the ETS with an EPP. The proposed EPP contains the programmatic controls now residing in the ETS, with appropriate plant procedures serving as implementing documents to ensure compliance with applicable regulatory requirements. The proposed changes to the operating licenses are also administrative in nature and change the Appendix B reference from ETS to EPP. Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

Local Public Document Room location: Appling County Public Library, 301 City Hall Drive, Baxley, Georgia 31513

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Pennsylvania Power and Light Company, Docket Nos. 50-387 and 50-388 Susquehanna Steam Electric Station, Units 1 and 2, Luzerne County, Pennsylvania

Date of amendment request: November 21, 1994

Description of amendment request: The proposed amendment would eliminate the Main Steam Isolation Valve (MSIV) - Leakage Control System (LCS) including the primary containment isolation valves associated with the MSIV - LCS, along with increasing the allowable MSIV leakage rates.

Basis for proposed no significant hazards consideration determination: As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

I. Involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed changes to TS Section 3.6.1.2 do not involve a change to structures, components, or systems that would affect the probability of an accident previously evaluated. The TS limits for MSIVs are increased from 46 scf per hour for all four main steam lines to less than or equal to 100 scf per hour for any one MSIV and a combined maximum pathway leakage rate of less than or equal to 300 scf per hour for all four main steam lines. The consequences of an accident are affected as discussed in this section.

The proposed changes to TS Section 3.6.1.4 eliminate the Main Steam Isolation

Valves (MSIVs) Leakage Control System (LCS) requirements from the TS. As described in Section 6.7 of the FSAR, the LCS is manually initiated in about 20 minutes following a design basis Loss of Coolant Accident (LOCA). Since the LCS is operated only after an accident has occurred, these proposed changes have no effect on the probability of an accident.

Since MSIV leakage and operation of the LCS are included in the radiological analysis for the design basis LOCA as described in Section 15.6.5 of the FSAR, the proposed changes do not affect the precursors of other analyzed accidents. Analysis of the effects of the proposed changes do, however, result in acceptable radiological consequences for the design basis LOCA previously evaluated in Section 15.6.5 of the FSAR.

SSES, Units 1 and 2 have an inherent MSIV leakage treatment capability as discussed below. We propose to use the drain lines associated with the main steam lines and main turbine condenser as an alternative to the guidance in Regulatory Guide 1.96, "Design of Main Steam Isolation Valve Leakage Control System For Boiling Water Nuclear Power Plants", Revision 0, May 1975, for MSIV leakage treatment. If approved, we will incorporate this alternate method in the appropriate operational procedures and Emergency Operating Procedures.

The Boiling Water Reactor Owners' Group (BWROG) has evaluated the availability of main steam system piping and main condenser alternate pathways for processing MSIV leakage, and has determined that the probability of a near coincident LOCA and a seismic event is much smaller than for other plant safety risks. Accordingly, this alternate MSIV leakage treatment pathway is available during and after a LOCA. Nevertheless, the BWROG has also determined that main steam piping and main condenser design are extremely rugged, and the design requirements applied to SSES Unit 1 and Unit 2 main steam system piping and main condenser contain substantial margin, based on the original design requirements. Therefore, the alternate treatment method has been evaluated for its capability to mitigate the consequences of a LOCA, and has been evaluated to assure its availability considering a seismic event.

In order to determine the capability of the main steam piping and main condenser alternate treatment pathway, the BWROG has reviewed earthquake experience data on the performance of non-seismically designed piping and condensers during past earthquakes. The data is summarized in General Electric (GE) Report, "BWROG Report for Increasing MSIV Leakage Rate Limits and Elimination of Leakage Control Systems," NEDC 31858P, Revision 2, submitted to the NRC by BWROG letter dated October 4, 1993. This study concluded that the possibility of a failure that could cause a loss of steam or condensate in Boiling Water Reactor (BWR) main steam piping or condensers in the event of a design basis (i.e., safe shutdown) earthquake is highly unlikely, and that such a failure would also be contrary to a large body of historical earthquake experience data, and thus unprecedented.

A verification has been performed of the seismic adequacy of the Unit 1 and Unit 2 main steam piping and main condenser consistent with the guidelines discussed in Section 6.7 of NEDC-31858P, Revision 2, to provide reasonable assurance of the structural integrity of these components. An evaluation, including the walkdown report outliers, "MSIV Leakage Alternate Treatment Method Seismic Evaluation," for Unit 1 and Unit 2, is attached. The results of the evaluation clearly demonstrate that the MSIV Leakage Alternate Treatment Method meets the intent of 10CFR100 Appendix A, with regards to seismic qualification. Except for the requirement to establish a proper flow path from the MSIVs to the condenser, the proposed method is passive and does not require any additional logic control and interlocks. The method proposed for MSIV leakage treatment is consistent with the philosophy of protection by multiple barriers used in containment design for limiting fission product release to the environment.

A plant-specific radiological analysis has been performed in accordance with NEDC-31858P, Revision 2, to assess the effects of the proposed increase to the allowable MSIV leakage rate in terms of control room and offsite doses following a postulated design basis LOCA. This analysis utilizes the hold-up volumes of the main steam piping and condenser as an alternate method for treating the MSIV leakage. As discussed earlier, there is reasonable assurance that the main steam piping and condenser remain intact following a design basis earthquake. The radiological analysis uses standard conservative assumptions for the radiological source term consistent with Regulatory Guide (RG) 1.3, Assumptions Used for Evaluating the Potential Radiological Consequences of a Loss-Of-Coolant Accident for Boiling Water Reactor, Revision 2, dated April 1974.

The analysis results demonstrate that dose contributions from the proposed MSIV leakage rate limit of 100 scfh per steam line, not to exceed a total of 300 scfh for all four main steam lines, and from the proposed deletion of the LCS, result in an insignificant increase to the LOCA doses previously evaluated against the regulatory limits for the off-site doses and control room doses contained in 10CFR100 and 10CFR50, Appendix A, General Design Criterion (GDC) 19, respectively. The off-site and control room doses resulting from a LOCA are discussed in Section 15.6.5 of the FSAR. The off-site and control room doses resulting from a LOCA associated with the proposed changes are the sum of LOCA doses evaluated in the power uprate revision to the design basis DBA-LOCA calculation (EC RADN-1009) and the additional doses calculated using the alternate MSIV leakage treatment method. Enclosure 3 [of application dated November 21, 1994] summarizes the off-site and control room doses and compares the alternate treatment method doses to the original MSIV-LCS treatment method doses.

The 30-day whole body doses at the Low Population Zone (LPZ) did not change and remained at .37 rem for the alternate treatment method. The 30-day control room whole body doses increased slightly from .38