (<0.6g) RPV rupture, LOOP, and containment failure	VB, early CF, WW failure, RCS > 200 psi	1.1E-06	yes	4.0%	yes	6.1E-08	0.2%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
49	FPDS01	SAPB1	fire in MCR or cable spreading room, auto-actuation fails, remote control lost	VB, early CF, WW failure, RCS > 200 psi	1.9E-06	yes	7.0%	yes	5.4E-08	0.2%		8.2E-06	4.4E-13	0.0%		1.4E-04	7.8E-12	0.1%	
50	IPDS07	SAPB4	ATWS after stuck-open SRV, SLC failed	VB, early CF, DW failure, RCS < 200 psi	9.1E-08		0.3%		5.3E-08	0.2%		2.9E-05	1.6E-12	0.0%		1.5E-04	7.9E-12	0.1%	
51	IPDS04	SAPB9	short-term SBO with DC failed, possible stuck-open SRV	No VB	1.2E-07		0.4%		5.3E-08	0.2%		5.0E-07	2.7E-14	0.0%		2.9E-05	1.5E-12	0.0%	
52	IPDS04	SAPB4	short-term SBO with DC failed, possible stuck-open SRV	VB, early CF, DW failure, RCS < 200 psi	1.2E-07		0.4%		5.0E-08	0.2%		6.0E-05	3.0E-12	0.0%		1.7E-04	8.4E-12	0.1%	
53	FPDS03	SAPB7	fire SBO - LOOP with DG failure to run, HPCI works until high pool temperature	VB, vent	1.1E-07		0.4%		4.0E-08	0.1%		4.5E-05	1.8E-12	0.0%		2.4E-04	9.6E-12	0.1%	
54	SPDS08	SAPB1	seismic (>0.6g) RPV rupture, LOOP, and containment failure	VB, early CF, WW failure, RCS > 200 psi	2.1E-07		0.8%		3.9E-08	0.1%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
55	SPDS11	SAPB4	seismic (>0.6g) SBO, HPCI works until battery depletion or high pool temperature	VB, early CF, DW failure, RCS < 200 psi	2.2E-07		0.8%	yes	3.7E-08	0.1%		1.0E-02	1.2E-11	0.0%		1.8E-03	1.9E-12	0.0%	
56	IPDS07	SAPB7	ATWS after stuck-open SRV, SLC failed	VB, vent	9.1E-08		0.3%		3.4E-08	0.1%		1.9E-06	6.5E-14	0.0%		1.6E-04	5.3E-12	0.0%	
57	FPDS04	SAPB1	fire LOOP with failure of PCS, venting, and most CHR, random CHR failures, HPCI fails on high pool temperature, LPCI fails when SRVs close on high containment pressure	VB, early CF, WW failure, RCS > 200 psi	9.8E-07		3.6%	yes	3.2E-08	0.1%		8.1E-06	2.6E-13	0.0%		1.4E-04	4.5E-12	0.0%	
58	SPDS10	SAPB2	seismic (>0.6g) LLOCA, SBO with DC failure, and containment failure	VB, early CF, WW failure, RCS < 200 psi	6.8E-06	yes	25.0%	yes	3.0E-08	0.1%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
59	FPDS02	SAPB7	fire SBO - LOOP with random ESW failure, HPCI works until battery depletion or high pool temperature	VB, vent	3.0E-07		1.1%	yes	3.0E-08	0.1%		3.2E-05	9.4E-13	0.0%		2.4E-04	7.1E-12	0.1%	
60	FPDS01	SAPB5	fire in MCR or cable spreading room, auto-actuation fails, remote control lost	VB, late CF, WW failure	1.9E-06	yes	7.0%	yes	2.7E-08	0.1%		2.6E-07	7.2E-15	0.0%		2.0E-04	5.5E-12	0.0%	
61	SPDS03	SAPB4	seismic (<0.6g) LLOCA, SBO with DC failure, and containment failure	VB, early CF, DW failure, RCS < 200 psi	2.5E-07		0.9%	yes	2.7E-08	0.1%		7.4E-03	1.8E-11	0.0%		8.4E-03	2.6E-11	0.2%	
62	IPDS06	SAPB3	ATWS with HPCI and SLC working, vessel not manually depressurized, injection fails on high pool temperature	VB, early CF, DW failure, RCS > 200 psi	3.7E-08		0.1%		2.5E-08	0.1%		1.6E-05	4.0E-13	0.0%		7.4E-05	1.9E-12	0.0%	
63	SPDS02	SAPB6	seismic (<0.6g) LLOCA, SBO, and containment failure	VB, late CF, DW failure	4.4E-08		0.2%		2.2E-08	0.1%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
64	SPDS09	SAPB6	seismic (>0.6g) LLOCA, SBO, and containment failure	VB, late CF, DW failure	6.1E-09		0.0%		2.0E-08	0.1%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
65	IPDS01	SAPB6	LLOCA or MLOCA with loss of injection	VB, late CF, DW failure	1.1E-08		0.0%		1.9E-08	0.1%		1.1E-05	2.1E-13	0.0%		1.6E-04	3.1E-12	0.0%	
66	IPDS05	SAPB2	long-term SBO, either battery depletion or HPCI and RCIC fails on high pool temperature or high containment pressure	VB, early CF, WW failure, RCS < 200 psi	5.9E-06	yes	21.7%	yes	1.9E-08	0.1%		2.9E-06	5.5E-14	0.0%		9.6E-05	1.8E-12	0.0%	
67	IPDS09	SAPB3	ATWS after LOOP, SLC failed	VB, early CF, DW failure, RCS > 200 psi	1.5E-07		0.6%		1.8E-08	0.1%		2.7E-05	4.7E-13	0.0%		1.7E-04	3.0E-12	0.0%	
68	SPDS11	SAPB6	seismic (>0.6g) SBO, HPCI works until battery depletion or high pool temperature	VB, late CF, DW failure	2.2E-07		0.8%	yes	1.7E-08	0.1%		4.0E-01	2.8E-10	0.5%		3.2E-01	1.9E-10	1.4%	yes
69	IPDS02	SAPB6	transient with 2 stuck-open SRVs and loss of injection, CRD and CHR working	VB, late CF, DW failure	5.0E-07		1.8%	yes	1.6E-08	0.1%		1.1E-05	1.7E-13	0.0%		1.6E-04	2.6E-12	0.0%	
70	IPDS06	SAPB6	ATWS with HPCI and SLC working, vessel not manually depressurized, injection fails on high pool temperature	VB, late CF, DW failure	3.7E-08		0.1%		1.5E-08	0.1%		1.0E-05	1.5E-13	0.0%		1.0E-04	1.5E-12	0.0%	
71	IPDS04	SAPB3	short-term SBO with DC failed, possible stuck-open SRV	VB, early CF, DW failure, RCS > 200 psi	1.2E-07		0.4%		1.4E-08	0.1%		1.9E-05	2.7E-13	0.0%		1.4E-04	1.9E-12	0.0%	
72	SPDS01	SAPB5	seismic (<0.6g) RPV rupture, LOOP, and containment failure	VB, late CF, WW failure	1.1E-06	yes	4.0%	yes	1.4E-08	0.1%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
73	IPDS08	SAPB6	ATWS after loss of AC bus or PCS, SLC failed	VB, late CF, DW failure	7.9E-08		0.3%		1.4E-08	0.1%		1.0E-05	1.4E-13	0.0%		1.5E-04	2.1E-12	0.0%	
74	IPDS05	SAPB5	long-term SBO, either battery depletion or HPCI and RCIC fails on high pool temperature or high containment pressure	VB, late CF, WW failure	5.9E-06	yes	21.7%	yes	1.3E-08	0.0%		3.2E-07	4.2E-15	0.0%		1.2E-04	1.6E-12	0.0%	
75	IPDS04	SAPB6	short-term SBO with DC failed, possible stuck-open SRV	VB, late CF, DW failure	1.2E-07		0.4%		1.3E-08	0.0%		1.1E-05	1.5E-13	0.0%		7.5E-05	9.9E-13	0.0%	
76	IPDS08	SAPB1	ATWS after loss of AC bus or PCS, SLC failed	VB, early CF, WW failure, RCS > 200 psi	7.9E-08		0.3%		1.2E-08	0.0%		1.9E-06	2.3E-14	0.0%		1.1E-04	1.3E-12	0.0%	

77	IPDS09	SAPB7	ATWS after LOOP, SLC failed	VB, vent	1.5E-07		0.6%		1.0E-08	0.0%		1.9E-06	2.0E-14	0.0%		1.5E-04	1.5E-12	0.0%	
78	IPDS07	SAPB8	ATWS after stuck-open SRV, SLC failed	VB, no CF	9.1E-08		0.3%		9.0E-09	0.0%		3.3E-09	3.0E-17	0.0%		5.1E-07	4.6E-15	0.0%	
79	SPDS08	SAPB5	seismic (>0.6g) RPV rupture, LOOP, and containment failure	VB, late CF, WW failure	2.1E-07		0.8%		8.8E-09	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
80	IPDS07	SAPB9	ATWS after stuck-open SRV, SLC failed	No VB	9.1E-08		0.3%		8.1E-09	0.0%		4.9E-07	4.0E-15	0.0%		2.7E-05	2.2E-13	0.0%	
81	SPDS03	SAPB2	seismic (<0.6g) LLOCA, SBO with DC failure, and containment failure	VB, early CF, WW failure, RCS < 200 psi	2.5E-07		0.9%	yes	7.3E-09	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
82	IPDS01	SAPB2	LLOCA or MLOCA with loss of injection	VB, early CF, WW failure, RCS < 200 psi	1.1E-08		0.0%		7.3E-09	0.0%		2.9E-06	2.1E-14	0.0%		9.6E-05	7.0E-13	0.0%	
83	IPDS09	SAPB4	ATWS after LOOP, SLC failed	VB, early CF, DW failure, RCS < 200 psi	1.5E-07		0.6%		7.2E-09	0.0%		2.3E-05	1.6E-13	0.0%		1.2E-04	8.7E-13	0.0%	
84	SPDS04	SAPB4	seismic (<0.6g) SBO, HPCI works until battery depletion or high pool temperature	VB, early CF, DW failure, RCS < 200 psi	2.6E-07		1.0%	yes	6.6E-09	0.0%		1.3E-03	3.9E-13	0.0%		1.4E-03	8.4E-13	0.0%	
85	IPDS02	SAPB2	transient with 2 stuck-open SRVs and loss of injection, CRD and CHR working	VB, early CF, WW failure, RCS < 200 psi	5.0E-07		1.8%	yes	6.2E-09	0.0%		2.9E-06	1.8E-14	0.0%		9.6E-05	5.9E-13	0.0%	
86	IPDS08	SAPB2	ATWS after loss of AC bus or PCS, SLC failed	VB, early CF, WW failure, RCS < 200 psi	7.9E-08		0.3%		6.0E-09	0.0%		2.9E-06	1.8E-14	0.0%		9.5E-05	5.7E-13	0.0%	
87	IPDS06	SAPB2	ATWS with HPCI and SLC working, vessel not manually depressurized, injection fails on high pool temperature	VB, early CF, WW failure, RCS < 200 psi	3.7E-08		0.1%		5.1E-09	0.0%		2.9E-06	1.5E-14	0.0%		8.4E-05	4.3E-13	0.0%	
88	SPDS10	SAPB6	seismic (>0.6g) LLOCA, SBO with DC failure, and containment failure	VB, late CF, DW failure	6.8E-06	yes	25.0%	yes	5.1E-09	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
89	SPDS10	SAPB7	seismic (>0.6g) LLOCA, SBO with DC failure, and containment failure	VB, vent	6.8E-06	yes	25.0%	yes	5.1E-09	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
90	SPDS02	SAPB4	seismic (<0.6g) LLOCA, SBO, and containment failure	VB, early CF, DW failure, RCS < 200 psi	4.4E-08		0.2%		5.1E-09	0.0%		4.4E-01	7.2E-11	0.1%		5.4E-01	2.3E-10	1.6%	yes
91	IPDS04	SAPB2	short-term SBO with DC failed, possible stuck-open SRV	VB, early CF, WW failure, RCS < 200 psi	1.2E-07		0.4%		5.0E-09	0.0%		3.0E-06	1.5E-14	0.0%		9.7E-05	4.9E-13	0.0%	
92	IPDS04	SAPB7	short-term SBO with DC failed, possible stuck-open SRV	VB, vent	1.2E-07		0.4%		5.0E-09	0.0%		1.9E-06	9.5E-15	0.0%		1.3E-04	6.7E-13	0.0%	
93	SPDS01	SAPB7	seismic (<0.6g) RPV rupture, LOOP, and containment failure	VB, vent	1.1E-06	yes	4.0%	yes	4.9E-09	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
94	SPDS09	SAPB4	seismic (>0.6g) LLOCA, SBO, and containment failure	VB, early CF, DW failure, RCS < 200 psi	6.1E-09		0.0%		4.6E-09	0.0%		1.2E+02	1.7E-08	32.3%	yes	2.1E+01	2.7E-09	19.7%	yes
95	SPDS11	SAPB2	seismic (>0.6g) SBO, HPCI works until battery depletion or high pool temperature	VB, early CF, WW failure, RCS < 200 psi	2.2E-07		0.8%	yes	4.4E-09	0.0%		3.1E-02	4.2E-12	0.0%		7.8E-03	6.3E-13	0.0%	
96	IPDS09	SAPB8	ATWS after LOOP, SLC failed	VB, no CF	1.5E-07		0.6%		3.5E-09	0.0%		3.3E-09	1.2E-17	0.0%		5.1E-07	1.8E-15	0.0%	
97	IPDS09	SAPB9	ATWS after LOOP, SLC failed	No VB	1.5E-07		0.6%		3.2E-09	0.0%		4.9E-07	1.6E-15	0.0%		2.7E-05	8.7E-14	0.0%	
98	SPDS08	SAPB7	seismic (>0.6g) RPV rupture, LOOP, and containment failure	VB, vent	2.1E-07		0.8%		3.2E-09	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
99	SPDS04	SAPB6	seismic (<0.6g) SBO, HPCI works until battery depletion or high pool temperature	VB, late CF, DW failure	2.6E-07		1.0%	yes	3.1E-09	0.0%		5.8E-03	1.8E-12	0.0%		7.6E-02	2.7E-11	0.2%	
100	FPDS02	SAPB2	fire SBO - LOOP with random ESW failure, HPCI works until battery depletion or high pool temperature	VB, early CF, WW failure, RCS < 200 psi	3.0E-07		1.1%	yes	3.0E-09	0.0%		9.6E-07	2.8E-15	0.0%		5.8E-05	1.7E-13	0.0%	
101	FPDS02	SAPB4	fire SBO - LOOP with random ESW failure, HPCI works until battery depletion or high pool temperature	VB, early CF, DW failure, RCS < 200 psi	3.0E-07		1.1%	yes	3.0E-09	0.0%		3.7E-05	1.1E-13	0.0%		1.3E-04	3.8E-13	0.0%	
102	FPDS02	SAPB8	fire SBO - LOOP with random ESW failure, HPCI works until battery depletion or high pool temperature	VB, no CF	3.0E-07		1.1%	yes	3.0E-09	0.0%		9.4E-09	2.8E-17	0.0%		2.2E-06	6.4E-15	0.0%	
103	FPDS02	SAPB9	fire SBO - LOOP with random ESW failure, HPCI works until battery depletion or high pool temperature	No VB	3.0E-07		1.1%	yes	3.0E-09	0.0%		1.6E-08	4.6E-17	0.0%		3.2E-07	9.3E-16	0.0%	
104	FPDS03	SAPB2	fire SBO - LOOP with DG failure to run, HPCI works until high pool temperature	VB, early CF, WW failure, RCS < 200 psi	1.1E-07		0.4%		2.9E-09	0.0%		9.7E-07	2.8E-15	0.0%		5.8E-05	1.7E-13	0.0%	
105	FPDS03	SAPB4	fire SBO - LOOP with DG failure to run, HPCI works until high pool temperature	VB, early CF, DW failure, RCS < 200 psi	1.1E-07		0.4%		2.9E-09	0.0%		3.7E-05	1.1E-13	0.0%		1.3E-04	3.6E-13	0.0%	
106	FPDS03	SAPB8	fire SBO - LOOP with DG failure to run, HPCI works until high pool temperature	VB, no CF	1.1E-07		0.4%		2.9E-09	0.0%		9.4E-09	2.7E-17	0.0%		2.2E-06	6.2E-15	0.0%	
107	FPDS03	SAPB9	fire SBO - LOOP with DG failure to run, HPCI works until high pool temperature	No VB	1.1E-07		0.4%		2.9E-09	0.0%		1.6E-08	4.5E-17	0.0%		3.2E-07	9.0E-16	0.0%	

108	SPDS02	SAPB5	seismic (<0.6g) LLOCA, SBO, and containment failure	VB, late CF, WW failure	4.4E-08		0.2%		2.4E-09	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
109	FPDS04	SAPB6	fire LOOP with failure of PCS, venting, and most CHR, random CHR failures, HPCI fails on high pool temperature, LPCI fails when SRVs close on high containment pressure	VB, late CF, DW failure	9.8E-07		3.6%	yes	2.2E-09	0.0%		1.4E-05	3.2E-14	0.0%		1.9E-04	4.2E-13	0.0%	
110	SPDS09	SAPB5	seismic (>0.6g) LLOCA, SBO, and containment failure	VB, late CF, WW failure	6.1E-09		0.0%		2.2E-09	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
111	SPDS11	SAPB5	seismic (>0.6g) SBO, HPCI works until battery depletion or high pool temperature	VB, late CF, WW failure	2.2E-07		0.8%	yes	2.0E-09	0.0%		2.8E-02	1.7E-12	0.0%		7.7E-02	5.9E-12	0.0%	
112	IPDS03	SAPB7	transient with 2 stuck-open SRVs and loss of injection, CRD working, CHR failed	VB, vent	6.1E-08		0.2%		1.7E-09	0.0%		1.9E-06	3.1E-15	0.0%		1.0E-04	1.7E-13	0.0%	
113	IPDS03	SAPB4	transient with 2 stuck-open SRVs and loss of injection, CRD working, CHR failed	VB, early CF, DW failure, RCS < 200 psi	6.1E-08		0.2%		1.6E-09	0.0%		2.0E-05	3.3E-14	0.0%		9.4E-05	1.5E-13	0.0%	
114	IPDS03	SAPB9	transient with 2 stuck-open SRVs and loss of injection, CRD working, CHR failed	No VB	6.1E-08		0.2%		1.5E-09	0.0%		4.9E-07	7.6E-16	0.0%		2.6E-05	3.9E-14	0.0%	
115	IPDS06	SAPB1	ATWS with HPCI and SLC working, vessel not manually depressurized, injection fails on high pool temperature	VB, early CF, WW failure, RCS > 200 psi	3.7E-08		0.1%		1.5E-09	0.0%		1.9E-06	2.9E-15	0.0%		1.1E-04	1.6E-13	0.0%	
116	IPDS07	SAPB6	ATWS after stuck-open SRV, SLC failed	VB, late CF, DW failure	9.1E-08		0.3%		1.3E-09	0.0%		1.0E-05	1.4E-14	0.0%		1.6E-04	2.1E-13	0.0%	
117	SPDS03	SAPB6	seismic (<0.6g) LLOCA, SBO with DC failure, and containment failure	VB, late CF, DW failure	2.5E-07		0.9%	yes	1.3E-09	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
118	SPDS03	SAPB7	seismic (<0.6g) LLOCA, SBO with DC failure, and containment failure	VB, vent	2.5E-07		0.9%	yes	1.3E-09	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
119	IPDS07	SAPB2	ATWS after stuck-open SRV, SLC failed	VB, early CF, WW failure, RCS < 200 psi	9.1E-08		0.3%		1.2E-09	0.0%		2.9E-06	3.5E-15	0.0%		9.5E-05	1.1E-13	0.0%	
120	IPDS04	SAPB5	short-term SBO with DC failed, possible stuck-open SRV	VB, late CF, WW failure	1.2E-07		0.4%		1.1E-09	0.0%		3.2E-07	3.4E-16	0.0%		1.2E-04	1.3E-13	0.0%	
121	SPDS11	SAPB7	seismic (>0.6g) SBO, HPCI works until battery depletion or high pool temperature	VB, vent	2.2E-07		0.8%	yes	1.0E-09	0.0%		4.0E+00	1.2E-10	0.2%		8.6E-01	2.7E-11	0.2%	
122	SPDS04	SAPB2	seismic (<0.6g) SBO, HPCI works until battery depletion or high pool temperature	VB, early CF, WW failure, RCS < 200 psi	2.6E-07		1.0%	yes	7.9E-10	0.0%		2.3E-03	1.9E-13	0.0%		1.2E-02	2.4E-12	0.0%	
123	IPDS01	SAPB7	LLOCA or MLOCA with loss of injection	VB, vent	1.1E-08		0.0%		7.8E-10	0.0%		1.9E-06	1.5E-15	0.0%		1.3E-04	1.0E-13	0.0%	
124	IPDS08	SAPB5	ATWS after loss of AC bus or PCS, SLC failed	VB, late CF, WW failure	7.9E-08		0.3%		7.5E-10	0.0%		3.2E-07	2.4E-16	0.0%		1.2E-04	8.9E-14	0.0%	
125	SPDS02	SAPB1	seismic (<0.6g) LLOCA, SBO, and containment failure	VB, early CF, WW failure, RCS > 200 psi	4.4E-08		0.2%		7.0E-10	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
126	IPDS02	SAPB7	transient with 2 stuck-open SRVs and loss of injection, CRD and CHR working	VB, vent	5.0E-07		1.8%	yes	6.6E-10	0.0%		1.9E-06	1.2E-15	0.0%		1.3E-04	8.5E-14	0.0%	
127	SPDS09	SAPB1	seismic (>0.6g) LLOCA, SBO, and containment failure	VB, early CF, WW failure, RCS > 200 psi	6.1E-09		0.0%		6.4E-10	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
128	FPDS04	SAPB2	fire LOOP with failure of PCS, venting, and most CHR, random CHR failures, HPCI fails on high pool temperature, LPCI fails when SRVs close on high containment pressure	VB, early CF, WW failure, RCS < 200 psi	9.8E-07		3.6%	yes	5.5E-10	0.0%		9.7E-07	5.3E-16	0.0%		5.8E-05	3.2E-14	0.0%	
129	FPDS04	SAPB4	fire LOOP with failure of PCS, venting, and most CHR, random CHR failures, HPCI fails on high pool temperature, LPCI fails when SRVs close on high containment pressure	VB, early CF, DW failure, RCS < 200 psi	9.8E-07		3.6%	yes	5.5E-10	0.0%		3.7E-05	2.0E-14	0.0%		1.3E-04	7.0E-14	0.0%	
130	FPDS04	SAPB5	fire LOOP with failure of PCS, venting, and most CHR, random CHR failures, HPCI fails on high pool temperature, LPCI fails when SRVs close on high containment pressure	VB, late CF, WW failure	9.8E-07		3.6%	yes	5.5E-10	0.0%		2.7E-07	1.5E-16	0.0%		1.5E-04	8.1E-14	0.0%	
131	FPDS04	SAPB8	fire LOOP with failure of PCS, venting, and most CHR, random CHR failures, HPCI fails on high pool temperature, LPCI fails when SRVs close on high containment pressure	VB, no CF	9.8E-07		3.6%	yes	5.5E-10	0.0%		9.4E-09	5.2E-18	0.0%		2.2E-06	1.2E-15	0.0%	
132	FPDS04	SAPB9	fire LOOP with failure of PCS, venting, and most CHR, random CHR failures, HPCI fails on high pool temperature, LPCI fails when SRVs close on high containment pressure	No VB	9.8E-07		3.6%	yes	5.5E-10	0.0%		1.6E-08	8.7E-18	0.0%		3.2E-07	1.7E-16	0.0%	
133	IPDS03	SAPB6	transient with 2 stuck-open SRVs and loss of injection, CRD working, CHR failed	VB, late CF, DW failure	6.1E-08		0.2%		5.1E-10	0.0%		1.0E-05	5.3E-15	0.0%		1.4E-04	7.2E-14	0.0%	

134	SPDS01	SAPB2	seismic (<0.6g) RPV rupture, LOOP, and containment failure	VB, early CF, WW failure, RCS < 200 psi	1.1E-06	yes	4.0%	yes	4.9E-10	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
135	SPDS01	SAPB4	seismic (>0.6g) RPV rupture, LOOP, and containment failure	VB, early CF, DW failure, RCS < 200 psi	1.1E-06	yes	4.0%	yes	4.9E-10	0.0%		2.6E+00	8.3E-11	0.2%		3.0E+00	1.3E-10	1.0%	yes
136	IPDS03	SAPB8	transient with 2 stuck-open SRVs and loss of injection, CRD working, CHR failed	VB, no CF	6.1E-08		0.2%		4.8E-10	0.0%		3.3E-09	1.6E-18	0.0%		7.1E-07	3.4E-16	0.0%	
137	SPDS10	SAPB5	seismic (>0.6g) LLOCA, SBO with DC failure, and containment failure	VB, late CF, WW failure	6.8E-06	yes	25.0%	yes	4.5E-10	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
138	IPDS09	SAPB6	ATWS after LOOP, SLC failed	VB, late CF, DW failure	1.5E-07		0.6%		4.0E-10	0.0%		1.0E-05	4.1E-15	0.0%		1.5E-04	6.1E-14	0.0%	
139	SPDS04	SAPB5	seismic (<0.6g) SBO, HCPI works until battery depletion or high pool temperature	VB, late CF, WW failure	2.6E-07		1.0%	yes	3.6E-10	0.0%		3.4E-04	1.1E-14	0.0%		3.6E-02	7.4E-13	0.0%	
140	IPDS09	SAPB1	ATWS after LOOP, SLC failed	VB, early CF, WW failure, RCS > 200 psi	1.5E-07		0.6%		3.5E-10	0.0%		1.9E-06	6.8E-16	0.0%		1.1E-04	4.0E-14	0.0%	
141	SPDS08	SAPB2	seismic (>0.6g) RPV rupture, LOOP, and containment failure	VB, early CF, WW failure, RCS < 200 psi	2.1E-07		0.8%		3.2E-10	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
142	SPDS08	SAPB4	seismic (>0.6g) RPV rupture, LOOP, and containment failure	VB, early CF, DW failure, RCS < 200 psi	2.1E-07		0.8%		3.2E-10	0.0%		7.7E+02	8.1E-09	15.1%	yes	1.3E+02	1.2E-09	8.8%	yes
143	IPDS03	SAPB5	transient with 2 stuck-open SRVs and loss of injection, CRD working, CHR failed	VB, late CF, WW failure	6.1E-08		0.2%		2.8E-10	0.0%		3.2E-07	8.9E-17	0.0%		1.1E-04	3.2E-14	0.0%	
144	SPDS04	SAPB7	seismic (<0.6g) SBO, HCPI works until battery depletion or high pool temperature	VB, vent	2.6E-07		1.0%	yes	1.9E-10	0.0%		2.7E-01	2.7E-12	0.0%		6.6E-01	4.6E-12	0.0%	
145	IPDS09	SAPB2	ATWS after LOOP, SLC failed	VB, early CF, WW failure, RCS < 200 psi	1.5E-07		0.6%		1.8E-10	0.0%		2.9E-06	5.1E-16	0.0%		9.5E-05	1.7E-14	0.0%	
146	IPDS06	SAPB5	ATWS with HCPI and SLC working, vessel not manually depressurized, injection fails on high pool temperature	VB, late CF, WW failure	3.7E-08		0.1%		1.5E-10	0.0%		3.2E-07	4.8E-17	0.0%		1.2E-04	1.8E-14	0.0%	
147	IPDS06	SAPB7	ATWS with HCPI and SLC working, vessel not manually depressurized, injection fails on high pool temperature	VB, vent	3.7E-08		0.1%		1.5E-10	0.0%		1.9E-06	2.8E-16	0.0%		1.3E-04	1.9E-14	0.0%	
148	IPDS01	SAPB1	LLOCA or MLOCA with loss of injection	VB, early CF, WW failure, RCS > 200 psi	1.1E-08		0.0%		1.3E-10	0.0%		1.9E-06	2.5E-16	0.0%		1.1E-04	1.5E-14	0.0%	
149	IPDS01	SAPB3	LLOCA or MLOCA with loss of injection	VB, early CF, DW failure, RCS > 200 psi	1.1E-08		0.0%		1.3E-10	0.0%		1.7E-05	2.2E-15	0.0%		1.3E-04	1.7E-14	0.0%	
150	IPDS01	SAPB5	LLOCA or MLOCA with loss of injection	VB, late CF, WW failure	1.1E-08		0.0%		1.3E-10	0.0%		3.2E-07	4.1E-17	0.0%		1.2E-04	1.6E-14	0.0%	
151	IPDS01	SAPB9	LLOCA or MLOCA with loss of injection	No VB	1.1E-08		0.0%		1.3E-10	0.0%		4.9E-07	6.4E-17	0.0%		2.7E-05	3.5E-15	0.0%	
152	SPDS03	SAPB5	seismic (<0.6g) LLOCA, SBO with DC failure, and containment failure	VB, late CF, WW failure	2.5E-07		0.9%	yes	1.1E-10	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
153	IPDS02	SAPB1	transient with 2 stuck-open SRVs and loss of injection, CRD and CHR working	VB, early CF, WW failure, RCS > 200 psi	5.0E-07		1.8%	yes	1.1E-10	0.0%		1.9E-06	2.1E-16	0.0%		1.1E-04	1.2E-14	0.0%	
154	IPDS02	SAPB3	transient with 2 stuck-open SRVs and loss of injection, CRD and CHR working	VB, early CF, DW failure, RCS > 200 psi	5.0E-07		1.8%	yes	1.1E-10	0.0%		1.7E-05	1.9E-15	0.0%		1.3E-04	1.4E-14	0.0%	
155	IPDS02	SAPB5	transient with 2 stuck-open SRVs and loss of injection, CRD and CHR working	VB, late CF, WW failure	5.0E-07		1.8%	yes	1.1E-10	0.0%		3.2E-07	3.5E-17	0.0%		1.2E-04	1.3E-14	0.0%	
156	IPDS02	SAPB9	transient with 2 stuck-open SRVs and loss of injection, CRD and CHR working	No VB	5.0E-07		1.8%	yes	1.1E-10	0.0%		4.9E-07	5.4E-17	0.0%		2.7E-05	3.0E-15	0.0%	
157	IPDS04	SAPB1	short-term SBO with DC failed, possible stuck-open SRV	VB, early CF, WW failure, RCS > 200 psi	1.2E-07		0.4%		1.1E-10	0.0%		1.9E-06	2.0E-16	0.0%		1.1E-04	1.2E-14	0.0%	
158	SPDS10	SAPB1	seismic (>0.6g) LLOCA, SBO with DC failure, and containment failure	VB, early CF, WW failure, RCS > 200 psi	6.8E-06	yes	25.0%	yes	7.5E-11	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
159	SPDS10	SAPB3	seismic (>0.6g) LLOCA, SBO with DC failure, and containment failure	VB, early CF, DW failure, RCS > 200 psi	6.8E-06	yes	25.0%	yes	7.5E-11	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
160	IPDS07	SAPB1	ATWS after stuck-open SRV, SLC failed	VB, early CF, WW failure, RCS > 200 psi	9.1E-08		0.3%		5.5E-11	0.0%		1.9E-06	1.1E-16	0.0%		1.1E-04	6.2E-15	0.0%	
161	IPDS07	SAPB3	ATWS after stuck-open SRV, SLC failed	VB, early CF, DW failure, RCS > 200 psi	9.1E-08		0.3%		5.5E-11	0.0%		1.7E-05	9.4E-16	0.0%		1.3E-04	7.0E-15	0.0%	
162	IPDS07	SAPB5	ATWS after stuck-open SRV, SLC failed	VB, late CF, WW failure	9.1E-08		0.3%		5.5E-11	0.0%		3.2E-07	1.7E-17	0.0%		1.2E-04	6.6E-15	0.0%	
163	SPDS02	SAPB2	seismic (<0.6g) LLOCA, SBO, and containment failure	VB, early CF, WW failure, RCS < 200 psi	4.4E-08		0.2%		5.0E-11	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
164	SPDS02	SAPB7	seismic (<0.6g) LLOCA, SBO, and containment failure	VB, vent	4.4E-08		0.2%		5.0E-11	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
165	SPDS09	SAPB2	seismic (>0.6g) LLOCA, SBO, and containment failure	VB, early CF, WW failure, RCS < 200 psi	6.1E-09		0.0%		4.6E-11	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
166	SPDS09	SAPB7	seismic (>0.6g) LLOCA, SBO, and containment failure	VB, vent	6.1E-09		0.0%		4.6E-11	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
167	SPDS11	SAPB1	seismic (>0.6g) SBO, HCPI works until battery depletion or high pool temperature	VB, early CF, WW failure, RCS > 200 psi	2.2E-07		0.8%	yes	3.1E-11	0.0%		3.5E+02	3.6E-10	0.7%		7.9E+01	9.4E-11	0.7%	yes

168	SPDS11	SAPB3	seismic (>0.6g) SBO, HCPI works until battery depletion or high pool temperature	VB, early CF, DW failure, RCS > 200 psi	2.2E-07		0.8%	yes	3.1E-11	0.0%		6.9E+03	8.1E-09	15.2%	yes	2.5E+03	3.0E-09	22.0%	yes
169	IPDS09	SAPB5	ATWS after LOOP, SLC failed	VB, late CF, WW failure	1.5E-07		0.6%		2.2E-11	0.0%		3.2E-07	7.0E-18	0.0%		1.2E-04	2.6E-15	0.0%	
170	SPDS03	SAPB1	seismic (<0.6g) LLOCA, SBO with DC failure, and containment failure	VB, early CF, WW failure, RCS > 200 psi	2.5E-07		0.9%	yes	1.9E-11	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
171	SPDS03	SAPB3	seismic (<0.6g) LLOCA, SBO with DC failure, and containment failure	VB, early CF, DW failure, RCS > 200 psi	2.5E-07		0.9%	yes	1.9E-11	0.0%		0.0E+00	0.0E+00	0.0%		0.0E+00	0.0E+00	0.0%	
172	SPDS04	SAPB1	seismic (<0.6g) SBO, HCPI works until battery depletion or high pool temperature	VB, early CF, WW failure, RCS > 200 psi	2.6E-07		1.0%	yes	5.5E-12	0.0%		3.9E+00	8.0E-12	0.0%		1.7E+02	2.3E-11	0.2%	
173	SPDS04	SAPB3	seismic (<0.6g) SBO, HCPI works until battery depletion or high pool temperature	VB, early CF, DW failure, RCS > 200 psi	2.6E-07		1.0%	yes	5.5E-12	0.0%		7.6E+00	3.6E-11	0.1%		1.6E+03	1.6E-10	1.2%	yes
174	IPDS03	SAPB1	transient with 2 stuck-open SRVs and loss of injection, CRD working, CHR failed	VB, early CF, WW failure, RCS > 200 psi	6.1E-08		0.2%		3.1E-12	0.0%		1.9E-06	5.9E-18	0.0%		1.1E-04	3.4E-16	0.0%	
175	IPDS03	SAPB2	transient with 2 stuck-open SRVs and loss of injection, CRD working, CHR failed	VB, early CF, WW failure, RCS < 200 psi	6.1E-08		0.2%		3.1E-12	0.0%		2.9E-06	8.9E-18	0.0%		9.5E-05	2.9E-16	0.0%	
176	IPDS03	SAPB3	transient with 2 stuck-open SRVs and loss of injection, CRD working, CHR failed	VB, early CF, DW failure, RCS > 200 psi	6.1E-08		0.2%		3.1E-12	0.0%		1.7E-05	5.2E-17	0.0%		1.3E-04	3.9E-16	0.0%	
177	SPDS05	SAPB1	seismic (<0.6g) SBO, HCPI fails initially upon Radwaste/Turbine Building failure	VB, early CF, WW failure, RCS > 200 psi	1.3E-07		0.5%		0.0E+00	0.0%		n/a	9.3E-14	0.0%		n/a	3.1E-13	0.0%	
178	SPDS05	SAPB2	seismic (<0.6g) SBO, HCPI fails initially upon Radwaste/Turbine Building failure	VB, early CF, WW failure, RCS < 200 psi	1.3E-07		0.5%		0.0E+00	0.0%		n/a	1.8E-14	0.0%		n/a	2.4E-13	0.0%	
179	SPDS05	SAPB3	seismic (<0.6g) SBO, HCPI fails initially upon Radwaste/Turbine Building failure	VB, early CF, DW failure, RCS > 200 psi	1.3E-07		0.5%		0.0E+00	0.0%		n/a	3.2E-12	0.0%		n/a	1.4E-11	0.1%	
180	SPDS05	SAPB5	seismic (<0.6g) SBO, HCPI fails initially upon Radwaste/Turbine Building failure	VB, late CF, WW failure	1.3E-07		0.5%		0.0E+00	0.0%		n/a	1.9E-15	0.0%		n/a	1.3E-13	0.0%	
181	SPDS05	SAPB6	seismic (<0.6g) SBO, HCPI fails initially upon Radwaste/Turbine Building failure	VB, late CF, DW failure	1.3E-07		0.5%		0.0E+00	0.0%		n/a	3.3E-13	0.0%		n/a	4.9E-12	0.0%	
182	SPDS05	SAPB7	seismic (<0.6g) SBO, HCPI fails initially upon Radwaste/Turbine Building failure	VB, vent	1.3E-07		0.5%		0.0E+00	0.0%		n/a	2.8E-14	0.0%		n/a	4.7E-14	0.0%	
183	SPDS06	SAPB1	seismic (<0.6g) MLOCA, SBO due to cooling water failure, HCPI works until RVP is depressurized	VB, early CF, WW failure, RCS > 200 psi	1.0E-07		0.4%		0.0E+00	0.0%		n/a	2.5E-15	0.0%		n/a	7.2E-15	0.0%	
184	SPDS06	SAPB2	seismic (<0.6g) MLOCA, SBO due to cooling water failure, HCPI works until RVP is depressurized	VB, early CF, WW failure, RCS < 200 psi	1.0E-07		0.4%		0.0E+00	0.0%		n/a	2.6E-12	0.0%		n/a	3.5E-11	0.3%	
185	SPDS06	SAPB3	seismic (<0.6g) MLOCA, SBO due to cooling water failure, HCPI works until RVP is depressurized	VB, early CF, DW failure, RCS > 200 psi	1.0E-07		0.4%		0.0E+00	0.0%		n/a	8.5E-16	0.0%		n/a	3.9E-15	0.0%	
186	SPDS06	SAPB5	seismic (<0.6g) MLOCA, SBO due to cooling water failure, HCPI works until RVP is depressurized	VB, late CF, WW failure	1.0E-07		0.4%		0.0E+00	0.0%		n/a	8.9E-17	0.0%		n/a	6.0E-15	0.0%	
187	SPDS06	SAPB6	seismic (<0.6g) MLOCA, SBO due to cooling water failure, HCPI works until RVP is depressurized	VB, late CF, DW failure	1.0E-07		0.4%		0.0E+00	0.0%		n/a	1.8E-14	0.0%		n/a	2.8E-13	0.0%	
188	SPDS06	SAPB7	seismic (<0.6g) MLOCA, SBO due to cooling water failure, HCPI works until RVP is depressurized	VB, vent	1.0E-07		0.4%		0.0E+00	0.0%		n/a	7.1E-13	0.0%		n/a	1.2E-12	0.0%	
189	SPDS07	SAPB1	seismic (<0.6g) MLOCA or SLOCA, HCPI works until RVP is depressurized	VB, early CF, WW failure, RCS > 200 psi	6.3E-07		2.3%	yes	0.0E+00	0.0%		n/a	7.3E-16	0.0%		n/a	2.1E-15	0.0%	
190	SPDS07	SAPB2	seismic (<0.6g) MLOCA or SLOCA, HCPI works until RVP is depressurized	VB, early CF, WW failure, RCS < 200 psi	6.3E-07		2.3%	yes	0.0E+00	0.0%		n/a	2.5E-13	0.0%		n/a	3.7E-12	0.0%	
191	SPDS07	SAPB3	seismic (<0.6g) MLOCA or SLOCA, HCPI works until RVP is depressurized	VB, early CF, DW failure, RCS > 200 psi	6.3E-07		2.3%	yes	0.0E+00	0.0%		n/a	2.6E-16	0.0%		n/a	1.1E-15	0.0%	
192	SPDS07	SAPB5	seismic (<0.6g) MLOCA or SLOCA, HCPI works until RVP is depressurized	VB, late CF, WW failure	6.3E-07		2.3%	yes	0.0E+00	0.0%		n/a	2.9E-16	0.0%		n/a	2.0E-14	0.0%	
193	SPDS07	SAPB6	seismic (<0.6g) MLOCA or SLOCA, HCPI works until RVP is depressurized	VB, late CF, DW failure	6.3E-07		2.3%	yes	0.0E+00	0.0%		n/a	4.5E-14	0.0%		n/a	7.1E-13	0.0%	
194	SPDS07	SAPB7	seismic (<0.6g) MLOCA or SLOCA, HCPI works until RVP is depressurized	VB, vent	6.3E-07		2.3%	yes	0.0E+00	0.0%		n/a	1.1E-13	0.0%		n/a	2.0E-13	0.0%	
195	SPDS12	SAPB1	seismic (>0.6g) SBO, HCPI fails initially upon Radwaste/Turbine Building failure	VB, early CF, WW failure, RCS > 200 psi	5.7E-06	yes	21.0%	yes		0.0%		n/a	5.8E-12	0.0%		n/a	2.8E-12	0.0%	
196	SPDS12	SAPB2	seismic (>0.6g) SBO, HCPI fails initially upon Radwaste/Turbine Building failure	VB, early CF, WW failure, RCS < 200 psi	5.7E-06	yes	21.0%	yes		0.0%		n/a	6.3E-13	0.0%		n/a	9.1E-14	0.0%	

197	SPDS12	SAPB3	seismic (>0.6g) SBO, HPCI fails initially upon Radwaste/Turbine Building failure	VB, early CF, DW failure, RCS > 200 psi	5.7E-06	yes	21.0%	yes		0.0%		n/a	2.1E-09	3.9%	yes	n/a	3.4E-10	2.4%	yes
198	SPDS12	SAPB4	seismic (>0.6g) SBO, HPCI fails initially upon Radwaste/Turbine Building failure	VB, early CF, DW failure, RCS < 200 psi	5.7E-06	yes	21.0%	yes		0.0%		n/a	1.1E-10	0.2%		n/a	2.4E-11	0.2%	
199	SPDS12	SAPB5	seismic (>0.6g) SBO, HPCI fails initially upon Radwaste/Turbine Building failure	VB, late CF, WW failure	5.7E-06	yes	21.0%	yes		0.0%		n/a	4.3E-13	0.0%		n/a	1.5E-12	0.0%	
200	SPDS12	SAPB6	seismic (>0.6g) SBO, HPCI fails initially upon Radwaste/Turbine Building failure	VB, late CF, DW failure	5.7E-06	yes	21.0%	yes		0.0%		n/a	8.5E-11	0.2%		n/a	5.4E-11	0.4%	yes
201	SPDS12	SAPB7	seismic (>0.6g) SBO, HPCI fails initially upon Radwaste/Turbine Building failure	VB, vent	5.7E-06	yes	21.0%	yes		0.0%		n/a	1.5E-11	0.0%		n/a	2.0E-12	0.0%	
202	SPDS13	SAPB1	seismic (>0.6g) MLOCA, SBO due to cooling water failure, HPCI works until RVP is depressurized	VB, early CF, WW failure, RCS > 200 psi	1.5E-06	yes	5.5%	yes		0.0%		n/a	6.9E-13	0.0%		n/a	1.8E-13	0.0%	
203	SPDS13	SAPB2	seismic (>0.6g) MLOCA, SBO due to cooling water failure, HPCI works until RVP is depressurized	VB, early CF, WW failure, RCS < 200 psi	1.5E-06	yes	5.5%	yes		0.0%		n/a	4.1E-10	0.8%		n/a	5.9E-11	0.4%	yes
204	SPDS13	SAPB3	seismic (>0.6g) MLOCA, SBO due to cooling water failure, HPCI works until RVP is depressurized	VB, early CF, DW failure, RCS > 200 psi	1.5E-06	yes	5.5%	yes		0.0%		n/a	1.4E-12	0.0%		n/a	4.5E-13	0.0%	
205	SPDS13	SAPB4	seismic (>0.6g) MLOCA, SBO due to cooling water failure, HPCI works until RVP is depressurized	VB, early CF, DW failure, RCS < 200 psi	1.5E-06	yes	5.5%	yes		0.0%		n/a	8.8E-09	16.4%	yes	n/a	1.3E-09	9.3%	yes
206	SPDS13	SAPB5	seismic (>0.6g) MLOCA, SBO due to cooling water failure, HPCI works until RVP is depressurized	VB, late CF, WW failure	1.5E-06	yes	5.5%	yes		0.0%		n/a	8.8E-14	0.0%		n/a	3.0E-13	0.0%	
207	SPDS13	SAPB6	seismic (>0.6g) MLOCA, SBO due to cooling water failure, HPCI works until RVP is depressurized	VB, late CF, DW failure	1.5E-06	yes	5.5%	yes		0.0%		n/a	2.5E-11	0.0%		n/a	1.6E-11	0.1%	
208	SPDS13	SAPB7	seismic (>0.6g) MLOCA, SBO due to cooling water failure, HPCI works until RVP is depressurized	VB, vent	1.5E-06	yes	5.5%	yes		0.0%		n/a	4.8E-10	0.9%	yes	n/a	5.4E-11	0.4%	yes
209	SPDS14	SAPB1	seismic (>0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, early CF, WW failure, RCS > 200 psi	1.5E-08		0.1%			0.0%		n/a	2.8E-13	0.0%		n/a	7.5E-14	0.0%	
210	SPDS14	SAPB2	seismic (>0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, early CF, WW failure, RCS < 200 psi	1.5E-08		0.1%			0.0%		n/a	6.0E-11	0.1%		n/a	8.8E-12	0.1%	
211	SPDS14	SAPB3	seismic (>0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, early CF, DW failure, RCS > 200 psi	1.5E-08		0.1%			0.0%		n/a	5.6E-13	0.0%		n/a	1.8E-13	0.0%	
212	SPDS14	SAPB4	seismic (>0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, early CF, DW failure, RCS < 200 psi	1.5E-08		0.1%			0.0%		n/a	1.6E-09	3.0%	yes	n/a	2.4E-10	1.7%	yes
213	SPDS14	SAPB5	seismic (>0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, late CF, WW failure	1.5E-08		0.1%			0.0%		n/a	3.9E-13	0.0%		n/a	1.4E-12	0.0%	
214	SPDS14	SAPB6	seismic (>0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, late CF, DW failure	1.5E-08		0.1%			0.0%		n/a	1.4E-10	0.3%		n/a	7.8E-11	0.6%	yes
215	SPDS14	SAPB7	seismic (>0.6g) MLOCA or SLOCA, HPCI works until RVP is depressurized	VB, vent	1.5E-08		0.1%			0.0%		n/a	7.8E-11	0.1%		n/a	1.0E-11	0.1%	