ENCLOSURE 1

VOGTLE ELECTRIC GENERATING PLANT
REQUEST FOR TECHNICAL SPECIFICATION CHANGES
ELIMINATION OF CONTAINMENT SPRAY ADDITIVE SYSTEM

BASIS FOR PROPOSED CHANGES

Proposed Change

The Vogtle Electric Generating Plant Technical Specifications for the emergency core cooling systems (Technical Specification 3/4.5), containment spray additive system (Technical Specification 3/4.6.2.2), electrical protective devices (Technical Specification 3/4.8.4), and procedures and programs for administrative controls (Technical Specification 6.7.4) are proposed to be revised as follows:

1. Add a new specification 3/4.5.5 for recirculating solution pH control to provide a means for raising the pH of the recirculated sump solution into the range of 7.5 to 10.5.

2. Delete the current specification 3/4.6.2.2 for limiting conditions for operations and surveillance requirements in its entirety.

3. Delete the spray additive tank discharge valves 1/2HV-8994A, B from the current specification table 3.8-1 for thermal overload bypass devices of safety-related motor-operated valves.

4. Revise specification bases 3/4.5.4 and add a new specification bases 3/4.5.5 describing the requirement to raise the pH of the recirculated sump solution into the range of 7.5 to 10.5 to minimize the potential for chloride induced stress corrosion cracking of austenitic stainless steel and ensure retention of iodine in the sump solution.

5. Delete the Bases for 3/4.6.2.2.

6. Delete the reference to the NaOH subsystem for the containment spray system from the current specification 6.7.4 for programs for administrative controls.

ENCLOSURE 1 (CONTINUED)

VOGTLE ELECTRIC GENERATING PLANT
REQUEST FOR TECHNICAL SPECIFICATION CHANGES
ELIMINATION OF CONTAINMENT SPRAY ADDITIVE SYSTEM

BASIS FOR PROPOSED CHANGES

Basis

Draft revision 2 to the Standard Review Plan (SRP) section 6.5.2. "Containment Spray as a Fission Product Cleanup System" and industry precedence have made it possible to eliminate the spray additive portion of the CSS. The methodology of SRP 6.5.2 identifies that post-accident injection phase removal of elemental iodine (the predominant form) from the LOCA containment atmosphere is essentially independent of spray pH. Thus, this change eliminates the spray additive portion of the CSS, including the spray additive tank (SAT).

The removal of the spray additive does not eliminate the need for adjusting the pH of the emergency core cooling system (ECCS) recirculation solution. To assure that the iodine removed by the sprays is retained in solution, to minimize chloride induced stress corrosion cracking of austenitic stainless steel components, and to minimize the hydrogen produced by the corrosion of galvanized surfaces and zinc-based paints, the long-term pH of the ECCS solution should be no less than 7.5. Since the initial pH of the boric acid ECCS solution, without spray additive, will be approximately 4.5, a chemical additive must be utilized to raise the pH of the solution in the containment building sump.

The replacement for the liquid sodium hydroxide (NaOH) spray additive system consists of crystalline trisodium phosphate (TSP) stored in baskets located in the post-LOCA flooded region of the containment building.

The initial containment spray (injection phase) will be a boric acid (2400 to 2600 ppm range) solution from the refueling water storage tank (RWST), which has a pH of approximately 4.5. As the initial spray solution and subsequently the recirculation solution comes in contact with the TSP, the TSP dissolves, raising the pH of the sump solution to an equilibrium value of 7.5 or greater.

The proposed recirculation fluid pH control system will have the same function as the present spray additive system; that is, to mitigate the effects of a LOCA. The change to a passive pH control system will eliminate the possibility of an active spray additive component failure.

ENCLOSURE 1 (CONTINUED)

VOGTLE ELECTRIC GENERATING PLANT
REQUEST FOR TECHNICAL SPECIFICATION CHANGES
ELIMINATION OF CONTAINMENT SPRAY ADDITIVE SYSTEM

BASIS FOR PROPOSED CHANGES

The components associated with the spray additive system are being either spared in place or removed. The blank orifice plates installed to isolate the spray additive system will meet ASME Section III Class 3 requirements. The piping and components isolated will not be maintained as ASME Section III components, however, they will be maintained as Seismic Category 1, since they remain connected to the piping downstream.

Level indicators and flow indicators and the hand switches will be removed from the Main Control Board (QMCB) and replaced with cover plates. These changes do not result in any significant mass variation when compared to the overall QMCB mass. The QMCB's response to seismic input will be unaffected by this change and can still be considered seismically qualified.

Three (3) trisodium phosphate (TSP) storage baskets will be located in the containment sump area with a total minimum capacity of approximately 11,484 pounds (220 ft^3). The baskets are designed to Seismic Category 1 standards and will be bolted (anchored) to the filler slab at elevation 171'-9". The seismic accelerations for the base slab were used in the seismic design of the baskets. The natural frequencies of each basket were used in determining the seismic loads for each basket.

The metal mass for the three trisodium phosphate baskets and supports adds a heat sink to the containment, and the deletion of the SAT water inventory removes a heat sink. The impact of the additional metal heat sink on the peak clad temperature (PCT) has been reviewed and determined to be acceptably small, less than +1°F, so that the requirements of 10 CFR 50.46 continue to be met.

The high energy pipe break zone of influence calculations were reviewed for jet impingement on the TSP baskets. The results of this review indicate that there are two cases where a pipe break jet may impinge on one of the TSP baskets. These cases were analyzed and indicated that the loads on the TSP basket were acceptable.

ENCLOSURE 1 (CONTINUED)

VOGTLE ELECTRIC GENERATING PLANT
REQUEST FOR TECHNICAL SPECIFICATION CHANGES
ELIMINATION OF CONTAINMENT SPRAY ADDITIVE SYSTEM

BASIS FOR PROPOSED CHANGES

The flooded post-LOCA sump level will not be significantly changed (i.e., <1/2") due to the addition of the TSP and the TSP baskets and deletion of the SAT water volume, and thus does not warrant revision as the equipment located above the sump flood level would remain above the flooded post-accident environment. Further, the deletion of the unborated water volume in the SAT will result in a small, but insignificant, increase in the boron concentration of the recirculation fluid.

Analyses were conducted to ensure that effects such as vortexing, reduction of net positive suction head (NPSH), and screen blockage will not result in degraded residual heat removal (RHR) or containment spray pump/system performance. Containment sump hydraulic model studies were previously performed to determine if the intake velocities at the sump intakes were large enough to create pump suction vortex problems. The results of these studies indicated that there were no problems when the grating cage and trash rack-screen were installed over the sumps. The proposed change will not have an adverse impact on the function of the grating cage or the trash rack-screen to minimize pump suction vortex problems. Therefore, there is no adverse effect on the previous sump hydraulic model studied.

The pH of the sump solution will be adjusted to greater than 7.5 to counteract the buildup of chloride concentrations to critical levels. Equipment in containment will be exposed to a low pH solution (approximately 4.5) for a short period of time during the spray injection phase. During this time, the trisodium phosphate (TSP) will begin to dissolve and the pH of the ECCS sump solution will be raised into the range of 7.5 to 10.5. The surfaces sprayed during the injection phase will eventually be re-sprayed during the recirculation phase with a high pH solution. Materials qualified for long term exposure to a high pH solution will not be adversely affected by short term exposure to a low pH solution.

Aluminum and zinc corrosion are the only sources of possible hydrogen generation affected by this change. The proposed change will affect the pH by introducing an initial pH of 4.5 (borated water spray) followed by a pH range of 7.5 to 10.5 using TSP. This is effectively a lower pH than the current range of 8.0 to 10.5, using sodium hydroxide. The corrosion of aluminum decreases with decreasing pH, therefore, the hydrogen generation resulting from aluminum corrosion will decrease with the use of TSP. The corrosion of zinc and zinc-based paints, which is highly dependent on temperature, has been shown to

be similar for the pH ranges of sodium hydroxide and TSP sprays. Elimination of the spray additive will have little net effect on hydrogen generation due to the corrosion of aluminum and zinc in the post-LOCA containment environment.

The proposed change to a lower initial pH of 4.5 and a lower equilibrium pH of 7.5 to 10.5 is expected to have no effect on equipment qualification or protective coating, since both are currently analyzed for the more limiting condition of high pH for long term periods.

Offsite and Control Room thyroid doses were reevaluated considering the impact of lower pH during the injection phase. The results are within 10 CFR 100 and General Design Criteria (GDC) 19 limits.

ENCLOSURE 2

REQUEST FOR TECHNICAL SPECIFICATION CHANGES
ELIMINATION OF CONTAINMENT SPRAY ADDITIVE SYSTEM

10 CFR 50.92 EVALUATION

Pursuant to 10 CFR 50.92, Georgia Power Company (GPC) has evaluated the proposed amendment and has determined that operation of the facility in accordance with the proposed amendment would not involve a significant hazards consideration. The basis for this determination is as follows:

1. The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated. The proposed change involves replacement of concentrated NaOH injected via the containment spray system with trisodium phosphate (TSP) stored in the containment and dissolved in the sump recirculation solution to maintain acceptable post accident spray/recirculation solution chemistry. Deletion of the concentrated NaOH will eliminate a personnel hazard. The pH control system functions in response to an accident and does not involve or have any effect on any initiating event for any accident previously evaluated. Operation under the proposed amendment will continue to ensure that iodine potentially released post-LOCA is retained in the sump solution, and resultant offsite and control room thyroid doses are within the limits of 10 CFR 100 and 10 CFR 50, Appendix A, General Design Criterion 19, respectively.

2. The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated. The deleted equipment is isolated from the remaining equipment by blind flanges, locked closed valves, cut and capped piping, determinated and/or spared cables; and interfaces are analyzed to ensure the remaining required equipment meets applicable original design requirements. The new equipment (TSP and baskets) is a passive pH control system and is supported and analyzed to ensure there are no adverse interfaces (e.g. pipe break, jet impingement, seismic) with existing equipment, systems, or structures.

3. The proposed change does not involve a significant reduction in a margin of safety. The slight change in recirculation solution pH maintains adequate protection against chloride induced stress corrosion cracking of austenitic stainless steel and maintains the capability of the solution to retain iodine. It results in an insignificant increase in the post-accident rate of hydrogen generation, which remains well within the existing

capacity of the hydrogen recombiners. The increased mass in the containment will have no significant impact on post-accident flood levels, recirculation solution boron concentration, or peak clad temperatures. No other operating parameters for systems, structures, or components assumed to operate in the safety analysis are changed. The offsite and control room doses meet the limits of 10 CFR 100 and GDC 19 respectively. Because the trisodium phosphate is nonvolatile and the baskets are protected with solid covers and are located slightly above the floor in the containment where access is strictly controlled, a surveillance interval of once per refueling outage provides assurance that the TSP will be available when required.

Conclusion

Based on the preceding analysis, GPC has determined that the proposed change to the Technical Specifications will not significantly increase the probability or consequences of an accident previously evaluated, create the possibility of a new or different kind of accident from any accident previously evaluated, or involve a significant reduction in a margin of safety. GPC therefore concludes that the proposed change meets the requirements of 10 CFR 50.92 (c) and does not involve a significant hazards consideration.

ENCLOSURE 3

REQUEST FOR TECHNICAL SPECIFICATION CHANGES
ELIMINATION OF CONTAINMENT SPRAY ADDITIVE SYSTEM

PROPOSED CHANGES

The proposed changes to the Vogtle Electric Generating Plant Technical Specifications are to be implemented as follows:

PHASE 1 - To become effective following Unit 2 Cycle 4 shutdown in Spring 1995.

THIS PAGE APPLICABLE TO UNIT 2 ONLY

EMERGENCY CORE COOLING SYSTEMS

3/4.5.5 ECCS RECIRCULATION FLUID pH CONTROL SYSTEM

LIMITING CONDITION FOR OPERATION

3.5.5 The recirculation fluid pH control system shall be OPERABLE with sufficient trisodium phosphate crystals available in the storage baskets in the containment building.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION: With the recirculating fluid pH control system INOPERABLE, restore the system to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours; restore the recirculating fluid pH control system to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.5.5 During each refueling outage the recirculating solution pH control system shall be demonstrated operable by visually verifying that the:

a. Three (3) storage baskets are in place,

b. have maintained their integrity, and

c. are filled with trisodium phosphate crystals such that the level is between the indicated fill marks.

THIS PAGE APPLICABLE TO UNIT 1 ONLY

CONTAINMENT SYSTEMS

SPRAY ADDITIVE SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.2 The Spray Additive System shall be OPERABLE with:

a. A spray additive tank containing a volume of between 3700 (89.9%) and 4000 (97.2%) gallons (LI-0931A, LI-0931B) of between 30 and 32% by weight NaOH solution, and

b. Two spray additive eductors each capable of adding NaOH solution from the spray additive tank to a Containment Spray System pump flow.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With the Spray Additive System inoperable, restore the system to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours; restore the Spray Additive System to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.2 The Spray Additive System shall be demonstrated OPERABLE:

a. At least once per 31 days by 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;

b. At least once per 6 months by:

1) Verifying the contained solution volume in the tank, and

2) Verifying the concentration of the NaOH solution by chemical analysis.

c. At least once per 18 months during shutdown, by verifying that each automatic valve in the flow path actuates to its correct position on a containment spray actuation test signal; and

d. At least once per 5 years by verifying each eductor suction flow rate (to be determined during preoperational tests) by isolating the spray additive tank, opening the valves in the miniflow lines, and the valve in the eductor test line, and running the respective pump:

1) Train A 130 ± 30 gpm

2) Train B 120 ± 30 gpm

TABLE 3.8-1 (Continued)

SAFETY-RELATED
MOTOR-OPERATED VALVES THERMAL OVERLOAD
PROTECTION BYPASS DEVICES

VALVE NUMBER	FUNCTION
1/2HV-8105; 8106	Chg Pump to RCS Isolation
1/2HV-8807A, B; 8924	HHSI Suction to Chg/SI Suction
1/2HV-8801A, B	BIT Discharge
1/2HV-8808A, B, C, D	Accumulator Discharge
1/2HV-8811A, B	Containment Emergency Sump Isolation
1/2HV-8812A, B	RHR Suction from RWST
1/2HV-8809A, B	RHR Discharge Header
1/2HV-8804A	RHR Hx No. 1 Outlet to Charge Pump
1/2HV-8804B	RHR Hx No. 2 Outlet to SI Pumps
1/2HV-8806	RWST Discharge Header to SI Pumps
1/2HV-8923A, B	SI Pump Suction Isolation
1/2HV-8813; 8814	SI Pump Miniflow
1/2HV-8821A, B	SI Pump Crosschannel
1/2HV-8835	SI Pump Discharge to Cold Legs
1/2HV-8840	RHR Pump Discharge to Hot Legs
1/2HV-8802A, B	SI Pump Discharge Header
1/2HV-8701A, B; 8702A, B	RHR Suction from RCS Hot Legs 1, 4
1/2FV-0610; 0611	RHR Miniflow
1/2HV-8716A, B	RHR Cross Connect
1/2HV-9002A, B	Spray Pump Containment Emergency Sump Isolation
1/2HV-9003A, B	Spray Pump Containment Emergency Sump Isolation
1/2HV-9017A, B	Spray Pump Suction from RWST
1/2HV-9001A, B	Spray Pump Discharge Header
1/2HV-8994A, B	Spray Additive Tank Discharge (Unit 1 only)
1/2HV-11600	NSCW Pump Discharge Isolation
1/2HV-11605	NSCW Pump Discharge Isolation
1/2HV-11606	NSCW Pump Discharge Isolation
1/2HV-11607	NSCW Pump Discharge Isolation
1/2HV-11612	NSCW Pump Discharge Isolation
1/2HV-11613	NSCW Pump Discharge Isolation
1/2PV-2550A	Piping Penetration Room to Atmosphere
1/2PV-2551A	Piping Penetration Room to Atmosphere
1/2HV-3009	TDAFP Steam Supply Isolation
1/2HV-3019	TDAFP Steam Supply Isolation
1/2HV-8116	Charging Pump Discharge Boron Injection
1/2PV-15129	TDAFP Trip and Throttle Valve
1/2HV-2582A	CTB Cooling Unit A7001
1/2HV-2582B	CTB Cooling Unit A7002
1/2HV-2583A	CTB Cooling Unit A7003
1/2HV-2583B	CTB Cooling Unit A7004
1/2HV-2584A	CTB Cooling Unit A7005
1/2HV-2584B	CTB Cooling Unit A7006
1/2HV-2585A	CTB Cooling Unit A7007
1/2HV-2585B	CTB Cooling Unit A7008
1/2 HV-3548	RCS Hot Leg Sample

REFUELING WATER STORAGE TANK (Continued)

The limits on contained water volume (Unit 1)/7.5(Unit 2) and boron concentration of the RWST also ensure a pH value of between 8.0 and 10.5 for the solution recirculated within containment after a LOCA. This pH band minimizes the evolution of iodine and minimizes the effect of chloride and caustic stress corrosion on mechanical systems and components.

3/4.5.5 ECCS RECIRCULATION FLUID pH CONTROL SYSTEM

The OPERABILITY of the ECCS recirculation fluid pH control system ensures that there is between 11,484 pounds (220 cubic feet) and 14,612 pounds (260 cubic feet) of trisodium phosphate crystals ($Na_3PO_4 \cdot 12\ H_2O \cdot \frac{1}{4}$ NaOH) available in containment to raise the pH of the recirculating solution into the range of 7.5 to 10.5. This pH range maintains iodine retention in solution and minimizes the potential for chloride induced stress corrosion cracking of austenitic stainless steel.

ENCLOSURE 3 (CONTINUED)

REQUEST FOR TECHNICAL SPECIFICATION CHANGES
ELIMINATION OF CONTAINMENT SPRAY ADDITIVE SYSTEM

PROPOSED CHANGES

PHASE 2 - To become effective following Unit 1 Cycle 6 shutdown in Spring 1996.

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

THIS PAGE APPLICABLE TO UNIT 2 ONLY

EMERGENCY CORE COOLING SYSTEMS

3/4.5.5 ECCS RECIRCULATION FLUID pH CONTROL SYSTEM

LIMITING CONDITION FOR OPERATION

3.5.5 The recirculation fluid pH control system shall be OPERABLE with sufficient trisodium phosphate crystals available in the storage baskets in the containment building.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION: With the recirculating fluid pH control system INOPERABLE, restore the system to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours; restore the recirculating fluid pH control system to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.5.5 During each refueling outage the recirculating solution pH control system shall be demonstrated operable by visually verifying that the:

a. Three (3) storage baskets are in place,

b. have maintained their integrity, and

c. are filled with trisodium phosphate crystals such that the level is between the indicated fill marks.

THIS PAGE APPLICABLE TO UNIT 1 ONLY

CONTAINMENT SYSTEMS

SPRAY ADDITIVE SYSTEM

Specification 3.6.2.2 Deleted

LIMITING CONDITION FOR OPERATION

3.6.2.2 The Spray Additive System shall be OPERABLE with:

a. A spray additive tank containing a volume of between 3700 (89.9%) and 4000 (97.2%) gallons (LI-0931A, LI-0931B) of between 30 and 32% by weight NaOH solution, and

b. Two spray additive eductors each capable of adding NaOH solution from the spray additive tank to a Containment Spray System pump flow.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With the Spray Additive System inoperable, restore the system to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours; restore the Spray Additive System to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.2 The Spray Additive System shall be demonstrated OPERABLE:

a. At least once per 31 days by 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;

b. At least once per 6 months by:

1) Verifying the contained solution volume in the tank, and

2) Verifying the concentration of the NaOH solution by chemical analysis.

c. At least once per 18 months during shutdown, by verifying that each automatic valve in the flow path actuates to its correct position on a containment spray actuation test signal; and

d. At least once per 5 years by verifying each eductor suction flow rate (to be determined during preoperational tests) by isolating the spray additive tank, opening the valves in the miniflow lines, and the valve in the eductor test line, and running the respective pump:

1) Train A 130 ± 30 gpm

2) Train B 120 ± 30 gpm

TABLE 3.8-1 (Continued)

SAFETY-RELATED
MOTOR-OPERATED VALVES THERMAL OVERLOAD
PROTECTION BYPASS DEVICES

VALVE NUMBER	FUNCTION
1/2HV-8105; 8106	Chg Pump to RCS Isolation
1/2HV-8807A, B; 8924	HHSI Suction to Chg/SI Suction
1/2HV-8801A, B	BIT Discharge
1/2HV-8808A, B, C, D	Accumulator Discharge
1/2HV-8811A, B	Containment Emergency Sump Isolation
1/2HV-8812A, B	RHR Suction from RWST
1/2HV-8809A, B	RHR Discharge Header
1/2HV-8804A	RHR Hx No. 1 Outlet to Charge Pump
1/2HV-8804B	RHR Hx No. 2 Outlet to SI Pumps
1/2HV-8806	RWST Discharge Header to SI Pumps
1/2HV-8923A, B	SI Pump Suction Isolation
1/2HV-8813; 8814	SI Pump Miniflow
1/2HV-8821A, B	SI Pump Crosschannel
1/2HV-8835	SI Pump Discharge to Cold Legs
1/2HV-8840	RHR Pump Discharge to Hot Legs
1/2HV-8802A, B	SI Pump Discharge Header
1/2HV-8701A, B; 8702A, B	RHR Suction from RCS Hot Legs 1, 4
1/2FV-0610; 0611	RHR Miniflow
1/2HV-8716A, B	RHR Cross Connect
1/2HV-9002A, B	Spray Pump Containment Emergency Sump Isolation
1/2HV-9003A, B	Spray Pump Containment Emergency Sump Isolation
1/2HV-9017A, B	Spray Pump Suction from RWST
1/2HV-9001A, B	Spray Pump Discharge Header
~~1/2HV-8994A, B~~	~~Spray Additive Tank Discharge~~ (Unit 1 only)
1/2HV-11600	NSCW Pump Discharge Isolation
1/2HV-11605	NSCW Pump Discharge Isolation
1/2HV-11606	NSCW Pump Discharge Isolation
1/2HV-11607	NSCW Pump Discharge Isolation
1/2HV-11612	NSCW Pump Discharge Isolation
1/2HV-11613	NSCW Pump Discharge Isolation
1/2PV-2550A	Piping Penetration Room to Atmosphere
1/2PV-2551A	Piping Penetration Room to Atmosphere
1/2HV-3009	TDAFP Steam Supply Isolation
1/2HV-3019	TDAFP Steam Supply Isolation
1/2HV-8116	Charging Pump Discharge Boron Injection
1/2PV-15129	TDAFP Trip and Throttle Valve
1/2HV-2582A	CTB Cooling Unit A7001
1/2HV-2582B	CTB Cooling Unit A7002
1/2HV-2583A	CTB Cooling Unit A7003
1/2HV-2583B	CTB Cooling Unit A7004
1/2HV-2584A	CTB Cooling Unit A7005
1/2HV-2584B	CTB Cooling Unit A7006
1/2HV-2585A	CTB Cooling Unit A7007
1/2HV-2585B	CTB Cooling Unit A7008
1/2 HV-3548	RCS Hot Leg Sample

REFUELING WATER STORAGE TANK (Continued) (Unit 1) 7.5 (Unit 2)

The limits on contained water volume and boron concentration of the RWST also ensure a pH value of between 7.5 and 10.5 for the solution recirculated within containment after a LOCA. This pH band minimizes the evolution of iodine and minimizes the effect of chloride and caustic stress corrosion on mechanical systems and components.

3/4.5.5 ECCS RECIRCULATION FLUID pH CONTROL SYSTEM

The OPERABILITY of the ECCS recirculation fluid pH control system ensures that there is between 11,484 pounds (220 cubic feet) and 14,612 pounds (260 cubic feet) of trisodium phosphate crystals ($Na_3PO_4 \cdot 12\ H_2O \cdot \frac{1}{4}$ NaOH) available in containment to raise the pH of the recirculating solution into the range of 7.5 to 10.5. This pH range maintains iodine retention in solution and minimizes the potential for chloride induced stress corrosion cracking of austenitic stainless steel.

BASES

CONTAINMENT VENTILATION SYSTEM (Continued)

The use of the containment purge lines is restricted to the 14-inch purge supply and exhaust isolation valves since, unlike the 24-inch valves, the 14-inch valves are capable of closing during a LOCA or steam line break accident. Therefore, the SITE BOUNDARY dose guideline of 10 CFR Part 100 would not be exceeded in the event of an accident during containment PURGING operation. Only safety-related reasons; e.g., containment pressure control or the reduction of airborne radioactivity to facilitate personnel access for surveillance and maintenance activities, should be used to justify the opening of these isolation valves.

Leakage integrity tests with a maximum allowable leakage rate for containment purge supply and exhaust supply valves will provide early indication of resilient material seal degradation and will allow opportunity for repair before gross leakage failures could develop. The 0.60 L_a leakage limit of Specification 3.6.1.2b. shall not be exceeded when the leakage rates determined by the leakage integrity tests of these valves are added to the previously determined total for all valves and penetrations subject to Type B and C tests.

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

3/4.6.2.1 CONTAINMENT SPRAY SYSTEM

The OPERABILITY of the Containment Spray System ensures that containment depressurization and cooling capability will be available in the event of a LOCA or steam line break. The pressure reduction and resultant lower containment leakage rate are consistent with the assumptions used in the safety analyses.

The Containment Spray System and the Containment Cooling System both provide post-accident cooling of the containment atmosphere. However, the Containment Spray System also provides a mechanism for removing iodine from the containment atmosphere and therefore the time requirements for restoring an inoperable Spray System to OPERABLE status have been maintained consistent with that assigned other inoperable ESF equipment.

3/4.6.2.2 SPRAY ADDITIVE SYSTEM (Specification 3/4.6.2.2 Deleted)

~~The OPERABILITY of the Spray Additive System ensures that sufficient NaOH is added to the containment spray in the event of a LOCA. The limits on NaOH volume and concentration ensure a pH value of between 8.0 and 10.5 for the solution recirculated within containment after a LOCA. This pH band minimizes the evolution of iodine and minimizes the effect of chloride and caustic stress corrosion on mechanical systems and components. The solution volume limits (3700-4000 gallons) represent the required solution to be delivered (i.e., the delivered solution volume is that volume above the tank discharge). These assumptions are consistent with the iodine removal efficiency assumed in the safety analyses.~~

PROCEDURES AND PROGRAMS (Continued)

c. The change is documented, reviewed in accordance with Specification 6.7.2 and approved by the General Manager-Nuclear Plant or department head of the responsible department within 14 days of implementation.

6.7.4 The following programs shall be established, implemented, and maintained:

a. Primary Coolant Sources Outside Containment

A program to reduce leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. The systems include the following:

1) Residual Heat Removal System
2) Containment Spray System ~~(excluding NaOH Subsystem)~~
3) Safety Injection (excluding Boron Injection & Accumulators)
4) Chemical and Volume Control System (Letdown and Charging Pumps)
5) Post Accident Processing System
6) Gaseous Waste Processing System
7) Nuclear Sampling System (Pressurizer steam and liquid sample lines, Reactor Coolant sample lines, RHR sample lines, CVCS Demineralizer and Letdown Heat Exchanger sample lines only)

The program shall include the following:

1) Preventive maintenance and periodic visual inspection requirements, and

2) Leak test requirements for each system at refueling cycle intervals or less.

b. In-Plant Radiation Monitoring

A program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

1) Training of personnel,

2) Procedures for monitoring, and

3) Provisions for maintenance of sampling and analysis equipment.

c. Secondary Water Chemistry

A program for monitoring of secondary water chemistry to inhibit steam generator tube degradation. This program shall include: