

Table G-1. Postulated accidents

No.	Accident description	Condition of reactor	Has initiating event occurred at SRP	Main effect
REACTIVITY ADDITION ACCIDENTS				
1	Single rod withdrawal	Full power	Yes	Local power increase
2	Partial rod insertion	Full power	Yes	Local power increase
3a	Gang rod withdrawal	Full power	No	Reactor power increase
3b	Gang rod withdrawal	Low power	No	Rapid power rise
4	Control rod melting	Full power	No	Local power increase
5	Target melting	Full power	No	Local power increase
6	Fuel melting	Full power	No	Fission products in moderator
7	Reloading error	Shutdown-charge-discharge	No	Inadvertent criticality
FLOW REDUCTION ACCIDENTS				
8	Loss of D ₂ O coolant pump power	Full power	No	Increased assembly temperature
9	Loss of H ₂ O pump power	Full power	No	Increased assembly temperature
10	Loss of both D ₂ O and H ₂ O pump power	Full power	No	Increased assembly temperature
11	Pump shaft break	Full power	No	Increased assembly temperature
12	Rotovalve closure	Full power	Yes ^a	Increased assembly temperature
13	Flow reduction in single assembly	Full power	Yes	Increased assembly temperature
14	Loss of control-rod cooling	Full power	Yes	Increased control rod temperature
15	Loss of blanket-gas pressure	Full power	No ^b	Decreased saturation temperature
16	Loss of coolant (leak)	Full power	No	Decreased moderator level; increased temperature; release of radioactivity
17	Loss of D ₂ O circulation	Full power	No	Increased assembly temperature
18	Loss of cooling during or after discharge	Discharge operations	No	Possible melting of fuel

^aTwo rotovalves closed in one system only one time; closure of all rotovalves in two systems has not occurred.

^bSlow leaks of blanket gas have occurred.