

ATTACHMENT 1

LIMERICK GENERATING STATION

UNITS 1 AND 2

DOCKET NOS. 50-352
50-353

LICENSE NOS. NPF-39
NPF-85

TECHNICAL SPECIFICATIONS CHANGE REQUEST

NO. 95-02-0

"INCREASE IN HIGH PRESSURE COOLANT INJECTION (HPCI)
SYSTEM RESPONSE TIME"

Supporting Information for Changes - 3 Pages

PECO Energy Company, under Facility Operating License Nos. NPF-39 and NPF-85 for Limerick Generating Station (LGS), Units 1 and 2, respectively, requests that the Technical Specifications (TS) contained in Appendix A to the Operating License be amended as proposed herein, to reflect an increase in the High Pressure Coolant Injection (HPCI) system response time from 30 seconds to 60 seconds, thereby revising TS Table 3.3.3-3. The proposed change to the TS is indicated by the vertical bar in the margin of the TS page 3/4 3-39. The TS pages showing the proposed change are contained in Attachment 2.

We request that, if approved, the TS change proposed herein be issued by April 1, 1996, and become effective within 30 days of issuance of the amendment.

This TS Change Request provides a discussion and description of the proposed TS change, a safety assessment of the proposed TS change, information supporting a finding of No Significant Hazards Consideration and information supporting an Environmental Assessment.

Discussion and Description of the Proposed Change

The proposed Technical Specifications (TS) Change Request involves increasing the High Pressure Coolant Injection (HPCI) system response time from 30 seconds to 60 seconds, revising TS Table 3.3.3-3 accordingly. This change will help prevent unnecessary retesting of the HPCI system.

The HPCI system response time is defined as the time from receipt of a low reactor water level (Level 2) or primary containment high pressure signal, to when the HPCI system reaches design rated flow. The current Emergency Core Cooling System (ECCS)-Loss-of-Coolant Accident (LOCA) analysis was performed for Limerick Generating Station (LGS), Units 1 and 2 at a thermal power level of 3622 MWt, which bounds the maximum authorized rated thermal power level of 3458 MWt. The current ECCS-LOCA analysis for LGS assumes a HPCI system response time of 60 seconds, instead of 30 seconds. The results of this analysis confirm that the HPCI response time of 60 seconds does not affect the licensing basis Peak Cladding Temperature (PCT), which is below 2200°F.

Therefore, we propose that TS Table 3.3.3-3 be revised to reflect the HPCI system response time of 60 seconds instead of 30 seconds.

Safety Assessment

The proposed TS change will increase the High Pressure Coolant Injection (HPCI) system response time from 30 seconds to 60 seconds. This TS change is in accordance with the assumptions provided in the current Emergency Core Cooling System (ECCS)-Loss-of-Coolant Accident (LOCA) analysis for Limerick Generating Station (LGS), Units 1 and 2, which considers a HPCI system response time of 60 seconds. The results of this analysis confirm that the ECCS acceptance criteria of 10CFR50.46 are met. The HPCI system response time of 60 seconds does not affect the licensing basis PCT, which is below 2200°F. No safety limits are affected by the proposed TS change.

The Loss of Feedwater Flow (LOFW) event has been evaluated for the potential effect of the increase in the HPCI system response time. The LOFW analysis shows that the HPCI system alone can adequately maintain the reactor vessel water level above the top of the active fuel. The HPCI system is one of the systems which provides reactor vessel water makeup inventory and is initiated automatically on a low

reactor water level (Level 2) signal. An analysis of the LOFW event with the HPCI system alone (assuming a RCIC failure), and a 60 second HPCI system response time, shows that Level 1 is not reached and that the top of the active fuel will remain covered throughout the event.

The Direct Current (DC) loads on the safeguard battery were reviewed for the affects of the increased HPCI system response time and no adverse impacts were identified.

The inadvertent HPCI pump start event has also been evaluated for the potential effect of the increased HPCI system response time of 60 seconds. This event causes a core reactivity increase due to the HPCI flow injection of cold water. The safety analysis assumes that the event begins when the HPCI system injects flow into the reactor pressure vessel. Therefore, the HPCI startup time increase from 30 seconds to 60 seconds does not change the calculated results of this event.

Information Supporting a Finding of No Significant Hazards Consideration

We have concluded that the proposed change to the Limerick Generation Station (LGS), Units 1 and 2 Technical Specifications (TS), which will revise TS Table 3.3.3-3, "Emergency Core Cooling System Response Times" to reflect the High Pressure Coolant Injection (HPCI) system response time of 60 seconds, does not involve 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 Technical Specifications (TS) change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed TS change will increase the High Pressure Coolant Injection (HPCI) system response time from 30 seconds to 60 seconds. The proposed TS change does not involve any physical change in the plant configuration which may cause an accident, or affect safety-related equipment performance or cause its failure. There is no increase in the consequences of an accident, because the HPCI response time increase does not affect the licensing basis Peak Cladding Temperature (PCT), which remains below the regulatory limit of 2200°F.

The Loss of Feedwater Flow (LOFW) event was evaluated for being potentially affected by the increased HPCI system response time. The HPCI system is one of the systems which provides reactor vessel water makeup inventory, and is initiated automatically on a low reactor water level (Level 2) signal. The LOFW analysis shows that Level 1 is not reached and that the top of the active fuel will remain covered throughout the event. Therefore, adequate core cooling will be maintained and no fuel damage will result. The probability of fuel failure will not be increased by this proposed TS change.

Therefore, the proposed TS change does not involve an increase in the probability or consequences of an accident previously evaluated.

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

The proposed TS change will increase the High Pressure Coolant Injection (HPCI) system response time from 30 seconds to 60 seconds. This proposed change is bounded by the

current Emergency Core Cooling System (ECCS)-Loss-of-Coolant Accident (LOCA) analysis for Limerick Generating Station (LGS) Units 1 and 2. The change in HPCI system response time does not involve any physical modifications to the plant systems or equipment, nor does it introduce a new operational/failure mode, which might cause a different type of accident. In case of a Loss of Feedwater Flow (LOFW) event, the HPCI system will operate as designed, maintaining adequate core cooling.

Therefore, the proposed TS change does not create the possibility of a new or different kind of accident, from any accident previously evaluated.

3. The proposed TS change does not involve a significant reduction in a margin of safety.

The following TS Bases were reviewed for potential reduction in the margin of safety:

3/4.5 Emergency Core Cooling System

2.1.4 Reactor Vessel Water Level

The TS Bases do not discuss the High Pressure Coolant Injection (HPCI) system start time. The margin of safety, as defined in the TS Bases, will remain the same. The proposed TS change is in accordance with the current licensing basis Emergency Core Cooling System (ECCS) - Loss-of-Coolant Accident (LOCA) analysis for LGS Units 1 and 2, and does not impact any safety limits of the plant. The HPCI system will operate as designed during the LOFW event, maintaining adequate core cooling.

Therefore, the proposed TS change does not involve a reduction in a margin of safety.

Information Supporting an Environmental Assessment

An environmental assessment is not required for the change proposed by this TS Change Request because the requested change to the Limerick Generating Station (LGS), Units 1 and 2, TS conforms to the criteria for "actions eligible for categorical exclusion" as specified in 10 CFR.51.22(c)(9). The requested 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.

Conclusion

The Plant Operations Review Committee and the Nuclear Review Board have reviewed this proposed change to the Limerick Generating Station (LGS), Units 1 and 2, TS and have concluded that it does not involve an unreviewed safety question, and will not endanger the health and safety of the public.

ATTACHMENT 2

LIMERICK GENERATING STATION

UNITS 1 AND 2

DOCKET NOS. 50-352
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TECHNICAL SPECIFICATIONS CHANGE REQUEST

NO. 95-02-0

LIST OF AFFECTED PAGES

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TABLE 3.3.3-3

EMERGENCY CORE COOLING SYSTEM RESPONSE TIMES

<u>ECCS</u>	<u>RESPONSE TIME (Seconds)</u>
1. CORE SPRAY SYSTEM	≤ 27
2. LOW PRESSURE COOLANT INJECTION MODE OF RHR SYSTEM	≤ 40
3. AUTOMATIC DEPRESSURIZATION SYSTEM	N.A.
4. HIGH PRESSURE COOLANT INJECTION SYSTEM	≤ 60
5. LOSS OF POWER	N.A.

TABLE 3.3.3-3

EMERGENCY CORE COOLING SYSTEM RESPONSE TIMES

<u>ECCS</u>	<u>RESPONSE TIME (Seconds)</u>
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2. LOW PRESSURE COOLANT INJECTION MODE OF RHR SYSTEM	≤ 40
3. AUTOMATIC DEPRESSURIZATION SYSTEM	N.A.
4. HIGH PRESSURE COOLANT INJECTION SYSTEM	≤ 60
5. LOSS OF POWER	N.A.