

ENCLOSURE 2

BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2
NRC DOCKET NOS. 50-325 & 50-324
OPERATING LICENSE NOS. DPR-71 & DPR-62
SUPPLEMENT TO REQUEST FOR TEMPORARY WAIVER OF COMPLIANCE
REACTOR WATER CLEANUP SYSTEM DIFFERENTIAL FLOW ISOLATION
INSTRUMENT

TECHNICAL SPECIFICATION PAGES - UNIT 1

TABLE 3.3.2-2 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

| <u>TRIP FUNCTION</u> | <u>TRIP SETPOINT</u> | <u>ALLOWABLE VALUE</u> |
|--|--|---|
| 2. <u>SECONDARY CONTAINMENT ISOLATION</u> | | |
| a. Reactor Building Exhaust Radiation - High | ≤ 11 mr/hr | ≤ 11 mr/hr |
| b. Drywell Pressure - High | ≤ 2 psig | ≤ 2 psig |
| c. Reactor Vessel Water Level - Low, Level 2 | $\geq + 112$ inches ^(a) | $\geq + 112$ inches ^(a) |
| 3. <u>REACTOR WATER CLEANUP SYSTEM ISOLATION</u> | | |
| a. Δ Flow - High | (d) ≤ 53 gal/min | ≤ 100 ≤ 53 gal/min |
| b. Area Temperature - High | $\leq 150^{\circ}\text{F}$ | $\leq 150^{\circ}\text{F}$ |
| c. Area Ventilation Δ Temperature - High | $\leq 50^{\circ}\text{F}$ | $\leq 50^{\circ}\text{F}$ |
| d. SLCS Initiation | NA | NA |
| e. Reactor Vessel Water Level - Low, Level 2 | $\geq + 112$ inches ^(a) | $\geq + 112$ inches ^(a) |
| f. Δ Flow - High - Time Delay Relay | ≤ 45 seconds | ≤ 45 seconds |

TABLE 3.3.2-2 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

| <u>TRIP FUNCTION</u> | <u>TRIP SETPOINT</u> | <u>ALLOWABLE VALUE</u> |
|---|-------------------------------|-------------------------------|
| 5. <u>SHUTDOWN COOLING SYSTEM ISOLATION</u> | | |
| a. Reactor Vessel Water Level - Low Level 1 | > 162.5 inches ^(a) | > 162.5 inches ^(a) |
| b. Reactor Steam Dome Pressure - High | < 140 psig | < 140 psig |

(a) Vessel water levels refer to REFERENCE LEVEL ZERO.

(b) Establish alarm/trip setpoints per the methodology contained in the OFFSITE DOSE CALCULATION MANUAL (ODCM).

(c) The Hydrogen Water Chemistry (HWC) system shall not be placed in service until reactor power reaches 20% of RATED THERMAL POWER. After reaching 20% of RATED THERMAL POWER, the normal full power background radiation level and associated trip setpoints may be increased to compensate for increased radiation levels as a result of full power operation with hydrogen injection. Prior to decreasing power below 20% of RATED THERMAL POWER and after the HWC system has been shut off, the background level and associated setpoint shall be returned to the normal full power values. Control rod motion shall be suspended, when the reactor power is below 20% of RATED THERMAL POWER, until the necessary adjustment is made (except for scram or other emergency action).

(d) Establish trip setpoint per the methodology described in Bases 3/4.3.2.

INSTRUMENTATION

BASES

3/4.3.2 ISOLATION ACTUATION INSTRUMENTATION

This specification ensures the effectiveness of the instrumentation used to mitigate the consequences of accidents by prescribing the trip settings for isolation of the reactor systems. When necessary, one channel may be inoperable for brief intervals to conduct required surveillance. Some of the trip settings have tolerances explicitly stated where both the high and low values are critical and may have a substantial effect on safety. The setpoints of other instrumentation, where only the high or low end of the setting has a direct bearing on the safety, are established at a level away from the normal operating range to prevent inadvertent actuation of the systems involved.

(Insert A - see following page)

3/4.3.3 EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

The emergency core cooling system actuation instrumentation is provided to initiate actions to mitigate the consequences of accidents that are beyond the operator's ability to control. This specification provides the trip point settings that will ensure effectiveness of the systems to provide the design protection. Although the instruments are listed by system, in some cases the same instrument is used to send the start signal to several systems at the same time. The out-of-service times for the instruments are consistent with the requirements of the specifications in Section 3/4.5.

3/4.3.4 CONTROL ROD WITHDRAWAL BLOCK INSTRUMENTATION

The control rod block functions are provided consistent with the requirements of the specifications in Section 3/4.1.4, Rod Program Controls, and Section 3/4.2, Power Distribution Limits. The trip logic is arranged so that a trip in any one of the inputs will result in a rod block.

3/4.3.5 MONITORING INSTRUMENTATION

3/4.3.5.1 SEISMIC MONITORING INSTRUMENTATION

The OPERABILITY of the seismic monitoring instrumentation ensures that sufficient capability is available to promptly determine the magnitude of a seismic event and evaluate the response of those features important to safety. This capability is required to permit comparison of the measured response to that used in the design basis for the facility.

INSERT A:

Reactor Water Cleanup System Differential Flow - High

The reactor water cleanup system (RWCU) high differential flow signal is provided to limit the release of radioactivity to maintain offsite and control room doses within the limits of 10 CFR 100 and 10 CFR 20. A time delay relay is provided to prevent spurious trips during most RWCU operational transients.

The high differential flow signals are initiated from transmitters that are connected to the inlet and outlets of the RWCU system. The outputs of the transmitters are arranged, compared and, if too large, initiate a trip signal. One channel of the high differential flow function is available and is required to be OPERABLE in OPERATIONAL CONDITIONS 1, 2, and 3.

The RWCU Differential Flow - High Allowable Value has been determined using the ISA-S67.04-1988 methodology. The Trip Setpoint is established far enough below the Allowable Value to accommodate the cumulative effects of instrument drift uncertainty, calibration uncertainty, all other random uncertainties and biases introduced by process effects, and a maximum of 10 percent analytical margin for the normal operating conditions. Seismic and accident effects are not included. A more restrictive tolerance is established as an acceptance criteria for periodic testing of the loop. That value excludes immeasurable loop uncertainty factors such as flow orifice effects, transmitter static pressure effects, and process temperature biases. The test acceptance criteria is controlled in engineering documents and plant procedures.

This function actuates the Group 3 valves.

ENCLOSURE 3

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TECHNICAL SPECIFICATION PAGES - UNIT 2

TABLE 3.3.2-2 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

| TRIP FUNCTION | TRIP SETPOINT | ALLOWABLE VALUE |
|--|---|------------------------------------|
| 2. <u>SECONDARY CONTAINMENT ISOLATION</u> | | |
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| c. Reactor Vessel Water Level - Low, Level 2 | $\geq + 112$ inches ^(a) | $\geq + 112$ inches ^(a) |
| 3. <u>REACTOR WATER CLEANUP SYSTEM ISOLATION</u> | | |
| a. Δ Flow - High | ≤ 100 gal/min (d) | ≤ 100 gal/min |
| b. Area Temperature - High | $\leq 150^{\circ}\text{F}$ | $\leq 150^{\circ}\text{F}$ |
| c. Area Ventilation Δ Temperature - High | $\leq 50^{\circ}\text{F}$ | $\leq 50^{\circ}\text{F}$ |
| d. SLCS Initiation | NA | NA |
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ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

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| a. Reactor Vessel Water Level - Low Level 1 | ≥ 162.5 inches ^(a) | ≥ 162.5 inches ^(a) |
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(a) Vessel water levels refer to REFERENCE LEVEL ZERO.

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