

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. 93-21-0

"Revise Technical Specifications Surveillance Requirement 4.8.1.1.2e.8
which requires that a Diesel Generator Be Retested
Within 5 Minutes After Completing a 24 Hour Endurance Run"

Supporting Information for Changes - 3 pages

PECO Energy Company, Licensee under Facility Operating License Nos. NPF-39 and NPF-85 for Limerick Generating Station, Units 1 and 2, respectively, requests that the Technical Specifications (TS) contained in Appendix A to the Operating Licenses be amended as proposed herein, to revise TS Surveillance Requirement (SR) 4.8.1.1.2e.8, which requires that an emergency diesel generator be tested within 5 minutes after completing a 24 hour endurance run. The proposed changes to the TS are indicated by a vertical bar in the margin of TS page 3/4 8-6 for Units 1 and 2. The TS pages showing the proposed changes are contained in Attachment 2.

We request that, if approved, the TS change proposed herein be effective immediately upon issuance of the amendments.

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 Changes

Currently, Limerick Generating Station (LGS), Units 1 and 2, Technical Specification (TS) Surveillance Requirement (SR) 4.8.1.1.2e.8 requires that an emergency diesel generator (EDG) be retested within 5 minutes after completing a 24 hour endurance run. The purpose of the EDG hot restart test, as described in Regulatory Guide 1.108, rev. 1, is to demonstrate functional capability of the EDG from full load temperature conditions. As reflected in the Standard Technical Specifications, a diesel start achieving voltage and frequency within the required time is an adequate demonstration of functional capability for the EDG hot restart test. The proposed TS change involves separating TS 4.8.1.1.2e.8 into two parts (i.e., 4.8.1.1.2e.8a and 4.8.1.1.2e.8b) and deleting the '***' footnote which applies to the EDG hot restart. Proposed part 'a' involving the EDG 24 hour test run will remain unchanged. Proposed part 'b', however, will incorporate a revision to the requirement to test the capability of an EDG to restart within a specified time after having run at rated conditions. The change as written is in accordance with the guidelines contained in NUREG-1433, of the Standard Technical Specifications. The intent of this surveillance requirement is to demonstrate that an EDG can restart and achieve required voltage and frequency within ten seconds from a hot condition.

Safety Assessment

This Technical Specification change clarifies that the intent of SR 4.8.1.1.2e.8 is to demonstrate: 1.) full-load carrying capability of the Emergency Diesel Generator (EDG) for a period of not less than 24 hours (endurance run), and b.) capability of the EDG to restart shortly after being shutdown following prolonged operation at or near full power (hot restart). The change clarifies this intent by requiring both a 24 hour endurance run, and, a hot restart which must occur within five minutes of shutting down the EDG after the EDG has operated for at least two hours at an indicated 2700-2800 kw. Scheduling of the hot restart relative to the 24 hour run will be a matter of plant management discretion. A two hour run satisfies the requirement for "prolonged operation" because, as determined by the manufacturer and corroborated by licensee experience, two hours is sufficient time for the EDG to reach steady-state operating temperatures. Furthermore, the change clarifies that an additional performance of SR 4.8.1.1.2e.4.b (Loss-Of-Offsite-Power (LOOP) test) is not required in conjunction with the hot restart. Verification of the capability of the EDG to appropriately respond to a LOOP is

accomplished by a separate SR. Performing an additional LOOP test in conjunction with a hot restart imposes a strain on multiple systems/components without measurable benefit.

Information Supporting a Finding of No Significant Hazards Consideration

We have concluded that the proposed change to the Limerick Generating Station (LGS), Units 1 and 2, Technical Specifications (TS) to revise Technical Specifications Surveillance Requirement 4.8.1.1.2e.8 which requires that a diesel generator be retested within 5 minutes after completing a 24 hour test run 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 would revise the Emergency Diesel Generator (EDG) surveillance criteria to allow the hot restart test to be performed independent of the Engineered Safety Features (ESF) load sequencing test and the 24 hour endurance run. The proposed surveillance requirements would continue to demonstrate that the objectives of each of these tests are met. Specifically, the EDG's are shown to be capable of starting the ESF loads in the required sequence, operating at full load for an extended period of time, and restarting from a full load temperature condition. Therefore, the proposed changes would not adversely affect the EDG's ability to support mitigation of the consequences of any previously evaluated accident. The proposed changes to the surveillance requirements do not affect the initiation or progression of any accident sequence.

Therefore, the proposed 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.

This proposed TS change does not require physical changes to the plant or equipment, and does not impact any design or functional requirements of the Emergency Diesel Generators (EDGs). The proposed change affects surveillance test criteria such that increased scheduling flexibility is allowed while the test objectives associated with demonstrating EDG operability continue to be met. The proposed changes do not allow any plant configurations that are presently prohibited by the Technical Specifications.

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

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

The proposed TS change does not involve a change to the physical design or functional requirements of the Emergency Diesel Generators (EDGs). Surveillance testing in accordance with the proposed Technical Specification will continue to demonstrate the ability of the EDG's to perform their intended function of providing electrical power to ESF systems needed to mitigate design

basis transients, consistent with the plant safety analyses. The margin of safety demonstrated by the plant safety analyses is therefore not affected by the proposed change.

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 LGS, Units 1 and 2, TS conform 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 LGS, Units 1 and 2, TS and have concluded that they do 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 50-353
License Nos.	NPF-39 NPF-85

TECHNICAL SPECIFICATIONS CHANGE REQUEST

No. 93-21-0

LIST OF AFFECTED PAGES

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ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

8. a) Verifying the diesel generator operates* for at least 24 hours. During the first 2 hours of this test, the diesel generator shall be loaded to an indicated 2950-3050 kW** and during the remaining 22 hours of this test, the diesel generator shall be loaded to an indicated 2700-2800 kW**.
- b) Within 5 minutes of shutting down the diesel generator after the diesel generator has operated* for at least 2 hours at an indicated 2700 - 2800 kW** verify the diesel generator starts*. The generator voltage and frequency shall reach 4285 +/- 420 volts and 60 +/- 1.2Hz within 10 seconds after the start signal.
9. Verifying that the auto-connected loads to each diesel generator do not exceed the 2000-hour rating of 3100 kW.
10. Verifying the diesel generator's capability to:
 - a) Synchronize with the offsite power source while the generator is loaded with its emergency loads upon a simulated restoration of offsite power,
 - b) Transfer its loads to the offsite power source, and
 - c) Be restored to its standby status.
11. Verifying that with the diesel generator operating in a test mode and connected to its bus, a simulated ECCS actuation signal overrides the test mode by (1) returning the diesel generator to standby operation, and (2) automatically energizes the emergency loads with offsite power.
12. Verifying that the automatic load sequence timers are OPERABLE with the interval between each load block within $\pm 10\%$ of its design interval.

* This test shall be conducted in accordance with the manufacturer's recommendations regarding engine prelude and warmup procedures, and as applicable regarding loading and shutdown recommendations.

** This band is meant as guidance to avoid routine overloading of the engine. Loads in excess of this band for special testing under direct monitoring by the manufacturer or momentary variations due to changing bus loads shall not invalidate the test.

ELECTRICAL POWER SYSTEMS

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