ENCLOSURE 1

PROPOSED CHANGES TO TECHNICAL SPECIFICATIONS

BROWNS FERRY NUCLEAR PLANT
(DOCKET NOS. 50-259, 50-260)

UNIT 1

PROPOSED CHANGES

3.5.C RHR Service Water and Emergency Equipment Cooling Water Systems (EECWS) (Continued)

2. During power operation, RHRSW pumps must be operable and assigned to service as indicated below for the specified time limits.

TIME LIMIT (DAYS)	MINIMUM SERVICE ASSIGNMENT RHRSW	EECW**
Indefinite	7*	3*
30	7* or 6***	2* or 3***
7	6*	2*

*At least one operable pump must be assigned to each header.

**Only automatically starting pumps may be assigned to EECW header service.

***Nine pumps must be operable. Either configuration is acceptable: 7 and 2 or 6 and 3.

3. During power operation both RHRSW pumps D1 and D2 normally or alternately assigned to the RHR heat exchanger header supplying the standby coolant supply connection must be operable except as specified in 3.5.C.4 and 3.5.C.5 below.

4.5.C RHR Service Water and Emergency Equipment Cooling Water Systems (EECWS) (Continued)

2. a. If no more than two RHRSW pumps are inoperable, increased surveillance is not required.

b. When three RHRSW pumps are inoperable, the remaining pumps, associated essential control valves, and associated diesel generators shall be operated weekly.

c. When four RHRSW pumps are inoperable, the remaining pumps, associated essential control valves, and associated diesel generators shall be operated daily.

3. Routine surveillance for these pumps is specified in 4.5.C.1.

3.5.C (Continued)

4. One of the D1 or D2 RHRSW pumps assigned to the RHR heat exchanger supplying the standby coolant supply connection may be inoperable for a period not to exceed 30 days provided the operable pump is aligned to supply the RHR heat exchanger header and the associated diesel generator and essential control valves are operable.

5. The standby coolant supply capability may be inoperable for a period not to exceed ten days.

6. If specifications 3.5.C.2 through 3.5.C.5 are not met, an orderly shutdown shall be initiated and the unit placed in the cold shutdown condition within 24 hours.

7. There shall be at least 2 RHRSW pumps, associated with the selected RHR pumps, aligned for RHR heat exchanger service for each reactor vessel containing irradiated fuel.

4.5.C (Continued)

4. When it is determined that one of the RHRSW pumps supplying standby coolant is inoperable at a time when operability is required, the operable RHRSW pump on the same header and its associated diesel generator and the RHR heat exchanger header and associated essential control valves shall be demonstrated to be operable immediately and every 15 days thereafter.

3.5 BASES

Should the capability for providing flow through the cross-connect lines be lost, a ten day repair time is allowed before shutdown is required. This repair time is justified based on the very small probability for ever needing RHR pumps and heat exchangers to supply an adjacent unit.

REFERENCES

1. Residual Heat Removal System (BFNP FSAR subsection 4.8)

2. Core Standby Cooling Systems (BFNP FSAR Section 6)

3.5.C RHR Service Water System and Emergency Equipment Cooling Water System (EECWS)

There are two EECW headers (north and south) with four automatic starting RHRSW pumps on each header. All components requiring emergency cooling water are fed from both headers thus assuring continuity of operation if either header is operable. Each header alone can handle the flows to all components. Two RHRSW pumps can supply the full flow requirements of all essential EECW loads for any abnormal or postaccident situation.

There are four RHR heat exchanger headers (A, B, C, & D) with one RHR heat exchanger from each unit on each header. There are two RHRSW pumps on each header; one normally assigned to each header (A2, B2, C2, or D2) and one on alternate assignment (A1, B1, C1, or D1). One RHR heat exchanger header can adequately deliver the flow supplied by both RHRSW pumps to any two of the three RHRSW heat exchangers on the header. One RHRSW pump can supply the full flow requirement of one RHR heat exchanger. Two RHR heat exchangers can more than adequately handle the cooling requirements of one unit in any abnormal or postaccident situation.

The RHR Service Water Systems was designed as a shared system for three units. The specification, as written, is conservative when consideration is given to particular pumps being out of service and to possible valving arrangements. If unusual operating conditions arise such that more pumps are out of service than allowed by this specification, a special case request may be made to the NRC to allow continued operation if the actual system cooling requirements can be assured.

Should one of the two RHRSW pumps normally or alternately assigned to the RHR heat exchanger header supplying the standby coolant supply connection become inoperable, an equal capability for long-term fluid makeup to the unit reactor and for cooling of the unit containment remains operable. Because of the availability of an equal makeup and cooling capability which is demonstrated to be operable immediately and with specified subsequent surveillance, a 30-day repair period is justified. Should the capability to provide standby coolant supply be lost, a 10-day repair time is justified based on the low probability for ever needing the standby coolant supply.

UNIT 2

PROPOSED CHANGES

3.5.C RHR Service Water and Emergency Equipment Cooling Water Systems (EECWS) (Continued)

2. During power operation, RHRSW pumps must be operable and assigned to service as indicated below for the specified time limits.

TIME LIMIT (DAYS)	MINIMUM SERVICE ASSIGNMENT RHRSW	EECW**
Indefinite	7*	3*
30	7* or 6***	2* or 3***
7	6*	2*

*At least one operable pump must be assigned to each header.

**Only automatically starting pumps may be assigned to EECW header service.

***Nine pumps must be operable. Either configuration is acceptable: 7 and 2 or 6 and 3.

3. During unit 2 power operation any two RHRSW pumps (D1, D2, B1, and B2) normally or alternately assigned to the RHR heat exchanger header supplying the standby coolant supply connection must be operable except as specified in 3.5.C.4 and 3.5.C.5 below.

4.5.C RHR Service Water and Emergency Equipment Cooling Water Systems (EECWS) (Continued)

2. a. If no more than two RHRSW pumps are inoperable, increased surveillance is not required.

b. When three RHRSW pumps are inoperable, the remaining pumps, associated essential control valves, and associated diesel generators shall be operated weekly.

c. When four RHRSW pumps are inoperable, the remaining pumps, associated essential control valves, and associated diesel generators shall be operated daily.

3. Routine surveillance for these pumps is specified in 4.5.C.1.

3.5.C (Continued)

4. Three of the D1, D2, B1, B2 RHRSW pumps assigned to the RHR heat exchanger supplying the standby coolant supply connection may be inoperable for a period not to exceed 30 days provided the operable pump is aligned to supply the RHR heat exchanger header and the associated diesel generator and essential control valves are operable.

5. The standby coolant supply capability may be inoperable for a period not to exceed ten days.

6. If specifications 3.5.C.2 through 3.5.C.5 are not met, an orderly shutdown shall be initiated and the unit placed in the cold shutdown condition within 24 hours.

7. There shall be at least 2 RHRSW pumps, associated with the selected RHR pumps, aligned for RHR heat exchanger service for each reactor vessel containing irradiated fuel.

4.5.C (Continued)

4. When it is determined that one of the RHRSW pumps supplying standby coolant is inoperable at a time when operability is required, the operable RHRSW pump on the same header and its associated diesel generator and the RHR heat exchanger header and associated essential control valves shall be demonstrated to be operable immediately and every 15 days thereafter.

3.5 BASES

Should the capability for providing flow through the cross-connect lines be lost, a ten day repair time is allowed before shutdown is required. This repair time is justified based on the very small probability for ever needing RHR pumps and heat exchangers to supply an adjacent unit.

REFERENCES

1. Residual Heat Removal System (BFNP FSAR subsection 4.8)

2. Core Standby Cooling Systems (BFNP FSAR Section 6)

3.5.C RHR Service Water System and Emergency Equipment Cooling Water System (EECW)

There are two EECW headers (north and south) with four automatic starting RHRSW pumps on each header. All components requiring emergency cooling water are fed from both headers to assuring continuity of operation if either header is operable. Each header alone can handle the flows to all components. Two RHRSW pumps can supply the full flow requirements of all essential EECW loads for any abnormal or postaccident situation.

There are four RHR heat exchanger headers (A, B, C, & D) with one RHR heat exchanger from each unit on each header. There are two RHRSW pumps on each header; one normally assigned to each header (A2, B2, C2, or D2) and one on alternate assignment (A1, B1, C1, or D1). One RHR heat exchanger header can adequately deliver the flow supplied by both RHRSW pumps to any two of the three RHRSW heat exchangers on the header. One RHRSW pump can supply the full flow requirement of one RHR heat exchanger. Two RHR heat exchangers can more than adequately handle the cooling requirements of one unit in any abnormal or postaccident situation.

The RHR Service Water Systems was designed as a shared system for three units. The specification, as written, is conservative when consideration is given to particular pumps being out of service and to possible valving arrangements. If unusual operating conditions arise such that more pumps are out of service than allowed by this specification, a special case request may be made to the NRC to allow continued operation if the actual system cooling requirements can be assured.

Should one of the two RHRSW pumps normally or alternately assigned to the RHR heat exchanger header supplying the standby coolant supply connection become inoperable, an equal capability for long-term fluid makeup to the unit reactor and for cooling of the unit containment remains operable. Because of the availability of an equal makeup and cooling capability which is demonstrated to be operable immediately and with specified subsequent surveillance, a 30-day repair period is justified. Unit 2 may be supplied standby coolant from either of four pumps--B1, B2, D1, or D2. Should the capability to provide standby coolant supply be lost, a 10-day repair time is justified based on the low probability for ever needing the standby coolant supply.

ENCLOSURE 2

JUSTIFICATION
(TVA BFNP TS 150)

By letter from L. M. Mills to H. R. Denton dated August 26, 1980, (TVA BFNP TS 147) and supplemented by letter from J. L. Cross to H. R. Denton dated August 28, 1980, we requested changes to the technical specifications of Browns Ferry unit 3. Amendment 34 to license No. DPR-68 issued September 9, 1980, transmitted by letter from T. A. Ippolito to H. G. Parris dated September 9, 1980, revised the specifications in response to our request. The revised specifications allow operation of Browns Ferry unit 3 with the standby coolant supply capability (supplied from unit 2) inoperable for a period not to exceed ten days. The changes to the units 1 and 2 technical specifications requested here (TS 150) will make them consistent with the unit 3 technical specifications as revised by TS 147. Because the specification revisions requested are essentially identical, the justification provided for TS 147 is applicable to this change (TS 150).

The justification for this requested change, extracted largely from TS 147, is as follows:

Standby coolant flow from an adjacent unit is through the RHR cross-connection line. Loss of RHR cross-connection flow path (by line blockage, etc.) will result in a loss of standby coolant flow capability. Since no credit for cross-connected RHR flow is taken in the Appendix K analysis in the FSAR and because of the very low probability of ever needing RHR pumps and heat exchangers to supply an adjacent unit, a ten-day repair time for RHR cross-connection flow capability is justified and authorized by Technical Specification 3.5.B.13. Similarly, no credit for standby cooling capability through the RHR cross-connection line is taken in the Appendix K analysis in the FSAR and there exists a very low probability of ever needing this redundant backup source of cooling water.

Therefore, the proposed technical specification change to allow a ten-day repair time for standby coolant supply is justified and the overall reduction in plant safety margin would be insignificant.