ENCLOSURE 1

SERIAL NLS-84-527

BRUNSWICK STEAM ELECTRIC PLANT

PROPOSED TECHNICAL SPECIFICATION PAGES - UNIT 1

(CP&L SERIAL: 84TSB50)

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SUMMARY LIST OF REVISIONS
BRUNSWICK UNIT 1

Page	Comment
VII	Section 3/4.6.4 - Change "Drywell - Suppression Pool" to "Drywell-Suppression Chamber."
3/4 3-51	Items 4, 5, and 7 - New accident monitoring instrumentation equipment numbers indicated and Note (b) added.
3/4 3-52a	Note (b) added.
3/4 3-52c	Items 4, 5, and 7 - New accident monitoring instrumentation equipment numbers indicated. Item 4 - Change Channel Check from "M" to "D".
3/4 6-9	This page has been generally reformatted, specific changes include: Item 3.6.2.1.a.2.b - New LCO, consistent with currently existing ACTION d. Item 3.6.2.1.b - New LCO for suppression chamber water temperature instrumentation. Item 3.6.2.1.c - LCO for suppression chamber leakage (moved from Section 3.6.4.1).
3/4 6-10	This page has been generally reformatted, specific changes include: ACTION c - New ACTION added dealing with loss of one suppression chamber water temperature instrumentation channel. ACTION d - New ACTION added dealing with loss of both instrumentation channels in any pair of temperature instrumentation channels. ACTION e - ACTION for suppression chamber leakage in excess of LCO (moved from Section 3.6.4.1).
3/4 6-10a	This page has been generally reformatted, specific changes include: Item 4.6.2.1.d - New surveillance requirement pertaining to suppression chamber water temperature instrumentation.

3/4 6-10b	Item 4.6.2.1.e.2 - Surveillance requirement pertaining to suppression chamber leakage (moved from Section 4.4.6.4.1.c.3).
3/4 6-18	Item 3.6.4.1.a - Deleted, now appears as Item 3.6.2.1.c.
	Various administrative changes including switching from mathematical symbols to phrases, changing "suppression pool to suppression chamber," and use of the defined term OPERATIONAL CONDITION have been made.
3/4 6-19	Item 4.6.4.1.c.3 - Deleted, now appears as Item 4.6.2.1.e.2.
	Mathematical Symbols changed to phrases.
B 3/4 3-3	Add paragraph explaining dual function of suppression pool water temperature monitoring system.
B 3/4 6-3	Administrative change - "design" changed to "calculated."
	Downcomer submergence changed from 4'-4" to 3'-4", based on tests performed at Monticello (changed from Bodega tests).
B 3/4 6-4	Add paragraph explaining dual function of suppression pool water temperature monitoring system.

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

TABLE 3.3.5.3-1
ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT AND INSTRUMENT NUMBER	REQUIRED NUMBER OF CHANNELS	MINIMUM CHANNELS OPERABLE	APPLICABLE OPERATIONAL CONDITIONS	ACTION
1. Reactor Vessel Pressure (B21-PI-R004A,B; C32-LPR-R608; and C32-PT-N005A,B)	2	1	1, 2	82
2. Reactor Vessel Water Level (B21-LITS-N026A,B; B21-LR-R615; B21-LI-R604A,B; B21-LT-N037; and B21-LTM-N037-1)	2	1	1, 2	82
3. Suppression Chamber Water Level (CAC-LT-2601; CAC-LI-2601-1) (CAC-LT-2602; CAC-LR-2602)	2	1	1, 2	82
4. Suppression Chamber Water Temperature (CAC-TE-4426-2 thru 13; CAC-TY-4426-1; CAC-TR-4426-1) (CAC-TE-4426-15 thru 26; CAC-TY-4426-2; CAC-TR-4426-2)	2	1	1, 2	82[(b)]
5. Suppression Chamber Atmosphere Temperature (CAC-TE-1258-17 thru 20; CAC-TY-4426-1(2); CAC-TR-4426-1(2); C91-P602)	2	1	1, 2	82[(b)]
6. Drywell Pressure (CAC-PI-4176; CAC-PT-4176; CAC-PR-1257-1; and CAC-PT-4175)	2	1	1, 2	82
7. Drywell Temperature (CAC-TE-1258-1 thru 13, 22, 23, 24; CAC-TY-4426-1(2); CAC-TR-4426-1(2); C91-P602)	2	1	1, 2	82[(b)]
8. Drywell Radiation (CAC-AR-1260; CAC-AQH-1260-1,2,3; CAC-AR-1261; CAC-AQH-1261-1,2,3; CAC-AR-1262; CAC-AQH-1262-1,2,3)	2	2	1, 2, 3	81

TABLE 3.3.5.3-1 (Continued)

ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT AND INSTRUMENT NUMBER	REQUIRED NUMBER OF CHANNELS	MINIMUM CHANNELS OPERABLE	APPLICABLE OPERATIONAL CONDITIONS	ACTION
13. Turbine Building Ventilation Monitor# (D12-RE-4561; D12-RE-4562; D12-RR-4548-2; D12-RR-4548-3)	1	1	1, 2, 3	81
14. Off-gas Stack Ventilation Monitor# (D12-RE-4573; D12-RE-4574; D12-RR-4599-2; D12-RR-4599-3)	1	1	1, 2, 3	81

\# High range noble gas monitors

(a) An OPERABLE instrument channel shall consist of the AT instrument and either the AI instrument or the XY-XY-AR instruments.

(b) See also specification 3.6.2.1 for ACTION requirements for the Suppression Pool Temperature Monitoring System Instrumentation.

TABLE 4.3.5.3-1

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT AND INSTRUMENT NUMBER	CHANNEL CHECK	CHANNEL CALIBRATION
1. Reactor Vessel Pressure (B21-PI-R004A,B; C32-LPR-R608; and C32-PT-N005A,B)	M	R
2. Reactor Vessel Water Level (B21-LITS-N026A,B; B21-LR-R615; B21-LI-R604A,B; B21-LT-N037; and B21-LTM-N037-1)	M	R
3. Suppression Chamber Water Level (CAC-LT-2601; CAC-LI-2601-1) (CAC-LT-2602; CAC-LR-2602)	M	R
4. Suppression Chamber Water Temperature (CAC-TE-4426-2 thru 13; CAC-TY-4426-1; CAC-TR-4426-1) (CAC-TE-4426-15 thru 26; CAC-TY-4426-2; CAC-TR-4426-2)	D	R
5. Suppression Chamber Atmosphere Temperature (CAC-TE-1258-17 thru 20; CAC-TY-4426-1(2); CAC-TR-4426-1(2); C91-P602)	M	R
6. Drywell Pressure (CAC-PI-4176; CAC-PT-4176; CAC-PR-1257-1; and CAC-PT-4175)	M	R
7. Drywell Temperature (CAC-TE-1258-1 thru 13, 22, 23, 24; CAC-TY-4426-1(2); CAC-TR-4426-1(2); C91-P602)	M	R
8. Drywell Radiation (CAC-AR-1260; CAC-AQH-1260-1,2,3; CAC-AR-1261; CAC-AQH-1261-1,2,3; CAC-AR-1262; CAC-AQH-1262-1,2,3)	M	R
9. Drywell Oxygen Concentration (CAC-AT-4409-37; CAC-AI-4409-40; CAC-X-XY-4348-2; CAC-X-XY-4349-2; CAC-AR-4409-41) (CAC-AT-4410-37; CAC-AI-4410-40; CAC-X-XY-4362-2; CAC-X-XY-4363-2; CAC-AR-4410-41)	M	R

CONTAINMENT SYSTEMS

3/4.6.2 DEPRESSURIZATION SYSTEMS

SUPPRESSION CHAMBER

LIMITING CONDITION FOR OPERATION

3.6.2.1 The suppression chamber shall be OPERABLE with:

a. The pool water:

1. Volume between 87,600 ft^3 and 89,600 ft^3, equivalent to a level between -27 inches and -31 inches, and a

2. Maximum average temperature of 95°F during OPERATIONAL CONDITION 1 or 2, except that the maximum average temperature may be permitted to increase to:

a) 105°F during testing which adds heat to the suppression chamber.

b) 110°F with THERMAL POWER less than or equal to 1% of RATED THERMAL POWER.

c) 120°F with the main steam line isolation valves closed following a scram.

b. Two OPERABLE suppression chamber water temperature instrumentation channels with a minimum of 11 operable RTD inputs per channel.

c. A total leakage from the drywell to the suppression chamber of less than the equivalent leakage through a 1-inch diameter orifice at a differential pressure of 1 psig.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

a. With the suppression chamber water level outside the above limits, restore the water level to within the limits within 6 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

b. In OPERATIONAL CONDITION 1 or 2 with the suppression chamber average water temperature greater than 95°F, restore the average temperature to less than or equal to 95°F within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours, except, as permitted above:

CONTAINMENT SYSTEMS

LIMITING CONDITIONS FOR OPERATION (Continued)

ACTION: (Continued)

1. With the suppression chamber average water temperature greater than 105°F during testing which adds heat to the suppression chamber, stop all testing which adds heat to the suppression chamber and restore the average temperature to less than or equal to 95°F within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

2. With the suppression chamber average water temperature greater than 110°F manually scram the reactor and operate at least one residual heat removal loop in the suppression pool cooling mode.

3. With the suppression chamber average water temperature greater than 120°F, depressurize the reactor pressure vessel to less than 200 psig within 12 hours.

c. With one suppression chamber water temperature instrumentation channel inoperable, restore the inoperable channel to OPERABLE status within 7 days or verify suppression chamber water temperature to be within the limits at least once per 12 hours.

d. With both suppression chamber water temperature instrumentation channels inoperable, restore at least one inoperable temperature instrumentation channel to OPERABLE status within 8 hours or be in at least HOT SHUTDOWN within the next 12 hours or in COLD SHUTDOWN within the following 24 hours.

e. With the drywell-to-suppression chamber bypass leakage in excess of the limit, restore the bypass leakage to within the limit prior to increasing reactor coolant temperature above 212°F.

SURVEILLANCE REQUIREMENTS

4.6.2.1 The suppression chamber shall be demonstrated OPERABLE:

a. By verifying the suppression chamber water volume to be within the limits at least once per 24 hours.

b. At least once per 24 hours in OPERATIONAL CONDITION 1 or 2 by verifying the suppression chamber average water temperature to be less than or equal to 95°F, except:

   1. At least once per 5 minutes during testing which adds heat to the suppression chamber, by verifying the suppression chamber average water temperature to be less than or equal to 105°F.

   2. At least once per hour when suppression chamber average water temperature is greater than 95°F, by verifying:

      a) Suppression chamber average water temperature to be less than or equal to 110°F, and

      b) THERMAL POWER to be less than or equal to 1% of RATED THERMAL POWER.

   3. At least once per 30 minutes following a scram with suppression chamber average water temperature greater than 95°F, by verifying suppression chamber average water temperature less than or equal to 120°F.

c. By an external visual examination of selected emergency core cooling system suction line penetrations of the suppression chamber enclosure prior to taking the reactor from COLD SHUTDOWN after safety/relief valve operation with the suppression chamber average water temperature greater than or equal to 160°F and reactor coolant system pressure greater than 200 psig.

d. By verifying at least two suppression chamber water temperature instrumentation channels OPERABLE by performance of a:

   1. CHANNEL CHECK at least once per 24 hours.

   2. CHANNEL FUNCTIONAL TEST at least once per 31 days, and

   3. CHANNEL CALIBRATION at least once per 18 months (550 days).

   with the temperature alarm setpoint for high water temperature less than or equal to 95°F. (CAC-TE-4426-2 thru 13; CAC-TY-4426-1; CAC-TR-4426-1) (CAC-TE-4426-15 thru 26; CAC-TY-4426-2; CAC-TR-4426-2)

e. At least once per 18 months by:

   1. A visual inspection of the accessible interior of the suppression chamber and exterior of the suppression chamber enclosure.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

2. Conducting a drywell-to-suppression chamber bypass leak test at an initial differential pressure of 1 psig and verifying that the differential pressure does not decrease by more than 0.25 inches of water per minute for a 10 minute period.

CONTAINMENT SYSTEMS

3/4.6.4 VACUUM RELIEF

DRYWELL - SUPPRESSION CHAMBER VACUUM BREAKERS

LIMITING CONDITION FOR OPERATION

3.6.4.1 All drywell-suppression chamber vacuum breakers shall be OPERABLE and in the closed position with:

a. The position indicator OPERABLE, and

b. An opening set point of less than or equal to 0.5 psid.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

a. With no more than 2 drywell-suppression chamber vacuum breakers inoperable for opening but known to be in the closed position, the provisions of Specification 3.0.4 are not applicable and operation may continue until the next COLD SHUTDOWN provided the surveillance requirements of Specification 4.6.4.1.a are performed on the OPERABLE vacuum breakers within 4 hours and at least once per 15 days thereafter, until the inoperable vacuum breakers are restored to OPERABLE status.

b. With one drywell-suppression chamber vacuum breaker in the open position, as indicated by the position indicating system, the provisions of Specificaton 3.0.4 are not applicable and operation may continue provided the surveillance requirements of Specification 4.6.4.1.a are performed on the OPERABLE vacuum breakers, and the surveillance requirements of Specification 4.6.4.1.b are performed within 8 hours and at least once per 72 hours thereafter, until the inoperable vacuum breaker is restored to the closed position.

c. With the position indicator of any drywell-suppression chamber vacuum breaker inoperable, the provisions of Specification 3.0.4 are not applicable, and operation may continue provided the surveillance requirements of Specification 4.6.4.1.b are performed within 8 hours and at least once per 72 hours thereafter, until the inoperable position indicator is returned to OPERABLE status.

d. Otherwise, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS

4.6.4.1 Each drywell-suppression chamber vacuum breaker shall be demonstrated OPERABLE:

a. At least once per 31 days and after any discharge of steam to the suppression chamber from any source, by exercising each vacuum breaker through one complete cycle and verifying that each vacuum breaker is closed as indicated by the position indication system.

b. Whenever a vacuum breaker is in the open position, as indicated by the position indication system, by conducting a test that verifies that the differential pressure is maintained greater than 1/2 the initial delta P for one hour without N_2 makeup.

c. At least once per 18 months during shutdown by:

   1. Verifying the opening setpoint, from the closed position, to be less than or equal to 0.5 psid,

   2. Performance of a CHANNEL CALIBRATION that each position indicator indicates the vacuum breaker to be open if the vacuum breaker does not satisfy the delta P test in 4.6.4.1.b.

MONITORING INSTRUMENTATION (Continued)

3/4.3.5.2 REMOTE SHUTDOWN MONITORING INSTRUMENTATION

The OPERABILITY of the remote shutdown monitoring instrumentation ensures that sufficient capability is available to permit shutdown and maintenance of HOT SHUTDOWN of the facility from locations outside of the control room. This capability is required in the event control room habitability is lost and is consistent with General Design Criteria 19 of CFR 50.

3/4.3.5.3 ACCIDENT MONITORING INSTRUMENTATION

The OPERABILITY of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess important variables following an accident. This capability is consistent with the recommendations of Regulatory Guide 1.97, "Instrumentation for Light Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," December 1975 and NUREG-0578, "TMI-2 Lessons Learned Task Force Status Report and Short Term Recommendations."

The suppression chamber water temperature monitoring system performs a dual function. It provides for accident monitoring as recommended by Regulatory Guide 1.97. This system is also designed to meet the acceptance criteria of NUREG-0661, Appendix A in monitoring average suppression chamber water temperature during normal operating conditions. Refer to Sections 3/4.3.5.3 and 3/4.6.2.1 for Limiting Conditions for Operation and Surveillance Requirements pertaining to each function.

3/4.3.5.4 SOURCE RANGE MONITORS

The source range monitors provide the operator with information on the status of the neutron level in the core at very low power levels during start-up. At these power levels, reactivity additions should not be made without this flux level information available to the operator. When the intermediate range monitors are on scale adequate information is available without the SRMs and they can be retracted.

3/4.3.5.5 CHLORINE DETECTION SYSTEM

The OPERABILITY of the chlorine detection systems ensures that an accidental chlorine release will be detected promptly and the necessary protective actions will be automatically initiated to provide protection for control room personnel. Upon detection of a high concentration of chlorine, the control room emergency ventilation system will automatically isolate the control room and initiate operation in the recirculation mode to provide the required protection. The detection systems required by this specification are consistent with the recommendations of Regulatory Guide 1.95 "Protection of Nuclear Power Plant Control Room Operators Against an Accidental Chlorine Release."

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

The specifications of this section ensure that the primary containment pressure will not exceed the calculated pressure of 49 psig during primary system blowdown from full operating pressure.

The pressure suppression pool water provides the heat sink for the reactor primary system energy release following a postulated rupture of the system. The pressure suppression chamber water volume must absorb the associated decay and structural sensible heat released during primary system blowdown from 1020 psig. Since all of the gases in the drywell are purged into the pressure suppression chamber air space during a loss of coolant accident, the pressure of the liquid must not exceed 62 psig, the suppression chamber maximum pressure. The design volume of the suppression chamber, water and air, was obtained by considering that the total volume of reactor coolant to be condensed is discharged to the suppression chamber and that the drywell volume is purged to the suppression chamber.

Using the minimum or maximum water volumes given in the specification, containment pressure during the design basis accident is approximately 49 psig, which is below the design pressure of 62 psig. Maximum water volume of 89,600 ft^3 results in a downcomer submergence of 3'4" and the minimum volume of 87,600 ft^3 results in a submergence approximately four inches less. The Monticello tests were run with a submerged length of three feet and with complete condensation. Thus, with respect to the downcomer submergence, this specification is adequate. The maximum temperature at the end of the blowdown tested during the Humboldt Bay and Bodega Bay tests was 170°F and this is conservatively taken to be the limit for complete condensation of the reactor coolant, although condensation would occur for temperatures above 170°F.

When it is necessary to make the suppression chamber inoperable, this shall only be done as provided in Specification 3.5.3.3.

Under full power operation conditions, blowdown from an initial suppression chamber water temperature of 90°F results in a water temperature of approximately 135°F immediately following blowdown, which is below the temperature 170°F used for complete condensation. At this temperature and atmospheric pressure, the available NPSH exceeds that required by both the RHR and core spray pumps; thus, there is no dependency on containment overpressure during the accident injection phase. If both RHR loops are used for containment cooling, there is no dependency on containment overpressure for post-LOCA operations.

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS (Continued)

Experimental data indicate that excessive steam condensing loads can be avoided if the peak temperature of the pressure suppression pool is maintained below 160°F during any period of relief valve operation with sonic conditions at the discharge exit. Specifications have been placed on the envelope of reactor operating conditions so that the reactor can be depressurized in a timely manner to avoid the regime of potentially high pressure suppression chamber loadings.

Because of the large volume and thermal capacity of the pressure suppression pool, the volume and temperature normally changes very slowly and monitoring these parameters daily is sufficient to establish any temperature trends. By requiring the pressure suppression pool temperature to be continually monitored and frequently logged during periods of significant heat addition, the temperature trends will be closely followed so that appropriate action can be taken. The requirement for an external visual examination following any event where potentially high loadings could occur provides assurance that no significant damage was encountered. Particular attention should be focused on structural discontinuities in the vicinity of the relief valve discharge since these are expected to be the points of highest stress.

In addition to the limits on temperature of the suppression chamber pool water, operating procedures define the action to be taken in the event a relief valve inadvertently opens or sticks open. As a minimum this action shall include: (1) use of all available means to close the valve, (2) initiate suppression pool water cooling heat exchangers, (3) initiate reactor shutdown, and (4) if other relief valves are used to depressurize the reactor, their discharge shall be separated from that of the stuck-open relief valve to assure mixing and uniformity of energy insertion to the pool.

The suppression chamber water temperature monitoring system performs a dual function. It provides for post-accident monitoring as recommended by Regulatory Guide 1.97. This system is also designed to meet the acceptance criteria of NUREG-0661, Appendix A in monitoring average suppression chamber water temperature during normal operating conditions. Refer to Sections 3/4.3.5.3 and 3/4.6.2.1 for Limiting Conditions for Operation and Surveillance Requirements pertaining to each function.

3/4.6.3 PRIMARY CONTAINMENT ISOLATION VALVES

The OPERABILITY of the primary containment isolation valves ensures that the primary containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the primary containment atmosphere or pressurization of the containment. Primary containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a LOCA.

ENCLOSURE 2

SERIAL NLS-84-527

BRUNSWICK STEAM ELECTRIC PLANT

PROPOSED TECHNICAL SPECIFICATION PAGE - UNIT 2

(CP&L SERIAL: 84TSB50)

SUMMARY LIST OF REVISIONS
BRUNSWICK UNIT 2

Page	Comment
3/4 3-52c	Item 4 - Change Channel Check from "M" to "D".
3/4 6-10a	Item 4.6.2.1.b.2.b - Change ". . . RATED THERMAL POWER after suppression chamber average water temperature has exceeded 95°F for more than 24 hours." to ". . . RATED THERMAL POWER."
B 3/4 6-3	Administrative change - "design" to "calculated."

(994NLU/pgp)

TABLE 4.3.5.3-1

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT AND INSTRUMENT NUMBER	CHANNEL CHECK	CHANNEL CALIBRATION
1. Reactor Vessel Pressure (B21-PI-R004A,B; C32-LPR-R608; and C32-PT-N005A,B)	M	R
2. Reactor Vessel Water Level (B21-LITS-N026A,B; B21-LR-R615; B21-LI-R604A,B; B21-LT-N037; and B21-LTM-N037-1)	M	R
3. Suppression Chamber Water Level (CAC-LT-2601; CAC-LI-2601-1) (CAC-LT-2602; CAC-LR-2602)	M	R
4. Suppression Chamber Water Temperature (CAC-TE-4426-2 thru 13; CAC-TY-4426-1; CAC-TR-4426-1) (CAC-TE-4426-15 thru 26; CAC-TY-4426-2; CAC-TR-4426-2)	D	R
5. Suppression Chamber Atmosphere Temperature (CAC-TE-1258-17 thru 20; CAC-TY-4426-1(2); CAC-TR-4426-1(2); C91-P602)	M	R
6. Drywell Pressure (CAC-PI-4176; CAC-PT-4176; CAC-PR-1257-1; and CAC-PT-4175)	M	R
7. Drywell Temperature (CAC-TE-1258-1 thru 13, 22, 23, 24; CAC-TY-4426-1(2); CAC-TR-4426-1(2); C91-P602)	M	R
8. Drywell Radiation (CAC-AR-1260; CAC-AQH-1260-1,2,3; CAC-AR-1261; CAC-AQH-1261-1,2,3; CAC-AR-1262; CAC-AQH-1262-1,2,3)	M	R
9. Drywell Oxygen Concentration (CAC-AT-4409-37; CAC-AI-4409-40; CAC-X-XY-4348-2; CAC-X-XY-4349-2; CAC-AR-4409-41) (CAC-AT-4410-37; CAC-AI-4410-40; CAC-X-XY-4362-2; CAC-X-XY-4363-2; CAC-AR-4410-41)	M	R

b. At least once per 24 hours in OPERATIONAL CONDITION 1 or 2 by verifying the suppression chamber average water temperature to be less than or equal to 95°F, except:

   1. At least once per 5 minutes during testing which adds heat to the suppression chamber, by verifying the suppression chamber average water temperature to be less than or equal to 105°F.

   2. At least once per hour when suppression chamber average water temperature is greater than 95°F, by verifying:

      a) Suppression chamber average water temperature to be less than or equal to 110°F, and

      b) THERMAL POWER to be less than or equal to 1% of RATED THERMAL POWER.

   3. At least once per 30 minutes following a scram with suppression chamber average water temperature greater than 95°F, by verifying suppression chamber average water temperature less than or equal to 120°F.

c. By an external visual examination of selected emergency core cooling system suction line penetrations of the suppression chamber enclosure prior to taking the reactor from COLD SHUTDOWN after safety/relief valve operation with the suppression chamber average water temperature greater than or equal to 160°F and reactor coolant system pressure greater than 200 psig.

d. By verifying at least two suppression chamber water temperature instrumentation channels OPERABLE by performance of a:

   1. CHANNEL CHECK at least once per 24 hours.

   2. CHANNEL FUNCTIONAL TEST at least once per 31 days, and

   3. CHANNEL CALIBRATION at least once per 18 months (550 days).

   with the temperature alarm setpoint for high water temperature less than or equal to 95°F. (CAC-TE-4426-2 thru 13; CAC-TY-4426-1; CAC-TR-4426-1) (CAC-TE-4426-15 thru 26; CAC-TY-4426-2; CAC-TR-4426-2)

e. At least once per 18 months by:

   1. A visual inspection of the accessible interior of the suppression chamber and exterior of the suppression chamber enclosure.

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

The specifications of this section ensure that the primary containment pressure will not exceed the calculated pressure of 49 psig during primary system blowdown from full operating pressure.

The pressure suppression pool water provides the heat sink for the reactor primary system energy release following a postulated rupture of the system. The pressure suppression chamber water volume must absorb the associated decay and structural sensible heat released during primary system blowdown from 1020 psig. Since all of the gases in the drywell are purged into the pressure suppression chamber air space during a loss of coolant accident, the pressure of the liquid must not exceed 62 psig, the suppression chamber maximum pressure. The design volume of the suppression chamber, water and air, was obtained by considering that the total volume of reactor coolant to be condensed is discharged to the suppression chamber and that the drywell volume is purged to the suppression chamber.

Using the minimum or maximum water volumes given in the specification, containment pressure during the design basis accident is approximately 49 psig, which is below the design pressure of 62 psig. Maximum water volume of 89,600 ft^3 results in a downcomer submergence of 3'4" and the minimum volume of 87,600 ft^3 results in a submergence approximately four inches less. The Monticello tests were run with a submerged length of three feet and with complete condensation. Thus, with respect to the downcomer submergence, this specification is adequate. The maximum temperature at the end of the blowdown test during the Humboldt Bay and Bodega Bay tests was 170°F, and this is conservatively taken to be the limit for complete condensation of the reactor coolant, although condensation would occur for temperatures above 170°F.

When it is necessary to make the suppression chamber inoperable, this shall only be done as provided in Specification 3.5.3.3.

Under full power operation conditions, blowdown from an initial suppression chamber water temperature of 90°F results in a water temperature of approximately 135°F immediately following blowdown, which is below the temperature 170°F used for complete condensation. At this temperature and atmospheric pressure, the available NPSH exceeds that required by both the RHR and core spray pumps; thus, there is no dependency on containment overpressure during the accident injection phase. If both RHR loops are used for containment cooling, there is no dependency on containment overpressure for post-LOCA operations.