

R. A. Saccone
Vice President - Nuclear Operations

PPL Susquehanna, LLC
769 Salem Boulevard
Berwick, PA 18603
Tel. 570.542.3959 Fax 570.542-1504
rasaccone@pplweb.com



FEB 28 2006

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station OP1-17
Washington, DC 20555

**SUSQUEHANNA STEAM ELECTRIC STATION
PROPOSED AMENDMENT NO. 240 TO LICENSE NPF-22:
REVISION TO TECHNICAL SPECIFICATIONS 3.3.8.1 AND 3.8.7
SUPPLEMENTAL INFORMATION
PLA-6022**

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

Reference: PLA-5869, B. T. McKinney (PPL), "Proposed Amendment No. 240 to License NPF-22: Revision to Technical Specifications 3.3.8.1 and 3.8.7," dated March 18, 2005.

The purpose of this letter is to supplement the referenced amendment request, which proposed changes to the SSES Unit 2 Technical Specifications (TS). The supplemental information provided herein provides the information requested during the February 1, 2006 teleconference held between PPL and NRC personnel.

Question No. 1:

What compensatory measures are taken when the LOCA/LOOP test is being performed (e.g. no work in switchyard, no work on transmission system, restrict maintenance on Unit 2 equipment)?

Response

During the LOCA/LOOP test, plant procedures and outage work management restrict maintenance activities on the Unit 1 division that is unaffected by the test. This ensures the redundant equipment on the Unit 1 division is operable. Our Maintenance Rule Program requires risk evaluations that include both Units 1 and 2. The evaluations consider all work activities, regardless of whether the work is scheduled or emergent. For example, if it were necessary to perform emergent maintenance/repair work on Unit 2 equipment, the risk of performing this work would be evaluated in conjunction with ongoing Unit 1 outage work and the necessary compensatory measures identified by the risk evaluation would be put into place.

A001

SSES performs qualitative risk assessment when comparing scheduled plant maintenance activities with scheduled maintenance activities performed on the transmission system or the 230kV switchyard in the vicinity of the plant. For example, there is work currently scheduled to be performed on the output transmission line from the Unit 1 generator to the 230kV switchyard, including work on the terminal points in the switchyard during the LOCA/LOOP test. An assessment of this switchyard work by PPL Electric Utilities (the transmission system owner), has been provided to the SSES Work Management organization. Based on this input, SSES has determined the offsite sources to Susquehanna SES would not be affected as a result of these work activities.

Work on other portions of the transmission system that directly affects the offsite sources to Susquehanna SES will be controlled in accordance with the Interface Agreement and Procedures for PPL EU Transmission Facilities Related to PPL Susquehanna, LLC.

Once the transmission equipment is switched out of service, grid status is continually evaluated by the PJM Energy Management System. In addition, PPL EU performs similar monitoring and evaluation. PJM notifies the SSES Control Room Operator through the PPL Electric Utilities Control Center.

Planned transmission outages are coordinated in accordance with a process detailed in the PJM Manual, "Transmission Operations." The process requires advanced notice and subsequent PJM approval for all outages to ensure grid reliability. On the outage start day, the system is analyzed by PJM before permitting the equipment to be switched out of service.

Question No. 2:

Explain why the combined LOCA/LOOP test has to be performed on a division at a time.

Background

The onsite power system at SSES consists of four independent load groups, Channels A, B, C, and D. Each Load group consists of a Class 1E 4kV bus, a Class 1E 480V load center, Class 1E 480V MCCs, and a Class 1E 208/120V distribution panel. All safety related loads are divided among these four load groups. Loss of any one load group will not prevent the minimum safety functions from being performed; i.e., three of the four load groups will meet the design basis requirement. As an example, the RHR pumps are channelized to meet the ECCS core cooling requirements for three of the four RHR pumps.

Two divisionalized load groups are established from the four load groups (Division I is comprised of Channels A and C; Division II, Channels B and D) for those Engineered Safety Feature loads which require one out of two load groups to meet the design basis

requirements. The ESW system is divisionalized, since only one loop is required to meet its design basis. (Note that a divisionalized system will have portions of the system energized from two different load groups.) For example, ESW pump A is energized from 4kV bus A, and ESW pump C is energized from 4kV bus C; however, both pumps are considered as Division I pumps. The divisionalized loads are energized from the four load groups, rather than from just two load groups, for load diversity considerations. At all voltage levels (4kV, 480V and 208/120), divisionalized loads are fed from the channelized load groups.

The Class 1E AC distribution system is grouped into Divisions or Channels due to the functional requirements of the connected equipment (as an example, the ability of the equipment to meet the single failure criteria).

The Class 1E AC distribution system power equipment is physically separated from its redundant counterparts to prevent the effects of a common mode failure from disabling redundant equipment. Common mode failure protection is required to ensure that one failure occurrence does not prevent the performance of safety functions. Independence between redundant load groups assures that a postulated single failure affects only one load group. Common mode failure is defined as a mechanism by which a single design basis event can cause redundant equipment to be inoperable. Physical separation is achieved by the use of separate safety class structures, distance, or barriers to preserve the independence of redundant equipment.

Response

The design features described in the Background Section above indicate that the SSES Class 1E Electrical Distribution System feeds a combination of divisional loads as well as channelized loads. The LOCA/LOOP test has always been performed on a Divisional bases since some Divisional Safety Related Equipment is also energized from the Channel C and D ESS Buses. Examples such as RHR Service Water and Control Structure Chillers, which are divisional systems, are fed from Unit 1C and the Unit 1D ESS Buses.

The current procedure assures that the LOCA/LOOP test satisfies the requirements to demonstrate operability of the channelized and divisionalized loads under LOCA/LOOP conditions, and reduces the time that the plant would be in an LCO condition. This surveillance allows the entire division to be tested and assures that the divisional support equipment is energized to support the ECCS functions.

Question No. 3:

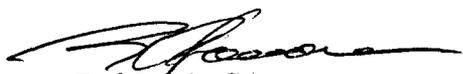
Explain the completion time difference between having one or more Unit 2 load groups (8 hours) out of service and having one Unit 1 (72 hours) load group out of service.

Response

The 8-hour completion time to restore Unit 2 load group(s) (provided there is no loss of safety function) is consistent with the completion times stated in NUREG-1433. The NUREG justified the completion time on the basis that the remaining AC electrical power distribution subsystems are capable of supporting the minimum safety functions necessary to shut down the reactor and maintain it in a safe shutdown condition, assuming no single failure. The overall reliability is reduced, however, because a single failure in the remaining power distribution subsystems could result in the minimum required ESF functions not being supported. Therefore, the required AC buses, load centers, motor control centers, and distribution panels must be restored to OPERABLE status within 8 hours.

As stated in the Unit 2 TS Bases, the completion time of 72 hours for the loss of one Unit 1 AC load group is consistent with the completion times associated with LCOs for the Unit 2 and common equipment affected by loss of a Unit 1 AC load group. The equipment affected by the loss of a Unit 1 AC load group is Emergency Service Water (ESW), Standby Gas Treatment System (SGTS), or Control Structure HVAC (CREOAS). The loss of one Unit 1 AC load group does not cause a loss of safety function. The LCO completion times for the common equipment are equal to or greater than 7 days. Therefore, the 72-hour completion time is conservative with respect to the individual LCO times.

If you have any questions regarding this submittal, please contact Mr. Duane L. Filchner at (610) 774-7819.



Robert A. Saccone
Vice President - Nuclear Operations

cc: NRC Region I
Mr. A. J. Blamey, NRC Sr. Resident Inspector
Mr. R. V. Guzman, NRC Project Manager
Mr. R. Janati, DEP/BRP