PROPOSED TECHNICAL SPECIFICATION CHANGES
BROWNS FERRY NUCLEAR PLANT
UNIT 3

3.5 CORE AND CONTAINMENT COOLING SYSTEMS

 During reactor power operation, RHRSW rumps 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.
 - operation, both RHRSW pumps 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 CORE AND CONTAINMENT COOLING SYSTEMS

- 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 CORE AND CONTAINMENT COOLING SYSTEMS

- 4. One of the Bl or 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 CORE AND CONTAINMENT COCLING SYSTEMS

When it is determined that the B1 or B2 . RHRSW pump 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

REFERENCES

- 1. Residual Heat Removal System (BFNP FSAR subsection 4.8)
- 2. Core Standby Cooling Systems (BFNP FSAR Section 6)

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 RHR 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 System 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.

JUSTIFICATION

This change is requested to allow RHR maintenance without affecting the operating status of other units. This requested change brings these specifications into conformance with the provisions of Technical Specification 3.5.B.13 which allows ten-day repair provisions for the cross-connection alignment.

PROPOSED TECHNICAL SPECIFICATION CHANGES
BROWNS FERRY NUCLEAR PLANT
UNIT 3

3.5 CORE AND CONTAINMENT COOLING SYSTEMS

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

TIME LIMIT	MINIMUM SERVICE ASSIGNMENT	
(DAYS)	RHRSW	EECW**
Indefinite	7*	3*
30	7* or 6***	2* or 3***
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- *At least one operable pump must be assigned to each header.
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 Either configuration is acceptable:
 7 and 2 or 6 and 3.
 - operation, both RHRSW pumps 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 CORE AND CONTAINMENT COOLING SYSTEMS

- 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 CORE AND CONTAINMENT COOLING SYSTEMS

- 4. One of the Bl or 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.
- 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 CORE AND CONTAINMENT COCLING SYSTEMS

4. When it is determined that the Bi or B2 . RHRSW pump 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

REFERENCES

- 1. Residual Heat Removal System (BFNP FSAR subsection 4.8)
- 2. Core Standby Cooling Systems (BFNP FSAR Section 6)

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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 MAR heat exchanger header can adequately deliver the flow supplied by both RHRSW pumps to any two of the three RHR heat exchangers on the header. One RHRSW pump can supply the full flow requirement of one RHR heat exchanger. Two RFR heat exchangers can more than adequately handle the cooling requirements of one unit in any abnormal or postaccident situation.

The RHR Service Water System 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.

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JUSTIFICATION

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