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Nuclear

10 CFR 50.90

March 19, 2002

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Peach Bottom Atomic Power Station, Units 2 and 3
Facility Operating License Nos. DPR-44 and DPR-56
NRC Docket Nos. 50-277 and 50-278

Subject: License Amendment Request 02-00049
Revision of Normal Heat Sink Technical Specification Temperature Limit

Dear Sir or Madam:

Pursuant to 10CFR50.90 Exelon Generation Company, LLC (Exelon), hereby requests the following amendment to the Technical Specifications (TS), Appendix A of Operating License Nos. DPR-44 and DPR-56 for Peach Bottom Atomic Power Station, Units 2 & 3.

The proposed changes revise the Units 2 and 3 TS Section 3.7.2, "Emergency Service Water (ESW) System and Normal Heat Sink," to change the requirements for determining the operability of the Normal Heat Sink (NHS). The new requirements allow continued plant operation with short-term elevated NHS temperatures. TS Bases Section 3.7.3 is also clarified to properly describe the relationship between the NHS and Emergency Heat Sink temperatures, in accordance with the existing design basis. The format for the proposed change is based upon NRC-approved Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, "Allowed Outage Time - Ultimate Heat Sink", TSTF-330, Revision 3, dated October 16, 2000.

In addition, an administrative change is made to TS Section 3.7.2, and its associated Bases, to delete references to an expired temporary TS change. The original temporary change, which expired May 31, 2000, was made under Amendment Nos. 231 and 236, for PBAPS Units 2 and 3, respectively.

This information is being submitted under unsworn declaration. Information supporting this License Amendment Request is contained in Attachment 1 to this letter, and the proposed marked up TS pages and final TS pages are contained in Attachments 2 and 3, respectively.

A001

Exelon requests approval of the proposed amendment by March 15, 2003.

Once approved, this amendment shall be implemented within 30 days of issuance.

Additionally, there are no commitments contained within this letter.

A copy of this License Amendment Request, including the reasoned analysis about a no significant hazards consideration, is being provided to the appropriate Pennsylvania State official in accordance with the requirements of 10 CFR 50.91(b)(1). The proposed changes have been reviewed by the Plant Operations Review Committee and approved by the Nuclear Safety Review Board.

If you have any questions or require additional information, please contact me at (610) 765-5664.

I declare under penalty of perjury that the forgoing is true and correct.

Respectfully,

Executed on 3-19-2002

Michael P. Gallagher
Director, Licensing & Regulatory Affairs
Mid-Atlantic Regional Operating Group

Attachments: 1-Licensee's Evaluation
2-Markup of Technical Specification Pages
3-Camera Ready Technical Specification Pages

cc: H. J. Miller, Administrator, Region I, USNRC
A. C. McMurtray, USNRC Senior Resident Inspector, PBAPS
J. Boska, Senior Project Manager, USNRC
R. R. Janati, Commonwealth of Pennsylvania

ATTACHMENT 1

PEACH BOTTOM ATOMIC POWER STATION
UNITS 2 AND 3

Docket Nos. 50-277
50-278

License Nos. DPR-44
DPR-56

LICENSE AMENDMENT REQUEST 02-00049

Revision of Normal Heat Sink Technical Specification Temperature Limit

Supporting Information - 9 Pages

Docket Nos. 50-277
50-278

License Nos. DPR-44
DPR-56

Introduction

Exelon Generation Company, LLC, Licensee under Facility Operating License Nos. DPR-44 and DPR-56 for Peach Bottom Atomic Power Station (PBAPS), Units 2 & 3, requests that the Technical Specifications contained in Appendix A to the Operating License be amended to revise the condition/required action for the Normal Heat Sink (NHS) temperature limit in Technical Specification (TS) 3.7.2. The NHS for PBAPS is the Susquehanna River. Surveillance Requirement (SR) 3.7.2.2 currently requires that the water temperature of the NHS be less than or equal to 90°F as demonstrated on a 24 hour frequency. The proposed Technical Specification change allows plant operation to continue if the NHS temperature exceeds the Technical Specification limit of 90°F, provided the water temperature, averaged over the previous 24 hour period, does not exceed 90°F. An additional requirement in the form of a maximum limit based upon equipment limitations is also imposed. The current action time requirements will apply if NHS temperature exceeds 92°F, or if the 24-hour averaged value exceeds 90°F. The marked up TS pages and final TS pages are contained in Attachments 2 and 3, respectively.

The format for the proposed change is based upon NRC-approved Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, "Allowed Outage Time - Ultimate Heat Sink", TSTF-330, Revision 3, dated October 16, 2000. Please note that TSTF-330 uses the term Ultimate Heat Sink but the PBAPS TS use the term Normal Heat Sink for the Susquehanna River. For the purpose of this submittal, these terms are interchangeable.

Evaluations for containment analysis relative to General Electric SIL 636, "Additional Terms Included in Reactor Decay Heat Calculations," and the 10CFR50 Appendix K Power Rerate Project are ongoing concurrent with this license amendment request (LAR). The impact of these issues has been assessed by General Electric (GE) relative to available equipment margins, in the same manner as discussed herein, and found to be manageable through more restrictive heat exchanger fouling limits in accordance with the PBAPS Generic Letter 89-13 Program.

This LAR provides a discussion of the proposed TS changes, a safety assessment of the proposed TS changes, information supporting a finding of No Significant Hazards Consideration and information supporting an Environmental Assessment.

Discussion and Description of the Proposed Change

During the summer of 1999, the NHS temperature for the intake of PBAPS Units 2 & 3 approached the 90°F temperature limit. The apparent root cause for the temperature increase to the NHS was an abnormally long period of time with low precipitation (rain) resulting in a sustained reduction in Susquehanna River flow. Low river flow increases the variability of NHS temperature. This effect, combined with abnormally hot weather conditions for an extended period of time, resulted in NHS temperatures that were close to exceeding the TS requirement of 90°F, which would have resulted in a required shutdown of PBAPS Units 2 & 3. Review of plant data for the past 15 years indicates that the NHS has not exceeded 90°F.

A shutdown of both units, due to NHS high temperature, would result in an unnecessary plant transient and increase the possibility of a disturbance to the PBAPS off-site electrical power sources and the regional electrical power distribution system at a time of potential grid vulnerability due to maximum

generation requirements. This TS change is being proposed in anticipation of other potentially hot, dry summers.

As mentioned in the cover letter, TS Bases Section 3.7.3 is also clarified to properly describe the relationship between the NHS and Emergency Heat Sink temperatures, in accordance with the existing design basis. This clarification prevents potential confusion, since this Bases Section currently refers specifically to the existing single NHS temperature limit of 90°F.

Also, an administrative change is made to TS Section 3.7.2, and its associated Bases, to delete references to an expired temporary TS change. This temporary change, made under Amendment Numbers 231 and 236 for PBAPS Units 2 and 3, respectively, expired on May 31, 2000.

As a point of clarity, note that the minor changes addressed in the preceding two paragraphs of this Section are addressed in the "Information Supporting a Finding of No Significant Hazards" and the " Information Supporting an Environmental Assessment" Sections, but are not discussed in the "Safety Assessment" Section of this submittal.

Safety Assessment

The NHS for PBAPS is the Susquehanna River. The NHS serves as the heat sink for the Condenser Circulating Water (CCW), Service Water (SW), Emergency Service Water (ESW) and High Pressure Service Water (HPSW) Systems to allow for the removal of heat from both safety related and non-safety related components and cooling systems during normal operation, shutdown and accident conditions. The CCW is a non-safety related system that provides cooling water to the Main Condensers. The SW System is a non-safety related system that provides cooling water to the Reactor Building Closed Cooling Water (RBCCW) System and Turbine Building Closed Cooling Water (TBCCW) System heat exchangers and other non-safety related heat exchangers and equipment.

The following safety related components are cooled by the NHS following an accident or abnormal operational transient:

HPSW System:
Residual Heat Removal (RHR) Heat Exchangers
HPSW Pump Motor Oil Coolers

ESW System:
Residual Heat Removal (RHR) Pump Room Coolers
Residual Heat Removal (RHR) Pump Seal Coolers
Core Spray (CS) Pump Room Coolers
High Pressure Coolant Injection (HPCI) Pump Room Coolers
Reactor Core Isolation Cooling (RCIC) Pump Room Coolers
Emergency Diesel Generator (EDG) Heat Exchangers
Core Spray (CS) Pump Motor Oil Coolers

Note that engineering calculations have demonstrated that the HPCI and RCIC Pump Room Coolers, and the RHR Pump Seal Coolers are not required to support operability of their associated safety system. Therefore, this equipment is not addressed in the following evaluation.

Technical Specification 3.7.2, "Emergency Service Water (ESW) System and Normal Heat Sink," requires the NHS to be Operable in Modes 1, 2, and 3, i.e., Power Operation, Startup, and Hot Shutdown, respectively. In accordance with the current TS Surveillance Requirement (SR) 3.7.2.2, the NHS is considered Operable if the NHS temperature does not exceed 90°F. The purpose of this requirement is to ensure that the heat removal capability of the Emergency Service Water (ESW) and High Pressure Service Water (HPSW) Systems is adequate to maintain the design basis temperatures of safety related equipment relied upon to mitigate the consequences of an accident or operational transient.

The proposed Technical Specification change maintains the original NHS design basis water temperature of 90°F, but allows for this limit to be temporarily exceeded provided that the 24 hour (rolling) average does not exceed 90°F and the peak temperature does not exceed 92°F. This approach is conservative for PBAPS since reasonable margins exist that allows the affected safety related components to continuously perform their design function at NHS temperatures up to 92°F.

This change does not alter any assumptions on which the plant safety analysis is based. The affected components were originally designed with margin that allows for cooling water temperatures greater than the plant design basis of 90°F, although no credit had previously been taken for this margin. In determining the capability of the affected heat exchangers, the original equipment design conservatively assumed a certain degree of equipment degradation (i.e., fouling, tube plugging). Consequently, periodic testing and cleaning are performed to verify that these design conditions assumed for the affected heat exchangers are not reached. The technical evaluations performed in support of the proposed Technical Specification change have determined that a reasonable degree of equipment degradation can still be assumed while demonstrating that the affected safety related components could continuously perform their design function at cooling water temperatures up to 92°F. New limits for equipment degradation will be procedurally controlled to ensure that the affected components would continue to function at the increased cooling water temperature. These limits will not require excessively frequent maintenance or testing to ensure that design margins are maintained. All heat exchangers addressed in this evaluation will be maintained capable of removing their respective design basis heat loads at the elevated (92°F) cooling water temperature in accordance with the PBAPS Generic Letter 89-13 Program.

RHR Heat Exchangers

The PBAPS plant specific analyses for the Design Basis Accidents (DBAs) and non-break events which require containment cooling assume a minimum RHR heat exchanger heat transfer capability that is based upon a conservative amount of overall thermal fouling and a set percentage of the tube population plugged. The present design basis maximum cooling water inlet temperature is 90°F. The actual fouling factors determined from test data and engineering analysis are used to verify operability of the heat exchangers by comparison to the equipment design basis fouling factor. The material condition of the RHR heat exchangers is maintained better than assumed in determining the design basis heat transfer capability. This margin in material condition is used to revise the fouling factor acceptance criteria and demonstrate that the RHR heat exchangers are capable of maintaining the required heat transfer capability for NHS temperatures up to 92°F. Compliance with the acceptance criteria for fouling of the RHR heat exchangers is controlled by procedures thus ensuring that the limit for heat exchanger fouling is not reached. By maintaining the design basis capability of the RHR heat

exchangers (at the increased cooling water temperature), the heat exchanger capability that has been assumed in evaluating plant events is maintained.

Emergency Diesel Generator (EDG) Heat Exchangers
In response to an equipment design deficiency identified during Generic Letter 89-13 heat exchanger performance testing for the EDGs (reference PBAPS Licensee Event Report 2-00-002), PBAPS has made a hardware change to each EDG Air Coolant System that has corrected for the inherent design deficiency and has increased equipment design margins relative to cooling water temperature limits. Engineering analysis has established permissible fouling factors for the EDG heat exchangers based upon the limiting conditions for electrical loading, combustion air inlet temperature and cooling water flow and temperature. Evaluation of test data following the hardware changes discussed previously has demonstrated that sufficient margin exists between measured fouling and permissible fouling to allow the EDG heat exchangers to perform their design basis function at cooling water inlet temperatures up to 92°F at any point during the heat exchanger operating cycle between scheduled cleanings. Compliance with the acceptance criteria for fouling of the EDG heat exchangers is controlled in accordance with the Generic Letter 89-13 testing program; thereby ensuring that the established limits for heat exchanger fouling are not reached. By maintaining the design basis capability of the EDG (at the increased cooling water temperature), the ability of this system to provide onsite emergency AC power, as required, is maintained.

RHR and CS Pump Room Coolers
The RHR and CS Pump Room Coolers have been evaluated via engineering calculations to be capable of maintaining acceptable pump room post-accident temperature profiles assuming the room coolers in each pump room are supplied cooling water at a conservative temperature of 95°F. Periodic testing is performed to verify that the equipment performance assumed in the analyses is maintained.

HPSW/CS Pump Motor Oil Coolers
Review of the original equipment design requirements for the HPSW and CS Pump Motor Oil Coolers indicates that the coolers have been conservatively designed with respect to the present 90°F NHS temperature limit. Review of historical and recent test data considering the increased cooling water temperature limit has shown that sufficient margin exists for the affected motor oil coolers to perform their design basis function at cooling water inlet temperatures up to 92°F. Periodic testing is performed to verify that the required equipment capability is maintained at the NHS temperature limit.

Consistency with TSTF-330, Revision 3
The format and wording of the proposed TS/TS Bases changes are based upon TSTF-330, Revision 3, dated October 16, 2000.

The conditions set forth in TSTF-330, which form the basis for acceptance of the Ultimate Heat Sink (UHS) averaging approach, are addressed below:

1. The UHS is not relied upon for immediate heat removal (such as to prevent containment overpressurization), but is relied upon for longer-term cooling such that the temperature averaging approach continues to satisfy the accident analysis assumptions for heat removal over time.

The containment air coolers at PBAPS are not credited in the plant safety analysis for post accident containment heat removal. At PBAPS, the Suppression Pool Cooling and Containment Spray modes of the RHR System are designed to provide long-term post accident containment heat removal. As discussed above, the design basis capability of the RHR heat exchangers that is assumed in evaluating the plant events that require containment heat removal is maintained at the increased cooling water temperature by imposing more restrictive limits for heat exchanger fouling. Therefore, the temperature averaging approach satisfies the accident and transient analysis assumptions for containment heat removal over time.

The EDGs are considered to rely immediately on the NHS to remove heat from the engine cylinders, combustion inlet air and lubricating oil. As discussed above, testing and engineering analysis has demonstrated that the EDGs remain capable of performing their intended safety function under design basis conditions (i.e., maximum electrical loading and combustion inlet air temperature and minimum cooling water flow) at cooling water temperatures up to 92°F.

2. When the UHS is at the proposed maximum allowed value of 92°F, equipment that is relied upon for accident mitigation, anticipated operational occurrences, or for safe shutdown, will not be adversely affected and are not placed in alarm condition or limited in any way at this higher temperature.

   As discussed above, the equipment that is relied upon for accident mitigation, anticipated operational occurrences, or for safe shutdown, remains capable of performing its design basis function at NHS temperatures up to 92°F. The new limits for equipment degradation that must be imposed to ensure that the affected components would continue to function at the increased cooling water temperature are maintained in the same manner as those that exist for the present cooling water temperature limit.

3. Plant-specific assumptions, such as those that were credited in addressing station blackout and Generic Letter 96-06, have been adjusted (as necessary) to be consistent with the maximum allowed UHS temperature of 92°F that is proposed.

   The containment air coolers at PBAPS are not credited in the plant safety analysis for post accident containment heat removal. Evaluations performed in response to Generic Letter 96-06 to demonstrate that cooling water systems serving the containment air coolers are not susceptible to waterhammer or overpressurization of isolated piping inside containment following a design basis accident such that containment integrity could be compromised are not dependent upon the NHS temperature limit. The impact of the increased NHS temperature limit on special events that the plant must be designed to withstand is encompassed by the above evaluations which demonstrate that the safety related equipment which relies on the NHS for cooling remains capable of performing its design basis function at NHS temperatures up to 92°F. Therefore, plant specific assumptions previously credited in evaluating special events and regulatory issues are not impacted by the increase in the NHS temperature limit.

4. Cooling water that is being discharged from the plant (either during normal plant operation, or during accident conditions), does not affect the UHS intake water temperature (typical of an

infinite heat sink, but location of the intake and discharge connections, and characteristics of the UHS can have an impact).

The NHS for PBAPS is the Susquehanna River. The Peach Bottom site is located on the westerly shore of the Conowingo Pond, which is formed in the Susquehanna River by the Conowingo Dam located approximately 9.0 miles downstream. Holtwood Dam, located approximately 6 miles upstream from the Peach Bottom site, forms the upper boundary of Conowingo Pond. The Muddy Run Pumped Storage Generating Plant, which is owned and operated by Exelon Corporation, is located on the easterly shore of the Conowingo Pond approximately 4 miles upstream from the Peach Bottom site. Under normal river flow conditions the PBAPS NHS is considered an infinite heat sink; however, during periods of low river flow, operation of the Muddy Run plant has the potential to reverse the normal downstream flow during the pumping cycle when river flows are below approximately 13,000 cubic feet per second (cfs). A noticeable influence on PBAPS intake water temperature does not occur until river flow is below 5000 cfs. Observed flows in the Susquehanna River near the site have ranged from a minimum daily average (1964) of 1,400 cfs to a peak (1972) of 972,000 cfs. Average flow is 36,200 cfs.

As a result of the most recent challenge to the NHS temperature limit (Summer 1999), station procedures have been implemented that limit Muddy Run pumping cycles during periods of high NHS temperature (greater than 85 ^{0}F) and low river flow (less than 5000 cfs) thus minimizing the impact of Muddy Run operation on PBAPS NHS intake temperature.

Risk Information

There is no significant impact on the probabilistic safety assessment (PSA) if there were a minor decrease in ESW and HPSW System heat removal capability as a result of the increased water temperatures. Conversely, a Technical Specification required dual unit shutdown resulting from elevated NHS temperatures could increase the possibility of a disturbance to the PBAPS offsite electrical power sources and the regional power distribution system. Elevated NHS temperatures do not cause equipment failures or significantly change equipment performance from a severe accident perspective.

Information Supporting a Finding of No Significant Hazards

Exelon Generation Company, LLC, Licensee under Facility Operating License Nos. DPR-44 and DPR-56 for Peach Bottom Atomic Power Station (PBAPS), Units 2 & 3, requests that the Technical Specifications (TS) contained in Appendix A to the Operating License be amended to revise the condition/required action for the Normal Heat Sink (NHS) temperature limit in TS 3.7.2. The format for the proposed change is based upon NRC-approved Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, "Allowed Outage Time - Ultimate Heat Sink", TSTF-330, Revision 3, dated October 16, 2000. TS Bases Section 3.7.3 is also clarified to properly describe the relationship between the NHS and Emergency Heat Sink temperatures, in accordance with the existing design basis.

Also, an administrative change is made to TS Section 3.7.2, and its associated Bases, to delete references to an expired temporary TS change. This temporary change, made under Amendment Numbers 231 and 236 for PBAPS Units 2 and 3, respectively, expired on May 31, 2000.

We have concluded that the proposed changes to the PBAPS, Units 2 and 3 Technical Specifications (TS) and TS Bases do not involve a Significant Hazard. In support of this determination, an evaluation of each of the three (3) standards set forth in 10 CFR 50.92 is provided below.

1. The proposed TS changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

   The proposed changes allow plant operation to continue if the Normal Heat Sink (NHS) temperature exceeds the Technical Specification limit of 90°F provided the water temperature, averaged over the previous 24 hours, does not exceed 90°F and the peak temperature does not exceed 92°F. The water temperature limit imposed for the NHS exists to ensure the ability of safety systems to mitigate the consequences of an accident and does not involve the prevention or identification of any precursors of an accident. The water temperature of the NHS cannot adversely affect the initiator of any accident previously evaluated. This increase in the NHS temperature limit does not affect the normal operation of the plant to the extent that any accident previously evaluated would be more likely to occur.

   The safety objective of the water temperature limit for the NHS is to ensure that the heat removal capability of the Emergency Service Water (ESW) and High Pressure Service Water (HPSW) Systems is adequate to allow safety related equipment that is relied upon to mitigate the consequences of an accident or operational transient to perform its design function. The design basis heat removal capability of the affected components and systems is maintained at the increased NHS temperature limit, thus ensuring that the affected safety related components continuously perform their safety related function at the increased NHS temperature limit. The new limits for equipment degradation that must be imposed to ensure that the affected components continue to perform their design basis function at the increased cooling water temperature is maintained in the same manner as those for the present cooling water temperature limit. Consequently, the affected components maintain their design basis capability, as previously assumed in plant safety analyses, at the new maximum NHS temperature.

   The proposed change to TS Bases Section 3.7.3 to properly describe the relationship between the NHS and Emergency Heat Sink temperatures also does not involve a significant increase in the probability or consequences of an accident previously evaluated. This change clarifies the TS Bases to be consistent with the existing design bases of PBAPS Units 2 and 3, and makes no change that influences the probability or consequences of accidents.

   The proposed administrative change to remove an expired, temporary license amendment from the PBAPS Units 2 and 3 TS is being made to simply remove information, which is no longer valid. This proposed change also does not influence the probability or consequences of accidents.

   Therefore, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated in the SAR.

2. The proposed TS changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed changes allow plant operation to continue if the Normal Heat Sink (NHS) temperature exceeds the Technical Specification limit of 90°F provided the water temperature, averaged over the previous 24 hours, does not exceed 90°F and the peak temperature does not exceed 92°F. The method of operation of components (heat exchangers, coolers, etc.), which rely on the NHS for cooling, is not altered by this activity. The water temperature limit imposed for the NHS exists to ensure the ability of plant safety equipment to mitigate the consequences of an accident and does not have the potential to create an accident initiator. This activity does not involve a physical change to any plant structure, system or component that is considered an accident initiator. The design basis heat removal capability of the affected components is maintained at the increased NHS temperature limit.

The TS Bases clarification and administrative changes described above are minor in nature and, while improving the precision and readability of the TS, they do not have the potential to create accidents.

Therefore, the proposed changes do not create the possibility of a different type of accident than any previously evaluated in the SAR.

3. The proposed TS changes do not involve a significant reduction in a margin of safety.

Operation of PBAPS Units 2 and 3 under the proposed Normal Heat Sink (NHS) temperature limits does not reduce the margin of safety as defined in the basis for any Technical Specification. Technical Specification SR 3.7.2.2 defines the Limiting Condition for Operation for the temperature of the NHS. A portion of the TS Bases for SR 3.7.2.2 states:

> 'Verification of the Normal Heat Sink temperature ensures that the heat removal capability of the ESW and HPSW Systems is within the DBA analysis.'

The basis for SR 3.7.2.2 is that margin of safety is not reduced provided that the heat removal capability of the ESW and HPSW Systems satisfies the assumptions considered in the plant safety analysis.

The heat removal capability of the components that rely on the ESW and HPSW Systems for cooling is based on the design basis temperature of the NHS and the performance capability of the equipment. In determining the capability of the affected heat exchangers, the original equipment design conservatively assumed a certain degree of equipment degradation. Consequently, periodic testing and cleaning are required to verify and ensure that the assumed degree of degradation is not reached. Technical evaluations have demonstrated that a reasonable degree of equipment degradation can still be assumed while demonstrating that the affected safety related components continuously perform their design basis function at cooling water temperatures up to 92°F. The new limits for equipment degradation that must be imposed to ensure that the affected components continue to function at the increased cooling water temperature are maintained in the same manner as that for the present cooling water temperature limit. Therefore, since the design basis capability of the affected components are

maintained at the increased cooling water temperature limit, the increase in NHS temperature does not involve a significant reduction in the margin of safety.

The TS Bases clarification and administrative changes described above do not affect the design or operation of the facilities and are very minor in nature. Therefore, while these enhancements improve the precision and readability of the TS, they do not have the potential to reduce the margin of safety.

Therefore, the proposed TS changes described above do not involve a significant reduction in a margin of safety.

We have concluded that the proposed changes to the PBAPS, Units 2 and 3 TS do not involve a Significant Hazards Consideration.

Information Supporting an Environmental Assessment

An environmental assessment is not required for the proposed change since the proposed change conforms to the criteria for "actions eligible for categorical exclusion" as specified in 10 CFR 51.22(c)(9). The proposed change will have no impact on the environment. The proposed change does not involve a significant hazards consideration as discussed in the preceding section. The proposed change does not involve a significant change in the types or significant increase in the amounts of any effluents that may be released offsite. In addition, the proposed change does not involve a significant increase in individual or cumulative occupational radiation exposure.

Additionally, in accordance with 10 CFR 51.41, a review was performed to determine the impact of the proposed administrative changes that remove an expired, temporary license amendment from the PBAPS Units 2 and 3 TS, on the conclusions of the NRC's Final Environmental Statement for PBAPS. The considerations included in 10 CFR 51.45(b) were used in this review with the following conclusions. Since these changes are administrative only, implementation of the proposed changes has no impact on the environment. Since there is no impact on the environment, there are no adverse environmental effects that cannot be avoided. Since these changes are administrative only and have no impact on operation of the facility or on the environment, there is no value in considering alternatives to the proposed changes. Since the operation of the facility is not affected by the proposed changes, there is no impact on the original assessment of the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity. Since the operation of the facility is unaffected by the proposed changes, there is no change to the commitment of resources and therefore, no irreversible nor irretrievable commitment of resources involved.

ATTACHMENT 2

PEACH BOTTOM ATOMIC POWER STATION
UNITS 2 AND 3

Docket Nos. 50-277
50-278

License Nos. DPR-44
DPR-56

LICENSE AMENDMENT REQUEST 02-00049

Revision of Normal Heat Sink Technical Specification Temperature Limit

List of Attached Marked Up Pages

Unit 2	Unit 3
3.7-3	3.7-3
B 3.7-8	B 3.7-8
B 3.7-13	B 3.7-13

INSERT A

B. Water temperature of the normal heat sink is > 90°F and ≤ 92°F.	B.1 Verify water temperature of the normal heat sink is ≤ 90°F averaged over the previous 24 hour period.	Once per hour

INSERT B

B.1

With water temperature of the normal heat sink > 90°F and ≤ 92°F, the design basis assumptions associated with the initial normal heat sink temperature are bounded provided the temperature of the normal heat sink when averaged over the previous 24 hour period is ≤ 90°F. To ensure that the 92°F normal heat sink temperature limit is not exceeded, Required Action B.1 is provided to more frequently monitor the temperature of the normal heat sink. The once per hour completion time takes into consideration normal heat sink temperature variations and the increased monitoring frequency needed to ensure design basis assumptions and equipment limitations are not exceeded in this condition. If the water temperature of the normal heat sink exceeds 90°F when averaged over the previous 24 hour period or the water temperature of the normal heat sink exceeds 92°F, Condition C must be entered immediately.

3.7 PLANT SYSTEMS

3.7.2 Emergency Service Water (ESW) System and Normal Heat Sink

LCO 3.7.2 Two ESW subsystems and normal heat sink shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One ESW subsystem inoperable.	A.1 Restore ESW subsystem to OPERABLE status.	7 days * ~~*~~ DELETE
ADD INSERT A →		
C ~~B.~~ Required Action and associated Completion Time of Condition A not met. OR B OR Both ESW subsystems inoperable. OR Normal heat sink inoperable [FOR REASONS OTHER THAN CONDITION B]	C ~~B.~~ 1 Be in MODE 3. AND ~~B.~~ C 2 Be in MODE 4.	12 hours 36 hours

ADD

~~* The Completion Time to this Action is temporarily extended to 14 days. This note will expire May 31, 2000.~~

DELETE

BASES

APPLICABILITY (continued)

In MODES 4 and 5, the OPERABILITY requirements of the ESW System and normal heat sink are determined by the systems they support, and therefore the requirements are not the same for all facets of operation in MODES 4 and 5. Thus, the LCOs of the systems supported by the ESW System and normal heat sink will govern ESW System and normal heat sink OPERABILITY requirements in MODES 4 and 5.

ACTIONS

A.1

With one ESW subsystem inoperable, the ESW subsystem must be restored to OPERABLE status within 7 days. With the unit in this condition, the remaining OPERABLE ESW subsystem is adequate to perform the heat removal function. However, the overall reliability is reduced because a single failure in the OPERABLE ESW subsystem could result in loss of ESW function.

The 7 day Completion Time is based on the redundant ESW System capabilities afforded by the OPERABLE subsystem, the low probability of an event occurring during this time period, and is consistent with the allowed Completion Time for restoring an inoperable DG.* DELETE

ADD INSERT B →

C ~~B.1~~ and ~~B.2~~ C

If the ESW System cannot be restored to OPERABLE status within the associated Completion Time, or both ESW subsystems are inoperable, or the normal heat sink is inoperable, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 12 hours and in MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.2.1

This SR verifies the water level in the pump bay of the pump structure to be sufficient for the proper operation of the ESW pumps (the pump's ability to meet the minimum flow rate and anticipatory actions required for flood conditions are

(continued)

~~* The Completion time to this Action is temporarily extended to 14 days. The additional 7 days is based on probabilistic risk assessment study. This note will expire May 31, 2000.~~

DELETE

OF THE EMERGENCY COOLING TOWER RESERVOIR

BASES

LCO (continued)

Emergency heat sink water temperature is not addressed in this LCO since the maximum water temperature ~~((90°F))~~ has been demonstrated, based on historical data, to be bounded by the normal heat sink requirements (LCO 3.7.2, "Emergency Service Water (ESW) System and Normal Heat Sink").

APPLICABILITY

In MODES 1, 2, and 3, the emergency heat sink is required to be OPERABLE to provide a seismic Class I source of cooling water to the ESW and HPSW Systems when the normal heat sink is unavailable. Therefore, the emergency heat sink is required to be OPERABLE in these MODES.

In MODES 4 and 5, the OPERABILITY requirements of the emergency heat sink are determined by the systems it supports in the event the normal heat sink is unavailable.

ACTIONS

A.1

With one required emergency cooling tower fan inoperable, action must be taken to restore the required emergency cooling tower fan to OPERABLE status within 14 days. The 14 day Completion Time is based on the remaining heat removal capability, the low probability of an event occurring requiring the inoperable emergency cooing tower fan to function, and the capability of the remaining emergency cooling tower fan.

B.1

With the emergency heat sink inoperable for reasons other than Condition A, the emergency heat sink must be restored to OPERABLE status within 7 days. With the unit in this condition, the normal heat sink (Conowingo Pond) is adequate to perform the heat removal function; however, the overall reliability is reduced. The 7 day Completion Time is based on the remaining heat removal capability and the low probability of an event occurring requiring the emergency heat sink to be OPERABLE during this time period.

(continued)

3.7 PLANT SYSTEMS

3.7.2 Emergency Service Water (ESW) System and Normal Heat Sink

LCO 3.7.2 Two ESW subsystems and normal heat sink shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One ESW subsystem inoperable.	A.1	Restore ESW subsystem to OPERABLE status.	7 days*
~~B.~~ C. Required Action and associated Completion Time of Condition A not met. OR Both ESW subsystems inoperable. OR Normal heat sink inoperable [FOR REASONS OTHER THAN CONDITION B]	~~B.~~ C.1 AND ~~B.~~ C.2	Be in MODE 3.	12 hours
		Be in MODE 4.	36 hours

ADD INSERT A →

OR B

ADD

~~* The Completion Time to this Action is temporarily extended to 14 days. This note will expire May 31, 2000.~~

DELETE

BASES

APPLICABILITY (continued)

In MODES 4 and 5, the OPERABILITY requirements of the ESW System and normal heat sink are determined by the systems they support, and therefore the requirements are not the same for all facets of operation in MODES 4 and 5. Thus, the LCOs of the systems supported by the ESW System and normal heat sink will govern ESW System and normal heat sink OPERABILITY requirements in MODES 4 and 5.

ACTIONS

A.1

With one ESW subsystem inoperable, the ESW subsystem must be restored to OPERABLE status within 7 days. With the unit in this condition, the remaining OPERABLE ESW subsystem is adequate to perform the heat removal function. However, the overall reliability is reduced because a single failure in the OPERABLE ESW subsystem could result in loss of ESW function.

The 7 day Completion Time is based on the redundant ESW System capabilities afforded by the OPERABLE subsystem, the low probability of an event occurring during this time period, and is consistent with the allowed Completion Time for restoring an inoperable DG.* DELETE

ADD INSERT B → C B.1 and B.2

If the ESW System cannot be restored to OPERABLE status within the associated Completion Time, or both ESW subsystems are inoperable, or the normal heat sink is inoperable, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 12 hours and in MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.2.1

This SR verifies the water level in the pump bay of the pump structure to be sufficient for the proper operation of the ESW pumps (the pump's ability to meet the minimum flow rate and anticipatory actions required for flood conditions are

(continued)

~~* The Completion time to this Action is temporarily extended to 14 days. The additional 7 days is based on probabilistic risk assessment study. This note will expire May 31, 2000.~~ DELETE

OF THE EMERGENCY COOLING TOWER RESERVOIR

BASES

LCO (continued)

Emergency heat sink water temperature is not addressed in this LCO since the maximum water temperature ~~(90°F)~~ has been demonstrated, based on historical data, to be bounded by the normal heat sink requirements (LCO 3.7.2, "Emergency Service Water (ESW) System and Normal Heat Sink").

APPLICABILITY

In MODES 1, 2, and 3, the emergency heat sink is required to be OPERABLE to provide a seismic Class I source of cooling water to the ESW and HPSW Systems when the normal heat sink is unavailable. Therefore, the emergency heat sink is required to be OPERABLE in these MODES.

In MODES 4 and 5, the OPERABILITY requirements of the emergency heat sink are determined by the systems it supports in the event the normal heat sink is unavailable.

ACTIONS

A.1

With one required emergency cooling tower fan inoperable, action must be taken to restore the required emergency cooling tower fan to OPERABLE status within 14 days. The 14 day Completion Time is based on the remaining heat removal capability, the low probability of an event occurring requiring the inoperable emergency cooing tower fan to function, and the capability of the remaining emergency cooling tower fan.

B.1

With the emergency heat sink inoperable for reasons other than Condition A, the emergency heat sink must be restored to OPERABLE status within 7 days. With the unit in this condition, the normal heat sink (Conowingo Pond) is adequate to perform the heat removal function; however, the overall reliability is reduced. The 7 day Completion Time is based on the remaining heat removal capability and the low probability of an event occurring requiring the emergency heat sink to be OPERABLE during this time period.

(continued)

ATTACHMENT 3

PEACH BOTTOM ATOMIC POWER STATION
UNITS 2 AND 3

Docket Nos. 50-277
50-278

License Nos. DPR-44
DPR-56

LICENSE AMENDMENT REQUEST 02-00049

Revision of Normal Heat Sink Technical Specification Temperature Limit

List of Camera Ready Pages

Unit 2	Unit 3
3.7-3	3.7-3
B 3.7-8	B 3.7-8
B 3.7-8a	B 3.7-8a
B 3.7-13	B 3.7-13

3.7 PLANT SYSTEMS

3.7.2 Emergency Service Water (ESW) System and Normal Heat Sink

LCO 3.7.2 Two ESW subsystems and normal heat sink shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One ESW subsystem inoperable.	A.1	Restore ESW subsystem to OPERABLE status.	7 days
B. Water temperature of the normal heat sink is > 90°F and ≤ 92°F.	B.1	Verify water temperature of the normal heat sink is ≤ 90°F averaged over the previous 24 hour period.	Once per hour
C. Required Action and associated Completion Time of Condition A or B not met. OR Both ESW subsystems inoperable. OR Normal heat sink inoperable [for reasons other than condition B].	C.1 AND C.2	Be in MODE 3. Be in MODE 4.	12 hours 36 hours

BASES

APPLICABILITY (continued)

In MODES 4 and 5, the OPERABILITY requirements of the ESW System and normal heat sink are determined by the systems they support, and therefore the requirements are not the same for all facets of operation in MODES 4 and 5. Thus, the LCOs of the systems supported by the ESW System and normal heat sink will govern ESW System and normal heat sink OPERABILITY requirements in MODES 4 and 5.

ACTIONS

A.1

With one ESW subsystem inoperable, the ESW subsystem must be restored to OPERABLE status within 7 days. With the unit in this condition, the remaining OPERABLE ESW subsystem is adequate to perform the heat removal function. However, the overall reliability is reduced because a single failure in the OPERABLE ESW subsystem could result in loss of ESW function.

The 7 day Completion Time is based on the redundant ESW System capabilities afforded by the OPERABLE subsystem, the low probability of an event occurring during this time period, and is consistent with the allowed Completion Time for restoring an inoperable DG.

B.1

With water temperature of the normal heat sink > 90°F and ≤ 92°F, the design basis assumptions associated with the initial normal heat sink temperature are bounded provided the temperature of the normal heat sink when averaged over the previous 24 hour period is ≤ 90°F. To ensure that the 92°F normal heat sink temperature limit is not exceeded, Required Action B.1 is provided to more frequently monitor the temperature of the normal heat sink. The once per hour completion time takes into consideration normal heat sink temperature variations and the increased monitoring frequency needed to ensure design basis assumptions and equipment limitations are not exceeded in this condition. If the water temperature of the normal heat sink exceeds 90°F when averaged over the previous 24 hour period or the water temperature of the normal heat sink exceeds 92°F, Condition C must be entered immediately.

(continued)

BASES

ACTIONS (continued)

C.1 and C.2

If the ESW System cannot be restored to OPERABLE status within the associated Completion Time, or both ESW subsystems are inoperable, or the normal heat sink is inoperable, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 12 hours and in MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.2.1

This SR verifies the water level in the pump bay of the pump structure to be sufficient for the proper operation of the ESW pumps (the pump's ability to meet the minimum flow rate and anticipatory actions required for flood conditions are

(continued)

BASES

LCO (continued)

Emergency heat sink water temperature is not addressed in this LCO since the maximum water temperature of the emergency cooling tower reservoir has been demonstrated, based on historical data, to be bounded by the normal heat sink requirements (LCO 3.7.2, "Emergency Service Water (ESW) System and Normal Heat Sink").

APPLICABILITY

In MODES 1, 2, and 3, the emergency heat sink is required to be OPERABLE to provide a seismic Class I source of cooling water to the ESW and HPSW Systems when the normal heat sink is unavailable. Therefore, the emergency heat sink is required to be OPERABLE in these MODES.

In MODES 4 and 5, the OPERABILITY requirements of the emergency heat sink are determined by the systems it supports in the event the normal heat sink is unavailable.

ACTIONS

A.1

With one required emergency cooling tower fan inoperable, action must be taken to restore the required emergency cooling tower fan to OPERABLE status within 14 days. The 14 day Completion Time is based on the remaining heat removal capability, the low probability of an event occurring requiring the inoperable emergency cooing tower fan to function, and the capability of the remaining emergency cooling tower fan.

B.1

With the emergency heat sink inoperable for reasons other than Condition A, the emergency heat sink must be restored to OPERABLE status within 7 days. With the unit in this condition, the normal heat sink (Conowingo Pond) is adequate to perform the heat removal function; however, the overall reliability is reduced. The 7 day Completion Time is based on the remaining heat removal capability and the low probability of an event occurring requiring the emergency heat sink to be OPERABLE during this time period.

(continued)

3.7 PLANT SYSTEMS

3.7.2 Emergency Service Water (ESW) System and Normal Heat Sink

LCO 3.7.2 Two ESW subsystems and normal heat sink shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One ESW subsystem inoperable.	A.1 Restore ESW subsystem to OPERABLE status.	7 days
B. Water temperature of the normal heat sink is > 90°F and ≤ 92°F.	B.1 Verify water temperature of the normal heat sink is ≤ 90°F averaged over the previous 24 hour period.	Once per hour
C. Required Action and associated Completion Time of Condition A or B not met. OR Both ESW subsystems inoperable. OR Normal heat sink inoperable [for reasons other than condition B].	C.1 Be in MODE 3. AND C.2 Be in MODE 4.	12 hours 36 hours

BASES

APPLICABILITY (continued)

In MODES 4 and 5, the OPERABILITY requirements of the ESW System and normal heat sink are determined by the systems they support, and therefore the requirements are not the same for all facets of operation in MODES 4 and 5. Thus, the LCOs of the systems supported by the ESW System and normal heat sink will govern ESW System and normal heat sink OPERABILITY requirements in MODES 4 and 5.

ACTIONS

A.1

With one ESW subsystem inoperable, the ESW subsystem must be restored to OPERABLE status within 7 days. With the unit in this condition, the remaining OPERABLE ESW subsystem is adequate to perform the heat removal function. However, the overall reliability is reduced because a single failure in the OPERABLE ESW subsystem could result in loss of ESW function.

The 7 day Completion Time is based on the redundant ESW System capabilities afforded by the OPERABLE subsystem, the low probability of an event occurring during this time period, and is consistent with the allowed Completion Time for restoring an inoperable DG.

B.1

With water temperature of the normal heat sink > 90°F and ≤ 92°F, the design basis assumptions associated with the initial normal heat sink temperature are bounded provided the temperature of the normal heat sink when averaged over the previous 24 hour period is ≤ 90°F. To ensure that the 92°F normal heat sink temperature limit is not exceeded, Required Action B.1 is provided to more frequently monitor the temperature of the normal heat sink. The once per hour completion time takes into consideration normal heat sink temperature variations and the increased monitoring frequency needed to ensure design basis assumptions and equipment limitations are not exceeded in this condition. If the water temperature of the normal heat sink exceeds 90°F when averaged over the previous 24 hour period or the water temperature of the normal heat sink exceeds 92°F, Condition C must be entered immediately.

(continued)

BASES

ACTIONS (continued)

C.1 and C.2

If the ESW System cannot be restored to OPERABLE status within the associated Completion Time, or both ESW subsystems are inoperable, or the normal heat sink is inoperable, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 12 hours and in MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

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(continued)

BASES

LCO (continued)

Emergency heat sink water temperature is not addressed in this LCO since the maximum water temperature of the emergency cooling tower reservoir has been demonstrated, based on historical data, to be bounded by the normal heat sink requirements (LCO 3.7.2, "Emergency Service Water (ESW) System and Normal Heat Sink").

APPLICABILITY

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ACTIONS

A.1

With one required emergency cooling tower fan inoperable, action must be taken to restore the required emergency cooling tower fan to OPERABLE status within 14 days. The 14 day Completion Time is based on the remaining heat removal capability, the low probability of an event occurring requiring the inoperable emergency cooing tower fan to function, and the capability of the remaining emergency cooling tower fan.

B.1

With the emergency heat sink inoperable for reasons other than Condition A, the emergency heat sink must be restored to OPERABLE status within 7 days. With the unit in this condition, the normal heat sink (Conowingo Pond) is adequate to perform the heat removal function; however, the overall reliability is reduced. The 7 day Completion Time is based on the remaining heat removal capability and the low probability of an event occurring requiring the emergency heat sink to be OPERABLE during this time period.

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