Appendix A. Table of Loss Scenarios with their Annotations and MBSA mapped Items

ID	Annotated Text	MBSA Item
1.1	but available	BATTERY.state1.nominal
1.1	set battery to use	Flight_Crew.o_BattRelayOutput.failed
1.1	the battery is not connected	BATTERY.o2.failed
1.1	the battery is not connected but available while other power source are not	Flight_Crew.i1.nominal
1.1	while other power source are not	EXT_PWR_Connector.o1.failed
1.2	but available	BATTERY.state1.nominal
1.2	the battery is not connected	BATTERY.o2.failed
1.2	the battery is not connected but available while other power source are not	Flight_Crew.i1.failed
1.2	while other power source are not	EXT_PWR_Connector.o1.failed
1.3	Battery	BATTERY.i1.failed
1.3	but available	BATTERY.state1.nominal
1.3	set battery to use	Flight_Crew.o_BattRelayOutput.nominal
1.3	set battery to use	Flight_Crew.o_BattRelayOutput.nominal
1.3	the battery is not connected	BATTERY.o2.failed
1.3	while other power source are not	EXT_PWR_Connector.o1.failed
1.4	Battery	BATTERY.i1.nominal
1.4	Battery	BATTERY.i1.nominal
1.4	but available	BATTERY.state1.nominal
1.4	the battery is not connected	BATTERY.o2.failed

Table A.1 continued from previous page

ID	Annotated Text	MBSA Item
1.4	while other power source are not	EXT_PWR_Connector.o1.failed
2.1	Flight crew	Flight_Crew
2.1	Flight crew	Flight_Crew
2.1	feedback (or other input) that indicated the battery is disconnected and overheated	Flight_Crew.i1.nominal
2.1	set battery to use	Flight_Crew.o_BattRelayOutput.nominal
2.1	the battery is disconnected and overheated	BATTERY.state1.failed
2.2	and overheated	BATTERY.state1.nominal
2.2	the battery is disconnected	BATTERY.o2.failed
2.2	the battery is disconnected and overheated	Flight_Crew.i1.failed
2.3	set battery to use	Flight_Crew.o_BattRelayOutput.failed
2.3	set battery to use	Flight_Crew.o_BattRelayOutput.failed
2.3	the battery is disconnected and overheated	BATTERY.state1.failed
2.4	Battery	BATTERY.i1.failed
2.4	Battery	BATTERY.o2.failed
2.4	set battery to use	Flight_Crew.o_BattRelayOutput.nominal
2.4	the battery is disconnected and overheated	BATTERY.state1.failed
4.1	set battery to not use	Flight_Crew.o_BattRelayOutput.nominal
4.1	the battery is connected and it overheats	BATTERY.state1.nominal
4.1	the battery is connected and it overheats	Flight_Crew.i1.nominal
4.2	the battery is connected and it overheats	Flight_Crew.i1.failed
4.2	the battery is connected and it overheats	BATTERY.state1.nominal
4.3	Circuit breaker	BATT_DISC_RELAY.i1.failed

Table A.1 continued from previous page

ID	Annotated Text	MBSA Item
4.3	set battery to not use	Flight_Crew.o_BattRelayOutput.failed
4.3	the battery is connected and it overheats	BATTERY.state1.failed
4.4	Circuit breaker	BATT_DISC_RELAY.i1.failed
4.4	Circuit breaker	BATT_DISC_RELAY.o1.failed
4.4	the battery is connected and it overheats	BATTERY.state1.failed
5.1	set battery to not use	Flight_Crew.o_BattRelayOutput.failed
5.1	the battery is connected, charged	BATTERY.state1.nominal
5.1	the battery is connected, charged while other power source are not	Flight_Crew.i1.nominal
5.1	while other power source are not	EXT_PWR_Connector.o1.failed
5.2	the battery is connected, charged	BATTERY.state1.nominal
5.2	the battery is connected, charged while other power source are not	Flight_Crew.i1.failed
5.2	while other power source are not	EXT_PWR_Connector.o1.failed
5.3	set battery to not use	Flight_Crew.o_BattRelayOutput.nominal
5.3	set battery to not use	BATT_DISC_RELAY.i1.failed
5.3	the battery is connected, charged	BATTERY.state1.nominal
5.3	while other power source are not	EXT_PWR_Connector.o1.failed
5.4	Circuit breaker	BATT_DISC_RELAY.i1.nominal
5.4	Circuit breaker	BATT_DISC_RELAY.o1.failed
5.4	the battery is connected, charged	BATTERY.state1.nominal
5.4	while other power source are not	EXT_PWR_Connector.o1.failed
7.1	set generator to use	Flight_Crew.o3.failed

Table A.1 continued from previous page

ID	Annotated Text	MBSA Item
7.1	the generator is online and not connected	L_GCU.state1.failed
7.1	the generator is online and not connected	Flight_Crew.i_Feedback_Generator.nominal
7.2	the generator is online and not connected	Flight_Crew.i_Feedback_Generator.failed
7.2	the generator is online and not connected	L_GCU.state1.failed
7.3	set generator to use	Flight_Crew.o3.nominal
7.3	set generator to use	L_GCU.i_starter.failed
7.3	the generator is online and not connected	L_GCU.state1.failed
8.1	set generator to use	Flight_Crew.o3.nominal
8.1	the generator is in fault condition and not connected	L_GCU.state1.failed
8.1	the generator is in fault condition and not connected	Flight_Crew.i_Feedback_Generator.nominal
8.2	the generator is in fault condition and not connected	Flight_Crew.i_Feedback_Generator.failed
8.2	the generator is in fault condition and not connected	L_GCU.state1.failed
8.3	set generator to use	Flight_Crew.o3.failed
8.3	the set generator to use action	L_GCU.i_starter.nominal
8.3	the generator is in fault condition and not connected	L_GCU.state1.failed
8.4	Generator Control Unit (GCU) responds erroneously	L_GCU.o1.failed
8.4	set generator to use	L_GCU.i_starter.failed

Table A.1 continued from previous page

ID	Annotated Text	MBSA Item
8.4	the generator is in fault condition and not connected	L_GCU.state1.failed
10.1	connected, in fault condition and cannot be reset	L_GCU.state1.failed
10.1	connected, in fault condition and cannot be reset	Flight_Crew.i_Feedback_Generator.nominal
10.1	the set generator to not use	Flight_Crew.o3.nominal
10.2	connected, in fault condition and cannot be reset	Flight_Crew.i_Feedback_Generator.failed
10.2	connected, in fault condition and cannot be reset	L_GCU.state1.failed
10.3	connected, in fault condition and cannot be reset	L_GCU.state1.failed
10.3	set generator to not use	L_GEN_RELAY.i_flight_crew.nominal
10.3	the set generator to not use	Flight_Crew.o3.failed
10.4	connected, in fault condition and cannot be reset	L_GCU.state1.failed
10.4	does not respond adequately	L_GCU.o1.nominal
10.4	set generator to not use	L_GEN_RELAY.i_flight_crew.failed
11.1	set generator to not use	Flight_Crew.o3.failed
11.1	the generator is connected, online and functional	L_GCU.state1.nominal
11.1	the generator is connected, online and functional	Flight_Crew.i3.nominal
11.2	the generator is connected, online and functional	Flight_Crew.i3.failed

Table A.1 continued from previous page

ID	Annotated Text	MBSA Item
11.2	the generator is connected, online and functional	L_GCU.state1.nominal
11.3	set generator to not use	Flight_Crew.o3.nominal
11.3	set generator to not use	L_GCU.i_starter.nominal
11.3	the generator is connected, online and functional	L_GCU.state1.nominal
11.4	responds erroneously	L_GCU.o1.nominal
11.4	set generator to not use	L_GCU.i_starter.nominal
11.4	the generator is connected, online and functional	L_GCU.state1.nominal
21.1	connect user system	NORM_or_INT_DISC.o1.failed
21.1	it can be connected, the system is needed and functional	MASTER_INTERIOR_SSR.INTERIOR_state.nominal
21.1	it can be connected, the system is needed and functional	Flight_Crew.i3.nominal
21.2	it can be connected, the system is needed and functional	Flight_Crew.i3.failed
21.2	it can be connected, the system is needed and functional	MASTER_INTERIOR_SSR.INTERIOR_state.nominal
21.3	Circuit breaker	MASTER_INTERIOR_SSR.i3.failed
21.3	connect user system	NORM_or_INT_DISC.o1.nominal
21.3	it can be connected, the system is needed and functional	MASTER_INTERIOR_SSR.INTERIOR_state.nominal
21.4	Circuit breaker	MASTER_INTERIOR_SSR.i3.nominal
21.4	Circuit breaker	MASTER_INTERIOR_SSR.o1.failed

Table A.1 continued from previous page

ID	Annotated Text	MBSA Item
21.4	it can be connected, the system is needed and functional	MASTER_INTERIOR_SSR.INTERIOR_state.nominal
22.1	connect user system	NORM_or_INT_DISC.o1.nominal
22.1	the power distribution is faulty	R_SSR_1_BUS_BAR.state1.failed
22.1	the power distribution is faulty	Flight_Crew.i4.nominal
22.2	Flight crew	Flight_Crew.i4.failed
22.2	the power distribution is faulty	R_SSR_1_BUS_BAR.state1.failed
22.3	connect user system	NORM_or_INT_DISC.o1.failed
22.3	connect user system	NORM_or_INT_DISC.o1.nominal
22.3	the power distribution is faulty	R_SSR_1_BUS_BAR.state1.failed
22.4	Circuit breaker	MASTER_INTERIOR_SSR.i3.failed
22.4	Circuit breaker	MASTER_INTERIOR_SSR.o1.nominal
22.4	the power distribution is faulty	L_SSR_1_BUS_BAR.state1.failed
24.1	disconnect user system	NORM_or_INT_DISC.o1.failed
24.1	it the system is needed and functional	MASTER_INTERIOR_SSR.INTERIOR_state.nominal
24.1	it the system is needed and functional	Flight_Crew.i3.nominal
24.2	it the system is needed and functional	Flight_Crew.i3.failed
24.2	it the system is needed and functional	MASTER_INTERIOR_SSR.INTERIOR_state.nominal
24.3	disconnect user system	NORM_or_INT_DISC.o1.nominal
24.3	disconnect user system	MASTER_INTERIOR_SSR.i1.failed
24.3	it the system is needed and functional	MASTER_INTERIOR_SSR.INTERIOR_state.nominal
24.4	User systems	MASTER_INTERIOR_SSR.i1.nominal
24.4	User systems	MASTER_INTERIOR_SSR.o1.nominal

Table A.1 continued from previous page

ID	Annotated Text	MBSA Item
24.4	it the system is needed and functional	MASTER_INTERIOR_SSR.INTERIOR_state.nominal
28.1	Flight crew	Flight_Crew.i3.nominal
28.1	the system is OFF and necessary for safe conduct of flight	MASTER_INTERIOR_SSR.INTERIOR_state.failed
28.1	turn on user system	NORM_or_INT_DISC.o1.failed
28.2	the system is OFF and necessary for safe conduct of flight	Flight_Crew.i3.failed
28.2	the system is OFF and necessary for safe conduct of flight	MASTER_INTERIOR_SSR.INTERIOR_state.failed
28.3	User systems	MASTER_INTERIOR_SSR.i1.failed
28.3	the system is OFF and necessary for safe conduct of flight	MASTER_INTERIOR_SSR.INTERIOR_state.failed
28.3	turn on user system	NORM_or_INT_DISC.o1.nominal
28.4	User systems	MASTER_INTERIOR_SSR.i1.nominal
28.4	User systems	MASTER_INTERIOR_SSR.o1.failed
28.4	the system is OFF and necessary for safe conduct of flight	MASTER_INTERIOR_SSR.INTERIOR_state.failed
30.1	the system is ON and necessary for safe conduct of flight	MASTER_INTERIOR_SSR.INTERIOR_state.nominal
30.1	the system is ON and necessary for safe conduct of flight	Flight_Crew.i3.nominal
30.1	turn off user system	NORM_or_INT_DISC.o1.failed
30.2	the system is ON and necessary for safe conduct of flight	Flight_Crew.i3.failed

Table A.1 continued from previous page

ID	Annotated Text	MBSA Item
30.2	the system is ON and necessary for safe conduct of flight	MASTER_INTERIOR_SSR.INTERIOR_state.nominal
30.3	Engine Starter-Generator	L_STARTER_GENERATOR.i1.failed
30.3	the system is ON and necessary for safe conduct of flight	MASTER_INTERIOR_SSR.INTERIOR_state.nominal
30.3	turn off user system	NORM_or_INT_DISC.o1.nominal
30.4	Engine Starter-Generator	L_STARTER_GENERATOR.i1.nominal
30.4	Engine Starter-Generator	L_STARTER_GENERATOR.o1.nominal
30.4	the system is ON and necessary for safe conduct of flight	MASTER_INTERIOR_SSR.INTERIOR_state.nominal
31.1	break a circuit	L_GEN_RELAY.o1.failed
31.1	overloaded	L_GEN_RELAY.i2.failed
31.1	overloaded	L_GEN_RELAY.i2State.nominal
31.2	overloaded	L_GEN_RELAY.i2State.failed
31.2	overloaded	L_GEN_RELAY.i2.failed
31.3	break a circuit	L_GEN_RELAY.o1.nominal
31.3	break a circuit	L_GCU.i_starter.nominal
31.3	overloaded	L_GEN_RELAY.i2.failed
31.4	does not respond adequately	L_GCU.o1.nominal
31.4	overloaded	L_GCU.i_starter.failed
32.1	break a circuit	L_GEN_RELAY.o1.nominal
32.1	it is not overloaded	L_GEN_RELAY.i1.nominal
32.1	it is not overloaded	L_GEN_RELAY.i1State.nominal
32.2	it is not overloaded	L_GEN_RELAY.i1State.failed
32.2	it is not overloaded	L_GEN_RELAY.i1.nominal
32.3	break a circuit	L_GEN_RELAY.o1.failed
32.3	break a circuit	L_GCU.i_starter.failed
32.3	it is not overloaded	L_GEN_RELAY.i1.nominal

Table A.1 continued from previous page

ID	Annotated Text	MBSA Item
32.4	break a circuit	L_GCU.i_starter.nominal
32.4	it is not overloaded	L_GEN_RELAY.state1.nominal
32.4	responds erroneously	L_GCU.o1.nominal
34.1	and respective generator parameters are met	L_GCU.state1.nominal
34.1	commanded by the crew	Flight_Crew.o3.nominal
34.1	commanded by the crew and respective generator parameters are met	L_GCU.i_starter.nominal
34.1	connect	L_START_CNTRL_PCB.o1.failed
34.2	and respective generator parameters are met	L_GCU.state1.nominal
34.2	commanded by the crew	Flight_Crew.o3.nominal
34.2	commanded by the crew and respective generator parameters are met	L_GCU.i_starter.failed
34.3	Engine Starter-Generator	L_STARTER_GENERATOR.feedbackState.failed
34.3	and respective generator parameters are met	L_GCU.state1.nominal
34.3	commanded by the crew	Flight_Crew.o3.nominal
34.3	connect	L_START_CNTRL_PCB.o1.nominal
34.4	Engine Starter-Generator	L_STARTER_GENERATOR.feedbackState.nominal
34.4	Engine Starter-Generator	L_GCU.o1.failed
34.4	and respective generator parameters are met	L_GCU.state1.nominal
34.4	commanded by the crew	Flight_Crew.o3.nominal
35.1	connect	L_START_CNTRL_PCB.o1.nominal
35.1	respective generator parameters are exceeded	L_GCU.state1.nominal
35.1	respective generator parameters are exceeded	L_GCU.i_starter.failed

Table A.1 continued from previous page

ID	Annotated Text	MBSA Item
35.2	respective generator parameters are exceeded	L_GCU.i_starter.nominal
35.2	respective generator parameters are exceeded	L_GCU.state1.failed
35.3	connect	L_START_CNTRL_PCB.o1.failed
35.3	connect	L_STARTER_GENERATOR.i1.nominal
35.3	respective generator parameters are exceeded	L_GCU.state1.failed
35.4	Engine Starter-Generator	L_STARTER_GENERATOR.i1.failed
35.4	Engine Starter-Generator	L_STARTER_GENERATOR.o1.failed
35.4	respective generator parameters are exceeded	L_GCU.state1.failed
37.1	commanded by the crew	Flight_Crew.o3.failed
37.1	commanded by the crew	L_GCU.i_starter.nominal
37.1	disconnect	L_START_CNTRL_PCB.o1.nominal
37.2	commanded by the crew	L_GCU.i_starter.failed
37.2	commanded by the crew	Flight_Crew.o3.nominal
37.3	Engine Starter-Generator	L_STARTER_GENERATOR.feedbackState.failed
37.3	commanded by the crew	Flight_Crew.o3.failed
37.3	disconnect	L_START_CNTRL_PCB.o1.failed
37.4	Engine Starter-Generator	L_STARTER_GENERATOR.feedbackState.nominal
37.4	Engine Starter-Generator	L_STARTER_GENERATOR.o1.nominal
37.4	commanded by the crew	Flight_Crew.o3.failed
38.1	disconnect	L_START_CNTRL_PCB.o1.nominal
38.1	respective generator parameters are exceeded	L_GCU.state1.failed
38.1	respective generator parameters are exceeded	L_GCU.i_starter.failed
38.2	respective generator parameters are exceeded	L_GCU.i_starter.nominal

Table A.1 continued from previous page

ID	Annotated Text	MBSA Item
38.2	respective generator parameters are exceeded	L_GCU.state1.failed
38.3	Engine Starter-Generator	L_STARTER_GENERATOR.feedbackState.failed
38.3	disconnect	L_GCU.o1.failed
38.3	respective generator parameters are exceeded	L_GCU.state1.failed
38.4	Engine Starter-Generator	L_STARTER_GENERATOR.i1.failed
38.4	Engine Starter-Generator	L_STARTER_GENERATOR.o1.nominal
38.4	respective generator parameters are exceeded	L_GCU.state1.failed
39.1	and it was not commanded to do so by the crew	Flight_Crew.o3.nominal
39.1	disconnect	L_GCU.o1.failed
39.1	the generator is online and functional	L_STARTER_GENERATOR.state1.nominal
39.1	the generator is online and functional, and it was not commanded to do so by the crew	L_GCU.i_starter.failed
39.3	and it was not commanded to do so by the crew	Flight_Crew.o3.failed
39.3	disconnect	L_GCU.o1.nominal
39.3	disconnect	L_STARTER_GENERATOR.i1.failed
39.3	the generator is online and functional	L_STARTER_GENERATOR.state1.nominal
39.4	Engine Starter-Generator	L_STARTER_GENERATOR.i1.nominal
39.4	Engine Starter-Generator	L_STARTER_GENERATOR.o1.nominal

Table A.1 continued from previous page

ID	Annotated Text	MBSA Item
39.4	and it was not commanded to do so by the crew	Flight_Crew.o3.failed
39.4	the generator is online and functional	L_STARTER_GENERATOR.state1.nominal