

**Bryce L. Shriver**  
Senior Vice President and  
Chief Nuclear Officer

**PPL Susquehanna, LLC**  
769 Salem Boulevard  
Berwick, PA 18603  
Tel 570 542.3120 Fax 570.542.1504  
blshriver@pplweb.com



OCT 30 2002

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

**SUSQUEHANNA STEAM ELECTRIC STATION  
PROPOSED AMENDMENT NO. 248 TO LICENSE NPF-14 AND  
PROPOSED AMENDMENT NO. 213 TO LICENSE NPF-22:  
CREOASS PRESSURE DROP LIMIT  
PLA-5519**

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

Pursuant to 10 CFR 59.90, PPL Susquehanna, LLC hereby requests the following amendment to the Susquehanna Steam Electric Station (SSES) Unit 1 and Unit 2 Technical Specification (TS). The proposed amendment would change the Control Room Emergency Outside Air Supply System (CREOASS) maximum allowed filter train pressure drop from <9.1 inches wg, to <7.3 inches wg in the Administrative Controls Programs and Manuals, Technical Specification Section 5.5.7 – Ventilation Filter Testing Program. The proposed changes will correct an inconsistency with Design Basis Documents.

Attachment 1 to this letter presents the Safety Assessment for the proposed change.

Attachment 2 to this letter contains the “No Significant Hazards Consideration” and “Environmental Considerations” assessments.

The proposed change decreases the maximum allowable pressure drop through the CREOASS filter train, which is not an accident initiator, thus the probability or consequence of an accident previously evaluated is not significantly increased. The proposed change does not involve a physical modification of the plant, or a change in methods governing plant operation; thus it does not create a possibility of a new or different kind of accident from any accident previously evaluated. The proposed change

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does not adversely affect the operation of any safety-related component or accident analysis, thus there is no significant reduction in margin of safety. Therefore, the proposed amendment presents no significant hazard consideration.

The "Environmental Consideration" assessment concludes that the revision conforms to the criteria for actions eligible for categorical exclusion as specified in 10 CFR 51.22 (c) (9), and will not impact the environment.

Attachment 3 contains marked-up pages of the Unit 1 and Unit 2 Technical Specifications.

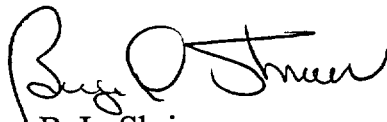
Attachment 4 contains "Camera-Ready" versions of the revised Unit 1 and Unit 2 Technical Specification pages.

The proposed changes have been approved by the SSES Plant Operations Review Committee and reviewed by the Susquehanna Review Committee.

SSES requests approval of the proposed amendment by March 31, 2003. Once approved, the amendment shall be implemented within 60 days.

Should you have any questions or require additional information, please contact Mr. John M. Oddo at (610) 774-7596.

Sincerely,



B. L. Shriver

Attachments: Affidavits

Attachment 1 – Safety Assessment

Attachment 2 – No Significant Hazards Consideration Evaluation and  
Environmental Assessment

Attachment 3 – Technical Specification Mark-up

Attachment 4 – "Camera-Ready" Technical Specification Pages

Copy: NRC Region I

Mr. S. Hansell, NRC Sr. Resident Inspector

Mr. R. Janati, DEP/BRP

Mr. E. M. Thomas, NRC Project Manager

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**Attachment 1 to PLA-5519**

**Safety Assessment**

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BEFORE THE  
UNITED STATES NUCLEAR REGULATORY COMMISSION

In the Matter of \_\_\_\_\_ :

PPL Susquehanna, LLC:

Docket No. 50-387

PROPOSED AMENDMENT NO. 248 TO LICENSE NPF-14  
CREOASS PRESSURE DROP LIMIT  
UNIT NO. 1

Licensee, PPL Susquehanna, LLC, hereby files a revision to its Facility Operating License No. NPF-14 dated July 17, 1982.

This amendment involves a revision to the Unit 1 Technical Specifications.



PPL Susquehanna, LLC

By:

B. L. Shriver

Sr. Vice President and Chief Nuclear Officer

Sworn to and subscribed before me  
this 30<sup>th</sup> day of October, 2002.

Notary Public

Notarial Seal  
Laurie Minto, Notary Public  
Salem Twp., Luzerne County  
My Commission Expires July 24, 2006

Member, Pennsylvania Association of Notaries

BEFORE THE  
UNITED STATES NUCLEAR REGULATORY COMMISSION

In the Matter of :

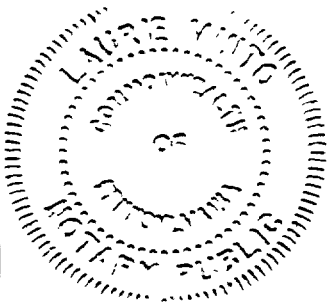
PPL Susquehanna, LLC:

Docket No. 50-388

**PROPOSED AMENDMENT NO. 213 TO LICENSE NPF-22:  
CREOASS PRESSURE DROP LIMIT  
UNIT NO. 2**

Licensee, PPL Susquehanna, LLC, hereby files a revision to its Facility Operating License No. NPF-22 dated March 23, 1984.

This amendment involves a revision to the Unit 2 Technical Specifications.



PPL Susquehanna, LLC

By:

B. L. Shriver

Sr. Vice President and Chief Nuclear Officer

Sworn to and subscribed before me  
this 30<sup>th</sup> day of October, 2002.

Notary Public

Notarial Seal  
Laurie Minto, Notary Public  
Salem Twp., Luzerne County  
My Commission Expires July 24, 2006  
Member, Pennsylvania Association of Notaries

## **Attachment 1 – Safety Assessment**

### **SECTION I**

#### **SUMMARY OF PROPOSED CHANGE**

Due to NRC activities in the control room habitability arena, SSES has undertaken a thorough review of control room habitability design basis and licensing documents. During this review, the discovery was made that administrative TS 5.5.7.d was in error. In accordance with 10 CFR 50.90, PPL Susquehanna, LLC (PPL) proposes to revise the Susquehanna Steam Electric Station Units 1 and 2 (SSES) Technical Specifications (TS) to correct a technical error located in the Administrative Controls section (Section 5.5.7) of the TS.

Section 5.5.7 of the TS contains the requirements for the Ventilation Test Program. The SSES ESF filter ventilation systems are discussed in SSES FSAR Section 6.5. The proposed TS change will correct the maximum allowed pressure drop across the Control Room Emergency Outside Air Supply System (CREOASS) prefilters, HEPAs and charcoal adsorbers when tested at the specified system flowrate. The current maximum allowed CREOASS filter train pressure drop specified in Section 5.5.7.d is < 9.1 inches wg. The proposed change will require the maximum allowed CREOASS filter train pressure drop to be < 7.3 inches wg. The new pressure drop is consistent with current design analyses and test acceptance criteria.

### **SECTION II**

#### **DESCRIPTION AND BASIS (BOTH LICENSING AND DESIGN) OF THE CURRENT REQUIREMENTS**

NUREG-1433 requires for each of the ESF ventilation systems that the pressure drop across the combined HEPA filters, the prefilters, and the charcoal adsorbers is less than the value specified when tested at the system flowrate. Additionally, Section C.5 of Regulatory Guide 1.52 “Design, Testing, and Maintenance Criteria for Post Accident Engineered Safety Feature Atmosphere Cleanup System Air Filtration and Adsorption Units of Light Water Cooled Nuclear Power Plants” presents acceptable in-place testing criteria. SSES is committed to positions C.5.a, C.5.c and C.5.d of Section C.5 of Regulatory Guide 1.52 Revision 2 as identified in SSES FSAR Section 3.13. The ESF ventilation system of concern is the CREOASS. As stated in SSES FSAR Section 6.5.1.2, part of the design bases for the filter train is to maintain system capacity with all

particulate filters fully loaded (dirty). If CREOASS capacity (design flowrate) is maintained, the conditions assumed in the control room dose consequence analysis will be met.

The original design basis requirement for the CREOASS filter train was to maintain the rated system flowrate with a maximum pressure drop of 9.1 inches wg. The maximum filter train pressure drop of 9.1 inches wg was derived by adding the maximum allowable pressure drop for each filter train component. For the CREOASS, the maximum pressure drop for the prefilter was 0.9 inches wg, the upstream HEPA was 3.0 inches wg, the charcoal adsorber was 2.2 inches wg and the downstream HEPA was 3.0 inches wg, yielding a total filter train pressure drop of 9.1 inches wg. During initial startup testing of the CREOASS, the system could not achieve the system design flowrate under a simulated design basis pressure drop condition across the filter train. To reconcile this discrepancy, the design downstream HEPA dirty filter pressure drop was changed from 3.0 inches wg to 1.2 inches wg. As stated in both ERDA 76-21 "Nuclear Air Cleaning Handbook" and ORNL-NSIC-65 "Design, Construction, and Testing of High-Efficiency Air Filtration Systems for Nuclear Application", the downstream HEPA filters are provided in case of failure of the upstream HEPA filter (redundancy) and to collect carbon dust (fines) that carryover from the charcoal adsorbers cells. Considering the design basis function of the downstream HEPA, the pressure drop of the downstream HEPA filter should not change since failure of the upstream HEPA is not anticipated and the carryover of charcoal dust will be minimal. Additionally, these two documents state that the pressure drop of the charcoal adsorber cells should not change over the life of the unit. This provides additional margin for the total pressure drop of the filtration unit. The other filter train components' design pressure drop remained unchanged, thus yielding a new maximum filter train pressure drop of 7.3 inches wg.

### **SECTION III**

#### **EVALUATION OF PROPOSED CHANGE AND BASIS**

A calculation was performed to determine the total pressure drop of the CREOASS with the proposed maximum filter train pressure drop. The calculation determined that the current CREOASS fans will be able to supply the design flowrate under design conditions. Additional testing of the filter train with the proposed maximum pressure drop was not performed during startup due to concerns over damaging the filter media from artificial debris loading. Regulatory Guide 1.52, Revision 2, Section C.5.b requires a test with the design basis filter train pressure drop to be performed. As discussed in Section II, SSES is not committed to this position of the regulatory guide. As required by the SSES TS, the total pressure drop across the filter train is measured. The measurement of the total filter train pressure drop is performed in accordance with plant procedures that conservatively allow a maximum filter train pressure drop of 7.3 inches wg. Since

the design debris loading test was not performed, SSES measures the pressure drop across each component of the filter train to assure that no single filter train component is outside its design basis pressure drop. This verification provides additional assurance that the CREOASS filter train pressure drop remains below the maximum value and the CREOASS will supply its design flowrate. The proposed change aligns the Technical Specifications with all design analyses, design documents and licensing requirements.

#### **SECTION IV**

#### **CONCLUSIONS**

The proposed change was reviewed against current SSES licensing requirements. The proposed change is consistent with SSES commitments to Revision 2 of Regulatory Guide 1.52 and other licensing requirements. The proposed change will also provide consistency between the Technical Specifications and design basis documents and requirements. Since the proposed change aligns all licensing and design basis requirements, the proposed change ensures that the health and safety of the public will be maintained.



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**Attachment 2 to PLA-5519**

**No Significant Hazards Consideration Evaluation  
and  
Environmental Considerations**

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## NO SIGNIFICANT HAZARDS CONSIDERATION EVALUATION

Section 5.5.7 of the Susquehanna Steam Electric Station (SSES) Technical Specification (TS) contains the requirements for the Ventilation Filter Test Program. The proposed TS change will correct the maximum allowed pressure drop across the Control Room Emergency Outside Air Supply System (CREOASS) prefilters, HEPA's and charcoal adsorbers when tested at the specified system flowrate. The current maximum allowed CREOASS filter train pressure drop specified in Section 5.5.7.d is < 9.1 inches wg. The proposed change will require the maximum allowed CREOASS filter train pressure drop to be < 7.3 inches wg. The new pressure drop is consistent with current design analyses and test acceptance criteria.

SSES has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

- 1. Does the proposed change involve a significant increase in the probability or consequence of an accident previously evaluated?**

Response: No

The proposed change decreases the maximum acceptable pressure loss through the Control Room Emergency Outside Air Supply System (CREOASS) filter train. A limit is placed on the filter train pressure loss to assure that the CREOASS can deliver the design flowrate assumed in the control room radiological consequence analysis presented in the SSES Final Safety Analysis Report (FSAR). The proposed change assures the system design flowrate will be met. Thus, the consequences of any accident previously evaluated are not increased. The maximum allowable pressure drop through the CREOASS filter train is not an accident initiator thus, the probability of an accident previously evaluated is not increased. Therefore, the change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

- 2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?**

Response: No

The proposed change does not involve a physical modification or alteration of plant equipment (no new or different type of equipment will be installed) or a change in the

methods governing normal plant operation. The proposed change does not change the design function or operation of the CREOASS. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

**3. Does the proposed change involve a significant reduction in a margin of safety?**

Response: No

The proposed action does not involve a significant reduction in a margin of safety. For the CREOASS, a lower maximum allowed pressure drop in the TS does not adversely impact the operation of any safety-related component or equipment. This proposed TS value is consistent with the design analysis and test acceptance criteria. Engineering evaluations concluded that there are no impacts on safety-related systems or accident analyses associated with the proposed change.

The margin of safety is established through the design of the plant structures, systems, and components, the parameters within which the plant is operated, and the establishment of the setpoints for the actuation of equipment relied upon to respond to an event. The proposed change does not impact the condition or performance of structures, systems, and components relied upon for accident mitigation.

Therefore, the proposed amendment does not involve a significant reduction in a margin of safety.

## ENVIRONMENTAL CONSIDERATIONS

10 CFR 51.22(c)(9) identifies certain licensing and regulatory actions that are eligible for categorical exclusion from the requirement to perform an environmental assessment. A proposed amendment to an operating license for a facility does not require an environmental assessment if operation of the facility in accordance with the proposed amendment would not (1) involve a significant hazards consideration; (2) result in a significant change in the types or significant increase in the amounts of any effluents that may be released offsite; or (3) result in a significant increase in individual or cumulative occupational radiation exposure. PPL Susquehanna, LLC has evaluated the proposed change and has determined that the proposed change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22 (c)(9). Accordingly, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with issuance of the amendment. The basis for this determination, using the above criteria, follows:

### Basis

1. As demonstrated in the No Significant Consideration Evaluation, the proposed amendment does not involve a significant hazards consideration.
2. There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite. The proposed change does not involve any physical modification or alteration of plant equipment (no new or different type of equipment will be installed) or change in methods governing normal plant operation.
3. There is no significant increase in individual or cumulative occupational radiation exposure. The proposed change does not involve any physical modification or alteration of plant equipment (no new or different type of equipment will be installed) or change in methods governing normal plant operation.

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**Attachment 3 to PLA-5519**

**Technical Specification Mark-Ups**

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5.5 Programs and Manuals

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5.5.7 Ventilation Filter Test Program (continued)

- d. Demonstrate for each of the ESF systems that the pressure drop across the combined HEPA filters, the prefilters, and the charcoal adsorbers is less than the value specified below when tested at the system flowrate specified below:

ESF Ventilation System	Delta P (inches wg)	Flowrate (cfm)
Standby Gas Treatment System	< 13	9,090 to 11,110
Control Room Emergency Outside Air Supply System	< <del>9.1</del> 7.3	5,229 to 6,391

- e. Demonstrate that the temperature differential in the air flow across the heating coils for each of the ESF system is greater than or equal to the value specified below when tested in accordance with ASME N510-1975:

ESF Ventilation System	Delta T (°F)	Flowrate (cfm)
Standby Gas Treatment System	≥ 17	9,090 to 11,110

- f. Demonstrate that the heaters for each of the ESF system dissipate the value specified below when tested in accordance with ANSI N510-1975:

ESF Ventilation System	Wattage (kW)
Control Room Emergency Outside Air Supply System	:27 to 33

5.5.8 Explosive Gas and Storage Tank Radioactivity Monitoring Program

This program provides controls for potentially explosive gas mixtures contained in the Main Condenser Offgas Treatment System and the quantity of radioactivity contained in unprotected outdoor liquid storage tanks. The liquid radwaste quantities shall be determined in accordance with Standard Review Plan, Section 15.7.3, "Postulated Radioactive Release due to Tank Failures". The program shall include:

- a. The limits for concentrations of hydrogen in the Main Condenser Offgas Treatment System and a surveillance

(continued)

5.5 Programs and Manuals

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5.5.7 Ventilation Filter Test Program (continued)

- d. Demonstrate for each of the ESF systems that the pressure drop across the combined HEPA filters, the prefilters, and the charcoal adsorbers is less than the value specified below when tested at the system flowrate specified below:

ESF Ventilation System	Delta P (inches wg)	Flowrate (cfm)
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- a. The limits for concentrations of hydrogen in the Main Condenser Offgas Treatment System and a

(continued)

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**Attachment 4 to PLA-5519**

**“Camera-Ready” Technical Specification Pages**

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5.5 Programs and Manuals

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5.5.7 Ventilation Filter Testing Program (continued)

- d. Demonstrate for each of the ESF systems that the pressure drop across the combined HEPA filters, the prefilters, and the charcoal adsorbers is less than the value specified below when tested at the system flowrate specified below:

ESF Ventilation System	Delta P (inches wg)	Flowrate (cfm)
Standby Gas Treatment System	< 13	9,090 to 11,110
Control Room Emergency Outside Air Supply System	< 7.3	5,229 to 6,391

- e. Demonstrate that the temperature differential in the air flow across the heating coils for each of the ESF system is greater than or equal to the value specified below when tested in accordance with ASME N510-1975:

ESF Ventilation System	Delta T (°F)	Flowrate (cfm)
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- a. The limits for concentrations of hydrogen in the Main Condenser Offgas Treatment System and a surveillance

(continued)

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5.5 Programs and Manuals

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5.5.7 Ventilation Filter Test Program (continued)

- d. Demonstrate for each of the ESF systems that the pressure drop across the combined HEPA filters, the prefilters, and the charcoal adsorbers is less than the value specified below when tested at the system flowrate specified below:

ESF Ventilation System	Delta P (inches wg)	Flowrate (cfm)
Standby Gas Treatment System	< 13	9,090 to 11,110
Control Room Emergency Outside Air Supply System	< 7.3	5,229 to 6,391

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ESF Ventilation System	Delta T (°F)	Flowrate (cfm)
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- a. The limits for concentrations of hydrogen in the Main Condenser Offgas Treatment System and a

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