Station Support Department

10 CFR 50.90

PECO NUCLEAR
A UNIT OF PECO ENERGY

PECO Energy Company
Nuclear Group Headquarters
965 Chesterbrook Boulevard
Wayne, PA 19087-5691

May 3, 1996

Docket Nos. 50-352
50-353
License Nos. NPF-39
NPF-85

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

Subject: Limerick Generating Station, Units 1 and 2
Technical Specifications Change Request No. 93-28-0
Revise the Technical Specifications Surveillance Requirements to Change the Surveillance Test Frequency for Performing Flow Testing of the Standby Gas Treatment System and Reactor Enclosure Recirculation System from Monthly to Quarterly

Gentlemen:

PECO Energy Company is submitting Technical Specifications (TS) Change Request No. 93-28-0 in accordance with 10 CFR 50.90, requesting an amendment to the TS (i.e., Appendix A) of Operating License Nos. NPF-39 and NPF-85 for Limerick Generating Station, Units 1 and 2, respectively. This proposed TS Change Request revises TS Surveillance Requirements 4.6.5.3.a and 4.6.5.4.a to modify specific requirements to perform surveillance flow testing of the Standby Gas Treatment and Reactor Enclosure Recirculation Systems from monthly to quarterly. Information supporting this TS Change Request is contained in Attachment 1 to this letter, and the proposed mark-up pages for the LGS, Units 1 and 2, TS are contained in Attachment 2. This information is being submitted under affirmation, and the required affidavit is enclosed.

We request that, if approved, the amendments to the LGS, Units 1 and 2, TS be issued by November 15, 1996 and become effective within 30 days of issuance of the amendment.

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

Very truly yours,

G. A. Hunger, Jr.

G. A. Hunger, Jr.
Director - Licensing

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Attachments
Enclosure

cc: T. T. Martin, Administrator, Region I, USNRC (w/ attachments, enclosure)
N. S. Perry, USNRC Senior Resident Inspector, LGS (w/ attachments, enclosure)
R. R. Janati, Director, PA Bureau of Radiation Protection, (w/ attachments, enclosure)

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COMMONWEALTH OF PENNSYLVANIA :

:

COUNTY OF CHESTER :

D. B. Fetters, being first duly sworn, deposes and says:

That he is Vice President of PECO Energy Company, the Applicant herein; that he has read the foregoing Technical Specifications Change Request No. 93-28-0 for Limerick Generating Station, Units 1 and 2, to modify the surveillance interval for flow testing of the Standby Gas Treatment and Reactor Enclosure Recirculation Systems from monthly to quarterly, 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.

Vice President

Subscribed and sworn to
before me this 3rd day
of May 1996.

Notary Public

Notarial Seal
Mary Lou Skrocki, Notary Public
Tredyffrin Twp., Chester County
My Commission Expires May 17, 1999
Member, Pennsylvania Association of Notaries

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. 93-28-0

"Revise the Technical Specifications Surveillance Requirements to Change the Surveillance Test Frequency for Performing Flow Testing of the Standby Gas Treatment System and Reactor Enclosure Recirculation System from Monthly to Quarterly."

Supporting Information for Changes - 4 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 modify TS Surveillance Requirements 4.6.5.3.a and 4.6.5.4.a to change surveillance test frequency for performing flow testing of the Standby Gas Treatment System (SGTS) and Reactor Enclosure Recirculation System (RERS) from monthly (at least one per 31 days) to quarterly (at least once per 92 days).

We request that, if approved, the TS changes proposed herein be issued by November 15, 1996 and become effective within 30 days of issuance of the amendments.

This TS Change Request 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.

Discussion and Description of the Proposed Changes

Currently, Limerick Generating Station (LGS), Units 1 and 2, Technical Specifications (TS) surveillance requirements require that flow testing of the Standby Gas Treatment System (SGTS) and the Reactor Enclosure Recirculation System (RERS) be performed monthly (at least once per 31 days). Specifically, the current TS require that:

1) each standby gas treatment subsystem is demonstrated operable at least once per 31 days by initiating, from the control room, flow through the HEPA filters and charcoal absorbers and verifying that the subsystem operates with the heaters operable; and that,

2) each reactor enclosure recirculation subsystem is demonstrated operable at least once per 31 days by initiating, from the control room, flow through the HEPA filters and charcoal absorbers and verifying that the subsystem operates properly.

The proposed TS change will revise TS Surveillance Requirements (SRs) 4.6.5.3a and 4.6.5.4a to change the surveillance test frequency for performing flow testing of the Standby Gas Treatment System (SGTS) and Reactor Enclosure Recirculation System (RERS) from monthly (at least once per 31 days) to quarterly (at least once per 92 days).

Safety Assessment

The LGS Standby Gas Treatment System (SGTS) is an engineered safety feature system whose primary function is to maintain a negative pressure in the affected secondary containment zone(s) and to remove iodine and particulate concentration in gases potentially present within the secondary containment zone(s) prior to discharge to the environment following a Loss of Coolant Accident (LOCA) or Fuel Handling Accident. This reduction in containment iodine inventory reduces the resulting site boundary radiation doses associated with containment leakage.

The SGTS encompasses a portion of the reactor enclosure and refueling area HVAC systems and also the Reactor Enclosure Recirculation System (RERS). The RERS is used to filter the halogen and particulate concentrations in gases potentially present in the reactor enclosure following a LOCA. The RERS is the initial cleanup system, and the SGTS is the final cleanup system before discharge to the environment.

Under normal operating conditions, the safety-related SGTS and RERS are maintained in a standby mode. These systems will automatically start upon receipt of the appropriate isolation signal.

The SGTS is common to both Units 1 and 2. It consists of two (2) redundant filter trains and fans. Each filter train consists of a heater, two (2) HEPA filter banks, and an 8-inch deep charcoal absorber bed. Each Unit has its own RERS. Each Units' RERS consist of two (2) redundant filter trains and fans. Each filter train consists of a prefilter, two HEPA filter banks, and a 2-inch deep charcoal absorber bed.

The SGTS and RERS were designed with a feature to continuously purge their respective charcoal beds and HEPA filters with dry instrument air for the purpose of preventing moisture build up on the charcoal absorber beds. This design feature was the direct result of Regulatory Guide 1.52, Revision 1, "Design, Testing, and Maintenance Criteria for Post Accident Engineered-Safety-Feature Atmosphere Clean-up System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants" which stated that potential build-up of moisture in the absorber should be given design consideration. This safety-related feature was designed such that whenever the SGTS and RERS are not in operation (as sensed by flow switches) a supply of dry instrument air is injected upstream of the absorbers to prevent moisture buildup. When the SGTS and RERS are in operation the supply of instrument air is shut-off. This dry instrument air will entrain moisture and maintain moisture levels at a minimum because there is no internal humidity source and the system duct-work is leak-tight. This information is discussed in LGS Updated Final Safety Analysis Report (UFSAR) Sections 6.5.1, 6.5.2, and LGS TS Bases Section 3/4.6.5. As stated in the LGS TS the leak-tightness of SGTS and RERS is verified at least once per 24 months or (1) after any structural maintenance on the HEPA filter or charcoal absorber housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with these system so this verification assures that each system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978.

Information Supporting a Finding of No Significant Hazards Consideration

We have concluded that the proposed changes to the Limerick Generating Station (LGS), Units 1 and 2, Technical Specifications (TS) Surveillance Requirements (SRs) 4.6.5.3.a and 4.6.5 4.a to change surveillance test frequency for performing flow testing of the SGTS and RERS from monthly to quarterly, do not involve a Significant Hazards Consideration. In support of this determination, an evaluation of each of the three (3) standards set forth in 10CFR 50.92 is performed below.

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

   The proposed TS changes do not involve any physical changes to plant systems or equipment. The proposed TS changes only change the Surveillance Requirements (SRs) surveillance test frequency pertaining to flow testing of the SGTS and RERS from monthly to quarterly. The periodic surveillance test frequencies provide adequate assurance that the equipment tested will remain in an operable condition. The test frequency interval for the flow testing of the SGTS and RERS was determined from the regulatory position in USNRC Regulatory Guide 1.52, "Design, Testing, and Maintenance Criteria for Post Accident Engineered-Safety-Feature Atmosphere Clean-up System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants". As stated in Regulatory Position C.4.d, "... each Engineered Safety Feature (ESF) atmosphere cleanup train should be operated at least 10 hours per month, with the heaters

on (if so equipped), in order to reduce the buildup of moisture on the absorbers and HEPA filters."

System operation on a monthly basis for the purpose of preventing moisture buildup on the absorbers as described in R.G. 1.52 is not required at Limerick due to the continuous dry instrument air purge described previously in the Safety Assessment section of this submittal. Therefore a change in the interval between tests from monthly to quarterly will not result in moisture accumulation which would reduce the capability of the absorber to remove the iodine species from the exhaust air flow stream.

The SGTS components are common to both units and must be run with the associated RERS for the surveillance test for each unit. The currently specified test frequency results in the SGTS being run at least twice per month or as many as eight (8) times per quarter for this surveillance, in addition to other required system surveillance tests which require the use of the components in this system. A change in surveillance test frequency from monthly to quarterly would reduce the wear on system components and thereby reduce the associated system downtime for maintenance and repairs. The consequent increased availability provides greater assurance that the system will be able to perform its mitigation function following any postulated accident.

Surveillance test frequency on a quarterly interval is considered adequate to verify operability, as demonstrated by the required quarterly test interval for other equipment important to safety which have a similar function, such as the requirement for quarterly verification of the isolation time of the secondary containment and refueling area isolation valves, as required by LGS TS Sections 4.6.5.2.1 and 4.6.5.2.2.

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

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 TS changes only involve changes to the frequency in which the specified surveillances tests are performed. The proposed TS changes do not physically change the design or intended function of the systems, structures, or components associated with the SGTS or RERS. There will be no change to the existing redundancy of systems and components. The proposed change in surveillance test frequency will not introduce the possibility of any failure mechanisms of a different type than those already evaluated in the SAR. The existing components will not be used in any different manner and no new components will be added. Therefore with no physical changes and no new or different manner of system operation, no new failure mechanisms or equipment failure modes are created.

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

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

The margin of safety as defined in the LGS TS Bases has not been reduced. The specific basis for the 31 day surveillance interval is not given in the LGS TS Bases section nor in the LGS UFSAR Sections 6.5.1 or 9.4.2 which discuss the subject systems. However, Regulatory Position C.4.d of Regulatory Guide 1.52, Revision 2, relating to maintenance requirements, recommends:

> "Each ESF atmosphere cleanup train should be operated at least 10 hours per month, with the heaters on (if so equipped), in order to reduce the buildup of moisture on the absorbers and HEPA filters."

The Bases for Surveillance Requirements (SR) 3.6.4.3.1 in the Standard Technical Specifications for General Electric Plants, BWR/4, which corresponds to the subject LGS TS test, also notes the need for ten (10) hours of operation per month for elimination of moisture in the filters.

The basis for the requirement for a monthly test with the heaters energized is clearly related to the desired elimination of moisture in the filters and absorbers. However, LGS UFSAR Table 6.5-2 states that LGS does not conform to R.G. 1.52, Position C.4.d because the SGTS and RERS trains are "continuously purged with dry instrumentation air to prevent build-up of moisture." UFSAR Sections 6.5.1.1.2 and 6.5.1.3.2 provide additional discussion of this method of moisture control.

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

Information Supporting an Environmental Assessment

An Environmental Assessment is not required for the changes proposed by this TS Change Request because the requested changes 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 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 a significant 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, 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.