TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
16. Undervoltage-Reactor Coolant Pump Busses	3-1/bus	2	2	1	7#
17. Underfrequency-Reactor Coolant Pump Busses	3-1/bus	2	2	1	7#
18. Turbine Trip					
A. Low Auto Stop Oil Pressure	3	2	2	1	7#
B. Turbine Stop Valve Closure	4	4	4	1	7#
19. Safety Injection Input from ESF	2	1	2	1,2	1
20. Reactor Coolant Pump Breaker Position Trip					
A. Above P-8	1/breaker	1	1/breaker	1	10
B. Above P-7	1/breaker	2	1/breaker per operating loop	1	11
21. A. Reactor Trip Breakers	2	1	2	1,2	1, 14
	2	1	1	3*,4*,5*	15
B. Reactor Trip Bypass Breakers	2	1	2	***	13
22. Automatic Trip Logic					
A. Undervoltage Trip Logic	2	1	2	1,2	14
	2	1	2	3*,4*,5*	15
B. Shunt Trip Logic	2	1	2	1,2	14
	2	1	2	3*,4*,5*	15

TABLE NOTATION

*With the reactor trip system breakers in the closed position and the control rod drive system capable of rod withdrawal.

**The channel(s) associated with the protective functions derived from the out of service Reactor Coolant Loop shall be placed in the tripped condition.

***With the Reactor Trip Breaker open for surveillance testing in accordance with Specification Table 4.3-1 (item 21A).

#The provisions of Specification 3.0.4 are not applicable.

##High voltage to detector may be de-energized above P-6.

ACTION STATEMENTS

ACTION 1 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, be in HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.1.

ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 1 hour.

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 2 hours for surveillance testing of the redundant channel(s) per Specification 4.3.1.1.1.

c. Either, THERMAL POWER is restricted to ≤ 75% of RATED THERMAL POWER and the Power Range, Neutron Flux trip setpoint is reduced to ≤ 85% of RATED THERMAL POWER within 4 hours; or, the QUADRANT POWER TILT RATIO is monitored at least once per 12 hours.

d. The QUADRANT POWER TILT RATIO shall be determined to be within the limit when above 75 percent of RATED THERMAL POWER with one Power Range Channel inoperable by using the moveable incore detectors to confirm that the normalized symmetric power distribution, obtained from 2 sets of 4 symmetric thimble locations or a full-core flux map, is consistent with the indicated QUADRANT POWER TILT RATIO at least once per 12 hours.

ACTION 3 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:

ACTION 9 - With a channel associated with an operating loop inoperable, restore the inoperable channel to OPERABLE status within 2 hours or be in HOT STANDBY within the next 6 hours; however, one channel associated with an operating loop may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.1.

ACTION 10 - With one channel inoperable, restore the inoperable channel to OPERABLE status within 2 hours or reduce THERMAL POWER to below P-8 within the next 2 hours. Operation below P-8 may continue pursuant to ACTION 11.

ACTION 11 - With less than the Minimum Number of Channels OPERABLE, operation may continue provided the inoperable channel is placed in the tripped condition within 1 hour.

ACTION 12 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in HOT STANDBY within the next 6 hours and/or open the reactor trip breakers.

ACTION 13 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within (1) hour or terminate testing of the Reactor Trip Breaker and open the Reactor Trip Bypass Breaker.

ACTION 14 - With one of the diverse trip features (undervoltage or shunt trip device) inoperable, restore it to OPERABLE status within 48 hours or declare the breaker inoperable and apply Action 1. The breaker shall not be bypassed while one of the diverse trip features is inoperable except for the time required for performing maintenance to restore the breaker to OPERABLE status.

ACTION 15 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement restore the inoperable channel to OPERABLE status within 48 hours or open the reactor trip breakers within the next hour.

TABLE 4.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. Manual Reactor Trip	N.A.	N.A.	R(7)	1,2 and *
2. Power Range, Neutron Flux	S	D(2), M(3) and Q(6)	M	1,2
3. Power Range, Neutron Flux, High Positive Rate	N.A.	R(6)	M	1,2
4. Power Range, Neutron Flux, High Negative Rate	N.A.	R(6)	M	1,2
5. Intermediate Range, Neutron Flux	S	R(6)	S/U(1)	1,2 and *
6. Source Range, Neutron Flux	N.A.	R(6)	M,S/U(1)	2,3, 4 and 5
7. Overtemperature ΔT	S	R(6)	M	1,2
8. Overpower ΔT	S	R(6)	M	1,2
9. Pressurizer Pressure--Low	S	R	M	1,2
10. Pressurizer Pressure--High	S	R	M	1,2
11. Pressurizer Water Level--High	S	R	M	1,2
12. Loss of Flow - Single Loop	S	R	M	1

TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
13. Loss of Flow - Two Loops	S	R	N.A.	1
14. Steam Generator Water Level Low-Low	S	R	M	1,2
15. Steam/Feedwater Flow Mismatch and Low Steam Generator Water Level	S	R	M	1,2
16. Undervoltage - Reactor Coolant Pump Busses	N.A.	R	N.A	1
17. Underfrequency - Reactor Coolant Pump Busses	N.A.	R	N.A.	1
18. Turbine Trip				
A. Low Auto Stop Oil Pressure	N.A.	N.A.	S/U(1)	1,2
B. Turbine Stop Valve Closure	N.A.	N.A.	S/U(1)	1,2
19. Safety Injection Input from ESF	N.A.	N.A.	M(4)	1,2
20. Reactor Coolant Pump Breaker Position Trip	N.A.	N.A.	R	N.A.
21. A. Reactor Trip Breaker	N.A.	N.A.	M(5)	1,2 and *
B. Reactor Trip Bypass Breaker	N.A.	N.A.	M(5),(8) and R(9)	1,2 and *
22. Automatic Trip Logic				
A. Undervoltage Trip Logic	N.A.	N.A.	M(5)	1,2 and *
B. Shunt Trip Logic	N.A.	N.A.	M(5)	1,2 and *

TABLE 4.3-1 (Continued)

NOTATION

* - With the reactor trip system breakers closed and the control rod drive system capable of rod withdrawal.

(1) - If not performed in previous 7 days.

(2) - Heat balance only, above 15% of RATED THERMAL POWER.

(3) - Compare incore to excore axial offset above 15% of RATED THERMAL POWER. Adjust channel if absolute difference ≥3 percent.

(4) - Manual ESF functional input check every 18 months.

(5) - Each train or logic channel shall be tested at least every 62 days on a STAGGERED TEST BASIS.

(6) - Neutron detectors may be excluded from CHANNEL CALIBRATION.

(7) - The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of the UNDERVOLTAGE and shunt trip circuits for the manual reactor trip function. The test shall also verify the operability of the Bypass Breaker Trip circuit(s).

(8) - Local manual shunt trip prior to placing breaker into service.

(9) - Automatic undervoltage trip.

ATTACHMENT 2

TABLE 3.3 -1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
16. Undervoltage-Reactor Coolant Pump Busses	3-1/bus	2	2	1	7#
17. Underfrequency-Reactor Coolant Pump Busses	3-1/bus	2	2	1	7#
18. Turbine Trip					
A. Low Auto Stop Oil Pressure	3	2	2	1	7#
B. Turbine Stop Valve Closure	4	4	4	1	7#
19. Safety Injection Input from ESF	2	1	2	1,2	1
20. Reactor Coolant Pump Breaker Position Trip					
A. Above P-8	1/breaker	1	1/breaker	1	10
B. Above P-7	1/breaker	2	1/breaker per operating loop	1	11
21. A. Reactor Trip Breakers	2	1	2	1,2	1,14
	2	1	2	3*,4*,5*	15
B. Reactor Trip Bypass Breakers	2	1	2	***	13
22. Automatic Trip Logic					
A. Undervoltage Trip Logic	2	1	2	1,2	14
	2	1	2	3*,4*,5*	15
B. Shunt Trip Logic	2	1	2	1,2	14
	2	1	2	3*,4*,5*	15

TABLE 3.3-1 (Continued)

TABLE NOTATION

*With the reactor trip system breakers in the closed position and the control rod drive system capable of rod withdrawal.

**The channel(s) associated with the protective functions derived from the out of service Reactor Coolant Loop shall be placed in the tripped condition.

***With the Reactor Trip Breaker open for surveillance testing in accordance with Specification Table 4.3-1 (item 21A).

#The provisions of Specification 3.0.4 are not applicable.

##High voltage to detector may be de-energized above the P-6, (Block of Source Range Reactor Trip), setpoint.

ACTION STATEMENTS

ACTION 1 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, be in HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.1 provided the other channel is OPERABLE.

ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 1 hour.

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 2 hours for surveillance testing of the redundant channel(s) per Specification 4.3.1.1.1.

c. Either, THERMAL POWER is restricted to ≤75% of RATED THERMAL POWER and the Power Range, Neutron Flux trip setpoint is reduced to ≤85% of RATED THERMAL POWER within 4 hours; or, the QUADRANT POWER TILT RATIO is monitored at least once per 12 hours.

d. The QUADRANT POWER TILT RATIO shall be determined to be within the limit when above 75 percent of RATED THERMAL POWER with one Power Range Channel inoperable by using the moveable incore detectors to confirm that the normalized symmetric power distribution, obtained from 2 sets of 4 symmetric thimble locations or a full-core flux map, is consistent with the indicated QUADRANT POWER TILT RATIO at least once per 12 hours.

ACTION 9 - With a channel associated with an operating loop inoperable, restore the inoperable channel to OPERABLE status within 2 hours or be in HOT STANDBY within the next 6 hours; however, one channel associated with an operating loop may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.1.

ACTION 10 - With one channel inoperable, restore the inoperable channel to OPERABLE status within 2 hours or reduce THERMAL POWER to below P-8, (Block of Low Reactor Coolant Pump Flow and Reactor Coolant Pump Breaker Position) setpoint, within the next 2 hours. Operation below P-8, (Block of Low Reactor Coolant Pump Flow and Reactor Coolant Pump Breaker Position) setpoint, may continue pursuant to ACTION 11.

ACTION 11 - With less than the Minimum Number of Channels OPERABLE, operation may continue provided the inoperable channel is placed in the tripped condition within 1 hour.

ACTION 12 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in HOT STANDBY within the next 6 hours and/or opern the reactor trip breakers.

ACTION 13 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within (1) hour or terminate testing of the Reactor Trip Breaker and open the Reactor Trip Bypass Breaker.

ACTION 14 - With one of the diverse trip features (undervoltage or shunt trip device) inoperable, restore it to OPERABLE status within 48 hours or declare the breaker inoperable and apply Action 1. The breaker shall not be bypassed while one of the diverse trip features is inoperable except for the time required for performing maintenance to restore the breaker to OPERABLE status.

ACTION 15 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement restore the inoperable channel to OPERABLE status within 48 hours or open the reactor trip breakers within the next hour.

TABLE 4.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. Manual Reactor Trip	N.A.	N.A.	R(8)	1,2 and *
2. Power Range, Neutron Flux	S	D(2), M(3) and Q(6)	M	1,2
3. Power Range, Neutron Flux, High Positive Rate	N.A.	R(6)	M	1,2
4. Power Range, Neutron Flux, High Negative Rate	N.A.	R(6)	M	1,2
5. Intermediate Range, Neutron Flux	S	R(6)	S/U(1)	1,2 and *
6. Source Range, Neutron Flux	S(7)	R(6)	M,S/U(1)	2,3,4,5 and *
7. Overtemperature ΔT	S	R(6)	M	1,2
8. Overpower ΔT	S	R(6)	M	1,2
9. Pressurizer Pressure--Low	S	R	M	1,2
10. Pressurizer Pressure--High	S	R	M	1,2
11. Pressurizer Water Level--High	S	R	M	1,2
12. Loss of Flow - Single Loop	S	R	M	1

TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
13. Loss of Flow - Two Loops	S	R	N.A.	1
14. Steam Generator Water Level Low-Low	S	R	M	1,2
15. Steam/Feedwater Flow Mismatch and Low Steam Generator Water Level	S	R	M	1,2
16. Undervoltage - Reactor Coolant Pump Busses	N.A.	R	M	1
17. Underfrequency - Reactor Coolant Pump Busses	N.A.	R	M	1
18. Turbine Trip				
A. Low Auto Stop Oil Pressure	N.A.	N.A.	S/U(1)	N.A.
B. Turbine Stop Valve Closure	N.A.	N.A.	S/U(1)	N.A.
19. Safety Injection Input from ESF	N.A.	N.A.	M(4)	1,2
20. Reactor Coolant Pump Breaker Position Trip	N.A.	N.A.	R	1
21. A. Reactor Trip Breaker	N.A.	N.A.	M(5)	1,2 and *
B. Reactor Trip Bypass Breaker	N.A.	N.A.	M(5),(9) and R(10)	1,2 and *
22. Automatic Trip Logic				
A. Undervoltage Trip Logic	N.A.	N.A.	M(5)	1,2 and *
B. Shunt Trip Logic	N.A.	N.A.	M(5)	1,2 and *

TABLE 4.3-1 (Continued)

NOTATION

* - With the reactor trip system breakers closed and the control rod drive system capable of rod withdrawal.

(1) - If not performed in previous 7 days.

(2) - Heat balance only, above 15% of RATED THERMAL POWER. Adjust channel if absolute difference >2 percent.

(3) - Compare incore to excore axial offset above 15% of RATED THERMAL POWER. Recalibrate if absolute difference ≥3 percent.

(4) - Manual ESF functional input check every 18 months.

(5) - Each train or logic channel shall be tested at least every 62 days on a STAGGERED TEST BASIS.

(6) - Neutron detectors may be excluded from CHANNEL CALIBRATION.

(7) - Below the P-6, (Block of Source Range Reactor Trip) Setpoint.

(8) - The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip circuits for the Manual Reactor Trip Function. The test shall also verify the OPERABILITY of the Bypass Breaker trip circuit(s).

(9) - Local manual shunt trip prior to placing breaker into service.

(10) - Automatic undervoltage trip.

ATTACHMENT 3

SAFETY EVALUATION FOR SUPPLEMENTAL PROPOSED CHANGE

This supplemental proposed change to the Technical Specification provides clarification for the required testing of the reactor trip breakers, reactor trip bypass breakers and the manual scram switches; and provides further definition of operability for the reactor trip breakers. To meet the guidance of the Generic Letter 85-09, "Technical Specifications for Generic Letter 83-28, item 4.3," a supplemental proposed change is submitted to provide a Limiting Condition for Operation for the reactor trip breakers; and administrative notes to clarify the surveillance testing requirements for the reactor trip breakers, reactor trip bypass breakers, and the manual scram switches.

50.59 Safety Review

Pursuant to 10CFR50.59, we have reviewed the supplemental proposed change and have concluded that no unreviewed safety question exists: In that, (i) The probability of occurrence or the consequences of an accident or malfunction of equipment importantant to safety is not increased by these supplemental changes. One change redefines the operability of the reactor trip breaker with one of the diverse trip features (undervoltage or shunt trip attachments) inoperable. Since either trip feature being operable would initiate a reactor trip the probability of occurrence or consequence of an accident or malfunction of equipment important to safety is not increased from that previously evaluated in the UFSAR. (ii) The possibility of a different type of accident other than discussed in the UFSAR has not been created by this supplemental proposed change. The proposed changes are bounded by the previous submittal and no new or different type of accidents are created by this additional change. (iii) The margin of safety as defined in the basis for any Technical Specification is not reduced by this change. The proposed changes provide further definition of reactor trip breaker operability and clarification of surveillance test requirements for the reactor trip and reactor trip bypass breakers, and the manual scram switches. These supplemental changes are bounded by the previous submittal and do not reduce the margin of safety.

50.92 Significant Hazards Review

The supplemental proposed changes do not pose a significant hazards consideration as defined in 10CFR50.92. The Commission has provided examples of changes that constitute no significant safety hazards consideration in Federal Register, Volume 48, page 14870. Example (ii) consist of additional limitation, restrictions or controls beyond those presently specified in the Technical Specifications. Example (vii) consist of a change to make the licensee conform to changes in Commission guidances. The supplemental proposed change is similar to example (ii) in that it clarifies the intent of the surveillance testing requirements for reactor trip and reactor trip bypass breakers, and the manual scram switches. Specifically, the Technical Specification requires independent testing of the undervoltage and shunt trip attachments in the reactor trip and reactor trip bypass breakers. In addition the proposed change is similar to example (vii) in that it clarifies operability of the reactor trip breakers in the action statement. Specifically the Commission's guidance, in Generic Letter 85-09, permits power operation of the reactor with one (1) of the diverse trip features of a reactor trip breaker (undervoltage or shunt trip attachment) inoperable for up to 48 hours prior to shuting down. The proposed changes also remain consistent with the Standard Technical Specifications for Westinghouse PWRs, Revision 4.

Based on the above we concluded that this proposed Technical Specification supplemental change does not involve an unreviewed safety question as defined in 10CFR50.59 nor a significant hazards consideration as defined in 10CFR50.92.