3/4.3 INSTRUMENTATION

3/4.3.1 REACTOR TRIP SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.1 As a minimum, the Reactor Trip System instrumentation channels and interlocks of Table 3.3-1 shall be OPERABLE.

APPLICABILITY: As shown in Table 3.3-1.

ACTION:

As shown in Table 3.3-1.

SURVEILLANCE REQUIREMENTS

4.3.1.1 Each Reactor Trip System instrumentation channel and interlock and the automatic trip logic shall be demonstrated OPERABLE by the performance of the Reactor Trip System Instrumentation Surveillance Requirements specified in Table 4.3-1.

4.3.1.2 The REACTOR TRIP SYSTEM RESPONSE TIME of each Reactor trip function shall be demonstrated to be within its limit at least once per 18 months. Neutron detectors are exempt from response time testing. Each test shall include at least one train such that both trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific Reactor trip function as shown in the "Total No. of Channels" column of Table 3.3-1.

TABLE 3.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1. Manual Reactor Trip	2	1	2	1,2	1
	2	1	2	3*,4*,5*	10
2. Power Range, Neutron Flux					
a. High Setpoint	4	2	3	1,2	2#
b. Low Setpoint	4	2	3	1###,2	2#
3. Power Range, Neutron Flux, High Positive Rate	4	2	3	1,2	2#
4. Power Range, Neutron Flux, High Negative Rate	4	2	3	1,2	2#
5. Intermediate Range, Neutron Flux	2	1	2	1###,2	3
6. Source Range, Neutron Foux					
a. Startup	2	1	2	2##	4
b. Shutdown	2	1	2	3,4,5	5
7. Overtemperature ΔT Four Loop Operation	4	2	3	1,2	6#
8. Overpower ΔT Four Loop Operation	4	2	3	1,2	6#
9. Pressurizer Pressure-Low	4	2	3	1	6#
10. Pressurizer Pressure-High	4	2	3	1,2	6#