NPF-38-207

ATTACHMENT A

EXISTING SPECIFICATIONS

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TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
7. EMERGENCY FEEDWATER (EFAS)					
a. Manual (Trip Buttons)	2 sets of 2 per steam generator	1 set of 2 per steam generator	2 sets of 2 per steam generator	1, 2, 3	15
b. SG Level (1/2) - Low and ΔP (1/2) - High	4/steam generator	2/steam generator	3/steam generator	1, 2, 3	13*, 14*
c. SG Level (1/2) - Low and No S/G Pressure - Low Trip (1/2)	4/steam generator	2/steam generator	3/steam generator	1, 2, 3	13*, 14*
d. Automatic Actuation Logic	4	2	3	1, 2, 3	12
e. Control Valve Logic (Wide Range SG Level - Low)	2/steam generator	1/steam generator	2/steam generator	1, 2, 3	15

TABLE NOTATION

(a) Trip function may be bypassed in this MODE when pressurizer pressure is less than 400 psia; bypass shall be automatically removed when pressurizer pressure is greater than or equal to 500 psia.

(b) An SIAS signal is first necessary to enable CSAS logic.

* The provisions of Specification 3.0.4 are not applicable.

ACTION STATEMENTS

ACTION 12 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

ACTION 13 - With the number of channels OPERABLE one less than the Total Number of Channels, STARTUP and/or POWER OPERATION and/or operation in the other applicable MODE(S) may continue provided the inoperable channel is placed in the bypassed or tripped condition within 1 hour. If the inoperable channel is bypassed, the desirability of maintaining this channel in the bypassed condition shall be documented by the Plant Operations Review Committee in accordance with plant administrative procedures. The channel shall be returned to OPERABLE status no later than prior to entry into the applicable MODE(S) following the next COLD SHUTDOWN.

With a channel process measurement circuit that affects multiple functional units inoperable or in test, bypass or trip all associated functional units as listed below:

	Process Measurement Circuit	Functional Unit Bypassed/Tripped
1.	Containment Pressure - High	Containment Pressure - High (ESF) Containment Pressure - High (RPS)
2.	Steam Generator Pressure - Low	Steam Generator Pressure - Low Steam Generator ΔP 1 and 2 (EFAS)
3.	Steam Generator Level	Steam Generator Level - Low Steam Generator Level - High Steam Generator ΔP (EFAS)

TABLE 3.3-3 (Continued)

TABLE NOTATION

ACTION 14 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE, STARTUP and/or POWER OPERATION and/or operation in the other applicable MODE(S) may continue provided the following conditions are satisfied:

a. Verify that one of the inoperable channels has been bypassed and place the other inoperable channel in the tripped condition within 1 hour.

b. All functional units affected by the bypassed/tripped channel shall also be placed in the bypassed/tripped condition as listed below.

	Process Measurement Circuit	Functional Unit Bypassed/Tripped
1.	Containment Pressure Circuit	Containment Pressure - High (ESF) Containment Pressure - High (RPS)
2.	Steam Generator Pressure - Low	Steam Generator Pressure - Low Steam Generator Level - High Steam Generator ΔP (EFAS)
3.	Steam Generator Level	Steam Generator Level -Low Steam Generator Level - High Steam Generator ΔP (EFAS)

STARTUP and/or POWER OPERATION and/or operation in the other applicable MODE(S) may continue until the performance of the next required CHANNEL FUNCTIONAL TEST. Subsequent STARTUP and/or POWER OPERATION and/or operation in the other applicable MODE(S) may continue if one channel is restored to OPERABLE status and the provisions of ACTION 13 are satisfied.

ACTION 15 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channels to OPERABLE status within 48 hours or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

ACTION 16 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or declare the associated valve inoperable and take the ACTION required by Specification 3.7.1.5.

ACTION 17 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may continue provided the inoperable channel is placed in the tripped (D.C. Relay energized) condition within 1 hour, the remaining Emergency Diesel Generator is OPERABLE, and the inoperable channel is restored to OPERABLE status within the next 48 hours. Otherwise, be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the next 30 hours. The surveillance requirements of Table 4.3-2 are waived for all channels while this action requirement is in effect.

TABLE 3.3-3 (Continued)

TABLE NOTATION

ACTION 18 - With more than one channel inoperable, or if the inoperable channel cannot be placed in the trip (D.C. Relay energized) condition, declare the associated Emergency Diesel Generator inoperable and take the ACTION required by Specification 3.8.1.1. The surveillance requirements of Table 4.3-2 are waived for all channels while this action requirement is in effect.

ACTION 19 - With the number of channels OPERABLE one less than the Total Number of Channels, STARTUP and/or POWER OPERATION and/or operation in the other applicable MODE(S) may continue, provided the inoperable channel is placed in the bypassed or tripped condition within 1 hour:

a. If the inoperable channel is to remain in the bypassed condition, the desirability of maintaining this channel in the bypassed condition shall be documented by the Plant Operations Review Committee in accordance with plant administrative procedures. The channel shall be returned to OPERABLE status no later than prior to entry into the applicable MODE(S) following the next COLD SHUTDOWN.

b. If the inoperable channel is required to be placed in the tripped condition, within 48 hours either restore the channel to OPERABLE status or place the channel in the bypassed condition. If the tripped channel can not be returned to OPERABLE status in 48 hours, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours or place the tripped channel in bypass.

ACTION 20 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE, STARTUP and/or POWER OPERATION and/or operation in the other applicable MODE(S) may continue provided the following conditions are satisfied:

a. Verify that one of the inoperable channels has been bypassed and place the other inoperable channel in the tripped condition within 1 hour.

b. Restore at least one of the inoperable channels to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Subsequent operation in the applicable MODE(S) may continue if one channel is restored to OPERABLE status and the provisions of ACTION 19 are satisfied.

3/4.3.1 and 3/4.3.2 REACTOR PROTECTIVE AND ENGINEERED SAFETY FEATURES ACTUATION SYSTEMS INSTRUMENTATION

The OPERABILITY of the Reactor Protective and Engineered Safety Features Actuation Systems instrumentation and bypasses ensures that (1) the associated Engineered Safety Features Actuation action and/or reactor trip will be initiated when the parameter monitored by each channel or combination thereof reaches its setpoint, (2) the specified coincidence logic is maintained, (3) sufficient redundancy is maintained to permit a channel to be out of service for testing or maintenance, and (4) sufficient system functional capability is available from diverse parameters.

The OPERABILITY of these systems is required to provide the overall reliability, redundancy, and diversity assumed available in the facility design for the protection and mitigation of accident and transient conditions. The integrated operation of each of these systems is consistent with the assumptions used in the safety analyses.

The redundancy design of the Control Element Assembly Calculators (CEAC) provides reactor protection in the event one or both CEACs become inoperable. If one CEAC is in test or inoperable, verification of CEA position is performed at least every 4 hours. If the second CEAC fails, the CPCs will use DNBR and LPD penalty factors to restrict reactor operation to some maximum fraction of RATED THERMAL POWER. If this maximum fraction is exceeded, a reactor trip will occur.

Table 3.3-3 ACTION 19 allows for continued operation in the applicable MODE(S) with one of the Refueling Water Storage Pool (RWSP) - Low channels inoperable provided the channel is placed in the bypass or tripped condition within 1 hour. If an inoperable channel of the RWSP - Low is required to be placed in the tripped condition within one hour, then within 48 hours the channel must either be restored to OPERABLE status or be placed in the bypassed condition. The bypassed channel must be restored to OPERABLE status prior to entering MODE 4 following the next MODE 5 entry. With one of the RWSP - Low channels inoperable and in bypass, and testing or repairs is necessary on one of the remaining channels, ACTION 20 must be entered.

ACTION 19a is annotated with an askerisk for the 3.0.4 exemption to allow the changing of MODES even though one channel is bypassed. MODE changes between MODES 1 and 4 with this configuration are allowed, to permit maintenance and testing on the inoperable channel. In this configuration, the protection system is in a two-out-of-three logic, and the probability of a random failure affecting two of the OPERABLE channels is remote. The tripped condition does not have this annotation as a single failure could cause the Emergency Core Cooling System and Containment Spray System suctions to be supplied from the Safety Injection System Sump prematurely and loss of the Low Pressure Safety Injection Systems.

Table 3.3-3 ACTION 20 allows for continued operation in the applicable MODE(S) with two of the RWSP - Low channels inoperable provided that one of the inoperable channels is bypassed and the other inoperable channel is placed in the tripped condition within one hour.

One of the inoperable RWSP - Low channels must be restored to OPERABLE status within 48 hours to allow removal of the channel from the tripped condition. The allowed time is acceptable because operating experience has demonstrated the low probability of the following sequence of events occuring: the need to place one RSWP - Low channel in the tripped

3/4.3.1 and 3/4.3.2 REACTOR PROTECTIVE AND ENGINEERED SAFETY FEATURE SAFETY ACTUATION SYSTEMS INSTRUMENTATION

condition while another RWSP-Low channel is in bypass, the receipt of a valid Safety Injection Actuation Signal Actuation, and a coincident failure of one of the two remaining OPERABLE RWSP-Low channels. These conditions could cause the Emergency Core Cooling System and Containment Spray System suctions to be supplied from the Safety Injection System Sump prematurely due to containment pressure being higher than RWSP outlet pressure and loss of the Low Pressure Safety Injection Systems.

When one of the inoperable channels is restored to OPERABLE status, subsequent operation in the applicable MODE(S) may continue in accordance with the provisions of ACTION 19.

The Surveillance Requirements specified for these systems ensure that the overall system functional capability is maintained comparable to the original design standards. The periodic surveillance tests performed at the minimum frequencies are sufficient to demonstrate this capability. The quarterly frequency for the channel functional tests for these systems comes from the analyses presented in topical report CEN-327: RPS/ESFAS Extended Test Interval Evaluation, as supplemented.

Testing frequency for the Reactor Trip Breakers (RTBs) is described and analyzed in CEN NPSD-951. The quarterly RTB channel functional test and RPS logic channel functional test are scheduled and preformed such that RTBs are verified OPERABLE at least every 6 weeks to accommodate the appropriate vendor recommended interval for cycling of each RTB.

RPS\ESFAS Trip Setpoints values are determined by means of an explicit setpoint calculation analysis. A Total Loop Uncertainty (TLU) is calculated for each RPS/ESFAS instrument channel. The Trip Setpoint is then determined by adding or subtracting the TLU from the Analytical Limit (add TLU for decreasing process value; subtract TLU for increasing process value). The Allowable Value is determined by adding an allowance between the Trip Setpoint and the Analytical Limit to account for RPS/ESFAS cabinet Periodic Test Errors (PTE) which are present during a CHANNEL FUNCTIONAL TEST. PTE combines the RPS/ESFAS cabinet reference accuracy, calibration equipment errors (M&TE), and RPS/ESFAS cabinet bistable Drift. Periodic testing assures that actual setpoints are within their Allowable Values. A channel is inoperable if its actual setpoint is not within its Allowable Value and corrective action must be taken. Operation with a trip set less conservative than its setpoint, but within its specified ALLOWABLE VALUE is acceptable on the basis that the difference between each trip Setpoint and the ALLOWABLE VALUE is equal to or less than the Periodic Test Error allowance assumed for each trip in the safety analyses.

The measurement of response time at the specified frequencies provides assurance that the protective and ESF action function associated with each channel is completed within the time limit assumed in the safety analyses. No credit was taken in the analyses for those channels with response times indicated as not applicable.

Response time may be demonstrated by any series of sequential, overlapping, or total channel test measurements provided that such tests demonstrate the total channel response time as defined. Sensor response time verification may be demonstrated by (1) in place, onsite, or offsite test measurements or (2) utilizing replacement sensors with certified response times.

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ATTACHMENT B

PROPOSED MARKED-UP SPECIFICATIONS

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM ~~INSTUMENTATION~~ INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
7. EMERGENCY FEEDWATER (EFAS)					
a. Manual (Trip Buttons)	2 sets of 2 per steam generator	1 set of 2 per steam generator	2 sets of 2 per steam generator	1, 2, 3	15
b. SG Level (1/2) - Low and ΔP (1/2) - High	4/steam generator	2/steam generator	3/steam generator	1, 2, 3	19a*, 19b, 20 ~~13*, 14*~~
c. SG Level (1/2) - Low and No S/G Pressure - Low Trip (1/2)	4/steam generator	2/steam generator	3/steam generator	1, 2, 3	19a*, 19b, 20 ~~13*, 14*~~
d. Automatic Actuation Logic	4	2	3	1, 2, 3	12
e. Control Valve Logic (Wide Range SG Level - Low)	2/steam generator	1/steam generator	2/steam generator	1, 2, 3	15

TABLE 3.3-3 (Continued)

TABLE NOTATION

(a) Trip function may be bypassed in this MODE when pressurizer pressure is less than 400 psia; bypass shall be automatically removed when pressurizer pressure is greater than or equal to 500 psia.

(b) An SIAS signal is first necessary to enable CSAS logic.

* The provisions of Specification 3.0.4 are not applicable.

ACTION STATEMENTS

ACTION 12 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

ACTION 13 - With the number of channels OPERABLE one less than the Total Number of Channels, STARTUP and/or POWER OPERATION and/or operation in the other applicable MODE(S) may continue provided the inoperable channel is placed in the bypassed or tripped condition within 1 hour. If the inoperable channel is bypassed, the desirability of maintaining this channel in the bypassed condition shall be documented by the Plant Operations Review Committee in accordance with plant administrative procedures. The channel shall be returned to OPERABLE status no later than prior to entry into the applicable MODE(S) following the next COLD SHUTDOWN.

With a channel process measurement circuit that affects multiple functional units inoperable or in test, bypass or trip all associated functional units as listed below:

	Process Measurement Circuit	Functional Unit Bypassed/Tripped
1.	Containment Pressure - High	Containment Pressure - High (ESF) Containment Pressure - High (RPS)
2.	Steam Generator Pressure - Low	Steam Generator Pressure - Low Steam Generator ΔP 1 and 2 (EFAS)
3.	Steam Generator Level	Steam Generator Level - Low Steam Generator Level - High Steam Generator ΔP (EFAS)

TABLE 3.3-3 (Continued)

TABLE NOTATION

ACTION 14 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE, STARTUP and/or POWER OPERATION and/or operation in the other applicable MODE(S) may continue provided the following conditions are satisfied:

a. Verify that one of the inoperable channels has been bypassed and place the other inoperable channel in the tripped condition within 1 hour.

b. All functional units affected by the bypassed/tripped channel shall also be placed in the bypassed/tripped condition as listed below.

	Process Measurement Circuit	Functional Unit Bypassed/Tripped
1.	Containment Pressure Circuit	Containment Pressure - High (ESF) Containment Pressure - High (RPS)
2.	Steam Generator Pressure - Low	Steam Generator Pressure - Low Steam Generator Level - High Steam Generator ΔP (EFAS) 1 and 2
~~3.~~	~~Steam Generator Level~~	Steam Generator Level - Low Steam Generator Level - High Steam Generator ΔP (EFAS)

STARTUP and/or POWER OPERATION and/or operation in the other applicable MODE(S) may continue until the performance of the next required CHANNEL FUNCTIONAL TEST. Subsequent STARTUP and/or POWER OPERATION and/or operation in the other applicable MODE(S) may continue if one channel is restored to OPERABLE status and the provisions of ACTION 13 are satisfied.

ACTION 15 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channels to OPERABLE status within 48 hours or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

ACTION 16 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or declare the associated valve inoperable and take the ACTION required by Specification 3.7.1.5.

ACTION 17 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may continue provided the inoperable channel is placed in the tripped (D.C. Relay energized) condition within 1 hour, the remaining Emergency Diesel Generator is OPERABLE, and the inoperable channel is restored to OPERABLE status within the next 48 hours. Otherwise, be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the next 30 hours. The surveillance requirements of Table 4.3-2 are waived for all channels while this action requirement is in effect.

TABLE 3.3-3 (Continued)

TABLE NOTATION

ACTION 18 - With more than one channel inoperable, or if the inoperable channel cannot be placed in the trip (D.C. Relay energized) condition, declare the associated Emergency Diesel Generator inoperable and take the ACTION required by Specification 3.8.1.1. The surveillance requirements of Table 4.3-2 are waived for all channels while this action requirement is in effect.

ACTION 19 - With the number of channels OPERABLE one less than the Total Number of Channels, STARTUP and/or POWER OPERATION and/or operation in the other applicable MODE(S) may continue, provided the inoperable channel is placed in the bypassed or tripped condition within 1 hour:

a. If the inoperable channel is to remain in the bypassed condition, the desirability of maintaining this channel in the bypassed condition shall be documented by the Plant Operations Review Committee in accordance with plant administrative procedures. The channel shall be returned to OPERABLE status no later than prior to entry into the applicable MODE(S) following the next COLD SHUTDOWN.

INSERT 1

b. If the inoperable channel is required to be placed in the tripped condition, within 48 hours either restore the channel to OPERABLE status or place the channel in the bypassed condition. If the tripped channel can not be returned to OPERABLE status in 48 hours, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours or place the tripped channel in bypass.

ACTION 20 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE, STARTUP and/or POWER OPERATION and/or operation in the other applicable MODE(S) may continue provided the following conditions are satisfied:

a. Verify that one of the inoperable channels has been bypassed and place the other inoperable channel in the tripped condition within 1 hour.

INSERT 2

b. Restore at least one of the inoperable channels to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Subsequent operation in the applicable MODE(S) may continue if one channel is restored to OPERABLE status and the provisions of ACTION 19 are satisfied.

INSERT 1

With a channel process measurement circuit that affects multiple functional units inoperable or in test, bypass or trip all associated functional units as listed below:

	Process Measurement Circuit	Functional Unit Bypassed/Tripped
1.	Steam Generator Pressure - Low	Steam Generator Pressure – Low Steam Generator ΔP 1 and 2 (EFAS)
2.	Steam Generator Level	Steam Generator Level – Low Steam Generator Level – High Steam Generator ΔP (EFAS)

Insert 2

a. Verify that one of the inoperable channels has been bypassed and place the other inoperable channel in the tripped condition within 1 hour. With a channel process measurement circuit that affects multiple functional units inoperable or in test, bypass or trip all associated functional units as listed below:

	Process Measurement Circuit	Functional Unit Bypass/Tripped
1.	Steam Generator Pressure - Low	Steam Generator Pressure – Low Steam Generator ΔP 1 and 2 (EFAS)
2.	Steam Generator Level	Steam Generator Level – Low Steam Generator Level – High Steam Generator ΔP (EFAS)

3/4.3.1 and 3/4.3.2 REACTOR PROTECTIVE AND ENGINEERED SAFETY FEATURES ACTUATION SYSTEMS INSTRUMENTATION

The OPERABILITY of the Reactor Protective and Engineered Safety Features Actuation Systems instrumentation and bypasses ensures that (1) the associated Engineered Safety Features Actuation action and/or reactor trip will be initiated when the parameter monitored by each channel or combination thereof reaches its setpoint, (2) the specified coincidence logic is maintained, (3) sufficient redundancy is maintained to permit a channel to be out of service for testing or maintenance, and (4) sufficient system functional capability is available from diverse parameters.

The OPERABILITY of these systems is required to provide the overall reliability, redundancy, and diversity assumed available in the facility design for the protection and mitigation of accident and transient conditions. The integrated operation of each of these systems is consistent with the assumptions used in the safety analyses.

The redundancy design of the Control Element Assembly Calculators (CEAC) provides reactor protection in the event one or both CEACs become inoperable. If one CEAC is in test or inoperable, verification of CEA position is performed at least every 4 hours. If the second CEAC fails, the CPCs will use DNBR and LPD penalty factors to restrict reactor operation to some rnaximum fraction of RATED THERMAL POWER. ~~If this maximum fraction is exceeded,~~ a reactor trip will occur.

INSERT 3

Table 3.3-3 ACTION 19 allows for continued operation in the applicable MODE(S) with one of the Refueling Water Storage Pool (RWSP) - Low channels inoperable provided the channel is placed in the bypass or tripped condition within 1 hour. If an inoperable channel of the RWSP - Low is required to be placed in the tripped condition within one hour, then within 48 hours the channel must either be restored to OPERABLE status or be placed in the bypassed condition. The bypassed channel must be restored to OPERABLE status prior to entering MODE 4 following the next MODE 5 entry. With one of the RWSP - Low channels inoperable and in bypass, and testing or repairs is necessary on one of the remaining channels, ACTION 20 must be entered.

ACTION 19a is annotated with ~~an askerisk for the~~ 3.0.4 exemption to allow the changing of MODES even though one channel is bypassed. MODE changes between MODES 1 and 4 with this configuration are allowed, to permit maintenance and testing on the inoperable channel. In this configuration, the protection system is in a two-out-of-three logic, and the probability of a random failure affecting two of the OPERABLE channels is remote. The tripped condition does not have this annotation as a single failure could cause the Emergency Core Cooling System and Containment Spray System suctions to be supplied from the Safety Injection System Sump prematurely and loss of the Low Pressure Safety Injection Systems or Steam Generator ΔP (EFAS)

INSERT 4

Table 3.3-3 ACTION 20 allows for continued operation in the applicable MODE(S) with two of the RWSP - Low channels inoperable provided that one of the inoperable channels is bypassed and the other inoperable channel is placed in the tripped condition within one hour.

One of the inoperable RWSP - Low channels must be restored to OPERABLE status within 48 hours to allow removal of the channel from the tripped condition. The allowed time is acceptable because operating experience has demonstrated the low probability of the following sequence of events occuring: the need to place one ~~RSWP~~ RWSP - Low channel in the tripped

Insert 3

Table 3.3-3 ACTION 19 allows for continued operation in the applicable MODE(S) with one of the Refueling Water Storage Pool (RWSP) – Low or Steam Generator ΔP Emergency Feedwater Actuation Signal (EFAS) channels inoperable provided the channel is placed in the bypass or tripped condition within 1 hour. If an inoperable channel of the RWSP – Low or Steam Generator ΔP (EFAS) channel is required to be placed in the tripped condition within one hour, then within 48 hours the channel must either be restored to OPERABLE or be placed in the bypassed condition. The bypassed channel must be restored to OPERABLE status prior to entering the applicable MODE(S) following the next MODE 5 entry. With one of the RWSP – Low or Steam Generator ΔP (EFAS) channels inoperable and in bypass, and a failure occurs or repairs are necessary on one of the remaining channels, ACTION 20 must be entered.

Insert 4

with a premature Recirculation Actuation Signal (RAS) or with an inadvertent EFAS could cause the automatic isolation of a faulted generator from Emergency Feedwater (EFW) to not occur as assumed by the Waterford 3 safety analysis.

3/4.3.1 and 3/4.3.2 REACTOR PROTECTIVE AND ENGINEERED SAFETY FEATURE SAFETY ACTUATION SYSTEMS INSTRUMENTATION

condition while another RWSP-Low channel is in bypass, the receipt of a valid Safety Injection Actuation Signal Actuation, and a coincident failure of one of the two remaining OPERABLE RWSP-Low channels. These conditions could cause the Emergency Core Cooling System and Containment Spray System suctions to be supplied from the Safety Injection System Sump prematurely due to containment pressure being higher than RWSP outlet pressure and loss of the Low Pressure Safety Injection Systems.

INSERT 5

When one of the inoperable channels is restored to OPERABLE status, subsequent operation in the applicable MODE(S) may continue in accordance with the provisions of ACTION 19.

INSERT 6

The Surveillance Requirements specified for ~~these~~ systems ensure that the overall system functional capability is maintained comparable to the original design standards. The periodic surveillance tests performed at the minimum frequencies are sufficient to demonstrate this capability. The quarterly frequency for the channel functional tests for these systems comes from the analyses presented in topical report CEN-327: RPS/ESFAS Extended Test Interval Evaluation, as supplemented.

Testing frequency for the Reactor Trip Breakers (RTBs) is described and analyzed in CEN NPSD-951. The quarterly RTB channel functional test and RPS logic channel functional test are scheduled and ~~preformed~~ PERFORMED such that RTBs are verified OPERABLE at least every 6 weeks to accommodate ~~the appropriate~~ vendor recommended interval for cycling of each RTB.

RPS\ESFAS Trip Setpoints values are determined by means of an explicit setpoint calculation analysis. A Total Loop Uncertainty (TLU) is calculated for each RPS/ESFAS instrument channel. The Trip Setpoint is then determined by adding or subtracting the TLU from the Analytical Limit (add TLU for decreasing process value; subtract TLU for increasing process value). The Allowable Value is determined by adding an allowance between the Trip Setpoint and the Analytical Limit to account for RPS/ESFAS cabinet Periodic Test Errors (PTE) which are present during a CHANNEL FUNCTIONAL TEST. PTE combines the RPS/ESFAS cabinet reference accuracy, calibration equipment errors (M&TE), and RPS/ESFAS cabinet bistable Drift. Periodic testing assures that actual setpoints are within their Allowable Values. A channel is inoperable if its actual setpoint is not within its Allowable Value and corrective action must be taken. Operation with a trip set less conservative than its setpoint, but within its specified ALLOWABLE VALUE is acceptable on the basis that the difference between each trip Setpoint and the ALLOWABLE VALUE is equal to or less than the Periodic Test Error allowance assumed for each trip in the safety analyses.

The measurement of response time at the specified frequencies provides assurance that the protective and ESF action function associated with each channel is completed within the time limit assumed in the safety analyses. No credit was taken in the analyses for those channels with response times indicated as not applicable.

Response time may be demonstrated by any series of sequential, overlapping, or total channel test measurements provided that such tests demonstrate the total channel response time as defined. Sensor response time verification may be demonstrated by (1) in place, onsite, or ~~offsite test measurements~~ or (2) utilizing replacement sensors with certified response times.

INSERT 7

Insert 5

One of the inoperable Steam Generator ΔP (EFAS) channels must be restored to OPERABLE status within 48 hours to allow removal of the channel from the tripped condition. The allowed outage time is acceptable because operating experience has demonstrated the low probability of the following sequence of events occurring: the need to place one Steam Generator ΔP (EFAS) in the tripped condition while another Steam Generator ΔP (EFAS) is in bypass, coincident with a failure of one of the two remaining OPERABLE Steam Generator ΔP (EFAS) channels, and the occurrence of a Main Steam Line Break (MSLB) or Feedwater Line Break (FWLB). These conditions could cause the automatic isolation of a faulted steam generator from Emergency Feedwater (EFW) to not occur as assumed by the Waterford safety analysis.

Insert 6

Because of the interaction between process measurement circuits and associated functional units as listed in the ACTIONS 19 and 20, placement of an inoperable channel of Steam Generator Level in the bypass or trip condition results in corresponding placements of Steam Generator ΔP (EFAS) instrumentation. Depending on the number of applicable inoperable channels, the provisions of ACTIONS 19 and 20 and the aforesaid scenarios for Steam Generator ΔP (EFAS) would govern.

Insert 7

The Reactor Trip Breakers Functional in Table 3.3-1 refers to the reactor trip breaker channels. There are four reactor trip breaker channels. Two reactor trip breaker channels with a coincident trip logic of one-out-of-two taken twice (reactor trip channels A or B, and C or D) are required to produce a trip. Each reactor trip breaker channel consists of two reactor trip breakers. For a reactor trip breaker channel to be considered OPERABLE, both of the reactor trip breakers of that reactor trip breaker channel must be capable of performing their safety function (disrupting the flow of power in its respective trip leg). The safety function is satisfied when the reactor trip breaker is capable of automatically opening, or otherwise opened or racked-out.

If a racked-in reactor trip breaker is not capable of automatically opening, the ACTION for an inoperable reactor trip breaker channel shall be entered. The ACTION shall not be exited unless the reactor trip breaker capability to automatically open is restored, or the reactor trip breaker is opened or racked-out.

NOTE – DO NOT ADD THE BELOW TEXT

As discussed in the cover letter (W3F1-98-0033 dated July 2, 1998), this bases insert (Insert 7) has been reviewed and approved by the W3 PORC in accordance with 10CFR50.59. This text is being provided with this TSCR so that when the NRC issues the requested amendment, this text can be included in the updated version for completeness.

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ATTACHMENT C

PROPOSED SPECIFICATIONS

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
7. EMERGENCY FEEDWATER (EFAS)					
a. Manual (Trip Buttons)	2 sets of 2 per steam generator	1 set of 2 per steam generator	2 sets of 2 per steam generator	1, 2, 3	15
b. SG Level (1/2) - Low and ΔP (1/2) - High	4/steam generator	2/steam generator	3/steam generator	1, 2, 3	19a*, 19b, 20
c. SG Level (1/2) - Low and No S/G Pressure - Low Trip (1/2)	4/steam generator	2/steam generator	3/steam generator	1, 2, 3	19a*, 19b, 20
d. Automatic Actuation Logic	4	2	3	1, 2, 3	12
e. Control Valve Logic (Wide Range SG Level - Low)	2/steam generator	1/steam generator	2/steam generator	1, 2, 3	15

TABLE 3.3-3 (Continued)

TABLE NOTATION

(a) Trip function may be bypassed in this MODE when pressurizer pressure is less than 400 psia; bypass shall be automatically removed when pressurizer pressure is greater than or equal to 500 psia.

(b) An SIAS signal is first necessary to enable CSAS logic.

* The provisions of Specification 3.0.4 are not applicable.

ACTION STATEMENTS

ACTION 12 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

ACTION 13 - With the number of channels OPERABLE one less than the Total Number of Channels, STARTUP and/or POWER OPERATION and/or operation in the other applicable MODE(S) may continue provided the inoperable channel is placed in the bypassed or tripped condition within 1 hour. If the inoperable channel is bypassed, the desirability of maintaining this channel in the bypassed condition shall be documented by the Plant Operations Review Committee in accordance with plant administrative procedures. The channel shall be returned to OPERABLE status no later than prior to entry into the applicable MODE(S) following the next COLD SHUTDOWN.

With a channel process measurement circuit that affects multiple functional units inoperable or in test, bypass or trip all associated functional units as listed below:

	Process Measurement Circuit	Functional Unit Bypassed/Tripped
1.	Containment Pressure - High	Containment Pressure - High (ESF) Containment Pressure - High (RPS)
2.	Steam Generator Pressure - Low	Steam Generator Pressure - Low Steam Generator $\triangle$P 1 and 2 (EFAS)

TABLE 3.3-3 (Continued)

TABLE NOTATION

ACTION 14 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE, STARTUP and/or POWER OPERATION and/or operation in the other applicable MODE(S) may continue provided the following conditions are satisfied:

a. Verify that one of the inoperable channels has been bypassedand place the other inoperable channel in the tripped condition within 1 hour.

b. All functional units affected by the bypassed/tripped channel shall also be placed in the bypassed/tripped condition as listed below.

	Process Measurement Circuit	Functional Unit Bypassed/Tripped
1.	Containment Pressure Circuit	Containment Pressure - High (ESF) Containment Pressure - High (RPS)
2.	Steam Generator Pressure - Low	Steam Generator Pressure - Low Steam Generator $\triangle$P 1 and 2 (EFAS)

STARTUP and/or POWER OPERATION and/or operation in the other applicable MODE(S) may continue until the performance of the next required CHANNEL FUNCTIONAL TEST. Subsequent STARTUPand/or POWER OPERATION and/or operation in the other applicable MODE(S) may continue if one channel is restored to OPERABLE status and the provisions of ACTION 13 are satisfied.

ACTION 15 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channels to OPERABLE status within 48 hours or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

ACTION 16 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or declare the associated valve inoperable and take the ACTION required by Specification 3.7.1.5.

TABLE 3.3-3 (Continued)

TABLE NOTATION

ACTION 17 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may continue provided the inoperable channel is placed in the tripped (D.C. Relay energized) condition within 1 hour, the remaining Emergency Diesel Generator is OPERABLE, and the inoperable channel is restored to OPERABLE status within the next 48 hours. Otherwise, be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the next 30 hours. The surveillance requirements of Table 4.3-2 are waived for all channels while this action requirement is in effect.

ACTION 18 - With more than one channel inoperable, or if the inoperable channel cannot be placed in the trip (D.C. Relay energized) condition, declare the associated Emergency Diesel Generator inoperable and take the ACTION required by Specification 3.8.1.1. The surveillance requirements of Table 4.3-2 are waived for all channels while this action requirement is in effect.

ACTION 19 - With the number of channels OPERABLE one less than the Total Number of Channels, STARTUP and/or POWER OPERATION and/or operation in the other applicable MODE(S) may continue, provided the inoperable channel is placed in the bypassed or tripped condition within 1 hour:

a. If the inoperable channel is to remain in the bypassed condition, the desirability of maintaining this channel in the bypassed condition shall be documented by the Plant Operations Review Committee in accordance with plant administrative procedures. The channel shall be returned to OPERABLE status no later than prior to entry into the applicable MODE(S) following the next COLD SHUTDOWN.

b. If the inoperable channel is required to be placed in the tripped condition, within 48 hours either restore the channel to OPERABLE status or place the channel in the bypassed condition. If the tripped channel can not be returned to OPERABLE status in 48 hours, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours or place the tripped channel in bypass.

With a channel process measurement circuit that affects multiple functional units inoperable or in test, bypass or trip all associated functional units as listed below:

TABLE 3.3-3 (Continued)

TABLE NOTATION

	Process Measurement Circuit	Functional Unit Bypassed/Tripped
1.	Steam Generator Pressure - Low	Steam Generator Pressure - Low Steam Generator $\triangle$P 1 and 2 (EFAS)
2.	Steam Generator Level	Steam Generator Level - Low Steam Generator Level - High Steam Generator $\triangle$P (EFAS)

ACTION 20 - With the number of channels OPERABLE one less than the Minimum Channels OPERABLE, STARTUP and/or POWER OPERATION and/or operation in the other applicable MODE(S) may continue provided the following conditions are satisfied:

a. Verify that one of the inoperable channels has been bypassed and place the other inoperable channel in the tripped condition within 1 hour. With a channel process measurement circuit that affects multiple functional units inoperable or in test, bypass or trip all associated functional units as listed below:

	Process Measurement Circuit	Functional Unit Bypassed/Tripped
1.	Steam Generator Pressure - Low	Steam Generator Pressure - Low Steam Generator $\triangle$P 1 and 2 (EFAS)
2.	Steam Generator Level	Steam Generator Level - Low Steam Generator Level - High Steam Generator $\triangle$P (EFAS)

b. Restore at least one of the inoperable channels to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Subsequent operation in the applicable MODE(S) may continue if one channel is restored to OPERABLE status and the provisions of ACTION 19 are satisfied.

3/4.3.1 and 3/4.3.2 REACTOR PROTECTIVE AND ENGINEERED SAFETY FEATURES ACTUATION SYSTEMS INSTRUMENTATION

The OPERABILITY of the Reactor Protective and Engineered Safety Features Actuation Systems instrumentation and bypasses ensures that (1) the associated Engineered Safety Features Actuation action and/or reactor trip will be initiated when the parameter monitored by each channel or combination thereof reaches its setpoint, (2) the specified coincidence logic is maintained, (3) sufficient redundancy is maintained to permit a channel to be out of service for testing or maintenance, and (4) sufficient system functional capability is available from diverse parameters.

The OPERABILITY of these systems is required to provide the overall reliability, redundancy, and diversity assumed available in the facility design for the protection and mitigation of accident and transient conditions. The integrated operation of each of these systems is consistent with the assumptions used in the safety analyses.

The redundancy design of the Control Element Assembly Calculators (CEAC) provides reactor protection in the event one or both CEACs become inoperable. If one CEAC is in test or inoperable, verification of CEA position is performed at least every 4 hours. If the second CEAC fails, the CPCs will use DNBR and LPD penalty factors to restrict reactor operation to some maximum fraction of RATED THERMAL POWER. If this maximum fraction is exceeded, a reactor trip will occur.

Table 3.3-3 ACTION 19 allows for continued operation in the applicable MODE(S) with one of the Refueling Water Storage Pool (RWSP) - Low or Steam Generator $\triangle$P Emergency Feedwater Actuation Signal (EFAS) channels inoperable provided the channel is placed in the bypass or tripped condition within 1 hour. If an inoperable channel of the RWSP - Low or Steam Generator $\triangle$P EFAS channel is required to be placed in the tripped condition within one hour, then within 48 hours the channel must either be restored to OPERABLE status or be placed in the bypassed condition. The bypassed channel must be restored to OPERABLE status prior to entering the applicable MODE(S) following the next MODE 5 entry. With one of the RWSP - Low or Steam Generator $\triangle$P (EFAS) channels inoperable and in bypass, and a failure occurs or repairs are necessary on one of the remaining channels, ACTION 20 must be entered.

ACTION 19a is annotated with a 3.0.4 exemption to allow the changing of MODE(S) even though one channel is bypassed. MODE changes between MODES 1 and 4 with this configuration are allowed, to permit maintenance and testing on the inoperable channel. In this configuration, the protection system is in a two-out-of-three logic, and the probability of a random failure affecting two of the OPERABLE channels is remote. The tripped condition does not have this annotation as a single failure could cause the Emergency Core Cooling System and Containment Spray System suctions to be supplied from the Safety Injection System Sump prematurely and loss of the Low Pressure Safety Injection Systems with a premature

3/4.3.1 and 3/4.3.2 REACTOR PROTECTIVE AND ENGINEERED SAFETY FEATURE SAFETY ACTUATION SYSTEMS INSTRUMENTATION (Continued)

Recirculation Actuation Signal (RAS) or with an inadvertent EFAS could cause the automatic isolation of a faulted steam generator from Emergency Feedwater (EFW) to not occur as assumed by the Waterford 3 safety analysis.

Table 3.3-3 ACTION 20 allows for continued operation in the applicable MODE(S) with two of the RWSP - Low or Steam Generator $\triangle$P (EFAS) channels inoperable provided that one of the inoperable channels is bypassed and the other inoperable channel is placed in the tripped condition within one hour.

One of the inoperable RWSP-Low channels must be restored to OPERABLE status within 48 hours to allow removal of the channel from the tripped condition. The allowed time is acceptable because operating experience has demonstrated the low probability of the following sequence of events occurring: the need to place one RWSP-Low channel in the tripped condition while another RWSP-Low channel is in bypass, the receipt of a valid Safety Injection Actuation Signal Actuation, and a coincident failure of one of the two remaining OPERABLE RWSP-Low channels. These conditions could cause the Emergency Core Cooling System and Containment Spray System suctions to be supplied from the Safety Injection System Sump prematurely due to containment pressure being higher than RWSP outlet pressure and loss of the Low Pressure Safety Injection Systems.

One of the inoperable Steam Generator $\triangle$P (EFAS) channels must be restored to OPERABLE status within 48 hours to allow removal of the channel from the tripped condition. The allowed time is acceptable because operating experience has demonstrated the low probability of the following sequence of events occurring: the need to place one Steam Generator $\triangle$P (EFAS) channel in the tripped condition while another Steam Generator $\triangle$P (EFAS) is in bypass, coincident with a failure of one of the two remaining OPERABLE Steam Generator $\triangle$P (EFAS) channels, and the occurrence of a MSLB or FWLB. These conditions could cause the automatic isolation of a faulted steam generator from Emergency Feedwater (EFW) to not occur as assumed by the Waterford safety analysis.

When one of the inoperable channels is restored to OPERABLE status, subsequent operation in the applicable MODE(S) may continue in accordance with the provisions of ACTION 19.

3/4.3.1 and 3/4.3.2 REACTOR PROTECTIVE AND ENGINEERED SAFETY FEATURE SAFETY ACTUATION SYSTEMS INSTRUMENTATION (Continued)

Because of the interaction between process measurement circuits and associated functional units as listed in the ACTIONS 19 and 20, placement of an inoperable channel of Steam Generator Level in the bypass or trip condition results in corresponding placements of Steam Generator $\triangle$P (EFAS) instrumentation. Depending on the number of applicable inoperable channels, the provisions of ACTIONS 19 and 20 and the aforesaid scenarios for Steam Generator $\triangle$P (EFAS) would govern.

The Surveillance Requirements specified for these systems ensure that the overall system functional capability is maintained comparable to the original design standards. The periodic surveillance tests performed at the minimum frequencies are sufficient to demonstrate this capability. The quarterly frequency for the channel functional tests for these systems comes from the analyses presented in topical report CEN-327: RPS/ESFAS Extended Test Interval Evaluation, as supplemented.

Testing frequency for the Reactor Trip Breakers (RTBs) is described and analyzed in CEN NPSD-951. The quarterly RTB channel functional test and RPS logic channel functional test are scheduled and performed such that RTBs are verified OPERABLE at least every 6 weeks to accommodate the appropriate vendor recommended interval for cycling of each RTB.

RPS\ESFAS Trip Setpoints values are determined by means of an explicit setpoint calculation analysis. A Total Loop Uncertainty (TLU) is calculated for each RPS/ESFAS instrument channel. The Trip Setpoint is then determined by adding or subtracting the TLU from the Analytical Limit (add TLU for decreasing process value; subtract TLU for increasing process value). The Allowable Value is determined by adding an allowance between the Trip Setpoint and the Analytical Limit to account for RPS/ESFAS cabinet Periodic Test Errors (PTE) which are present during a CHANNEL FUNCTIONAL TEST. PTE combines the RPS/ESFAS cabinet reference accuracy, calibration equipment errors (M&TE), and RPS/ESFAS cabinet bistable Drift. Periodic testing assures that actual setpoints are within their Allowable Values. A channel is inoperable if its actual setpoint is not within its Allowable Value and corrective action must be taken. Operation with a trip set less conservative than its setpoint, but within its specified ALLOWABLE VALUE is acceptable on the basis that the difference between each trip Setpoint and the ALLOWABLE VALUE is equal to or less than the Periodic Test Error allowance assumed for each trip in the safety analyses.

The measurement of response time at the specified frequencies provides assurance that the protective and ESF action function associated with each channel is completed within the time limit assumed in the safety analyses. No credit was taken in the analyses for those channels with response times indicated as not applicable.

3/4.3.1 and 3/4.3.2 REACTOR PROTECTIVE AND ENGINEERED SAFETY FEATURE SAFETY ACTUATION SYSTEMS INSTRUMENTATION (Continued)

TABLE 3.3-1, Functional Unit 13, Reactor Trip Breakers

Response time may be demonstrated by any series of sequential, overlapping, or total channel test measurements provided that such tests demonstrate the total channel response time as defined. Sensor response time verification may be demonstrated by (1) in place, onsite, or offsite test measurements or (2) utilizing replacement sensors with certified response times.

The Reactor Trip Breakers Functional Unit in Table 3.3-1 refers to the reactor trip breaker channels. There are four reactor trip breaker channels. Two reactor trip breaker channels with a coincident trip logic of one-out-of-two taken twice (reactor trip breaker channels A or B, and C or D) are required to produce a trip. Each reactor trip breaker channel consists of two reactor trip breakers. For a reactor trip breaker channel to be considered OPERABLE, both of the reactor trip breakers of that reactor trip breaker channel must be capable of performing their safety function (disrupting the flow of power in its respective trip leg). The safety function is satisfied when the reactor trip breaker is capable of automatically opening, or otherwise opened or racked-out.

If a racked-in reactor trip breaker is not capable of automatically opening, the ACTION for an inoperable reactor trip breaker channel shall be entered. The ACTION shall not be exited unless the reactor trip breaker capability to automatically open is restored, or the reactor trip breaker is opened or racked-out.