ENCLOSURE 1

UNIT 1
EFFECTIVE PAGE LIST

REMOVE	INSERT
3.2/4.2-49	3.2/4.2-49
3.9/4.9-5	3.9/4.9-5
3.9/4.9-6	3.9/4.9-6

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TABLE 4.2.B (Continued)
SURVEILLANCE REQUIREMENTS FOR INSTRUMENTATION THAT INITIATE OR CONTROL THE CSCS

Function	Functional Test	Calibration	Instrument Check
RHR Area Cooler Fan Logic	Tested during functional test of instrument channels, RHR motor start and thermostat (RHR area cooler fan). No other test required.	N/A	N/A
Core Spray Area Cooler Fan Logic	Tested during logic system functional test of instrument channels, core spray motor start and thermostat (core spray area cooler fan). No other test required.	N/A	N/A
Instrument Channel - Core Spray Motors A or D Start	Tested during functional test of core spray pump (refer to Section 4.5.A).	N/A	N/A
Instrument Channel Core Spray Motors B or C Start	Tested during functional test of core spray pump (refer to Section 4.5.A).	N/A	N/A
Instrument Channel - Core Spray Loop 1 Accident Signal	Tested during logic system functional test of core spray system.	N/A	N/A
Instrument Channel - Core Spray Loop 2 Accident Signal	Tested during logic system functional test of core spray system.	N/A	N/A
RHRSW Initiate Logic	once/18 months	N/A	N/A
RPT initiate logic	once/month	N/A	N/A
RPT breaker	once/operating cycle	N/A	N/A

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.9.A. Auxiliary Electrical Equipment	4.9.A. Auxiliary Electrical System
3. Buses and Boards Available	3. Logic Systems
a. The respective start bus is energized for each common station-service transformer designated as an offsite power source.	a. Both divisions of the common accident signal logic system shall be tested every 18 months to demonstrate that it will function on actuation of the core spray system of each reactor to provide an automatic start signal to all 4 units 1 and 2 diesel generators.
b. The 4-kV bus tie board is energized and capable of supplying power to the units 1 and 2 shutdown boards if a cooling tower transformer is designated as an offsite power source.	b. Once every 18 months, the condition under which the 480-V load shedding logic system is required shall be simulated using pendant test switches and/or pushbutton test switches to demonstrate that the load shedding logic system would initiate load shedding signals on the diesel auxiliary boards, RMOV boards, and the 480-V shutdown boards.
c. The units 1 and 2 4-kV shutdown boards are energized.	

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.9.A. Auxiliary Electrical Equipment	4.9.A. Auxiliary Electrical System
3.9.A.3. (Cont'd) d. The 480-V shutdown boards 1A and 1B are energized. e. The units 1 and 2 diesel auxiliary boards are energized. f. Loss of voltage and degraded voltage relays OPERABLE on 4-kV shutdown boards A, B, C, and D. g. Shutdown buses 1 and 2 energized. h. The 480-V reactor motor-operated valve (RMOV) boards 1D & 1E are energized with motor-generator (mg) sets 1DN, 1DA, 1EN, and 1EA in service.	
4. The three 250-V unit batteries, the four shutdown board batteries, a battery charger for each battery, and associated battery boards are OPERABLE.	4. Undervoltage Relays a. (Deleted) b. Once every 18 months, the conditions under which the loss of voltage and degraded voltage relays are required shall be simulated with an undervoltage on each shutdown board to demonstrate that the associated diesel generator will start.

ENCLOSURE 1

UNIT 2
EFFECTIVE PAGE LIST

REMOVE	INSERT
3.2/4.2-49	3.2/4.2-49
3.9/4.9-5	3.9/4.9-5
3.9/4.9-6	3.9/4.9-6
3.9/4.9-15a	3.9/4.9-15a

TABLE 4.2.B (Continued)
SURVEILLANCE REQUIREMENTS FOR INSTRUMENTATION THAT INITIATE OR CONTROL THE CSCS

Function	Functional Test	Calibration	Instrument Check
RHR Area Cooler Fan Logic	Tested during functional test of instrument channels, RHR motor start and thermostat (RHR area cooler fan). No other test required.	N/A	N/A
Core Spray Area Cooler Fan Logic	Tested during logic system functional test of instrument channels, core spray motor start and thermostat (core spray area cooler fan). No other test required.	N/A	N/A
Instrument Channel - Core Spray Motors A or D Start	Tested during functional test of core spray pump (refer to section 4.5.A).	N/A	N/A
Instrument Channel - Core Spray Motors B or C Start	Tested during functional test of core spray pump (refer to section 4.5.A).	N/A	N/A
Instrument Channel - Core Spray Loop 1 Accident Signal	Tested during logic system functional test of core spray system.	N/A	N/A
Instrument Channel - Core Spray Loop 2 Accident Signal	Tested during logic system functional test of core spray system.	N/A	N/A
RHRSW Initiate Logic	Once/18 months	N/A	N/A
RPT initiate logic	Once/month	N/A	N/A
RPT breaker	Once/operating cycle	N/A	N/A

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.9.A. Auxiliary Electrical Equipment	4.9.A. Auxiliary Electrical System
3. Buses and Boards Available	3. Logic Systems
a. The respective start bus is energized for each common station-service transformer designated as an offsite power source.	a. Both divisions of the common accident signal logic system shall be tested every 18 months to demonstrate that it will function on actuation of the core spray system of each reactor to provide an automatic start signal to all 4 units 1 and 2 diesel generators.
b. The 4-kV bus tie board is energized and capable of supplying power to the units 1 and 2 shutdown boards if a cooling tower transformer is designated as an offsite power source.	b. Once every 18 months, the condition under which the 480-volt load shedding logic system is required shall be simulated using pendant test switches and/or pushbutton test switches to demonstrate that the load shedding logic system would initiate load shedding signals on the diesel auxiliary boards, RMOV boards, and the 480-V shutdown boards.
c. The units 1 and 2 4-kV shutdown boards are energized.	

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.9.A. Auxiliary Electrical Equipment	4.9.A. Auxiliary Electrical System
3.9.A.3. (Cont'd) d. The 480-V shutdown boards 2A and 2B are energized. e. The units 1 and 2 diesel auxiliary boards are energized. f. Loss of voltage and degraded voltage relays OPERABLE on 4-kV shutdown boards A, B, C, and D. g. Shutdown buses 1 and 2 energized. h. The 480-V reactor motor-operated valve (RMOV) boards 2D & 2E are energized with motor-generator (mg) sets 2DN, 2DA, 2EN, and 2EA in service.	
4. The three 250-V unit batteries, the four shutdown board batteries, a battery charger for each battery, and associated battery boards are OPERABLE.	4. Undervoltage Relays a. (Deleted) b. Once every 18 months, the conditions under which the loss of voltage and degraded voltage relays are required shall be simulated with an undervoltage on each shutdown board to demonstrate that the associated diesel generator will start.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.9.D Unit 3 Diesel Generators Required for Unit 2 Operation	4.9.D Unit 3 Diesel Generators Required for Unit 2 Operation
1. Whenever any of the following equipment is required to be OPERABLE in accordance with the corresponding section of these technical specifications, the Unit 3 diesel generator aligned to supply emergency power to that equipment shall be OPERABLE. a. Standby gas treatment train C in accordance with T.S. 3.7.B (diesel generator 3D). b. Control room emergency ventilation train B in accordance with T.S. 3.7.E (diesel generator 3B or 3C).	1.a Diesel Generators Surveillance requirements are as specified in T.S. 4.9.A.1.a, 4.9.A.1.c, 4.9.A.1.d and 4.9.A.1.e. 1.b DC Power System Surveillance requirements are as specified in T.S. 4.9.A.2. 1.c Logic Systems Both divisions of the common accident signal logic system shall be tested every 18 months to demonstrate that it will function on actuation of the core spray system of the reactor to provide an automatic start signal to each diesel generator. 1.d Undervoltage Relays Surveillance requirements are as specified in T.S. 4.9.A.4.
2. When the diesel generator aligned to supply emergency power to the equipment in 3.9.D.1.a or b is inoperable, the equipment may be considered OPERABLE for the purpose of satisfying the corresponding technical specification during the succeeding 30 days provided that the redundant train(s) of equipment and their normal and emergency power supplies are OPERABLE.	2. No surveillance required.
3. If Specification 3.9.D.2 cannot be met, the affected equipment shall be declared inoperable.	3. No surveillance required.

ENCLOSURE 1

UNIT 3
EFFECTIVE PAGE LIST

REMOVE	INSERT
3.2/4.2-48	3.2/4.2-48
3.9/4.9-5	3.9/4.9-5
3.9/4.9-6	3.9/4.9-6
3.9/4.9-14a	3.9/4.9-14a

TABLE 4.2.B (Cont'd)
SURVEILLANCE REQUIREMENTS FOR INSTRUMENTATION THAT INITIATE OR CONTROL THE CSCS

Function	Functional Test	Calibration	Instrument Check
RHR Area Cooler Fan Logic	Tested during functional test of instrument channels, RHR motor start and thermostat (RHR area cooler fan). No other test required.	N/A	N/A
Core Spray Area Cooler Fan Logic	Tested during logic system functional test of instrument channels, core spray motor start and thermostat (core spray area cooler fan). No other test required.	N/A	N/A
Instrument Channel - Core Spray Motors A or D Start	Tested during functional test of core spray pump (refer to Section 4.5.A).	N/A	N/A
Instrument Channel Core Spray Motors B or C Start	Tested during functional test of core spray pump (refer to Section 4.5.A).	N/A	N/A
RPT initiate logic	once/month	N/A	N/A
RPT breaker	once/operating cycle	N/A	N/A
Instrument Channel - Core Spray Loop 1 Accident Signal	Tested during logic system functional test of core spray system.	N/A	N/A
Instrument Channel - Core Spray Loop 2 Accident Signal	Tested during logic system functional test of core spray system.	N/A	N/A
RHRSW Initiate Logic	once/18 months	N/A	N/A

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.9.A. Auxiliary Electrical Equipment	4.9.A. Auxiliary Electrical System
3. Buses and Boards Available	3. Logic Systems
a. The respective start bus is energized for each common station-service transformer designated as an offsite power source.	a. Both divisions of the accident signal logic system shall be tested every 18 months to demonstrate that it will function on actuation of the core spray system of the reactor to provide an automatic start signal to all 4 diesel generators.
b. The 4-kV bus tie board is energized if a cooling tower transformer is designated as an offsite power source.	
c. The 4-kV shutdown boards (3EA, 3EB, 3EC, 3ED) are energized.	
d. The 480-V shutdown boards 3A and 3B are energized.	

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.9.A. Auxiliary Electrical Equipment	4.9.A. Auxiliary Electrical System
3.9.A.3. (Cont'd) e. Loss of voltage and degraded voltage relays OPERABLE on 4-kV shutdown boards 3EA, 3EB, 3EC, and 3ED. f. The 480-V diesel auxiliary boards 3EA and 3EB are energized. g. The 480-V reactor motor-operated valve (RMOV) boards 3D & 3E are energized with motor-generator (mg) sets 3DN, 3DA, 3EN, and 3EA in service.	
4. The 250-V shutdown board 3EB battery, all three unit batteries, a battery charger for each battery, and associated battery boards are OPERABLE.	4. Undervoltage Relays a. (Deleted) b. Once every 18 months, the conditions under which the loss of voltage and degraded voltage relays are required shall be simulated with an undervoltage on each shutdown board to demonstrate that the associated diesel generator will start.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.9.D Unit 3 Diesel Generators Required for Unit 2 Operation	4.9.D Unit 3 Diesel Generators Required for Unit 2 Operation
1. Whenever any of the following equipment is required to be OPERABLE in accordance with the corresponding section of any units technical specifications, the Unit 3 diesel generator aligned to supply emergency power to that equipment shall be OPERABLE. a. Standby gas treatment train C in accordance with T.S. 3.7.B (diesel generator 3D). b. Control room emergency ventilation train B in accordance with T.S. 3.7.E (diesel generator 3B or 3C).	1.a Diesel Generators Surveillance requirements are as specified in T.S. 4.9.A.1.a, 4.9.A.1.c, 4.9.A.1.d and 4.9.A.1.e. 1.b DC Power System Surveillance requirements are as specified in T.S. 4.9.A.2. 1.c Logic Systems Both divisions of the common accident signal logic system shall be tested every 18 months to demonstrate that it will function on actuation of the core spray system of the Unit 2 reactor to provide an automatic start signal to each diesel generator. 1.d Undervoltage Relays Surveillance requirements are as specified in T.S. 4.9.A.4.
2. When the diesel generator aligned to supply emergency power to the equipment in 3.9.D.1.a or b is inoperable, the equipment may be considered OPERABLE for the purpose of satisfying the corresponding technical specification during the succeeding 30 days provided that the redundant train(s) of equipment and their normal and emergency power supplies are OPERABLE.	2. No surveillance required.
3. If Specification 3.9.D.2 cannot be met, the affected equipment shall be declared inoperable.	3. No surveillance required.

ENCLOSURE 2

REASON FOR CHANGE, DESCRIPTION AND JUSTIFICATION
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1, 2 AND 3

REASON FOR CHANGE

A revision to BFN Units 1, 2, and 3 Technical Specifications (TSs), described below, is requested to increase the surveillance interval for logic system functional testing, which is currently specified as "once every 6 months". Due to the duration of current fuel cycles, this test interval requires performance of the tests during reactor power operation. The proposed extension of the logic system functional testing requirements to "once every 18 months" is necessary for the following reasons:

1. Reduce the conduct of complex surveillance test evolutions at power by aligning the performance of these tests with the refueling outage cycles.

2. Reduce the number of cold starts and stops required for the 4-kV RHRSW pump motors, thereby increasing their life expectancy, reliability, and availability.

3. Reduce the number of diesel generator cold starts and stops required in accordance with the NRC Generic Letter 84-15 guidance, thereby increasing life expectancy, reliability, and availability.

4. Provide consistency with nuclear industry standards and practices and their intent as specified in BWR Standard TSs (NUREG-0123).

DESCRIPTION OF THE PROPOSED CHANGE

1. Existing Units 1 and 2 Surveillance Requirement (SR) 4.9.A.3.a currently reads:

> Both divisions of the common accident signal logic system shall be tested every 6 months to demonstrate that it will function on actuation of the core spray system of each reactor to provide an automatic start signal to all 4 Units 1 and 2 diesel generators.

The Unit 3 SR 4.9.A.3.a is identical to the above with the exception that the Unit 3 TS reads "4 diesel generators" in lieu of "4 Units 1 and 2 diesel generators".

Proposed change to SR 4.9.A.3.a would read:

> Both divisions of the common accident signal logic system shall be tested every 18 months to demonstrate . . . ;

2. Existing Units 1 and 2 SR 4.9.A.3.b currently reads:

> Once every 6 months the condition under which the 480-volt load shedding logic system is required shall be simulated using pendant test switches and/or pushbutton test switches to demonstrate that the load shedding logic system would initiate load shedding signals on the diesel auxiliary boards, RMOV boards, and the 480-V shutdown boards.

Proposed change to SR 4.9.A.3.b would read:

> Once every 18 months the condition under which the 480-volt load shedding logic system is required . . . .

3. Existing Units 1, 2, and 3 SR 4.9.A.4.b currently reads:

> Once every 6 months, the condition under which the loss of voltage and degraded voltage relays are required shall be simulated with an undervoltage on each shutdown board to demonstrate that the associated diesel generator will start.

In addition, a change will be made in the Units 1 and 2 SR 4.9.A.4.b to correct a typographical error and thus make these sections consistent with the Unit 3 SR 4.9.A.4.b.

Proposed change to SR 4.9.A.4.b would read:

> Once every 18 months the condition under which the loss of voltage and degraded . . . .

4. Existing Units 1, 2, and 3 Table 4.2.B currently reads:

> Once every 6 months, perform a functional test on the RHRSW initiation logic.

Proposed change to Table 4.2.B would read:

> Once every 18 months, perform a functional test on the RHRSW initiation logic.

5. A change will be made to Subsection 1.c, "Logic Systems", of the Units 2 and 3 SR 4.9.D, "Unit 3 Diesel Generators Required for Unit 2 Operation". The existing Units 2 and 3 SR 4.9.D.1.c currently reads:

> Both divisions of the common accident signal logic system shall be tested every 6 months to demonstrate that it will function on actuation of the core spray system of the Unit 2 reactor to provide an automatic start signal to each diesel generator.

Proposed change to SR 4.9.D.1.c would read:

> Both divisions of the common, accident signal logic system shall be tested every 18 months to demonstrate that it will function on action . . . .

JUSTIFICATION FOR THE PROPOSED CHANGES

TVA has determined that the performance of these logic system functional tests during power operation is undesirable. The performance of these tests at power creates a potential for inadvertent scrams, actuations of equipment and resultant transients which place unnecessary demands on safety systems. The numerous temporary alterations required for the conduct of these tests place the plant in a configuration which increase system restoration time and reduces the redundancy of protection. The proposed technical specification changes will permit the performance of these complex logic surveillance tests during unit shutdown.

ENCLOSURE 3

PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATIONS DETERMINATION
BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3

DESCRIPTION OF PROPOSED TECHNICAL SPECIFICATION (TS) AMENDMENT

The proposed amendment changes the BFN TSs for Units 1, 2, and 3 to extend the logic system functional test interval from "once every 6 months" to "once every 18 months" for the Common Accident Signal Logic, 4 kV Shutdown Board Undervoltage Start of the Diesel Generator, 480V Load Shedding Logic, RHR Service Water Initiation Logic.

BASIS FOR PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

NRC has provided standards for determining whether a significant hazards consideration exists as stated in 10 CFR 50.91(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, or (2) create the possibility of a new or different kind of accident from an accident previously evaluated, or (3) involve a significant reduction in a margin of safety. The proposed TS changes are judged to involve no significant hazards considerations based on the following:

1. The proposed changes do not involve a significant increase in the probability or consequence of any accident previously evaluated.

Item 4.5.3 of Generic Letter 83-28 requested that licensees review the existing Reactor Protection System (RPS) on-line functional test intervals required by their plant TS. The licensees were to ensure that current and proposed test intervals are consistent with a goal of achieving high RPS availability considering uncertainties in component failure rates, uncertainties in common mode failure rates, reduced redundancy during testing, operator errors during testing, and component wear caused by the testing.

The Boiling Water Reactor Owners' Group (BWROG) decided to attempt to resolve these issues generically. It commissioned General Electric (GE) to perform generic analyses and apply the generic results to the individual BWR plants. The results of these analyses were documented in GE topical reports, NEDC-30936P and NEDC-30851P, and NEDC-30844A. Based on the results of these studies, the overall system reliabilities are not dominated by the reliabilities of logic systems but by that of mechanical components (e.g., pumps and valves). NEDC-30844A demonstrated that the existing BWR Standard Technical Specification (BWRSTS) RPS test intervals were adequate to achieve the high RPS availability goals requested by Generic Letter 83-28, item 4.5.3. The proposed revisions to the logic system functional test intervals are consistent with the BWR STS.

Therefore, since the proposed amendment does not significantly degrade the reliability of systems and components relied upon to prevent or mitigate the consequences of an accident, TVA has determined that these revisions do not involve a significant increase in the probability or consequences of any accident previously analyzed.

2. The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed amendment only changes the surveillance frequency for logic system functional testing and does not involve any change to the surveillance requirements, any change to system or equipment configuration, nor does it introduce any new mode of plant operation. Therefore, this change does not create the possibility for a new or different kind of accident from any accident previously analyzed.

3. The proposed amendment does not involve a significant reduction in a margin of safety.

The net effect of the proposed change in the surveillance interval does not involve a significant reduction in a margin of safety. The performance of these tests requires numerous temporary alterations, and are inherently prone to unplanned actuations and the potential for personnel error. Safety system redundancy is reduced and the systems are placed in a configuration which inhibits quick restoration if needed to respond to a design basis event during testing. Testing at a once per 6 months frequency results in additional emergency diesel generator and 4 kV RHRSW pump motor starts and stops, thereby increasing component wear and decreasing life expectancy. (The reduction of diesel generator starts and stops is consistent with the guidance contained in Generic Letter 84-15.) The performance of these tests while the reactor is shutdown increases the operational margin of safety as a result of increased safety system availability during power operation, reduced potential for human error during testing, and reduced component wear. Therefore, TVA has concluded that the proposed amendment does not involve a significant reduction in the margin of safety.

The Commission has provided additional guidance for the application of criteria for no significant hazards consideration determination by providing examples of amendments that are considered not likely to involve significant hazards considerations (48 FR 14870). These examples include: "(vi) - A change which either may result in some increase to the probability or consequences of a previously analyzed accident or reduce in some way a safety margin, but where the results of the change are clearly within all acceptable criteria with respect to the system or component specified in the Standard Review Plan (SRP): For example, a change resulting from the application of a small refinement of a previously-used calculational model or design method."

The proposed amendment is encompassed by this example in that the revision reflects the requirements established in the TSs (NUREG-0123) as endorsed by Chapter 16 of the SRP.

CONCLUSION

TVA has evaluated the proposed amendment described above against the criteria given in 10 CFR 50.92(c) in accordance with the requirements of 10 CFR 50.91(a)(1). This evaluation has determined that this proposed change will not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility for a new or different kind of accident from any accident previously evaluated, or (3) create a significant reduction in a margin of safety.

TVA has also evaluated the proposed amendment against the examples provided by the NRC of the types of amendments considered not likely to involve significant hazards considerations.

Both of these evaluations support TVA's conclusion that the proposed amendment does not involve a significant hazards consideration.