## PHILADELPHIA ELECTRIC COMPANY

NUCLEAR GROUP HEADQUARTERS 955-65 CHESTERBROOK BLVD. WAYNE, PA 19087-5691

(215) 640-6000

July 11, 1990

Docket No. 50-352

License No. NPF-39

U.S. Nuclear Regulatory Commission ATTN: Document Control Desk Washington, D.C. 20555

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

Dear Sir:

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Philadelphia Electric Company hereby submits Technical Specifications Change Request No. 90-06-1, in accordance with 10 CFR 50.90, requesting an amendment to the Technical Specifications (TS) (Appendix A) of Operating License No. NPF-39. Information supporting this Change Request is contained in Attachment 1 to this letter, and the proposed replacement page is contained in Attachment 2.

This submittal requests a change to TS Table 3.6.3-1 to add a new outboard primary containment isolation valve. This proposed change reflects a planned modification to install new suppression pool water level indication at the Remote Shutdown Panel to support safe shutdown of the plant in the event of a fire. This modification is planned to be performed during the next (third) refueling outage for Limerick Generating Station (LGS), Unit 1, currently scheduled to begin in September 1990, based on a commitment in LGS Unit 1 Licensee Event Report No. 1-89-023, "Lack of Protected Suppression Pool Level and Temperature Indication in the Event of a Fire," dated May 5, 1989.

We request the approved change proposed herein be effective within 90 days of the start of the third refueling outage for LGS, Unit 1, currently scheduled to begin on September 8, 1990.

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If you have any questions regarding this matter, please contact us.

Very truly yours,

G. A. Hunger, Jr.

Manager Licensing Section Nuclear Engineering and Services

### Attachments

- cc:
- T. T. Martin, Administrator, Region I, USNRC T. J. Kenny, USNRC Senior Resident Inspector, LGS T. M. Gerusky, Director, PA Bureau of Radiological Protection

### TECHNICAL SPECIFICATION CHANGE REQUEST NO. 90-06-1

COMMONWEALTH OF PENNSYLVANIA :

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### COUNTY OF CHESTER

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

That he is Vice President of Philadelphia Electric Company; the Applicant herein; that he has read the foregoing Application for Amendment of Facility Operating License No. NPF-39 to reflect a modification to provide new suppression pool water level indication at the Remote Shutdown Panel (RSP) to support safe shutdown of the plant in the event of a fire, and knows the contents thereof; and the statements and matters set forth therein are true and correct to the best of his knowledge, information and belief.

**Vice President** 

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Subscribed and sworn to before me this Mday of July 1990.

Catherine a mender

Notary Public

NOTARIAL SEAL CATHERINE A MENDEZ, Notary Public Tredyffrin Twp. Chester County My Commission Expires Sept. 4, 1993

### ATTACHMENT 1

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## LIMERICK GENERATING STATION Unit 1

Docket No. 50-352

License No. NPF-39

# TECHNICAL SPECIFICATIONS CHANGE REQUEST

No. 90-06-1

# "New Suppression Pool Water Level Indication at the Remote Shutdown Panel"

# Supporting Information for Changes - 6 pages

Philadelphia Electric Company (PECo), Licensee under Facility Operating License No. NPF-39 for Limerick Generating Station (LGS), Unit 1, hereby requests that the Technical Specifications (TS) contained in Appendix A of the Operating License be amended as proposed herein to reflect a planned modification to install new suppression pool water level indication at the Remote Shutdown Panel (RSP) to support safe shutdown of the plant in the event of a fire. This modification is planned to be performed during the next (third) refueling outage for LGS, Unit 1, currently scheduled to begin in September 1990, based on a commitment in LGS Unit 1 Licensee Event Report (LER) No. 1-89-023, "Lack of Protected Suppression Pool Level and Temperature Indication in the Event of a Fire," dated May 5, 1989, and results in the need to add a new containment isolation valve to the appropriate TS Section. For plants licensed after January 1, 1979 (such as LGS, Unit 1), the requirements of 10 CFR 50.48 and 10 CFR 50, Appendix R are invoked by the Standard Review Plan (NUREG-0800), Section 9.5.1, dated July 1981 and its associated attachment, Branch Technical Position (BTP) CMEB 9.5-1. The proposed TS change is indicated by a vertical bar in the margin of TS page 3/4 6-28 for LGS, Unit 1, and is contained in Attachment 2.

We request the approved change proposed herein be effective within 90 days of the start of the third refueling outage for LGS, Unit 1, currently scheduled to begin on September 8, 1990.

This 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

NRC Information Notice (IN) No. 84-09, "Lessons Learned From NRC Inspections of Fire Protection Safety Shutdown Systems (10 CFR 50, Appendix R)," dated February 13, 1984, and NRC Generic Letter (GL) 86-10, "Implementation of Fire Protection Requirements," dated April 24, 1986, specify that suppression pool water level monitoring capability is necessary to support safe shutdown of the plant in the event of a fire. For LGS, Unit 1, there are five (5) safe shutdown methods (A, B, C, D, and R) described in the Fire Protection Evaluation Report (FPER). By way of LER No. 1-89-023 for LGS, Unit 1, dated May 5, 1989, we reported that suppression pool water level indication may be lost in the event of a fire since the existing suppression pool water level instrumentation loops are not designated for use with any of the safe shutdown methods described in the FPER, and the cabling and instrumention associated with this indication are not protected from fire damage. Therefore, in LER No. 1-89-023, we committed to perform a modification during the third refueling outage to provide suppression pool water level indication which would be available to support safe shutdown of the plant in the event of a fire.

The existing electrical Division 1 Suppression Pool Level Monitoring System (SPLMS) instrumentation loop does not meet the safe shutdown requirements of BTP

CMEB 9.5-1. Therefore, the planned modification will instal; a new electrical Division 1 SPLMS instrumentation loop to support safe shutdown methods A, C, and R. The existing electrical Division 2 SPLMS instrumentation loop meets the safe shutdown requirements of BTP CMEB 9.5-1 and is available to support safe shutdown methods B and D. Therefore, no change is necessary for the electrical Division 2 SPLMS instrumentation loop.

The planned modification will require changing the existing primary containment isolation valve arrangement. A new suppression pool water level transmitter (LT-55-141) will be located in an electrical Division 1 area. The upper pressure tap (dry leg) will be taken from downstream of existing valve SV-57-183 at containment penetration X-221B. The low pressure tap (wet leg) will be taken from downstream of existing valve HV-55-121 at containment penetration X-219A. Two new motor-operated valves will be installed. One of the new valves will be tagged HV-55-121 and will be used to isolate the existing electrical Division 2 SPLMS instrumentation and process lines. Existing motor-operated valve HV-55-121 will be retagged 55-1092 and left in place with the capability for manual operation. The power and control cables associated with this valve will be terminated at the new valve HV-55-121. Valve 55-1092 will be maintained in the locked open position during normal plant operation through plant administrative procedures. The other new valve will be tagged HV-55-126 and will be used to isolate the new electrical Division 1 SPLMS level transmitter and its process line. Both new valves HV-55-121 and HV-55-126 will be primary containment isolation valves. The design of these new valves is consistent with the design as presently committed to in the Final Safety Analysis Report (FSAR), Section 6.2.4.3.1.3.1, and conforms to the design criteria specified in Safety Guide 1.11, "Instrument Lines Penetrating Primary Reactor Containment," dated March 10, 1971, as described in FSAR Section 6.2.4.3.1.5. This design was reviewed and approved by the NRC as an acceptable alternative to the explicit requirements of General Design Criterion (GDC) 56 of 10 CFR 50, Appendix A as documented in Section 6.2.4.2 of NUREG-0991, "Safety Evaluation Report Related to the Operation of Limerick Generating Station, Units 1 and 2," dated August 1983. The valve control circuits for both new valves (HV-55-121 and HV55-126) will be designed to facilitate the operation of each from either the Main Control Room (MCR) or the RSP. The existing wiring for valve SV-57-183, located on a Containment Atmospheric Control (CAC) System sample line and controlled from the MCR, will be modified to facilitate its operation from the RSP as well. Additionally, a new suppression pool water level indicator (LI-55-141) will be installed on the RSP. This planned modification will ensure that suppression pool water level indication is available at the RSP to support safe shutdown methods A, C, and R. The existing electrical Division 2 suppression pool water level indication in the MCR will support safe shutdown methods 8 and D.

As a result of this planned modification, a change is proposed to TS Table 3.6.3-1, "Part A - Primary Containment Isolation Valves," TS page 3/4 6-28, to add the new outboard primary containment isolation valve, HV-55-126, to this table for penetration number 219A. TS Table 3.6.3-1 currently lists outboard primary containment isolation valve, HV-55-121, for penetration number 219A. Therefore, no change is required to this table for the new valve HV-55-121 since all requirements specified in TS Table 3.6.3-1 for existing valve HV-55-121 (to be converted to a non-containment isolation manual valve 55-1092) are applicable to the new valve.

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#### Safety Assessment

The proposed TS change results from a planned modification to install a new electrical Division 1 SPLMS instrumentation loop. This new level instrumentation loop, in conjunction with the existing electrical Division 2 SPLMS instrumentation loop, will ensure that suppression pool water level indication is available to support safe shutdown of the plant in the event of a fire. The original function of the SPLMS, as described in the FSAR, will remain unchanged. This planned modification does not involve any physical change to the existing channels of suppression pool water level instrumentation that are relied on for Emergency Core Cooling System (ECCS) actuation, post-accident monitoring, or remote shutdown capability (in accordance with GDC 19 of 10 CFR 50, /ppendix A).

This planned modification will not add any new electrical interfaces with systems not related to suppression pool water level monitoring. This planned modification will not adversely affect the operation of any safety-related plant equipment, and will not introduce any new failure mode for the existing systems associated with fire protection safe shutdown methods A, B, C, D, and R.

Valve SV-57-183 is located on a CAC system sampling line; however, this planned modification will not adversely affect the CAC system sampling function or any of the existing containment isolation interlocks on SV-57-183, allowing its operation from the MCR as intended in its original design. The primary containment pressure boundary will be maintained using the existing valve SV-57-183 and new motor-operated valves HV-55-121 and HV-55-126. This configuration is consistent with the design presently committed to in FSAR Section 6.2.4.3.1.3.1 and conforms to the design criteria specified in Safety Guide 1.11 as described in FSAR Section 6.2.4.3.1.5. This design provides an acceptable alternative to the explicit requirements of GDC 56 as approved by the NRC in Section 6.2.4.2 of NUREG-0991. The design of this planned modification meets the existing design criteria for the SPLMS, the primary containment isolation system for instrument lines, and the CAC system, and meets the existing seismic and dynamic qualification requirements for the components of these systems.

The new level instrumentation loop will be powered from an electrical Division 1, Class 1E source, and therefore, its design conforms to applicable criteria for physical separation, redundancy, and divisionalization.

### Information Supporting a Finding of No Significant Hazards Consideration

We have concluded that the proposed change to the LGS, Unit 1 TS, which reflects the installation of new suppression pool water level indication at the RSP to support safe shutdown of the plant in the event of a fire and in particular, the addition of a new containment isolation valve on an instrument line, does 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.

### The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed TS change reflects a planned modification to install a new electrical Division 1 suppression pool water level instrumentation loop. This planned modification will ensure the availability of suppression pool water level indication at the RSP to support safe shutdown methods A, C, and R for safe shutdown of the plant in the event of a fire. The existing electrical Division 2 SPLMS instrumentation loop will be available to support safe shutdown methods B and D in the event of a fire.

The planned modification, specifically, the addition of a new containment isolation valve on an instrument line, will not adversely affect the operation of any safety-related equipment of the plant. The original function of the SPLMS, as described in the FSAR, will remain unchanged, i.e., this planned modification does not involve any physical change to the existing channels of the SPLMS that are relied on for ECCS actuation, postaccident monitoring, or remote shutdown capability (in accordance with GDC 19 of 10 CFR 50, Appendix A).

The new level instrumentation loop will be powered from an electrical Division 1, Class 1E source. The increased loading on this power source will be negligible, and therefore, will have no effect on the ability of this Class 1E power source to perform its intended function. This planned modification will not use any instrumentation with accuracies or response characteristics that are different than the existing suppression pool level instrumentation. This planned modification will meet applicable construction standards, design, and material requirements which are applicable to the existing systems associated with safe shutdown methods A, C, and R. The design of the new level instrumentation loop conforms to applicable criteria for physical separation, redundancy, and divisionalization. The new level instrumentation loop components will be environmentally qualified, dynamically qualified, qualified to Seismic Category I and Class 1E, and energized from onsite emergency power supplies in the event offsite power is lost. This planned addition of a new containment isolation valve is consistent with the design presently committed to in FSAR Section 6.2.4.3.1.3.1 and conforms to the design criteria specified in Safety Guide 1.11 as described in FSAR Section 6.2.4.3.1.5. This design provides an acceptable alternative to the explicit requirements of GDC 56 as approved by the NRC in Section 6.2.4.2 of NUREG-0991. This planned modification will not introduce any new failure mode and will not alter any assumptions previously made in evaluating the radiological consequences of an accident. The proposed change does not affect limiting safety system settings or operating parameters, and does not modify or add any initiating parameters that would cause an increase in the probability or consequences of an accident previously evaluated.

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

The proposed TS change reflects a planned modification to install new suppression pool water level indication at the RSP to support fire protection safe shutdown methods A, C, and R. This planned modification

will not delete or modify the existing safe shutdown protection features, downgrade the support system performance necessary for reliable operation of equipment, reduce system redundancy or independence, or impose more severe testing requirements. This planned modification, specifically, the addition of a new containment isolation valve on an instrument line, will not introduce a new failure mode for any components in the existing systems associated with safe shutdown of the plant in the event of a fire. The new level instrumentation loop is divisionalized for electrical Division 1 as required for safe shutdown methods A, C, and R. The existing electrical Division 2 level instrumentation loop required no design changes to meet the requirements of safe shutdown methods B and D. The level instrument lines from the suppression pool will be provided with remote manual isolation valves in series with a locked open manual valve. The configuration will not permit containment atmosphere to escape in case of a valve failure. The new isolation valves will remain in an enclosed pump room which has provisions for any fluid leakage, and is serviced by the Standby Gas Treatment System. The new isolation valves will be safetyrelated, designed to Seismic Category I, and will be able to withstand containment design pressure and temperature. The proposed change does not involve any change to setpoints or operating parameters nor does it involve any potential initiating event that would create the possibility of a new or different kind of accident from any accident previously evaluated.

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

The proposed TS change reflects a planned modification to install new suppression pool water level indication at the RSP to support safe shutdown methods A, C, and R in the event of a fire. The original function of the SPLMS will remain unchanged, i.e., this planned modification, specifically, the addition of a new containment isolation valve on an instrument line, does not involve any physical change to the existing channels of suppression pool water level instrumentation that are relied on for ECCS actuation, post-accident monitoring, or remote shutdown capability (in accordance with GDC 19 of 10 CFR 50, Appendix A). The design of the new primary containment isolation valve configuration will meet the existing design criteria for the SPLMS, the primary containment isolation system for instrument lines, and the CAC system, and therefore, will have no adverse impact on these systems. Accordingly, the existing margin of safety will be maintained. Therefore, the proposed 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 Change Request because the requested change 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 TS and have concluded that it does not involve an unreviewed safety question, or a significant hazards consideration, and will not endanger the health and safety of the public.