

CONTROLLED BY USER

PALO VERDE - UNIT 1

3/4 3-3

8803080330 880226
PDR ADDCK 05000528
DCD

TABLE 3.3-1
REACTOR PROTECTIVE INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
TRIP GENERATION					
A. Process					
1. Pressurizer Pressure - High	4	2	3	1, 2	2 [#] , 3 [#]
2. Pressurizer Pressure - Low	4	2 (b)	3	1, 2	2 [#] , 3 [#]
3. Steam Generator Level - Low	4/SG	2/SG	3/SG	1, 2	2 [#] , 3 [#]
4. Steam Generator Level - High	4/SG	2/SG	3/SG	1, 2	2 [#] , 3 [#]
5. Steam Generator Pressure - Low	4/SG	2/SG	3/SG	1, 2, 3*, 4*	2 [#] , 3 [#]
6. Containment Pressure - High	4	2	3	1, 2	2 [#] , 3 [#]
7. Reactor Coolant Flow - Low	4/SG	2/SG	3/SG	1, 2	2 [#] , 3 [#]
8. Local Power Density - High	4	2 (c)(d)	3	1, 2	2 [#] , 3 [#]
9. DNBR - Low	4	2 (c)(d)	3	1, 2	2 [#] , 3 [#]
B. Excore Neutron Flux					
1. Variable Overpower Trip	4	2	3	1, 2	2 [#] , 3 [#]
2. Logarithmic Power Level - High					
a. Startup and Operating	4	2 (a)(d)	3	1, 2	2 [#] , 3 [#]
	4	2	3	3*, 4*, 5*	2 [#] , 3 [#]
b. Shutdown	4	0	2	3, 4, 5	4
C. Core Protection Calculator System					
1. CEA Calculators	2	1	2 (e)	1, 2	6, 7
2. Core Protection Calculators	4	2 (c)(d)	3	1, 2	2 [#] , 3 [#] , 7

CONTROLLED BY USER

TABLE 3.3-1

REACTOR PROTECTIVE INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
I. TRIP GENERATION					
A. Process					
1. Pressurizer Pressure - High	4	2	3	1, 2	2 [#] , 3 [#]
2. Pressurizer Pressure - Low	4	2 (b)	3	1, 2	2 [#] , 3 [#]
3. Steam Generator Level - Low	4/SG	2/SG	3/SG	1, 2	2 [#] , 3 [#]
4. Steam Generator Level - High	4/SG	2/SG	3/SG	1, 2	2 [#] , 3 [#]
5. Steam Generator Pressure - Low	4/SG	2/SG	3/SG	1, 2, 3*, 4*	2 [#] , 3 [#]
6. Containment Pressure - High	4	2	3	1, 2	2 [#] , 3 [#]
7. Reactor Coolant Flow - Low	4/SG	2/SG	3/SG	1, 2	2 [#] , 3 [#]
8. Local Power Density - High	4	2 (c)(d)	3	1, 2	2 [#] , 3 [#]
9. DNBR - Low	4	2 (c)(d)	3	1, 2	2 [#] , 3 [#]
B. Excore Neutron Flux					
1. Variable Overpower Trip	4	2	3	1, 2	2 [#] , 3 [#]
2. Logarithmic Power Level - High					
a. Startup and Operating	4	2 (a)(d)	3	1, 2	2 [#] , 3 [#]
	4	2	3	3*, 4*, 5*	8 2 [#] , 3 [#]
b. Shutdown	4	0	2	3, 4, 5	4
C. Core Protection Calculator System					
1. CEA Calculators	2	1	2 (e)	1, 2	6, 7
2. Core Protection Calculators	4	2 (c)(d)	3	1, 2	2 [#] , 3 [#] , 7

TABLE 3.3-1

REACTOR PROTECTIVE INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
I. TRIP GENERATION					
A. Process					
1. Pressurizer Pressure - High	4	2	3	1, 2	2 [#] , 3 [#]
2. Pressurizer Pressure - Low	4	2 (b)	3	1, 2	2 [#] , 3 [#]
3. Steam Generator Level - Low	4/SG	2/SG	3/SG	1, 2	2 [#] , 3 [#]
4. Steam Generator Level - High	4/SG	2/SG	3/SG	1, 2	2 [#] , 3 [#]
5. Steam Generator Pressure - Low	4/SG	2/SG	3/SG	1, 2, 3*, 4*	2 [#] , 3 [#]
6. Containment Pressure - High	4	2	3	1, 2	2 [#] , 3 [#]
7. Reactor Coolant Flow - Low	4/SG	2/SG	3/SG	1, 2	2 [#] , 3 [#]
8. Local Power Density - High	4	2 (c)(d)	3	1, 2	2 [#] , 3 [#]
9. DNBR - Low	4	2 (c)(d)	3	1, 2	2 [#] , 3 [#]
B. Excore Neutron Flux					
1. Variable Overpower Trip	4	2	3	1, 2	2 [#] , 3 [#]
2. Logarithmic Power Level - High					
a. Startup and Operating	4	2 (a)(d)	3	1, 2	2 [#] , 3 [#]
	4	2	3	3*, 4*, 5*	2 [#] , 3 [#]
b. Shutdown	4	0	2	3, 4, 5	4
C. Core Protection Calculator System					
1. CEA Calculators	2	1	2 (e)	1, 2	6, 7
2. Core Protection Calculators	4	2 (c)(d)	3	1, 2	2 [#] , 3 [#] , 7



12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100