ENCLOSURE 1

PROPOSED TECHNICAL SPECIFICATIONS REVISIONS

BROWNS FERRY NUCLEAR PLANT

UNITS 1, 2, AND 3

(TVA BFN TS 245-T)

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.7.B. Standby Gas Treatment System	4.7.B. Standby Gas Treatment System
*1a. Except as specified in Specification 3.7.B.3 below, all three trains of the standby gas treatment system shall be OPERABLE at all times when secondary containment integrity is required.	1. At least once per year, the following conditions shall be demonstrated.
1b. With no fuel in any reactor vessel, only two (2) of the three (3) standby gas treatment trains are required to be OPERABLE at all times when secondary containment integrity is required. If either of the two (2) standby gas treatment system trains become inoperable at any time when operability is required, suspend handling of irradiated fuel until two (2) trains of standby gas treatment are OPERABLE.	a. Pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches of water at a flow of 9000 cfm (± 10%). b. The inlet heaters on each circuit are tested in accordance with ANSI N510-1975, and are capable of an output of at least 40 kW. c. Air distribution is uniform within 20% across HEPA filters and charcoal adsorbers.

* With no fuel in any reactor vessel, Specification 3.7.B.1.b is applicable.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.7.B. Standby Gas Treatment System	4.7.B. Standby Gas Treatment System
*1a. Except as specified in Specification 3.7.B.3 below, all three trains of the standby gas treatment system shall be OPERABLE at all times when secondary containment integrity is required.	1. At least once per year, the following conditions shall be demonstrated.
1b. With no fuel in any reactor vessel, only two (2) of the three (3) standby gas treatment trains are required to be OPERABLE at all times when secondary containment integrity is required. If either of the two (2) standby gas treatment system trains become inoperable at any time when operability is required, suspend handling of irradiated fuel until two (2) trains of standby gas treatment are OPERABLE.	a. Pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches of water at a flow of 9000 cfm (± 10%). b. The inlet heaters on each circuit are tested in accordance with ANSI N510-1975, and are capable of an output of at least 40 kW. c. Air distribution is uniform within 20% across HEPA filters and charcoal adsorbers.

* With no fuel in any reactor vessel, Specification 3.7.B.1.b is applicable.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.7.B. Standby Gas Treatment System	4.7.B. Standby Gas Treatment System
*1a. Except as specified in Specification 3.7.B.3 below, all three trains of the standby gas treatment system shall be OPERABLE at all times when secondary containment integrity is required.	1. At least once per year, the following conditions shall be demonstrated.
1b. With no fuel in any reactor vessel, only two (2) of the three (3) standby gas treatment trains are required to be OPERABLE at all times when secondary containment integrity is required. If either of the two (2) standby gas treatment system trains become inoperable at any time when operability is required, suspend handling of irradiated fuel until two (2) trains of standby gas treatment are OPERABLE.	a. Pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches of water at a flow of 9000 cfm (± 10%). b. The inlet heaters on each circuit are tested in accordance with ANSI N510-1975, and are capable of an output of at least 40 kW. c. Air distribution is uniform within 20% across HEPA filters and charcoal adsorbers.

* With no fuel in any reactor vessel, Specification 3.7.B.1.b is applicable.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.7.B. Standby Gas Treatment System	4.7.B. Standby Gas Treatment System
	4.7.B.2 (Cont'd)
	d. Each train shall be operated a total of at least 10 hours every month.
	e. Test sealing of gaskets for housing doors shall be performed utilizing chemical smoke generators during each test performed for compliance with Specification 4.7.B.2.a and Specification 3.7.B.2.a.
* 3. From and after the date that one train of the standby gas treatment system is made or found to be INOPERABLE for any reason, reactor operation and fuel handling is permissible only during the succeeding 7 days unless such circuit is sooner made OPERABLE, provided that during such 7 days all active components of the other two standby gas treatment trains shall be OPERABLE.	3. a. Once per operating cycle automatic initiation of each branch of the standby gas treatment system shall be demonstrated from each unit's controls.
	b. At least once per year manual operability of the bypass valve for filter cooling shall be demonstrated.
	* c. When one train of the standby gas treatment system becomes INOPERABLE the other two trains shall be demonstrated to be OPERABLE within 2 hours and daily thereafter.

* Not applicable with no fuel in any reactor vessel.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.7.B. Standby Gas Treatment System	4.7.B. Standby Gas Treatment System
	4.7.B.2 (Cont'd)
	d. Each train shall be operated a total of at least 10 hours every month.
	e. Test sealing of gaskets for housing doors shall be performed utilizing chemical smoke generators during each test performed for compliance with Specification 4.7.B.2.a and Specification 3.7.B.2.a.
* 3. From and after the date that one train of the standby gas treatment system is made or found to be INOPERABLE for any reason, reactor operation and fuel handling is permissible only during the succeeding 7 days unless such circuit is sooner made OPERABLE, provided that during such 7 days all active components of the other two standby gas treatment trains shall be OPERABLE.	3. a. Once per operating cycle automatic initiation of each branch of the standby gas treatment system shall be demonstrated from each unit's controls.
	b. At least once per year manual operability of the bypass valve for filter cooling shall be demonstrated.
	* c. When one train of the standby gas treatment system becomes INOPERABLE the other two trains shall be demonstrated to be OPERABLE within 2 hours and daily thereafter.

* Not applicable with no fuel in any reactor vessel.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.7.B. Standby Gas Treatment System	4.7.B. Standby Gas Treatment System
	4.7.B.2 (Cont'd)
	d. Each train shall be operated a total of at least 10 hours every month.
	e. Test sealing of gaskets for housing doors shall be performed utilizing chemical smoke generators during each test performed for compliance with Specification 4.7.B.2.a and Specification 3.7.B.2.a.
* 3. From and after the date that one train of the standby gas treatment system is made or found to be INOPERABLE for any reason, reactor operation and fuel handling is permissible only during the succeeding 7 days unless such circuit is sooner made OPERABLE, provided that during such 7 days all active components of the other two standby gas treatment trains shall be OPERABLE.	3. a. Once per operating cycle automatic initiation of each branch of the standby gas treatment system shall be demonstrated from each unit's controls.
	b. At least once per year manual operability of the bypass valve for filter cooling shall be demonstrated.
	* c. When one train of the standby gas treatment system becomes INOPERABLE the other two trains shall be demonstrated to be OPERABLE within 2 hours and daily thereafter.

* Not applicable with no fuel in any reactor vessel.

LIMITING CONDITIONS FOR OPERATION

SURVEILLANCE REQUIREMENTS

3.7.B. Standby Gas Treatment System

4.7.B. Standby Gas Treatment System

3.7.B.3 (Cont'd)

4. If these conditions cannot be met, the reactor shall be placed in a condition for which the standby gas treatment system is not required.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.7.B. Standby Gas Treatment System	4.7.B. Standby Gas Treatment System

3.7.B.3 (Cont'd)

4. If these conditions cannot be met, the reactor shall be placed in a condition for which the standby gas treatment system is not required.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.7.B. Standby Gas Treatment System	4.7.B. Standby Gas Treatment System

3.7.B.3 (Cont'd)

4. If these conditions cannot be met, the reactor shall be placed in a condition for which the standby gas treatment system is not required.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.7.E. Control Room Emergency Ventilation	4.7.E. Control Room Emergency Ventilation
3. From and after the date that one of the control room emergency pressurization systems is made or found to be INOPERABLE for any reason, reactor operation or refueling operations is permissible only during the succeeding 7 days unless such circuit is sooner made OPERABLE.*	3. At least once per operating cycle not to exceed 18 months, automatic initiation of the control room emergency pressurization system shall be demonstrated.
4. If these conditions cannot be met, reactor shutdown shall be initiated and all reactors shall be in Cold Shutdown within 24 hours for reactor operations and refueling operations shall be terminated within 2 hours.*	4. During the simulated automatic actuation test of this system (see Table 4.2.G), it shall be verified that the following dampers operate as indicated: Close: FCO-150 B, D, E, and F Open: FCO-151 FCO-152

* LCO not applicable with no fuel in any reactor vessel.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.7.E. Control Room Emergency Ventilation	4.7.E. Control Room Emergency Ventilation
3. From and after the date that one of the control room emergency pressurization systems is made or found to be INOPERABLE for any reason, reactor operation or refueling operations is permissible only during the succeeding 7 days unless such circuit is sooner made OPERABLE.*	3. At least once per operating cycle not to exceed 18 months, automatic initiation of the control room emergency pressurization system shall be demonstrated.
4. If these conditions cannot be met, reactor shutdown shall be initiated and all reactors shall be in Cold Shutdown within 24 hours for reactor operations and refueling operations shall be terminated within 2 hours.*	4. During the simulated automatic actuation test of this system (see Table 4.2.G), it shall be verified that the following dampers operate as indicated: Close: FCO-150 B, D, E, and F Open: FCO-151 FCO-152

* LCO not applicable with no fuel in any reactor vessel.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.7.E. Control Room Emergency Ventilation	4.7.E. Control Room Emergency Ventilation
3. From and after the date that one of the control room emergency pressurization systems is made or found to be INOPERABLE for any reason, reactor operation or refueling operations is permissible only during the succeeding 7 days unless such circuit is sooner made OPERABLE.*	3. At least once per operating cycle not to exceed 18 months, automatic initiation of the control room emergency pressurization system shall be demonstrated.
4. If these conditions cannot be met, reactor shutdown shall be initiated and all reactors shall be in Cold Shutdown within 24 hours for reactor operations and refueling operations shall be terminated within 2 hours.*	4. During the simulated automatic actuation test of this system (see Table 4.2.G), it shall be verified that the following dampers operate as indicated: Close: FCO-150 B, D, E, and F Open: FCO-151 FCO-152

* LCO not applicable with no fuel in any reactor vessel.

ENCLOSURE 2

DESCRIPTION AND JUSTIFICATION
BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3

Description of Change

The Browns Ferry Nuclear (BFN) Plant Technical Specifications require specific safety-related systems to be operable during handling of spent fuel and all operations over the spent fuel pools. BFN is proposing the attached temporary changes to units 1, 2, and 3 technical specifications for the Standby Gas Treatment System (SGTS) and Control Room.Emergency Ventilation System (CREVS).

Reason for Change

The proposed temporary changes to the technical specifications as shown in attachment 1 are to provide system operability requirements for the SGTS and CREVS Systems to support the BFN fuel inspection and reconstitution program and plant activities before unit 2 fuel load.

The current BFN technical specifications provide operability requirements for the handling of spent fuel and operations over the spent fuel pools. Specification 3.7.C.3 requires refueling zone secondary containment integrity to be maintained. For handling of spent fuel and all operations over the spent fuel pools, BFN Technical Specification 3.7.B.1 requires all three trains of SGTS to be operable whenever secondary containment integrity is required. Technical specification 3.7.B.3 will allow fuel handling for a maximum of seven days with one train of SGTS inoperable. However, the remaining two trains must be demonstrated operable within two hours and daily thereafter.

A conservative reading of technical specification 3.7.E.1 would also require both control room emergency ventilation systems to be operable. The actual specification requires operability at all times when any reactor vessel contains irradiated fuel. All three units at BFN are currently defueled. Technical Specification 3.7.E.3 and 4 limit "refueling operations" if one or both CREVS is inoperable. A conservative definition of refueling operations would encompass any movement of fuel in and around the fuel pools.

Fuel inspection and reconstitution will improve the reliability of the fuel by identifying and replacing fuel rods which fail to meet acceptable corrosion criteria for continued operation. This will reduce the number of fuel pins leaking, in future cycles, which will reduce plant radiation levels and thus increase plant safety.

TVA requests a temporary change to the technical specifications which will relax these system requirements. This will allow the system modifications and maintenance needed for restart to proceed in parallel with the fuel inspections and reconstitution program without reducing the margin of safety.

Justification for Change

Standby Gas Treatment (SGTS)

The SGTS has three trains that automatically start upon receipt of a high radiation signal. The SGTS minimizes the release of radioactive material from the secondary containment to the environs. The SGTS performs two safety functions: (1) filter iodine particulate and exhaust the Reactor Building atmosphere to the plant stack during secondary containment isolation conditions, and (2) when isolated, maintain the secondary containment at one-quarter inch of water negative pressure relative to the building exterior, thus assuring only inleakage into the secondary containment.

The fuel for all three units has decayed for approximately three years. The only significant radioisotope remaining is Kr-85. There is essentially no iodine present. Should a fuel handling accident occur, SGTS filtering of iodine would therefore not be required. Filtering has no effect on Kr-85 since it is an inert gas. The only safety function that would be performed by the SGTS in the event of a fuel handling accident would be to maintain the required one-quarter inch of water negative pressure when secondary containment integrity is required. It is verified through periodic surveillance testing that only two SGTS trains are required to maintain the one-quarter inch of water negative pressure. The average measured inleakage is approximately 10,100 CFM with the secondary containment at one-quarter inch negative pressure. This is less than the technical specification limit of 12,000 CFM. Each train of SGTS is rated at 9,000 CFM. The total design flow for two trains is 15,000 CFM. Thus, two trains will provide adequate flow to maintain the necessary vacuum.

The proposed temporary amendment will require only two of the three trains of SGTS to be operable when secondary containment integrity is required. With less than two operable trains of SGTS, handling of irradiated fuel will be suspended until two trains are operable. If fuel handling is suspended, the fuel assemblies being moved, inspected, or reconstituted will be placed in a secure position until fuel handling activities resume. As fuel handling will be suspended if less than two trains are operable, limiting condition for operation (LCO) 3.7.B.3 and its associated required surveillance requirement (SR) 4.7.B.3.c will not be entered. To prevent ambiguity, this LCO and SR will be marked to clarify that it is not applicable with no fuel in any reactor vessel.

Control Room Emergency Ventilation System (CREVS)

The CREVS is designed to protect the control room operators by pressurizing the main control room (MCR) with filtered air during a fuel handling accident condition. The CREVS uses charcoal adsorbers to assure the removal of radioactive iodine from the air and high efficiency particulate absolute (HEPA) filters for removing particulate matter. These filters and adsorbers will keep the resulting doses, in the event of a design basis fuel handling accident, less than the allowable levels stated in criterion 19 of General Design Criteria for Nuclear Power Plants Appendix A to 10 CFR 50.

Justification for Change (Cont'd)

TVA is proposing to delete the operability requirements of the CREVS until just before fuel load. This change will enable work to be performed on the CREVS and the associated control room HVAC ducting, as necessary. This consists of a one time change to the technical specifications. LCO's 3.7.E.3 and 3.7.E.4 will be returned to applicability before commencing fuel load.

The filtration function that the CREVS provides would not be needed in the event of a fuel handling accident. 10 CFR 50 Appendix A (GDC 19) requires that in the event of an accident the radiation dosage to the occupants of the control room not exceed 5 REM whole body or its equivalent to any part of the body for the duration of the accident. This same radiation dose limit is endorsed in section 6.2.4 of NUREG 0800. TVA has evaluated the potential consequences to the control room operators in the event of a fuel handling accident before fuel load. Currently all three units are defueled with the irradiated fuel stored in the spent fuel pool. The irradiated fuel has decayed for approximately three years and the only remaining volatile fission product of any significance is Kr-85. Essentially no iodine is present in the decayed fuel. Due to the "scrubbing" effect of the fuel pool water and since Kr-85 is the only radioisotope of any significance, virtually no radioactive particulates would enter the CREVS intake ductwork. Since essentially no iodine is present in the fuel, the inhalation dose is negligible, and therefore, assuming the failure of two assemblies (i.e., 124 fuel pins), the main control room doses would be 0.001 REM whole body gamma, 0.200 REM beta, and 0.0 REM inhalation. These calculated doses are far below the level acceptable in the event of an accident. In order to reach the dose limit of 10 CFR 50 Appendix A, approximately 300 assemblies currently stored in the BFN fuel pool would have to fail.

ENCLOSURE 3

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION
BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3

Description of Amendment Request

The proposed amendment would change the Browns Ferry Nuclear Plant (BFN) Technical Specifications for units 1, 2, and 3 by relaxing technical specification operability requirements for the SGTS and CREVS Systems to support plant activities before fuel load.

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 50.92(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, 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.

(1) The proposed amendments do not involve a significant increase in the probability or consequences of an accident previously evaluated. The proposed temporary changes to the technical specifications involve relaxations to system operability requirements for the SGTS and CREVS Systems during the fuel inspection and reconstitution program in addition to supporting plant activities before fuel load. The fuel being moved in a spent fuel pool has decayed for approximately three years, thus reducing the need for systems required by the technical specifications for postaccident iodine removal.

The fuel handling accident evaluated in the FSAR (section 14.6.4) represents the most severe event in terms of radioactive release and dose consequences that should be considered applicable to the fuel inspection and reconstitution program or any other plant activity before fuel load. Since movement of irradiated fuel in the spent fuel pool area for a typical refueling operation is the same for the fuel inspection and reconstitution process, the current FSAR analysis is still valid. The current condition of the fuel is well within the bounds of the FSAR analysis. The FSAR calculations used freshly irradiated fuel (unloaded from the core 24 hours after shutdown) which would contain large amounts of fission products, specifically iodine. The irradiated fuel being inspected and reconstituted has decayed for approximately three years and the only remaining volatile fission product of any significance is Kr-85, which is an inert gas. Due to this decay time, there is essentially no iodine present and therefore no need for operability of systems with iodine removal capability.

Basis for Proposed No Significant Hazards Consideration Determination (Cont'd)

The proposed temporary changes to the technical specifications do not affect the precursors for any accident analysis and therefore do not involve a significant increase in the probability of an accident previously evaluated. The present required availability of systems in the technical specifications is based on FSAR accident analysis assumptions and limitations. The present condition of the fuel in the spent fuel pool is such that over 300 assemblies would have to fail before the FSAR limiting assumptions for releases and dose consequences could be reached, thus allowing a reduction in the number of systems required to mitigate such a limiting event. The requested reduction in system operability for the SGTS and CREVS Systems has been evaluated and a determination reached that with the proposed temporary technical specification changes present FSAR assumptions and limitations will be maintained. Therefore, the proposed temporary changes do not involve a significant increase in the consequences of an accident previously evaluated.

(2) The proposed change does not create the possibility of a new or different kind of accident from an accident previously evaluated. The proposed temporary changes will reduce present system operability requirements; however, no new modes of plant operation are introduced which could contribute to the possibility of a new or different kind of accident. The fuel inspection and reconstitution program involves handling irradiated fuel which is bounded by present FSAR fuel handling accident assumptions. This is the most severe event that could occur before fuel load therefore any plant activities conducted until then will be also bounded by the FSAR fuel handling accident.

(3) The proposed amendment does not involve a significant reduction in a margin of safety. The proposed temporary technical specification changes will reduce the operability requirements for the SGTS and CREVS during the fuel inspection and reconstitution program and those plant activities conducted before fuel load for BFN Unit 2. The proposed temporary changes as they relate to the margin of safety are discussed below:

a. SGTS - Based on the current unit 2 fuel fission inventory (essentially no iodine) the SGTS would not be required to mitigate a fuel handling accident during the fuel inspection and reconstitution program. The most severe accident applicable before fuel load is the fuel handling accident previously evaluated in FSAR section 14.6.4. The SGTS is still required to maintain the one-quarter-inch of water negative pressure when secondary containment integrity is required (technical specification 4.7.C). Approximately 10,100 CFM are required to draw the one quarter inch of water negative pressure and each SGTS is rated at 9000 CFM. Therefore, two trains of the SGTS are more than adequate.

Basis for Proposed No Significant Hazards Consideration Determination (Cont'd)

b. CREVS - The irradiated fuel has decayed for approximately three years and the only remaining volatile fission product of any significance is Kr-85. Essentially no iodine is present in the decayed fuel. Due to the "scrubbing" effect of the fuel pool water and since Kr-85 is the only radioisotope of any significance, should a fuel handling accident occur virtually no radioactive particulates would be present in the CREVS intake ductwork. Therefore, the filtration function that the CREVS provides would not be needed during the fuel inspection and reconstitution program or any other plant activities before fuel load.

The proposed temporary changes will ensure that the appropriate safety-related systems needed to mitigate a fuel handling accident are operable and will be able to perform their intended safety function if called upon. Therefore, the proposed changes do not represent a significant reduction in a margin of safety.

Determination of Basis for Proposed No Significant Hazards

Since the application for amendment involves a proposed change that is 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.