Amendment No. 24

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TABLE 3.5-1
PROTECTION SYSTEM INSTRUMENTATION

NO.	FUNCTIONAL UNIT	1 TOTAL NO. of CHANNELS	2 NO. of CHANNELS TO TRIP	3 MIN. OPERABLE CHANNELS	4 PERMISSIBLE BYPASS CONDITIONS	5 OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 3 CANNOT BE MET	6 CHANNEL OPERABLE ABOVE
1.	Manual	2	1	2		1	when RCCA is withdrawn
2.	Nuclear Flux Power Range low setting	4	2	3	For low setting, 2 of 4 power range channels greater than 10% F.P.	2 Note 1	when RCCA is withdrawn
	high setting	4	2	3		2	when RCCA is withdrawn
3.	Nuclear Flux Intermediate Range	2	1	1	2 of 4 power range channels greater than 10% F.P.	3 Note 1	when RCCA is withdrawn
4.	Nuclear Flux Source Range	2	1	2	1 of 2 intermediate range channels greater than 10^{-10} amps.	4 Note 1	Note 2
		2	0	1		4	Note 3
5.	Overtemperature Δ T	4	2	3		2	Hot Shutdown
6.	Overpower Δ T	4	2	3		2	Hot Shutdown
7.	Low Pressurizer Pressure	4	2	3		2	5% power
8.	Hi Pressurizer Pressure	3	2	2	Change	5 ← 2	Hot Shutdown
9.	Pressurizer-Hi Water Level	3	2	2		5 ← 2	5% power
10.	Low Flow in one loop (≥ 50% F.P.)	3/loop	2/loop (either loop)	2/loop (both loops)		5 ← 2	5% power
	Low Flow both loops (8.5%-50% F.P.)	3/loop	2/loop (both loops)	2/loop (either loop)		6 ← 2	5% power

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TABLE 3.5-1 (CONTINUED)
PROTECTION SYSTEM INSTRUMENTATION

		1	2	3	4	5	6
NO.	FUNCTIONAL UNIT	TOTAL NO. of CHANNELS	NO. of CHANNELS TO TRIP	MIN. OPERABLE CHANNELS	PERMISSIBLE BYPASS CONDITIONS	OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 3 CANNOT BE MET	CHANNEL OPERABLE ABOVE
	Change #4						
11.	Turbine Trip Low Autostop Oil Pressure	3	2	2	Change #1 #3	5 2	50% Power
~~12.~~	~~Deleted~~						
13.	Lo Lo Steam Generator Water Level	3/loop	2/loop	2/loop		5a 2	Hot Shutdown
14.	Undervoltage 4 KV Bus	2/bus	1/bus (both busses)	2/bus (on either bus)		6a 2	5% Power
15.	Underfrequency 4 KV Bus	2/bus	1/bus (both busses)	2/bus (on either bus)		6 2	5% Power
16.	Quadrant power tilt monitor (upper & lower ex-core neutron detectors)	1	NA	1		Log individual upper & lower ion chamber currents once/hr & after a load change of 10% or after 48 steps of control rod motion	Hot Shutdown
	Change #4						
12.	SI Input from ESFAS	2	1	2		15	Hot Shutdown
11.a	Turbine Trip - Stop Valve Closure	2	2	2		21	50% power

TABLE 3.5-1 (Continued)
PROTECTION SYSTEM INSTRUMENTATION

NO.	FUNCTIONAL UNIT	1 TOTAL NO. of CHANNELS	2 NO. of CHANNELS TO TRIP	3 MIN. OPERABLE CHANNELS	4 PERMISSIBLE BYPASS CONDITIONS	5 OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 3 CANNOT BE MET	6 CHANNEL OPERABLE ABOVE
17.	Circulating Water Flood Protection						
	a. Condenser	2 sets of 3	2 of 3 in either set	2 of 3 in both sets		Power operation may be continued for a period of up to 7 days with 1 channel (1 set of three) inoperable or for a period of 24 hrs. with two channels (2 sets of of three) inoperable. Otherwise be in hot shutdown in an additional 6 hours.	Hot Shutdown
	b. Screenhouse	2 sets of 3	2 of 3 in either set	2 of 3 in both sets		Power operation may be continued for a period of up to 7 days with 1 channel (1 set of three) inoperable or for a period of 24 hrs. with two channels (2 sets of of three) inoperable. Otherwise be in hot shutdown in an additional 6 hours.	Hot Shutdown
18.	Loss of Voltage 480V Safeguards Bus	2 sets of 2/bus	1 of 2 in each set in one bus	2 of 2 in one of the two sets		7	T_{RCS} = 350°F

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TABLE 3.5-1 (Continued)
PROTECTION SYSTEM INSTRUMENTATION

NO.	FUNCTIONAL UNIT	1 TOTAL NO. of CHANNELS	2 NO. of CHANNELS TO TRIP	3 MIN. OPERABLE CHANNELS	4 PERMISSIBLE BYPASS CONDITIONS	5 OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 3 CANNOT BE MET	6 CHANNEL OPERABLE ABOVE
19.	Degraded Voltage 480V Safeguards Bus	2/bus	2/bus	1/bus		7	T_{avg} = 350°F
20.	Automatic Trip Logic ~~Including~~ Reactor Trip Breakers	2	1	2	Note 4	~~17~~ 18	Note 5
21.		2	1	2		14	Note 5
22.	RCP Pump Breaker Position	1/breaker 1/breaker	1 2	1/breaker 1/breaker		17 16	8.5% power, but <50% power 50% power

Change #5

Change #4

NOTE 1: When block condition exists, maintain normal operation.
NOTE 2: Channels should be operable at all modes below the bypass condition with the reactor trip system breakers in the closed position and control rod drive system capable of rod withdrawal.
NOTE 3: Channels shall be operable at all modes below the bypass condition except during refueling defined to be when fuel is in the reactor vessel with the vessel head closure bolts less than fully tensioned or with the head removed.
NOTE 4: One reactor trip breaker may be bypassed for surveillance testing provided the other reactor trip breaker is operable.
NOTE 5: Channels shall be operable at all modes above refueling when the control rod drive system is capable of rod withdrawal unless both reactor trip breakers are open.
F.P. = Full Power

TABLE 3.5-2
ENGINEERED SAFETY FEATURE ACTUATION INSTRUMENTATION

NO. FUNCTIONAL UNIT	1 TOTAL NO. of CHANNELS	2 NO. of CHANNELS TO TRIP	3. MIN. OPERABLE CHANNELS	4 PERMISSIBLE BYPASS CONDITIONS	5 OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 3 CANNOT BE MET	6 CHANNEL OPERABLE ABOVE
1. SAFETY INJECTION						
a. Manual	2	1	2		8	T_{RCS} = 350°F
b. Automatic Actuation Logic and Actuation Relays	2	1	2		20	Cold Shutdown
~~b.~~ c High Containment Pressure	3	2	2		~~9~~ 11	Cold Shutdown ~~T_{RCS} = 350°F~~
~~c.~~ d Steam Generator Low Steam Pressure/Loop	3	2	2	Primary pressure less than 2000 psig	9	T_{RCS} = 350°F
~~d.~~ e Pressurizer Low Pressure	3	2	2	Primary pressure less than 2000 psig	9	T_{RCS} = 350°F
2. CONTAINMENT SPRAY						
a. Manual	2	2**	2		10	Cold Shutdown
b. Automatic Actuation Logic and Actuation Relays	2	1	2		20	Cold Shutdown
~~b.~~ c Hi-Hi Containment Pressure (Containment Spray)	2 sets of 3	2 of 3 in both sets	2 per set in either set		11	Cold Shutdown

** Must actuate 2 switches simultaneously.

Change #14

Change #11

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TABLE 3.5-2 (Continued)
ENGINEERED SAFETY FEATURE ACTUATION INSTRUMENTATION

NO.	FUNCTIONAL UNIT	1 TOTAL NO. of CHANNELS	2 NO. of CHANNELS TO TRIP	3 MIN. OPERABLE CHANNELS	4 PERMISSIBLE BYPASS CONDITIONS	5 OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 3 CANNOT BE MET	6 CHANNEL OPERABLE ABOVE
3.	AUXILIARY FEEDWATER Motor and Turbine Driven						
	a. Manual	1/pump	1/pump	1/pump		8	T_{RCS} = 350°F
	~~b.~~ c Stm. Gen. Water Level-low-low						
	i. Start Motor Driven Pumps	3/stm.gen.	2/stm.gen. either gen.	2/stm.gen. both gen.		9	T_{RCS} = 350°F
	ii. Start Turbine Driven Pump	3/stm.gen.	2/stm.gen. both gen.	2/stm.gen. either gen.	Change #18	~~12~~ 9	T_{RCS} = 350°F
	~~c.~~ d Loss of 4 KV Voltage Start Turbine Driven Pump	2/bus	1/bus (both buses)	2/bus (either bus)		~~12~~ 8	T_{RCS} = 350°F
	~~d.~~ e Safety Injection Start Motor Driven Pumps	(see Item 1)					
	~~e.~~ f Trip of both Feed-water Pumps starts Motor Driven Pumps	2/pump	1/pump both pumps	2/pump either pump	Change #18	~~6~~ 8	5% power
	Standby Motor Driven						
	a. Manual	1/pump	1/pump	1/pump		8	T_{RCS} = 350°F
	b. Automatic Actuation Logic and Actuation Relays	2	1	2		19	T_{RCS} = 350°F

Change #11

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TABLE 3.5-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION INSTRUMENTATION

NO.	FUNCTIONAL UNIT	1 TOTAL NO. of CHANNELS	2 NO. of CHANNELS TO TRIP*	3 MIN. OPERABLE CHANNELS	4 PERMISSIBLE BYPASS CONDITIONS	5 OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 3 CANNOT BE MET	6 CHANNEL OPERABLE ABOVE
4.	CONTAINMENT ISOLATION						
4.1	Containment Isolation						
a.	Manual	2	1	2		10	Cold Shutdown
b.	Automatic Actuation Logic and Actuation Relays	2	1	2		20	Cold Shutdown
~~b.~~ c	Safety Injection (Auto Actuation)	(See Table 3.5-2, Item 1)					
4.2	Containment Ventilation Isolation						
a.	Manual	2	1	1		13	Cold Shutdown
b.	Automatic Actuation Logic and Actuation Relays	2	1	2		13	Cold Shutdown
~~b.~~ c	High Containment Radioactivity	2	1	2		13	Cold Shutdown
d ~~c.~~	Manual Spray	(See Table 3.5-2, Item 2a)					
e ~~d.~~	Safety Injection	(See Table 3.5-2, Item 1)					

Change #11

3.5-11

TABLE 3.5-2 (Continued)
ENGINEERED SAFETY FEATURE ACTUATION INSTRUMENTATION

NO.	FUNCTIONAL UNIT	1 TOTAL NO. of CHANNELS	2 NO. of CHANNELS TO TRIP	3 MIN. OPERABLE CHANNELS	4 PERMISSIBLE BYPASS CONDITIONS	5 OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 3 CANNOT BE MET	6 CHANNEL OPERABLE ABOVE
5.	STEAM LINE ISOLATION						
	a. Hi-Hi Steam Flow with Safety Injection	2 Hi-Hi SF with S.I. for each loop	1 SF with S.I. in each loop	***	Change #12	12 9	*T_{RCS} = 350°F w/MSIV's open
	~~b.~~ c. Hi Steam Flow and 2 of 4 Low T_{AVG} with Safety Injection	2 Hi SF and 4 Low T_{avg} with S.I. for each loop	1 Hi SF and 2 Low T_{avg} with S.I. for each loop	***		12 9	*T_{RCS} = 350°F w/MSIV's open
	~~c.~~ d. Containment Pressure	3	2	2		9	*T_{RCS} = 350°F w/MSIV's open
	~~d.~~ e. Manual	1/loop	1/loop	1/loop		8	*T_{RCS} = 350°F w/MSIV's open
6.	FEEDWATER LINE ISOLATION						
	a. Safety Injection	(See Table 3.5-2, Item 1)					
	~~b.~~ c. Hi Steam Generator Level	3/loop	2/loop in either loop	2/loop in both loops		9	**T_{RCS} = 350°F w/FW Isol valves open

* RCS temperature may be above 350°F if MSIV's are closed.
** RCS temperature may be above 350°F if FW Isol. valves are closed.
*** Both trains must be capable of providing a S.I. signal to each loop.

b. Automatic Actuation Logic and Actuation Relays	2	1	2		19	*T_{RCS} = 350°F w/ MSIVs open
b. Automatic Actuation Logic and Actuation Relays	2	1	2		19	*T_{RCS} = 350°F w/ FW isol valves open

Change #11

ACTION STATEMENTS

1. With the number of operable channels one less than the Minimum Operable Channels requirement, restore the inoperable channel to operable status within 48 hours or be in hot shutdown with all RCCA's fully inserted within the next 6 hours.

Change #1

2. With the number of operable channels one less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the tripped condition within 6 hours ~~1 hour~~ and the requirements for the minimum number of channels operable are satisfied. However, the inoperable channel may be bypassed for up to 2 4 hours for surveillance testing of other channels.

Change #2

With the number of operable channels less than the Minimum Operable Channels requirement, be at a condition where operability is not required according to Column 6 of Table 3.5-1 within 6 hours.

3. With the number of operable channels one less than the Minimum Operable Channels requirement, suspend all operations involving positive reactivity changes and have all RCCA's fully inserted within 6 hours.

4. With the number of operable channels one less than the Minimum Operable Channels requirement, suspend all operations involving positive reactivity changes. If the channel is not restored to operable status within 48 hours, open the reactor trip breaker within the next hour.

Change #1

~~5. With the number of operable channels one less than the Total Number of Channels, operation may proceed until the next Channel Functional Test provided the inoperable channel is placed in the tripped condition within 1 hour. With the number of operable channels one less than the Minimum Operable Channels requirement, or at the time of the next required Channel Functional Test referenced above, be at a condition where channel operability is not required according to Column 6 of Table 3.5-1 within the next 6 hours.~~

Change #1

~~6. With the number of operable channels less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the tripped condition within 1 hour. Should the next Channel Functional Test require the bypass of an inoperable channel to avoid the generation of a reactor trip signal, operation may proceed until this Channel Functional Test. At the time of this next Channel Functional Test, or if at any time the number of operable channels is less than the Minimum Operable Channels, be at a condtion where channel operability is not required according to Column 6 of Table 3.5-1 within the next 6 hours.~~

7. With the number of operable channels less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the tripped condition within ~~1~~ 6 hours. ~~Should the next Channel Functional Test require the bypass of an inoperable channel to avoid the generation of a trip signal, operation may proceed until this Channel Functional Test. At the time of this Channel Functional Test, or I~~f at any time the number of operable channels is less than the Minimum Operable Channels, ~~either~~

Change #15

~~a)~~ be at Hot Shutdown within the next 6 hours and an RCS temperature less than 350°F within the following 6 hours.

~~or~~ However, the channel may be bypassed for up to 2 hours to perform surveillance testing of other channels.

~~b) energize the affected bus with a diesel generator.~~

8. With the number of operable channels one less than the Minimum Operable Channels required, restore the inoperable channel to operable status within 48 hours or be in Hot Shutdown within the next 6 hours and at an RCS temperature less than 350°F within the following 6 hours.

Change #12

9. With the number of operable channels one less than the Total Number of Channels required, operation may proceed ~~until the next Channel Functional Test~~ provided the inoperable channel is placed in the tripped position within ~~1 hour~~ 6 hours. ~~At the next Channel Functional Test, or~~ If at any time the number of operable channels is less than the Minimum Operable Channels required, be at Hot Shutdown within the next 6 hours and at an RCS temperature less than 350°F within the following 6 hours.

10. With the number of operable channels one less than the Minimum Operable Channels required, restore the inoperable channel to operable status within 48 hours or be in Hot Shutdown within an additional 6 hours, and at cold shutdown within the following 30 hours.

Change #12

11. With the number of operable channels less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the tripped condition within ~~2~~ 6 hours. ~~Should the next Channel Functional Test require the bypass of an inoperable channel to avoid the generation of an actuation signal, operation may proceed until this Channel Functional Test. At the time of this Channel Functional Test, or I~~f at any time the number of operable channels is less than the Minimum Operable Channels required, be at Hot Shutdown within 6 hours and at Cold Shutdown within the following 30 hours.

Change #13

However, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels.

Change #12

~~12. With the number of operable channels less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the tripped condition within 1 hour. Should the next Channel Functional Test require the bypass of an inoperable channel to avoid the generation of an actuation signal, operation may proceed until this Channel Functional Test. At the time of this Channel Functional Test, or if at any time the number of operable channels is less than the Minimum Operable Channels required, be at hot shutdown within 6 hours and at an RCS temperature less than 350°F within 6 hours.~~

13. With the number of operable channels less than the Minimum Operable Channels required, operation may continue provided the containment purge and exhaust valves are maintained closed.

while in operation, restore the breaker to OPERABLE status within 1 hour or

14. Should one reactor trip breaker ~~or channel of trip logic~~ be inoperable the plant must not be in the operating mode in the following a six hour time period, and the breaker must be open.

If one of the diverse reactor trip breaker trip features (undervoltage or shunt trip attachment) on one breaker is inoperable, restore it to operable status within 48 hours or declare breaker inoperable. If at the end of the 48 hour period one trip feature is inoperable it must be repaired or the plant must not be in the operating mode, and the reactor trip breaker must be open, following an additional six hour time period. 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.

Change #5

If a reactor trip breaker is inoperable at all other times above refueling when the control rod drive system is capable of rod withdrawal, restore the breaker to OPERABLE status within 48 hours or open the trip breakers within the next hour.

See next page

See page 3.5-15

15. Change #4

With the number of operable channels less than the Minimum Operable Channels required, restore the inoperable channel to OPERABLE status within 6 hours or be in at least Hot Shutdown within 6 hours. However, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of the remaining channels.

16. Change #4

With the number of operable channels one less than the Minimum Operable Channels required, restore the inoperable channel to operable status within 6 hours or reduce to below 50% THERMAL POWER within the next 2 hours. Operation may proceed below 50% THERMAL POWER pursuant to Action Statement 17.

17. Change #4

With the number of operable channels one less than the Minimum Operable Channels required, operation may continue provided the inoperable channel is placed in the tripped condition within 6 hours.

18. Change #5

With one automatic trip logic train inoperable while in operation, restore the trip logic train to OPERABLE status within 6 hours or the plant must not be in the operating mode in the following 6 hour time period. If an automatic trip logic train is inoperable at all other times above refueling when the control rod drive system is capable of rod withdrawal, restore the breaker to OPERABLE status within 48 hours or open the trip breakers.

19. Change #11

With the number of OPERABLE channels one less that the Minimum Channels required, restore the inoperable channel to OPERABLE status within 6 hours or be in at least Hot Shutdown within 6 hours and at an RCS temperature less than 350°F within the following 6 hours. However, one channel may be bypassed for up to 8 hours for surveillance testing provided that the other channel is OPERABLE. The slave relays for one channel may be bypassed for up to 12 hours provided that the other channel is OPERABLE.

20. Change #11

With the number of OPERABLE channels one less that the Minimum Channels required, be in at least Hot Shutdown within 12 hours and Cold Shutdown within the following 30 hours. However, one channel may be bypassed for up to 8 hours for surveillance testing provided that the other channel is OPERABLE. The slave relays for one channel may be bypassed for up to 12 hours provided that the other channel is OPERABLE.

21. Change #4

With the number of OPERABLE channels one less that the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the tripped condition within 6 hours.

TABLE 4.1-1

MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND TEST OF INSTRUMENT CHANNELS

Change #6

Change #8

Channel Description	Check	Calibrate	Test	Remarks
1. Nuclear Power Range	S M*(3)	D(1) Q*(3)	~~B/W~~ Q (2)(4) P(2)(5)(6)	1) Heat balance calculation** 2) Signal to ΔT; bistable action (permissive, rod stop, trips) 3) Upper and lower chambers for axial offset** 4) High setpoint ($\leq$109% of rated power) 5) Low setpoint ($\leq$25% of rated power) 6) If not performed within the last 31 days
2. Nuclear Intermediate Range	S(1)	N.A.	P(2)	1) Once/shift when in service 2) Log level; bistable action (permissive, rod stop, trip) 3) If not performed within the last 31 days
3. Nuclear Source Range	S(1)	N.A.	P(2)	1) Once/shift when in service 2) Bistable action (alarm, trip) 3) If not performed within the last 31 days
4. Reactor Coolant Temperature	S	R	~~M~~ Q (1) (2)	1) Overtemperature-Delta T 2) Overpower - Delta T
5. Reactor Coolant Flow	S	R	~~M~~ Q	
6. Pressurizer Water Level	S	R	~~M~~ Q	
7. Pressurizer Pressure	S	R	~~M~~ Q	For both RTS and SI actuation
8. 4 Kv Voltage & Frequency	N.A.	R	~~M~~ Q	4KV Frequency Reactor Protection circuits only. 4KV Voltage both RTS and AFW initiation
9. Rod Position Indication	S(1,2)	N.A.	M	1) With step counters 2) Log rod position indications each 4 hours when rod deviation monitor is out of service

Change #6

Change #16

* By means of the movable in-core detector system.

** Not required during hot, cold, or refueling shutdown but as soon as possible after return to power.

TABLE 4.1-1 (Continued)

Channel Description	Check	Calibrate	Test	Remarks
10. Rod Position Bank Counters	S(1,2)	N.A.	N.A.	1) With rod position indication 2) Log rod position indications each 4 hours when rod deviation monitor is out of service
11. Steam Generator Level	S	Change #6 R Change #16	~~M~~ Q	For RTS, AFW initiation and Feedwater Isolation
12. Charging Flow	N.A.	R	N.A.	
13. Residual Heat Removal Pump Flow	N.A.	R	N.A.	
14. Boric Acid Storage Tank Level	D	R	N.A.	Note 4
15. Refueling Water Storage Tank Level	N.A.	R	N.A.	
16. Volume Control Tank Level	N.A.	R	N.A.	
17. Reactor Containment Pressure	~~D~~ S	Change #16 R	Q ~~M(1)~~	1) Isolation Valve signal
18. Radiation Monitoring System	D	R	M	Area Monitors R1 to R9, System Monitor R17
19. Boric Acid Control	N.A.	R	N.A.	
20. Containment Drain Sump Level	N.A.	R	N.A.	
21. Valve Temperature Interlocks	N.A.	N.A.	R	
22. Pump-Valve Interlock	R	N.A.	N.A.	All ESFAS actuation logic and relays
23. Turbine Trip Set-Point	N.A.	Change #7 R	~~M(1)~~ P(1)(2)	~~1) Block Trip~~ 1) Setpoint verification is not required for Stop Valve Closure trip. 2) If not performed within last 31 days.
24. Accumulator Level and Pressure	S	R	N.A.	

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TABLE 4.1-1 (CONTINUED)

	Channel Description	Check	Calibrate	Test	Remarks
25.	Containment Pressure	S	R Change #16	~~M~~ Q	Narrow range containment pressure (-3.0, +3 psig) excluded For SI and CS actuation and Steam Line Isolation.
26.	Steam Generator Pressure	S	R	~~M~~ Q	For SI actuation
27.	Turbine First Stage Pressure Change #10	SA	R	~~M~~ R	
28.	Emergency Plan Radiation Instruments	M	R	M	
29.	Environmental Monitors	M	NA	NA	
30.	Loss of Voltage/Degraded Voltage 480 Volt Safeguards Bus	NA	R	M	
31.	Trip of Main Feedwater Pumps	NA	NA	R	
32.	Steam Flow	S	R Change #16	~~M~~ Q	For Steam Line Isolation
33.	T_{avg}	S	R	~~M~~ Q	For Steam Line Isolation
34.	Chlorine Detector, Control Room Air Intake	NA	R	M	
35.	Ammonia Detector, Control Room Air Intake	NA	R	M	
36.	Radiation Detectors, Control Room Air Intake	NA	R	M	
37.	Reactor Vessel Level Indication System	M	R	NA	
38a.	Trip Breaker Logic Channel Testing	NA	NA	M	Notes 1, 2 and 3
38b.	Trip Breaker Logic Channel Testing	NA	NA	R	Note 1

TABLE 4.1-1 (Continued)

Channel Description	Check	Calibrate	Test	Remarks
39. Reactor Trip Breakers	N.A	N.A.	M	Function test - Includes independent testing of both undervoltage and shunt trip attachment of reactor trip breakers. Each of the two reactor trip breakers will be tested on alternate months.
40. Manual Trip Reactor	N.A.	N.A.	R	Includes independent testing of both undervoltage and shunt trip circuits. The test shall also verify the operability of the bypass breaker.
41a. Reactor Trip Bypass Breaker	N.A.	N.A.	M	Using test switches in the reactor protection rack manually trip the reactor trip bypass breaker using the shunt trip coil.
41.b Reactor Trip Bypass Breaker	N.A.	N.A.	R	Automatically trip the undervoltage trip attachment.

Add next page

NOTE 1: Logic trains will be tested on alternate months corresponding to the reactor trip breaker testing. Monthly logic testing will verify the operability of all sets of reactor trip logic actuating contacts on that train (See Note 3). Refueling shutdown testing will verify the operability of all sets of reactor trip actuating contacts on both trains. In testing, operation of one set of contacts will result in a reactor trip breaker trip; the operation of all other sets of contacts will be verified by the use of indication circuitry.

NOTE 2: Testing shall be performed monthly, unless the reactor trip breakers are open or shall be performed prior to startup if testing has not bee performed within the last 30 days.

NOTE 3: The source range trip logic may be excluded from monthly testing provided it is tested within 30 days prior to startup.

NOTE 4: When BAST is required to be operable.

See page 4.1-7a

Channel Description		Check	Calibrate	Test	Remarks
42.	SI Input from ESFAS	N.A.	N.A.	R	
43.	RCP Breaker Position Trip	N.A.	N.A.	R	
44.	Overtemperature ΔT	S	R	Q(1)	1) Each channel shall be tested at least once every 92 days on a staggered test basis
45.	Overpower ΔT	S	R	Q(1)	1) Each channel shall be tested at least once every 92 days on a staggered test basis
46.	Safety Injection Manual Initiation (ESFAS)	N.A.	N.A.	R	
47.	Containment Spray Manual Initiation (ESFAS)	N.A.	N.A.	R	
48.	Containment Isolation Manual Initiation	N.A.	N.A.	R	
49.	Containment Ventilation Isolation Manual Initiation	N.A.	N.A.	R	
50.	Steam Line Isolation Manual Initiation	N.A.	N.A.	R	
51.	Auxiliary Feedwater Manual Initiation	N.A.	N.A.	R	

Change #9

Change #17

TABLE 4.1-2

MINIMUM FREQUENCIES FOR EQUIPMENT AND SAMPLING TESTS

		Test	Frequency
1.	Reactor Coolant Chemistry Samples	Chloride and Fluoride Oxygen	3 times/week and at least every third day 5 times/week and at least every second day except when below 250°F
2.	Reactor Coolant Boron	Boron Concentration	Weekly
3.	Refueling Water Storage Tank Water Sample	Boron Concentration	Weekly
4.	Boric Acid Storage Tank	Boron Concentration	Twice/Week[4]
5.	Control Rods	Rod drop times of all full length rods	After vessel head removal and at least once per 18 months (1)
6a.	Full Length Control Rod	Move any rod not fully inserted a sufficient number of steps in any one direction to cause a change of position as indicated by the rod position indication system	Monthly
6b.	Full Length Control Rod	Move each rod through its full length to verify that the rod position indication system transitions occur	Each Refueling Shutdown
7.	Pressurizer Safety Valves	Set point	Each Refueling Shutdown
8.	Main Steam Safety Valves	Set point	Each Refueling Shutdown
~~9.~~	~~Containment~~ Isolation Trip	~~Functioning~~	~~Each Refueling Shutdown~~
10.	Refueling System Interlocks	Functioning	Prior to Refueling Operations

Change #17

Table 4.1-5

Radioactive Effluent Monitoring Surveillance Requirements

	Instrument	Channel Check	Source Check	Functional Test	Channel Calibration
1.	Gross Activity Monitor (Liquid)				
	a. Liquid Rad Waste (R-18)	D(7)	M(4)	Q(1)	R(5)
	b. Steam Generator Blowdown (R-19)	D(7)	M(4)	Q(1)	R(5)
	c. Turbine Building Floor Drains (R-21)	D(7)	M(4)	Q(1)	R(5)
	d. High Conductivity Waste (R-22)	D(7)	M(4)	Q(1)	R(5)
	e. Containment Fan Coolers (R-16)	D(7)	M(4)	Q(2)	R(5)
	f. Spent Fuel Pool Heat Exchanger A Loop (R-20A)	D(7)	M(4)	Q(2)	R(5)
	g. Spent Fuel Pool Heat Exchanger B Loop (R-20B)	D(7)	M(4)	Q(2)	R(5)
	Plant Ventilation				
	a. Noble Gas Activity (R-14) (Alarm and Isolation of Gas Decay Tanks)	D(7)	M	Q(1)	R(5)
	b. Particulate Sampler (R-13)	W(7)	N.A.	N.A.	R(5)
	c. Iodine Sampler (R-10B and R-14A)	W(7)	N.A.	M	R(5)
	d. Flow Rate Determination	N.A.	N.A.	N.A.	R(6)
3.	Containment Purge				
No change Required	a. Noble Gas Activity (R-12)	D(7)	PR	Q(1)	R(5)
	b. Particulate Sampler (R-11)	W(7)	N.A.	Q(1)	R(5)
	c. Iodine Sampler (R-10A and R-12A)	W(7)	N.A.	M	R(5)
	d. Flow Rate Determination	N.A.	N.A.	N.A.	R(6)
4.	Air Ejector Monitor (R-15 and R-15A)	D(7)	M	M(2)	R(5)
5.	Waste Gas System Oxygen Monitor	D	N.A.	N.A.	Q(3)
6.	Main Steam Lines (R-31 and R-32)	M	N.A.	Q	R

TABLE 4.1-5 (Continued)

TABLE NOTATION

(1) The Channel Functional Test shall also demonstrate that automatic isolation of this pathway and control room alarm occur if any of the following conditions exist:

   1. Instrument indicates measured levels above the alarm and/or trip setpoint.

   2. Power failure.

(2) The Channel Functional Test shall also demonstrate that control room alarm occurs if any of the following conditions exist:

   1. Instrument indicates measured levels above the alarm setpoint.

   2. Power failure.

(3) The Channel Calibration shall include the use of standard gas samples containing a nominal:

   1. Zero volume percent oxygen; and

   2. Three volume percent oxygen.

(4) This check may require the use of an external source due to high background in the sample chamber.

(5) Source used for the Channel Calibration shall be traceable to the National Bureau of Standards (NBS) or shall be obtained from suppliers (e.g. Amersham) that provide sources traceable to other officially-designated standards agencies.

(6) Flow rate for main plant ventilation exhaust and containment purge exhaust are calculated by the flow capacity of ventilation exhaust fans in service and shall be determined at the frequency specified.

(7) Applies only during releases via this pathway.

Attachment III

Marked Up Copy of R.E. Ginna Nuclear Power Plant Technical Specifications
Submitted in LAR Dated May 26, 1995

Included Pages:

Attachment A

187	223*	279*	315*
188*	224	280*	
189	225*	281*	
190*	226*	282*	
191*		283*	
192*		284*	
193*		285*	
194*			
195*			
196*			
197*			
198			
199			

Attachment B, Section 3.3:

3.5-5	4.1-5
3.5-6	4.1-6
3.5-7	4.1-7*
3.5-8	4.1-7a
3.5-9*	4.1-8
3.5-10	4.1-12
3.5-11	4.1-13
3.5-12	
3.5-13*	
3.5-14*	
3.5-15*	

* - Identifies that a change is made to this page.

v. TS 3.4.3 - This was revised to require that a backup source of condensate be verified within 4 hours when the CSTs are inoperable versus demonstrating the operability of the SW System. Specifying a time limit for verifying the backup condensate source is a conservative change which now provides a clear and concise requirement for plant operators. Revising the Actions to allow any alternate source to be used as a backup source provides additional operational flexibility since other condensate sources than the SW System can be used if necessary. These sources are described in the bases for new LCO 3.7.6. These changes are consistent with NUREG-1431 and are Ginna TS Category (v.a) changes.

15. Technical Specification 3.5

i. The following changes were made to TS 3.5.1 or Table 3.5-1:

a. Table 3.5-1, Columns 1, 2, and 3 - The columns for the "Total Number of Channels," the "Number of Channels to Trip," and the "Minimum Operable Channels" were not added for each of the functional units. The columns were replaced with a new column denoting "Required Channels." System design and operational details are not directly related to the OPERABILITY of the instrumentation and were relocated to the bases or are adequately described in the UFSAR. This is a Ginna TS Category (iii) change.

b. Table 3.5-1, Column 6 - The column for the "channel operable above" was revised consistent with the changes to the Mode table definitions in ITS Chapter 1.0. Changes to the Applicability different from those discussed in Chapter 1.0 are discussed with the specific changes to the Functional Units. This is a Ginna TS Category (vi) change.

c. Table 3.5-1, Functional Unit #15 - The trip Function was not added to the new specifications. Removal of this trip function is justified in Reference 44 which shows that based on the offsite power system configuration, this trip Function is not applicable to Ginna Station. Therefore, this trip Function was relocated to the TRM. This is a Ginna TS Category (iii) change.

d. Table 3.5-1, Action Statement #1 for Functional Unit #1 - This action was revised to add requirements for operability of the Manual Reactor Trip function in Modes 3, 4, and 5 when the reactor trip breakers are closed and the rod control system is capable of rod withdrawal (LCO 3.3.1, Condition C). These actions ensures the plant is placed in a condition in which the trip function is no longer required for the associated modes of operation. This is a Ginna TS Category (vi) change.

e. Table 3.5-1, Note 1 for Functional Units #2, #3, and #4 - The notes or remarks which describe an operational detail that are not directly related to the OPERABILITY of the instrumentation were not added. These details were relocated to the bases or are adequately described in the UFSAR. This is a Ginna TS Category (iii) change.

f. Table 3.5-1, Action Statement #2 for Functional Units #2 ("low setting" and "high setting"), #5, #6, and #7 - This action was revised to allow an inoperable channel to be placed in the tripped condition within 6 → 72 hours (rather than 1 hour). This change is discussed and justified in Reference 80 62. This is a Ginna TS Category (v.b.15) change.

g. Table 3.5-1, Action Statement #2 for Functional Units #2 ("low setting" and "high setting"), #5, #6, and #7 - This action was revised to allow an inoperable channel to be bypassed for up to 12 hours (rather than 2 hours) during surveillance testing. This change is discussed and justified in Reference 80 62. This is a Ginna TS Category (v.b.15) change. 4

h. Table 3.5-1, Column 4 - This requirement was revised to associate the permissive (or bypass) details with the specific permissive (or interlock) numbers and to clarify the applicability of the Function with an associated Mode. The details of the permissible bypass conditions for the associated Functions are discussed in the UFSAR and ITS Bases. Changes to the Applicability of a Functional Unit different from those discussed in Column 4 are discussed with the specific changes to the Functional Units. This is a Ginna TS Category (v.c) change.

i. Table 3.5-1, Action Statement #2 for Functional Unit #2 ("high setting") - This action was revised to add a requirement to either reduce Thermal Power to less than or equal to 75% RTP within 12 hours or to perform a flux map every 24 hours (consistent with SR 3.2.1.2 and SR 3.2.2.2). These requirements are in addition to the requirement to place the channel in the tripped condition within 72 hours as discussed in Section D, item 15.i.f. Reducing the power level prevents operation of the core with radial power distributions beyond the design limits. Performing a flux map compensates for the lost monitoring capability due to the inoperable NIS power range channel and allows continued operation at power levels above 75% RTP. This is a Ginna TS Category (iv.a) change.

j. Table 3.5-1, Action Statement #3 for Functional Unit #3 - This action was revised to clarify the applicability of the intermediate range neutron flux to correspond to the specific permissives with either one or two channels inoperable. The NIS intermediate range neutron flux channels must be OPERABLE when the power level is above the capability of the source range and below the capability of the power range. The associated Required Actions ensure the plant is no longer in the applicable condition through controlled power adjustments and taking into account the low probability of an event during the period that may require the protection of the NIS trip. This change supersedes that proposed in Reference 61. This is a Ginna TS Category (v.a) change.

k. Table 3.5-1, Action Statement #4 for Functional Unit #4 - This action was revised to clarify the Applicability and add associated Required Actions for inoperable SRMs. For Mode 2 below the permissive and only one SRM OPERABLE, the plant would not be required to shut down. However, with two SRMs inoperable the plant would be required to immediately open the RTBs. For Modes 3, 4, and 5, with the RTBs open, an additional action (LCO 3.3.1, RA L.2) was added that requires the performance of a SDM verification. These clarifications and additional restriction ensure the plant is no longer in the applicable condition or is in a more stable condition. This is a Ginna TS Category (iv.a) change.

l. Table 3.5-1, Action Statement #5 for Functional Units #8, #9, #10 ("low flow in one loop"), #11 and #13 - This action was revised to allow an inoperable channel to be placed in the tripped condition within 6 ~~72~~ hours (rather than 1 hour). This change is discussed and justified in Reference ~~30~~ 62. This is a Ginna TS Category (v.b.15) change.

m. Table 3.5-1, Action Statement #5 for Functional Units #8, #9, #10 ("low flow in one loop"), #11 and #13 - This action was revised to replace the current limitation of operation (tied to the next channel functional test of an OPERABLE channel) to allow the bypassing of an inoperable channel for up to ~~12~~ 4 hours in order to perform surveillance testing of other channels. The current requirement limits the ability to perform channel functional tests on OPERABLE channels for Functional Units with two-out-of-three logic. Providing a note to bypass the inoperable channel provides a sufficient timeframe to perform the required surveillance testing in a safe and orderly manner. This change is discussed and justified in Reference ~~30~~ 62. This is a Ginna TS Category (v.b.15) change.

n. Table 3.5-1, Action Statement #6 for Functional Units #10 ("low flow in both loops"), #14 and #15 - This action was revised to allow an inoperable channel to be placed in the tripped condition within ~~72~~ 6 hours (rather than 1 hour). This change is discussed and justified in Reference ~~30~~ 62. This is a Ginna TS Category (v.b.15) change.

o. Table 3.5-1, Action Statement #6 for Functional Units #10 ("low flow in both loops"), and #14 - This action was revised to replace the current limitation of operation (tied to the next channel functional test of an OPERABLE channel) to allow the bypassing of an inoperable channel for up to ~~12~~ 4 hours in order to perform surveillance testing of other channels. The current requirement limits the ability to perform channel functional tests on OPERABLE channels for Functional Units with two-out-of-three logic. Providing a note to bypass the inoperable channel provides a sufficient timeframe to perform the required surveillance testing in a safe and orderly manner. This change is discussed and justified in Reference ~~30~~ 62. This is a Ginna TS Category (v.b.15) change.

p. Table 3.5-1, Functional Unit #16 - This was revised to relocate the QPTR Monitor OPERABILITY requirements to Chapter 3.2. In addition, requirements were added to verify with a calculation that the QPTR is within limits every 24 hours when the Quadrant Power Tilt Monitor is inoperable and THERMAL POWER is < 75% RTP and to verify with a full core flux map that the core power distribution is acceptable every 24 hours when the Quadrant Power Tilt Monitor is inoperable and THERMAL POWER is ≥ 75% RTP. These are Ginna TS Category (i) and (iv.a) changes, respectively.

q. Table 3.5-1, Functional Unit #17 - The trip function requirement for the Circulation Water Flood Protection was not added. The Circulation Water Flood Protection instruments only provide an anticipatory turbine trip and is not assumed in the Ginna Station safety analysis. These instruments do not monitor parameters which are initial assumptions for a DBA or transient, do not identify a significant abnormal degradation of the reactor coolant pressure boundary, and do not provide any mitigation of a design basis event. Therefore, the requirement specified for this function does not satisfy the NRC Final Policy Statement technical specification screening criteria and is relocated to the TRM. This is a Ginna TS Category (iii) change.

r. Table 3.5-1, Functional Units #18 and #19 - The Functional Unit applicability was revised to require the instruments to be applicable in all modes associated with DG operability. This ensures that the DG can perform its function on a loss of voltage or degraded voltage to the 480 V buses. This is a Ginna TS Category (iv.a) change.

s. Table 3.5-1, Action Statement #7 for Functional Units #18 and #19 - This action was revised to allow an inoperable channel to be placed in the tripped condition within 6 hours (rather than 1 hour). This Completion Time is sufficient to allow restoration of the channel and takes into account the redundancy of the trip channels, and the low probability of an event requiring a LOP start occurring during this interval. This change is discussed and justified in Reference 42. This is a Ginna TS Category (v.b.16) change.

t. Table 3.5-1, Action Statement #7 for Functional Units #18 and #19 - This action was revised to replace the current limitation of operation (tied to the next channel functional test of an OPERABLE channel) to allow the bypassing of an inoperable channel (consistent with LCO 3.0.5) in order to perform surveillance testing of other channels. The current requirement limits the ability to perform channel functional tests on OPERABLE channels for Functional Units with the associated logic. Bypassing the inoperable channel provides a sufficient timeframe to perform the required surveillance testing in a safe and orderly manner. Additionally, a note was added clarifying that entry into the associate Conditions and Required Actions can be delayed for up to 4 hours 2 for performance of required surveillance. Entering DG actions during testing is not necessary since the Completion Times for an inoperable DG is much greater than the time to perform the SR (72 hours vs 6 hours). The SR Note time of 6 hours takes into account the redundancy of the trip channels and the low probability of an event requiring a LOP start occurring during this interval. This is a Ginna TS Category (v.b.17) change.

The bypass allowance of 2 hours is discussed and justified in Reference 62.

u. Table 3.5-1, Action Statement #7 for Functional Units #18 and #19 - This action was revised to replace the current shutdown actions with a requirement to restore channels to an OPERABLE status or to enter the applicable conditions for an inoperable DG. The actions of new LCO 3.8.1 and LCO 3.8.2 provide for adequate compensatory actions to assure plant safety. The loss of the minimum required loss of voltage or degraded voltage channels (one bus) should result in actions that are no more restrictive than actions for the loss of one DG. This is a Ginna TS Category (iv.b.1) change.

v. Table 3.5-1, Functional Unit #18 and #19 - The number of channels was reformatted to require only two undervoltage channels per bus versus two channels of the loss of voltage function and two degraded voltage function per bus. The bus undervoltage design is a one-out-of-two taken twice logic such that one degraded voltage channel and one loss of voltage channel comprise each of the two undervoltage channels. However, due to the system design, if either of the degraded voltage or loss of voltage functions is inoperable, the entire undervoltage channel must be tripped (i.e., both the degraded voltage and loss of voltage functions are tripped). This change provides greater clarity to the operators without any reduction in the system requirements. This is a Ginna TS Category (v.b.18) change.

w. LCO 3.3.1, Table 3.3.1-1, Function #10 was added for the RCP Breaker Position. This function anticipates the Reactor Coolant Flow - Low trips by monitoring each RCP breaker position to avoid RCS heatup that would occur before the low flow trip actuates. The function ensures that protection is provided against violating the DNBR limit due to loss of flow in either a single loop or two loop configuration. This is a Ginna TS Category (iv.a) change.

x. LCO 3.3.1, Table 3.3.1-1, Function #14 was added for the SI Input from ESFAS. This function ensures that if a reactor trip has not already been generated by the RTS, the ESFAS automatic actuation logic will initiate a reactor trip upon any signal that initiates SI. This is a condition of acceptability for the LOCA. A reactor trip is initiated every time an SI signal is present. This is a Ginna TS Category (v.a) change.

This change is also consistent with Reference 62.

y. Table 3.5-1, Functional Unit #20 and associated Action Statement #14 - This requirement was reformatted to separately denote the Reactor Trip Breakers, the Reactor Trip Breaker Undervoltage and Shunt Trip Mechanisms, and the Automatic Trip Logic functions (LCO 3.3.1, Table 3.3.1-1, Functions #15, #16, and #17). This is a Ginna TS Category (vi) change.

z. Table 3.5-1, Action Statement #14 for Functional Unit #20 (Automatic Trip Logic) - This action was revised to allow 6 hours to restore the channel to OPERABLE status in Modes 1 and 2 prior to initiating a plant shut down to Mode 3 (new LCO 3.3.1, Condition Q). The restoration time of 6 hours is reasonable considering that the remaining OPERABLE channel is adequate to perform the safety function and given the low probability of an event during this interval. This is a Ginna TS Category (v.b.18) change.

This change is discussed and justified in Reference 62.

aa. Table 3.5-1, Action Statement #14 for Functional Unit #20 (Reactor Trip Breaker) - This action was revised to allow 1 hour to restore the RTB to OPERABLE status in Modes 1 and 2 prior to initiating a plant shut down to Mode 3 (new LCO 3.3.1, Condition R). The restoration time of 1 hour is reasonable considering that the remaining OPERABLE RTB is adequate to perform the safety function and given the low probability of an event during this interval. This is a Ginna TS Category (v.b.19) change.

bb. Table 3.5-1, Action Statement #14 for Functional Unit #20 (Automatic Trip Logic) - This action was revised to allow 48 hours to restore the channel to OPERABLE status in Modes 3, 4, and 5 prior to initiating action to open the RTBs (new LCO 3.3.1, Condition C). The restoration time of 48 hours is reasonable considering that the remaining OPERABLE channel is adequate to perform the safety function and given the low probability of an event during this interval. This is a Ginna TS Category (v.b.20) change.

This change is discussed and justified in Reference 42.

cc. Table 3.5-1, Action Statement #14 for Functional Unit #20 (Reactor Trip Breaker) - This action was revised to allow 48 hours to restore the breaker to OPERABLE status in Modes 3, 4, and 5 prior to initiating action to open the RTBs (new LCO 3.3.1, Condition C). The restoration time of 48 hours is reasonable considering that the remaining OPERABLE breaker is adequate to perform the safety function and given the low probability of an event during this interval. This is a Ginna TS Category (v.b.20) change.

dd. Table 3.5-1, Action Statement #14 for Functional Unit #20 (Reactor Trip Breaker Undervoltage and Shunt Trip Mechanisms) - This action was revised to only allow 1 hour to open the RTBs following the action to restore the RTB to OPERABLE status in Modes 3, 4, and 5 (new LCO 3.3.1, Condition C). The current Ginna Station TS allows 6 hours to perform this action but takes into account a shut down from Modes 1 and 2. The 1 hour provides sufficient amount of time to accomplish the action in Modes 3, 4, and 5 in an orderly manner. This is a Ginna TS Category (v.a) change.

ee. Table 3.5-1, Action Statement #14 for Functional Unit #20 (Reactor Trip Breaker Undervoltage and Shunt Trip Mechanisms) - This action was revised to specify a limit of 2 hours to bypass the RTB for surveillance testing and 8 hours to bypass the RTB for maintenance on undervoltage or shunt trip mechanisms (new LCO 3.3.1, Condition R, Notes 1 and 2). The current Ginna Station TS for bypassing during maintenance does not specify a time limit. The ITS would set a limit on this time. This is a Ginna TS Category (iv.a) change.

ii. The following changes were made to TS 3.5.2, Table 3.5-2, or Table 3.5-4:

a. TS 3.5.2.2, 3.5.2.3 and Table 3.5-2, Columns 1, 2, and 3 - The details describing the operability acceptance criteria for Trip Setpoints including the columns for the "Total Number of Channels," the "Number of Channels to Trip," and the "Minimum Operable Channels" were not added for each of the functional units. The columns were replaced with a new column denoting "Required Channels." System design and operational details are not directly related to the operability of the instrumentation and were relocated to the bases or are described in the UFSAR. This is a Ginna TS Category (iii) change.

b. Table 3.5-2, Column 6 - The column for the "Channel Operable Above" was revised consistent with the changes to the Mode table definitions in ITS Chapter 1.0. Changes to the Applicability different from those discussed in Chapter 1.0 are discussed with the specific changes to the Functional Units. This is a Ginna TS Category (vi) change.

c. ~~Not used.~~ The Applicability for Safety Injection - High Containment Pressure was revised from $T_{RCS} > 350°F$ to above Cold Shutdown. This increased Applicability is required since this function initiates containment isolation between 200°F and 350°F. This change is consistent with Reference 62. This is a Ginna TS Category (iv.a) change.

d. Table 3.5-2, Functional Units #1.c and #1.d - The notes or remarks which describe operational details for the Pressurizer Pressure interlock, were reformatted as Mode Applicabilities and default conditions in the new specifications. A new SR 3.3.2.6, was added to specifically denote the operability requirements for the Pressurizer Pressure interlock. This is a Ginna TS Category (iii) change.

e. Table 3.5-2, Action Statement #9 for Functional Units #1.b, #1.c, #1.d, #3.b.i, #5.c and #6.b - This action was revised to replace the current limitation of operation (tied to the next channel functional test of an OPERABLE channel) to allow the bypassing of an inoperable channel for up to 12 hours in order to perform surveillance testing of other channels. The current requirement limits the ability to perform channel functional tests on OPERABLE channels for Functional Units with two-out-of-three logic. Providing a note to bypass the inoperable channel provides a sufficient timeframe to perform the required surveillance testing in a safe and orderly manner. This change is discussed and justified in Reference ~~30~~ 62. This is a Ginna TS Category (v.b.15) change. 4

f. Table 3.5-2, Action Statement #9 for Functional Units #1.b, #1.c, #1.d, #3.b.i, #5.c and #6.b - This action was revised to allow an inoperable channel to be placed in the tripped condition within 72 hours (6) (rather than 1 hour). This change is discussed and justified in Reference ~~30~~ 62. This is a Ginna TS Category (v.b.15) change.

g. LCO 3.3.2, Functional Units #1.b, #2.b, #3.b, #4.b, #5.a, and #6.a, "Automatic Actuation Logic and Actuation Relays," were added for the ESFAS Instrumentation. Actuation logic consists of all circuitry housed within the actuation subsystems, including relay contacts responsible for actuating the ESF equipment. This is merely a presentation change to the Technical Specifications as this logic circuitry is assumed within the operability of the specific Functions. Additionally, the automatic actuation logic and actuation relays for various Functions are required OPERABLE in Mode 4 to support system level manual initiation. This change is also consistent with Reference 62. This is a Ginna TS Category (iv.a) change.

h. Table 3.5-2, Action Statement #12 for Functional Unit #3.c - The action associated with this Function was revised to allow an inoperable channel to be placed in the tripped condition within 48 hours (rather than 1 hour). This change is discussed and justified in Reference ~~30~~ 62. This is a Ginna TS Category (v.b.15) change.

i. Table 3.5-2, Action Statement #11 for Functional Unit #2.b - The action associated with this Function was revised to replace the limitation of operation (tied to the next channel functional test of an OPERABLE channel) to allow the bypassing of an inoperable (4) channel for up to 12 hours in order to perform surveillance testing of other channels. The current requirement limits the ability to perform channel functional tests on OPERABLE channels for Functional Units with two-out-of-three logic. Providing a note to bypass the inoperable channel provides a sufficient timeframe to perform the required surveillance testing in a safe and orderly manner. This change is discussed and justified in Reference ~~30~~ 62. This is a Ginna TS Category (v.b.15) change.

j. Table 3.5-2, Action Statement #11 for Functional Unit #2.b - The action associated with this Function was revised to allow an inoperable channel to be placed (6) in the tripped condition within 72 hours (rather than 2 hours). This change is discussed and justified in Reference ~~30~~ 62. This is a Ginna TS Category (v.b.15) change.

k. Table 3.5-2, Functional Unit #3.a - The requirements for the Auxiliary Feedwater Manual Initiation were not added. The individual AFW pump instrument requirements only provide a manual function which is not assumed in the Ginna Station safety analysis. These instruments do not monitor parameters which are initial assumptions for a DBA or transient, do not identify a significant abnormal degradation of the reactor coolant pressure boundary, and do not provide any mitigation of a design basis event. Therefore, the requirement specified for this function does not satisfy the NRC Final Policy Statement technical specification screening criteria and is relocated to the TRM. This is a Ginna TS Category (iii) change.

l. Table 3.5-2, Action Statement #12 for Functional Units #3.b.ii, #3.c, #5.a, and 5.b - The action associated with these Functions was revised to replace the limitation of operation (tied to the next channel functional test of an OPERABLE channel) to
4 allow the bypassing of an inoperable channel for up to 12 hours in order to perform surveillance testing of other channels. The current requirement limits the ability to perform channel functional tests on OPERABLE channels for Functional Units with two-out-of-three logic. Providing a note to bypass the inoperable channel provides a sufficient timeframe to perform the required surveillance testing in a safe and orderly manner. This change is discussed and justified in Reference ~~30~~ 62. This is a Ginna TS Category (v.b.15) change.

m. Table 3.5-2, Action Statement #12 for Functional Units #3.b.ii, #5.a, and 5.b - The action associated with these Functions was revised to allow an inoperable channel to be placed in the tripped
6 condition within 72 hours (rather than 1 hour). This change is discussed and justified in Reference ~~30~~ 62. This is a Ginna TS Category (v.b.15) change.

n. Table 3.5-2, Action Statement #6 for Functional Unit #3.e - The action associated with this Function was revised to a more restrictive restoration time of 48 hours for an inoperable channel rather than placing the channel in the tripped condition within one hour. The allowance of 48 hours to return the train to an OPERABLE status is justified in Reference ~~48~~ 62. This is a Ginna TS Category (iv.a) change.

o. Table 3.5-2, Functional Unit #3.f - The requirements for the Standby Auxiliary Feedwater Manual Initiation were not added. The individual Standby AFW pump instrument requirements only provide a manual function to the Standby AFW pumps which backup the AFW pumps. The Ginna Station safety analysis does not model the individual manual function for these pumps. These instruments do not monitor parameters which are initial assumptions for a DBA or transient, do not identify a significant abnormal degradation of the reactor coolant pressure boundary, and do not provide any mitigation of a design basis event. Therefore, the requirement specified for this function does not satisfy the NRC Final Policy Statement technical specification screening criteria and is relocated to the TRM. This is a Ginna TS Category (iii) change.

p. Table 3.5-2, Functional Unit #4.2 and Table 3.5-4, Functional Unit #3.b - The requirements for the Containment Ventilation Isolation Function were not added. The containment ventilation components include the shutdown purge and mini-purge lines. These lines are automatically isolated on a containment isolation signal from SI. The R-29 and R-30 instruments are not assumed in the Ginna safety analysis as ESFAS isolation functions. These instruments are, however, required to perform a post-accident monitoring function in accordance with Regulatory Guide 1.97 and are retained in new LCO 3.3.3. These instruments do not monitor parameters which are initial assumptions for a DBA or transient, do not identify a significant abnormal degradation of the reactor coolant pressure boundary, and do not provide any mitigation of a design basis event. Therefore, the Manual Isolation and High Containment Radioactive Functions do not satisfy the NRC Final Policy Statement technical specification screening criteria and are relocated to the TRM. The Manual Spray and Safety Injection Functions are deleted since these functions are duplicated by other Functional Units. This is a Ginna TS Category (iii) and (ii) change, respectively.

q. Table 3.5-4, Functional Units #1.b, #1.d, and #2.b - These Functional Unit Allowable Values were revised to reflect the actual values used in the accident analyses. This is a Ginna TS Category (v.c) change.

r. Table 3.5-4, Functional Units #7.a and #7.b - The Trip Setpoint for the loss of voltage and degraded voltage functions were revised to provide a minimum value. Criteria for the establishment of equivalent values based on measured voltage versus relay operating time was relocated to the bases for new LCO 3.3.4). This is a Ginna TS Category (iii) change.

s. Table 3.5-4, Notes 1 and 2 for Functional Units #6.a and #6.c - The notes which describe design details for the Steam Generator Water Level - Low Low Function and Loss of 4 kV Function were not added. These details are relocated to the bases or are described in the UFSAR. This is a Ginna TS Category (iii) change.

iii. The following changes were made to TS 3.5.3 or Table 3.5-3:

a. TS 3.5.3.2, TS 3.5.3.3, and Table 3.5-3, Columns 1 and 2 - The columns for the "Total Required Number of Channels," and the "Minimum Channels Operable," were not added for each of the functional units. The columns were replaced with a new column denoting "Required Channels." System design and operational details are not directly related to the operability of the instrumentation and were relocated to the bases or are described in the UFSAR. This is a Ginna TS Category (iii) change.

b. TS 3.5.3.2 - The restoration time requirement of 7 days for one inoperable channel (for Functions with two channels) was revised to 30 days. The 30 day Completion Time was revised based on industry operating experience and takes into account the remaining OPERABLE channel, the passive nature of the instrument, and the low probability of an event requiring PAM instrumentation during this interval. This is a Ginna TS Category (v.b.21) change.

c. TS 3.5.3.2 - The action for one channel inoperable for more than 7 days (for Functions with two channels) was revised from requiring a plant shutdown to requiring a Special Report. Due to the passive function of these instruments and the operator's ability to respond to an accident utilizing alternate instruments and methods for monitoring, it is not appropriate to impose stringent shutdown requirements for out-of-service instrumentation. This is a Ginna TS Category (v.b.21) change.

iv. A new section SR 3.0.4 was added which establishes the requirement that all applicable SRs must be met before entry into a MODE or other specified condition in the Applicability. This section does not provide any new requirements. Previous guidance provided by the NRC (e.g., Generic Letter 87-09) regarding the intent and interpretation of existing Specifications is consistent with SR 3.0.4. This SR provides clarifying and descriptive information for the SRs applicability consistent with the use and format of the ITS. This is a Ginna TS Category (v.a) change.

28. Technical Specification 4.1

i. The following changes were made to TS 4.1.1 or Table 4.1-1:

a. Table 4.1-1, Columns 2 (Calibrate) and 3 (Test) - Various calibration and testing interval requirements for RTS and ESFAS Functions were revised consistent with Reference 62 ~~NUREG-1431.~~ Changes to the testing interval requirements different from those identified and discussed in NUREG-1431 are discussed with the specific changes to the Functional Units. This is a Ginna TS Category (v.b.15) change.

b. The following new requirements were added to Table 4.1-1 (Ginna TS Category (iv.a) changes):

1. SR 3.4.2.1 - requires verification every 30 minutes that T_{avg} for each RCS loop is > 540°F when any RCS loop T_{avg} is known to be < 547°F. This surveillance is intended to ensure that the minimum temperature for criticality is not exceeded when the RCS is at less than Hot Zero Power conditions (i.e., 547°F). The surveillance is not required to be performed if the low T_{avg} alarm in each loop is reset with a setpoint > 540°F.

2. SR 3.4.3.1 - requires verification every 30 minutes that RCS pressure, temperature, heatup and cooldown rates are within limits. This surveillance is only required during RCS heatup and cooldown operations, and inservice leak and hydrostatic testing. The 30 minute Frequency is based on the fact that heatup and cooldown rates are specified in hourly increments which provides adequate margin to correct minor deviations.

3. SR 3.4.1.1 - requires verification every 12 hours that pressurizer pressure is within limits during MODE 1. This surveillance is similar to current Ginna TS Table 4.1-1, #7 which is performed to support reactor trip functions.

4. SR 3.4.1.2 - requires verification every 12 hours that RCS average temperature is within limits during MODE 1. This surveillance is similar to current Ginna TS Table 4.1-1, #33 which is performed to support reactor trip functions.

5. SR 3.4.1.3 - requires performance of a precision heat balance to verify that RCS flow is within limits every 24 months. This surveillance is required to be performed within 7 days of entering MODE 1 and reaching 95% RTP.

6. SR 3.1.6.1 - Requires verification within 4 hours prior to criticality that the critical control bank position is within limits in the COLR.

7. SR 3.1.6.4 - Requires verification every 12 hours when critical that the sequence and overlap limits for the control banks not fully withdrawn are within limits specified in the COLR.

8. SR 3.1.8.4 - Requires verification every 30 minutes during MODE 2 PHYSICS TESTS that THERMAL POWER ≤ 5% RTP. Verification of the THERMAL POWER level will ensure that the initial conditions of the safety analyses are not violated.

9. SR 3.2.4.1 - Verification with a calculation using the power range channels every 7 days that the QPTR is within limits.

c. Table 4.1-1, Functional Units #1, #2, #3, #8, #17, #23, #25, #38a, #38b, #39, #40, #41a, and #41b - The notes or remarks which describe an operational detail, were not added. These details were relocated to the bases or are described in the UFSAR. This is a Ginna TS Category (iii) change.

This change is consistent with Reference 62.

d. LCO 3.3.1, Table 3.3.1-1, Function #10 was added for the RCP Breaker Position. This function anticipates the Reactor Coolant Flow - Low trips by monitoring each RCP breaker position to avoid RCS heatup that would occur before the low flow trip actuates. The function ensures that protection is provided against violating the DNBR limit due to loss of flow in either a single loop or two loop configuration. This is a Ginna TS Category (iv.a) change.

e. LCO 3.3.1, Table 3.3.1-1, Function #14 was added for the SI Input from ESFAS. This function ensures that if a reactor trip has not already been generated by the RTS, the ESFAS automatic actuation logic will initiate a reactor trip upon any signal that initiates SI. This is a condition of acceptability for the LOCA. A reactor trip is initiated every time an SI signal is present. This is a Ginna TS Category (iv.a) change.

f. SR 3.3.1.14, SR 3.3.1.15, SR 3.3.1.16, SR 3.3.1.17, SR 3.3.1.18 were added for the Reactor Trip System Interlocks (P-6 through P-10). These surveillances are provided to ensure reactor trips are in the correct configuration for the current plant status. They are provided to back up operator actions to ensure protection system Functions are not bypassed during plant conditions under which the safety analysis assumes the Functions are not bypassed. This is a Ginna TS Category (iv.a) change.

g. Table 4.1-1, Functions #34 and #35 - The requirements for the chlorine gas and ammonia gas instrumentation monitors for control room habitability were not added. No screening criteria apply for these requirements since the monitored parameters are not part of the primary success path in the mitigation of a DBA or transient. These monitors are not used for, nor capable of, detecting a significant abnormal degradation of the reactor coolant pressure boundary prior to a DBA. Therefore, the requirements specified for these functions do not satisfy the NRC Final Policy Statement technical specification screening criteria and are relocated to the TRM. This is a Ginna TS Category (iii) change.

h. Table 4.1-1, Functional Units #1 and 2 were revised to require a CHANNEL OPERATIONAL TEST (COT) on the power range and the intermediate range channels within 7 days prior to reactor criticality. The ITS Bases states that the 7 day time limits is sufficient to ensure that the instrumentation is OPERABLE shortly before initiating the PHYSICS TESTS. This is a Ginna TS Category (iv.a) change.

i. Table 4.1-1, Functional Unit #4 was revised to include a note requiring a channel check every 30 minutes while implementing MODE 2 PHYSICS TEST exceptions. Verification of the RCS temperature will ensure that the initial conditions of the safety analyses are not violated. This is a Ginna TS Category (iv.a) change.

j. Table 4.1-1, Functional Units #18, #28, and #29 - The Surveillance requirements for radiation monitors R-1 through R-9 and R-17, emergency plan radiation instruments, and environmental monitors, were not added to the new specifications. These process variables are not an initial condition of a DBA or transient analysis. Therefore, the requirements specified for these functions do not satisfy the NRC Final Policy Statement technical specification screening criteria and are relocated to the ODCM and the Effluent Controls Program described in new Specifications 5.5.1 and 5.5.4, respectively. This is a Ginna TS Category (iii) change.

Not used.

k. ~~Table 4.1-1, Functional Unit #25 - The calibration and testing requirements for the containment pressure narrow range transmitter were not added to the new specifications. This instrument is not used or credited in any DBA or transient analysis. This instrument is only used to verify that containment pressure remains ≤ 1.0 psig and ≥ -2.0 psig during normal operation. These items were relocated to the TRM. This is a Ginna TS Category (iii) change.~~

l. Table 4.1-1, Functional Unit #3 - This was revised to add a requirement which establishes a surveillance for a SRM CHANNEL CALIBRATION in MODE 6. This calibration consists of obtaining the detector plateau or preamp discriminator curves, evaluating those curves, and comparing the curves to baseline data and is consistent with current Ginna Station procedures. This is a Ginna TS Category (iv.a) change.

m. Table 4.1-1, Functional Units #14, #16, and #19 were relocated to the TRM for the same reasons as described in Section D, items 12.i through 12.iv. These are Ginna TS Category (iii) changes.

Based upon the above information, it has been determined that the proposed changes to the Ginna Station Technical Specifications do not involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of a new or different kind of accident previously evaluated, and does not involve a significant reduction in a margin of safety. Therefore, it is concluded that the proposed changes meet the requirements of 10 CFR 50.92(c) and do not involve a significant hazards consideration.

LESS RESTRICTIVE CHANGE CATEGORY (v.b.15)

Reference 62

The proposed changes to the Ginna Station Technical Specifications as discussed in Section D and denoted by Category (v.b.15) do not involve a significant hazards consideration as discussed below:

1. ~~Operation of Ginna Station in accordance with the proposed changes does not involve a significant increase in the probability or consequences of an accident previously evaluated. The proposed changes increase the Surveillance Test Intervals (STIs) and AOTs for instrumentation supporting a number of TS Functions. There are no actual related modifications to any of the affected systems. However, the changes are expected to reduce the test related plant scrams, reduce the test induced wear on the equipment, and reduce the number of forced outages related to test activities. Therefore, there is no significant increase in the probability of occurrence of a previously evaluated accident. Westinghouse topical reports WCAP-10271-P-A (Ref. 48) and WCAP-14333 (Ref. 30) and associated supplements showed that the effects of these extensions of STIs and AOTs, which produced negligible impact, are bounded by previous analyses. Further, the NRC has reviewed the reports associated with WCAP-10271-P-A and approved the conclusions on a generic basis. Therefore, the change does not significantly increase the consequences of a previously evaluated accident.~~

2. ~~Operation of Ginna Station in accordance with the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated. The design and functional operation of the affected equipment are not changed by the proposed revisions. The proposed changes affect only the STIs and AOTs and will not impact the function of monitoring system variables over the anticipated ranges for normal operation, anticipated operational occurrences, or accident conditions. Further, the proposed changes do not introduce any new modes of plant operation, make any physical modifications, or alter any operational setpoints. Therefore, the possibility of a new or different kind of accident from any previously evaluated is not created.~~

3. Operation of Ginna Station in accordance with the proposed change does not involve a significant reduction in a margin of safety. The proposed changes do not alter the manner in which safety limits, limiting safety system settings, or limiting conditions for operation are determined. The impact of reduced testing, other than as addressed above, is to allow a longer time interval over which instrument uncertainties (e.g., drift) may act. Implementation of the proposed changes is expected to result in an overall improvement in safety due to:

   i. Reduced testing which results in fewer inadvertent reactor trips, less frequent actuation of ESF components, and greater equipment availability.

   ii. Improvements in the effectiveness of the operating staff in monitoring and controlling plant operation resulting from less frequent distraction to attend to testing.

   Therefore, the proposed changes do not significantly reduce the margin of safety.

Based upon the above information, it has been determined that the proposed changes to the Ginna Station Technical Specifications do not involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of a new or different kind of accident previously evaluated, and does not involve a significant reduction in a margin of safety. Therefore, it is concluded that the proposed changes meet the requirements of 10 CFR 50.92(c) and do not involve a significant hazards consideration.

LESS RESTRICTIVE CHANGE CATEGORY (v.b.16)

in Reference 62

The proposed changes to the Ginna Station Technical Specifications as discussed in Section D and denoted by Category (v.b.16) do not involve a significant hazards consideration as discussed below:

1. Operation of Ginna Station in accordance with the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated. The change revises the AOT from 1 hour to 6 hours to place an inoperable DG LOP instrumentation channel in the tripped condition (current Table 3.5-1, Functional Units #18 and #19). This Function is not considered as an initiator for any accidents previously analyzed. Therefore, this change does not significantly increase the probability of a previously analyzed accident. Since the action is to place the channel in the tripped condition, the Function will continued to perform its safety function. Therefore, this change does not significantly increase the consequences of a previously analyzed accident.

2. Operation of Ginna Station in accordance with the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated. The proposed change does not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed). The proposed change introduces no new mode of plant operation or changes in the methods governing normal plant operation. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Operation of Ginna Station in accordance with the proposed change does not involve a significant reduction in a margin of safety. The proposed changes do not alter the manner in which safety limits, limiting safety system settings, or limiting conditions for operation are determined. Therefore, this change does not involve a significant reduction in a margin of safety. This change is also consistent with NUREG-1431 which has been approved by the NRC Staff.

Based upon the above information, it has been determined that the proposed changes to the Ginna Station Technical Specifications do not involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of a new or different kind of accident previously evaluated, and does not involve a significant reduction in a margin of safety. Therefore, it is concluded that the proposed changes meet the requirements of 10 CFR 50.92(c) and do not involve a significant hazards consideration.

LESS RESTRICTIVE CHANGE CATEGORY (v.b.17)

in Reference 62

The proposed changes to the Ginna Station Technical Specifications as discussed in Section D and denoted by Category (v.b.17) do not involve a significant hazards consideration as discussed below:

1. Operation of Ginna Station in accordance with the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated. The change provides an exception to allow bypassing of an inoperable DG LOP instrumentation channel and to delay entry into a Condition for the channel being tested (current Table 3.5-1, Functional Units #18 and #19). This Function is not considered as an initiator for any accidents previously analyzed. Therefore, this change does not significantly increase the probability of a previously analyzed accident. The change is expected to reduce the test related plant scrams, reduce the test induced wear on the equipment, and reduce the number of forced outages related to test activities. Since trip capability is maintained, the Function will continued to perform its safety function. Therefore, this change does not significantly increase the consequences of a previously analyzed accident.

2. Operation of Ginna Station in accordance with the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated. The proposed change does not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed). The proposed change introduces no new mode of plant operation or changes in the methods governing normal plant operation. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Operation of Ginna Station in accordance with the proposed change does not involve a significant reduction in a margin of safety. The proposed changes do not alter the manner in which safety limits, limiting safety system settings, or limiting conditions for operation are determined. Therefore, this change does not involve a significant reduction in a margin of safety. This change is also consistent with NUREG-1431 which has been approved by the NRC Staff.

Based upon the above information, it has been determined that the proposed changes to the Ginna Station Technical Specifications do not involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of a new or different kind of accident previously evaluated, and does not involve a significant reduction in a margin of safety. Therefore, it is concluded that the proposed changes meet the requirements of 10 CFR 50.92(c) and do not involve a significant hazards consideration.

LESS RESTRICTIVE CHANGE CATEGORY (v.b.18)

The proposed changes to the Ginna Station Technical Specifications as discussed in Section D and denoted by Category (v.b.18) do not involve a significant hazards consideration as discussed below:

1. Operation of Ginna Station in accordance with the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated. The change revises the required channels for Diesel Generator (DG) Loss of Power (LOP) start instrumentation (current Table 3.5-1, Functional Units # 18 and #19) from individually specifying the loss of voltage and degraded voltage channels to requiring two channels of undervoltage per 480 V safeguards bus. The start instrumentation function is not considered as an initiator for any accidents previously analyzed. Therefore, this change does not significantly increase the probability of a previously analyzed accident. The change does not further degrade the capability of the OPERABLE DG LOP instrumentation channels from performing their intended function. Therefore, this change does not significantly increase the consequences of a previously analyzed accident.

2. Operation of Ginna Station in accordance with the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated. The proposed change does not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed) or changes in the methods governing normal plant operation. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Operation of Ginna Station in accordance with the proposed change does not involve a significant reduction in a margin of safety. The change only clarifies the actual design of the DG LOP instrumentation without affecting the safety function of the specified channels. The requirement for a loss of voltage and degraded voltage function is specified in the surveillance requirement for this LCO. Therefore, this change does not involve a significant reduction in a margin of safety.

Based upon the above information, it has been determined that the proposed changes to the Ginna Station Technical Specifications do not involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of a new or different kind of accident previously evaluated, and does not involve a significant reduction in a margin of safety. Therefore, it is concluded that the proposed changes meet the requirements of 10 CFR 50.92(c) and do not involve a significant hazards consideration.

LESS RESTRICTIVE CHANGE CATEGORY (v.b.19)

in Reference 42

The proposed changes to the Ginna Station Technical Specifications as discussed in Section D and denoted by Category (v.b.19) do not involve a significant hazards consideration as discussed ~~below:~~

~~1. Operation of Ginna Station in accordance with the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated. The change revises the Required Actions for an inoperable reactor trip breaker to allow 1 hour to restore the inoperable breaker before requiring a plant shutdown (current Table 3.5-1, Functional Unit #20). The reactor trip breakers are only considered an initiator for previously analyzed transients with respect to their spurious opening. Therefore, this change does not significantly increase the probability of a previously analyzed accident. The change does not further degrade, under the circumstances, the capability of the reactor trip breaker from performing its intended function. Therefore, this change does not significantly increase the consequences of a previously analyzed accident.~~

2. Operation of Ginna Station in accordance with the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated. The proposed change does not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed) or changes in the methods governing normal plant operation. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Operation of Ginna Station in accordance with the proposed change does not involve a significant reduction in a margin of safety. The change allows a short period to restore the inoperable reactor trip breaker before requiring a plant shutdown. This time to restore the inoperable breaker is consistent with NUREG-1431. Therefore, this change does not involve a significant reduction in a margin of safety. This change is also consistent with NUREG-1431 which has been approved by the NRC Staff.

Based upon the above information, it has been determined that the proposed changes to the Ginna Station Technical Specifications do not involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of a new or different kind of accident previously evaluated, and does not involve a significant reduction in a margin of safety. Therefore, it is concluded that the proposed changes meet the requirements of 10 CFR 50.92(c) and do not involve a significant hazards consideration.

LESS RESTRICTIVE CHANGE CATEGORY (v.b.20)

in Reference 62

The proposed changes to the Ginna Station Technical Specifications as discussed in Section D and denoted by Category (v.b.20) do not involve a significant hazards consideration as discussed below:

1. Operation of Ginna Station in accordance with the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated. The change revises the Required Actions for one inoperable train of Automatic Trip Logic (or reactor trip breaker) to allow 48 hours to restore the channel to OPERABLE status in Modes 3, 4, and 5 prior to initiating action to open the reactor trip breakers (current Table 3.5-1, Functional Unit #20). The automatic trip logic is only considered an initiator for previously analyzed transients with respect to their spurious operation. The reactor trip breakers are only considered an initiator for previously analyzed transients with respect to their spurious opening. Therefore, this change does not significantly increase the probability of a previously analyzed accident. The change does not further degrade, under the circumstances, the capability of the Automatic Trip Logic (or reactor trip breaker) from performing its intended function. Therefore, this change does not significantly increase the consequences of a previously analyzed accident.

2. Operation of Ginna Station in accordance with the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated. The proposed change does not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed) or changes in the methods governing normal plant operation. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Operation of Ginna Station in accordance with the proposed change does not involve a significant reduction in a margin of safety. The change allows a period of time to restore the inoperable Automatic Trip Logic and reactor trip breaker before requiring a plant shutdown. The primary accident of concern during MODES 3, 4, and 5 is the rod ejection accident which is very unlikely due to the reduced system pressures and temperatures. Therefore, this change does not involve a significant reduction in a margin of safety.

Based upon the above information, it has been determined that the proposed changes to the Ginna Station Technical Specifications do not involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of a new or different kind of accident previously evaluated, and does not involve a significant reduction in a margin of safety. Therefore, it is concluded that the proposed changes meet the requirements of 10 CFR 50.92(c) and do not involve a significant hazards consideration.

LESS RESTRICTIVE CHANGE CATEGORY (v.b.21)

The proposed changes to the Ginna Station Technical Specifications as discussed in Section D and denoted by Category (v.b.21) do not involve a significant hazards consideration as discussed below:

1. Operation of Ginna Station in accordance with the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated. The change revises the current AOT to restore inoperable Post Accident Monitors (PAMs), revises the actions for inoperable PAMs that are not restored to service within the AOT, and revises the PAM testing frequencies (current TS 3.5.3, 3.6.4.2, and 4.4.7). The PAMs are not considered as an initiator for any accidents previously analyzed. Therefore, this change does not significantly increase the probability of a previously analyzed accident. The proposed change does not further degrade the capability of the system to perform its required function under these circumstances. Therefore, this change does not significantly increase the consequences of a previously analyzed accident.

49. Letter from D.M. Crutchfield (NRC) to J. Maier (RG&E), Subject: *Fuel Handling Accident Inside Containment*, dated October 7, 1981.

50. WCAP-13029, *MERITS Program, Phase III, Comments on Draft NUREG-1431, Standard Technical Specifications Westinghouse Plants*, July 1991.

51. WCAP-12159, *MERITS Program, Phase II, Technical Specifications and Bases*, March 1989.

52. WCAP-11618, *MERITS Program, Phase II, Task 5, Criteria Application*, November 1987.

53. ASME, Boiler and Pressure Vessel Code, Section XI.

54. EG&E Report, EGG-NTAP-6175, *In-Service Leak Testing of Primary Pressure Isolation Valves*, February 1983.

55. Letter from V.L. Rooney, NRC, to J.F. Opeka, Northeast Nuclear Energy Company, Subject: *Issuance of Amendment No. 105 (TAC No. M89518)*, dated February 22, 1995.

56. Generic Letter 88-16, *Removal of Cycle-Specific Parameter Limits from Technical Specifications*, dated October 4, 1988.

57. Letter from A.G. Hansen, NRC, to R.E. Link, Subject: *Amendment Nos. 157 and 161 to Facility Operating License Nos. DPR-24 and DPR-27 (TACS M85689 and M85690)*, dated December 8, 1994.

58. Ginna Station LER 95-001, Subject: *Pressurizer Safety Valve Lift Settings Found Above Technical Specification Tolerance During Post-Service Test Due to Setpoint Shifts, Results in Independent Train Being Considered Inoperable*, dated March 6, 1995.

59. Letter from A.R. Johnson, NRC, to R.C. Mecredy, RG&E, Subject: *Emergency Response Capability - Conformance to Regulatory Guide 1.97, Revision 3 (TAC No. M80439)*, dated February 24, 1993.

60. Letter from R.C. Mecredy, RG&E, to A.R. Johnson, NRC, Subject: *Generic Letter 90-06, Resolution of Generic Issue 70, "Power Operated Relief Valve and Block Valve Reliability" and Generic Issue 94, "Additional Low Temperature Overpressure Protection for Light Water Reactors,"* dated September 15, 1992.

61. Letter from R.E. Smith, RG&E, to C. Stahle, NRC, Subject: *Change P-10 Permissive*, dated December 22, 1988.

62. Letter from R.C. Mecredy, RG&E, to A.R. Johnson, NRC, Subject: "Changes to Technical Specification Instrument Requirements, Conversion to Improved Technical Specifications," dated August 31, 1995.

Amendment No.

LCO 3.3.1
TABLE 3.3.1-1

TABLE 3.5-1
PROTECTION SYSTEM INSTRUMENTATION

15.i.a

	NO.	FUNCTIONAL UNIT	1 TOTAL NO. of CHANNELS	2 NO. of CHANNELS TO TRIP	3 MIN. OPERABLE CHANNELS	4 PERMISSIBLE BYPASS CONDITIONS	5 OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 3 CANNOT BE MET	6 CHANNEL OPERABLE ABOVE
FU #1	1.	Manual (Also Addressed w/ Chapter 3.1)	2	1	2		1	when RCCA is withdrawn 15.i.b 15.i.d
FU #2	2.	Nuclear Flux Power Range				For low setting, 2 of 4 power range channels greater than ~~10%~~ 8% F.P. 15.i.h 15.i.j	2 ~~Note 1~~ 15.i.e	when RCCA is withdrawn
FU #2.b		low setting	4	2	3			
FU #2a		high setting	4	2	3		2 15.i.i	when RCCA is withdrawn
FU #3	3.	Nuclear Flux Intermediate Range	2	1	1	2 of 4 power range channels greater than ~~10%~~ 8% F.P. 15.i.j	3 ~~Note 1~~ 15.i.e	when RCCA is withdrawn 15.i.j
FU #4	4.	Nuclear Flux Source Range (Also Addressed w/ Chapter 3.1)	2	1	2	1 of 2 intermediate range channels greater than 10^{-10} amps.	4 ~~Note 1~~ 15.i.e	Note 2 15.i.k
			2	0	1		4	Note 3
FU #5	5.	Overtemperature Δ T	4	2	3		2	Hot Shutdown
FU #6	6.	Overpower Δ T	4	2	3		2	Hot Shutdown
FU #7.a	7.	Low Pressurizer Pressure	4	2	3		2	5% power
FU #7.b	8.	Hi Pressurizer Pressure	3	2	2		5	Hot Shutdown
FU #8	9.	Pressurizer-Hi Water Level	3	2	2		5	5% power
FU #9.a	10.	Low Flow in one loop ~~(> 50% F.P.)~~	3/loop	2/loop (either loop)	2/loop (both loops)		5	5% power
FU #9.b		Low Flow both loops ~~(8.5% - 50% F.P.)~~	3/loop	2/loop (both loops)	2/loop (either loop)		6	5% power

Amendment No. [illegible]

TABLE 3.5-1 (CONTINUED)
PROTECTION SYSTEM INSTRUMENTATION

15.i.a

		1	2	3	4	5	6
NO.	FUNCTIONAL UNIT	TOTAL NO. of CHANNELS	NO. of CHANNELS TO TRIP	MIN. OPERABLE CHANNELS	PERMISSIBLE BYPASS CONDITIONS	OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 3 CANNOT BE MET	CHANNEL OPERABLE ABOVE
FU#13 11.	Turbine Trip	3	2	2		5	50% Power
~~12.~~	~~Deleted~~						
FU#12 13.	Lo Lo Steam Generator Water Level	3/loop	2/loop	2/loop		5	Hot Shutdown
FU#11 14.	Undervoltage 4 KV Bus	2/bus	1/bus (both busses)	2/bus (on either bus)		6	5% Power
~~15.~~	~~Underfrequency 4 KV Bus~~	~~2/bus~~	~~1/bus (both busses)~~	~~2/bus (on either bus)~~		~~6~~	~~5% Power~~
16.	Quadrant power tilt monitor (upper & lower ex-core neutron detectors)	1	NA	1		Log individual upper & lower ion chamber currents once/hr & after a load change of 10% or after 48 steps of control rod motion	Hot Shutdown

15.i.b

15.i.c

Addressed with Chapter 3.2

Add Function # 10, "RCP Breaker Position" 15.i.w

Add Function # 14, "SI Input from ESFAS" 15.i.x

Amendment No. 24

3.5-

TABLE 3.5-1 (Continued)
PROTECTION SYSTEM INSTRUMENTATION

NO.	FUNCTIONAL UNIT	1 TOTAL NO. of CHANNELS	2 NO. of CHANNELS TO TRIP	3 MIN. OPERABLE CHANNELS	4 PERMISSIBLE BYPASS CONDITIONS	5 OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 3 CANNOT BE MET	6 CHANNEL OPERABLE ABOVE
17.	Circulating Water Flood Protection						
	a. Condenser	2 sets of 3	2 of 3 in either set	2 of 3 in both sets		Power operation may be continued for a period of up to 7 days with 1 channel (1 set of three) inoperable or for a period of 24 hrs. with two channels (2 sets of of three) inoperable. Otherwise be in hot shutdown in an additional 6 hours.	Hot Shutdown
	b. Screenhouse	2 sets of 3	2 of 3 in either set	2 of 3 in both sets		Power operation may be continued for a period of up to 7 days with 1 channel (1 set of three) inoperable or for a period of 24 hrs. with two channels (2 sets of of three) inoperable. Otherwise be in hot shutdown in an additional 6 hours.	Hot Shutdown
18.	Loss of Voltage 480V Safeguards Bus	2 sets of 2/bus	1 of 2 in each set in one bus	2 of 2 in one of the two sets		7	T_{RCS} = 350°F

15.i.q

CO 3.3.4

15.i.v

15.i.a

15.i.r

TABLE 3.5-1 (Continued)
PROTECTION SYSTEM INSTRUMENTATION

NO.	FUNCTIONAL UNIT	1 TOTAL NO. of CHANNELS	2 NO. of CHANNELS TO TRIP	3 MIN. OPERABLE CHANNELS	4 PERMISSIBLE BYPASS CONDITIONS	5 OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 3 CANNOT BE MET	6 CHANNEL OPERABLE ABOVE
19.	Degraded Voltage 480V Safeguards Bus	2/bus	2/bus	1/bus		7	T_{avg} = 350°F
20.	Automatic Trip Logic Including Reactor Trip Breakers	2	1	2	Note 4	14	Note 5

15.i.v 15.i.r CO3.3.4 FU# 15 FU# 16 FU# 17 15.i.y 15.i.a

15.i.e ~~NOTE 1: When block condition exists, maintain normal operation.~~

FU#4 Notes (a)&(e) NOTE 2: Channels should be operable at all modes below the bypass condition with the reactor trip system breakers in the closed position and control rod drive system capable of rod withdrawal.

FU #4 Note (e) NOTE 3: Channels shall be operable at all modes below the bypass condition except during refueling defined to be when fuel is in the reactor vessel with the vessel head closure bolts less than fully tensioned or with the head removed.

FU#15 Cond R Note 1 NOTE 4: One reactor trip breaker may be bypassed for surveillance testing provided the other reactor trip breaker is operable.

FU#17 Note (j) NOTE 5: Channels shall be operable at all modes above refueling when the control rod drive system is capable of rod withdrawal unless both reactor trip breakers are open.

~~F.P. = Full Power~~

LCO 3.3.2

Table 3.3.2-1

TABLE 3.5-2

ENGINEERED SAFETY FEATURE ACTUATION INSTRUMENTATION

15.ii.a 15.ii.b

	NO.	FUNCTIONAL UNIT	1 TOTAL NO. of CHANNELS	2 NO. of CHANNELS TO TRIP	3 MIN. OPERABLE CHANNELS	4 PERMISSIBLE BYPASS CONDITIONS	5 OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 3 CANNOT BE MET	6 CHANNEL OPERABLE ABOVE
	1.	SAFETY INJECTION						
FU # 1.a		a. Manual	2	1	2		8 15.ii.c	T_{RCS} = 350°F
FU # 1.c		b. High Containment Pressure	3	2	2		11 → ⊕ Cold Shutdown	~~T_{RCS} = 350°F~~
FU # 1.e		c. Steam Generator Low Steam Pressure/Loop	3	2	2	Primary pressure less than 2000 psig SR 3.3.2.6 15.ii.d LCO 3.3.2 Footnote (a)	9	T_{RCS} = 350°F
FU # 1.d		d. Pressurizer Low Pressure	3	2	2	Primary pressure less than 2000 psig	9	T_{RCS} = 350°F
	2.	CONTAINMENT SPRAY						
FU # 2.a		a. Manual	2	2**	2		10	Cold Shutdown
FU # 2.c		b. Hi-Hi Containment Pressure (Containment Spray)	2 sets of 3	2 of 3 in both sets	2 per set in either set		11	Cold Shutdown

** Must actuate 2 switches simultaneously. 15.ii.a

Add Function # 1.b, "Automatic Actuation Logic and Actuation Relays" 15.ii.g

Add Function # 2.b, "Automatic Actuation Logic and Actuation Relays" 15.ii.g

TABLE 3.5-2 (Continued)
ENGINEERED SAFETY FEATURE ACTUATION INSTRUMENTATION

15.ii.a

15.ii.b

NO. FUNCTIONAL UNIT	1 TOTAL NO. of CHANNELS	2 NO. of CHANNELS TO TRIP	3 MIN. OPERABLE CHANNELS	4 PERMISSIBLE BYPASS CONDITIONS	5 OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 3 CANNOT BE MET	6 CHANNEL OPERABLE ABOVE
3. AUXILIARY FEEDWATER Motor and Turbine Driven						
15.ii.k ~~a. Manual~~	~~1/pump~~	~~1/pump~~	~~1/pump~~		~~8~~	~~T_{RCS} = 350°F~~
FU# 6.b b. Stm. Gen. Water Level-low-low						
i. Start Motor Driven Pumps	3/stm.gen.	2/stm.gen. either gen.	2/stm.gen. both gen.		9	T_{RCS} = 350°F
ii. Start Turbine Driven Pump	3/stm.gen.	2/stm.gen. both gen.	2/stm.gen. either gen.		12	T_{RCS} = 350°F
FU# 6.d c. Loss of 4 KV Voltage Start Turbine Driven Pump	2/bus	1/bus (both buses)	2/bus (either bus)		12 15.ii.h	T_{RCS} = 350°F
FU# 6.c d. Safety Injection Start Motor Driven Pumps		(see Item 1)				
FU# 6.e e. Trip of both Feed-water Pumps starts Motor Driven Pumps	2/pump	1/pump both pumps	2/pump either pump		6 15.ii.n	5% power
15.ii.o Standby Motor Driven a. Manual	1/pump	1/pump	1/pump		8	T_{RCS} = 350°F

Add Function # 6.a, "Automatic Actuation Logic and Actuation Relays" 15.ii.g

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TABLE 3.5-2 (Continued)
ENGINEERED SAFETY FEATURE ACTUATION INSTRUMENTATION

15.ii.a

15.ii.b

NO.	FUNCTIONAL UNIT	1 TOTAL NO. of CHANNELS	2 NO. of CHANNELS TO TRIP*	3 MIN. OPERABLE CHANNELS	4 PERMISSIBLE BYPASS CONDITIONS	5 OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 3 CANNOT BE MET	6 CHANNEL OPERABLE ABOVE
4.	CONTAINMENT ISOLATION						
4.1	Containment Isolation						
FU#3.a a.	Manual	2	1	2		10	Cold Shutdown
FU#3.c b.	Safety Injection (Auto Actuation)		(See Table 3.5-2, Item 1)				
4.2	Containment Ventilation Isolation						
a.	Manual	2	1	1		13	Cold Shutdown
b.	High Containment Radioactivity	2	1	2		13	Cold Shutdown
c.	Manual Spray		(See Table 3.5-2, Item 2a)				
d.	Safety Injection		(See Table 3.5-2, Item 1)				

15.ii.p

Add Function # 3.b, "Automatic Actuation Logic and Actuation Relays" 15.ii.g

3-54

TABLE 3.5-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION INSTRUMENTATION

	15.ii.a					15.ii.b
	1	2	3	4	5	6
NO. FUNCTIONAL UNIT	TOTAL NO. of CHANNELS	NO. of CHANNELS TO TRIP	MIN. OPERABLE CHANNELS	PERMISSIBLE BYPASS CONDITIONS	OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 3 CANNOT BE MET	CHANNEL OPERABLE ABOVE
5. STEAM LINE ISOLATION						
FU#4.e Footnote (c) a. Hi-Hi Steam Flow with Safety Injection	2 Hi-Hi SF with S.I. for each loop	1 SF with S.I. in each loop	***		12	*T_{RCS} = 350°F w/MSIV's open
FU#4.d Footnote (c) b. Hi Steam Flow and 2 of 4 Low T_{AVG} with Safety Injection	2 Hi SF and 4 Low T_{avg} with S.I. for each loop	1 Hi SF and 2 Low T_{avg} with S.I. for each loop	***		12	*T_{RCS} = 350°F w/MSIV's open
FU#4.c Footnote (c) c. Containment Pressure	3	2	2		9	*T_{RCS} = 350°F w/MSIV's open
FU#4.a Footnote (c) d. Manual	1/loop	1/loop	1/loop		8	*T_{RCS} = 350°F w/MSIV's open
6. FEEDWATER LINE ISOLATION						
FU# 5.c a. Safety Injection	(See Table 3.5-2, Item 1)					
FU# 5,b Footnote (d) b. Hi Steam Generator Level	3/loop	2/loop in either loop	2/loop in both loops		9	**T_{RCS} = 350°F w/FW Isol valves open

Note (c) * RCS temperature may be above 350°F if MSIV's are closed.

Note (d) ** RCS temperature may be above 350°F if FW Isol. valves are closed.

*** Both trains must be capable of providing a S.I. signal to each loop. 15.ii.a

Add Function 4.b, "Automatic Actuation Logic and Actuation Relays" 15.ii.g

Add Function 5.a, "Automatic Actuation Logic and Actuation Relays" 15.ii.g.

Add Function 7, "ESFAS Pressurizer Pressure Interlock" 15.ii.d

ACTION STATEMENTS

LCO 3.3.1 Cond B Cond C 15.i.d

1. With the number of operable channels one less than the Minimum Operable Channels requirement, restore the inoperable channel to operable status within 48 hours or be in hot shutdown with all RCCA's fully inserted within the next 6 hours.

LCO 3.3.1 Cond D Cond E Cond M 6 ~~72~~ 15.i.f

2. With the number of operable channels one less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the tripped condition within 1 hour and the requirements for the minimum number of channels operable are satisfied. However, the inoperable channel may be bypassed for up to 2 hours for surveillance testing of other channels. 4 ~~12~~ 15.i.g Add RA D.1.1 and D.2.1 15.i.i

With the number of operable channels less than the Minimum Operable Channels requirement, be at a condition where operability is not required according to Column 6 of Table 3.5-1 within 6 hours.

LCO 3.3.1 Cond F/G/H

3. With the number of operable channels one less than the Minimum Operable Channels requirement, suspend all operations involving positive reactivity changes and have all RCCA's fully inserted within 6 hours. 15.i.j

LCO 3.3.1 Cond I/J/K/L 15.i.k ADD RA L.2

4. With the number of operable channels one less than the Minimum Operable Channels requirement, suspend all operations involving positive reactivity changes. If the channel is not restored to operable status within 48 hours, open the reactor trip breaker within the next hour. 6 ~~12~~ 15.i.l

LCO 3.3.1 Cond E Cond M Cond N Cond P

5. With the number of operable channels one less than the Total Number of Channels, operation may proceed until the next Channel Functional Test provided the inoperable channel is placed in the tripped condition within 1 hour. With the number of operable channels one less than the Minimum Operable Channels requirement, ~~or at the time of the next required Channel Functional Test referenced above,~~ be at a condition where channel operability is not required according to Column 6 of Table 3.5-1 within the next 6 hours. 15.i.m Add Note 15.i.m

LCO 3.3.1 Cond M 6 15.i.n ~~72~~ LCO 3.3.2 Cond B 15.i.o 15.ii.n Cond C

6. With the number of operable channels less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the tripped condition within 1 hour. Should the next Channel Functional Test require the bypass of an inoperable channel to avoid the generation of a reactor trip signal, operation may proceed until this Channel Functional Test. At the time of this next Channel Functional Test or if at any time the number of operable channels is less than the Minimum Operable Channels, be at a condtion where channel operability is not required according to Column 6 of Table 3.5-1 within the next 6 hours. Add Note 15.i.o

LCO 3.3.4 7. With the number of operable channels less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the tripped condition within (1) hour. Should the next Channel Functional Test require the bypass of an inoperable channel to avoid the generation of a trip signal, operation may proceed until this Channel Functional Test. At the time of this Channel Functional Test, or if at any time the number of operable channels is less than the Minimum Operable Channels, either

Cond A

6 15.i.s

SR Note 15.i.t

15.i.u

Cond B & Cond C

a) be at Hot Shutdown within the next 6 hours and an RCS temperature less than 350°F within the following 6 hours, or

b) energize the affected bus with a diesel generator.

LCO 3.3.2 8. With the number of operable channels one less than the Minimum Operable Channels required, restore the inoperable channel to operable status within 48 hours or be in Hot Shutdown within the next 6 hours and at an RCS temperature less than 350°F within the following 6 hours.

Cond B
Cond D

LCO 3.3.2 9. With the number of operable channels one less than the Total Number of Channels required, operation may proceed until the next Channel Functional Test provided the inoperable channel is placed in the tripped position within ~~48~~ 6 hour. At the next Channel Functional Test, or at any time the number of operable channels is less than the Minimum Operable Channels required, be at Hot Shutdown within the next 6 hours and at an RCS temperature less than 350°F within the following 6 hours.

Cond I

5.ii.f

15.ii Note

Cond J
Cond K

LCO 3.3.2 10. With the number of operable channels one less than the Minimum Operable Channels required, restore the inoperable channel to operable status within 48 hours or be in Hot Shutdown within an additional 6 hours, and at cold shutdown within the following 30 hours.

Cond B
Cond E

Note 15.ii.i 6 ~~12~~ 15.ii.j

LCO 3.3.2 11. With the number of operable channels less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the tripped condition within (2) hours. Should the next Channel Functional Test require the bypass of an inoperable channel to avoid the generation of an actuation signal, operation may proceed until this Channel Functional Test. At the time of this Channel Functional Test, or if at any time the number of operable channels is less than the Minimum Operable Channels required, be at Hot Shutdown within 6 hours and at Cold Shutdown within the following 30 hours.

Cond I
Cond L

15.ii.h 48 ~~72~~ 6 15.ii.m

LCO 3.3.2 Cond B Cond I

12. With the number of operable channels less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the tripped condition within 1 hour. Should the next Channel Functional Test require the bypass of an inoperable channel to avoid the generation of an actuation signal, operation may proceed until this Channel Functional Test. At the time of this Channel Functional Test, or if at any time the number of operable channels is less than the Minimum Operable Channels required, be at hot shutdown within 6 hours and at an RCS temperature less than 350°F within 6 hours.

NOTE 15.ii.l

Cond D Cond K

15.ii.p

13. ~~With the number of operable channels less than the Minimum Operable Channels required, operation may continue provided the containment purge and exhaust valves are maintained closed.~~

15.i.aa & 15.i.cc 15.i.z & 15.i.bb

LCO 3.3.1 Cond C Cond R Cond Q

14. Should one reactor trip breaker or channel of trip logic be inoperable the plant must not be in the operating mode following a six hour time period, and the breaker must be open.

LCO 3.3.1 Cond C Cond S Cond U

15.i.dd

If one of the diverse reactor trip breaker trip features (undervoltage or shunt trip attachment) on one breaker is inoperable, restore it to operable status within 48 hours or declare breaker inoperable. If at the end of the 48 hour period one trip feature is inoperable it must be repaired or the plant must not be in the operating mode, and the reactor trip breaker must be open, following an additional six hour time period. 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.

Cond R, Note 2

15.i.ee

TABLE 4.1-1

MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND
TEST OF INSTRUMENT CHANNELS

28.i.a

28.i.b

28.i.c

Channel Description	Check	Calibrate	Test	Remarks
1. Nuclear Power Range #2(3.3.1) #5(3.3.1) See also Chapter 3.1	S 1(3.3.1) M* ~~(3)~~ 3(3.3.1)	D(1) 2(3.3.1) Q* ~~(3)~~ 6(3.3.1)	~~Q-B/W~~ ~~(2)~~ (4) 7(3.3.1) P ~~(2)~~ (5) 8(3.3.1)	~~1) Heat balance calculation**~~ ~~2) Signal to ΔT; bistable action (permissive, rod stop, trips)~~ ~~3) Upper and lower chambers for axial offset**~~ 4) High setpoint (<109% of rated power) 5) Low setpoint (<25% of rated power)
2. Nuclear Intermediate Range #3(3.3.1) Mode 6 Requirements Addressed w/ Chapter 3.9	S ~~(1)~~ 1(3.3.1)	~~N.A.~~ R 10(3.3.1)	P ~~(2)~~ 8(3.3.1)	~~1) Once/shift when in service~~ ~~2) Log level; bistable action (permissive, rod stop, trip)~~ 28.i.c
3. Nuclear Source Range #4(3.3.1)	S ~~(1)~~ 1(3.3.1)	~~N.A.~~ R 10(3.3.1)	P ~~(2)~~ 7 (Modes 3→5) 8 (Mode 2)	~~1) Once/shift when in service~~ ~~2) Bistable action (alarm, trip)~~ 28.i.c
4. Reactor Coolant Temperature #3(3.3.2) #5(3.3.1) #6(3.3.1) #4(3.3.2) See also Chapter	S 1(3.3.1)	R 10(3.3.1)	~~M~~ Q (1) (2) 7(3.3.1)	1) Overtemperature-Delta T 2) Overpower - Delta T
5. Reactor Coolant Flow #9(3.3.1)	S 1(3.3.1)	R 10(3.3.1)	~~M~~ Q 7(3.3.1)	
6. Pressurizer Water Level #8(3.3.1)	S 1(7.3.1)	R 10(3.3.1)	~~M~~ Q 7(3.3.1)	
7. Pressurizer Pressure #7(3.3.1) #1.d(3.3.2)	S 1(3.3.1) 1(3.3.2)	R 10(3.3.1) 5(3.3.2) 9(3.3.2)	~~M~~ Q 7(3.3.1) 8(3.3.2)	
8. 4 Kv Voltage & Frequency #11, 12(3.3.1) FU#6.e(3.3.2)	N.A.	R 10(3.3.1) 5(3.3.2)	~~M~~ Q 9(3.3.1) 3(3.3.2)	~~Reactor Protection circuits only~~ 28.i.c
9. Rod Position Indication	S(1,2)	N.A.	M	1) With step counters 2) Log rod position indications each 4 hours when rod deviation monitor is out of service Addressed in Chapter 3.1

Add Function #15, RCP Breaker Position 28.i.d

Add Function #19, SI Input from ESFAS 28.i.e

~~* By means of the movable in-core detector system~~ 28.i.c

~~** Not required during hot, cold, or refueling shutdown but as soon as possible after return to power.~~

TABLE 4.1-1 (Continued)

28.i.a

28.i.b

Addressed in Chapter 3.1

Channel Description	Check	Calibrate	Test	Remarks
10. Rod Position Bank Counters	S(1,2)	N.A.	N.A.	1) With rod position indication 2) Log rod position indications each 4 hours when rod deviation monitor is out of service
FU#12(3.3.3) FU#13(3.3.1) FU#5.b and 6.c (3.3.2) 11. Steam Generator Level	S 1 (3.3.1) 1 (3.3.2)	R 10 (3.3.1) 5 (3.3.2)	~~M~~ Q 7 (3.3.1) 2 (3.7.2)	
12. Charging Flow	N.A.	R	N.A.	
LCO 3.3.3 MFU#14 13. Residual Heat Removal Pump Flow	N.A.	R 2 (3.3.3)	N.A.	
14. Boric Acid Storage Tank Level	D	R	N.A.	Note 4
15. Refueling Water Storage Tank Level	N.A.	R	N.A.	Addressed with Chapter 3.4 & 3.5
16. Volume Control Tank Level	N.A.	R	N.A.	
17. Reactor Containment Pressure FU#1c (3.3.2) FU#2.c (3.3.2)	D 1 (3.3.2)	R 5 (3.3.2)	9 ~~M(1)~~ 2 (3.3.2)	~~1) Isolation Valve signal~~ 28.i.c
18. Radiation Monitoring System	D	R	M	Area Monitors R1 to R9, System Monitor R17
19. Boric Acid Control	N.A.	R	N.A.	
20. Containment Drain Sump Level	N.A.	R	N.A.	Addressed with Chapter 3.4 & 3.5
FU#4 21. Valve Temperature Interlocks	N.A.	N.A.	R	
FU#1,2,3,4,5,6 22. Pump-Valve Interlock	R	N.A.	N.A.	
FU#14 (3.3.1) 23. Turbine Trip Set-Point	N.A.	R 10 (3.3.1)	S[M] ~~1)~~ 13 (3.3.1)	~~1) Block Trip~~ 28.i.c
24. Accumulator Level and Pressure	S	R	N.A.	Addressed with Chapter 3.4 & 3.5

TABLE 4.1-1 (CONTINUED)

See Chapter 3.6

28.i.a

28.i.b

Channel Description	Check	Calibrate	Test	Remarks
25. Containment Pressure	S	R	~~M~~ Q	Narrow range containment pressure (-3.0, +3 psig) excluded
FU#1.e (3.3.2) 26. Steam Generator Pressure	S 1 (3.3.2)	R 5 (3.3.2)	~~M~~ Q 2 (3.3.2)	~~28.i.c~~
27. Turbine First Stage Pressure	~~S~~	R	~~M~~ R	28.i.c
28. Emergency Plan Radiation Instruments	M	R	M	
29. Environmental Monitors	M	NA	NA	
LCO 3.3.4 30. Loss of Voltage/Degraded Voltage 480 Volt Safeguards Bus	NA	R 2 (3.3.4)	M 1 (3.3.4)	
31. Trip of Main Feedwater Pumps FU#6.f (3.3.2)	NA	NA	R 4/5 (3.3.2)	
32. Steam Flow FU#4.d a 4.e (3.3.2)	S 1 (3.3.2)	R 5 (3.3.2)	~~M~~ Q 2 (3.3.2)	
33. T_{avg} FU#4.d (3.3.2)	S 1 (3.3.2)	R 5 (3.3.2)	~~M~~ Q 2 (3.3.2)	
~~34. Chlorine Detector, Control Room Air Intake~~	~~NA~~	~~R~~	~~M~~	28.i.g
~~35. Ammonia Detector, Control Room Air Intake~~	~~NA~~	~~R~~	~~M~~	
LCO 3.3.5 36. Radiation Detectors, Control Room Air Intake	NA	R 2 (3.3.5) 3 (3.3.5)	~~M~~ Q 1 (3.3.5)	
LCO 3.3.3 FU#7 37. Reactor Vessel Level Indication System	M 1 (3.3.3)	R 2 (3.3.3)	NA	
FU#17 38a. Trip Breaker Logic Channel Testing FU#17 (3.3.1)	NA	NA	M 5 (3.3.1)	~~Notes 1,~~ 2 and 3
FU#17 38b. Trip Breaker Logic Channel Testing FU#1 (3.3.1)	NA	NA	R 12 (3.3.1)	~~Note 1~~ 28.i.c

TABLE 4.1-1 (Continued) 28.i.a 28.i.b 28.i.c

	Channel Description	Check	Calibrate	Test	Remarks
FU #15 FU #16 (3.3.1)	39. Reactor Trip Breakers	N.A	N.A.	M 4 (3.3.1)	~~Function test - Includes independent testing of both undervoltage and shunt trip attachment of reactor trip breakers. Each of the two reactor trip breakers will be tested on alternate months.~~
FU #1 (3.3.1)	40. Manual Trip Reactor	N.A.	N.A.	(3.3.1) R 12	~~Includes independent testing of both undervoltage and shunt trip circuits. The test shall also verify the operability of the bypass breaker.~~
FU #15 (3.3.1)	41a. Reactor Trip Bypass Breaker	N.A.	N.A.	(3.3.1) M 4	~~Using test switches in the reactor protection rack manually trip the reactor trip bypass breaker using the shunt trip coil.~~
FU #1 (3.3.1)	41.b Reactor Trip Bypass Breaker	N.A.	N.A.	(3.3.1) R 12	~~Automatically trip the undervoltage trip attachment.~~

SR 3.3.1.14 Through SR 3.3.1.18 28.i.f

NOTE 1: Logic trains will be tested on alternate months corresponding to the reactor trip breaker testing. ~~Monthly logic testing will verify the operability of all sets of reactor trip logic actuating contacts on that train (See Note 3). Refueling shutdown testing will verify the operability of all sets of reactor trip actuating contacts on both trains. In testing, operation of one set of contacts will result in a reactor trip breaker trip; the operation of all other sets of contacts will be verified by the use of indication circuitry.~~ 28.i.c

SR 3.3.1.5

~~NOTE 2: Testing shall be performed monthly, unless the reactor trip breakers are open or shall be performed prior to startup if testing has not bee performed within the last 30 days.~~ e

~~NOTE 3: The source range trip logic may be excluded from monthly testing provided it is tested within 30 days prior to startup.~~ e

NOTE 4: When BAST is required to be operable.

TABLE 4.1-2

MINIMUM FREQUENCIES FOR EQUIPMENT AND SAMPLING TESTS

		Test	Frequency	
1.	Reactor Coolant Chemistry Samples	Chloride and Fluoride	3 times/week and at least every third day	
		Oxygen	5 times/week and at least every second day except when below 250°F	
2.	Reactor Coolant Boron	Boron Concentration	Weekly	
3.	Refueling Water Storage Tank Water Sample	Boron Concentration	Weekly	Addressed with Chapter 3.4 & 3.5
~~4.~~	~~Boric Acid Storage Tank~~	~~Boron Concentration~~	~~Twice/Week(4)~~	
5.	Control Rods	Rod drop times of all full length rods	After vessel head removal and at least once per 18 months (1)	
6a.	Full Length Control Rod	Move any rod not fully inserted a sufficient number of steps in any one direction to cause a change of position as indicated by the rod position indication system	Monthly	Addressed with Chapter 3.1
6b.	Full Length Control Rod	Move each rod through its full length to verify that the rod position indication system transitions occur	Each Refueling Shutdown	
7.	Pressurizer Safety Valves	Set point	Each Refueling Shutdown	Addressed with Chapter 3.4
8.	Main Steam Safety Valves	Set point	Each Refueling Shutdown	Addressed with Chapter 3.7
9.	Containment Isolation Trip	Functioning	Each Refueling Shutdown	SR 3.3.2.4
10.	Refueling System Interlocks	Functioning	Prior to Refueling Operations	Addressed in Chapter 3.9

Addressed with Chapter 5.0

Table 4.1-5

Radioactive Effluent Monitoring Surveillance Requirements

	Instrument	Channel Check	Source Check	Functional Test	Channel Calibration
1.	Gross Activity Monitor (Liquid)				
	a. Liquid Rad Waste (R-18)	D(7)	M(4)	Q(1)	R(5)
	b. Steam Generator Blowdown (R-19)	D(7)	M(4)	Q(1)	R(5)
	c. Turbine Building Floor Drains (R-21)	D(7)	M(4)	Q(1)	R(5)
	d. High Conductivity Waste (R-22)	D(7)	M(4)	Q(1)	R(5)
	e. Containment Fan Coolers (R-16)	D(7)	M(4)	Q(2)	R(5)
	f. Spent Fuel Pool Heat Exchanger A Loop (R-20A)	D(7)	M(4)	Q(2)	R(5)
	g. Spent Fuel Pool Heat Exchanger B Loop (R-20B)	D(7)	M(4)	Q(2)	R(5)
	Plant Ventilation				
	a. Noble Gas Activity (R-14) (Alarm and Isolation of Gas Decay Tanks)	D(7)	M	Q(1)	R(5)
	b. Particulate Sampler (R-13)	W(7)	N.A.	N.A.	R(5)
	c. Iodine Sampler (R-10B and R-14A)	W(7)	N.A.	M	R(5)
	d. Flow Rate Determination	N.A.	N.A.	N.A.	R(6)
3.	Containment Purge				
	a. Noble Gas Activity (R-12)	D(7)	PR	Q(1)	R(5)
	b. Particulate Sampler (R-11)	W(7)	N.A.	Q(1)	R(5)
	c. Iodine Sampler (R-10A and R-12A)	W(7)	N.A.	M	R(5)
	d. Flow Rate Determination	N.A.	N.A.	N.A.	R(6)
4.	Air Ejector Monitor (R-15 and R-15A)	D(7)	M	M(2)	R(5)
	Waste Gas System Oxygen Monitor	D	N.A.	N.A.	Q(3)
6.	Main Steam Lines (R-31 and R-32)	M	N.A.	Q	R

Addressed with Chapter 3.4

TABLE 4.1-5 (Continued)

TABLE NOTATION

(1) The Channel Functional Test shall also demonstrate that automatic isolation of this pathway and control room alarm occur if any of the following conditions exist:

1. Instrument indicates measured levels above the alarm and/or trip setpoint.

2. Power failure.

(2) The Channel Functional Test shall also demonstrate that control room alarm occurs if any of the following conditions exist:

1. Instrument indicates measured levels above the alarm setpoint.

2. Power failure.

(3) The Channel Calibration shall include the use of standard gas samples containing a nominal:

1. Zero volume percent oxygen; and

2. Three volume percent oxygen.

(4) This check may require the use of an external source due to high background in the sample chamber.

(5) Source used for the Channel Calibration shall be traceable to the National Bureau of Standards (NBS) or shall be obtained from suppliers (e.g. Amersham) that provide sources traceable to other officially-designated standards agencies.

(6) Flow rate for main plant ventilation exhaust and containment purge exhaust are calculated by the flow capacity of ventilation exhaust fans in service and shall be determined at the frequency specified.

(7) Applies only during releases via this pathway.

Addressed with Chapter 5.0

Attachment IV

Evaluation of Increased Surveillance Test Intervals

Evaluation of Quarterly Trip Test Instrument Surveillance Intervals

Design Analysis

Ginna Station

EWR 10226

Rochester Gas and Electric Corporation
89 East Avenue
Rochester, New York 14649

DA-EE-95-0136

Revision 0

August 21, 1995

Prepared by: Richard A. Baker — 8-22-95
Design Engineer — Date

Approved by: Mark D. Flaherty — 8-25-95
Independent or Lead Reviewer — Date

REVISION STATUS SHEET

Revision Number	Affected Sections	Description of Revision
0	All	Original Issue Table 1 Attachment A

TABLE OF CONTENTS

DESIGN ANALYSIS

Evaluation of Quarterly Trip Test Instrument Surveillance Intervals

1.0 Purpose

Included within the scope of EWR 10226 - Ginna Station Technical Specification Improvement Program (TSIP) is a change in the required surveillance intervals for testing Reactor Trip System (RTS) and Engineered Safety Feature Actuation System (ESFAS) instrument trip setpoints. Current Technical Specifications (TS) require monthly channel operational tests of RTS and ESFAS setpoint devices. Under the TSIP, it is proposed that these testing intervals be increased from monthly to quarterly. The purpose of this evaluation is to perform an instrument setpoint drift study based on historical as found/as left calibration records to show that RTS and ESFAS trip test surveillance requirements can be extended to quarterly intervals without exceeding allowable limits.

2.0 Conclusions

This analysis has shown that the Ginna Station Instrumentation listed in Table 1 may be assigned a trip test surveillance interval of up to three months (quarterly) without instrument calibration drift exceeding the allowable limits specified in existing Ginna Station setpoint documents.

3.0 Design Inputs

3.1 Setpoint Analyses

3.1.1 DA-EE-92-090-21, F411 - RCS Flow, Rev. 0

3.1.2 DA-EE-92-087-21, P429 - Pressurizer Pressure, Rev. 0

3.1.3 DA-EE-92-088-21, P468 - S/G Pressure, Rev. 0

3.1.4 DA-EE-92-085-21, P450 - LTOP RCS Pressure, Rev. 0

3.1.5 DA-EE-92-092-21, T405 - Delta T, Rev. 0

3.1.6 DA-EE-92-039-21, AST 63-3 - Turbine Auto Stop, Rev. 0

3.1.7 DA-EE-92-042-21, P946 - Containment Pressure (Wide), Rev. 0

3.1.8 DA-EE-92-089-21, F464 - Main Steam Flow, Rev. 0

3.1.9 DA-EE-92-041-21, P945 - Containment Pressure (Narrow), Rev. 0

3.1.10 DA-EE-92-081-21, L426 - Pressurizer Level, Rev. 0

3.1.11 DA-EE-92-050-21, L461 - S/G Narrow Range Level, Rev. 0

3.2 <u>RPS and ESFAS Trip Test Procedures</u>

3.2.1 CPI-TRIP-TEST 5.10, RPS Trip Test Calibration for Channel 1, Rev. 8

3.2.2 CPI-TRIP-TEST 5.20, RPS Trip Test Calibration for Channel 2, Rev. 11

3.2.3 CPI-TRIP-TEST 5.30, RPS Trip Test Calibration for Channel 3, Rev. 13

3.2.4 CPI-TRIP-TEST 5.40, RPS Trip Test Calibration for Channel 4, Rev. 8

3.2.5 CPI-TRIP-TEST 5.50, Trip Test for Turbine Auto Stop Pressure Switches and Relays

3.3 <u>Instrument Calibration Data Records</u>

Approximately 75 Instrument Calibration Data Records were retrieved and used as inputs to this analysis. These records were obtained from Ginna Station Work Orders and completed Instrument Calibration Procedures and are too numerous to be itemized in this analysis. Copies of these records will be retained in the EWR 10226 document file.

4.0 <u>Referenced Documents</u>

4.1 "Guidelines for Instrument Loop Performance Evaluation and Setpoint Verification", EWR 5126, Rev. 1, dated 08/07/92.

4.2 Commonwealth Edison Correspondence: L.D. Butterfield (WOG) to H.R. Denton (NRC); Subject: Rev. 1 of Guidelines for Preparation of Submittals Requesting Revisions to RPS Technical Specifications, dated 9/3/85.

4.3 USNRC Correspondence: C.E. Rossi (NRC) to R.A. Newton (WOG); Subject: WCAP-10271 Evaluation of Surveillance Frequencies and Out of Service Times for the Engineered Safety Features Actuation System, dated 2/22/89.

4.4 MIL-STD-105D, "Sampling Procedures and Tables for Inspection by Attributes".

5.0 Assumptions

Assumptions are noted in Section 7.0 and Attachment A when applicable.

6.0 Computer Codes

None.

7.0 Analysis

7.1 Identifying the Drift Study Population

7.1.1 References 4.2 and 4.3 require that instrument drift and safety analysis issues be addressed when proposing an increase in RTS and ESFAS surveillance intervals from monthly to quarterly. The following is a summary of the review effort performed under this analysis.

7.1.2 Functional descriptions and model numbers of the instrumentation within the scope of this analysis are provided in Table 1. This population was developed by identifying all components included within the RTS and ESFAS strings. The specific model numbers for each of these components were then identified; Table 1 was created by sorting on model numbers. There are a total of 59 instruments subject to this evaluation.

7.1.3 Monthly instrument trip test results over a one year period for a sample of the identified equipment were retrieved from Ginna Station Central Records/Document Control. Sample sizes were determined based on Reference 4.4 for a 95/95 confidence level.

7.2 Discussion of Trip Test Data and Setpoint Analyses

7.2.1 RTS and ESFAS setpoint devices are currently checked monthly in accordance with the procedures listed under Reference 3.2. Instrument Setpoint Data Sheets specify the desired setpoint and acceptance criteria for each setpoint device. Each time an instrument is tested, its current setpoint is measured and recorded on the applicable data sheet. These values are the "as found" instrument values.

7.2.2 The "as found" instrument setpoint values may differ from the "desired/calculated" values specified on the Data Sheet due to the combined effects of one or more of the following instrument uncertainty terms:

a. Instrument accuracy (Ia)
b. Instrument drift (Id)
c. Instrument calibration tolerance (It)
d. Test equipment accuracy (MTE)

The statistical worst-case effects of these uncertainties are incorporated in the design analyses of the Instrument Setpoint Verification Project (Setpoint Analyses) and used to evaluate the adequacy of existing instrument setpoint and calibration values specified in the calibration procedures. The total instrument uncertainty (TIU) is given by:

$$TIU = [Ia^2 + Id^2 + It^2 + MTE^2]^{1/2}$$

The "as-found" acceptance criteria or allowable tolerance band (ATB) specified on the Data Sheet is typically ± 1.0% of the instrument's calibrated span and is, in fact, the "It" term described above.

If during an instrument calibration an "as found" value is within the ATB, no other action is required. The instrument may be left as is until the next calibration interval. However, if an "as found" value is outside the ATB or approaching the limit of the ATB, the instrument must be adjusted or recalibrated back into the ATB as required by the calibration procedure. In either case, the "as left" calibration data is recorded on the Data Sheet.

7.3 <u>Drift Study Methodology</u>

7.3.1 The Data Sheets for the sample instrumentation population were reviewed for the period from January 1994 through January 1995. For the first Surveillance Data Sheet, the "desired/calculated" value was subtracted from the "as found" value and recorded. For the second Surveillance Data Sheet, the "as found" value is subtracted from the first surveillance "as left" value. The third surveillance "as found" value is then compared to the second surveillance "as left" value and so on until one year of data is available.

7.3.2 The "as found" minus "as left" values represent the observed instrument setpoint variance, in percent of span, for that surveillance interval (typically one month). After examining the surveillance history of each device, the worst-case consecutive five month variance is selected and documented on the Summary Sheet for each instrument manufacturer/model number in the sample population.

7.3.3 The worst "as left/as found" difference is calculated over a period of one month up to five months (i.e. the worst case drift may actually be between two consecutive monthly tests rather than over the maximum five month period). If the worst-case five month setpoint variance is within the TIU band, a quarterly trip test interval has been demonstrated to be acceptable (with two months margin which encompasses the 25% extension allowed by TS).

8.0 Results

8.1 Specific results for each manufacturer/model number are provided in the Attachment A Summary Sheets. In one case (PC-478A/B, Attachment A, page 3) the worst case variance was found to exceed the TIU by 0.18%. Per Reference 4.4, one failure out of a sample of 8 specimens is allowed. In all other cases, the worst case setpoint variance was observed to be within the TIU. Therefore, quarterly channel trip test surveillance intervals are considered to be acceptable for the instrumentation included within the scope of this analysis.

Table 1

Instrumentation Applicable to Increased Surveillance Intervals

MODEL	VENDOR NAME	EIN	SELECTED	SHORT DESC
63S-AR				
63S-AR	FOXBORO	FC-411	No	RX CLNT FLO LOOP A ALM
63S-AR	FOXBORO	FC-412	No	RX CLNT FLO LOOP A ALM
63S-AR	FOXBORO	FC-413	No	RX CLNT FLO LOOP A ALM
63S-AR	FOXBORO	FC-414	No	RX CLNT FLO LOOP B ALM
63S-AR	FOXBORO	FC-415	No	RX CLNT FLO LOOP B ALM
63S-AR	FOXBORO	FC-416	No	RX CLNT FLO LOOP B ALM
63S-AR	FOXBORO	PC-429A	Yes	PRZR DUPLEX ALM UNIT
63S-AR	FOXBORO	PC-429E	Yes	PRZR ALM-VARIBLE LP TRI
63S-AR	FOXBORO	PC-430A	No	PRZR DUPLEX ALM UNIT
63S-AR	FOXBORO	PC-430H	No	PRZR ALM-VARIBLE LP TRI
63S-AR	FOXBORO	PC-431A	No	PRZR DUPLEX ALM UNIT
63S-AR	FOXBORO	PC-431J	No	PRZR ALM-VARIBLE LP TRI
63S-AR	FOXBORO	PC-449A	Yes	PRZR PRESS BISTB LO TRIP

MODEL	VENDOR NAME	EIN	SELECTED	SHORT DESC
Total	13			
63S-BR				
63S-BR	FOXBORO	FC-464A	No	SG A STM FLOW ALARM
63S-BR	FOXBORO	FC-465A	No	SG A SF HI/HI-HI TRIP
63S-BR	FOXBORO	FC-474A	No	S/G B STM FLO ALM/TRIP
63S-BR	FOXBORO	FC-475A	No	S/G FLOW LOOP B BISTB
63S-BR	FOXBORO	LC-426A/B	Yes	PZR LVL DUPLEX ALM-HI T
63S-BR	FOXBORO	LC-427A/C	No	PZR LVL DUPLEX ALM-HI T
63S-BR	FOXBORO	LC-428A/E	No	PZR LVL DUPLEX ALM-HI T
63S-BR	FOXBORO	LC-461A/B	No	SG A NR HI LVL/RX FW ISOL
63S-BR	FOXBORO	LC-462A/B	No	S/G A LO-LO/HI LVL ALM
63S-BR	FOXBORO	LC-463C/D	No	S/G A LEVEL BISTABLE
63S-BR	FOXBORO	LC-471A/B	No	S/G B ALARM BISTABLE
63S-BR	FOXBORO	LC-472A/B	No	SG B LO-LO/HI LVL/RX FW

MODEL	VENDOR NAME	EIN	SELECTED	SHORT DESC
63S-BR	FOXBORO	LC-473C/D	No	SG B HI LVL ALM/FW ISOL
63S-BR	FOXBORO	PC-429D/C	No	PRZR PRESS DUPLEX ALAR
63S-BR	FOXBORO	PC-430E/F	No	PRZR PRESS DUPLEX ALAR
63S-BR	FOXBORO	PC-431I/G	No	PRZR PRESS DUPLEX ALAR
63S-BR	FOXBORO	PC-468A	Yes	SG A PRESS BISTB
63S-BR	FOXBORO	PC-469A	No	SG A PRESS LO/LO-LO BISTB
63S-BR	FOXBORO	PC-478A/B	Yes	S/G B PRESS BISTB
63S-BR	FOXBORO	PC-479A	No	S/G PRESS LOOP B BISTB
63S-BR	FOXBORO	PC-482A	Yes	S/G A STM PRESS BISTB AL
63S-BR	FOXBORO	PC-483A	No	SG B PRESS LO/LO-LO BISTB
63S-BR	FOXBORO	PC-945A/B	No	CNMT PRESS HI RX TRIP
63S-BR	FOXBORO	PC-946A/B	No	CNMT PRESS BISTB HI/HI-HI
63S-BR	FOXBORO	PC-947A/B	Yes	CNMT PRESS BISTB
63S-BR	FOXBORO	PC-948A/B	No	CNMT PRESS BISTB HI/HI-HI
63S-BR	FOXBORO	PC-949A/B	No	HI CNMT PRESS TRIP BISTB
63S-BR	FOXBORO	PC-950A/B	No	HI CNMT PRESS/SPRAY BIST
63S-BR	FOXBORO	TC-401A/D	Yes	TAVG HI TEMP TRIP BISTB

MODEL	VENDOR NAME	EIN	SELECTED	SHORT DESC
63S-BR	FOXBORO	TC-402A	Yes	TAVG HI & LO TEMP TRIP
63S-BR	FOXBORO	TC-403A	No	TAVG HI & LO TEMP TRIP BI
63S-BR	FOXBORO	TC-404A/D	No	TAVG LO/HI TRIP BISTB
63S-BR	FOXBORO	TC-405A/B	Yes	DELT SP2 OP TRIP/ROD STO
63S-BR	FOXBORO	TC-405C/D	No	DELT SP2 OVERTEMP TRIP
63S-BR	FOXBORO	TC-406A/B	No	DELT SP2 OP TRIP
63S-BR	FOXBORO	TC-406C/D	No	DELT SP2 OT TRIP
63S-BR	FOXBORO	TC-407A/B	No	DELT SP2 OP TRIP BISTABL
63S-BR	FOXBORO	TC-407C/D	No	DELT SP1 OT TRIP BISTABL
63S-BR	FOXBORO	TC-408A/B	No	DELT SP2 OP TRIP/ROD STO
63S-BR	FOXBORO	TC-408C/D	No	OT DELT SP2 TRIP/ROD STO

Total 40

63U

63U	FOXBORO	PC-450	Yes	RC OVERPRESS PROT ALM

MODEL	VENDOR NAME	EIN	SELECTED	SHORT DESC
63U	FOXBORO	PC-451	No	RC OVERPRESS PROT ALM
63U	FOXBORO	PC-452	Yes	RC OVERPRESS PROT ALM
Total	3			
DA-23-127				
DA-23-127	MERCOID	PS-2019	Yes	TURB LO PRESS SW TRIP
DA-23-127	MERCOID	PS-2020	Yes	TURB LO PRESS SW TRIP
DA-23-127	MERCOID	PS-2026	No	TURB LO PRESS SW TRIP
Total	3			

Attachment A

Instrument Drift Study Summary Sheets

ENG. DEPT.	STATION: GINNA STATION	DATE: 7-19-95	PAGE 1 OF 1
JOB: QUARTERLY TRIP TEST INTERVALS		MADE BY: RAB	CK:

SUMMARY SHEET

Manufacturer : Mercoid
Model No. : DA-23-127
Total No. EINs : 3
Sample No. EINs: 2

Setpoint Analysis: DA EE-92-039-21
Ia = ± 1.0 % Id = ± .5 %
It = ± 1.58 % MTE = ± .1 %
$TIU = \sqrt{1^2 + .5^2 + 1.58^2 + .1^2} = \pm 1.94\%$

EIN: PS-2019

Date	% Variance
1-12-94	-.53
2-15-94	0
4-5-94	.03
4-19-94	.5
5-6-94	-.53
6-7-94	-1.05
7-1-94	.53
7-27-94	0
8-26-94	.53
9-20-94	-.53
10-18-94	0
11-15-94	0
12-13-94	0
1-10-95	0

Worst Case = -1.58 %

EIN: PS-2020

Date	% Variance
1-12-94	0
2-15-94	.53
4-5-94	-1.16
4-19-94	.63
5-6-94	-.53
6-7-94	0
7-1-94	.53
7-27-94	0
8-26-94	-.53
9-20-94	.53
10-18-94	0
11-15-94	0
12-13-94	-.53
1-10-95	.53

Worst Case = -1.16 %

EIN:

Date	% Variance

Worst Case = %

Conclusions:

Worst case variance - 1.58 % is within TIU ± 1.94 %, therefore acceptable.

ENG. DEPT.	STATION: GINNA STATION	DATE: 7-19-95	PAGE 1 OF 1
JOB: QUARTERLY TRIP TEST INTERVALS		MADE BY: RAB	CK:

SUMMARY SHEET

Manufacturer : Foxboro — Setpoint Analysis: DA EE-92-087-21

Model No. : 63S-AR — Ia = ±.6% — Id = ±1.0%

Total No. EINs : 14 — It = ±1.0% — MTE = ±.1%

Sample No. EINs: 3 — $TIU = \sqrt{.6^2+1^2+1^2+.1^2} = \pm 1.54\%$

EIN: PC-449A

Date	% Variance
1-14-94	.05
2-15-94	-.05
3-15-94	.05
3-29-94	.125
4-13-94	0
5-4-94	-.125
6-7-94	.23
7-1-94	-.2
7-25-94	-.18
8-24-94	-.13
9-20-94	.13
10-18-94	-.03
11-15-94	-.1
12-12-94	0
1-10-95	-.1

Worst Case = -.61 %

EIN: PC-429A

Date	% Variance
1-12-94	.05
2-14-94	.03
3-11-94	.23
3-14-94	-.08
4-13-94	-.08
5-4-94	.03
6-6-94	-.05
6-29-94	-.13
7-25-94	.43
8-24-94	.05
9-19-94	.03
10-17-94	-.03
11-14-94	0
12-12-94	.18
1-9-95	-.03

Worst Case = .66 %

EIN: PC-429E

Date	% Variance
1-12-94	-.13
2-14-94	-.18
3-11-94	-.68
3-14-94	-.18
4-13-94	-.35
5-4-94	.55
6-6-94	.03
6-29-94	-.08
7-25-94	0
8-24-94	0
9-19-94	.13
10-17-94	.15
11-14-94	-.13
12-12-94	.03
1-9-95	.55

Worst Case = -1.52 %

Conclusions:

Worst case variance -1.52 % is within TIU ± 1.54 %, therefore acceptable.

ENG. DEPT.	STATION: GINNA STATION	DATE: 7-19-95	PAGE 1 OF 3
JOB: QUARTERLY TRIP TEST INTERVALS		MADE BY: RAB	CK:

SUMMARY SHEET

Manufacturer : Foxboro
Model No. : 63S-BR
Total No. EINs : 43
Sample No. EINs: 8

Setpoint Analysis: DA EE-92-088-21
$Ia = \pm .5\%$ $Id = \pm .71\%$ ①
$It = \pm 1.0\%$ $MTE = \pm .1\%$
$TIU = \sqrt{.5^2 + .71^2 + 1^2 + .1^2} = \pm 1.33\%$

EIN: LC-426A/B

Date	% Variance
1-12-94	.08
2-14-94	-.18
3-8-94	-.2
3-14-94	.08
4-13-94	.03
5-4-94	-.03
6-6-94	-.13
6-29-94	-.03
7-25-94	.13
8-24-94	0
9-19-94	.03
10-17-94	-.08
11-14-94	.08
12-12-94	.03
1-9-95	.03

Worst Case = -.32 %

EIN: PC-468A

Date	% Variance
1-12-94	0
2-14-94	0
3-14-94	.03
4-13-94	-.1
5-4-94	.08
6-6-94	.08
6-29-94	0
7-25-94	-.08
8-24-94	.03
9-19-94	.08
10-17-94	-.05
11-14-94	-.05
12-12-94	.15
1-9-95	-.18

Worst Case = .16 %

EIN: PC-478A/B

Date	% Variance
1-13-94	0
2-15-94	0
3-15-94	.3
3-27-94	.05
4-4-94	.28
4-13-94	-.05
5-4-94	.45
6-6-94	.18
6-30-94	.3
7-26-94	-.38
8-24-94	.43
9-19-94	-.18
10-18-94	.05
11-15-94	-.05
12-12-94	-.83
1-9-95	-.13

* Worst Case = 1.51 %

Remarks:
① Total Path Drift = ±1% for 2 modules; for 1 module: $1 = \sqrt{2d^2} \Rightarrow \pm .71\% = Id$

Conclusions:

Worst case variance * 1.51 % exceeds TIU ± 1.33 %, therefore one specimen out of 8 samples fails. Seven out of 8 specimens are acceptable. See section 8.0 Results.

ENG. DEPT.	STATION: GINNA STATION	DATE: 7-19-95	PAGE 2 OF 3
JOB: QUARTERLY TRIP TEST INTERVALS		MADE BY: RAB	CK:

SUMMARY SHEET

Manufacturer : Foxboro — Setpoint Analysis: DA EE-92-088-21

Model No. : 63S-BR — $I_a = \pm .5\%$ — $I_d = \pm .71\%$ ①

Total No. EINs : 43 — $I_t = \pm 1.0\%$ — $MTE = \pm .1\%$

Sample No. EINs: 8 — $TLU = \sqrt{.5^2 + .71^2 + 1^2 + .1^2} = \pm 1.33\%$

EIN: PC-482A

Date	% Variance
1-13-94	.13
2-15-94	-.23
3-15-94	.08
3-28-94	.23
4-13-94	.1
5-4-94	-.13
6-6-94	.05
6-30-94	.1
7-26-94	-.28
8-24-94	-.03
9-19-94	.15
10-18-94	-.15
11-15-94	.23
12-12-94	-.13
1-9-95	.03

Worst Case = .32 %

EIN: PC-947A/B

Date	% Variance
1-13-94	-.25
1-21-94	.05
2-15-94	.05
3-15-94	-.03
4-13-94	.03
5-4-94	.15
6-6-94	-.1
6-30-94	.1
7-26-94	-.65
8-24-94	0
9-19-94	.13
10-18-94	-.08
11-15-94	.03
12-12-94	0
1-9-95	.03

Worst Case = -.65 %

EIN: TC-401A

Date	% Variance
1-12-94	-.1
2-14-94	.05
3-8-94	.15
3-14-94	0
4-13-94	-.08
5-4-94	0
6-6-94	.03
6-29-94	-.08
7-25-94	-.05
8-24-94	.03
9-19-94	.05
10-17-94	-.03
11-14-94	.05
12-12-94	-.03
1-9-95	-.05

Worst Case = .2 %

Remarks:

① Total Path Drift = ±1% for 2 modules; for 1 module: $1 = \sqrt{2d^2} \Rightarrow \pm .71\% = I_d$

Conclusions:

See Attachment A page 3.

ENG. DEPT.	STATION: GINNA STATION	DATE: 7-19-95	PAGE 3 OF 3
JOB: QUARTERLY TRIP TEST INTERVALS		MADE BY: RAB	CK:

SUMMARY SHEET

Manufacturer : Foxboro Setpoint Analysis : DA EE-92-088-21

Model No. : 63S-BR $I_a = \pm .5\%$ $I_d = \pm .71\%$ ①

Total No. EINs : 43 $I_t = \pm 1.0\%$ MTE = $\pm .1\%$

Sample No. EINs : 8 $TLU = \sqrt{.5^2 + .71^2 + 1^2 + .1^2} = \pm 1.33\%$

EIN: TC-402A

Date	% Variance
1-13-94	-.08
2-14-94	0
3-14-94	-.2
4-13-94	.6
5-4-94	.13
6-6-94	.1
6-29-94	-.03
7-25-94	.05
8-23-94	-.23
9-20-94	-.13
10-17-94	.1
11-14-94	.05
12-17-94	.18
1-9-95	-.08

Worst Case = -.36 %

EIN: TC-405A/B

Date	% Variance
1-12-94	-.47
2-14-94	.23
3-8-94	0
3-14-94	.13
4-13-94	-.15
5-4-94	.48
6-6-94	0
6-29-94	.05
7-25-94	-.05
8-24-94	-.03
9-19-94	.05
10-17-94	-.03
11-14-94	-.03
12-12-94	.03
1-9-95	-.55

Worst Case = .74 %

EIN:

Date	% Variance

Worst Case = %

Remarks:

① Total Path Drift = ±1% for 2 modules; for 1 module: $1 = \sqrt{2d^2} \Rightarrow \pm .71\% = I_d$

Conclusions:

See Attachment A page 3.

ENG. DEPT.	STATION: GINNA STATION	DATE: 7-19-95	PAGE 1 OF 1
JOB: QUARTERLY TRIP TEST INTERVALS		MADE BY: RAB	CK:

SUMMARY SHEET

Manufacturer : Foxboro   Setpoint Analysis : DA EE-92-085-21

Model No. : 63U   Ia = ±1.1%   Id = ±1.0%

Total No. EINs : 3   It = ±1.0%   MTE = ±.1%

Sample No. EINs : 2 $TIU = \sqrt{1.1^2 + 1^2 + 1^2 + .1^2} = \pm 1.79\%$

EIN: PC-450

Date	% Variance
1-13-94	.03
2-15-94	-.03
3-15-94	.1
3-28-94	0
4-13-94	.1
5-4-94	-.2
6-6-94	.05
6-30-94	.03
7-26-94	0
8-24-94	-.03
9-19-94	0
10-18-94	.03
11-15-94	-.05
12-12-94	.08
1-9-95	-.08

Worst Case = .2 %

EIN: PC-452

Date	% Variance
1-12-94	.05
2-14-94	.03
3-10-94	.1
3-14-94	.08
4-13-94	-.08
5-4-94	-.05
6-6-94	-.125
6-29-94	0
7-25-94	.08
8-24-94	.05
9-19-94	-.125
10-17-94	.125
11-14-94	.03
12-12-94	-.03
1-9-95	.03

Worst Case = .26 %

EIN:

Date	% Variance

Worst Case = %

Conclusions:

Worst case variance .26 % is within TIU ± 1.79 %, therefore acceptable.

EWR 10226
DESIGN ANALYSIS
DA EE-95-0136

ATTACHMENT A
8/21/95

Attachment V

Evaluation of Differences Between Standard Technical Specifications and Proposed Technical Specifications

This attachment discusses the technical differences from WCAP-10271 and standard technical specifications (STS) which would exist following implementation of the technical specification changes as proposed in this LAR. These differences are, in general, not created during the implementation of these changes, but are due to existing requirements (e.g., the current Ginna Station technical specifications may be less restrictive than standard technical specifications). The proposed resolution of these differences is also provided.

Current Technical Specification Table 3.5-1		
Function #	Difference	Resolution
1	STS have separate Required Actions for MODES 1 and 2 and MODES 3, 4, and 5. CTS has the same Required Actions for all MODES. As such, STS require opening the reactor trip breakers within 1 hour in MODES 3, 4, and 5 if the 48 hour Completion Time is not met while CTS do not have this requirement.	This issue is addressed in the 5/26/95 submittal (see change D.15.i.d on page 188 of Attachment A) such that the CTS Required Actions will be changed to reflect STS.
2	STS have additional Required Actions for an inoperable channel related to reducing THERMAL POWER and the Power Range Neutron Flux trip setpoint or monitoring QPTR with an inoperable Power Range Neutron Flux - High channel.	This issue is addressed in the 5/26/95 submittal (see change D.15.i.i on page 189 of Attachment A) such that the CTS Required Actions will be changed to reflect STS.
3	STS have additional Required Actions for an inoperable channel related to reducing THERMAL POWER and the Power Range Neutron Flux trip setpoint or monitoring QPTR.	This issue is addressed in the 5/26/95 submittal (see change D.15.i.j on page 189 of Attachment A) such that the CTS Required Actions will be changed to reflect STS.

Current Technical Specification Table 3.5-1		
Function #	Difference	Resolution
4	The CTS require opening the reactor trip breakers within 48 hours if the Source Range Neutron Flux channel is not restored to OPERABLE status while in MODE 2 in addition to stopping all positive reactivity additions.	This issue is addressed in the 5/26/95 submittal (see Condition I of proposed LCO 3.3.1) by removing this more restrictive CTS requirement.
5	Not affected by changes.	N/A
6	Not affected by changes.	N/A
7	Not affected by changes.	N/A
8	No difference after changes.	N/A
9	No difference after changes.	N/A
10	No difference after changes.	N/A
11	No difference after changes.	N/A
12	No difference after changes.	N/A
13	No difference after changes.	N/A
14	No difference after changes.	N/A
15	No difference. (Note that the Underfrequency 4 KV Bus function is being relocated to the TRM in the 5/26/95 submittal since it is not credited in the accident analyses, nor as a secondary function for Ginna Station.)	N/A
16	No difference. (Note that the QPTR monitor function is being relocated to ITS Chapter 3.2, "Power Distribution Limits" in the 5/26/95 submittal since this is not a RTS function.)	N/A
17	No difference. (Note that the Circulating Water Flood Protection function is being relocated to the TRM in the 5/26/95 submittal since it is not a RTS function, nor is it credited in the accident analyses.)	N/A

Current Technical Specification Table 3.5-1		
Function #	Difference	Resolution
18	The Loss of Voltage - 480 V Bus function is comprised of 2 sets of 2 channels each. To actuate this function, at least 1 channel in <u>both</u> sets must energize. This is different than the STS assumed design of 2/4 logic.	The reliability of the Ginna Station design is consistent with that assumed in STS such that no change to the proposed technical specifications is required.
19	The Degraded Voltage - 480 V Bus function is comprised of 2 sets of 2 channels each. To actuate this function, at least 1 channel in <u>both</u> sets must energize. This is different than the STS assumed design of 2/4 logic.	The reliability of the Ginna Station design is consistent with that assumed in STS such that no change to the proposed technical specifications is required.
20	a. The CTS do not have any time limit for performing maintenance on diverse trip functions while STS limits this to 2 hours. b. The CTS allow 6 hours to open the RTBs if a diverse trip function is not restored within 48 hours while STS limits this to 1 hour.	a. This issue is addressed in the 5/26/95 submittal (see change D.15.i.ee on page 194 of Attachment A) such that the CTS Required Actions will be changed to essentially reflect STS. b. This issue is addressed in the 5/26/95 submittal (see change D.15.i.dd on page 194 of Attachment A) such that the CTS Required Actions will be changed to reflect STS.
-	STS contain OPERABILITY requirements for the RTS permissives while the CTS have no such requirements.	This issue is addressed in the 5/26/95 submittal (see change C.23.xix on page 73 of Attachment A).

Current Technical Specification Table 3.5-2		
Function #	Difference	Resolution
1	The CTS only requires the SI ESFAS function above 350°F (with the exception of high containment pressure) while STS require this function above Cold Shutdown (> 200°F).	At Ginna Station, all functions automatically initiated by SI (except containment isolation) are only required above 350°F (i.e., there is no system other than containment isolation which requires actuation of SI below this MODE). No change required.
2	The CTS requires that high-high containment pressure actuation of the Containment Spray ESFAS function be OPERABLE above Cold Shutdown while STS only require it above 350°F. Also, this actuation function is comprised of 2 sets of 3 channels each at Ginna Station. To actuate this function, at least 2 channels in both sets must energize. This is different than the WCAP assumed design of 2/4 logic. As such, the proposed TS require an inoperable channel to be tripped within 6 hours versus the WCAP requirement to place the channel in bypass.	The CTS and proposed TS requirements are more conservative than STS. In addition, the CTS Applicability reflects the accident analysis assumptions for Ginna Station and is maintained.
3	No difference after changes.	N/A
4	STS organize the Containment Isolation function with respect to "Phase A" and "Phase B" while Ginna Station has no such distinction.	The CTS are equivalent to STS since all containment isolation valves receive the same signal.

Current Technical Specification Table 3.5-2		
Function #	Difference	Resolution
5	a. STS allow the option to declare inoperable the MSIV with the inoperable manual isolation channel if the channel is not restored to OPERABLE status within 48 hours. The CTS have no Required Actions for an inoperable MSIV and therefore require a shutdown. b. The Containment Pressure actuation of the Steam Line Isolation ESFAS function is 2/3 logic at Ginna Station while the WCAP used 2/4 logic. As such, the proposed TS require an inoperable channel to be tripped within 6 hours versus the STS requirement to place the channel in bypass.	a. The CTS are more conservative than STS and no change is required. b. The CTS and proposed TS requirements are more conservative than STS and considered acceptable.
6	The CTS require Feedline Isolation above 350°F while STS only require it above Hot Shutdown.	The CTS Applicability is more conservative than STS and reflects the accident analysis assumptions. No change required.
-	STS contain OPERABILITY requirements for the ESFAS permissives while the CTS have no such requirements.	This issue is addressed in the 5/26/95 submittal (see change C.24.ii on page 75 of Attachment A).
-	STS contain OPERABILITY requirements for the Automatic Switchover to the Containment Sump which is not incorporated at Ginna Station.	No change required.

Current Technical Specification Table 4.1-1		
Function #	Difference	Resolution
1	a. The CTS require the daily comparison of the heat balance calculation with the Power Range Neutron Flux - High function "as soon as possible after return to power" while STS require adjustment if the difference is > 2% when > 15% THERMAL POWER. b. The CTS require a monthly comparison of the incore detector measurements to the axial flux difference while STS require adjustment if the difference is > 3%. c. The CTS require a quarterly comparison of the incore detector measurements to the axial flux difference "as soon as possible after return to power" while STS require adjustment when > 75% THERMAL POWER.	a. This issue is addressed in the 5/26/95 submittal (see SR 3.3.1.2 of proposed LCO 3.3.1) such that the CTS will be changed to essentially reflect STS. b. This issue is addressed in the 5/26/95 submittal (see SR 3.3.1.3 of proposed LCO 3.3.1) such that the CTS will be changed to reflect STS. c. This issue is addressed in the 5/26/95 submittal (see SR 3.3.1.6 of proposed LCO 3.3.1) such that the CTS will be changed to reflect STS.
2	STS require refueling interval calibrations and quarterly channel operational tests of the Source Range Neutron Flux function while the CTS do not have these surveillance requirements.	This issue is addressed in the 5/26/95 submittal (see Attachment B, Table 3.3.1-1, Functional Unit #4) such that CTS will be changed to reflect STS.
3	STS require a quarterly verification that the permissives are in their required state while the CTS have no such requirement.	This issue is addressed in the 5/26/95 submittal (see change C.23.xix on page 73 of Attachment A) such that the CTS will be changed to essentially reflect STS.
4	No difference after changes.	N/A
5	No difference after changes.	N/A
6	No difference after changes.	N/A
7	No difference after changes.	N/A

Current Technical Specification Table 4.1-1		
Function #	Difference	Resolution
8	No difference after changes.	N/A
9	Not affected by changes.	N/A
10	Not affected by changes.	N/A
11	No difference after changes.	N/A
12	Not affected by changes.	N/A
13	Not affected by changes.	N/A
14	Not affected by changes.	N/A
15	Not affected by changes.	N/A
16	Not affected by changes.	N/A
17	No difference after changes.	N/A
18	Not affected by changes.	N/A
19	Not affected by changes.	N/A
20	Not affected by changes.	N/A
21	Not affected by changes.	N/A
22	STS require monthly actuation logic and master relay testing and quarterly slave relay testing while the CTS only requires these tests on a refueling outage basis.	The Ginna Station design does not allow for online testing of this instrumentation. The WCAP acknowledges this design limitation without requiring any changes. Therefore, no change required.
23	No difference after changes.	N/A
24	Not affected by changes.	N/A
25	No difference after changes.	N/A
26	No difference after changes.	N/A

Current Technical Specification Table 4.1-1		
Function #	Difference	Resolution
27	No difference after changes.	N/A
28	Not affected by changes.	N/A
29	Not affected by changes.	N/A
30	Not affected by changes.	N/A
31	Not affected by changes.	N/A
32	No difference after changes.	N/A
33	No difference after changes.	N/A
34	Not affected by changes.	N/A
35	Not affected by changes.	N/A
36	Not affected by changes.	N/A
37	Not affected by changes.	N/A
38a	Not affected by changes.	N/A
38b	Not affected by changes.	N/A
39	Not affected by changes.	N/A
40	Not affected by changes.	N/A
41a	Not affected by changes.	N/A
41b	Not affected by changes.	N/A
-	STS include surveillance requirements for the RTS permissives while the CTS have no such testing.	This issue is addressed in the 5/26/95 submittal (see change C.23.xix on page 73 of Attachment A).
-	STS include surveillance requirements for the ESFAS permissives while the CTS have no such testing.	This issue is addressed in the 5/26/95 submittal (see change C.24.ii on page 75 of Attachment A).

Current Technical Specification Table 4.1-1		
Function #	Difference	Resolution
-	The WCAP includes surveillance requirements for the ESFAS actuation trains including their slave and master relays.	This issue is addressed in the 5/26/95 submittal (see change C.24.xv on page 77 of Attachment A).

Current Technical Specification Table 4.1-2		
Function #	Difference	Resolution
1	Not affected by changes.	N/A
2	Not affected by changes.	N/A
3	Not affected by changes.	N/A
4	Not affected by changes.	N/A
5	Not affected by changes.	N/A
6	Not affected by changes.	N/A
7	No affected by changes.	N/A
8	Not affected by changes.	N/A
9	No difference.	N/A
10	Not affected by changes.	N/A
11	Not affected by changes.	N/A
12	Not affected by changes.	N/A
13	Not affected by changes.	N/A
14	Not affected by changes.	N/A
15	Not affected by changes.	N/A
16	Not affected by changes.	N/A
17	Not affected by changes.	N/A
18	Not affected by changes.	N/A
19	Not affected by changes.	N/A

Current Technical Specification Table 4.1-5		
Function #	Difference	Resolution
1.a	Not affected by changes.	N/A
1.b	Not affected by changes.	N/A
1.c	Not affected by changes.	N/A
1.d	Not affected by changes.	N/A
1.e	Not affected by changes.	N/A
1.f	Not affected by changes.	N/A
1.g	Not affected by changes.	N/A
2.a	Not affected by changes.	N/A
2.b	Not affected by changes.	N/A
2.c	Not affected by changes.	N/A
2.d	Not affected by changes.	N/A
3.a	STS require a shift check of the Containment Ventilation Isolation - Containment Radioactivity High channels while the CTS only require this daily when the plant vent is being used. Also, STS require a monthly channel calibration while the CTS is quarterly.	The Containment Ventilation Isolation function is not credited in any accident analysis. This system is redundant to the Containment Isolation function. Therefore, the CTS surveillance requirements are considered acceptable.
3.b	STS require a shift check of the Containment Ventilation Isolation - Containment Radioactivity High channels while the CTS only require this weekly when the plant vent is being used. Also, STS require a monthly channel calibration while the CTS is quarterly.	The Containment Ventilation Isolation function is not credited in any accident analysis. This system is redundant to the Containment Isolation function. Therefore, the CTS surveillance requirements are considered acceptable.
3.c	Not affected by changes.	N/A

Current Technical Specification Table 4.1-5		
Function #	Difference	Resolution
3.d	Not affected by changes.	N/A
4	Not affected by changes.	N/A
5	Not affected by changes.	N/A
6	Not affected by changes.	N/A