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**OCT 05 2005**

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Mail Station OP1-17  
Washington, DC 20555-0001

**SUSQUEHANNA STEAM ELECTRIC STATION  
PROPOSED AMENDMENT NO. 273 TO LICENSE NPF-14 AND  
PROPOSED AMENDMENT NO. 242 TO LICENSE NPF-22:  
APPLICATION FOR TECHNICAL SPECIFICATION  
IMPROVEMENT TO REVISE TECHNICAL SPECIFICATIONS  
TO ELIMINATE REQUIREMENTS FOR HYDROGEN  
RECOMBINERS AND HYDROGEN/OXYGEN MONITORS  
USING THE CONSOLIDATED LINE ITEM  
IMPROVEMENT PROCESS  
PLA-5882**

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

In accordance with the provisions of 10 CFR 50.90, PPL Susquehanna, LLC is submitting a request for an amendment to the Technical Specifications (TS) for Susquehanna Units 1 and 2.

The proposed amendment will delete the TS requirements related to hydrogen recombiners, containment hydrogen monitors and containment oxygen monitors. The proposed TS changes support implementation of the revisions to 10 CFR 50.44, "Standards for Combustible Gas Control System in Light-Water-Cooled Power Reactors," that became effective on September 16, 2003 (68 FR 54141). The changes are consistent with Revision 1 of NRC-approved Industry/Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-447, "Elimination of Hydrogen Recombiners and Change to Hydrogen and Oxygen Monitors." The availability of this TS improvement was announced in the Federal Register on September 25, 2003 (68 FR 555416) as part of the consolidated line item improvement process (CLIIP). Also included are markups of the Table of Contents pages which convey editorial changes to TS page numbers.

These proposed changes have been reviewed by the Plant Operations Review Committee and by the Susquehanna Review Committee.

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Attachment 1 provides a description of the proposed change, the requested confirmation of applicability, and plant-specific verifications and commitments. Attachment 2 provides the existing TS pages marked-up to show the proposed change. Attachment 3 provides the list of regulatory commitments. Implementation of TSTF-447 also involves various changes to the TS Bases. The TS Bases changes will be submitted with a future update in accordance with TS 5.5.10, "Technical Specifications (TS) Bases Control Program."

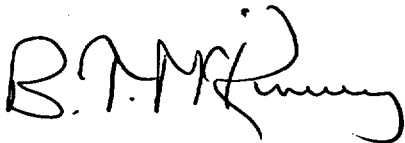
PPL Susquehanna, LLC requests approval of the proposed License Amendment by March 31, 2006 with the amendment, and regulatory commitments, being implemented within 60 days following approval.

In accordance with 10 CFR 50.91(b), PPL Susquehanna, LLC is providing the Commonwealth of Pennsylvania with a copy of this proposed License Amendment request.

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

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

Executed on: 10-5-05



B. T. McKinney

**Attachments:**

- Attachment 1 - Description, Applicability, and Verification of the Proposed Change
- Attachment 2 - Proposed Technical Specification Changes Units 1 & 2, (Mark-ups)
- Attachment 3 - List of Regulatory Commitments

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

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**Attachment 1 to PLA-5882**

**Description, Applicability, and Verification of the  
Proposed Change**

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## **DESCRIPTION AND ASSESSMENT**

### **1.0 INTRODUCTION**

The proposed License amendment deletes Technical Specification (TS) 3.6.3.1, "Primary Containment Hydrogen Recombiners," and the requirements for the containment hydrogen analyzer and containment oxygen analyzer in TS 3.3.3.1, "Post Accident Monitoring (PAM) Instrumentation." The proposed TS changes support implementation of the revisions to 10 CFR 50.44, "Standards for Combustible Gas Control System in Light-Water-Cooled Power Reactors," that became effective on September 16, 2003 (68 FR 54141). The deletion of the requirements for the hydrogen recombiner, hydrogen analyzers, and oxygen analyzers did not result in renumbering of the TS sections. The associated Specifications and related surveillance requirements are shown as "Not Used" such that the Specification numbering and subsequent page numbering were unaffected by this proposed amendment.

The changes are consistent with Revision 1 of NRC approved Industry/Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-447, "Elimination of Hydrogen Recombiners and Change to Hydrogen and Oxygen Monitors." The availability of this TS improvement was announced in the *Federal Register* on September 25, 2003 (68 FR 55416) as part of the consolidated line item improvement process (CLIIP).

### **2.0 DESCRIPTION OF PROPOSED AMENDMENT**

Consistent with the NRC-approved Revision 1 of TSTF-447, the proposed TS changes include:

- Delete Table 3.3.3.1, Function 8, Containment H<sub>2</sub> & O<sub>2</sub> Analyzer
- Delete TS 3.6.3.1, Primary Containment Hydrogen Recombiners

As described in NRC approved Revision 1 of TSTF-447, the changes to TS requirements result in changes to the associated TS Bases sections. The TS Bases changes will be submitted with a future update in accordance with TS 5.5.10, "Technical Specifications (TS) Bases Control Program."

### **3.0 BACKGROUND**

The background for this application is adequately addressed by the NRC Notice of Availability published on September 25, 2003 (68 FR 55416), TSTF-447, the documentation associated with the 10 CFR 50.44 rulemaking (68 FR 54141), and other related documents.

#### **4.0 REGULATORY GUIDANCE AND REQUIREMENTS**

The applicable regulatory requirements and guidance associated with this application are adequately addressed by the NRC Notice of Availability published on September 25, 2003 (68 FR 55416), TSTF-447, the documentation associated with the 10 CFR 50.44 rulemaking (68 FR 54141), and other related documents.

#### **5.0 TECHNICAL ANALYSIS**

PPL Susquehanna, LLC has reviewed the safety evaluation (SE) published on September 25, 2003 (68 FR 55416) as part of the CLIIP Notice of Availability. This verification included a review of the NRC staff's SE, as well as the supporting information provided to support TSTF-447. PPL Susquehanna, LLC has concluded that the justifications presented in the TSTF proposal and the SE prepared by the NRC staff are applicable to Susquehanna Steam Electric Station, Unit 1 and Unit 2, and justify this amendment for the incorporation of the changes to the Susquehanna Steam Electric Station, Unit 1 and Unit 2 TS.

#### **6.0 REGULATORY ANALYSIS**

A description of this proposed change and its relationship to applicable regulatory requirements and guidance was provided in the NRC Notice of Availability published on September 25, 2003 (68 FR 55416), TSTF-447, the documentation associated with the 10 CFR 50.44 rulemaking (68 FR 54141), and other related documents.

##### **6.1 Verifications And Commitments**

As discussed in the model SE published in the Federal Register on September 25, 2003 (68 FR 55416) for this TS improvement, PPL Susquehanna, LLC is making the following verifications and regulatory commitments:

1. PPL Susquehanna, LLC has verified that a hydrogen monitoring system capable of diagnosing beyond design-basis accidents is installed at Susquehanna Steam Electric Station, Unit 1 and Unit 2 and is making a regulatory commitment to maintain that capability. The hydrogen monitors will be included in the Technical Requirements Manual prior to implementation of the approved TS amendment.
2. Susquehanna Steam Electric Station, Unit 1 and Unit 2, has an inerted containment. PPL Susquehanna, LLC has verified that an oxygen monitoring system capable of verifying the status of the inerted containment is installed at Susquehanna Steam Electric Station, Unit 1 and Unit 2 and is making a

regulatory commitment to maintain that capability. The oxygen monitors will be included in the Technical Requirements Manual prior to implementation of the approved TS amendment.

## **7.0 NO SIGNIFICANT HAZARDS DETERMINATION**

PPL Susquehanna, LLC has reviewed the proposed no significant hazards consideration determination published on September 25, 2003 (68 FR 55416) as part of the CLIIP. PPL Susquehanna, LLC has concluded that the proposed determination presented in the notice is applicable to Susquehanna Steam Electric Station Unit 1 and Unit 2 and the determination is hereby incorporated by reference to satisfy the requirements of 10 CFR 50.91(a).

## **8.0 ENVIRONMENTAL EVALUATION**

PPL Susquehanna, LLC has reviewed the environmental evaluation included in the model safety evaluation published on September 25, 2003 (68 FR 55416) as part of the CLIIP. PPL Susquehanna, LLC has concluded that the NRC staff's findings presented in that evaluation are applicable to Susquehanna Steam Electric Station and the evaluation is hereby incorporated by reference for this application.

## **9.0 PRECEDENT**

This application is being made in accordance with the CLIIP. PPL Susquehanna, LLC is not proposing variations or deviations from the TS changes described in TSTF-447 or the NRC staff's model SE published on September 25, 2003 (68 FR 55416).

## **10.0 REFERENCES**

Federal Register Notice: Notice of Availability of Model Application Concerning Technical Specifications Improvement To Eliminate Hydrogen Recombiner Requirement, and Relax the Hydrogen and Oxygen Monitor Requirements for Light Water Reactors Using the Consolidated Line Item Improvement Process, published September 25, 2003 (68 FR 55416).

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**Attachment 2 to PLA-5882**  
**Proposed Technical Specification Changes**  
**Units 1 & 2**  
**(Mark-ups)**

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Not Used

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ACTIONS (continued)

| CONDITION   | REQUIRED ACTION  | COMPLETION TIME |
|---|--|-----------------|
| D. Required Action and associated Completion Time of Condition C not met. | D.1 Enter the Condition referenced in Table 3.3.3.1-1 for the channel. | Immediately     |
| E. As required by Required Action D.1 and referenced in Table 3.3.3.1-1.  | E.1 Be in MODE 3.  | 12 hours        |
| F. As required by Required Action D.1 and referenced in Table 3.3.3.1-1.  | F.1 with Initiate action in accordance Specification 5.6.7.            | Immediately     |

SURVEILLANCE REQUIREMENTS

NOTE

These SRs apply to each Function in Table 3.3.3.1-1.

| SURVEILLANCE   | FREQUENCY          |
|--|--------------------|
| SR 3.3.3.1.1 Perform CHANNEL CHECK.  | 31 days            |
| SR 3.3.3.1.2 <del>Perform CHANNEL CALIBRATION of the Primary Containment H<sub>2</sub> and O<sub>2</sub> Analyzers.</del>                                | <del>02 days</del> |
| SR 3.3.3.1.3 Perform CHANNEL CALIBRATION for all Functions except the Primary Containment H <sub>2</sub> and O <sub>2</sub> Analyzers and PCIV Position. | 24 months          |

Not Used

Table 3.3.3.1-1 (page 1 of 1)  
Post Accident Monitoring Instrumentation

| FUNCTION |   | REQUIRED CHANNELS                             | CONDITIONS REFERENCED FROM REQUIRED ACTION D.1 |
|----------|---|---|--|
| 1.       | Reactor Steam Dome Pressure                                       | 2   | E  |
| 2.       | Reactor Vessel Water Level  |   |  |
|          | a. Wide Range   | 2   | E  |
|          | b. Extended Range   | 2   | E  |
|          | c. Fuel Zone Range  | 2   | E  |
| 3.       | Suppression Chamber Water Level                                   | 2   | E  |
| 4.       | Primary Containment Pressure                                      |   |  |
|          | a. Accident Range   | 2   | E  |
|          | b. LOCA Range   | 2   | E  |
| 5.       | Primary Containment High Radiation                                | 2   | F  |
| 6.       | PCIV Position   | 2 per penetration flow path <sup>(a)(b)</sup> | E  |
| 7.       | Neutron Flux  | 2   | E  |
| 8.       | <del>Containment H<sub>2</sub> &amp; O<sub>2</sub> Analyzer</del> | <del>2</del>                                  | <del>E</del>                                   |
| 9.       | Drywell Atmosphere Temperature                                    | 2   | E  |
| 10.      | Suppression Chamber Water Temperature                             | 2   | E  |

(a) Not required for isolation valves whose associated penetration flow path is isolated by at least one closed and deactivated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured.

(b) Only one position indication channel is required for penetration flow paths with only one installed control room indication channel.

Not Used

## 3.6 CONTAINMENT SYSTEMS

3.6.3.1 ~~Primary Containment Hydrogen Recombiners~~

Not Used

~~LCO 3.6.3.1 Two drywell and two suppression chamber hydrogen recombiners shall be OPERABLE.~~

~~APPLICABILITY: MODES 1 and 2.~~

| ACTIONS  |   |  |
|--|---|--|
| CONDITION  | REQUIRED ACTION   | COMPLETION TIME  |
| A. One drywell or one suppression chamber hydrogen recombiner inoperable<br><br><u>OR</u><br>One drywell and one suppression chamber hydrogen recombiner inoperable. | A.1 Restore the inoperable hydrogen recombiners to OPERABLE status.   | 30 days  |
| B. Two drywell or two suppression chamber hydrogen recombiners inoperable.<br><br><u>OR</u><br>Any three or more hydrogen recombiners inoperable.                    | B.1 Verify by administrative means that the alternate hydrogen control function is maintained.<br><br><u>AND</u><br>B.2 Restore recombiners to ensure that at least one drywell and one suppression chamber hydrogen recombiner are OPERABLE. | 1 hour<br><br><u>AND</u><br>Once per 12 hours thereafter<br><br>7 days |

(continued)

Not Used

**ACTIONS (continued)**

| CONDITION  | REQUIRED ACTION   | COMPLETION TIME |
|--|-------------------|-----------------|
| C. Required Action and associated Completion Time not met. | C.1 Be in MODE 3. | 12 hours        |

**SURVEILLANCE REQUIREMENTS**

| SURVEILLANCE   | FREQUENCY |
|--|-----------|
| SR 3.6.3.1.1 Perform a system functional test for each drywell and suppression chamber hydrogen recombiner.  | 24 months |
| SR 3.6.3.1.2 Visually examine each drywell and suppression chamber hydrogen recombiner enclosure and verify there is no evidence of abnormal conditions. | 24 months |
| SR 3.6.3.1.3 Perform a resistance to ground test for each heater phase.  | 24 months |

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SURVEILLANCE REQUIREMENTS (continued)

| SURVEILLANCE  | FREQUENCY |
|---|-----------|
| SR 3.3.3.1.2 Perform CHANNEL CALIBRATION of the Primary Containment H <sub>2</sub> and O <sub>2</sub> Analyzers.  | 92 days   |
| SR 3.3.3.1.3 Perform CHANNEL CALIBRATION for all Functions except <del>the Primary Containment H<sub>2</sub> and O<sub>2</sub> Analyzers</del> and PCIV <del>Position</del> . | 24 months |

Not Used

Table 3.3.3.1-1 (page 1 of 1)  
Post Accident Monitoring Instrumentation

| FUNCTION   | REQUIRED CHANNELS                             | CONDITIONS<br>REFERENCED FROM<br>REQUIRED ACTION D.1 |
|--|---|--|
| 1. Reactor Steam Dome Pressure                                       | 2   | E  |
| 2. Reactor Vessel Water Level  |   |  |
| a. Wide Range  | 2   | E  |
| b. Extended Range  | 2   | E  |
| c. Fuel Zone Range   | 2   | E  |
| 3. Suppression Chamber Water Level                                   | 2   | E  |
| 4. Primary Containment Pressure                                      |   |  |
| a. Accident Range  | 2   | E  |
| b. LOCA Range  | 2   | E  |
| 5. Primary Containment High Radiation                                | 2   | F  |
| 6. PCIV Position   | 2 per penetration flow path <sup>(a)(b)</sup> | E  |
| 7. Neutron Flux  | 2   | E  |
| 8. <del>Containment H<sub>2</sub> &amp; O<sub>2</sub> Analyzer</del> | <del>2</del>                                  | <del>E</del>   |
| 9. Drywell Atmosphere Temperature                                    | 2   | E  |
| 10. Suppression Chamber Water Temperature                            | 2   | E  |

(a) Not required for isolation valves whose associated penetration flow path is isolated by at least one closed and deactivated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured.

(b) Only one position indication channel is required for penetration flow paths with only one installed control room indication channel.

Not Used

## 3.6 CONTAINMENT SYSTEMS

3.6.3.1 ~~Primary Containment Hydrogen Recombiners~~

Not Used

~~LCO 3.6.3.1 Two drywell and two suppression chamber hydrogen recombiners shall be OPERABLE.~~~~APPLICABILITY: MODES 1 and 2.~~~~ACTIONS~~

| <del>CONDITION</del>   | <del>REQUIRED ACTION</del>  | <del>COMPLETION TIME</del>  |
|--|---|---|
| <del>A. One drywell or one suppression chamber hydrogen recombiner inoperable</del><br><br><del>OR</del><br><del>One drywell and one suppression chamber hydrogen recombiner inoperable.</del> | <del>A.1 Restore the inoperable hydrogen recombiners to OPERABLE status.</del>  | <del>30 days</del>  |
| <del>B. Two drywell or two suppression chamber hydrogen recombiners inoperable.</del><br><br><del>OR</del><br><del>Any three or more hydrogen recombiners inoperable.</del>                    | <del>B.1 Verify by administrative means that the alternate hydrogen control function is maintained.</del><br><br><del>AND</del><br><del>B.2 Restore recombiners to ensure that at least one drywell and one suppression chamber hydrogen recombiner are OPERABLE.</del> | <del>1 hour</del><br><br><del>AND</del><br><del>Once per 12 hours thereafter</del><br><br><del>7 days</del> |

~~(continued)~~

Not Used

**ACTIONS (continued)**

| CONDITION  | REQUIRED ACTION   | COMPLETION TIME |
|--|-------------------|-----------------|
| C. Required Action and associated Completion Time not met. | C.1 Be in MODE 3. | 12 hours        |

**SURVEILLANCE REQUIREMENTS**

| SURVEILLANCE   | FREQUENCY |
|--|-----------|
| SR 3.6.3.1.1 Perform a system functional test for each drywell and suppression chamber hydrogen recombiner.  | 24 months |
| SR 3.6.3.1.2 Visually examine each drywell and suppression chamber hydrogen recombiner enclosure and verify there is no evidence of abnormal conditions. | 24 months |
| SR 3.6.3.1.3 Perform a resistance to ground test for each heater phase.  | 24 months |

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**Attachment 3 to PLA-5882**

**List of Regulatory Commitments**

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**LIST OF REGULATORY COMMITMENTS**

The following table identifies those actions committed to by PPL Susquehanna in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments. Please direct questions regarding these commitments to Mr. Duane L. Filchner.

| <b>REGULATORY COMMITMENTS</b>   | <b>Due Date/Event</b>   |
|---|---|
| 1. PPL Susquehanna, LLC has verified that a hydrogen monitoring system capable of diagnosing beyond design-basis accidents is installed at Susquehanna Steam Electric Station, Unit 1 and Unit 2 and is making a regulatory commitment to maintain that capability. The hydrogen monitors will be included in the Technical Requirements Manual.  | Prior to implementation of approved Technical Specification amendment |
| 2. Susquehanna Steam Electric Station, Unit 1 and Unit 2, has an inerted containment. PPL Susquehanna, LLC has verified that an oxygen monitoring system capable of verifying the status of the inerted containment is installed at Susquehanna Steam Electric Station, Unit 1 and Unit 2 and is making a regulatory commitment to maintain that capability. The oxygen monitors will be included in the Technical Requirements Manual. | Prior to implementation of approved Technical Specification amendment |