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SUBJECT: Forwards proposed amends 219 & 181 to licenses NPF-14 & NPF-22, respectively. Amends change TS to annotate requirement for Type A testing to indicate penetrations to which it will not apply for duration of proposed enforcement discretion.

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**SUSQUEHANNA STEAM ELECTRIC STATION  
PROPOSED AMENDMENT NO. 219 TO LICENSE NPF-14  
AND PROPOSED AMENDMENT NO. 181 TO LICENSE NPF-22:  
LEAK TESTING OF INSTRUMENT LINES**  
**PLA-4846**

**FILE A17-2**

**Docket Nos. 50-387  
and 50-388**

*Reference: (1) PP&L Letter PLA-4844, "Request for Enforcement Discretion: Instrument Line Leak Testing," dated February 3, 1998.*

The purpose of this letter is to propose changes to Susquehanna Steam Electric Station (SSES) Unit 1 and Unit 2 Technical Specifications, under emergency circumstances, to reflect enforcement discretion from the requirements regarding Primary Containment Leakage testing for certain instrument line penetrations, granted by the NRC on February 3, 1998. The proposed change annotates the requirement for Type A testing to indicate the penetrations to which it will not apply for the duration of the proposed enforcement discretion.

This letter also includes information specifically requested by the NRC at the February 3, 1998 teleconference to discuss enforcement discretion.

### Background

Technical Specification Surveillance Requirement 4.6.1.2 requires that primary containment leakage be demonstrated in accordance with Specification 6.8.5, "Primary Containment Leakage Rate Testing Program," for Type A tests. Specification 6.8.5 states that the applicable leakage rate acceptance criterion,  $L_a$ , must be established at  $P_a$ , the peak calculated containment internal pressure for the DBA LOCA, which is 45.0 psig.

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PP&L identified a number of instrument line penetrations on each unit that have been designated as "extensions of containment," but a portion of each instrument line including the instrument was isolated from P<sub>a</sub> during the Type A test. This discrepancy was identified through the questioning attitude of a system engineer during a review of the Unit 2 Integrated Leak Rate Test valve line-up. In accordance with PP&L's corrective action program, the engineer generated a Condition Report. Based on the condition report evaluation, on February 3, 1998, at 0005 hours, Specification 4.0.3 was entered on SSES Units 1 and 2 due to the identification of a missed surveillance requirement. The NRC verbally granted enforcement discretion on February 3, 1998 at 1730 hours.

As described in Reference No. 1 and at the February 3, 1998 teleconference, PP&L proposes to perform monthly calibrations of each of the affected instruments associated with penetrations X-32A and X-3B to confirm the absence of unacceptable leakage. Other penetrations are proposed to be Appendix J tested in the near term. Refer to Attachment 1 for details and conditions regarding these actions.

#### Basis for Amendment Request Under Emergency Circumstances

SSES Units 1 and 2 are currently operating at 100% power. The need for prompt action is required because failure to satisfy the cited Technical Specification surveillance requirement requires application of the action statement of LCO 3.6.1.1, "Primary Containment Integrity." This LCO provides 1 hour to restore primary containment integrity, or the unit must be in at least hot shutdown within the next 12 hours and in cold shutdown within the following 24 hours.

PP&L's request for a license amendment under emergency circumstances has resulted from the recent discovery described above and in Reference No. 1 of a missed surveillance requirement. The enforcement discretion allows both units to operate until surveillance testing, determined to have been missed on certain portions of these lines, can be performed to support operability.

PP&L's request for enforcement discretion was based upon the premise that the enforcement discretion will minimize the potential safety consequences and operational risks associated with a dual-unit shutdown in which to perform the required testing. This would create an undesirable transient on the units and a challenge to control room operators. This also forms the basis for the emergency request.

#### Supporting Information

Attachment 1 presents the safety assessment for the change request. This assessment concludes that extending the duration to perform Appendix J testing of these instruments has a negligible impact on risk, and does not significantly increase the consequences of an accident previously evaluated in the FSAR.

Attachment 2 evaluates No Significant Hazards Considerations and Environmental Considerations. This evaluation concludes that the proposed Technical Specification change action does not involve a significant increase in the probability or consequences of an accident previously evaluated; does not create the possibility of a new or different kind of accident from any accident previously evaluated; and does not involve a significant reduction in the margin of safety. Furthermore, the change conforms to the criteria for actions eligible for categorical exclusion as specified in 10 CFR 51.22(c)(9), and will not impact the environment. PP&L has performed an evaluation which has established our expectation that the potential leakage associated with the affected penetrations would be bounded by 10 CFR 100 limits. Therefore, no environmental consequences that have not been previously evaluated are anticipated.

Attachment 3 contains marked-up pages from the Unit 1 and Unit 2 Technical Specifications to illustrate the proposed changes, which are described in Attachment 1.

The proposed changes have been approved by the SSES Plant Operations Review Committee and reviewed by the Susquehanna Review Committee.

#### Additional Information Requested By NRC

1. Status of Root Cause Investigation: As noted above, this condition was self-identified by PP&L through entry into the Condition Report process. The Corrective Action Team significance review determined that this Condition Report should receive a formal root cause analysis. A Root Cause Analysis Review Team has been formed in accordance with PP&L's corrective action program to fully investigate the event and to determine its underlying causes. The team is comprised of six senior engineers experienced at root cause analysis, none of whom have been directly associated with developing or reviewing the procedures, or acting as the overall Test Director for the SSES ILRTs. Personnel previously associated with our ILRTs are being interviewed and relevant historical records reviewed.

As indicated in Reference No. 1, our preliminary review revealed that the most recent Type A tests on each unit were performed with the root valve associated with each of the instruments on the affected penetrations closed, thereby isolating this portion of each instrument line configuration from Type A test pressure. Although it is premature to determine the root cause at this time, the underlying issues appear to only impact the specified instruments' boundaries within ILRTs, and do not appear to be a testing, reviewing, modification or other generic problem. However, this too remains a preliminary assessment until the formal root cause analysis process is completed.

2. Acceptance Criteria for Planned Testing: PP&L's proposed acceptance criteria for the planned testing was generally described at the February 3, 1998 teleconference with the NRC. When each instrument volume is tested, any leakage will be added to the Type B & C test running total and compared to 0.6 La. This approach is consistent with 10 CFR 50, Appendix J - Option B for Type B&C tests, and the fact that the Type A tests were last performed in 1992.

In accordance with 10 CFR 50 Appendix J Option B, an administrative limit will be established for each instrument configuration (including tubing and valves).

The determination of the administrative limit was based upon the results of previous acceptance tests. Results from Unit 2 were used as a basis because they were more restrictive. The value for the administrative limit was derived by subtracting the "min path" Type B & C running total (13,622 sccm) from 0.6 La (190,745 sccm) to determine the margin. That margin (177,123 sccm) was then divided by 18 (for the 18 instrument volumes that were not tested) to identify the allowable leakage per volume (9,840 sccm). This value was then rounded down to 9,700 sccm for added conservatism.

Thus, the administrative limit will be 9,700 sccm for each of the three instrument volumes. If the leakage of each instrument volume tested is 9,700 sccm, the Type B & C running total will remain below 0.6 La (190,745 sccm) on each unit. Per our Appendix J program, any component that exceeds its administrative limit must be restored to below the administrative limit. In accordance with our Appendix J program, if a tested volume exceeds the administrative limit, we will evaluate the root cause and any effect on the other untested instrument volumes, and we will perform an engineering calculation of the effect on the continued operability of the units.

In the event that the near-term testing of the three lines is successful, the criteria for Unit 2 will be based upon the testing of all 15 instrument volumes on Unit 1 during the refueling outage. The sum of the individual leak rates would be added to the Type B & C "min path" running total on Unit 2. If the resultant value remains less than 0.6 La, Unit 2 will be deemed acceptable to run until its outage. If the value is greater than 0.6 La, Unit 2 will be shutdown, and the testing completed.

3. Test Procedure Corrections to Preclude Recurrence: Associated integrated leak rate testing procedures for both units are currently in the revision, review, and approval process. Procedure revisions will be completed prior to the next performance of each procedure, and will consider relevant findings from root cause analysis of the event described above. Specifically, revisions are envisioned to ILRT valve line-up procedures and Primary Containment ILRT procedures.

Proposed changes to ILRT Valve Lineup procedures PE-100-003 and TP-259-017 include the following:

- a. Add the instruments and associated tubing and valves into the Type A test volume by eliminating the steps that isolate and vent the instruments.
- b. Add steps to bypass the high drywell pressure signal for the appropriate instruments.
- c. Add a commitment footnote that is tied to the Condition Report at the appropriate procedural steps.
- d. Cite the Condition Report in the reference section of the test procedures.

Proposed changes to Primary Containment Integrated Leak Rate Test procedures SE-100-003 and SE-200-003 include deletion of the procedural steps that direct isolation and venting of instruments per the ILRT valve lineup procedures discussed above.

If you have any additional questions, please contact Mr. J. M. Kenny at (610) 774-7535.

Sincerely,



G. T. Jones

Attachments

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