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September 23, 2003

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

**SUSQUEHANNA-STEAM ELECTRIC STATION  
RESPONSE TO SECOND REQUEST FOR ADDITIONAL INFORMATION  
PROPOSED AMENDMENT NO. 255 TO LICENSE NPF-14 AND  
PROPOSED AMENDMENT NO. 220 TO LICENSE NPF-22  
ONE-TIME CHANGE TO TECHNICAL SPECIFICATIONS 3.8.1  
ALLOWABLE COMPLETION TIME FOR  
OFFSITE AC CIRCUITS  
PLA-5677**

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

*Reference: 1) PLA-5637, B. L. Shriver (PPL) to USNRC, "Proposed Amendment No. 255 to License NPF-14 and Proposed Amendment No. 220 to License NPF-22 One-Time Change to Technical Specifications 3.8.1 Allowable Completion Time For Offsite AC Circuits," dated July 3, 2003.*

In teleconferences held on September 15, 2003 and September 17, 2003, NRC requested additional information regarding the PPL Susquehanna, LLC (PPL) risk assessment generated to support the proposed license amendment for a one-time change to Technical Specifications 3.8.1 Allowable Completion Time for Offsite AC Circuits (Reference 1). The responses provided in the teleconferences are documented in Attachment 1.

If you have any questions, please contact Mr. John M. Oddo at (610) 774-7596.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on: 09/23/03

Richard L. Anderson  
Vice President – Nuclear Operations

Attachment 1 – Response to Second Request for Additional Information

copy: NRC Region I  
Mr. T. Colburn, NRC Project Manager  
Mr. R. V. Guzman, NRC Project Manager  
Mr. S. L. Hansell, NRC Sr. Resident Inspector  
Mr. R. Janati, DEP/BRP

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**Attachment 1 to PLA-5677**

**Response to Second Request for  
Additional Information**

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### **NRC Question 1**

In the conversion of the SSES model to CAFTA/EOOS – discuss the program/procedures used to validate the PRA results with respect to the previous model/IPE. Describe current procedures/processes for updating and maintenance of the SSES PRA.

### **PPL Response**

1. To ensure consistency with the original IPE model, an electronic conversion to the EOOS/CAFTA codes was made. The CAFTA/EOOS model results were compared to results from the previous IPE model. Consistency was determined based on comparison of the CDF, LERF, and the dominant cutsets. The results were comparable.

Subsequent changes to the PRA model are documented by means of a PPL calculation. The PPL calculation procedure used to document these changes is the same procedure used to comply with 10 CFR 50 Appendix B Quality Assurance requirements. Specifically, the procedure requires qualified individuals to prepare, independently review, and approve the calculation.

### **NRC Question 2**

For internal fires discuss in more detail the conclusion that a combination LOOP and fire are extremely low. Can an internal fire initiate a LOOP? What contribution do fires contribute to a LOOP? Are there any activities related to transformer replacement that could increase fire risk?

### **PPL Response**

2. Reference 1 stated that there is an insignificant incremental risk associated with having a fire event because the time during which the Startup Transformer Number 10 is being replaced is so short.

An internal fire can initiate a LOOP. PPL Susquehanna does not currently have a Fire PRA analysis. In lieu of calculating the fire contribution to a LOOP, the additional compensatory measures described below will be taken to minimize the probability of a combination of an internal fire and a LOOP to control the fire risk, to support the conclusion provided in Reference 1.

A fire in the following areas has the potential to initiate a LOOP or other postulated transients. The areas have been chosen to conservatively bound the potential fire initiated LOOP locations.

- Reactor Building
- Control Structure
- Turbine Building
- Emergency Diesel Generator Buildings
- Emergency Service Water Pumphouse
- Circulating Water Pumphouse

During the period of the Startup Transformer Number 10 replacement, the following additional compensatory actions will be taken in the above areas.

- a.) No planned "Hot Work" (grinding, welding, or open flame) will be performed.
- b.) No planned maintenance on fire detection and/or suppression equipment, that would cause the fire detection and/or suppression equipment to be inoperable, will be performed during the transformer replacement period.
- c.) For any emergent "Hot Work," consistent with SSES standard practice in accordance with the "Hot Work" program, a continuous, independent fire watch will be stationed.
- d.) Testing on fire detection and/or suppression equipment that would cause the equipment to be inoperable during the testing, will be performed with a continuous, independent fire watch.

### NRC Question 3

For external fires provide additional detail on the limitation of fires to the 500kV to 230kV line tie including external fire contributions to a LOOP. Are there any activities related to transformer replacement that could increase fire risk?

### PPL Response

3. The external fire analysis, provided in Reference 1, was focussed on the 500kV to 230kV tie line since this is the source of offsite power during the Startup Transformer Number 10 outage. This line connects the 500kV switchyard located south of the plant boundary to the 230kV switch yard across the Susquehanna River. In the 230kV switch yard there are 7 sources of offsite power and in the 500kV switch yard there are 2 sources of offsite power.

The cleared right-of-way for this line is maintained by PPL's Vegetation Maintenance Program to minimize loss of the line due to vegetation or fire. This program does annual helicopter patrols of this line and periodic walk downs, as required. The line was last inspected in May 2003 and had vegetation control work, brush cutting, and tree trimming performed on July 5, 2003. Prior to this, the most recent vegetative control work was performed in 2000.

Since multiple sources of offsite power exist, and any one of these can provide offsite power to Startup Transformer Number 20, external fires were not considered for the lines (other than the 500kV to 230kV tie line) from these two switch yards. No one fire is expected to affect the transmission lines on both sides of the river.

The following regulatory commitment was made in Reference 1 and is a compensatory measure which further minimizes fire risk during the period of Startup Transformer Number 10 replacement:

For the duration of the Startup Transformer Number 10 replacement, Transmission and Distribution Operations will NOT grant any work requests that would jeopardize the reliability of Startup Transformer Number 20. This includes, but is not limited to, canceling any requests that would cause Startup Transformer Number 20 to operate in a radial manner.

#### **Additional Information**

A peer review of the PPL Susquehanna, LLC PRA is scheduled to commence on October 6, 2003, prior to the initiation of the Startup Transfer Number 10 replacement scheduled for October 13, 2003. During the peer review, any potential findings which are substantive issues that could impact the conclusions of the proposed amendment will be assessed immediately and appropriate actions taken.

Reference: 1) PLA-5637, B. L. Shriver (PPL) to USNRC, "Proposed Amendment No. 255 to License NPF-14 and Proposed Amendment No. 220 to License NPF-22 One-Time Change to Technical Specifications 3.8.1 Allowable Completion Time For Offsite AC Circuits," dated July 3, 2003.