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SUBJECT: Forwards application for amend to License NPF-14,consisting of proposed Amend 70,revising Tech Specs re design changes to nitrogen makeup sys.Fee paid.

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Director of Nuclear Reactor Regulation
Attention: Dr. W. R. Butler, Chief
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U.S. Nuclear Regulatory Commission
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SUSQUEHANNA STEAM ELECTRIC STATION
PROPOSED AMENDMENT 70 TO LICENSE NPF-14
ER 100450 FILE 841-8
PLA-2513 Docket No. 50-387

Reference: Licensee Event Report No. 83-115 transmitted via PLA-1842 dated September 13, 1983.

Dear Dr. Butler:

The purpose of this letter is to propose a change to the Susquehanna SES Unit 1 Technical Specifications in order to support design changes to the nitrogen makeup system.

Via the referenced report, PP&L notified the NRC of the discovery of a single failure in Division II Primary Containment Isolation System (PCIS) logic that could have resulted in the failure to isolate the nitrogen supply line. (See attached drawing of existing Unit 1 configuration). The PCIS Division II relay (K83) provides a closure signal to the drywell nitrogen supply outboard isolation valve (SV-15767) and the containment atmosphere control sample inboard isolation valve (SV-15776B). The drywell nitrogen supply line taps into the containment atmosphere sample line between the inboard valve (SV-15776B) and the outboard valve (SV-15774B) (see attached drawing of existing configuration). With the nitrogen makeup system in service, coincident with a loss of coolant accident, the K83 relay could fail in such a manner as to maintain SV-15776B and SV-15767 open. This configuration could create a direct path from primary containment to the outside environment through the nonsafety-related nitrogen makeup system should it fail. A similar scenario is applicable to the suppression chamber nitrogen supply isolation valve (SV-15737) and the containment atmosphere control return inboard isolation valve (SV-15736B).

The design changes to correct this deficiency will consist of rerouting the drywell and wetwell makeup lines to spare penetrations and installing divisionalized isolation valves (see attached drawing of revised configuration). The inboard valves will have Division I power and logic and the outboard valves will be Division II.

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The enclosed marked-up copy of Table 3.6.3-1 shows the changes required to ensure that the Technical Specifications properly reflect the installation of the modifications to the Nitrogen makeup system. Those changes include the addition of two new isolation valves, SV-15738 and SV-15789. Two valves currently listed under the Containment Atmosphere Sample category, SV-15737 and SV-15767, are proposed to be deleted and moved to the newly formed category "Nitrogen Makeup", since in the new configuration, they are no longer in the atmosphere sampling lines.

The isolation signals for this new category are "B", Reactor Vessel Water Level - Low, Low Level 2; "Y", Drywell Pressure - High; and "R", SGTS Exhaust Radiation - High.

Although not required to correct the deficiency, upon approval of this change the "R" isolation signal will be removed from valves SV-15736B and SV-15776B since they will then be dedicated to the sampling lines and isolation on SGTS Exhaust Radiation - High is no longer required.

No Significant Safety Hazards Determination

I. The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated. The addition of the Nitrogen makeup line is compatible with the FSAR design requirements. The proposed action does not increase the probability of an occurrence or consequence of an accident or malfunction of equipment related to safety. All engineering has been performed in accordance with plant design criteria to assure the required installation will not impact safety-related systems. The results of the most recent ILRT will be adjusted based on local leak rate testing of the new Nitrogen makeup system configuration, when it is installed. Bypass leakage effects discussed in FSAR Subsections 6.2.3 and 6.2.1.1.5 remain unchanged by this proposed action.

II. The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated. Design of the proposed new penetrations, isolation valves and isolation circuitry is in accordance with the existing design basis of the plant.

III. The proposed change does not result in a significant reduction in a margin of safety. This change will increase the safety margin of the plant by ensuring that a single failure in the nitrogen makeup system isolation logic will not allow an uncontrolled release of radiation to the environment following a DBA. As stated in II above, the design change will be in accordance with the existing design basis.

Please be advised that identical modifications have already been performed on SSES Unit 2, with the Technical Specifications revised via Amendment 2 to License NPF-22, dated October 9, 1984.

Implementation Schedule

PP&L plans to perform the modifications described in this letter during the Unit 1 second refueling outage. We therefore request that your approval of these changes be conditioned to become effective upon startup following that outage.

If you desire additional information on this proposal please contact Mr. R. Sgarro at (215) 770-7855. Pursuant to 10CFR170.22, the appropriate fee is enclosed.

Very truly yours,

N. W. Curtis
Vice President-Engineering & Construction-Nuclear

cc: M. J. Campagnone USNRC
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