PPL Susquehanna, LLC
Allegheny Electric Cooperative, Inc.
Docket No. 50-388
Susquehanna Steam Electric Station, Unit 2
Renewed Facility Operating License

1. The Nuclear Regulatory Commission (the Commission or the NRC) having found that:

   A. The application for a renewed license filed by the PPL Susquehanna, LLC and the Allegheny Electric Cooperative, Inc. (the licensees)[#] complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;

   B. Construction of the Susquehanna Steam Electric Station, Unit 2 (the facility), has been substantially completed in conformity with Construction Permit No. CPPR-102 and the application, as amended, the provisions of the Act, and the regulations of the Commission;

   C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission;

   D. There is reasonable assurance: (i) that the activities authorized by this operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;

   E. The PPL Susquehanna, LLC[*] is technically qualified to engage in the activities authorized by this operating license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;

   F. The licensees have satisfied the applicable provisions of 10 CFR 140, “Financial Protection Requirements and Indemnity Agreements", of the Commission's regulations;

The original application for the operating license and construction permit were submitted by Pennsylvania Power & Light Company and Allegheny Electric Cooperative, Inc. For purposes of certain historical references contained herein, the term "operating licensee" is used to refer to PPL Susquehanna, LLC, as well as Pennsylvania Power & Light Company and PP&L, Inc., both of which were previously named in the license with authority to operate the facility.

* The PPL Susquehanna, LLC is authorized to act as agent for the Alleghany Electric Cooperative, Inc. and has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility.

G. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public;

H. After weighing the environmental, economic, technical, or other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of renewed Facility Operating License No. NPF-22 subject to the condition for protection of the environment set forth herein, is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied;

I. The receipt, possession, and use of source, byproduct, and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70; and

J. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1); and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by the renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accordance with the Act and the Commission's regulations.

2. Renewed Facility Operating License No. NPF-22 is hereby issued to the PPL Susquehanna, LLC and the Allegheny Electric Cooperative, Inc. to read as follows:

   A. This license applies to the Susquehanna Steam Electric Station, Unit 2, a boiling water nuclear reactor and associated equipment (the facility), owned by the licensees. The facility is located in Luzerne County, Pennsylvania, and is described in the licensees' Final Safety Analysis Report, as supplemented and amended, and the licensees' Environmental Report, as supplemented and amended.

   B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:

      (1) Pursuant to Section 103 of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," PPL Susquehanna, LLC and the Allegheny Electric Cooperative, Inc. to possess, and PPL Susquehanna, LLC to use, and operate the facility at the designated location in Luzerne County, Pennsylvania, in accordance with the procedures and limitations set forth in this license;

      (2) PPL Susquehanna, LLC, pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;

(3) PPL Susquehanna, LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed neutron sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

(4) PPL Susquehanna, LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and

(5) PPL Susquehanna, LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

PPL Susquehanna, LLC is authorized to operate the facility at reactor core power levels not in excess of 3952 megawatts thermal in accordance with the conditions specified herein. The preoperational test, startup tests and other items identified in License Conditions 2.C.(20), 2.C.(21), 2.C.(22), and 2.C.(23) to this license shall be completed as specified.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 234, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. PPL Susquehanna, LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

For Surveillance Requirements (SRs) that are new in Amendment 151 to Facility Operating License No. NPF-22, the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment 151. For SRs that existed prior to Amendment 151, including SRs with modified acceptance criteria and SRs whose frequency of performance is being extended, the first performance is due at the end of the first surveillance interval that begins on the date the Surveillance was last performed prior to implementation of Amendment 151.

(3) PPL Susquehanna, LLC shall implement and maintain in effect all provisions of the approved fire protection program as described in the Fire Protection Review Report for the facility and as approved in Fire Protection Program, Section 9.5, SER, SSER#1, SSER#2, SSER#3, SSER#4, SSER#6, Safety Evaluation of Fire Protection dated August 9, 1989, Safety Evaluation of Revision 4 to the Fire Protection Review Report dated March 29, 1993, Safety Evaluation of Fire Protection Program Issues, Safe Shutdown Methodology and Analysis of Associated Circuits dated October 21, 1997, and Safety Evaluation of the licensees' Amendment No. 150, dated June 24, 1998, to relocate the Fire Protection Program subject to the following provision:

The operating licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

(4) Operation with Partial Feedwater Heating at End-of-Cycle (Section 15.1 SER, SSER #1)

PPL Susquehanna, LLC shall not operate with partial feedwater heating for the purpose of extending the normal fuel cycle unless acceptable justification is provided to and approved by the NRC staff prior to such operation.

(5) Initial Test Program (Section 14, SER, SSER #1)

The operating licensee shall conduct the post-fuel-loading initial test program described in Section 14 of the Final Safety Analysis Report, as amended without making any major modifications unless such modifications have prior NRC approval. Major modifications are defined as:

(a) Elimination of any safety-related test*;

(b) Modifications of objectives, test methods or acceptance criteria for any safety-related test;

(c) Performance of any safety-related test at a power level different from that stated in the licensees' Final Safety Analysis Report by more than 5 percent of rated power;

(d) Failure to satisfactorily complete the entire initial startup test program by the time core burnup equals 120 effective full power days;

* Safety-related tests are those tests which verify the design, construction, and operation of safety-related systems, structures, and equipment.

(e) Deviation from initial test program administrative procedures or quality assurance controls described in the licensees' Final Safety Analysis Report; and

(g) Delays in the test program in excess of 30 days (14 days if power level exceeds 50 percent) concurrent with power operation. If continued power operation is desired during a delay, the operating licensee shall provide justification that adequate testing has been performed and evaluated to demonstrate that the facility can be operated at the planned power level with reasonable assurance that the health and safety of the public will not be endangered.

(6) Inservice Inspection Program (Section 5.2.4 and 6.6, SER, SSER #1, SSER #3)

By March 1, 1985, the operating licensee shall submit a revised inservice inspection program for NRC review and approval.

(7) Environmental Qualification (Section 3.11 SER, SSER #1, SSER #2, SSER #3, SSER #4, SSER #5, SSER #6)

Prior to March 31, 1985, the operating licensee shall environmentally qualify all electrical equipment according to the provisions of 10 CFR 50.49 except as follows:

(a) All modifications of Unit 2 equipment which are common with Unit 1 shall be completed prior to the startup following the first refueling outage for Unit 1 which is prior to November 30, 1985.

(b) Testing and qualification of conduit seals, silicone rubber insulated cable and NSIS cable shall be completed prior to November 30, 1985.

(c) Modifications to the Target Rock Solenoid Valve SV-22651 shall be completed prior to November 30, 1985.

(8) Seismic and Dynamic Qualification (Section 3.10, SER, SSER #1, SSER #3, SSER #4, SSER #5, SSER #6)

(a) Prior to exceeding 5 percent of rated power, the operating licensee shall complete qualification and documentation, as well as installation for:

(1) RCIC back power supply and inverter

(2) A/E - added devices to NSSS panels

(b) "Prior to use, the operating licensee shall complete qualification and documentation, as well as installation of the in-vessel rack."

(9) Surveillance of Control Blade (Section 4.2.3 SER)

DELETED

(10) Additional Instrumentation and Control Concerns (Section 7.7.2, SER, SSER #2; Section 3.11.3, SSER #6)

Prior to exceeding five percent of rated power, the operating licensee shall resolve the following concerns to the NRC's satisfaction:

(a) whether common electrical power sources or sensor malfunctions may cause multiple control system failures, and

(b) whether high energy line breaks will result in unacceptable consequential control system failures.

(11) Emergency Diesel Engine Starting Systems (Section 9.6.3, SER)

Prior to September 1, 1985, the operating licensee shall install air dryers upstream of the air receivers.

(12) NUREG-0737 Conditions (Section 22, SER)

The operating licensee shall complete the following conditions to the satisfaction of the NRC. These conditions reference the appropriate items in Section 22.2, "TMI Action Plan Requirements for Applicants for Operating Licenses," in the Safety Evaluation Report and Supplements 1, 2, 3, 4, 5, and 6, NUREG-0776.

(a) Nuclear Steam Supply Vendor Review of Procedures (1.C.7, SER, SSER #1)

Prior to achieving initial criticality, the operating licensee shall assure that the General Electric review of the power ascension test procedures has been completed.

(b) Detailed Control Room Design Review (I.D.1, SSER #6)

All human engineering deficiencies requiring correction as a result of the operating licensee's Detailed Control Room Design Review for Unit 1 shall be corrected in the Unit 2 control room. By March 1, 1985, the operating licensee should submit its schedule for implementing all human engineering deficiency corrective action for review and approval by NRC staff.

(c) Post Accident Sampling (II.B.3, SER, SSER #1, SSER #3)

(1) Prior to exceeding 5 percent of rated power, the operating licensee shall have installed and have operational the Post-Accident Sampling System.

(2) Prior to December 1, 1984, the operating licensee shall revise the interim core damage estimating procedure by submitting for staff review a final procedure which incorporates hydrogen levels, reactor vessel coolant level and containment radiation levels in addition to radionuclide data.

2.C(12)(c)(2) see SER Ltr dtd 9/18/85

(d) Emergency Response Capabilities (Generic Letter 82-33, Supplement 1 to NUREG-0737)

The operating licensee shall complete emergency response facilities and capabilities as required in Attachment 2 of this license.

(e) Instrumentation for Detection of Inadequate Core Cooling (II.F.2, SER, SSER #1, SSER #3, SSER #6)

The operating licensee shall implement the staff's requirements regarding upgrading of liquid level instrumentation or inclusion of additional instrumentation for detection of inadequate core cooling necessary to comply with Commission regulations, based on the staff's review of the BWR Owner's Group Reports (SLI 8211 & SLI 8218) and the operating licensee's plant specific evaluation report addressing the recommendations of the BWROG reports. Within 90 days after the operating licensee is informed of staff requirements, the operating licensee shall submit for review and approval by the staff, a schedule for implementing any required modifications regarding upgrading of liquid level instrumentation or inclusion of additional instrumentation for detection of inadequate core cooling.

2.C(12)(e) satisfied per ltr of 4/11/85

(f) Modification of Automatic Depressurization System Logic - Feasibility for Increased Diversity for Some Event Sequences (II.K.3.18, SER, SSER #1, SSER #2, SSER #3, SSER #6)

(1) Prior to achieving initial criticality, the operating licensee shall:

(i) Install modifications to the Automatic Depressurization System acceptable to the NRC, and

(ii) Propose Technical Specifications for the bypass timer setting and surveillance requirements for the bypass timer.

(2) Prior to September 1, 1985, the operating licensee shall:

(i) Incorporate into the Plant Emergency Procedures the usage of the manual inhibit switch, and

(ii) Propose Technical Specifications for the manual inhibit switch.

(3) The operating licensee shall maintain the manual inhibit switch disabled until license condition 2.C.(12) (f) (2) above is satisfied.

(13) Emergency Service Water System (Section 9.2.1, SSER #6)

Prior to September 1, 1985, the operating licensee shall complete modifications to the emergency service water (ESW) system described in the operating licensee's letter dated May 16, 1983.

(14) Control of Heavy Loads (Section 9.1.4, SSER #6)

DELETED

(15) Radon (ASLB Initial Decision, Paragraph 223)

This license will be subject to the ultimate outcome of the consolidated radon proceeding currently underway in Docket Nos. 50-277, 50-278, 50-320, 50-354 and 50-355.

(16) Formal Federal Emergency Management Agency Finding

In the event the NRC finds that lack of progress in completion of the procedures in Federal Emergency Management Agency's final rule, 44 CFR Part 350, is an indication that major substantial problem exists in achieving or maintaining an adequate state of emergency preparedness, the provisions of 10 CFR Section 50.54(s)(2) will apply.

(17) Additional Conditions

The Additional Conditions contained in Appendix C, as revised through Amendment No. 162, are hereby incorporated into this license. PPL Susquehanna, LLC shall operate the facility in accordance with the Additional Conditions.

(18) Mitigation Strategy License Condition

Develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

(a) Fire fighting response strategy with the following elements:
1. Pre-defined coordinated fire response strategy and guidance
2. Assessment of mutual aid fire fighting assets
3. Designated staging areas for equipment and materials
4. Command and control
5. Training of response personnel

(b) Operations to mitigate fuel damage considering the following:
1. Protection and use of personnel assets
2. Communications
3. Minimizing fire spread
4. Procedures for implementing integrated fire response strategy
5. Identification of readily-available pre-staged equipment
6. Training on integrated fire response strategy
7. Spent fuel pool mitigation measures

(c) Actions to minimize release to include consideration of:
1. Water spray scrubbing
2. Dose to onsite responders

(19) The licensee shall implement and maintain all Actions required by Attachment 2 to NRC Order EA-06-137, issued June 20, 2006, except the last action that requires incorporation of the strategies into the site security plan, contingency plan, emergency plan and/or guard training and qualification plan, as appropriate.

(20) <u>Potential Adverse Flow Effects</u>

These license conditions provide for monitoring, evaluating, and taking prompt action in response to potential adverse flow effects as a result of power uprate operation on plant structures, systems, and components (including verifying the continued structural integrity of the steam dryer).

(a) The following requirements are placed on operation of the PPL Susquehanna, LLC (PPL) facility above the licensed thermal power (CLTP) level of 3489 megawatts thermal (MWt):

(1) PPL shall obtain at each 3.5% power ascension step, main steam line strain gauge data and compare it to the limit curve for the dryer strains during power ascension.

(2) PPL shall monitor the main steam line (MSL) strain gauges during power ascension above 3489 MWt for increasing pressure fluctuations in the steam lines.

(3) PPL shall hold the facility at each 3.5% ascension step to collect data from License Condition 2.C.(20)(a) and conduct plant inspections and walk-downs, and evaluate steam dryer performance based on the data; shall provide the evaluation to the NRC staff by facsimile or electronic transmission to the NRC project manager upon completion of the evaluation; and shall not increase power above each hold point until 96 hours after the NRC project manager confirms receipt of transmission.

(4) If any frequency peak from the MSL strain gauge data exceeds the level 1 limit curve for dryer strains above 3489 MWt, PPL shall return the facility to a power level at which the acceptance criteria is not exceeded. PPL shall resolve the discrepancy, document the continued structural integrity of the steam dryer, and provide that documentation to the NRC staff by facsimile or electronic transmission to the NRC project manager prior to further increases in reactor power.

(5) In addition to evaluating the dryer strain and MSL strain gauge data, PPL shall monitor reactor pressure vessel water level instrumentation or MSL piping accelerometers during power ascension above 3489 MWt. If resonance frequencies are identified as increasing above nominal levels in proportion to instrumentation data, PPL shall stop power ascension, document the continued structural integrity of the steam dryer, and provide that documentation to the NRC staff by facsimile or electronic transmission to the NRC project manager prior to further increases in reactor power.

(6) Following CPPU start-up testing, PPL shall resolve the discrepancies in the steam dryer analysis and provide that resolution to the NRC staff by facsimile or electronic transmission to the NRC project manager. If the discrepancies are not resolved within 90 days of identification, PPL shall return the facility to a power level at which the discrepancy does not exist.

(b) PPL shall implement the following actions:

(1) PPL shall provide to NRC the as-built dryer stress analysis and load limit curves 45 days prior to operation above 3489 MWt.

(2) After the dryer stress analysis is benchmarked to the Unit 1 startup test data (Unit 1 data taken up to 107% of 3489 MWt), the benchmarked PATP and MSL limit curves shall be provided to the NRC 90 days prior to operation above 107% of 3489 MWt.

(3) In the event that acoustic signals are identified that challenge the limit curves during power ascension above 3489 MWt, PPL shall evaluate dryer loads and re-establish the acceptance criteria based on the new data, and shall perform an assessment of ACM uncertainty at the acoustic signal frequency.

(4) After reaching full CPPU, PPL shall obtain measurements from the MSL strain gauges and establish the steam dryer flow-induced vibration load fatigue margin for the facility, update the dryer stress report, if required, and re-establish the limit curve with the updated ACM load definition and revised instrument uncertainty, which will be provided to the NRC staff.

(5) During power ascension above 3489 MWt, if an engineering evaluation for the steam dryer is required because a Level 1 acceptance criteria is exceeded, PPL shall perform the structural analysis to address frequency uncertainties up to ±10% and assure that peak responses that fall within this uncertainty band are addressed.

(6) PPL shall revise the Post Constant Pressure Power Uprate (CPPU) Monitoring & Inspection Program to reflect long-term monitoring of plant parameters potentially indicative of steam dryer failure; to reflect consistency of the facility's steam dryer inspection program with General Electric Service Information Letter (SIL) 644, "BWR/3 Steam Dryer Failure," Revision 2; and to identify the NRC Project Manager for the facility as the point of contact for providing PATP information during power ascension.

(7) PPL shall submit a CPPU steam dryer report to the NRC. The report will be issued following completion of Unit 2 ascension to 114% CLTP. The report shall include evaluations or corrective actions that were required to assure steam dryer structural integrity. Additionally, it shall include relevant data collected at each power step, comparisons to performance criteria (design predictions), and evaluations performed in conjunction with steam dryer structural integrity monitoring.

(8) PPL shall submit the flow-induced vibration related portions of the CPPU startup test procedure to the NRC, including methodology for updating the limit curve, prior to initial power ascension above 3489 MWt.

(c) PPL shall prepare the CPPU startup test procedure to include the:

(1) main steam line strain gauge limit curves to be used up to 114% of CLTP;

(2) specific hold points and their duration during CPPU power ascension;

(3) activities to be accomplished during hold points;.

(4) plant parameters to be monitored;

(5) inspections and walk-downs to be conducted for steam, feedwater, and condensate systems and components during the hold points;

(6) methods to be used to trend plant parameters;

(7) acceptance criteria for monitoring and trending plant parameters, and conducting the walk-downs and inspections;

(8) actions to be taken if acceptance criteria are not satisfied; and

(9) verification of the completion of commitments and planned actions specified in its application and all supplements to the application in support of the CPPU license amendment request pertaining to the steam dryer prior to power increase above 3489 MWt. PPL shall provide the related CPPU startup test procedure sections to the NRC by facsimile or electronic transmission to the NRC project manager prior to increasing power above 3489 MWt.

(d) The following key attributes of the PATP shall not be made less restrictive without prior NRC approval:

(1) During initial power ascension testing above 3489 MWt, each test plateau increment shall be approximately 3.5% of 3489 MWt;

(2) Level 1 performance criteria; and

(3) The methodology for establishing the stress criteria used for the Level 1 and Level 2 performance criteria.

Changes to other aspects of the PATP may be made in accordance with the guidance of Nuclear Energy Institute (NEI) 99-04, "Guidelines for Managing NRC Commitments," issued July 1999.

(e) During the first two scheduled refueling outages after reaching full CPPU conditions, a visual inspection shall be conducted of all accessible, susceptible locations of the steam dryer in accordance with BWRVIP-139 and General Electric inspection guidelines.

(f) The results of the visual inspections of the steam dryer shall be reported to the NRC staff within 60 days following startup. The results of the PATP shall be submitted to the NRC staff in a report within 60 days following the completion of all CPPU power ascension testing.

(g) This license condition shall expire upon satisfaction of the requirements in License Conditions 2.C.(20)(e) and 2.C.(20)(f) provided that a visual inspection of the steam dryer does not reveal any new unacceptable flaw or unacceptable flaw growth that is due to fatigue.

(21) Transient Testing

(a) PPL will demonstrate through performance of transient testing on each SSES unit that the loss of one condensate pump will not result in a complete loss of reactor feedwater. The test shall be performed on each unit during the unit's CPPU power ascension test program within 336 hours of achieving and prior to exceeding a nominal power level of 3733 MWt with feedwater and condensate flow rates stabilized. PPL shall confirm that the plant response to the transient is as expected in accordance with the acceptance criteria that are established. If a loss of all reactor feedwater occurs as a result of the test, the test failure shall be addressed in accordance with corrective action program requirements and the provisions of the power ascension test program prior to continued operation of the SSES Unit above 3489 MWt.

(b) Unless the NRC issues a letter notifying the licensee that the tests specified by License Condition 2.C.(21)(a) adequately demonstrate that a single condensate pump trip will not result in a loss of all feedwater while operating at the full CPPU power level of 3952 MWt, PPL shall perform the transient test on either SSES unit (whichever unit is first to achieve the following specified operating conditions) specified by License Condition 2.C.(21)(a) during the power ascension test program while operating at 3872 MWt to 3952 (98% to 100% of the full CPPU power level) with feedwater and condensate flow rates stabilized. The test shall be performed within 90 days of operating at greater than 3733 MWt and within 336 hours of achieving a nominal power level of 3872 MWt with feedwater and condensate flow rates stabilized. PPL will demonstrate through performance of transient testing on either Susquehanna Unit 1 or Unit 2 (whichever unit is first to achieve the specified conditions) that the loss of one condensate pump will not result in a complete loss of reactor feedwater. PPL shall confirm that the plant response to the transient is as expected in accordance with the acceptance criteria that are established. If a loss of all feedwater occurs as a result of the test, the test failure shall be addressed in accordance with corrective action program requirements and the provisions of the power ascension test program prior to continued operation of either SSES Unit above 3733 MWt.

(22) Neutronic Methods

(a) An OPRM amplitude setpoint penalty will be applied to account for a reduction in thermal neutrons around the LPRM detectors caused by transients that increase voiding. This penalty will reduce the OPRM scram setpoint according to the methodology described in Response No. 3 of PPL letter, PLA-6306, dated November 30, 2007. This penalty will be applied until NRC evaluation determines that a penalty to account for this phenomenon is not warranted.

(b) For SSES SLMCPR, a conservatively adjusted pin power distribution uncertainty and bundle power correlation coefficient will be applied as stated in Response No. 4 of PPL letter, PLA-6306, dated November 30, 2007, when performing the analyses in accordance with ANF-524(P)(A), "Critical Power Methodology for Boiling Water Reactors," using the uncertainty parameters associated with EMF-2158(P)(A) "Siemens Power Corporations Methodology for Boiling Water Reactors: Evaluation and Validation of CASMO-4/MICROBURN-B2."

(23) Containment Operability for EPU

PPL shall ensure that the CPPU containment analysis is consistent with the SSES 1 and 2 operating and emergency procedures. Prior to operation above CLTP, for each respective unit, PPL shall notify the NRC project manager that all appropriate actions have been completed.

(24) Primary Containment Leakage Rate Testing Program

Those primary containment local leak rate program tests (Type B - leakage - boundary and Type C - containment isolation valves) as modified by approved exemptions, required by 10 CFR Part 50, Appendix J, Option B and Technical Specification 5.5.12, are not required to be performed at the CPPU peak calculated containment internal pressure of 48.6 psig (Amendment No. 224 to this Operating License) until their next required performance.

(25) Critical Power Correlation Additive Constants

AREVA NP has submitted EMF-2209(P), Revision 2, Addendum 1 (ML081260442) for NRC review to correct the critical power correlation additive constants due to a prior Part 21 notification (ML072830334). The report is currently under NRC review.

The license shall apply additional margin to the cycle specific OLMCPR, consistent in magnitude with the non-conservatism reported in the Part 21 report, thus imposing the appropriate MCPR penalty on the OLMCPR. This compensatory measure is to be applied until the approved version of

EMF-2209(P) Revision 2, Addendum 1 is published and PPL verifies that the additive constants from the approved report have been incorporated in the cycle specific analyses.

D. The operating licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plan, which contains Safeguards Information protected under 10 CFR 73.21, is entitled: "Physical Security Plan, Training and Qualification Plan, Safeguards Contingency Plan and Security and Contingency Plan for Independent Spent Fuel Storage Facility," and was submitted October 8, 2004.

E. DELETED

F. PPL Susquehanna, LLC shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.

G. The information in the Updated Final Safety Analysis Report (UFSAR) supplement, as revised, submitted pursuant to 10 CFR 54.21(d), shall be incorporated into the UFSAR no later than the next scheduled update required by 10 CFR 50.71(e) following the issuance of this renewed operating license. Until this update is complete, PPL Susquehanna, LLC, may not make changes to the information in the supplement. Following incorporation into the UFSAR, the need for prior Commission approval of any changes will be governed by 10 CFR 50.59.

H. The UFSAR supplement, as revised, submitted pursuant to 10 CFR 54.21(d), describes certain future activities to be completed prior to and/or during the period of extended operation. The licensee shall complete these activities in accordance with Appendix A of NUREG-1931, “Safety Evaluation Report Related to the Susquehanna Steam Electric Station, Units 1 and 2,” dated November, 2009. The licensee shall notify the NRC in writing when activities to be completed prior to the period of extended operation are complete and can be verified by NRC inspection.

I. All capsules in the reactor vessel that are removed and tested must meet the requirements of American Society for Testing and Materials (ASTM) E 185-82 to the extent practicable for the configuration of the specimens in the capsule. Any changes to the capsule withdrawal schedule, including spare capsules, must be approved by the staff prior to implementation. All capsules placed in storage must be maintained for future insertion. Any changes to storage requirements must be approved by the staff, as required by 10 CFR Part 50, Appendix H.

3. This license is effective as of the date of issuance and shall expire at midnight on March 23, 2044.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

Attachments:
1. Attachment 1
2. Attachment 2
3. Appendix A - Technical Specifications
4. Appendix B – Environmental Protection Plan (Non-Radiological)
5. Appendix C - Additional Conditions

Date of Issuance: November 24, 2009