

TABLE 7.10-1

SAFETY PARAMETER DISPLAY SYSTEM PARAMETERS

1. Neutron Flux - Source, Power, Intermediate Ranges, and Start-up rate
2. Control Rod Positions
3. Plant Vent Flow
4. RCS Cold Leg Water Temperature
5. RCS Hot Leg Water Temperature
6. RCS Pressure
7. Core Exit Temperature
8. Coolant Level in Reactor
9. Degrees of Subcooling
10. Containment Sump Water Level
11. Containment Pressure (Wide and Narrow Range)
12. Containment Isolation Valve Position (excluding check valves)
13. Containment Area Radiation
14. Containment Hydrogen Concentration
15. Containment Effluent Radioactivity (Noble Gases) from Identified Release Points
16. RHR System Flow
17. RHR Heat Exchanger Outlet Temperature
18. Accumulator Tank Level and Pressure
19. Accumulator Isolation Valve Position
20. Boric Acid Charging Flow
21. Charging Pumps Discharge Flow
22. Safety Injection Pumps Discharge Flow
23. Refueling Water Storage Tank Level
24. Reactor Coolant Pump Status (AMPS)
25. Primary System Safety/Relief Valve Position
26. Pressurizer Level
27. Pressurizer Heater Status (AMPS)
28. Pressurizer Relief Tank Level
29. Pressurizer Relief Tank Temperature
30. Pressurizer Relief Tank Pressure
31. Steam Generator Level
32. Steam Generator Pressure
33. Main Steam Flow
34. Main Feedwater Flow
35. Auxiliary Feedwater Flow
36. Auxiliary Feedwater Storage Tank Level
37. Containment Spray Flow Additive Rate
38. Heat Removal by the Containment Fan Coil Units (CFCU's) (CFCU Outlet Flow and CFCU Running)

TABLE 7.10-1 (Cont)

SAFETY PARAMETER DISPLAY SYSTEM PARAMETERS

39. Containment Atmosphere Temperature
40. Letdown Flow
41. Volume Control Tank Level
42. Component Cooling Water Temperature
43. Component Cooling Water Flow
44. High Level Radioactive Liquid Tanks Levels
 - a. Holdup Tanks
 - b. Auxiliary Building Sump Tank
 - c. Waste Monitor Holdup Tank
 - d. Waste Holdup Tanks
 - e. Reactor Coolant Drain Tank
45. Radioactive Gas Hold Up Tank Pressure
46. Control Room Emergency Ventilation Damper Position
47. Auxiliary Building Emergency Damper Position
48. Fuel Handling Building Emergency Damper Position
49. Status of Standby Power and Other Emergency Power Sources Important to Safety
50. Control Air Pressure
51. Main Steam Radiation
52. Condenser Availability (Condenser Vacuum and Circulator Amperes)
53. RCS Average Loop Temperature
54. Main Steam Isolation Valve Position
55. Reactor Trip Demand Signal from Train "A"
56. Reactor Trip Demand Signal from Train "B"
57. Auxiliary Building Roof Radiation Monitor

TABLE 7.10-2

COMPARISON OF SAFETY FUNCTIONS WITH NUREG-0737
SUPPLEMENT 1

SAFETY FUNCTION NUREG-0737 SUPPLEMENT 1	SAFETY FUNCTION STATUS TREE	PARAMETERS
Reactivity Control	Shut Down Margin	<ol style="list-style-type: none"> 1. Neutron Flux 2. Reactor Trip
Reactor Core Cooling and Heat Removal from the Primary System	Core Cooling	<ol style="list-style-type: none"> 1. Core Exit Temperature 2. Degrees of Subcooling 3. Reactor Coolant Pump Status 4. Reactor Vessel Level 5. Hot Leg Temperature 6. Cold Leg Temperature 7. Steam Generator Level 8. Steam Generator Pressure 9. RHR Flow 10. RCS Pressure 11. Containment Pressure 12. Containment Area Radiation
Reactor Coolant	Heat Sink	<ol style="list-style-type: none"> 1. Steam Generator Level 2. Steam Generator Pressure 3. Auxiliary Feedwater Flow 4. Cold Leg Temperature 5. Main Feedwater Flow
	Thermal Shock	<ol style="list-style-type: none"> 6. RCS Pressure 7. RCS Cold Leg Water Temperature
	Coolant Inventory	<ol style="list-style-type: none"> 8. Pressurizer Level 9. Reactor Vessel Level 10. Reactor Coolant Pump Status 11. Containment Sump Level 12. Pressurizer Temperature

TABLE 7.10-2 (cont.)

SAFETY FUNCTION NUREG-0737 SUPPLEMENT 1	SAFETY FUNCTION STATUS TREE	PARAMETERS
Radioactivity Control	Radiation Monitoring	<ol style="list-style-type: none"> 1. Containment Particulate Radiation 2. Plant Vent Particulate Radiation 3. Containment Radiation 4. Main Steam Radiation 5. Roof Monitor
Containment Conditions	Containment Environment	<ol style="list-style-type: none"> 1. Containment Sump Water Level 2. Containment Pressure 3. Containment Area Radiation 4. Containment Hydrogen

TABLE 7.10-3

CRITICAL SAFETY FUNCTIONS ASSOCIATED WITH BARRIERS

BARRIER

CRITICAL SAFETY FUNCTIONS

1. Fuel Matrix and
Fuel Clad

- a. Maintenance of SUBCRITICALITY
(minimize energy production in
the fuel)
- b. Maintenance of a CORE COOLING
(provide adequate reactor coolant
for heat removal from the fuel)
- c. Maintenance of a HEAT SINK
(provide adequate secondary
coolant for heat removal from the
fuel)
- d. Control of Reactor Coolant
INVENTORY (maintain enough
reactor coolant for effective
heat removal and pressure
control)

2. Reactor Coolant
System Pressure

- a. Maintenance of a HEAT SINK
(provide adequate heat removal
from the RCS)
- b. Maintenance of Reactor Coolant
System INTEGRITY (prevent failure
of RCS)
- c. Control of Reactor Coolant
INVENTORY (prevent flooding and
loss of pressure control)

3. Containment Vessel

- d. Maintenance of CONTAINMENT
Integrity (prevent failure of
containment vessel)