ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATION REVISIONS
CORE SPRAY SYSTEM SPECIAL TEST EXCEPTION
BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

SURVEILLANCE REQUIREMENTS (Continued)

2. Verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

c. At least once per 92 days* by:

1. Verifying that each CSS pump can be started from the control room and develops a flow of at least 4625 gpm on recirculation flow against a system head corresponding to a reactor vessel pressure of $\geq$ 113 psig.

2. Performing a CHANNEL CALIBRATION of the core spray header $\Delta P$ instrumentation (E21-dPIS-N004A,B) and verifying the set point to be 5, $\pm$1.5, psid greater than the normal indicated $\Delta P$.

d. At least once per 18 months by performing a system functional test which includes simulated automatic actuation of the system throughout its emergency operating sequence and verifying that each automatic valve in the flow path actuates to its correct position. Actual injection of coolant into the reactor vessel is excluded from this test.

* See Special Test Exception 3.10.6.

SPECIAL TEST EXCEPTIONS

3/4 10.5 PLANT SERVICE WATER

LIMITING CONDITION FOR OPERATION

3.10.5 The service water conventional header required to be operating per Specification 3.7.1.2 ACTION b.3 may be removed from operation by stopping the pumps to permit isolating and draining the service water nuclear header for maintenance provided that:

a. The service water conventional header remains lined up to supply cooling water to the required ECCS loads.

b. The draining/maintenance on the service water nuclear header will not affect the service water conventional system or lineup described in a. above.

c. Average coolant temperature is $\leq$100°F and the heatup rate is $\leq$10°F per hour.

d. Two dedicated qualified members of the unit operational staff are assigned to initiate the service water conventional header pumps, should any of the following occur:

1. Any event occurs which requires ECCS actuation.

2. Primary coolant temperature exceeds 180°F.

3. A loss of offsite power occurs.

APPLICABILITY: CONDITIONS 4 and 5 with the nuclear header inoperable.

ACTION: With the requirements of the above specification not satisfied, as soon as practicable, restore the:

a. Service water conventional header to operating status per the requirements of Specification 3.7.1.2 ACTION b.3, or

b. Service water nuclear header to OPERABLE status per Specification 3.7.1.2.

SURVEILLANCE REQUIREMENTS

4.10.5 When the service water conventional header is not operating as specified above:

a. Prior to securing all service water pumps, verify that the service water conventional header is lined up to supply cooling water for ECCS by verifying that each valve servicing safety-related equipment that is not locked in the proper position is administratively controlled in the proper position.

SPECIAL TEST EXCEPTION

3/4 10.6 CORE SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.10.6 The provisions of Technical Specification 4.5.3.1.c.1 may be suspended if the suppression pool is drained.

APPLICABILITY: CONDITIONS 4 and 5, with the suppression pool to be drained.

ACTION:

With the suppression pool restored to service, perform Surveillance Requirement 4.10.6.2 below.

SURVEILLANCE REQUIREMENTS

4.10.6.1 Perform Surveillance Requirement 4.5.3.1.c.1 within 7 days prior to draining the suppression pool.

4.10.6.2 Perform Surveillance Requirement 4.5.3.1.c.1 within 48 hours of restoring the suppression pool to operable status if the suppression pool has been drained per Specification 3.10.6.

SURVEILLANCE REQUIREMENTS (Continued)

2. Verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

c. At least once per 92 days* by:

1. Verifying that each CSS pump can be started from the control room and develops a flow of at least 4625 gpm on recirculation flow against a system head corresponding to a reactor vessel pressure of $\geq$ 113 psig.

2. Performing a CHANNEL CALIBRATION of the core spray header $\Delta P$ instrumentation (E21-dPIS-N004A,B) and verifying the setpoint to be 5, $\pm$1.5, psid greater than the normal indicated $\Delta P$.

d. At least once per 18 months by performing a system functional test which includes simulated automatic actuation of the system throughout its emergency operating sequence and verifying that each automatic valve in the flow path actuates to its correct position. Actual injection of coolant into the reactor vessel is excluded from this test.

* See Special Test Exception 3.10.6.

SPECIAL TEST EXCEPTIONS

## 3/4 10.5 PLANT SERVICE WATER

### LIMITING CONDITION FOR OPERATION

3.10.5 The service water conventional header required to be operating per Specification 3.7.1.2 ACTION b.3 may be removed from operation by stopping the pumps to permit isolating and draining the service water nuclear header for maintenance provided that:

a. The service water conventional header remains lined up to supply cooling water to the required ECCS loads.

b. The draining/maintenance on the service water nuclear header will not affect the service water conventional system or lineup described in a. above.

c. Average coolant temperature is $\leq$100°F and the heatup rate is $\leq$10°F per hour.

d. Two dedicated qualified members of the unit operational staff are assigned to initiate the service water conventional header pumps, should any of the following occur:

1. Any event occurs which requires ECCS actuation.

2. Primary coolant temperature exceeds 180°F.

3. A loss of offsite power occurs.

APPLICABILITY: CONDITIONS 4 and 5 with the nuclear header inoperable.

ACTION: With the requirements of the above specification not satisfied, as soon as practicable, restore the:

a. Service water conventional header to operating status per the requirements of Specification 3.7.1.2 ACTION b.3, or

b. Service water nuclear header to OPERABLE status per Specification 3.7.1.2.

### SURVEILLANCE REQUIREMENTS

4.10.5 When the service water conventional header is not operating as specified above:

a. Prior to securing all service water pumps, verify that the service water conventional header is lined up to supply cooling water for ECCS by verifying that each valve servicing safety-related equipment that is not locked in the proper position is administratively controlled in the proper position.

SPECIAL TEST EXCEPTION

3/4 10.6 CORE SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.10.6 The provisions of Technical Specification 4.5.3.1.c.1 may be suspended if the suppression pool is drained.

APPLICABILITY: CONDITIONS 4 and 5, with the suppression pool to be drained.

ACTION:

With the suppression pool restored to service, perform Surveillance Requirement 4.10.6.2 below.

SURVEILLANCE REQUIREMENTS

4.10.6.1 Perform Surveillance Requirement 4.5.3.1.c.1 within 7 days prior to draining the suppression pool.

4.10.6.2 Perform Surveillance Requirement 4.5.3.1.c.1 within 48 hours of restoring the suppression pool to operable status if the suppression pool has been drained per Specification 3.10.6.

ATTACHMENT 2

CORE SPRAY SYSTEM SPECIAL TEST EXCEPTION
DISCUSSION OF PROPOSED TECHNICAL SPECIFICATION REVISIONS

Surveillance Requirement 4.5.3.1.c.1 requires that a core spray system (CSS) pump flow test be performed at least once per 92 days. The purpose of this submittal is to allow, through the incorporation of a new Special Test Exception in the Technical Specifications (TS), the CSS to be considered operable if the only reason the system would be declared inoperable would be the inability to perform surveillance testing pursuant to Specification 4.5.3.1.c.1 due to extenuating plant conditions.

The CSS is divided into two independent subsystems, each with a 100% capacity (see Updated FSAR Figure 6.3.2-4). Technical Specifications allow the core spray pumps to take suction from the condensate storage tanks in Conditions 4 and 5; however, a full flow test can only be performed torus-to-torus.

During the upcoming Brunswick-1 refueling outage, Mark I torus (i.e., suppression pool) modifications will be installed which will necessitate the draining of the suppression pool. Concurrent with the suppression pool draining will be a flood-up of the vessel cavity for a routine refueling. Both suppression pool draining and vessel cavity fill-up are scheduled for week 2 of the outage. A review of the outage schedule has indicated that the suppression pool will still be drained at 92 days following the suppression pool draining. Therefore, the requirements of Surveillance Requirement 4.5.3.1.c.1 cannot be fulfilled. A vessel cavity drain is scheduled to occur during week 14 of the outage to facilitate certain in-vessel surveillance and maintanance activities. The suppression pool fill-up is scheduled to occur between week 17 and week 20, depending on work requirements. Prior to the cavity drain during week 14, a plant modification will be performed which will relocate a core spray system vent valve. The performance of Surveillance Requirement 4.5.3.1.c.1 would be required to demonstrate the operability of the CCS upon completion of this plant modification and prior to draining the vessel cavity during week 14 of the outage. However, Mark I torus modification work, which will be in progress until approximately week 17, will prohibit the performance of Surveillance Requirement 4.5.3.1.c.1 since the full flow test of the CSS can only be performed torus-to-torus as previously noted.

The proposed Special Test Exception will allow the requirements of Specification 4.5.3.1.c.1 to be suspended if the suppression pool is drained when in Conditions 4 and 5. The two proposed Surveillance Requirements for the Special Test Exception will require (1) the performance of surveillance pursuant to Specification 4.5.3.1.c.1 within 7 days prior to draining the suppression pool, and (2) the performance of surveillance pursuant to Specification 4.5.3.1.c.1 within 48 hours of restoring the suppression pool to operable status if the torus has been drained per Specification 3.10.6. A review of previous CSS operability testing shows that the systems are extremely reliable, as no failures were identified back to 1978. The instrumentation associated with the actuation and control of the CSS will continue to be tested during the outage per TS requirements.

Normally, should a single failure occur in one core spray subsystem, the redundant core spray subsystem is available to meet all reflood requirements. Redundant systems that would be available to supply core reflood capability include the condensate system and the service water injection system, with a small volume available from the control rod drive system. Normal core cooling during the outage time period will be provided by both the residual heat removal (RHR) system and the spent fuel pool cooling system. Even though the RHR system is available for core cooling, it is not available as a core reflood system since its only suction is the torus, which will be drained.

Note: A typographical correction is included for Surveillance Requirement 4.10.5 on page 3/4 10-5.