50-317

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

October 5, 1995

Mr. Robert E. Denton
Vice President - Nuclear Energy
Baltimore Gas and Electric Company
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, MD 20657-4702

SUBJECT: ISSUANCE OF AMENDMENTS FOR CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 1 (TAC NO. M91553) AND UNIT NO. 2 (TAC NO. M91554)

Dear Mr. Denton:

The Commission has issued the enclosed Amendment No. 207to Facility Operating License No. DPR-53 and Amendment No. 185 to Facility Operating License No. DPR-69 for the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TSs) in response to your application transmitted by letter dated January 3, 1995.

The amendments revise the TSs to increase the amount of Trisodium Phosphate (TSP) Dodecahydrate located in the containment sump baskets which is required to be verified by TS surveillance. The test requirements for verifying that the appropriate pH (acidity/alkalinity) would be maintained in the containment sump water following a design-basis accident are moved from the TSs to the TS Bases section; however, the requirement to perform the test remains in the TSs. The associated TS Bases sections are updated to reflect the changes.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,

Original signed by:

Daniel G. McDonald, Jr., Senior Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-317
and 50-318

Enclosures: 1. Amendment No. 207 to DPR-53
2. Amendment No. 185 to DPR-69
3. Safety Evaluation

cc w/encls: See next page

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A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,

Daniel G. McDonald, Jr., Senior Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-317
and 50-318

Enclosures: 1. Amendment No. 207 to DPR-53
2. Amendment No. 185 to DPR-69
3. Safety Evaluation

cc w/encls: See next page

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DATED: October 5, 1995

AMENDMENT NO. 207 TO FACILITY OPERATING LICENSE NO. DPR-53-CALVERT CLIFFS UNIT 1
AMENDMENT NO. 185 TO FACILITY OPERATING LICENSE NO. DPR-69-CALVERT CLIFFS UNIT 2

Docket File
PUBLIC
PDI-1 Reading
S. Varga, 14/E/4
L. Marsh
S. Little
D. McDonald
OGC
G. Hill (4)
C. Grimes
ACRS (4)
C. Cowgill, Region I
J. Strosnider

cc: Plant Service list

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-317

CALVERT CLIFFS NUCLEAR POWER PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 207
License No. DPR-53

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Baltimore Gas and Electric Company (the licensee) dated January 31, 1995, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.2. of Facility Operating License No. DPR-53 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 207, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

LB Marsh

Ledyard B. Marsh, Director
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 5, 1995

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-318

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 185
License No. DPR-69

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Baltimore Gas and Electric Company (the licensee) dated January 31, 1995, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.2. of Facility Operating License No. DPR-69 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 185, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Ledyard B. Marsh, Director
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 5, 1995

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 207 FACILITY OPERATING LICENSE NO. DPR-53

AMENDMENT NO. 185 FACILITY OPERATING LICENSE NO. DPR-69

DOCKET NOS. 50-317 AND 50-318

Revise Appendix A as follows:

Remove Pages	Insert Pages
3/4 5-5	3/4 5-5
B 3/4 5-2	B 3/4 5-2
B 3/4 5-3	B 3/4 5-3
B 3/4 5-4	B 3/4 5-4

SURVEILLANCE REQUIREMENTS (Continued)

e. At least once per **REFUELING INTERVAL** by:

1. Verifying the Shutdown Cooling System open-permissive interlock prevents the Shutdown Cooling System suction isolation valves from being opened with a simulated or actual RCS pressure signal of $\geq$ 309 psia.

2. A visual inspection of the containment sump and verifying that the subsystem suction inlets are not restricted by debris and that the sump components (trash racks, screens, etc.) show no evidence of structural distress or corrosion.

3. Verifying that a minimum total of 289.3 cubic feet of solid granular trisodium phosphate dodecahydrate (TSP) is contained within the TSP storage baskets.

4. Verifying that a sample from the TSP baskets provides adequate pH adjustment of water borated to be representative of the post-LOCA sump condition.

f. At least once per **REFUELING INTERVAL**, during shutdown, by:

1. Verifying that each automatic valve in the flow path actuates to its correct position on a Safety Injection Actuation test signal.

2. Verifying that each of the following pumps start automatically upon receipt of a Safety Injection Actuation Test Signal:

a. High-Pressure Safety Injection Pump.

b. Low-Pressure Safety Injection Pump.

SURVEILLANCE REQUIREMENTS (Continued)

e. At least once per **REFUELING INTERVAL** by:

1. Verifying the Shutdown Cooling System open-permissive interlock prevents the Shutdown Cooling System suction isolation valves from being opened with a simulated or actual RCS pressure signal of $\geq$ 309 psia.

2. A visual inspection of the containment sump and verifying that the subsystem suction inlets are not restricted by debris and that the sump components (trash racks, screens, etc.) show no evidence of structural distress or corrosion.

3. Verifying that a minimum total of 289.3 cubic feet of solid granular trisodium phosphate dodecahydrate (TSP) is contained within the TSP storage baskets.

4. Verifying that a sample from the TSP baskets provides adequate pH adjustment of water borated to be representative of the post-LOCA sump condition.

f. At least once per **REFUELING INTERVAL**, during shutdown, by:

1. Verifying that each automatic valve in the flow path actuates to its correct position on a Safety Injection Actuation test signal.

2. Verifying that each of the following pumps start automatically upon receipt of a Safety Injection Actuation Test Signal:

a. High-Pressure Safety Injection Pump.

b. Low-Pressure Safety Injection Pump.

pipe downward. In addition, each ECCS subsystem provides long term core cooling capability in the recirculation mode during the accident recovery period.

Portions of the Low Pressure Safety Injection (LPSI) System flowpath are common to both subsystems. This includes the LPSI flow control valve, CV-306, the flow orifice downstream of CV-306, and the four LPSI loop isolation valves. Although the portions of the flowpath are common, the system design is adequate to ensure reliable ECCS operation due to the short period of LPSI System operation following a design basis Loss of Coolant Incident prior to recirculation. The LPSI System design is consistent with the assumptions in the safety analysis.

The trisodium phosphate dodecahydrate (TSP) stored in dissolving baskets located in the containment basement is provided to minimize the possibility of corrosion cracking of certain metal components during operation of the ECCS following a LOCA. The TSP provides this protection by dissolving in the sump water and causing its final pH to be raised to $\geq$ 7.0. The requirement to dissolve a representative sample of TSP in a sample of borated water provides assurance that the stored TSP will dissolve in borated water at the postulated post LOCA temperatures. Testing must be performed to ensure the solubility and buffering ability of the TSP after exposure to the containment environment. A representative sample of 3.43 $\pm$ 0.05 grams of TSP from one of the baskets in containment is submerged in 1 $\pm$ 0.01 liters of water at a boron concentration of 3106 $\pm$ 50 ppm and at a standard temperature of 120 $\pm$ 5°F. Without agitation, let the solution stand for four hours. The liquid is then decanted and mixed, the temperature adjusted to 77 $\pm$ 2°F and the pH measured. At this point, the pH must be $\geq$ 6.0. The representative sample weight is based on the minimum required TSP amount of 14,371 pounds mass, which, at a manufactured density, corresponds to the minimum volume of 289.3 cubic feet, and a maximum possible sump amount following a LOCA of 4,503,500 pounds mass, normalized to buffer a 1 $\pm$ 0.01 liter sample. The boron concentration of the test water is representative of a maximum possible concentration corresponding to the maximum possible sump volume following a LOCA. Agitation of the test solution is prohibited since an adequate standard for the agitation intensity cannot be specified. The test time of four hours is necessary to allow time for the dissolved TSP to naturally diffuse through the sample solution. In the containment sump following a LOCA, rapid mixing would occur, significantly decreasing the actual amount of time before the required pH is achieved. This would ensure compliance with the Standard Review Plan requirement of a pH $\geq$ 7.0 by the onset of recirculation following a LOCA.

The Surveillance Requirements provided to ensure **OPERABILITY** of each component ensure that as a minimum, the assumptions used in the safety analyses are met and the subsystem **OPERABILITY** is maintained. The surveillance requirement for flow balance testing provides assurance that proper ECCS flows will be maintained in the event of a LOCA. Maintenance of proper flow resistance and pressure drop in the piping system to each

BASES

Portions of the Low Pressure Safety Injection (LPSI) System flowpath are common to both subsystems. This includes the LPSI flow control valve, CV-306, the flow orifice downstream of CV-306, and the four LPSI loop isolation valves. Although the portions of the flowpath are common, the system design is adequate to ensure reliable ECCS operation due to the short period of LPSI System operation following a design basis Loss of Coolant Incident prior to recirculation. The LPSI System design is consistent with the assumptions in the safety analysis.

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The Surveillance Requirements provided to ensure **OPERABILITY** of each component ensure that at a minimum, the assumptions used in the safety analyses are met and the subsystem **OPERABILITY** is maintained. The surveillance requirement for flow balance testing provides assurance that proper ECCS flows will be maintained in the event of a LOCA. Maintenance of proper flow resistance and pressure drop in the piping system to each injection point is necessary to: (1) prevent total pump flow from exceeding runout conditions when the system is in its minimum resistance configuration, (2) provide the proper flow split between injection points

injection point is necessary to: (1) prevent total pump flow from exceeding runout conditions when the system is in its minimum resistance configuration, (2) provide the proper flow split between injection points in accordance with the assumptions used in the ECCS-LOCA analyses, and (3) provide an acceptable level of total ECCS flow to all injection points equal to or above that assumed in the ECCS-LOCA analyses. Minimum HPSI flow requirements for temperatures above 365°F are based upon small break LOCA calculations which credit charging pump flow following an SIAS. Surveillance testing includes allowances for instrumentation and system leakage uncertainties. The 470 gpm requirement for minimum HPSI flow from the three lowest flow legs includes instrument uncertainties but not system check valve leakage. The **OPERABILITY** of the charging pumps and the associated flow paths is assured by the Boration System Specification 3/4.1.2. Specification of safety injection pump total developed head ensures pump performance is consistent with safety analysis assumptions.

The surveillance requirement for the Shutdown Cooling (SDC) System open-permissive interlock provides assurance that the SDC suction isolation valves are prevented from being remotely opened when the RCS pressure is at or above the SDC System design suction pressure of 350 psia. The suction piping to the LPSI pumps is the SDC System component with the limiting design pressure rating. The interlock provides assurance that double isolation of the SDC System from the RCS is preserved whenever RCS pressure is at or above the SDC System design pressure. The 309 psia value specified for this surveillance is the actual pressurizer pressure at the instrument tap elevation for PT-103 and PT-103-1 when the SDC System suction pressure is 350 psia. The Surveillance Test Procedure for this surveillance will contain the required compensation to be applied to this value to account for instrument uncertainties. This test is performed using a simulated RCS pressure input.

At indicated RCS temperatures of 365°F and less, HPSI injection flow is limited to less than or equal to 210 gpm except in response to excessive reactor coolant leakage. With excessive RCS leakage (LOCA), make-up requirements could exceed an HPSI flow of 210 gpm. Overpressurization is prevented by controlling other parameters, such as RCS pressure and subcooling. This provides overpressure protection in the low temperature region. An analysis has been performed which shows this flow rate is more than adequate to meet core cooling safety analysis assumptions. HPSI pumps are not required to auto-start when the RCS is in the MPT enable condition. The Safety Injection Tanks provide immediate injection of borated water into the core in the event of an accident, allowing adequate time for an operator to take action to start a HPSI pump.

Surveillance testing of HPSI pumps is required to ensure pump **OPERABILITY**. Some surveillance testing requires that the HPSI pumps deliver flow to the RCS. To allow this testing to be done without increasing the potential for overpressurization of the RCS, either the RWT must be isolated or the HPSI pump flow must be limited to less than or equal to 210 gpm or an RCS vent greater than 2.6 square inches must be provided.

in accordance with the assumptions used in the ECCS-LOCA analyses, and (3) provide an acceptable level of total ECCS flow to all injection points equal to or above that assumed in the ECCS-LOCA analyses. Minimum HPSI flow requirements for temperatures above 301°F are based upon small break LOCA calculations which credit charging pump flow following a SIAS. Surveillance testing includes allowances for instrumentation and system leakage uncertainties. The 470 gpm requirement for minimum HPSI flow from the three lowest flow legs includes instrument uncertainties but not system check valve leakage. The **OPERABILITY** of the charging pumps and the associated flow paths is assured by the Boration System Specifications 3/4.1.2. Specification of safety injection pump total developed head ensures pump performance is consistent with safety analysis assumptions.

The surveillance requirement for the Shutdown Cooling (SDC) System open-permissive interlock provides assurance that the SDC suction isolation valves are prevented from being remotely opened when the RCS pressure is at or above the SDC System design suction pressure of 350 psia. The suction piping to the LPSI pumps is the SDC System component with the limiting design pressure rating. The interlock provides assurance that double isolation of the SDC System from the RCS is preserved whenever RCS pressure is at or above the SDC System design pressure. The 309 psia value specified for this surveillance is the actual pressurizer pressure at the instrument tap elevation for PT-103 and PT-103-1 when the SDC System suction pressure is 350 psia. The Surveillance Test Procedure for this surveillance will contain the required compensation to be applied to this value to account for instrument uncertainties. This test is performed using a simulated RCS pressure input.

At indicated RCS temperatures of 301°F and less, HPSI injection flow is limited to less than or equal to 210 gpm except in response to excessive reactor coolant leakage. With excessive RCS leakage (LOCA), make-up requirements could exceed a HPSI flow of 210 gpm. Overpressurization is prevented by controlling other parameters, such as RCS pressure and subcooling. This provides overpressure protection in the low temperature region. An analysis has been performed which shows this flow rate is more than adequate to meet core cooling safety analysis assumptions. HPSI pumps are not required to auto-start when the RCS is in the MPT enable condition. The Safety Injection Tanks provide immediate injection of borated water into the core in the event of an accident, allowing adequate time for an operator to take action to start an HPSI pump.

Surveillance testing of HPSI pumps is required to ensure pump operability. Some surveillance testing requires that the HPSI pumps deliver flow to the RCS. To allow this testing to be done without increasing the potential for overpressurization of the RCS, either the RWT must be isolated or the HPSI pump flow must be limited to less than or equal to 210 gpm or an RCS vent greater than or equal to 2.6 square inches must be provided.

3/4.5.4 REFUELING WATER TANK (RWT)

The **OPERABILITY** of the RWT as part of the ECCS ensures that a sufficient supply of borated water is available for injection by the ECCS in the event of a LOCA. The limits on RWT minimum volume and boron concentration ensure that 1) sufficient water is available within containment to permit recirculation cooling flow to the core, and 2) the reactor will remain subcritical in the cold condition following mixing of the RWT and the RCS water volumes with all control rods inserted except for the most reactive control assembly. These assumptions are consistent with the LOCA analyses.

The contained water volume limit includes an allowance for water not usable because of tank discharge line location or other physical characteristics.

3/4.5.4 REFUELING WATER TANK (RWT)

The **OPERABILITY** of the RWT as part of the ECCS ensures that a sufficient supply of borated water is available for injection by the ECCS in the event of a LOCA. The limits on RWT minimum volume and boron concentration ensure that 1) sufficient water is available within containment to permit recirculation cooling flow to the core, and 2) the reactor will remain subcritical in the cold condition following mixing of the RWT and the RCS water volumes with all control rods inserted except for the most reactive control assembly. These assumptions are consistent with the LOCA analyses.

The contained water volume limit includes an allowance for water not usable because of tank discharge line location or other physical characteristics.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 207 TO FACILITY OPERATING LICENSE NO. DPR-53

AND AMENDMENT NO. 185 TO FACILITY OPERATING LICENSE NO. DPR-69

BALTIMORE GAS AND ELECTRIC COMPANY

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2

DOCKET NOS. 50-317 AND 50-318

1.0 INTRODUCTION

By letter dated January 31, 1995, the Baltimore Gas and Electric Company (BGE or the licensee) submitted a request for changes to the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, Technical Specifications (TSs). The requested changes would revise the TSs for the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, to increase the amount of Trisodium Phosphate (TSP) Dodecahydrate located in the sump baskets of each unit from 100^3 feet to 298.3^3 feet. The requested change is the result of an reanalysis performed by the licensee that indicated an increase in the amount of TSP was necessary to assure that the appropriate pH (acidity/alkalinity) would be maintained in the sump water subsequent to a loss-of-coolant accident (LOCA).

Specifically, the request would change the TS value in TS 4.5.2.e.3 from the current value of 100^3 feet of TSP to 289^3 feet of TSP. TS 4.5.2.e.4 would also be changed by moving the details of the required tests to the TS Bases Section B 3/4.5, but the requirement to perform the tests would remain. The requested changes will not alter the current acceptance criteria or test methods, with the exception of using an initial test temperature of 120 °F and allowing adjustments to the ratio of TSP to water to reflect changing plant conditions.

The containment spray activates, following a LOCA, to limit the containment pressure and temperature which in turn will reduce the possibility of airborne radioactivity leakage to the outside environment. The containment spray pumps discharge borated water from the refueling water storage tank (RWST) to the spray headers and nozzles which are located near the top of the containment. The spray water is collected in the containment sump where it is mixed with the reactor coolant system (RCS) water which has been released as the result of a LOCA. When the inventory in the RWST is nearly depleted, a Recirculation Actuation Signal (RAS) is initiated which switches the suction of the containment spray pumps from the RWST to the containment sump.

The Updated Final Safety Analysis Report (UFSAR), Chapter 14.24, "Maximum Hypothetical Accident," assumes the containment spray has a minimum pH of 5.0 for pre-RAS conditions for calculating the initial iodine removal by the containment spray and a containment sump pH of 7.0 to assure iodine retention during post-RAS conditions when the suction of the spray pumps has been switched to the containment sump.

2.0 EVALUATION

The current TS 4.5.2.e.3 requires verification that a minimum of 100^3 feet of solid granular TSP is contained within the TSP storage baskets. Amendment Nos. 48 and 31 for Units 1 and 2, respectively, established the 100^3 feet of TSP to maintain a containment sump pH of 7.0 during post RAS conditions. However, the licensee was verifying the basis for its TSP Surveillance Test Procedure (STP) and recalculated the amount of TSP required to maintain the pH of the sump water at 7.0. The results of the new calculations indicated that the minimum quantity of TSP necessary to maintain a pH of 7.0 is 289.3^3 feet which is based on the highest expected boron concentration in the sump water following a LOCA. The as found amounts measured was 131^3 feet in Unit 1 and 129^3 feet in Unit 2.

The licensee performed an evaluation using the smallest as found amount of TSP, 129^3 feet, which indicated that it would yield a pH of equal to or greater than 6.5. The licensee concluded, and the staff agrees, that there is no significant difference in the iodine retention or protection from stress crack corrosion between a pH of 6.5 and a pH of 7; thus, the as found amounts of TSP did not result in a condition adverse to safety. Based on the results of its evaluation, the licensee performed a 10 CFR 50.59 evaluation and installed larger baskets capable of holding 289.3^3 feet of TSP in the sumps of each unit during their respective refueling outages. The units are currently operating with 289.3^3 feet of TSP which is acceptable in that the TSs establish a minimum amount of TSP and allows an increase if needed to maintain the required pH to account for changing plant conditions.

NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports For Nuclear Power Plants," dated June 1978, indicates that a minimum pH of 7.0 should be maintained in the sump water. This level of pH not only controls the airborne activity by trapping radioactive iodine in solution, but also reduces the chloride stress corrosion cracking of metal components located in the containment and reduces hydrogen generation from the corrosion of galvanized materials in containment. In addition, the CCNPP1/2 UFSAR, Chapter 14.24, "Maximum Hypothetical Accident," assumes a pre-RAS containment spray pH of 5.0 for the iodine removal calculation and a post-RAS containment sump pH of 7.0 for iodine retention.

Therefore, the NRC staff has concluded that changing the minimum value of TS 4.5.2.e.3 from 100^3 feet to 289.3^3 feet of TSP is acceptable.

The proposed change to TS 4.5.2.e.4 relocates the details of the testing to the TS Base, does not change the requirement to perform the test, the current

test acceptance criteria or the test methods. However, the change will permit adjustments to the ratio of the TSP to borated water. The boron concentration of the test water will be representative of the maximum possible concentration corresponding to the maximum sump volume following a LOCA. The ratio changes can be performed under the controls of 10 CFR 50.59 as long as the ratio is reflective of a minimum value of 289.3^3 feet of TSP. Thus, if changes to the primary system (such as an increase in fuel enrichment) results in a required increase in boron, the test ratio can be adjusted to reflect the change. The initial test temperature is changed to 120 °F, however, the temperature is adjusted to 77 °F when the pH is measured. The 120 °F is well below the expected temperature of the containment sump water following a LOCA and the 77 °F is a standard temperature to assure consistent chemistry test measurements.

Therefore, the NRC staff has concluded, based on the above, that the proposed changes to TS 4.5.2.e.4 are acceptable and that the tests will adequately measure the pH for the expected post LOCA conditions. TS 4.5.2.e.4 will retain the requirement to perform the tests and the test details will be moved to TS Bases, Section 3/4.5.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Maryland State official was notified of the proposed issuance of the amendments. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (60 FR 14016). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such

activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

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