Enclosure to PLA-7191

Application for Order Approving Indirect Transfer of Control of Facility Operating License Nos. NPF-14 and NPF-22 and Conforming Amendments

July 11, 2014

UNITED STATES OF AMERICA

Before the U.S. Nuclear Regulatory Commission

In the Matter of	)	
	)	
PPL Susquehanna, LLC	)	Docket Nos. 50-387
	)	50-388
Susquehanna Steam Electric Station,	)	and 72-28
Units 1 and 2)	)	

Application for Order Approving Indirect Transfer of Control of Facility Operating License Nos. NPF-14 and NPF-22 and Conforming Amendments

I. INTRODUCTION

In accordance with Section 184 of the Atomic Energy Act, 10 C.F.R. § 50.80, and 10 C.F.R. § 72.50(a), this Application requests consent of the Nuclear Regulatory Commission ("NRC") to the indirect transfer of control of PPL Susquehanna, LLC's ("PPL Susquehanna") interests in Facility Operating License Nos. NPF-14 and NPF-22 for the Susquehanna Steam Electric Station ("SSES") Units 1 and 2, as well as the general license for the SSES Independent Spent Fuel Storage Installation ("ISFSI"). PPL Susquehanna is licensed as the sole operator and has a 90% undivided ownership interest in SSES. The proposed indirect transfer of licenses does not involve Allegheny Electric Cooperative, Inc., the other (10%) owner of the units and a non-operating licensee for SSES.

The indirect transfer of control results from a series of transactions (collectively, the "Transaction"), described in more detail below, in which PPL Corporation, PPL Susquehanna's ultimate parent, will spin off PPL Energy Supply, LLC ("Energy Supply"), which holds competitive generation and ancillary assets including PPL Susquehanna. The Transaction will involve the creation of and changes to intermediate holding companies, with Energy Supply eventually becoming a direct wholly owned subsidiary of a new intermediate parent named Talen Energy Holdings, Inc. ("Talen Holdings"), which in turn will be a direct wholly owned subsidiary of a new, publicly owned ultimate parent, named Talen Energy Corporation ("Talen Energy"). The specific Transaction steps include the following:

(1) PPL Corporation creates a new subsidiary, Talen Holdings.

(2) Talen Holdings creates a new subsidiary, Talen Energy.[1]

(3) Talen Energy creates a new subsidiary, Talen Energy Merger Sub, Inc. ("Merger Sub").[2]

(4) PPL Energy Funding Corporation ("Energy Funding"), which is a direct wholly owned subsidiary of PPL Corporation and the direct parent of Energy Supply, distributes 100% of the outstanding equity securities of Energy Supply to PPL Corporation.

(5) PPL Corporation contributes 100% of the outstanding equity securities of Energy Supply to Talen Holdings, resulting in Energy Supply becoming a subsidiary of Talen Holdings.

(6) PPL distributes the Talen Holdings common stock pro rata to its shareowners (the "Spin-Off").

(7) Talen Holdings merges with Merger Sub, with Talen Holdings surviving as a wholly owned subsidiary of Talen Energy and Talen Holdings common stock converted into common stock of Talen Energy.

(8) Raven Power Holdings LLC ("Raven Holdings"), C/R Energy Jade, LLC ("Jade Holdings") and Sapphire Power Holdings LLC ("Sapphire Holdings," together with Raven Holdings and Jade Holdings, "RJS"), which are portfolio companies sponsored by an energy and power focused private investment firm, Riverstone Holdings LLC ("Riverstone")[3], will contribute the equity interests in an entity that indirectly owns the competitive power generation businesses of RJS (the "RJS

---

[1] Although Talen Energy is initially created as a subsidiary of Talen Holdings, it will become Talen Holdings' parent under step 7 as described above.

[2] Steps 1-3 have already been effectuated.

[3] Raven Holdings is an independent power producer whose assets consist of three, primarily coal-fired, power generation facilities in Maryland, with a generating capacity of 2,648 MW (summer rating). Jade Holdings is a Texas-based independent power producer whose assets consist of a 1,928 MW (summer rating) portfolio of power generation, the majority of which are combined cycle gas-fired facilities. Sapphire Holdings is an independent power producer whose assets consist of seven natural gas-fired combined cycle generating units and one natural gas-fired peaking unit, located in the northeast with a generating capacity of 737 MW (summer rating).

HoldCo") to Talen Energy. In exchange, RJS or a special purpose entity wholly owned by RJS and controlled by Raven Holdings (such entity or RJS, as applicable, the "RJS Shareholder(s)"), will receive 35 percent of Talen Energy's common stock in the aggregate (the "Contribution"). [4]

As a result of the Transaction, PPL Susquehanna will become indirectly controlled by two new entities (Talen Energy and Talen Holdings), with the Talen Energy common stock being held 65 percent by PPL public shareowners as of the record date for the Spin-Off and 35 percent by the RJS Shareholder(s) in the aggregate. Simplified organization charts showing the current and post-organization ownership structures are provided as Figures 1 and 2 of this Application. [5]

With the exception of Steps (1) through (3), which have already been implemented, the Transaction steps will be substantially contemporaneous, but deemed to occur in the order set forth above. These steps could be altered, however, and accordingly PPL Susquehanna requests NRC consent to these or any similar, substantially contemporaneous steps that result in the final structure shown in Figure 2.

PPL Susquehanna also requests conforming amendments to the SSES operating licenses, including new license conditions contained in Appendix C superseding those that were imposed when the SSES licenses were previously transferred in 2000 from PP&L, Inc. (now known as PPL Electric Utilities Corporation) to PPL Susquehanna. The new conditions would replace references to "PPL Corporation" with references to "Talen Energy Corporation," reflecting the latter becoming the new, publicly-owned ultimate parent holding company after the Transaction. In particular, PPL Susquehanna requests that the second license condition in Appendix C, which currently prohibits PPL Corporation and other intermediate parents from cancelling the

---

[4] Following the Contribution, RJS HoldCo will be contributed by Talen Energy to Talen Holdings which, in turn, will either (a) contribute RJS HoldCo to Energy Supply and/or (b) cause RJS HoldCo to be merged with and into Energy Supply, with Energy Supply as the surviving company in the merger.

[5] Upon closing, Energy Supply, its subsidiary PPL Generation, LLC (PPL Susquehanna's immediate parent), and PPL Susquehanna will be renamed, but their corporate existence will not change (i.e. the renaming will not result in the creation of new companies). PPL Susquehanna will be renamed Susquehanna Nuclear, LLC. The new names of Energy Supply and PPL Generation have not yet been determined. PPL Susquehanna will timely inform the NRC when the new names are determined.

commitment to fund an extended plant shutdown as represented in the 2000 license transfer application, be replaced with a similar condition applicable to Talen Energy and including a replacement funding commitment as described later in this Application. In addition, PPL Susquehanna requests that the fourth license condition in Appendix C, which prohibits the decommissioning trust funds from being invested in securities or obligations of PPL Corporation or its affiliates, be replaced with a similar condition prohibiting investment in the securities or obligations of Talen Energy or its affiliates. PPL Susquehanna also requests that the third license condition in Appendix C, which required transfer of the decommissioning trusts when PPL Susquehanna was created in 2000 and previously provided for the transmittal of a non-bypassable wires charge through certain PPL companies, be deleted, as the transfer of funds already occurred, and the contributions from the wires charge have been completed. Leaving this historic condition would serve no purpose and could create confusion. Finally, PPL Susquehanna requests an administrative amendment to reflect its new name, "Susquehanna Nuclear, LLC" ("Susquehanna Nuclear"), following the Transaction.[6] Marked up pages showing these requested changes to the licenses are provided as Attachment 1 to this Application. Pursuant to 10 C.F.R. § 2.1315, these amendments involve no significant hazards considerations because the Application does no more than conform the license to reflect the proposed indirect license transfer.

II. STATEMENT OF PURPOSE OF THE TRANSFERS AND NATURE OF THE TRANSACTIONS MAKING THE TRANSFERS NECESSARY OR DESIRABLE

The purpose of the Transaction is to combine the competitive power generation businesses of PPL Corporation and RJS, resulting in Talen Energy becoming the third-largest investor-owned independent power producer in the United States, based on current generating capacity statistics. Talen Energy will combine 9,995 megawatts of capacity currently owned and operated by subsidiaries of Energy Supply principally at twelve sites in Pennsylvania and Montana with 5,313 megawatts of capacity currently owned and operated by RJS at fifteen sites in Maryland, New Jersey, Pennsylvania, Texas and Massachusetts. Talen Energy's combined portfolio of approximately 15,000 megawatts (before giving effect to any divestitures that may

[6] For convenience, the name PPL Susquehanna will be used throughout this application, even when describing matters or obligations after the name will be changed to Susquehanna Nuclear.

be required to achieve FERC and DOJ approvals) will have excellent fuel diversity, with approximately 40 percent natural gas, 40 percent coal, 15 percent nuclear, 3 percent oil and 2 percent renewables. The combination is expected to result in significant operating and financial benefits, eventually producing an estimated $155 million in annual run-rate synergies. Talen Energy's earnings before interest, taxes, depreciation and amortization ("EBITDA") on the full portfolio is estimated to be $1.07 billion on a 2015 "model year" basis[7], inclusive of the aforementioned run-rate forecast synergies. As a result, Talen Energy will have significant scale and a competitive cost structure, with the ability to pursue growth opportunities.

III. SUPPORTING INFORMATION

A. Name of Licensee

PPL Susquehanna, LLC (to be renamed Susquehanna Nuclear, LLC upon closing).

B. Address

Current:	Upon Closing:
Two North Ninth Street Allentown, PA 18101	To Be Determined

C. Description of Business or Occupation

PPL Susquehanna is and will remain a limited liability company organized under the laws of the State of Delaware, with its principal place of business in Pennsylvania[8], formed to hold interests in and operate SSES.

D. Board of Managers and Principal Officers

The current Board of Managers and the Principal Officers of PPL Susquehanna, all of whom are U.S. Citizens with the same corporate address as PPL Susquehanna, are listed below.

---

[7] "Model year" basis includes a full year of run-rate synergies benefit in 2015. Actual 2015 results will likely achieve a fraction of the run-rate synergy estimate.

[8] PPL Susquehanna will timely inform the NRC when the location of its new business address is determined.

MANAGERS:	Paul A. Farr Victor N. Lopiano Timothy S. Rausch Mark F. Wilten
PRINCIPAL OFFICERS:	Paul A. Farr.....President Timothy S. Rausch.....Senior Vice President and Chief Nuclear Officer Jon A. Franke.....Site Vice President-Susquehanna Jeffrey M. Helsel.....Vice President-Nuclear Operations

If any changes to the principal officers or managers above occur prior to closing of the Transaction, PPL Susquehanna will timely inform the NRC.

E. No Agency

In seeking NRC consent to this indirect transfer of control, PPL Susquehanna is not acting as the agent or representative of another person.

F. Relationship to Shareholders

PPL Susquehanna is a wholly owned subsidiary of PPL Generation, LLC ("Generation"), which is a wholly owned subsidiary of Energy Supply. Energy Supply is currently a wholly owned subsidiary of Energy Funding, which in turn is a wholly owned subsidiary of PPL Corporation, the ultimate parent. Upon closing of the Transaction, Energy Supply will become a wholly owned subsidiary of Talen Holdings, which in turn will be a wholly owned subsidiary of Talen Energy. On the closing date, 35 percent of the common stock of Talen Energy will be held by the RJS Shareholder(s) in the aggregate, and the remaining 65 percent will be held by the public shareowners of PPL Corporation who are shareowners as of the record date for the Spin-Off.

General corporate information specified in 10 C.F.R. § 50.33(d)(3) for Talen Energy, which will be the ultimate parent of PPL Susquehanna following the Transaction, is provided in Attachment 2 to this Application. The Principal Officers listed in Attachment 2 are those

persons who have been designated to fill these positions upon closing of the Transaction. PPL Susquehanna will timely inform the NRC if any of these designations change. The persons who will be on the Board of Directors upon closing have not yet been appointed. However, other than one candidate who is a citizen of the United Kingdom (and a current member of the PPL Board), all of the candidates are U.S. citizens.

The RJS Shareholder(s) will hold, in the aggregate, 35 percent of the common stock of Talen Energy. If Raven Holdings, Jade Holdings and Sapphire Holdings are the RJS Shareholders, Raven Holdings will own the majority of the Talen Energy common stock directly held by RJS. Alternatively, if the RJS Shareholder is a special purpose entity wholly owned by RJS, Raven Holdings will control such entity directly or through the appointment of a Board of Directors at such special purpose entity. Jade Holdings will own more than ten percent (but less than a controlling share) of any Talen Energy common stock directly held by RJS or will hold a non-controlling interest in a special purpose entity wholly owned by RJS that is the RJS Shareholder. Sapphire Holdings will own less than ten percent of any Talen Energy common stock directly held by RJS or will hold a non-controlling interest in a special purpose entity wholly owned by RJS that is the RJS Shareholder.

Raven Holdings is a Delaware limited liability company. Riverstone V Raven Holdings, L.P., a Delaware limited partnership ("R-R Holdings"), owns approximately 99% of the Class A Units of Raven Holdings with the remainder owned by certain individuals providing services to or employed by Raven Holdings. Certain individuals providing services or employed by Raven Holdings own Class B Units, which are profits interests without voting rights. There is no "managing member" of Raven Holdings. Instead, a Board of Directors appointed by R-R Holdings has full managerial authority.

R-R Holdings is controlled by its general partner, Riverstone Energy Partners V, L.P., a Delaware limited partnership ("Riverstone GP"). The general partner of Riverstone GP is Riverstone Energy GP V, LLC, a Delaware limited liability company, which is managed by its Board of Managers, composed of Pierre F. Lapeyre, Jr., David M. Leuschen, The Lord Browne of Madingley, James T. Hackett, Michael B. Hoffman, N. John Lancaster, Jr. and Andrew W. Ward. All but The Lord Browne of Madingley, who is a U.K. citizen, are U.S. citizens.

Riverstone Energy GP V, LLC is 100% owned by Riverstone Energy GP V Corp., a Delaware corporation, which is 100% owned by Riverstone.

Riverstone is an energy and power focused private investment firm founded in 2000 that has raised approximately $27 billion of equity capital. The firm is a Delaware limited liability company based in New York City. Riverstone was founded by Pierre F. Lapeyre, Jr. and David M. Leuschen. Riverstone has two classes of membership interests. By the nature of their membership interests, Mr. Lapeyre and Mr. Leuschen have full and equal control over the operation and management of Riverstone. They are based in New York and are U.S. citizens.

Jade Holdings and Sapphire Holdings are also Delaware limited liability companies. Like Raven Holdings, they are managed by their Boards of Directors. As noted previously, Jade Holdings will own a non-controlling minority interest greater than 10% in Talen Energy or a non-controlling interest in any special purpose entity that is the RJS Shareholder. Sapphire Holdings will own less than 10% of Talen Energy or a non-controlling interest in any special purpose entity that is the RJS Shareholder.

Although the RJS Shareholder(s) will not have, individually or in the aggregate, a majority interest in Talen Energy, general corporate information for Raven Holdings, Jade Holdings, Sapphire Holdings, and Riverstone is provided in Attachment 3 of this Application.

IV. FOREIGN OWNERSHIP OR CONTROL

PPL Susquehanna is not owned, controlled or dominated by an alien, foreign corporation or a foreign government, and the Transaction will have no impact on this status. Following the Transaction, the majority (65 percent) of the common stock of Talen Energy will be widely held by the shareowners of PPL Corporation who are shareowners as of the record date for the Spin-Off. Based on filings under Section 13(d) of the Securities Exchange Act of 1934, as amended as of the date of this Application, PPL Susquehanna is not aware of any alien, foreign corporation, or foreign government holding beneficial ownership of more than 5% of the securities of PPL Corporation.[9]

---

[9] According to the most recently filed Schedule 13G/A filed by BlackRock, Inc. with the SEC on February 10, 2014, BlackRock, Inc. beneficially owned, in the aggregate, 43,999,630 shares of PPL Corporation's stock, held by BlackRock (Luxembourg) S.A.; BlackRock (Netherlands) B.V.; BlackRock Advisors, LLC; BlackRock

In addition, the persons who have been designated to become the principal officers of Talen Energy upon closing of the Transaction are all U.S. citizens; and while the persons who will be elected as Directors upon closing have not yet been appointed, all of the candidates other than one citizen of the U.K. are U.S. citizens. Similarly, while the principal officers and directors of Talen Energy Holdings, Energy Supply and Generation upon closing of the Transaction have not been appointed, they will all remain U.S. citizens.

The RJS Shareholder(s) will own the remaining 35 percent of Talen Energy's common stock. If Raven Holdings, Jade Holdings and Sapphire Holdings are the RJS Shareholders, Raven Holdings will own the majority of the Talen Energy common stock directly held by RJS. Alternatively, if the RJS Shareholder is a special purpose entity wholly owned by RJS, Raven Holdings will control such entity directly or through the appointment of a Board of Directors at such special purpose entity. R-R Holdings, which owns 99 percent of the voting membership units in Raven Holdings, is a U.S. company (Delaware limited partnership) controlled by its general partner, Riverstone GP (as noted above, a Delaware limited partnership and thus a U.S. company), which is in turn controlled by its general partner, Riverstone Energy GP V LLC (a Delaware limited liability company, and thus also a U.S. company). Riverstone Energy GP V LLC is managed by its seven-person Board of Managers, all but one of whom is a U.S. citizen, and is 100% owned by Riverstone Energy GP V Corp., which is 100% owned by Riverstone. Pursuant to its operating agreement, Riverstone is controlled by its founders, Pierre F. Lapeyre, Jr. and David M. Leuschen, both of whom are U.S. citizens.

Further, ownership of 35% of the common stock in Talen Energy by the RJS Shareholder(s) should not be considered to constitute control over Talen Energy. The NRC has previously determined that a 34.5 percent ownership in the stock of a licensee did not constitute

---

Advisors (UK) Limited; BlackRock Asset Management Canada Limited; BlackRock Asset Management Deutschland AG; BlackRock Asset Management Ireland Limited; BlackRock Financial Management, Inc.; BlackRock Fund Advisors; BlackRock Fund Management Ireland Limited; BlackRock Fund Managers Limited; BlackRock Institutional Trust Company, N.A.; BlackRock International Limited; BlackRock Investment Management (Australia) Limited; BlackRock Investment Management (UK) Limited; BlackRock Investment Management, LLC; BlackRock Japan Co., Ltd.; BlackRock Life Limited; and iShares (DE) I InvAG mit Teilgesellschaftsvermoegen and had shared voting and dispositive power over 55,031 of these shares, sole voting power over 38,421,452 of these shares and sole dispositive power over 43,944,599 of these shares. While several of these companies are incorporated or organized overseas, they are all direct or indirect subsidiaries of BlackRock, Inc., which is a Delaware corporation with sole voting and dispositive power over most of the shares.

control. [10] In addition, the RJS Shareholder(s) will be able to designate no more than three directors on Talen Energy's eight-person Board.[11] Moreover, a stockholders agreement will prohibit the RJS Shareholder(s), without prior written approval of at least a majority of the Board members not designated by the RJS Shareholder(s), from taking certain actions with respect to Talen Energy and its subsidiaries until the date that is three months after the date on which the RJS Shareholder(s) is or are, as applicable, no longer entitled to designate a director to the Board, including: acquiring additional Talen Energy stock, depositing its Talen Energy stock into a voting trust or similar arrangement, entering into certain business transactions involving Talen Energy or its subsidiaries, making any "solicitation" of "proxies" (as such terms are used in the proxy rules of the U.S. Securities and Exchange Commission (the "SEC")), calling a stockholder meeting or initiating a proposal for stockholder action, participating as a "group" (as such term is used in the rules of the SEC) with respect to common stock, or otherwise acting, other than through the action of the directors it has designated to serve on the Board, alone or in concert to control or influence Talen Energy management or policies.

V. TECHNICAL QUALIFICATIONS

PPL Susquehanna will continue to be the sole plant operator, and the technical qualifications of PPL Susquehanna will not be affected by the proposed Transaction and indirect license transfer. After the Transaction, the same nuclear organization will remain responsible for operation of SSES. The Transaction will not require any change in the management or staffing of the nuclear organization, or any change in its procedures. The SSES nuclear organization will continue to have clear and direct lines of responsibility and authority, which will be unaffected

---

[10] Review of Direct and Indirect Transfer of Ownership Interests in Seabrook Station, Vermont Yankee Nuclear Power Station, Yankee Rowe Nuclear Power Station, Maine Yankee Atomic Power Station, and Haddam Neck Plant from Montaup Electric Company to New England Power Company (Feb. 24, 2000) (ADAMS Accession No. ML003685187) at 1-2 (indicating, *inter alia*, that no control would result from the merger of Montaup and NEP, which held 4.5 and 30 percent respectively of the sharers of Yankee Atomic).

[11] Talen Energy will have an eight member Board of Directors (the "Board"). The RJS Shareholder(s) will have the right to designate two directors to the Board until such time as the RJS Shareholder(s) no longer beneficially own(s) at least 25% of Talen Energy's common stock outstanding on the closing date, after which time the RJS Shareholder(s) shall have the right to designate one director to the Board for so long as the RJS Shareholder(s) beneficially own(s) at least 10% of the Talen Energy common stock outstanding on the closing date. The RJS Shareholder(s) shall have the further right to designate one independent director to the Board, who is "independent" (as defined in the rules and regulations governing the requirements of companies listing on the New York Stock Exchange) for so long as the RJS Shareholder(s) beneficially own(s) at least 10% of the Talen Energy common stock outstanding on the closing date.

by the Transaction. PPL Susquehanna's review of the SSES Quality Assurance (QA) Program Description has not identified any changes resulting from the Transaction that would result in a decrease in commitments from the Description pursuant to 10 C.F.R. § 50.54(a).

VI. FINANCIAL QUALIFICATIONS

PPL Susquehanna will remain financially qualified to operate and possess its interest in SSES. In accordance with 10 C.F.R. § 50.33(f) and the Standard Review Plan on Power Reactor Licensee Financial Qualifications and Decommissioning Funding Assurance (NUREG-1577, Revision 1), a projected income statement for the five-year period from January 1, 2015 until December 31, 2019, is provided in proprietary Attachment 4P for each unit. A redacted, non-proprietary version of these income statements suitable for public disclosure is included with the Application as Attachment 4NP. The projected income statements show that PPL Susquehanna's anticipated revenues from competitive sales of energy, capacity and ancillary services provide reasonable assurance of an adequate source of funds to meet PPL Susquehanna's share of SSES's anticipated expenses. It should be noted that PPL Susquehanna's share of the output from SSES Units 1 and 2 is sold in the PJM market, and other than potential reductions in corporate overhead (intercompany charges), the Transaction does not affect the anticipated revenues or expenses reflected in the projected income statement.

The revenues in the projected income statements are based on sale of PPL Susquehanna's 90% share of SSES generation (i.e., 2268 MW(e) of the station's 2520 MW(e) rated capacity, consisting of 1134 MW(e) per Unit) and capacity factors determined from the specific outage dates planned for each of the next four years, along with an unplanned outage factor corresponding to the average unplanned outage rate over the last five years. Because the specific dates for the refueling outage in the last year of the projections (2019) have not yet been determined, the planned outage duration in 2019 has been assumed to be the same as in 2018.

The revenue in the projected income statements includes income from the sale of both energy and capacity. With respect to the sale of energy, the forecasted prices are based upon a blending of market and fundamental prices. The market prices utilized are the forward prices of energy observed in the market as of May 7, 2014. The fundamental prices are a proprietary forecast of energy prices developed by PPL Corporation's Risk Management Department based

upon forecasted natural gas prices and utilizing various other internal assumptions. In the projected income statement, the observable forward market prices are applied in 2015. In 2016 and 2017, the projected income statement applies weighted averages of the market and fundamental prices (with the market price being weighted by two-thirds in 2016, and one-third in 2017). In 2018 and 2019, the forecasted price is the projected fundamental price. The price for capacity payments are those capacity prices determined by the PJM capacity auctions through 2018. Because a capacity auction for 2019 has not yet occurred, the projected capacity price in 2019 is derived from the 2018 price, escalated by 2.25 percent. The revenues for ancillary services are based on historical ancillary revenue in 2012 and 2013.

The projected operating expenses in the projected income statements are based on PPL Susquehanna's business plan extending through 2018 that has been reviewed and approved by the Board of Directors of PPL Corporation, and reflect PPL Susquehanna's 90% share of SSES.[12] The projected operating expenses for 2019 are derived by escalating the planned expenses in 2018 by 2.25 percent.

Two sensitivity analyses are included: (1) a 10% reduction in the forecast capacity factor, and (2) a 10% reduction in forecast price of electricity. In all cases, the projected revenue from sale of energy and capacity exceeds projected expenses.

To provide added assurance that PPL Susquehanna will have sufficient funds available to meet its operating expenses for SSES, Talen Energy will at closing enter into a Support Agreement with PPL Susquehanna to make funding of up to $205 million available to PPL Susquehanna, corresponding to the fixed operating costs that would be incurred during a six month outage of both Units. Attachment 4P shows the derivation of this amount. This Support Agreement will replace the current $130 million commitment currently provided by PPL Corporation (formerly PP&L Resources, Inc.) pursuant to the NRC's Order Approving Transfer of Licenses and Conforming Amendments, dated June 6, 2000, and corresponding license condition in Appendix C to the SSES licenses. Under the terms of the new agreement, provided in proposed form as Attachment 5 hereto, PPL Susquehanna will have the right to obtain such

[12] Other than potential reductions in corporate overhead (intercompany charges), there are no reductions in the budgeted expenditures for SSES associated with either the Transaction or any of the projected synergies.

funds from Talen Energy as PPL Susquehanna determines necessary to protect the public health and safety or meet NRC requirements. This agreement will not terminate until SSES permanently ceases operation and may not be cancelled or modified before then without 30 days prior written notice to the NRC. Pursuant to Condition 3 of the NRC's June 6, 2000 Order, PPL Susquehanna requests that the NRC Order approving the current indirect transfer of control include NRC consent to the cancellation and replacement of the prior funding commitment, effective upon closing of the Transaction.

Talen Energy will have substantial financial resources available to fulfill its obligations under the Support Agreement. Talen Energy's balance sheet quality, measured by the approximately 3.5 ratio of debt-to-EBITDA, is projected to be as strong as or stronger than its peers. Based on recent valuations of peer companies, the market value of total equity is expected to be approximately $6 billion and the enterprise value (the market value of equity plus total debt outstanding less cash on-hand) is expected to be approximately $9.5 billion. The funding requirement under the Support Agreement represents approximately 3.5% of Talen Energy's estimated market value of equity and 2.2% of its estimated enterprise value. At this financial scale, Talen Energy will have ready access to debt and equity capital on very short notice to fulfill its funding requirements. Arrangements are also being made to have a revolving credit facility of approximately $1.85 billion available to Talen Energy upon closing of the Transaction. This credit facility is currently in syndication and is expected to close in escrow by the end of July and be available to Talen Energy upon the closing of the Transaction. Talen Energy will also be a bigger and more diverse company than Energy Supply as a result of the Contribution, with more capacity and presence in additional states.

PPL Susquehanna's financial assurance for decommissioning funding will remain in effect and will not be affected by the proposed indirect license transfer. PPL Susquehanna currently provides such assurance through the prepayment method, pursuant to 10 C.F.R. § 50.75(e)(1)(i). As of December 31, 2013, the nuclear decommissioning master trust established by PPL Susquehanna, which is segregated from the licensee's assets and outside its administrative control, contains investments with a market value totaling $408,554,822 for Unit 1 and $454,995,397 for Unit 2. The minimum amount of decommissioning funds estimated to be required pursuant to10 C.F.R. § 50.75(b) & (c) is $625,117,500 per unit, as calculated in

Attachment 6. The estimated cost to decommission the Independent Spent Fuel Storage Installation (ISFSI), based on the 2010 Site Specific Study escalated to 2013 dollars using the Consumer Price Index - All Urban Consumers, Services is $7,680,476. On a per unit basis, when 2 percent real earnings are credited up to the times of permanent termination of operations, along with a pro-rata credit during a dismantlement period, as permitted by 10 C.F.R. § 50.75(e)(1)(i), the credited value of the funds ($769,938,146 and $887,725,537 for Units 1 and 2 respectively) exceeds PPL Susquehanna's 90% ownership share of the NRC minimum requirement ($625,117,500 for each unit as of December 31, 2013) and the cost to decommission the ISFSI. Therefore, the proposed indirect license transfer will have no effect upon PPL Susquehanna's financial assurance for decommissioning funding.

VII. PRICE-ANDERSON INDEMNITY AND NUCLEAR INSURANCE

The proposed indirect transfer of control will have no effect on the existing Price-Anderson indemnity or the nuclear insurance (property and liability) for SSES. PPL Susquehanna will maintain the required nuclear property damage insurance pursuant to 10 C.F.R. § 50.54(w) and nuclear liability insurance pursuant to Section 170 of the Atomic Energy Act and 10 C.F.R. Part 140. PPL Susquehanna's annual reporting in compliance with 10 CFR § 140.21 provides reasonable assurance regarding its ongoing ability to pay its share of any annual retrospective premium. The only revision to the indemnity agreements for Units 1 and 2 is an administrative amendment to reflect the new name and address of the licensee upon closing.

VIII. INTERCONNECTION AGREEMENT

The transactions will result in no change in the ownership of the switchyard components within the SSES exclusion area that constitute transmission facilities that PPL Electric Utilities Corporation (the transmission system owner, or "TSO") currently owns and maintains pursuant to an interconnection agreement with PPL Susquehanna. Effective upon closing, Susquehanna Nuclear, the TSO, and PJM Interconnection, L.L.C. ("PJM", the regional transmission operator) will enter into a new interconnection agreement for SSES. This interconnection agreement will require the TSO to operate and maintain such transmission facilities in compliance with all NRC requirements and SSES commitments. Susquehanna Nuclear will continue to own all real property within the SSES exclusion area,

and with respect to the switchyards within the exclusion area, will continue to maintain the authority and control to determine activities including the exclusion of personnel and property as required by 10 C.F.R. Part 100.

IX. ANTITRUST INFORMATION

In accordance with the Commission's decision in *Kansas Gas and Electric Co.,* (Wolf Creek Generating Station, Unit 1), CLI-99-19, 49 N.R.C. 441 (1999), the Atomic Energy Act does not require or authorize antitrust reviews of license transfer applications after initial licensing.

X. RESTRICTED DATA AND CLASSIFIED NATIONAL SECURITY INFORMATION

This Application for proposed transfer does not contain any Restricted Data or other Classified National Security Information and does not involve any change in access to such Restricted Data or Classified National Security Information. PPL Susquehanna's existing restrictions on access to Restricted Data and Classified National Security Information are unaffected by the proposed transfer. Both Talen Energy and Talen Holdings will before closing adopt resolutions to the effect that neither their officers nor Boards of Directors, acting as such, shall seek access to any classified information and/or special nuclear material in the custody of PPL Susquehanna.

XI. ENVIRONMENTAL CONSIDERATIONS

The requested consent to indirect transfer of control of the SSES licenses is exempt from environmental review because it falls within the categorical exclusion contained in 10 C.F.R. § 51.22(c)(21). Moreover, the proposed transfer does not involve any amendment to the facility operating licenses or other change that would directly affect the actual operation of SSES in any substantive way. The proposed transfer does not involve an increase in the amounts, or a change in the types, of any radiological effluents that may be allowed to be released off-site, and involves no increase in the amounts or change in the types of non-radiological effluents that may be released off-site. Further, there is no increase in the individual or cumulative operational radiation exposure. Therefore the proposed transfer has no environmental impact.

XII. CONCLUSION

Based upon the forgoing information, PPL Susquehanna respectfully requests that the NRC issue an Order (1) consenting to the indirect transfer of control of the Facility Operating Licenses, Nos. NPF-14 and NPF-22, for its operating authority and 90% undivided ownership interests in SSES, and the general license for the SSES ISFSI, and (2) approving the conforming amendments in Attachment 1. PPL Susquehanna requests that NRC's consent be provided as expeditiously as possible, and by no later than December 31, 2014. PPL Susquehanna requests that such consent be made immediately effective upon issuance and permit the indirect transfer of control at any time for one year following NRC approval or prior to January 31, 2016, whichever is later.

Attachments:

Figure 1:	Simplified Organization Chart – Current
Figure 2:	Simplified Organization Chart – After Transaction Closing
Attachment 1:	Conforming License Amendments
Attachment 2:	Corporate Information Regarding Talen Energy (as expected upon closing of the Transaction)
Attachment 3:	Corporate Information Regarding Riverstone Entities
Attachment 4P:	Projected Income Statement and Calculation of Six-Month Fixed Costs (Proprietary Version)
Attachment 4NP:	Projected Income Statement and Calculation of Six-Month Fixed Costs (Redacted, Non-Proprietary Version)
Attachment 5:	Form of Support Agreement
Attachment 6:	Decommissioning Funding Assurance
Attachment 7:	Affidavit of Timothy S. Rausch (Request for Withholding)
Attachment 8:	Regulatory Commitments

Figure 1
Simplified Organization Chart – Current

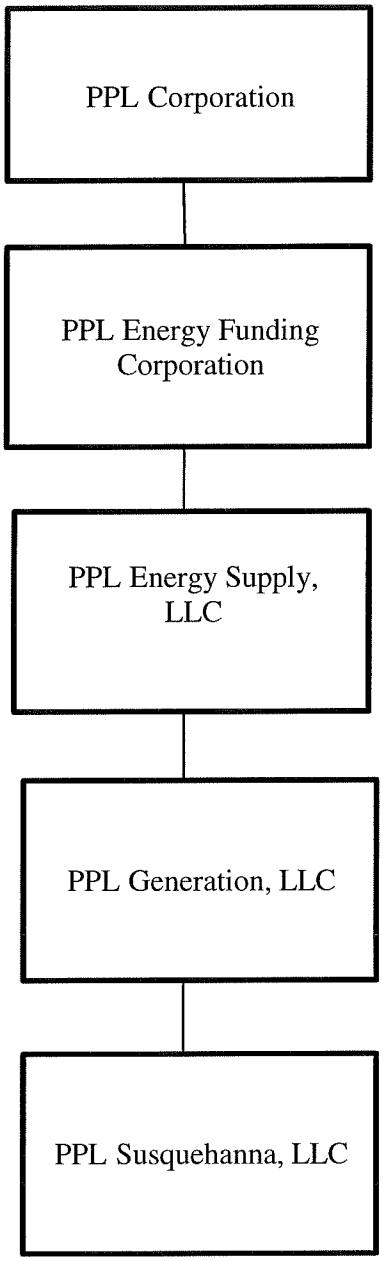
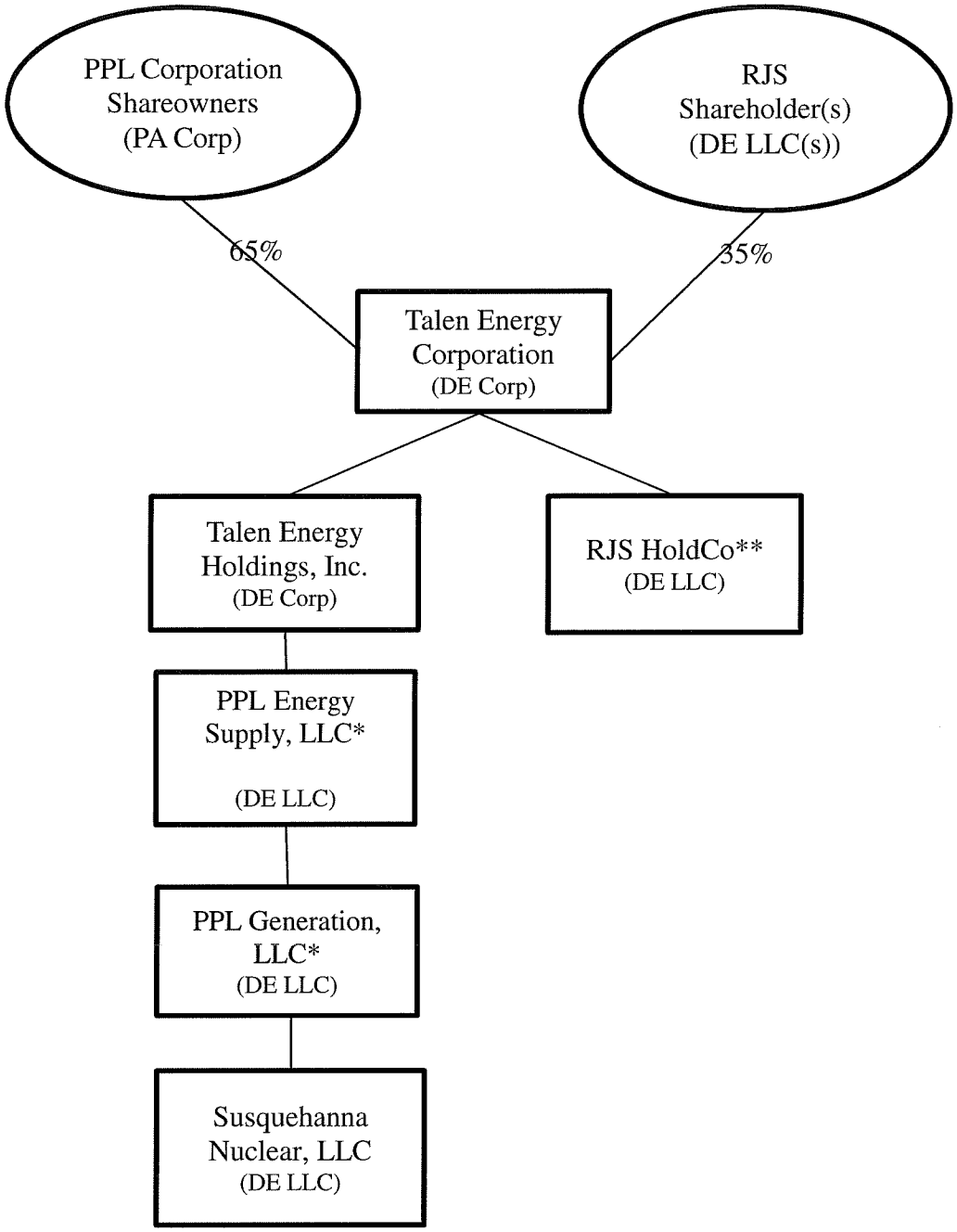


Figure 2
Simplified Organization Chart – After Transaction Closing



* Name subject to change

** RJS HoldCo will subsequently be contributed to Talen Energy Holdings which, in turn, will either (a) contribute RJS HoldCo to Energy Supply and/or (b) cause RJS HoldCo to be merged with and into Energy Supply, with Energy Supply as the surviving company in the merger (*see supra* note 4). RJS HoldCo will not become an intermediate parent of PPL Susquehanna, and these final steps will not result in any transfer of control over the NRC licenses.

Attachment 1 to the Enclosure to PLA-7191

Conforming License Amendments

Susquehanna SES Unit 1
Proposed License Amendment

Susquehanna Nuclear, LLC ~~PPL Susquehanna, LLC~~
Allegheny Electric Cooperative, Inc.
Docket No. 50-387
Susquehanna Steam Electric Station, Unit 1
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 operating licensee ~~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 1 (the facility), has been substantially completed in conformity with Construction Permit CPPR-101 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~~ Susquehanna Nuclear, LLC*~~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 applications for the operating license and construction permit were submitted by Pennsylvania Power & Light Company and Allegheny Electric Cooperative, Inc. The application for the renewed license was submitted by PPL Susquehanna, LLC and Allegheny Electric Cooperative, Inc. For purposes of certain historical references contained herein, the term "operating licensee" is used to refer to Susquehanna Nuclear, LLC ~~PPL Susquehanna, LLC,~~ as well as Pennsylvania Power & Light Company, ~~and~~ PP&L, Inc and PPL Susquehanna, LLC., all three ~~both~~ of which were previously named in the license with authority to operate the facility.

[*] ~~The~~ Susquehanna Nuclear, LLC ~~PPL Susquehanna, LLC~~ is authorized to act as agent for the Allegheny 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, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of renewed Facility Operating License No. NPF-14 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-14 is hereby issued to the Susquehanna Nuclear, LLC ~~PPL Susquehanna, LLC~~ and the Allegheny Electric Cooperative, Inc. to read as follows:

A. This license applies to the Susquehanna Steam Electric Station, Unit 1, 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," Susquehanna Nuclear, LLC ~~PPL Susquehanna, LLC~~ and the Allegheny Electric Cooperative, Inc. to possess, and Susquehanna Nuclear, LLC ~~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 renewed license;

(2) Susquehanna Nuclear, LLC ~~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) Susquehanna Nuclear, LLC ~~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) Susquehanna Nuclear, LLC ~~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) Susquehanna Nuclear, LLC ~~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

Susquehanna Nuclear, LLC ~~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 tests, startup tests and other items identified in License Conditions 2.C.(36), 2.C.(37), 2.C.(38), and 2.C.(39) 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. 260 and the Environmental Protection Plan contained in Appendix B are hereby incorporated in the license. Susquehanna Nuclear, LLC ~~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 178 to Facility Operating License No. NPF-14, the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment 178. For SRs that existed prior to Amendment 178, 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 178.

(3) Conduct of Work Activities During Fuel Load and Initial Startup

The operating licensee shall review by committee all facility construction, Preoperational Testing, and System Demonstration activities performed concurrently with facility initial fuel loading or with the facility Startup Test Program to assure that the activity will not affect the safe performance of the facility fuel loading or the portion of the facility Startup Program being performed. The review shall address, as a minimum, system interaction, span of control, staffing, security and health physics, with respect to performance of the activity concurrently with the facility fuel loading or the portion of the facility Startup Program being performed. The committee for the review shall be composed of a least three members, knowledgeable in the above areas, and who meet the qualifications for professional-technical personnel specified by section 4.4 of ANSI N18.7-1971. At least one of these three shall be a senior member of the Assistant Superintendent of Plant's staff.

(4) Thermal and Hydraulic Design (Section 4.4, SER)

(a) Susquehanna Nuclear, LLC ~~PPL Susquehanna, LLC~~ is prohibited from power operation under natural circulation conditions.

(5) Qualification of Purge Valves

Whenever the operational condition is other than cold shutdown or refueling, the operating licensee shall maintain each containment purge and vent isolation valve greater than 2-in. nominal diameter in one of the following conditions:

(a) Closed and electrically prohibited from opening,

(b) Blocked so as not to permit opening by more than 50 degrees, or

(c) Operated to permit opening by more than 50 degrees after demonstrating that the valves are qualified to close from the full open position against peak LOCA pressure, and are also qualified per the criteria of Branch Technical Position CSB 6-4. Purge valve qualification documentation must be approved by the NRC prior to operating valves in this mode.

(6) Susquehanna Nuclear, LLC ~~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 Report 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 licensee's Amendment No. 177, 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.

(7) Battery Room Area (Section 9.5.4, SER, SSER#1, SSER#3)

Prior to exceeding five percent of full power and subject to NRC review and approval, the operating licensee shall either conduct at an approved testing laboratory an ASTM E-119 test of the as-installed one-hour cable wrap configuration or install an automatic fire extinguishing system.

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

Prior to operation with partial feedwater heating, Susquehanna Nuclear, LLC ~~PPL Susquehanna, LLC~~ shall provide for NRC review and approval, analyses which show a more limiting change does not occur in the minimum critical power ratio than that obtained using normal feedwater heating.

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

The operating licensee shall conduct the post-fuel-loading initial test program (set forth in Section 14 of the licensee's Final Safety Analysis Report, as amended through Amendment 50 and modified by the operating licensee's letter dated August 26, 1982, (PLA-1257)) without making any major modifications of this program unless modifications have been identified and have received prior NRC approval. Major modifications are defined as:

(a) Elimination of any test identified as essential in Section 14 of the licensees' Final Safety Analysis Report, as amended through Amendment 50 and modified by the operating licensee's letter dated August 26, 1982, (PLA-1257);

(b) Modifications of test objectives, methods or acceptance criteria for any test identified as essential in Section 14 of the licensee's Final Safety Analysis Report, as amended through Amendment 50 and modified by the operating licensee's letter dated August 26, 1982, (PLA-1257);

(c) Performance of any test at a power level different from that described in the program; and

(d) Failure to complete any tests included in the described program (planned or scheduled for power levels up to the authorized power level).

or outside containment, are dynamically qualified or the operating licensee shall provide a basis for continued operation and a program for qualifying such valves.

(31) Control Room Design Review (Section 22, SSER #4)

Prior to startup following the first refueling outage, the operating licensee shall provide a report discussing the experience, including demonstrated reliability, of the Display Control System.

(32) Emergency Service Water System (Section 6.3.4, SSER #4)

Prior to startup following the first refueling outage, the operating licensee shall complete design modifications to the emergency service water (ESW) system, approved by the staff, to eliminate single failure in the ESW system which leads to the need for an uncooled residual heat removal (RHR) pump.

(33) The Additional Conditions contained in Appendix C, as revised through Amendment No. 188, are hereby incorporated into this license. The operating licensee ~~PPL Susquehanna, LLC~~ shall operate the facility in accordance with the Additional Conditions.

(34) Mitigation Strategy License Condition

Develop and maintain strategies for addressing large fires and explosions 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

(35) 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.

(36) Potential Adverse Flow Effects

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 operating licensee ~~PPL Susquehanna, LLC (PPL)~~ facility above the licensed thermal power (CLTP) level of 3489 megawatts thermal (MWt):

(1) The operating licensee ~~PPL~~ shall obtain at each 3.5% power ascension step up to 107% of 3489 MWt, dryer strain gauge data and compare it to the acceptance criteria during power ascension above 3489 MWt. The operating licensee ~~PPL~~ shall obtain at each 3.5% power ascension step above 107% of 3489 MWt, main steam line strain gauge data and compare it to the limit curve for the dryer strains during power ascension.

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

(3) The operating licensee ~~PPL~~ shall hold the facility at each 3.5% ascension step to collect data from License Condition 2.C.(36)(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 the transmission.

(4) If any steam dryer strains at each 3.5% power ascension step up to 107% of 3489 MWt or frequency peak from the MSL strain gauge data exceeds the level 1 limit curve for the MSL strains above 107% of 3489 MWt, the operating licensee ~~PPL~~ shall return the facility to a power level at which the acceptance criteria is not exceeded. The operating licensee ~~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 instrumentation data and MSL strain gauge data, the operating licensee ~~PPL~~ shall monitor reactor pressure vessel water level instrumentation and MSL piping accelerometers during power ascension above 3489 MWt. If resonance frequencies are identified as increasing above nominal levels in proportion to instrumentation data, the operating licensee ~~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, the operating licensee ~~PPL~~ shall resolve any 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, the operating licensee ~~PPL~~ shall return the facility to a power level at which the discrepancy does not exist.

(b) The operating licensee ~~PPL~~ shall implement the following actions:

(1) The operating licensee ~~PPL~~ shall provide to NRC the as-built dryer stress reconciliation 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 benchmark results and updated 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 curve during power ascension above 107%, the operating licensee ~~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 107% of CLTP, the operating licensee ~~PPL~~ shall obtain measurements from the steam dryer instrumentation and establish the steam dryer flow-induced vibration load fatigue margin for the facility, update the dryer stress report, 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 107 % CLTP, if an engineering evaluation for the steam dryer is required because a Level 1 acceptance criteria is exceeded, the operating licensee ~~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) The operating licensee ~~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 Power Ascension Test Plan (PATP) information during power ascension.

(7) The operating licensee ~~PPL~~ shall submit CPPU steam dryer reports to the NRC. Two written reports will be provided to the NRC. These reports will be issued following completion of testing of Unit 1 power ascension to 107% CLTP and 114% CLTP. Each report will include evaluations or corrective actions that were required to assure steam dryer structural integrity. Additionally, they will 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) The operating licensee ~~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) The operating licensee ~~PPL~~ shall prepare the CPPU startup test procedure to include the:

(1) steam dryer strain gauge acceptance criteria to be used up to 107% of CLTP and the main steam line strain gauge limit curves to be applied for evaluating steam dryer performance above 107% 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. The operating licensee ~~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 each scheduled refueling outage until at least two full operating cycles at full CPPU conditions have been achieved, 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.(36)(e) and 2.C.(36)(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.

(37) Transient Testing

(a) The operating licensee ~~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. The operating licensee ~~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.(37)(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, the operating licensee ~~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.(37)(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. The operating licensee ~~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. The operating licensee ~~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.

(38) 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 the operating licensee's ~~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 the operating licensee's ~~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. "

(39) Containment Operability for EPU

The operating licensee ~~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, the operating licensee ~~PPL~~ shall notify the NRC project manager that all appropriate actions have been completed.

(40) 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. 246 to this Operating License) until their next required performance.

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.

The operating licensee shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The Susquehanna Nuclear, LLC ~~PPL Susquehanna, LLC~~ CSP was approved by License Amendment No. 258.

E. Exemptions from certain requirements of Appendices G and H to 10 CFR Part 50 are described in the Safety Evaluation Report and Supplements 1 and 2 to the Safety Evaluation Report. In addition, an exemption was requested until receipt of new fuel for first refueling from the requirements for criticality monitors in the spent fuel pool area, 10 CFR Part 70.24. Also, an exemption was requested from the requirements of Appendix J of 10 CFR Part 50 for the first fuel cycle when performing local leak rate testing of Residual Heat Removal (RHR) relief valves in accordance with Technical Specification 4.6.1.2. This latter exemption is described in the safety evaluation of License Amendment No. 13. These exemptions are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest and have been granted pursuant to 10 CFR 50.12. Except as here exempted, the facility will operate, to the extent authorized herein, in conformity with the application, as amended, and the rules and regulations of the Commission and the provisions of the Act.

F. This license is subject to the following additional condition for the protection of the environment:

Before engaging in additional construction or operational activities which may result in a significant adverse environmental impact that was not evaluated or that is significantly greater than that evaluated in the Final Environmental Statement and its Addendum, Susquehanna Nuclear, LLC ~~PPL Susquehanna, LLC~~ shall provide a written notification to the Director of the Office of Nuclear Reactor Regulation and receive written approval from that office before proceeding with such activities.

G. DELETED

H. Susquehanna Nuclear, LLC ~~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.

I. In accordance with the Commission's direction in its Statement of Policy, Licensing and Regulatory Policy and Procedures for Environmental Protection; Uranium Fuel Cycle Impacts, October 29, 1982, this license is subject to the final resolution of the pending litigation involving Table S-3. See, Natural Resources Defense Council v. NRC, No. 74-1586 (April 27, 1982).

J. The information in the Updated Final Safety Analysis Report (USFAR) 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, the operating licensee ~~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.

K. The USFAR 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.

L. 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 withdraw 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.

APPENDIX B

TO FACILITY OPERATING LICENSE NO. NPF-14

SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2

Susquehanna Nuclear, LLC ~~PPL Susquehanna, LLC~~

DOCKET NOS. 50-387 AND 50-388

ENVIRONMENTAL PROTECTION PLAN

(NON-RADIOLOGICAL)

July 17, 1982

Amendment No. ~~188~~

Appendix C

Additional Conditions
Facility Operating License No. NPF-14
Docket No. 50-387

Amendment	Additional Conditions	Implementation Date
178	The operating licensee is authorized to relocate certain requirements included in Appendix A to operating licensee-controlled documents. Implementation of this amendment shall include the relocation of these requirements to the appropriate documents, as described in the operating licensee's letters dated August 1, 1996, as supplemented by letters dated November 26, 1997, January 6, March 2, April 24, and June 18, 1998, evaluated in the NRC staff's Safety Evaluation enclosed with this amendment.	This amendment is effective immediately and shall be implemented within 90 days of the date of this amendment. Dated: July 30, 1998
~~188~~	~~PPL Susquehanna shall not take any action that would cause PPL Corporation or any other direct or indirect parent of PPL Susquehanna to void cancel or diminish any applicable commitment to fund an extended plant shutdown as represented in the application for approval of the transfer of the license for Susquehanna SES, Unit 1.~~	~~This amendment shall be issued and made effective at the time the license transfer to PPL Susquehanna is completed and shall be implemented within 30 days of issuance.~~
~~188~~	~~For purposes of ensuring public health and safety, PPL Susquehanna shall provide decommissioning funding assurance, to be held in a decommissioning trust for Susquehanna SES, Unit 1, upon transfer of the license to PPL Susquehanna, in the amount specified in PP&L, Inc.'s, March 29, 1999, "Decommissioning Report of Financial Assurance" As Owner's Decommissioning Fund Totals at December 31, 1998, plus any additional funds added to the account since the filing of that report, on the date of transfer. In addition, PPL Susquehanna will ensure that its contractual arrangements with PPL EnergyPlus, LLC, and the contractual arrangements of PPL EnergyPlus, LLC with PPL Electric utilities Corporation to obtain necessary decommissioning funds for Susquehanna SES through a non-bypassable charge will be maintained until the decommissioning trust is fully funded, or will ensure that other mechanisms that provide equivalent assurance~~	~~This amendment shall be issued and made effective at the time the license transfer to PPL Susquehanna is completed and shall be implemented within 30 days of issuance.~~

Amendment	Additional Conditions	Implementation Date
	~~of decommissioning funding in accordance with the Commission's regulations are maintained.~~	
~~188~~	~~The decommissioning trust agreement for Susquehanna SES, Unit 1, is subject to the following:~~ ~~a) The trust agreement must be in a form acceptable to the NRC.~~ ~~b) With respect to the decommissioning trust fund, investments in the securities or other obligations of PPL Corporation or its affiliates, successors, or assigns shall be prohibited. Except for investments tied to market indexes or other non-nuclear-sector mutual funds, investments in any entity owning one or more nuclear power plants are prohibited.~~ ~~c) The decommissioning trust agreement for Susquehanna SES, Unit 1, must provide that no disbursements or payments from the trust shall be made by the trustee unless the trustee has first given the NRC 30-days prior written notice of payment. The decommissioning trust agreement shall further contain a provision that no disbursements or payments from the trust shall be made if the trustee receives prior written notice of objection from the Director, Office of Nuclear Reactor Regulation.~~ ~~d) The decommissioning trust agreement must provide that the agreement cannot be amended in any material respect without 30-days prior written notification to the Director, Office of Nuclear Reactor Regulation.~~ ~~e) The appropriate section of the decommissioning trust agreement shall state that the trustee, investment advisor, or anyone else directing the investments made in the trust shall adhere to a "prudent investor" standard, as specified in 18 CFR 35.32(a)(3) of the Federal Energy Regulatory Commission's regulations.~~	~~This amendment shall be issued and made effective at the time the license transfer to PPL Susquehanna is completed and shall be implemented within 30 days of issuance.~~
	Susquehanna Nuclear, LLC shall not take any action that would cause Talen Energy Corporation or any other direct or indirect parent of	This amendment shall be issued and made effective at the time the indirect transfer of

Amendment	Additional Conditions	Implementation Date
	Susquehanna Nuclear, LLC to void cancel or diminish any applicable commitment to fund an extended plant shutdown as represented in the application for approval of the transfer of the license for Susquehanna SES, Unit 1.	control to Talen Energy is completed and shall be implemented within 30 days of issuance.
	The decommissioning trust agreement for Susquehanna SES, Unit 1, is subject to the following: a) The trust agreement must be in a form acceptable to the NRC. b) With respect to the decommissioning trust fund, investments in the securities or other obligations of Talen Energy Corporation or its affiliates, successors, or assigns shall be prohibited. Except for investments tied to market indexes or other non-nuclear-sector mutual funds, investments in any entity owning one or more nuclear power plants are prohibited. c) The decommissioning trust agreement for Susquehanna SES, Unit 1, must provide that no disbursements or payments from the trust shall be made by the trustee unless the trustee has first given the NRC 30-days prior written notice of payment. The decommissioning trust agreement shall further contain a provision that no disbursements or payments from the trust shall be made if the trustee receives prior written notice of objection from the Director, Office of Nuclear Reactor Regulation. d) The decommissioning trust agreement must provide that the agreement cannot be amended in any material respect without 30-days prior written notification to the Director, Office of Nuclear Reactor Regulation. e) The appropriate section of the decommissioning trust agreement shall state that the trustee, investment advisor, or anyone else directing the investments made in the trust shall adhere to a "prudent investor" standard, as specified in 18 CFR 35.32(a)(3) of the Federal Energy Regulatory Commission's regulations.	This amendment shall be issued and made effective at the time the indirect transfer of control to Talen Energy is completed and shall be implemented within 30 days of issuance.

Susquehanna SES Unit 2
Proposed License Amendment

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

[*] ~~The~~ Susquehanna Nuclear, LLC ~~PPL Susquehanna, LLC~~ is authorized to act as agent for the Allegheny 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, and 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 Susquehanna Nuclear, LLC ~~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," Susquehanna Nuclear, LLC ~~PPL Susquehanna, LLC~~ and the Allegheny Electric Cooperative, Inc. to possess, and Susquehanna Nuclear, LLC ~~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) Susquehanna Nuclear, LLC~~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) Susquehanna Nuclear, LLC~~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) Susquehanna Nuclear, LLC~~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) Susquehanna Nuclear, LLC~~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

Susquehanna Nuclear, LLC ~~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. 241, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. Susquehanna Nuclear, LLC ~~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) Susquehanna Nuclear, LLC ~~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 licensee's 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)

Susquehanna Nuclear, LLC ~~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 objective, 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 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.

(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 the 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 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. The operating licensee ~~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) Potential Adverse Flow Effects

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 operating licensee ~~PPL Susquehanna, LLC (PPL)~~ facility above the licensed thermal power (CLTP) level of 3489 megawatts thermal (MWt):

(1) The operating licensee ~~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) The operating licensee ~~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) The operating licensee ~~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 1 limit curve for dryer strains above 3489 MWt, the operating licensee ~~PPL~~ shall return the facility to a power level at which the acceptance criteria is not exceeded. The operating licensee ~~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, the operating licensee ~~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, the operating licensee ~~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, the operating licensee ~~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, the operating licensee ~~PPL~~ shall return the facility to a power level at which the discrepancy does not exist.

(b) The operating licensee ~~PPL~~ shall implement the following actions:

(1) The operating licensee ~~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, the operating licensee ~~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, the operating licensee ~~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, the operating licensee ~~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) The operating licensee ~~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) The operating licensee ~~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) The operating licensee ~~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) The operating licensee ~~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. The operating licensee ~~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) The operating licensee ~~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. The operating licensee ~~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, the operating licensee ~~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. The operating licensee ~~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. The operating licensee ~~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 the operating licensee's ~~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 the operating licensee's ~~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

The operating licensee ~~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, the operating licensee ~~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 the operating licensee ~~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.

The operating licensee shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The Susquehanna Nuclear, LLC ~~PPL Susquehanna, LLC~~ CSP was approved by License Amendment No. 239.

E. DELETED

F. Susquehanna Nuclear, LLC ~~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, the operating licensee ~~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.

APPENDIX B

TO FACILITY OPERATING LICENSE NO. NPF-22

SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2

Susquehanna Nuclear, LLC ~~PPL Susquehanna, LLC~~

DOCKET NOS. 50-387 AND 50-388

ENVIRONMENTAL PROTECTION PLAN

(NON-RADIOLOGICAL)

March, 1984

Amendment No. ~~162~~

Appendix C

Additional Conditions
Facility Operating License No. NPF-22
Docket No. 50-388

Amendment Number	Additional Conditions	Implementation Date
151	The operating licensee is authorized to relocate certain requirements included in Appendix A to operating licensee-controlled documents. Implementation of this amendment shall include the relocation of these requirements to the appropriate documents, as described in the operating licensee's letters dated August 1, 1996, as supplemented by letters dated November 26, 1997, January 6, March 2, April 24, and June 18, 1998, evaluated in the NRC staff's Safety Evaluation enclosed with this amendment.	This amendment is effective immediately and shall be implemented within 90 days of the date of this amendment. Dated: July 30, 1998
~~162~~	~~PPL Susquehanna shall not take any action that would cause PPL Corporation or any other direct or indirect parent of PPL Susquehanna to void, cancel, or diminish any applicable commitment to fund an extended plant shutdown as represented in the application for approval of the transfer of the license for Susquehanna SES, Unit 2.~~	~~This amendment shall be issued and made effective at the time the license transfer to PPL Susquehanna is completed and shall be implemented within 30 days of issuance.~~
~~162~~	~~For purposes of ensuring public health and safety, PPL Susquehanna shall provide decommissioning funding assurance, to be held in a decommissioning trust for Susquehanna SES, Unit 2, upon transfer of the license to PPL Susquehanna, in the amount specified in PP&L, Inc.'s, March 29, 1999, "Decommissioning Report of Financial Assurance" as Owner's Decommissioning Fund Totals at December 31, 1998, plus any additional funds added to the account since the filing of the report, on the date of transfer. In addition, PPL Susquehanna will ensure that its contractual arrangements with PPL Energy Plus, LLC, and the contractual arrangements of PPL EnergyPlus, LLC with PPL Electric Utilities Corporation to obtain necessary decommissioning funds for Susquehanna SES through a non-bypassable charge will be maintained until the decommissioning trust is~~	~~This amendment shall be issued and made effective at the time the license transfer to PPL Susquehanna is completed and shall be implemented within 30 days of issuance.~~

Amendment Number	Additional Conditions	Implementation Date
	~~fully funded, or will ensure that other mechanisms that provide equivalent assurance of decommissioning funding in accordance with the Commission's regulations are maintained.~~	
~~162~~	~~The decommissioning trust agreement for Susquehanna SES, Unit 2, is subject to the following:~~ ~~a) The trust agreement must be in a form acceptable to the NRC.~~ ~~b) With respect to the decommissioning trust fund, investments in the securities or other obligations of PPL Corporation or its affiliates, successors, or assigns shall be prohibited. Except for investments tied to market indexes or other non-nuclear-sector mutual funds, investments in any entity owning one or more nuclear power plants are prohibited.~~ ~~c) The decommissioning trust agreement for Susquehanna SES, Unit 2, must provide that no disbursements or payments from the trust shall be made by the trustee unless the trustee has first given the NRC 30-days prior written notice of payment. The decommissioning trust agreement shall further contain a provision that no disbursements or payments from the trust shall be made if the trustee receives prior written notice of objection from the Director, Office of Nuclear Reactor Regulation.~~ ~~d) The decommissioning trust agreement must provide that the agreement cannot be amended in any material respect without 30-days prior written notification to the Director, Office of Nuclear Reactor Regulation.~~ ~~e) The appropriate section of the decommissioning trust agreement shall state that the trustee, investment advisor or anyone else directing the investments made in the trust shall adhere to a "prudent investor" standard, as specified in 18 CFR 35.32(a)(3) of the Federal Energy Regulatory Commission's regulations.~~	~~This amendment shall be issued and made effective at the time the license transfer to PPL Susquehanna is completed and shall be implemented within 30 days of issuance.~~

Amendment Number	Additional Conditions	Implementation Date
	Susquehanna Nuclear, LLC shall not take any action that would cause Talen Energy Corporation or any other direct or indirect parent of Susquehanna Nuclear, LLC to void cancel or diminish any applicable commitment to fund an extended plant shutdown as represented in the application for approval of the transfer of the license for Susquehanna SES, Unit 2.	This amendment shall be issued and made effective at the time the indirect transfer of control to Talen Energy is completed and shall be implemented within 30 days of issuance.
	The decommissioning trust agreement for Susquehanna SES, Unit 2, is subject to the following: a) The trust agreement must be in a form acceptable to the NRC. b) With respect to the decommissioning trust fund, investments in the securities or other obligations of Talen Energy Corporation or its affiliates, successors, or assigns shall be prohibited. Except for investments tied to market indexes or other non-nuclear-sector mutual funds, investments in any entity owning one or more nuclear power plants are prohibited. c) The decommissioning trust agreement for Susquehanna SES, Unit 1, must provide that no disbursements or payments from the trust shall be made by the trustee unless the trustee has first given the NRC 30-days prior written notice of payment. The decommissioning trust agreement shall further contain a provision that no disbursements or payments from the trust shall be made if the trustee receives prior written notice of objection from the Director, Office of Nuclear Reactor Regulation. d) The decommissioning trust agreement must provide that the agreement cannot be amended in any material respect without 30-days prior written notification to the Director, Office of Nuclear Reactor Regulation. e) The appropriate section of the decommissioning trust agreement shall state that the trustee, investment advisor, or anyone else directing the investments made in the trust shall adhere to a "prudent	This amendment shall be issued and made effective at the time the indirect transfer of control to Talen Energy is completed and shall be implemented within 30 days of issuance.

Amendment Number	Additional Conditions	Implementation Date
	investor" standard, as specified in 18 CFR 35.32(a)(3) of the Federal Energy Regulatory Commission's regulations.	

Attachment 2 to the Enclosure to PLA-7191

Corporate Information Regarding Talen Energy (as expected upon closing of the Transaction)

Attachment 2
Corporate Information Regarding Talen Energy
(as expected upon closing of the Transaction)

Name:	Talen Energy Corporation
State of Incorporation:	Delaware
Business Address:	Talen Energy's principal place of business will be in Pennsylvania, as set forth in the Transaction Agreement, but its specific business address in Pennsylvania has not yet been determined.
Directors:	Paul A. Farr Other Directors Not Yet Appointed (see note below)
Principal Officers:	Paul A. Farr . . . . . President and Chief Executive Officer Robert D. Gabbard, Jr. . Senior Vice President and Chief Commercial Officer Jeremy R. McGuire. . . . Senior Vice President and Chief Financial Officer Timothy S. Rausch. . . . . Senior Vice President and Chief Nuclear Officer James E. Schinski. . . . . Senior Vice President and Chief Administrative Officer Paul M. Breme. . . . . Vice President, General Counsel and Corporate Secretary Russell R. Clelland. . . . . Vice President and Treasurer J. Matt Simmons, Jr. . . . Vice President and Chief Accounting and Risk Officer

All of the designated principal officers of Talen Energy Corporation are U.S. citizens. While the persons who will be members of the Board of Directors upon closing of the Transaction have not yet been announced, all of the candidates are U.S. citizens other than one person who is a citizen of the United Kingdom. PPL Susquehanna will timely inform the NRC if there are any changes in the designation of principal officers and when any designation of Talen Energy's directors is announced.

Attachment 3 to the Enclosure to PLA-7191

Corporate Information Regarding Riverstone Entities

Attachment 3
Corporate Information Regarding Riverstone Entities

Name:	Raven Power Holdings LLC
State of Incorporation:	Delaware
Business Address:	c/o Topaz Power Management, LP 2901 Via Fortuna Drive, Building 6, Suite 650 Austin, Texas 78746-7574
Board of Directors:	Michael Hoffman Stephen Schaefer Carl Williams

All of the members of the Board of Directors, who have full managerial control over Raven Holdings, are U.S. citizens. Additional members of the Board of Directors may be appointed in the future.

Attachment 3
Corporate Information Regarding Riverstone Entities

Name:	C/R Energy Jade, LLC
State of Incorporation:	Delaware
Business Address:	c/o Topaz Power Management, LP 2901 Via Fortuna Drive, Building 6, Suite 650 Austin, Texas 78746-7574
Board of Directors:	Michael Hoffman Stephen Schaefer Carl Williams

All of the members of the Board of Directors, who have full managerial control over Jade Holdings, are U.S. citizens. Additional members of the Board of Directors may be appointed in the future.

Attachment 3
Corporate Information Regarding Riverstone Entities

Name:	Sapphire Power Holdings, LLC
State of Incorporation:	Delaware
Business Address:	c/o Topaz Power Management, LP 2901 Via Fortuna Drive, Building 6, Suite 650 Austin, Texas 78746-7574
Board of Directors:	Michael Hoffman Stephen Schaefer Carl Williams

All of the members of the Board of Directors, who have full managerial control over Sapphire Holdings, are U.S. citizens. Additional members of the Board of Directors may be appointed in the future.

Attachment 3
Corporate Information Regarding Riverstone Entities

Name:	Riverstone Holdings, LLC
State of Incorporation:	Delaware
Business Address:	712 Fifth Avenue, New York, NY 10019
Members:	Class A: Pierre F. Lapeyre, Jr. David M. Leuschen Class B: The Class B membership interests in Riverstone are held by senior investment professionals employed by Riverstone, or trusts established by them, and senior advisors of Riverstone. The Class B membership interests are passive interests conveying only limited consent rights.

Attachment 4NP to the Enclosure to PLA-7191

Projected Income Statement and Calculation of Six-Month Fixed Costs (Redacted, Non-Proprietary Version)

Attachment 4NP
Projected Income Statement and Calculation of Six-Month Fixed Costs
(Redacted, Non-Proprietary Version)

Unit 1: Base Case ($thousands)					
	2015	**2016**	**2017**	**2018**	**2019**
Assumptions					
Price Projection ($/Mwh)					
Plant Capacity Factor					
Revenues:					
Revenue from Energy					
Revenue for Ancillary Services					
Revenue from Capacity					
Total:					
Expenses:					
Fuel Expense					
Decommissioning Accretion Expenses					
Direct O&M					
Intercompany Charges					
Taxes (Non Income)					
Depreciation					
Other Expenses					
Total:					
Income before Taxes:					
Income Taxes:					
Net Income (Loss):					

Unit 1: Sensitivity Case 1 (10% Reduction in Capacity Factor) ($thousands)					
	2015	**2016**	**2017**	**2018**	**2019**
Assumptions					
Price Projection ($/Mwh)					
Plant Capacity Factor					
Revenues:					
Revenue from Energy					
Revenue for Ancillary Services					
Revenue from Capacity					
Total:					
Expenses:					
Fuel Expense					
Decommissioning Accretion Expenses					
Direct O&M					
Intercompany Charges					
Taxes (Non Income)					
Depreciation					
Other Expenses					
Total:					
Income before Taxes:					
Income Taxes:					
Net Income (Loss):					

Unit 1: Sensitivity Case 2 (10% Reduction in Projected Price) ($thousands)					
	2015	**2016**	**2017**	**2018**	**2019**
Assumptions					
Price Projection ($/Mwh)					
Plant Capacity Factor					
Revenues:					
Revenue from Energy					
Revenue for Ancillary Services					
Revenue from Capacity					
Total:					
Expenses:					
Fuel Expense					
Decommissioning Accretion Expenses					
Direct O&M					
Intercompany Charges					
Taxes (Non Income)					
Depreciation					
Other Expenses					
Total:					
Income before Taxes:					
Income Taxes:					
Net Income (Loss):					

Unit 1: Calculation of Six-Month Fixed Operating Costs ($thousands)						
	2015	**2016**	**2017**	**2018**	**2019**	**5-Year Average**
Direct O&M						
Taxes (Non Income)						
Non-fuel Capital Expenditures						
		Six months coverage of 5-year average operating costs				

Unit 2: Base Case ($thousands)					
	2015	**2016**	**2017**	**2018**	**2019**
Assumptions					
Price Projection ($/Mwh)					
Plant Capacity Factor					
Revenues:					
Revenue from Energy					
Revenue for Ancillary Services					
Revenue from Capacity					
Total:					
Expenses:					
Fuel Expense					
Decommissioning Accretion Expenses					
Direct O&M					
Intercompany Charges					
Taxes (Non Income)					
Depreciation					
Other Expenses					
Total:					
Income before Taxes:					
Income Taxes:					
Net Income (Loss):					

Unit 2: Sensitivity Case 1 (10% Reduction in Capacity Factor) ($thousands)					
	2015	**2016**	**2017**	**2018**	**2019**
Assumptions					
Price Projection ($/Mwh)					
Plant Capacity Factor					
Revenues:					
Revenue from Energy					
Revenue for Ancillary Services					
Revenue from Capacity					
Total:					
Expenses:					
Fuel Expense					
Decommissioning Accretion Expenses					
Direct O&M					
Intercompany Charges					
Taxes (Non Income)					
Depreciation					
Other Expenses					
Total:					
Income before Taxes:					
Income Taxes:					
Net Income (Loss):					

Unit 2: Sensitivity Case 2 (10% Reduction in Projected Price) ($thousands)					
	2015	**2016**	**2017**	**2018**	**2019**
Assumptions					
Price Projection ($/Mwh)					
Plant Capacity Factor					
Revenues:					
Revenue from Energy					
Revenue for Ancillary Services					
Revenue from Capacity					
Total:					
Expenses:					
Fuel Expense					
Decommissioning Accretion Expenses					
Direct O&M					
Intercompany Charges					
Taxes (Non Income)					
Depreciation					
Other Expenses					
Total:					
Income before Taxes:					
Income Taxes:					
Net Income (Loss):					

Unit 2: Calculation of Six-Month Fixed Operating Costs ($thousands)						
	2015	**2016**	**2017**	**2018**	**2019**	**5-Year Average**
Direct O&M						
Taxes (Non Income)						
Non-fuel Capital Expenditures						
		Six months coverage of 5-year average operating costs				

Attachment 5 to the Enclosure to PLA-7191

Form of Support Agreement

Attachment 5
Form of Support Agreement

PPL Susquehanna, LLC
[Two North Ninth Street
Allentown, PA 18101] [Address to be updated to reflect Talen Energy HQ address]

Ladies and Gentlemen:

On June 9, 2014, the Board of Directors of PPL Corporation adopted resolutions approving a transaction (the "Transaction") which will result in the indirect transfer of control of PPL Susquehanna, LLC to Talen Energy Corporation ("Talen Energy"). Upon closing of such transaction PPL Susquehanna, LLC will be renamed Susquehanna Nuclear, LLC and is hereafter referred to as Susquehanna Nuclear.

In consideration of the benefits to be derived by Talen Energy from Susquehanna Nuclear, Talen Energy hereby agrees that, subject to the terms and conditions of this agreement, by and through its subsidiaries, as necessary, it will provide funds to Susquehanna Nuclear to assure that Susquehanna Nuclear will have sufficient funds available to meet its operating expenses at the Susquehanna Steam Electric Station ("Susquehanna SES").

Upon closing of the Transaction Susquehanna Nuclear will be a wholly owned indirect subsidiary of Talen Energy, a publicly traded company whose other direct and indirect subsidiaries will include Talen Energy Holdings Inc., PPL Energy Supply, LLC (to be renamed [_____] upon closing) and PPL Generation, LLC (to be renamed [_____] upon closing).

Talen Energy represents and warrants that, by and through its subsidiaries, as necessary, it will provide funding to Susquehanna Nuclear, at any time that the Board of Managers of Susquehanna Nuclear determines that, in order to protect the public health and safety and/or to comply with NRC requirements, such funds are necessary to meet its ongoing operating expenses for Susquehanna SES or such funds are necessary to safely maintain Susquehanna SES; provided, however, that Talen Energy's maximum liability to provide funding hereunder shall not exceed $[205] million.

This agreement shall take effect upon closing of the Transaction resulting in indirect transfer of control of Susquehanna Nuclear to Talen Energy, as approved by the NRC, and will remain in effect and remain irrevocable until such time as either: (1) Susquehanna Nuclear has submitted to the NRC written certifications meeting the requirements of 10 CFR §§ 50.4(b)(8) & (9) that the

Susquehanna SES fuel has been permanently removed from the reactor vessel, *i.e.*, after Susquehanna Nuclear has determined to permanently cease Susquehanna SES operations, or (2) the NRC has given its prior written consent to the modification or discontinuance of the funding arrangements contemplated by this letter agreement. Talen Energy shall have the right to demand that Susquehanna Nuclear permanently cease Susquehanna SES operations rather than using funds available under this agreement for continued operations; provided that, in such event, Susquehanna Nuclear will nevertheless have the right to continue to obtain the funds necessary to assure the safe and orderly shutdown of Susquehanna SES and to continue the safe maintenance of Susquehanna SES until Susquehanna Nuclear can certify to the NRC that the fuel has been permanently removed from the reactor vessel.

Talen Energy hereby represents and warrants to Susquehanna Nuclear that its obligations under this letter agreement are valid, binding and enforceable obligations of Talen Energy in accordance with their terms (subject to bankruptcy, insolvency, reorganization and similar laws affecting creditors' rights generally and general equitable principles) and do not require the consent, approval or authorization of any Governmental Agency or third party other than those which have been obtained and are in full force and effect (or will be obtained on or prior to the closing of the Transaction). Nevertheless, nothing herein is intended to constitute a guarantee by Talen Energy of any indebtedness of Susquehanna Nuclear or provide any rights enforceable by third parties.

To the extent permitted by applicable law, Talen Energy hereby irrevocably, unconditionally and expressly waives, and agrees that it shall not at any time assert any claim or take the benefit or advantage of, any appraisal, valuation, stay, extension, marshalling or assets or redemption laws, any bankruptcy, insolvency or similar proceedings, or exemption, whether now or any time hereafter in force, which may delay, prevent or otherwise affect the performance by Talen Energy of its obligations hereunder.

This letter agreement shall be governed and construed in accordance with the laws of the Commonwealth of Pennsylvania without giving effect to conflict of law principles.

Sincerely,

Attachment 6 to the Enclosure to PLA-7191

Decommissioning Funding Assurance

Attachment 6
Calculation of Escalation Factors

Used in Computation of Minimum Financial Assurance Amount for Decommissioning Susquehanna Steam Electric Station Units 1and 2

Boiling Water Reactor (BWR)
Escalation Factor

Formula - 0.65(L) + 0.13(E) + 0.22(B)

Escalation = (.65 x 2.594) + (.13 x 2.647) + (.22 x 14.160)
Escalation = (1.686 + .344 + 3.115) = 5.145

(L) - Labor - (Bureau of Labor Statistics, Table 6, Compensation, Employment Cost Index, for total compensation, private industry workers, by bargaining status, region and area size)

Northeast region -	December 2013 Index Number	120.1
	December 2005 Index Number	100.0
	December 2005 Base	2.16

$$L = \frac{120.1}{100.0} \text{ times } 2.16 \text{ Equals } 2.594$$

(E) - Energy - (Producer Price Index Commodities, Series ID: WPU0543 and WPU0573)

E = (.54P + .46F)
E = (.54 x 1.756) + (.46 x 3.694)
E = 0.948 + 1.699 = 2.647

P - Industrial Power, 500 kW Demand - (Commodity 0543)

	December 2013 Index Number	200.5
	January 1986 Index Number	114.2 (1)

$$P = \frac{200.5}{114.2} \text{ equals } 1.756$$

F - Light Fuel Oils - (Commodity 0573)

December 2013 Index Number	302.9
January 1986 Index Number	82.0

$F = \frac{302.9}{82.0}$ equals 3.694

(B) Waste Burial

NUREG - 1307, Rev. 15, "NRC Report on Waste Burial Charges"
Table 2.1
Generic LLW Disposal Site, Combination of Compact-Affiliated and Non-Compact Facility 14.160

(1) Represents the national base value of P at January 1986. The base value of P is no longer determined on a regional basis.

PPL Susquehanna, LLC
Computation of Minimum Financial Assurance Amount for Decommissioning
Susquehanna Steam Electric Station
Units 1 and 2

	Unit 1	**Unit 2**
Base amount for BWR greater than 3,400 MWt = $135 million The Power Level of Unit 1 = 3,952 MWt and Unit 2 = 3,952 MWt	$135,000,000	$135,000,000
Ownership Percentage	90%	90%
Base Amount per Unit	$121,500,000	$121,500,000
Escalation Factor	5.145	5.145
Escalated Amount per Unit	$625,117,500	$625,117,500
Total Escalated Amount (Unit 1 + Unit 2)	$1,250,235,000	

Attachment 7 to the Enclosure to PLA-7191

Affidavit of Timothy S. Rausch (Request for Withholding

Attachment 7
Affidavit of Timothy S. Rausch

I, Timothy S. Rausch, Senior Vice President and Chief Nuclear Officer, PPL Susquehanna, LLC, do hereby affirm and state:

1. I am authorized to execute this affidavit on behalf of PPL Susquehanna, LLC;

2. PPL Susquehanna, LLC requests that Attachment 4P, which is being submitted under separate cover and labeled "CONFIDENTIAL INFORMATION SUBMITTED UNDER 10 C.F.R. § 2.390", be withheld from public disclosure under the provisions of 10 C.F.R. § 2.390(a)(4). A redacted version is included in this Application as Attachment 4NP.

3. Attachment 4P contains confidential commercial information, the disclosure of which would adversely affect PPL Susquehanna, LLC.

4. This information has been held in confidence by PPL Susquehanna, LLC. To the extent that PPL Susquehanna, LLC has shared this information with others, it has done so on a confidential basis.

5. PPL Susquehanna, LLC customarily keeps such information in confidence, and there is a rational basis for holding such information in confidence. The information is not available from public sources and could not be gathered readily from other publicly available information.

7. Public disclosure of this information would cause substantial harm to the competitive position of PPL Susquehanna, LLC because such information has significant commercial value to PPL Susquehanna, LLC.

Timothy S. Rausch
Senior Vice President and Chief Nuclear Officer

Subscribed and sworn before me,
a Notary Public in and for the
Commonwealth of Pennsylvania,
this 11th day of July, 2014.

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Pamela M. Vincent, Notary Public
Sugarloaf Twp., Columbia County
My Commission Expires May 31, 2018
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Pamela M. Vincent
Notary Public

Attachment 8 to the Enclosure to PLA-7191

Regulatory Commitments

Attachment 8
Regulatory Commitments

ITEM	COMMITMENT DESCRIPTION
1	The principal officers and directors of Talen Energy Holdings, Energy Supply and Generation will remain U.S. citizens upon closing of the Transaction.
2	PPL Susquehanna will inform the NRC if there are any significant changes in the status of other required approvals or any other developments that have an impact on the schedule, and will notify the NRC Staff when the closing will occur, so that the NRC may issue the conforming amendments.
3	PPL Susquehanna will inform the NRC when its new business address is determined.
4	The new names of PPL Energy Supply and PPL Generation have not yet been determined. PPL Susquehanna will inform the NRC when the new names are determined.
5	If any changes to the principal officers or managers of PPL Susquehanna listed in the Application occur prior to closing of the Transaction, PPL Susquehanna will inform the NRC.
6	PPL Susquehanna will inform the NRC when any designation of Talen Energy's directors is announced, and of any subsequent changes in their directors and principal officers until the Transaction closes.
7.	Both Talen Energy and Talen Holdings will before closing adopt resolutions to the effect that neither their officers nor Boards of Directors, acting as such, shall seek access to any classified information and/or special nuclear material in the custody of PPL Susquehanna.