ENCLOSURE 1

PROPOSED TECHNICAL SPECIFICATIONS REVISIONS

BROWNS FERRY NUCLEAR PLANT

UNITS 1, 2, AND 3

(TVA BFN TS 228)

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NOTES FOR TABLE 3.2.C

1. The minimum number of operable channels for each trip function is detailed for the startup and run positions of the reactor mode selector switch. The SRM, IRM, and APRM (startup mode), blocks need not be operable in "run" mode, and the APRM (flow biased) rod blocks need not be operable in "startup" mode.

   With the number of OPERABLE channels less than required by the minimum OPERABLE channels per trip function requirement, place at least one inoperable channel in the tripped condition within one hour.

2. W is the recirculation loop flow in percent of design. Trip level setting is in percent of rated power (3293 MWt).

   A ratio of FRP/CMFLPD <1.0 is permitted at reduced power. See Specification 2.1 for APRM control rod block setpoint.

3. IRM downscale is bypassed when it is on its lowest range.

4. SRMs A and C downscale functions are bypassed when IRMs A, C, E, and G are above range 2. SRMs B and D downscale function is bypassed when IRMs B, D, F, and H are above range 2.

   SRM detector not in startup position is bypassed when the count rate is $\geq$100 CPS or the above condition is satisfied.

5. During repair or calibration of equipment, not more than one SRM or RBM channel nor more than two APRM or IRM channels may be bypassed. Bypassed channels are not counted as operable channels to meet the minimum operable channel requirements. Refer to section 3.10.B for SRM requirements during core alterations.

6. IRM channels A, E, C, G all in range 8 or above bypasses SRM channels A and C functions.

   IRM channels B, F, D, H all in range 8 or above bypasses SRM channels B and D functions.

7. The following operational restraints apply to the RBM only.

a. Both RBM channels are bypassed when reactor power is $\leq$30 percent and when a peripheral control rod is selected.

b. The RBM need not be operable in the "startup" position of the reactor mode selector switch.

c. Two RBM channels are provided and only one of these may be bypassed from the console. If the inoperable channel cannot be restored within 24 hours, the inoperable channel shall be placed in the tripped condition within one hour.

d. With both RBM channels inoperable, place at least one inoperable rod block monitor channel in the tripped condition within one hour.

14. (Deleted)

15. The flow bias comparator will be tested by putting one flow unit in "Test" (producing 1/2 scram) and adjusting the test input to obtain comparator rod block. The flow bias upscale will be verified by observing a local upscale trip light during operation and verified that it will produce a rod block during the operating cycle.

16. Performed during operating cycle. Portions of the logic is checked more frequently during functional tests of the functions that produce a rod block.

17. This calibration consists of removing the function from service and performing an electronic calibration of the channel.

18. Functional test is limited to the condition where secondary containment integrity is not required as specified in Sections 3.7.C.2 and 3.7.C.3.

19. Functional test is limited to the time where the SGTS is required to meet the requirements of Section 4.7.C.1.a.

20. Calibration of the comparator requires the inputs from both recirculation loops to be interrupted, thereby removing the flow bias signal to the APRM and RBM and scramming the reactor. This calibration can only be performed during an outage.

21. Logic test is limited to the time where actual operation of the equipment is permissible.

22. One channel of either the reactor zone or refueling zone Reactor Building Ventilation Radiation Monitoring System may be administratively bypassed for a period not to exceed 24 hours for functional testing and calibration.

23. (Deleted)

24. This instrument check consists of comparing the thermocouple readings for all valves for consistence and for nominal expected values (not required during refueling outages).

25. During each refueling outage, all acoustic monitoring channels shall be calibrated. This calibration includes verification of accelerometer response due to mechanical excitation in the vicinity of the sensor.

3.5/4.5 CORE AND CONTAINMENT COOLING SYSTEMS

LIMITING CONDITIONS FOR OPERATION

3.5 Core and Containment Cooling Systems

L. APRM Setpoints

1. Whenever the core thermal power is $\geq$ 25% of rated, the ratio of FRP/CMFLPD shall be $\geq$ 1.0, or the APRM scram and rod block setpoint equations listed in Sections 2.1.A and 2.1.B shall be multiplied by FRP/CMFLPD as follows:

$$S \leq (0.66W + 54\%) \frac{FRP}{CMFLPD}$$

$$S_{RB} \leq (0.66W + 42\%) \left(\frac{FRP}{CMFLPD}\right)$$

2. When it is determined that 3.5.L.1 is not being met, 6 hours is allowed to correct the condition.

3. If 3.5.L.1 and 3.5.L.2 cannot be met, the reactor power shall be reduced to $\leq$ 25% of rated thermal power within 4 hours.

SURVEILLANCE REQUIREMENTS

4.5 Core and Containment Cooling Systems

L. APRM Setpoints

FRP/CMFLPD shall be determined daily when the reactor is $\geq$ 25% of rated thermal power.

3.5 BASES (Cont'd)

3.5.M. References

1. "Fuel Densification Effects on General Electric Boiling Water Reactor Fuel," Supplements 6, 7, and 8, NEIM-10735, August 1973.

2. Supplement 1 to Technical Report on Densification of General Electric Reactor Fuels, December 14, 1974 (USA Regulatory Staff).

3. Communication: V. A. Moore to I. S. Mitchell, "Modified GE Model for Fuel Densification," Docket 50-321, March 27, 1974.

4. Generic Reload Fuel Application, Licensing Topical Report, NEDE-24011-P-A and Addenda.

5. Letter from R. H. Buchholz (GE) to P. S. Check (NRC), "Response to NRC Request For Information On ODYN Computer Model," September 5, 1980.

LIMITING CONDITIONS FOR OPERATION

3.6.H. Seismic Restraints, Supports, and Snubbers

During all modes of operation all seismic restraints, snubbers, and supports shall, be OPERABLE except as noted in 3.6.H.1. All safety-related snubbers are listed in Surveillance Instruction BF SI 4.6.H-1 and BF SI 4.6.H-2.

1. With one or more seismic restraint, support, or snubber INOPERABLE on a system that is required to be OPERABLE in the current plant condition, within 72 hours replace or restore the INOPERABLE seismic restraint(s), support(s), or snubber(s) to OPERABLE status and perform an engineering evaluation on the attached component or declare the attached system INOPERABLE and follow the appropriate Limiting Condition statement for that system.

SURVEILLANCE REQUIREMENTS

4.6.H. Seismic Restraints, Supports, and Snubbers

The surveillance requirements of paragraph 4.6.G are the only requirements that apply to any seismic restraint or support other than snubbers.

Each safety-related snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program and the requirements of Specification 3.6.H/4.6.H. These snubbers are listed in Surveillance Instruction BF SI 4.6.H-1 and BF SI 4.6.H-2.

1. Inspection Groups

The snubbers may be categorized into two major groups based on whether the snubbers are accessible or inaccessible during reactor operation. These major groups may be further subdivided into groups based on design, environment, or other features which may be expected to affect the operability of the snubbers within the group. Each group may be inspected independently in accordance with 4.6.H.2 through 4.6.H.9.

2. Visual Inspection, Schedule, and Lot Size

The first inservice visual inspection of snubbers not previously included in these technical specifications and whose visual inspection has

The following are pages requested for UNIT 2

SAFETY LIMIT

LIMITING SAFETY SYSTEM SETTING

2.1.A Neutron Flux Trip Settings

2.1.A.1.a (Cont'd)

$S \leq (0.66W + 54\%)$

where:

S = Setting in percent of rated thermal power (3293 MWt)

W = Loop recirculation flow rate in percent of rated (rated loop recirculation flow rate equals 34.2×10^6 lb/hr)

b. For no combination of loop recirculation flow rate and core thermal power shall the APRM flux scram trip setting be allowed to exceed 120% of rated thermal power.

1.1/2.1 FUEL CLADDING INTEGRITY

SAFETY LIMIT

LIMITING SAFETY SYSTEM SETTING

2.1.A Neutron Flux Trip Settings

2.1.A.1.b. (Cont'd)

NOTE: These settings assume operation within the basic thermal hydraulic design criteria. These criteria are LHGR $\leq$13.4 kW/ft and MCPR within limits of Specification 3.5.K. If it is determined that either of these design criteria is being violated during operation, action shall be initiated within 15 minutes to restore operation within prescribed limits. Surveillance requirements for APRM scram setpoint are given in Specification 4.5.L.

c. The APRM Rod Block trip setting shall be:

$$S_{RB} \leq (0.66W + 42\%)$$

where:

S_{RB} = Rod Block setting in percent of rated thermal power (3293 MWt)

W = Loop recirculation flow rate in percent of rated (rated loop recirculation flow rate equals 34.2 x 10^6 lb/hr)

1.1/2.1 FUEL CLADDING INTEGRITY

SAFETY LIMIT

1.1.A Thermal Power Limits

2. Reactor Pressure $\leq$800 psia or Core Flow $\leq$10% of rated.

When the reactor pressure is $\leq$800 psia or core flow is $\leq$10% of rated, the core thermal power shall not exceed 823 MWt (25% of rated thermal power).

LIMITING SAFETY SYSTEM SETTING

2.1.A Neutron Flux Trip Settings (Cont'd)

d. Fixed High Neutron Flux Scram Trip Setting--When the mode switch is in the RUN position, the APRM fixed high flux scram trip setting shall be:

S$\leq$120% power.

2. APRM and IRM Trip Settings (Startup and Hot Standby Modes).

a. APRM--When the reactor mode switch is in the STARTUP position, the APRM scram shall be set at less than or equal to 15% of rated power.

b. IRM--The IRM scram shall be set at less than or equal to 120/125 of full scale.

NOTES FOR TABLE 3.2.C

1. The minimum number of OPERABLE channels for each trip function is detailed for the STARTUP and RUN positions of the reactor mode selector switch. The SRM, IRM, and APRM (STARTUP mode), blocks need not be OPERABLE in "RUN" mode, and the APRM (flow biased rod blocks need not be OPERABLE in "STARTUP" mode.

   With the number of OPERABLE channels less than required by the minimum OPERABLE channels per trip function requirement, place at least one INOPERABLE channel in the tripped condition within one hour.

2. W is the recirculation loop flow in percent of design. Trip level setting is in percent of rated power (3293 MWt).

3. IRM downscale is bypassed when it is on its lowest range.

4. SRMs A and C downscale functions are bypassed when IRMs A, C, E, and G are above range 2. SRMs B and D downscale function is bypassed when IRMs B, D, F, and H are above range 2.

   SRM detector not in startup position is bypassed when the count rate is $\geq$100 CPS or the above condition is satisfied.

5. During repair or calibration of equipment, not more than one SRM or RBM channel nor more than two APRM or IRM channels may be bypassed. Bypassed channels are not counted as OPERABLE channels to meet the minimum OPERABLE channel requirements. Refer to section 3.10.B for SRM requirements during core alterations.

6. IRM channels A, E, C, G all in range 8 or above bypasses SRM channels A and C functions.

   IRM channels B, F, D, H all in range 8 or above bypasses SRM channels B and D functions.

7. The following operational restraints apply to the RBM only.

   a. Both RBM channels are bypassed when reactor power is $\leq$30 percent and when a peripheral control rod is selected.

   b. The RBM need not be OPERABLE in the "startup" position of the reactor mode selector switch.

   c. Two RBM channels are provided and only one of these may be bypassed from the console. If the INOPERABLE channel cannot be restored within 24 hours, the INOPERABLE channel shall be placed in the tripped condition within one hour.

   d. With both RBM channels inoperable, place at least one inoperable rod block monitor channel in the tripped condition within one hour.

14. (Deleted)

15. The flow bias comparator will be tested by putting one flow unit in "Test" (producing 1/2 scram) and adjusting the test input to obtain comparator rod block. The flow bias upscale will be verified by observing a local upscale trip light during operation and verified that it will produce a rod block during the operating cycle.

16. Performed during operating cycle. Portions of the logic is checked more frequently during functional tests of the functions that produce a rod block.

17. This calibration consists of removing the function from service and performing an electronic calibration of the channel.

18. Functional test is limited to the condition where secondary containment integrity is not required as specified in Sections 3.7.C.2 and 3.7.C.3.

19. Functional test is limited to the time where the SGTS is required to meet the requirements of Section 4.7.C.1.a.

20. Calibration of the comparator requires the inputs from both recirculation loops to be interrupted, thereby removing the flow bias signal to the APRM and RBM and scramming the reactor. This calibration can only be performed during an outage.

21. Logic test is limited to the time where actual operation of the equipment is permissible.

22. One channel of either the reactor zone or refueling zone Reactor Building Ventilation Radiation Monitoring System may be administratively bypassed for a period not to exceed 24 hours for functional testing and calibration.

23. (Deleted)

24. This instrument check consists of comparing the thermocouple readings for all valves for consistence and for nominal expected values (not required during refueling outages).

25. During each refueling outage, all acoustic monitoring channels shall be calibrated. This calibration includes verification of accelerometer response due to mechanical excitation in the vicinity of the sensor.

LIMITING CONDITIONS FOR OPERATION

3.5 Core and Containment Cooling Systems

L. APRM Setpoints

1. Whenever the core thermal power is $\geq$ 25% of rated, the ration of FRP/CMFLPD shall be $\geq$ 1.0, or the APRM scram and rod block setpoint equations listed in Sections 2.1.A and 2.1.B shall be multiplied by FRP/CMFLPD as follows:

$$S \leq (0.66W + 54\%) \frac{FRP}{CMFLPD}$$

$$S_{RB} \leq (0.66W + 42\%) \left(\frac{FRP}{CMFLPD}\right)$$

2. When it is determined that 3.5.L.1 is not being met, 6 hours is allowed to correct the condition.

3. If 3.5.L.1 and 3.5.L.2 cannot be met, the reactor power shall be reduced to $\leq$ 25% of rated thermal power within 4 hours.

SURVEILLANCE REQUIREMENTS

4.5 Core and Containment Cooling Systems

L. APRM Setpoints

FRP/CMFLPD shall be determined daily when the reactor is $\geq$ 25% of rated thermal power.

3.5 BASES (Cont'd)

3.5.M. References

1. Loss-of-Coolant Accident Analysis for Browns Ferry Nuclear Plant Unit 2, NEDO - 24088-1 and Addenda.

2. "BWR Transient Analysis Model Utilizing the RETRAN Program," TVA-TR81-01-A.

3. Generic Reload Fuel Application, Licensing Topical Report, NEDE - 24011-P-A and Addenda.

3.6/4.6 PRIMARY SYSTEM BOUNDARY

LIMITING CONDITIONS FOR OPERATION

3.6.H. Seismic Restraints, Supports, and Snubbers

During all modes of operation all seismic restraints, snubbers, and supports shall be OPERABLE except as noted in 3.6.H.1. All safety-related snubbers are listed in Surveillance Instructions BF SI 4.6.H-1 and BF SI 4.6.H-2.

1. With one or more seismic restraint, support, or snubber INOPERABLE on a system that is required to be OPERABLE in the current plant condition, within 72 hours replace or restore the INOPERABLE seismic restraint(s), support(s), or snubber(s) to OPERABLE status and perform an engineering evaluation on the attached component or declare the attached system INOPERABLE and follow the appropriate Limiting Condition statement for that system.

SURVEILLANCE REQUIREMENTS

4.6.H. Seismic Restraints, Supports, and Snubbers

The surveillance requirements of paragraph 4.6.G are the only requirements that apply to any seismic restraint or support other than snubbers.

Each safety-related snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program and the requirements of Specification 3.6.H/4.6.H. These snubbers are listed in Surveillance Instructions BF SI 4.6.H-1 and BF SI 4.6.H-2.

1. Inspection Groups

The snubbers may be categorized into two major groups based on whether the snubbers are accessible or inaccessible during reactor operation. These major groups may be further subdivided into groups based on design, environment, or other features which may be expected to affect the operability of the snubbers within the group. Each group may be inspected independently in accordance with 4.6.H.2 through 4.6.H.9.

2. Visual Inspection, Schedule, and Lot Size

The first inservice visual inspection of snubbers not previously included in these technical specifications and whose visual inspection has

The following are pages requested for Unit 3

SAFETY LIMIT

LIMITING SAFETY SYSTEM SETTING

Settings

2.1.A Neutron Flux Trip

2.1.A.1.a (Cont'd)

$S \leq (0.66W + 54\%)$

where:

S = Setting in percent of rated thermal power (3293 MWt)

W = Loop recirculation flow rate in percent of rated (rated loop recirculation flow rate equals 34.2×10^6 lb/hr)

b. For no combination of loop recirculation flow rate and core thermal power shall the APRM flux scram trip setting be allowed to exceed 120% of rated thermal power.

SAFETY LIMIT

LIMITING SAFETY SYSTEM SETTING

2.1.A Neutron Flux Trip Settings

2.1.A.1.b (Cont'd)

NOTE: These settings assume operation within the basic thermal hydraulic design criteria. These criteria are LHGR $\leq$13.4 kW/ft and MCPR within limits of Specification 3.5.K. If it is determined that either of these design criteria is being violated during operation, action shall be initiated within 15 minutes to restore operation within the prescribed limits. Surveillance requirements for APRM scram setpoint are given in Specification 4.5.L.

c. The APRM Rod Block trip setting shall be:

$S_{RB} \leq (0.66W + 42\%)$

where:

S_{RB} = Rod Block setting in percent of rated thermal power (3293 MWt)

W = Loop recirculation flow rate in percent of rated (rated loop recirculation flow rate equals 34.2×10^6 lb/hr)

1.1/2.1 FUEL CLADDING INTEGRITY

SAFETY LIMIT

1.1.A Thermal Power Limits

2. Reactor Pressure $\leq$800 psia or Core Flow $\leq$10% of rated.

   When the reactor pressure is $\leq$800 psia or core flow is $\leq$10% of rated, the core thermal power shall not exceed 823 MWt (~25% of rated thermal power).

LIMITING SAFETY SYSTEM SETTING

2.1.A Neutron Flux Trip Settings

d. Fixed High Neutron Flux Scram Trip Setting--When the mode switch is in the RUN position, the APRM fixed high flux scram trip setting shall be:

   S$\leq$120% power.

2. APRM and IRM Trip Settings (Startup and Hot Standby Modes).

   a. APRM--When the reactor mode switch is in the STARTUP position, the APRM scram shall be set at less than or equal to 15% of rated power.

   b. IRM--The IRM scram shall be set at less than or equal to 120/125 of full scale.

NOTES FOR TABLE 3.2.C

1. The minimum number of operable channels for each trip f' :ion is detailed for the startup and run positions of the react(:ode selector switch. The SRM, IRM, and APRM (startup mode) ocks need not be operable in "run" mode, and the APRM (flow biase('od blocks need not be operable in "startup" mode.

   With the number of OPERABLE channels less than required by the minimum OPERABLE channels per trip function requirement, place at least one inoperable channel in the tripped condition within one hour.

2. W is the recirculation loop flow in percent of design. Trip level setting is in percent of rated power (3293 MWt).

   See Specification 2.1 for APRM control rod block setpoint.

3. IRM downscale is bypassed when it is on its lowest range.

4. SRMs A and C downscale functions are bypassed when IRMs A, C, E, and G are above range 2. SRMs B and D downscale function is bypassed when IRMs B, D, F, and H are above range 2.

   SRM detector not in startup position is bypassed when the count rate is $\geq$100 counts per second or the above condition is satisfied.

5. During repair or calibration of equipment, not more than one SRM or RBM channel nor more than two APRM or IRM channels may be bypassed. Bypassed channels are not counted as operable channels to meet the minimum operable channel requirements. Refer to section 3.10.B for SRM requirements during core alterations.

6. IRM channels A, E, C, G all in range 8 or above bypasses SRM channels A and C functions.

   IRM channels B, F, D, H all in range 8 or above bypasses SRM channels B and D functions.

7. The following operational restraints apply to the RBM only.

   a. Both RBM channels are bypassed when reactor power is $\leq$30 percent and when a peripheral control rod is selected.

   b. The RBM need not be operable in the "startup" position of the reactor mode selector switch.

   c. Two RBM channels are provided and only one of these may be bypassed from the console. If the inoperable channel cannot be restored within 24 hours, the inoperable channel shall be placed in the tripped condition within one hour.

   d. With both RBM channels inoperable, place at least one inoperable rod block monitor channel in the tripped condition within one hour.

NOTES FOR TABLES 4.2.A THROUGH 4.2.H except 4.2.D (Continued)

14. (Deleted)

15. The flow bias comparator will be tested by putting one flow unit in "Test" (producing 1/2 scram) and adjusting the test input to obtain comparator rod block. The flow bias upscale will be verified by observing a local upscale trip light during operation and verified that it will produce a rod block during the operating cycle.

16. Performed during operating cycle. Portions of the logic is checked more frequently during functional tests of the functions that produce a rod block..

17. This calibration consists of removing the function from service and performing an electronic calibration of the channel.

18. Functional test is limited to the condition where secondary containment integrity is not required as specified in Sections 3.7.C.2 and 3.7.C.3.

19. Functional test is limited to the time where the SGTS is required to meet the requirements of Section 4.7.C.1.a.

20. Calibration of the comparator requires the inputs from both recirculation loops to be interrupted, thereby removing the flow bias signal to the APRM and RBM and scramming the reactor. This calibration can only be performed during an outage.

21. Logic test is limited to the time where actual operation of the equipment is permissible.

22. One channel of either the reactor zone or refueling zone Reactor Building Ventilation Radiation Monitoring System may be administratively bypassed for a period not to exceed 24 hours for functional testing and calibration.

23. (Deleted)

24. This instrument check consists of comparing the thermocouple readings for all valves for consistence and for nominal expected values (not required during refueling outages).

25. During each refueling outage, all acoustic monitoring channels shall be calibrated. This calibration includes verification of accelerometer response due to mechanical excitation in the vicinity of the sensor.

LIMITING CONDITIONS FOR OPERATION

3.5 Core and Containment Cooling Systems

L. APRM Setpoints

1. Whenever the core thermal power is ≥ 25% of rated, the ratio of FRP/CMFLPD shall be ≥ 1.0, or the APRM scram and rod block setpoint equations listed in Sections 2.1.A and 2.1.B shall be multiplied by FRP/CMFLPD as follows:

$$S \leq (0.66W + 54\%) \frac{FRP}{CMFLPD}$$

$$S_{RB} \leq (0.66W + 42\%) \left(\frac{FRP}{CMFLPD}\right)$$

2. When it is determined that 3.5.L.1 is not being met, 6 hours is allowed to correct the condition.

3. If 3.5.L.1 and 3.5.L.2 cannot be met, the reactor power shall be reduced to ≤ 25% of rated thermal power within 4 hours.

SURVEILLANCE REQUIREMENTS

4.5 Core and Containment Cooling Systems

L. APRM Setpoints

FRP/CMFLPD shall be determined daily when the reactor is ≥ 25% of rated thermal power.

3.5 BASES (Cont'd)

3.5.M References

1. Loss-of-Coolant Accident Analysis for Browns Ferry Nuclear Plant Unit 3, NEDO-24194A and Addenda.

2. "BWR Transient Analysis Model Utilizing the RETRAN Program," TVA-TR81-01-A.

3. Generic Reload Fuel Application, Licensing Topical Report, NEDE-24011-P-A and Addenda.

LIMITING CONDITIONS FOR OPERATION

3.6.H. Seismic Restraints, Supports, and Snubbers

During all modes of operation all seismic restraints, snubbers, and supports shall, be OPERABLE except as noted in 3.6.H.1. All safety-related snubbers are listed in Surveillance Instruction BF SI 4.6.H-1 and BF SI 4.6.H-2.

1. With one or more seismic restraint, support, or snubber INOPERABLE on a system that is required to be OPERABLE in the current plant condition, within 72 hours replace or restore the INOPERABLE seismic restraint(s), support(s), or snubber(s) to OPERABLE status and perform an engineering evaluation on the attached component or declare the attached system INOPERABLE and follow the appropriate Limiting Condition statement for that system.

SURVEILLANCE REQUIREMENTS

4.6.H. Seismic Restraints, Supports, and Snubbers

The surveillance requirements of paragraph 4.6.G are the only requirements that apply to any seismic restraint or support other than snubbers.

Each safety-related snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program and the requirements of Specification 3.6.H/4.6.H. These snubbers are listed in Surveillance Instruction BF SI 4.6.H-1 and BF SI 4.6.H-2.

1. Inspection Groups

   The snubbers may be categorized into two major groups based on whether the snubbers are accessible or inaccessible during reactor operation. These major groups may be further subdivided into groups based on design, environment, or other features which may be expected to affect the operability of the snubbers within the group. Each group may be inspected independently in accordance with 4.6.H.2 through 4.6.H.9.

2. Visual Inspection, Schedule, and Lot Size

   The first inservice visual inspection of snubbers not previously included in these technical specifications and whose visual inspection has

TABLE 4.2.A
SURVEILLANCE REQUIREMENTS FOR PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

Function	Functional Test	Calibration Frequency	Instrument Check
Instrument Channel - Main Steam Line Tunnel High Temperature	once/3 months (29)	once/operating cycle	None
Instrument Channel - Reactor Building Ventilation High Radiation - Reactor Zone	(1) (22)	once/3 months	once/day (8)
Instrument Channel - Reactor Building Ventilation High Radiation - Refueling Zone	(1) (22)	once/3 Months	once/day (8)
Instrument Channel - SGTS Train A Heaters	(4)	(9)	N/A
Instrument Channel - SGTS Train B Heaters	(4)	(9)	N/A
Instrument Channel - SGTS Train C Heaters	(4)	(9)	N/A
Reactor Building Isolation Timer (refueling floor)	N/A	(4)	once/operating cycle
Reactor Building Isolation Timer (reactor zone)	N/A	(4)	once/operating cycle

TABLE 4.2.A
SURVEILLANCE REQUIREMENTS FOR PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

Function	Functional Test	Calibration Frequency	Instrument Check
Instrument Channel - (29) Main Steam Line Tunnel High Temperature		Once/operating cycle	None
Instrument Channel - Reactor Building Ventilation High Radiation - Reactor Zone		(1) (22)	Once/3 months Once/day (8)
Instrument Channel - (1) (22) Reactor Building Ventilation High Radiation - Refueling Zone		Once/3 Months	Once/day (8)
Instrument Channel - (4) SGTS Train A Heaters		(9)	N/A
Instrument Channel - (4) SGTS Train B Heaters		(9)	N/A
Instrument Channel - (4) SGTS Train C Heaters		(9)	N/A
Reactor Building Isolation N/A Timer (refueling floor)		(4)	Once/operating cycle
Reactor Building Isolation N/A Timer (reactor zone)		(4)	Once/operating cycle

TABLE 3.2.A (Continued)
PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

Minimum No. Instrument Channels Operable per Trip Sys(1)(11)	Function	Trip Level Setting	Action (1)	Remarks
2	Instrument Channel - High Radiation Main Steam Line Tunnel (6)	3 times normal rated full power background (13)	B	1. Above trip setting initiates Main Steam Line Isolation
2	Instrument Channel - Low Pressure Main Steam Line	≥ 825 psig (4)	B	1. Below trip setting initiates Main Steam Line Isolation
2(3)	Instrument Channel - High Flow Main Steam Line	≤ 140% of rated steam flow	B	1. Above trip setting initiates Main Steam Line Isolation
2(12)	Instrument Channel - Main Steam Line Tunnel High Temperature	≤ 200°F	B	1. Above trip setting initiates Main Steam Line Isolation.
2(14)	Instrument Channel - Reactor Water Cleanup System Floor Drain High Temperature	160 - 180°F	C	1. Above trip setting initiates Isolation of Reactor Water Cleanup Line from Reactor and Reactor Water Return Line.
2	Instrument Channel - Reactor Water Cleanup System Space High Temperature	160 - 180°F	C	1. Same as above
1(9)	Instrument Channel - Reactor Building Ventilation High Radiation - Reactor Zone	≤ 100 mr/hr or downscale	G	1. 1 upscale or 2 downscale will a. Initiate SGTS b. Isolate reactor zone and refueling floor. c. Close atmosphere control system.

TABLE 3.2.A (Continued)
PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

Minimum No. Instrument Channels Operable per Trip Sys(1)(11)	Function	Trip Level Setting	Action (1)	Remarks
1(9)	Instrument Channel - Reactor Building Ventilation High Radiation - Refueling Zone	≤ 100 mr/hr or downscale	F	1. 1 upscale or 2 downscale will a. Initiate SGTS b. Isolate refueling floor. c. Close atmosphere control system
2(7) (8)	Instrument Channel SGTS Flow - Train A Heater	R.H. Heaters ≤ 2000 cfm	H and (A or F)	1. Below 2000 cfm, trip setting R.H. Heaters will turn on.
2(7) (8)	Instrument Channel SGTS Flow - Train B Heater	R.H. Heaters ≤ 2000 cfm	H and (A or F)	1. Below 2000 cfm, trip setting R.H. Heaters will turn on.
2(7) (8)	Instrument Channel SGTS Flow - Train C Heater	R.H. Heaters ≤ 2000 cfm	H and (A or F)	1. Below 2000 cfm, trip setting R.H. Heaters will turn on.
1	Reactor Building Isolation Timer (refueling floor)	$0 \leq t \leq 2$ secs.	H or F	1. Below trip setting prevents spurious trips and system perturbations from initiating isolation
1	Reactor Building Isolation Timer (reactor zone)	$0 \leq t \leq 2$ secs.	G or A or H	1. Below trip setting prevents spurious trips and system perturbations from initiating isolation
2(10)	Group 1 (Initiating) Logic	N/A	A	1. Refer to Table 3.7.A for list of valves.

TABLE 4.2.A

SURVEILLANCE REQUIREMENTS FOR PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

Function	Functional Test	Calibration Frequency	Instrument Check
Instrument Channel - Main Steam Line Tunnel High Temperature	once/3 months (27)	once/operating cycle	None
Instrument Channel - Reactor Building Ventilation High Radiation - Reactor Zone	(1) (22)	once/3 months	once/day (8)
Instrument Channel - Reactor Building Ventilation High Radiation - Refueling Zone	(1) (22)	once/3 Months	once/day (8)
Instrument Channel - SGTS Train A Heaters	(4)	(9)	N/A
Instrument Channel - SGTS Train B Heaters	(4)	(9)	N/A
Instrument Channel - SGTS Train C Heaters	(4)	(9)	N/A
Reactor Building Isolation Timer (refueling floor)	(4)	once/operating cycle	N/A
Reactor Building Isolation Timer (reactor zone)	(4)	once/operating cycle	N/A

Enclosure 2
Description and Justification
Browns Ferry Nuclear Plant (BFN)
Units 1, 2, and 3

Description of Change

1. The technical specifications are being revised to delete section 3.5.M, Reporting Requirements, the bases for it, and its reference in the index.

2. Note 7.d for table 3.2.C is being revised to clarify an ambiquity and provide an action when both Rod Block Monitor (RBM) channels are inoperable.

3. The technical specifications are being revised to make the Limiting Condition of Operation (LCO), 3.6.H.1, reflect the correct Surveillance Instruction (SI) number for the safety related snubber list.

4. Section 2.1.A.1.c is being revised to show the correct reference of specification 4.5.L for the Surveillance Requirement (SR) for APRM setpoints.

5. Table 4.2.A note (14) is deleted.

Reason for Change

1. Section 3.5.M, Reporting Requirements, is to be deleted since it is redundant to 10 CFR 50.73 and requirements in the Administrative Controls section of the technical specifications.

2. Table 3.2.C requires both channels of the RBM to be operable except for its reference to note 7 which has four parts. The current note 7.d immediately prevents control rod movement if the conditions for the table are not met. However, note 7.c allows one channel to be bypassed and inoperable for 24 hours without having to prevent control rod movement. Note 7.d is being revised since it currently causes a conflict with note 7.c. The new wording will be taken from Standard Technical Specifications (STS). It will not produce any conflict and will address the possibility of both RBM channels being inoperable which is not specifically addressed at present.

3. Recent amendments (Nos. 128, 123, and 99 for units 1, 2, and 3 respectively) revised the SR 4.6.H to reference the correct SI containing snubber lists. However, the corresponding LCO reference which was not changed should also be corrected.

4. The revision to the reference in section 2.1.A.1.c for APRM setpoints is needed to correct an error in units 2 and 3 technical specifications. This same error was corrected in the unit 1 technical specifications by amendment No. 128.

5. There is no relationship between the surveillance testing required by table 4.2.A for the reactor zone and refueling zone radiation monitor instrumentation channels and either of the surveillance requirements referenced in footnote (14). Therefore, this footnote which ties performance of these surveillance requirements together should be deleted.

Justification for Change

The proposed amendment to the technical specifications for units 1, 2, and 3 is justified on the basis that it will correct and/or clarify the current technical specification revision. Each change included in this package is proposed to either correct an error or to achieve consistency throughout the technical specifications. More specific reasoning is given below for each change.

1. Section 3.5.M requires that a written report be made within 30 days if any of the limiting values in specifications 3.5.I, J, K, or L.3 are exceeded and the remedial action is taken. The remedial action for specifications 3.5.I, J, and K is to bring the reactor to cold shutdown with 36 hours. The remedial action of 3.5.L.3 is to reduce thermal power to $\leq$ 25 percent of rated within four hours. If 3.5.M is deleted, the technical specifications will continue to require reporting under the requirements of 10 CFR 50.73 which is referenced in section 6.6.1.a. The requirements of 10 CFR 50.73(a)(2)(i)(A) and (B) are that a Licensee Event Report (LER) be submitted within 30 days of any nuclear plant shutdown required by technical specifications, or any operation or condition prohibited by the plant's technical specifictions. Therefore, this change will not result in a significant decrease in technical specification reporting requirements.

2. The note 7.d regarding RBM requirements in table 3.2.C should be changed since it currently presents an apparent conflict with note 7.c. The current note 7.d is also confusing since it is not apparent when the note is supposed to apply. The proposed revision to note 7.d is taken from STS and does not conflict with any other requirements. Furthermore, it clarifies the action to be taken in the event that both RBM channels fail. Since this change would remove an apparent conflict, clarify required actions, and is consistent with the requirements of STS, TVA believes that safety will be enhanced.

3. Correcting the reference to the SI that lists safety related snubbers is an administrative change that in no way affects technical specification requirements or operations and will not have an adverse effect on nuclear safety.

4. Correcting the reference describing where to find APRM setpoint requirements is an administrative correction of an error and will not change any technical specification requirements or operations and will not have an adverse effect on nuclear safety. This change was previously approved for unit 1 by amendment No. 128.

5. This change involves three separate surveillance testing requirements. The first requirement is to functionally test the reactor building isolation trip caused by high radiation in the reactor building refueling zone and reactor zone. This is an instrumentation functional test required once per month by table 4.2.A.

The second test is performed once/year per SR 4.7.B.1.a. Its purpose is to show that the pressure drop across the combined HEPA filters and charcoal adsorber banks of the Standby Gas Treatment System (SGTS) is less than 6 inches of water at a flow of 9000 cfm ($\pm$10%).

The third test is performed before refueling and is to verify the capability of the secondary containment to maintain 1/4-inch of water vacuum with a system leakage rate of not more than 12000 cfm.

The only relation between these tests is that the high radiation trip signal will start the SGTS and isolate the secondary containment. Both of these functions are already tested as part of the instrument functional test as required by the technical specification definition of Instrument Functional test. Remote manual initiation is the method actually used in the other surveillance instructions. Finally, since each test has a different frequency requirement, it is not practical to perform the tests together.

For the reasons stated above, TVA has concluded that none of these proposed TS changes will reduce the margin of nuclear safety.

[illegible]

Enclosure 3
Determination of No Significant Hazards Consideration
Browns Ferry Nuclear Plant (BFN)
Units 1, 2, and 3

Description of Amendment Request

The proposed amendment would modify the technical specifications of BFN units 1, 2, and 3 to incorporate the following corrections and clarifications.

1. Delete section 3.5.M on reporting requirements for core thermal limits since it is redundant to reporting requirements specified elsewhere in technical specifications and 10 CFR 50.73.

2. Revise note 7.d of table 3.2.C since it is in conflict with note 7.c of the same table. These notes deal with the requirements for the Rod Block Monitor (RBM) and the revised note will be consistent with Standard Technical Specifications (STS). Note 7.c allows that one of the two RBM channels may be bypassed from the console and that 24 hours can be used to restore an inoperable channel before placing it in the tripped condition and thereby preventing control rod withdrawal. The current note 7.d, without the provisions of 7.c, requires that control rod withdrawal be immediately stopped if either RBM channel is inoperable. The new note taken from STS would require that one channel be placed in the tripped condition within one hour if both RBM channels are inoperable, thus removing any conflict.

3. Change the references to the lists of safety related snubbers from "Surveillance Instruction BF SI 4.6.H" to "Surveillance Instruction BF SI 4.6.H-1 and 2." This change would reflect reissued plant procedures.

4. Correct a reference to the surveillance requirement in the unit 2 and 3 Limiting Safety System Setting specification for the Average Power Range Monitor (APRM). The present references to section 4.5.B which specify surveillance requirements for the Reactor Protection System Power Monitoring System (RPSPMS) would be replaced by a reference to section 4.5.L which specifies surveillance requirements for the Reactor Protection System (RPS) and is the correct reference.

5. Change the technical specifications to delete the erroneous note (14) of table 4.2.A. It infers that the upscale functional test of the refuel and reactor zone radiation monitors is conducted during execution of two other surveillance tests; however, no apparent relationship exists.

Basis for proposed No Significant Hazards Consideration Determination:

The Commission has provided standards for determining whether a significant hazards consideration exists as stated in 10 CFR 50.92(c). A proposed amendment to an operating license involves no significant hazards considerations if operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility of a new or different kind of accident form an accident previously evaluated, or (3) involve a significant reduction in a margin of safety. Except for Item Nos. 1 and 2, the proposed amendments correct errors or eliminate inconsistencies. For Item No.1, the proposed change will only remove a requirement that is redundant to the reporting requirements in section 6 of the technical specifications and in 10 CFR 50.73. Furthermore, because no operability or surveillance requirements for systems, structures, or components used to terminate or mitigate accidents would be reduced, the amendments would not involve a significant increase in the probability or consequences of an accident previously evaluated, create the possibility of a new or different kind of accident from any accident previously evaluated, or involve a significant reduction in a margin of safety.

While Item No. 2 removes an inconsistency, it also adopts the requirements of STS for the RBM when both channels are inoperable. Therefore, it has been evaluated and determined not to cause a significant reduction in a safety margin. Finally, since this correction will not change any surveillance requirements or modes of operation, it will not involve a significant increase in the probability or consequences of an accident or create the possibility of a new kind of accident.

Item Nos. 3, 4, and 5 are administrative in nature in that only clarifications and corrections are made which do not affect the actual TS requirements. These technical specification changes will not eliminate or modify any protective functions, surveillance requirements, nor permit any new operational conditions. Therefore, they do not create the possibility of a new kind of accident or significantly increase the probability or consequences of an accident. Because the changes will clarify requirements and make corrections, the margin of safety will not be reduced.

Since the application for amendment involves proposed changes that are encompassed by the criteria for which no significant hazards consideration exists, TVA has made a proposed determination that the application involves no significant hazards consideration.

[illegible]

TO : W. H. Hannum, Chairman, Nuclear Safety Review Board, BR 1N 77B-C

FROM : M. J. May, Manager of Site Licensing, Browns Ferry Nuclear Plant

DATE :

SUBJECT: BROWNS FERRY NUCLEAR PLANT (BFN) - TECHNICAL SPECIFICATION 228 - MISCELLANEOUS NOTE CORRECTIONS - REVISIONS TO DESCRIPTION AND JUSTIFICATION AND DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION .

References: (1) Memorandum from R. W. Cantrell to S. A. White dated October 1, 1986, "Nuclear Safety Review Board (NSRB) Disposition of Proposed Technical Specification Change" (L42 861002 802)

(2) Letter from R. Gridley to U.S. Nuclear Regulatory Commission (NRC) dated April 03, 1987, "Browns Ferry Nuclear Plant (BFN) - TVA BFN TS 228 (L44 870403 803)

Browns Ferry Technical Specification 228 was approved by the NSRB by reference 1 and sent to NRC by reference 2. One of the changes approved by NSRB moved a footnote from table 4.2.A to table 3.2.A in response to a Resident Inspector's concern. It has subsequently been decided that the Resident Inspector's concern would be better resolved through a procedural change to the surveillance test; this does not require a technical specification change. The procedural change will be tracked under the original Inspector Followup Item and annotated to ensure it is not subsequently deleted. A resubmittal to NRC of the technical specification change is required to delete this change from the original request for revision. The deletion was requested by the Browns Ferry Nuclear Plant NRC Project Manager. Additional nontechnical changes were made to the enclosures to be more explicit and easy to read.

Enclosed is the revised Description and Justification (enclosure 2) and a No Significant Hazards Consideration (enclosure 3). These enclosures are designed to be substituted for the originals on a page by page basis. The change to enclosure 1 (the technical specification pages) deletes some of the change pages.

M. J. May

PPC:JEM:SJL
Enclosures
cc (Enclosures):
RIMS, MR 4N 72A-C
R. Gridley, LP 5N 157B-C

This was prepared principally by J. E. McCarthy.