10 CFR 50.90

PHILADELPHIA ELECTRIC COMPANY

NUCLEAR GROUP HEADQUARTERS

955-65 CHESTERBROOK BLVD.

WAYNE, PA 19087-5691

(215) 640-6000

November 6, 1992

Docket No. 50-352

NUCLEAR SERVICES DEPARTMENT

License No. NPF-39

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

SUBJECT: Limerick Generating Station, Unit 1
Technical Specifications Change Request

Gentlemen:

Philadelphia Electric Company (PECo) is submitting Technical Specifications (TS) Change Request No. 92-15-1, in accordance with 10 CFR 50.90, requesting an amendment to the TS (Appendix A) of Operating License No. NPF-39 for Limerick Generating Station (LGS), Unit 1. This submittal requests a one-time (i.e., temporary) TS change to extend the allowed outage time for the Unit 1 Residual Heat Removal Service Water (RHRSW) system and the Suppression Pool Cooling Mode of the Residual Heat Removal (RHR) system from 72 hours to 168 hours (i.e., seven days) during the second Unit 2 refueling outage in order to allow continued Unit 1 operation while upgrades are made to the 'B' RHR heat exchanger outlet valve on both units. During this maintenance activity, Unit 2 will comply with the applicable Unit 2 TS allowed outage time. Information supporting this Change Request is contained in Attachment 1 to this letter, and the proposed replacement pages for the LGS Unit 1 TS are contained in Attachment 2.

We request that, if approved, the amendment to the LGS Unit 1 TS be effective upon issuance.

If you have any questions, please do not hesitate to contact us.

Very truly yours,

G. J. Beck, Manager
Licensing Section

Attachments

cc: T. T. Martin, Administrator, Region I, USNRC w/attachments
T. J. Kenny, USNRC Senior Resident Inspector, LGS w/attachments
W. P. Dornsife, Director, PA Bureau of Radiological Protection w/attachments

A001

COMMONWEALTH OF PENNSYLVANIA :

: ss.

COUNTY OF CHESTER :

D. R. Helwig, being first duly sworn, deposes and says:

That he is Vice President, Limerick Generating Station, Philadelphia Electric Company, the Applicant herein; that he has read the enclosed Technical Specifications Change Request No. 92-15-1 for Limerick Generating Station Unit 1, Facility Operating License No. NPF-39 and knows the contents thereof; and that the statements and matters set forth therein are true and correct to the best of his knowledge, information and belief.

D R Helwig

Vice President

Subscribed and sworn to
before me this 5th day
of November 1992.

Notary Public

Notarial Seal
Erica A. Santon, Notary Public
Tredyffrin Twp., Chester County
My Commission Expires July 10, 1995

10 CFR 50.90

PHILADELPHIA ELECTRIC COMPANY

NUCLEAR GROUP HEADQUARTERS

955-65 CHESTERBROOK BLVD.

WAYNE, PA 19087-5691

(215) 640-6600

November 6, 1992

Docket No. 50-352

NUCLEAR SERVICES DEPARTMENT

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U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
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We request that, if approved, the amendment to the LGS Unit 1 TS be effective upon issuance.

If you have any questions, please do not hesitate to contact us.

Very truly yours,

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That he is Vice President, Limerick Generating Station, Philadelphia Electric Company, the Applicant herein; that he has read the enclosed Technical Specifications Change Request No. 92-15-1 for Limerick Generating Station Unit 1, Facility Operating License No. NPF-39 and knows the contents thereof; and that the statements and matters set forth therein are true and correct to the best of his knowledge, information and belief.

D R Helwig

Vice President

Subscribed and sworn to
before me this 6th day
of November 1992.

Notary Public

Notarial Seal
Erica A. Santori, Notary Public
Tredyffrin Twp., Chester County
My Commission Expires July 10, 1995

ATTACHMENT 1

LIMERICK GENERATING STATION

UNIT 1

Docket No. 50-352

License No. NPF-39

TECHNICAL SPECIFICATIONS CHANGE REQUEST

No. 95-15-1

"One-Time Technical Specifications Change to Extend the Allowed Outage Time for the Residual Heat Removal Service Water System and the Suppression Pool Cooling Mode of the Residual Heat Removal System - Unit 1"

Supporting Information for Changes - 9 pages

Philadelphia Electric Company (PECo), Licensee under Facility Operating License NPF-39 for the Limerick Generating Station (LGS) Unit 1, requests that the Technical Specifications (TS) contained in Appendix A to the Operating License be amended as proposed herein to allow for a one-time (i.e, temporary) extension in the allowed outage time (AOT) for the Residual Heat Removal Service Water (RHRSW) system and the Suppression Pool Cooling (SPC) mode of the Residual Heat Removal (RHR) system from 72 hours to 168 hours (i.e., seven days) during the second Unit 2 refueling outage to allow continued Unit 1 operation while upgrades are made to the 'B' RHR heat exchanger outlet valve on both units. The proposed changes would involve adding a one-time provision to TS Sections 3.6.2.3, "Suppression Pool Cooling," and 3.7.1.1, "Residual Heat Removal Service Water System - Common System." We propose that TS Section 3.6.2.3, Action a, and TS Section 3.7.1.1, Action a.3, be changed such that a 168-hour period be authorized for continued operation of Unit 1 although the 'B' RHRSW loop and the Unit 1 'B' RHR heat exchanger will be inoperable during this 168-hour period. These one-time TS changes are requested to avoid a Unit 1 shutdown while the SPC mode of the 'B' loop of the RHR system and the RHRSW system are inoperable for more than 72 hours, in accordance with Unit 1 TS Sections 3.6.2.3, Action a, and 3.7.1.1, Action a.3. The proposed changes to the LGS Unit 1 TS are indicated by vertical bars in the margin of the TS pages 3/4 6-16 and 3/4 7-1. The proposed TS changes are contained in Attachment 2.

During the maintenance activity described above, Unit 2 will be in a refueling outage and will comply with Unit 2 TS allowed outage time. Therefore, no changes to Unit 2 TS are required.

This change request for LGS Unit 1 provides a discussion and description 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.

We request that, if approved, the amendment to the LGS Unit 1 TS be effective upon issuance.

Discussion and Description of the Proposed Changes

This proposed TS change request involves a one-time change to the LGS Unit 1 TS to extend the allowed outage time (AOT) for the Residual Heat Removal Service Water (RHRSW) system and Suppression Pool Cooling (SPC) mode of the Residual Heat Removal (RHR) system from 72 hours to 168 hours (i.e., seven days). This is to allow maintenance to be performed on the RHR heat exchanger service water outlet valves HV-51-1F068B and HV-51-2F068B on the Unit 1 'B' RHR heat exchanger and the Unit 2 'B' RHR heat exchanger, respectively. This change request proposes that TS Section 3.7.1.1 be modified to allow one subsystem of RHRSW to be inoperable for 168 hours (i.e., seven days) and TS Section 3.6.2.3 be modified to allow the SPC mode of one RHR subsystem to be inoperable for 168 hours (i.e., seven days) during the second Unit 2 refueling outage.

These one-time TS changes are required to allow adequate time for maintenance on the 'B' RHRSW loop (i.e., a common system) while avoiding a Unit 1 shutdown. During this maintenance activity, Unit 2 will be in a refueling outage and will comply with the applicable Unit 2 TS AOTs for RHRSW and the SPC mode of RHR.

The maintenance to be performed is an upgrade of the HV-51-1F068B and HV-51-2F068B valve internals with stainless steel components. These valves

are used to isolate and throttle RHRSW flow through the RHR heat exchangers. During throttling operations, the valves are subjected to harsh flow conditions which have caused degradation of the valves. The recommended solution is to upgrade the valve internals with stainless steel components.

Maintenance on the Unit 1 and Unit 2 'B' RHR heat exchanger RHRSW inlet valves HV-51-1F014B and HV-51-2F014B may also be performed during this maintenance period.

These RHRSW valves (i.e., HV-51-1F014B, HV-51-2F014B, HV-51-1F068B, and HV-51-2F068B) are unisolable and the 'B' RHRSW loop piping configuration requires the use of multiple freeze seals (i.e., up to seven) and partial system draining in order to perform maintenance on these valves. The additional time required to establish multiple freeze seals, partial draining, and subsequent system restoration of the 'B' RHRSW loop necessitates the need for these one-time TS changes.

Safety Assessment

This proposed TS change request involves a one-time (i.e., temporary) change to the LGS Unit 1 TS to extend the allowed outage time for the Unit 1 RHRSW system and the SPC mode of the RHR system from 72 hours to 168 hours (i.e., seven days) during the second Unit 2 refueling outage to allow continued Unit 1 operation while upgrades are made to the 'B' RHR heat exchanger outlet valve on both units. During this maintenance activity Unit 1 will remain in operation and Unit 2 will be in a refueling outage and will comply with the applicable Unit 2 TS AOTs. For the duration of this maintenance activity the 'B' RHRSW loop, the Unit 1 'B' RHR heat exchanger, and the Unit 2 'B' RHR heat exchanger will be rendered inoperable. Removal of the 'B' RHRSW loop, the Unit 1 'B' RHR heat exchanger, and the Unit 2 'B' RHR heat exchanger from service will not prevent any loop of RHR on either unit from injecting water into the respective reactor vessel in the Low Pressure Coolant Injection (LPCI) mode of operation.

The accidents potentially impacted by these proposed TS changes are the full range of Loss of Coolant Accidents (LOCAs) with and without a concurrent Loss of Offsite Power (LOOP). The loss of shutdown cooling was also considered. Any postulated accident occurring during this activity is bounded by previous analysis. The removal of the 'B' RHRSW loop from service will affect the operability of the Unit 1 and Unit 2 'B' RHR heat exchangers. The RHR heat exchangers provide a method of decay heat removal and suppression pool/drywell temperature control. Decay heat removal is a routine shutdown cooling mode of operation when the unit is shutdown. Two loops of shutdown cooling are required to be operable in accordance with TS Sections 3.4.9.1 (i.e., while the reactor is in Operational Condition (OPCON) 3-hot shutdown), 3.4.9.2 (i.e.,OPCON 4 - cold shutdown), and 3.9.11.2 (i.e., OPCON 5 - refueling), or an alternate method of decay heat removal is required to be demonstrated. Unit 1 will be in OPCON 1 (i.e., power operation), therefore these TS Sections are not applicable. However, if Unit 1 is required to be shutdown during the period the 'B' RHRSW loop is inoperable, alternate decay heat removal methods are available such as establishing a shutdown cooling path through the automatic depressurization system (ADS) valves or using the main condenser as a heat sink if offsite power is available. These methods will satisfy the shutdown cooling requirements while the reactor is in OPCONs 3 and 4. In OPCON 5, alternate decay heat removal methods such as the Reactor Water Cleanup system can be utilized to satisfy the shutdown cooling requirements after a sufficient time

after plant shutdown.

Suppression pool/drywell temperature control is an accident mitigation function of the RHR system. The RHR system accomplishes this function by two modes of operation, suppression pool spray and suppression pool cooling, both of which utilize the RHR heat exchangers. TS Section 3.6.2.2 requires that two loops of the suppression pool spray mode of RHR system be operable in OPCONs 1, 2, and 3. The AOT for one loop of the suppression pool spray mode is seven days. The planned 'B' RHRSW valve loop maintenance will be completed within this AOT, therefore, no change is required. TS Section 3.6.2.3 requires that two loops of the SPC mode of the RHR system be operable in OPCONs 1, 2, and 3. The AOT for one loop of the SPC mode being inoperable is 72 hours. This change request proposes that this AOT for Unit 1 be extended to 168 hours (i.e., seven days) during the second Unit 2 refueling outage.

The LGS Updated Final Safety Analysis Report (UFSAR), Section 6.2.2, states that one operable RHR heat exchanger is adequate for accident mitigation. Two cases of one operable RHR heat exchanger during a postulated accident are presented. In the first case, the operable RHR heat exchanger is placed in service in the RHR drywell spray mode while one RHR pump in LPCI mode of operation and one Core Spray loop inject water into the reactor vessel. In the other case, the operable RHR heat exchanger is placed in service along with an associated RHR pump taking suction from the suppression pool and discharging to the reactor vessel. The flow from the RHR pump is cooled by RHRSW flow through the RHR heat exchanger before being discharged into the reactor vessel while another RHR pump, in LPCI mode of operation, and one Core Spray loop inject directly into the reactor vessel. Both cases assume a LOOP and that the High Pressure Coolant Injection (HPCI) system is available for the entire accident. Other assumptions include: initial suppression pool temperature and RHRSW temperature are at their maximum, all the decay heat from the reactor vessel is rejected through the RHR heat exchanger, and the RHR heat exchanger is in a fully fouled condition. The peak containment pressure is higher for the second case, but is still much less than the containment design pressure. This analysis is for a rupture of a reactor recirculation line and is the bounding event for similar occurrences. TS Section 3.7.1.1 requires that two loops of RHRSW be operable in OPCONs 1, 2, and 3. The AOT for one loop of RHRSW being inoperable, which renders the associated RHR heat exchanger inoperable is 72 hours. This change request proposes that this AOT be extended to 168 hours (i.e., seven days) during the second Unit 2 refueling outage. The RHRSW system was designed with sufficient capacity so that one loop of RHRSW with two RHRSW pumps in operation and two spray pond spray networks can mitigate a Design Basis Accident (DBA) on one unit and allow the safe shutdown of the other unit as described in the UFSAR Section 9.2 .

Unit 2 will be in a refueling outage with cold shutdown conditions established. The 'B' RHRSW loop will not be removed from service until approximately day 20 of the outage. The decay heat generation of Unit 2 will have been reduced from 146 MWt at time of shutdown to approximately 3.5 Mwt by day 20. The 'A' RHRSW loop may be in operation to support Unit 2 shutdown cooling requirements. However, due to prior establishment of cold shutdown conditions, the reduction in decay heat generation and the ability to place the Spent Fuel Pool Cooling and Cleanup System in service, along with a recirculation pump or a RHR pump for reactor core circulation as an alternate decay heat removal method, the Unit 2 heat removal requirements on the 'A' RHRSW loop needed to maintain cold shutdown conditions will be minimal. Furthermore draining of the Unit 2 reactor cavity will not be allowed until

the 'B' RHRSW loop is returned to service or an alternate decay heat removal method is available. Since one loop of RHRSW can mitigate a DBA on one unit and support the safe shutdown of the other unit, the potential heat removal requirements with respect to Unit 1 during the period that these proposed TS changes will be in effect is within the capacity of the 'A' RHRSW loop.

The above discussions do not account for a single failure that could render the operable 'A' RHR heat exchanger or operable 'A' RHRSW loop inoperable during the proposed extended AOT. By limiting the time the 'B' RHRSW loop is out of service and maintaining the Unit 1 'A' RHR heat exchanger, the 'A' RHRSW loop, and associated equipment/system operable during that period, the consequences of an accident previously evaluated will remain unchanged. The components that have the potential of preventing the Unit 1 'A' RHR heat exchanger or the 'A' RHRSW loop from performing their safety function if they were to fail are listed below.

- 'A' RHR heat exchanger, shell side (i.e.,RHR system flow side) outlet valve:
  HV-51-1F003A (normally open - safety function open).

- 'A' RHR heat exchanger, RHRSW inlet valve:
  HV-51-1F014A (normally closed - safety function open).

- 'A' RHR heat exchanger, shell side bypass valve:
  HV-C-51-1F048A (normally open - safety function throttled/closed).

- 'A' RHR heat exchanger, RHRSW outlet valve:
  HV-51-1F068A (normally closed - safety function throttled/open)

- 'A' RHRSW spray pond spray nozzle, inlet valve:
  HV-12-032A (normally closed - safety function open).

- 'C' RHRSW spray pond spray nozzle, inlet valve:
  HV-12-032C (normally closed - safety function open).

A review of the maintenance records indicates that there was one occurrence of the RHRSW inlet valve, HV-51-1F014A, failing to open. This valve was later tested and it operated properly. The RHRSW outlet valve, HV-51-1F068A, has also experienced improper operation, however, the valve internals were replaced during Unit 1 fourth refueling outage, and the valve is currently operating properly. No other occurrences of the other valves failing to function properly were noted. Therefore, the probability of a malfunction of any of these valves preventing the 'A' RHR heat exchanger or 'A' RHRSW loop from performing their safety function is considered to be minimal.

The above mentioned valves are powered from Class 1E safeguard buses. HV-C-051-1F048A, HV-51-1F014A and HV-12-032A are powered from Unit 1 division 1 power supplies. HV-51-1F068A is powered from Unit 1 division 3 power supplies. HV-12-032C is powered from Unit 2 division 3 power supplies. Therefore, to ensure emergency electrical power is available to these valves during a LOOP, the D11, D13, and D23 emergency diesel generators (EDGs) will be required to remain operable during the proposed extended AOTs.

A complete cleaning and inspection of the tube side of the Unit 1 'A' RHR heat exchanger was performed during the fourth Unit 1 refueling outage. Although some tube pitting occurred which required some tubes to be plugged, the heat removal capacity was evaluated to be 202 x 10^6 BTU/HR. This is 65%

above the minimum design capacity of 122 x 10^6 BTU/HR.

The removal of the 'B' RHRSW loop from service will not affect the capability of any emergency core cooling systems (ECCS) from injecting water into the reactor vessel. The RHRSW system is manually operated and is not required during the first ten minutes of a LOCA. Therefore, the short-term (i.e., less than ten minutes) emergency core cooling capability of Unit 1 ECCS is unaffected. Long-term actions (i.e., greater than ten minutes) will be affected to the extent that only the 'A' RHR heat exchanger will be operable for long-term heat removal. Long-term cooling requirements will be met by the Unit 1 'A' RHR heat exchanger and the 'A' RHRSW loop with the RHR system in either the containment spray or the SPC mode of operation, as discussed earlier. Further removal of Unit 1 equipment/systems will be allowed in accordance with existing TS requirements as long as the removal of equipment/systems from service does not adversely affect the operability of the 'A' RHRSW loop or the operable SPC mode of RHR operation or places the unit outside of the analysis described in UFSAR Section 6.2.

The Emergency Service Water (ESW) system will be affected by the removal of the 'B' RHRSW loop from service in that all ESW return flow will be to the 'A' RHRSW loop. This alignment is within the design capabilities of the ESW system and will be controlled by approved procedures. A computer analysis of the flow distribution to components cooled by ESW was performed. This analysis indicates that sufficient ESW flow is available to support operability of essential components. Measurements of ESW system flow will be performed on the most limiting components as determined by the computer analysis to validate component/system operability. Physical work on the 'B' RHRSW loop will not begin until the ESW system (i.e., both loops) is verified operable.

The Unit 2 Turbine Enclosure Cooling Water (TECW) system will also be affected such that the ESW system will not be available to backup the Service Water system as the cooling medium for the Unit 2 TECW system. The ESW system is utilized as the cooling medium for the TECW system in the event of a LOOP. The ESW return path from the Unit 2 TECW heat exchangers to the 'B' RHRSW loop will be isolated during the 'B' RHRSW loop maintenance period preventing the ESW system from being capable of removing heat from the Unit 2 TECW system. TECW is non-safety related and is normally aligned to the Service Water system. Since Unit 2 will be in a refueling outage, loss of the ESW system's ability to remove heat from the Unit 2 TECW system will have no adverse impact.

The concern associated with the proposed TS change is the reduced margin of safety incurred by extending the applicable AOTs. The RHRSW system is designed such that the AOT for operation with less than three RHRSW pumps operable along with their associated operable EDGs is limited to 72 hours to ensure adequate decay heat removal capability is available for the design accident scenario of a LOCA/LOOP on one unit and simultaneous safe shutdown of the other unit. The reduction in the margin of safety due to increasing the applicable AOTs from 72 hours to 168 hours in a degraded condition of the plant is considered minimal as discussed below, since this reduction reflects the small increase in the probability that a LOCA/LOOP event would occur on Unit 1 within the proposed seven-day AOT period as compared to the probability of a LOCA/LOOP on Unit 1 during the three-day period allowed by TS.

A Probabilistic Risk Assessment (PRA) was performed for the conditions discussed above. The cumulative risk of a core damage event increased from

3.801×10^{-6} per reactor year to 1.012×10^{-5} per reactor year. This equates to a 1.4% increase from the baseline core damage event risk for a three-day out-of-service period and a 3.2% increase from the baseline core damage event risk for a seven-day out-of-service period. Therefore, the increased risk (i.e., 1.8%) of extending the AOTs for TS Section 3.6.2.3, Action a, and TS Section 3.7.1.1, Action a.3 to 168 hours (i.e., seven days) is judged to be minimal.

Information Supporting a Finding of No Significant Hazards Consideration

We have concluded that the proposed changes to the LGS Unit 1 TS to extend the AOTs for the 'B' RHRSW loop and the SPC mode of operation of the 'B' RHR loop from 72 hours to 168 hours during the second Unit 2 refueling outage, do not constitute a significant hazards consideration. 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 changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed one-time Unit 1 TS changes do not increase the consequences of an accident from any previously evaluated. Extending the AOTs for the 'B' RHRSW loop and the SPC mode of operation of the 'B' RHR loop from 72 hours to 168 hours (i.e., seven days) does not cause an increase in the probability of an accident since the affected systems are not accident initiators as defined by the UFSAR. Maintaining the 'A' RHRSW loop and the SPC mode of operation of the 'A' RHR loop operable will ensure that the consequences of the accidents previously evaluated will remain bounded by the UFSAR Safety Analysis. Therefore, there is no increase in the consequences of an accident. This conclusion is based on the following considerations.

a. Removal of the 'B' RHRSW loop and its associated Unit 1 'B' RHR heat exchanger will not prevent any ECCS (i.e., LPCI, Core Spray, HPCI) from injecting water into the reactor vessel. Short-term mitigation of an accident is unaffected since RHRSW is manually operated and is not required to be placed in service during the first 10 minutes of an accident.

b. For long-term response, accident analysis discussed in UFSAR Section 6.2 indicates that one loop of RHRSW and one RHR heat exchanger are capable of removing the decay heat from both units assuming a LOCP/LOCA on one unit and safe shutdown on the other unit.

c. Unit 2 will be in a refueling outage. The heat load on the 'A' RHRSW loop from Unit 2 will be minimal based on long time after shutdown when the 'B' loop of RHRSW will be removed from service, and the availability of alternate decay heat removal methods that do not reject heat to RHRSW.

d. The RHRSW and ESW systems are designed with sufficient capacity such that one loop of ESW (i.e., one pump in operation) using one spray pond return header and two spray networks is the minimal alignment required to mitigate a LOCA with a concurrent LOOP on one unit (i.e., in this case Unit 1) and a safe shutdown on the other unit.

The unit undergoing an accident would receive 100% of the required RHRSW flow to its RHR heat exchanger and the unit undergoing a normal shutdown would receive 67% to 100% of the required RHRSW flow to its RHR heat exchanger. Sixty-seven percent RHRSW flow to the unit undergoing a normal shutdown is sufficient to remove the heat load transferred through the RHR heat exchanger as discussed in UFSAR Section 9.2.3. However, since Unit 2 will already be in cold shutdown, the heat removal requirements and therefore the required RHRSW flow will be substantially less than 67%.

The probability for a single failure to occur and render the operable 'A' RHR heat exchanger or operable 'A' RHRSW loop inoperable during the proposed extended AOTs, has been evaluated and the conclusion is that there is no increase in the existing probability for a single failure as a result of these proposed TS changes.

Therefore, implementation of the proposed 168-hour AOT will not result in an increase in the probability or consequences of an accident previously evaluated.

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

Since the proposed changes will not result in any new plant configuration, system alignment, or operational procedures, the possibility of a new or different kind of accident is not created. The systems affected are not accident initiators. The plant has been analyzed for one RHRSW loop out of service. Plant operation and accident mitigation utilizing one loop of RHRSW and one RHR heat exchanger is described in UFSAR Sections 5.4, 6.2, and 15.2. The operable systems that will be affected during the implementation of these proposed one-time TS changes will be operated within their design capabilities under approved procedures. The removal of one RHRSW loop and its associated RHR heat exchanger from service is currently allowed by TS. These proposed one-time TS changes will only extend the subsystem AOTs for the RHRSW system and SPC mode of operation of the RHR system from 72 hours to 168 hours (i.e., seven days) during the second Unit 2 refueling outage.

The proposed changes will not cause the components important to safety that have been discussed above to be challenged by a different type of malfunction, since no new type of malfunction will be created by any operation associated with this activity.

Therefore, these proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

The RHRSW system and the RHR system are designed with sufficient redundancy such that the removal from service of a component and/or subsystem will not prevent the system from performing its required safety function. Since removal of the 'B' RHRSW loop from service with Unit 1 in operation and Unit 2 in a refueling outage is allowed by existing TS, the concern is the reduced margin of safety incurred by extending the applicable AOTs.

The RHRSW system is designed such that the AOT for operation with less than three RHRSW pumps operable along with their associated operable EDGs is limited to 72 hours to ensure adequate decay heat removal capability is available for the design accident scenario of a LOCA/LOOP on one unit and simultaneous safe shutdown of the other unit. The reduction in the margin of safety due to increasing the applicable AOTs from 72 hours to 168 hours in a degraded condition of the plant is considered minimal as discussed below, since this reduction reflects the small increase in the probability that a LOCA/LOOP event would occur on Unit 1 within the proposed seven-day AOT period as compared to the probability of a LOCA/LOOP on Unit 1 during the three day period allowed by TS.

A PRA was performed for the conditions discussed above. The cumulative risk of a core damage event increased from 3.801×10^{-6} per reactor year to 1.012×10^{-5} per reactor year. This equates to a 1.4% increase from the baseline core damage event risk for a three-day out-of-service period and a 3.2% increase from the baseline core damage event risk for a seven-day out-of-service period. This increased risk of a core damage event (i.e., 1.8%) of extending the AOTs for TS Section 3.6.2.3, Action a and TS Section 3.7.1.1, Action a.3 to 168 hours (i.e., seven days) is judged to be minimal.

In addition, the following equipment and/or systems will be required to be operable for the duration of the proposed extended AOTs, or the Actions of TS Sections 3.6.2.3.b and 3.7.1.a.4 must be followed.

- Unit 1 'A' RHR heat exchanger and associated equipment.
- 'A' RHRSW loop and associated equipment.
- HPCI (Unit 1).
- D11, D13, and D23 EDGs and associated equipment.
- Any other equipment that, if removed, would place Unit 1 outside the bounds of the UFSAR analysis described in Section 6.2 (i.e., minimum number of ECCS, RHRSW loops, and ESW loops needed for accident mitigation).

One intended action is to maintain the Unit 1 suppression pool temperature as low as possible during the period these proposed changes are implemented. This will increase the heat storage capacity of the suppression pool and further enhance the heat removal capacity of the 'A' RHRSW loop. Also, since Unit 2 will be in a refueling outage, the Unit 2 decay heat removal demand on the RHRSW system will be minimal. Therefore, implementation of the proposed, one-time TS changes will not involve a significant reduction in the margin of safety.

Information Supporting an Environmental Assessment

An environmental assessment is not required for the changes proposed by this Change Request because the requested changes to the LGS Unit 1 TS conform to the criteria for "actions eligible for categorical exclusion" as specified in 10 CFR 51.22(c)(9). The requested changes will have no impact on the environment. The proposed changes do not involve a significant hazards consideration as discussed in the preceding section. The proposed

changes do 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 changes do not involve an increase in individual or cumulative occupational radiation exposure.

Conclusion

The Plant Operations Review Committee and the Nuclear Review Board have reviewed these proposed changes to the LGS Unit 1 TS and have concluded that they do involve an unreviewed safety question, but that they do not involve significant hazards consideration, and will not endanger the health and safety of the public.