

April 18, 2007

Mr. Britt T. McKinney
Sr. Vice President & Chief Nuclear Officer
PPL Susquehanna, LLC
769 Salem Boulevard
Berwick, PA 18603-0467

SUBJECT: ENVIRONMENTAL SITE AUDIT REGARDING SUSQUEHANNA STEAM
ELECTRIC STATION, UNITS 1 AND 2 NUCLEAR POWER PLANT LICENSE
RENEWAL APPLICATION (TAC NOS. MD3021 AND MD3022)

Dear Mr. McKinney:

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the Environmental Report submitted by PPL Susquehanna, LLC, in support of its application for license renewal for the Susquehanna Steam Electric Station, Units 1 and 2 (SSES) and plans to conduct its environmental site audit at SSES during the week of May 14, 2007. To develop the Supplemental Environmental Impact Statement for SSES license renewal, the NRC staff requests that the items described in the enclosed list be made available to the extent possible during the SSES environmental site audit. The NRC staff transmitted this list to members of your staff informally on April 13, 2007. If you have any questions, please contact me at 301-415-4006 or via e-mail at als3@nrc.gov.

Sincerely,

/RA/

Drew Stuyvenberg, Environmental Project Manager
Environmental Branch B
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-387 and 50-388

Enclosure:
As stated

cc w/encl: See next page

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OFFICE	LA:DLR	PM:DLR:REBB	PM:DLR:REBB	BC: DLR:REBA	BC:DLR:REBB
NAME	I. King	J. Davis (w/comments)	D. Stuyvenberg (w/ comments)	E. Benner <i>/RA JR for/</i>	R. Franovich <i>/RA BP for/</i>
DATE	3/29/07	4/16/07	4/18/07	4/18/07	4/18/07

OFFICIAL RECORD COPY

Letter to B. McKinney from D. Stuyvenberg Dated April 18, 2007

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ELECTRIC STATION, UNITS 1 AND 2 NUCLEAR POWER PLANT LICENSE
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HARD COPY

D. Stuyvenberg

E-MAIL

Public

RidsNrrDirRebb

RidsNrrDirReba

RidsOgcMailRoom

E. Benner

A. Stuyvenberg

J. Davis

F. Monette (fmonette@anl.gov)

R. Guzman

Y. Diaz Sanabria

A. Blamey, SRI Region 1

N. Sheehan, OPA Region 1

S. Uttal (OGC)

**Susquehanna Steam Electric Station
License Renewal Information Needs
April 18, 2007**

The NRC staff has reviewed Appendix E, Environmental Report (ER), of the Susquehanna Steam Electric Station (SSES) license renewal application and have found that it meets the requirements of 10 CFR 51.45. However, in order to develop the Supplemental Environmental Impact Statement (SEIS) for license renewal, a number of informational needs have been identified and are outlined below. The NRC staff would appreciate if you could make the following documents available during the site audit at SSES to be conducted the week of May 14, 2007.

Documentation

General

- NRC staff would like to see documentation that includes more detailed information for Section 2.1, Location and Features.

Hydrology & Permits

NRC staff would like to see the following:

- Updated versions of the expired permits listed in Table 9-1 of the SSES ER.
 - Water level records of existing site wells.
 - Water use records.
 - Any available well logs of on-site wells.
 - Contact information for local agencies responsible for environmental related permits.
 - Documentation for Attachment F of the ER which only contained a cover sheet and the approval letter.
 - The complete National Pollution Discharge Elimination System (NPDES) permit issued in 2005 and the accompanying NPDES application.
 - Copies of the Ecology III 2005 report.
 - The Spill Prevention, Control and Countermeasures/Pollution Incident Prevention Plan (or related).
 - Documentation on any groundwater monitoring programs, whether site-wide or targeting a particular facility or remedial action.
- Enclosure
- Documentation of any release notifications, notices of violation, or remediation

documentation associated with surface water discharges, septic or sewer systems, or groundwater or soil contamination (including spills, leaks, and other releases of tritium, fuels, solvents, or other chemicals).

Air

- Description of the onsite meteorological system/tower.
- Description of the onsite air sampling systems.
- Copies of Air permits and Compliance history for air quality (the past 5 years at minimum).
- A listing of any Mandatory Class 1 Federal areas.
- Description of the regional climatology (annual and seasonal mean temperatures, historically high rain and snow events).
- Description of the local meteorology for the plant (annual and seasonal predominant wind speed and direction).

Aquatic Ecology and Microbiological Organisms (Public Health)

- In addition to the above, copies of the following reports or correspondence cited in the ER are requested (provide all versions):

From Chapter 2, Section 2.3:

- o Ecology III (2005) PPL Electric Utilities Corp (2004). (Note: Staff also requested this document in "Hydrology and Permits." Additional copies for Aquatic reviewers would be appreciated.)

From Chapter 4, Section 4.21:

- o Ecology III (2004)
- NRC staff would like to have copies of all of the other Annual Reports prior to 1995, those published from 1996 thru 2000, and the most recent one published in 2006, that contain information on the aquatic resources in the Susquehanna area. However, if the annual reports are lengthy documents (e.g., over 100 pages) or are not currently available on CD or electronically, then those besides the ones requested above should be made available to us at the site audit.
- Descriptions and locations of streams and wetlands on site and along transmission lines.

Cultural Resources

NRC staff would like to see the following:

- Any surveys (archaeological investigations) completed prior to construction.
- The mitigation/avoidance program as mentioned in the ER page 2.11-4. What sort of "care" is/was exercised during ground disturbing activities?
- Copies of the Knouse site 1978 survey.
- Copies of the 1980 archaeological investigation onsite. (CAI Report provided was a management report and not the full report.)
- A response as to whether or not the State Historical Preservation Officer (SHPO) has reviewed onsite procedures regarding cultural resources.
- Copies of the PPL Susquehanna Environmental Inspection Plan (CH-ER-314).
- Photos that show the plant site pre, during and post construction.
- Any old maps of the site prior to plant construction.
- Documentation of any archaeological sites or historic structures on or adjacent to transmission lines.
- Maintenance procedures for transmission lines. Do they take into account the protection of cultural resources?
- Copies of any correspondence with the PA SHPO that is not included in the ER.
- Documentation that shows what training the Environmental Coordinator has in relation to Section 106 guidelines.
- Description of who owned the land prior to PPL Susquehanna LLC, and when was it purchased.
- Description of the land use history of the site prior to the power plant.
- A map indicating the extent of ground disturbance at the site.
- Correspondence with local groups concerning cultural resources.
- Correspondence with Native American Tribes or groups.
- Documentation of the cultural materials that were removed from the site.
- Documentation on the materials from the 1980 excavations and where they are being stored.
- Documentation of where the remains and artifacts that were disinterred in the 1978

study. The ER says they were removed by the PA Historical Commission. What ultimately happened to those remains after they were studied?

- A description of the mitigating actions that were recommended for site number SES-6. Were those mitigating actions ever implemented?

Alternatives

About PPL:

- Does PPL have plans to acquire or construct new, PPL-owned generation capacity – whether or not locations have yet been determined – prior to the current license expiration dates of Susquehanna Units 1 and 2? If so, how much does PPL anticipate adding? What size are these units and which fuels will they likely use?
- Does PPL anticipate additional generating capacity retirements – aside from the two coal and small diesel units mentioned in the ER – in the years before Susquehanna’s current license expires? If so, which units and by what dates? What are the capacities of these units?
- Which resources has PPL used to meet the goals of PA’s Alternative Energy Portfolio Standard (AEPS) in this first reporting year? Please identify each type of generation or each resource (in the case of DSM or EE measures) and provide amount of capacity, as well as total energy supplied or saved by these generators or resources.
- Please provide the screening criteria that PPL employs in determining which generators or resources it will use to meet AEPS goals.

About the Susquehanna Site:

- Please describe – if possible – how a coal-fired alternative could be configured to fit on the existing site.
- Please elaborate on the “load pocket” phenomenon described in Section 7.2.1.2, “Purchased Power.” How would this affect transmission lines serving the area near SSES and throughout the region?
- In Section 7.2.2.3 of the ER, the authors indicate that purchased power would require 50 miles of high voltage line (e.g., 345 or 500 kV) to address the load pocket produced if purchased power were to replace the capacity provided by Susquehanna Units 1 and 2. Please describe, if possible, where this line would likely need to be constructed (i.e., the line routing). If a likely routing is not available, please indicate to which existing lines this new line would need to connect.
- Does sufficient supply capacity exist on the 24-inch pipeline 2 miles north of the plant to support a gas-fired alternative (Section 7.2.2.1, “Other Impacts”) at the current plant site?
- Please describe – if possible – a likely routing for the 2-mile gas pipeline to supply the

gas-fired alternative.

- How much energy – in MW – do Susquehanna Units 1 and 2 consume for on-site uses?
- Please provide state maps showing rail lines, electric transmission lines, and gas pipelines.

About Pennsylvania, New Jersey, Maryland (PJM) Interconnection:

- To the extent possible, please indicate how much capacity PJM will likely add in the years prior to Susquehanna Units 1 and 2 license expirations.
- To the extent possible, please indicate how much capacity PJM participants will likely retire in the years prior to Susquehanna's current license expirations?

Radiological Protection

NRC staff would like to see:

- Copies of the annual radiological effluent release reports for the past 5 years.
- Previous 5 years of radiological and nonradiological environmental operating reports.
- Copy of the Off-site Dose Calculation Manual.
- Copies of the Occupational Exposure Reports for the last 5 years.
- Documentation on any unusual spills or leaks (5075 G reports).
- View any special analyses or monitoring results with regard to any past tritium releases to soil, surface water, or ground water.
- Any data concerning radiological wildlife sampling (i.e., animals such as deer, squirrel, turkey, pheasant, and other game birds and animals) in the vicinity of the SSES that are not regularly reported in the annual environmental operating reports.
- Any additional information concerning effects of the proposed extended power uprate (EPU).
- Documentation that includes more detailed information for Section 3.1.1, Reactor and Containment Systems.
- The complete version of the final safety analysis report (FSAR) including the complete section on radioactive waste management in Chapter 11.
- If there are any waste disposal areas on the SSES site, NRC staff would like to see documentation related to disposal activities and assessment of environmental impacts from such activities.

- SSES transportation of radioactive waste permits for South Carolina, Tennessee and Virginia.

Non-Radiological And Mixed Wastes

Non-Radiological Waste

NRC staff would like to know:

- What nonradiological wastes are generated at SSES? How much has been generated in the last five years at SSES? Nonradiological waste includes office trash, hazardous waste, universal wastes, kitchen wastes, yard waste, and construction debris.
- How are the wastes disposed?
- Does SSES have status as a small or large quantity generator of hazardous waste?
- Have there been any nonradiological waste (universal, hazardous, or solid) compliance audits by, or violations found by, the State or other applicable agencies? If so, the staff would like to know the results of those audits.
- Has SSES filed any Emergency Planning and Community Right to know Act (EPCRA) reports? If so, the staff would like to see the reports for the last 5 years.
- Are there any waste minimization or pollution prevention efforts at SSES? Is there a recycling program at SSES? If so, what items are recyclable?

NRC staff would like to see:

- The Acknowledgement of Notification of Hazardous Waste Activity issued by the State.
- Any Waste Minimization/Pollution Prevention plans and/or procedures for SSES.
- A list of all regulated storage tanks that contain nonradiological wastes (biocides, oil, etc) within the boundary of the SSES site and copies of the Tank Certifications as issued by the State.
- A copy of the SSES Hazardous Waste Permit application, if applicable.
- Accumulation and storage areas for the hazardous and universal wastes.
- SSES Hazardous Waste permit and associated reports required by the State, if applicable.
- Copy of SSES Hazardous Material Registration Certificate, if applicable.

Mixed Waste

NRC staff would like to know:

- What mixed wastes are generated at SSES?
- How are mixed wastes accumulated and stored onsite?
- How is the mixed waste disposed?
- The amount of mixed waste generated at SSES during the last five years.
- The status of mixed waste regulations in the state of Pennsylvania.

Transmission Corridors

NRC staff would like to see copies of the following documents:

- Lists of all herbicides, pesticides, or other chemicals used in the transmission corridor or around the plant, and the amount, location, and manner of application.
- Applicant's on-site and transmission line vegetation management program plan, including timing of mowing, herbicide application, type of herbicide used, and clearing; inspections and repair activities conducted by helicopters or other vehicles; maintenance technician training programs or guidelines for applicant and any contractors; and any regulations which restrict maintenance activities (for instance state legislation restricting herbicide use in a portion of the corridor).
- Names and contact information of any right-of-way contractors.
- Aerial photographs of site and transmission line(s).
- Topographic maps of site and transmission line(s).

Socioeconomics

Economic:

- A description of transient populations in the vicinity of SSES (and the area economic base provided).
- Latest data available for the residential location of full-time SSES plant employees, by city and county.
- Data on property taxes paid by SSES to Berwick Area School District (BASD), Luzerne County, and Salem Township, in 2005 and 2006.

- Data on the total annual revenues for BASD, total real estate tax collections for Luzerne County, total municipal and street taxes for Salem Township, in 2005.

Aesthetics:

- A description of the height, color, or visibility of the facilities and structures and from what distances and locations they can be seen. Appendix A referenced that a discussion of Issue 73 (Aesthetic impacts) would be found in Section 4.0, but it could not be found.

Noise:

- Information regarding plant and cooling tower noise and what can be heard at the site boundaries or in the Riverlands Recreation Area. Appendix A referenced that a discussion of Issue 58 (Noise) would be found in Section 4.0, but it could not be found.

Land Use

- Please provide a description of site land cover/land use percentages for land cover categories, such as, open areas (fields, marshes, swamps, beach, cemetery), forests, facilities and structures, parking areas, water (ponds, lakes, canals – whether natural or manmade), and visitor or recreation areas. Reference is made to undeveloped lands, but no actual accounting can be done, while there is mention of developed portions of the land being 487 acres. Is developed assumed to be just the plant structures, cooling towers, and parking areas?
- Please provide a clarification in the acreage totals and breakouts: Mention is made of PPL property and SSES property; is there a difference in the ownership? For example, in Section 2.4 there is mention of land being leased. Is the 65 acre Gould Island in the totals? Where does the 88-acre Overlook fit in the totals? Are the “Susquehanna Riverlands” and the “Riverlands Recreation Area” the same? Which is the accurate title?
- Please provide a description of the measures or impediments between the Riverlands Recreation Area and the Protected Area to halt ingress of recreational users, beyond it an assumption that the “security fencing” west of Route 11 provides that barrier (2.1-1).
- Please provide a description of the railroad and highway that cross the site.
- NRC staff would like to see documentation of the critical terrain elevations.

Related Federal Project Activities and Consultations

NRC staff would like to see the following:

- Documentation of Federal facilities and lands within a 50-mile proximity to the Susquehanna site. Without this, no assessment can be conducted to determine if activities of other Federal agencies might impact the renewal of the operating license.

The lack of this information also impedes an assessment of the possible need for a Federal agency to become a cooperating agency for the preparation of the SEIS. There is mention in the final environmental statements (FESs) of two military installations.

Terrestrial Ecology

- Copies, if available, the 1997 and 1998 Annual Environmental Reports (AERs) (could not be found in ADAMs).
- Records associated with any unusual events affecting terrestrial environmental resources, as defined in section 4.1 of the EPP, that have occurred since the FES for operations, or a statement that no such events have occurred.
- Copies of USGS topographic maps for site and all in-scope transmission lines, preferably with corridors highlighted.
- Maps or aerial photos of the site, in-scope transmission corridors, and Riverlands, as available. Description of acreage in each land cover (wetlands, agricultural fields, lawns) and vegetation community (hardwood forest, coniferous forest, marsh, pond, etc.) type.
- Description or map indicating the location, extent, and types of wetlands at the site. Copies of any wetland delineation reports which have been prepared.
- Copies of any environmental review and management plans, including those for reviewing new construction projects; controlling erosion, wildfires, invasive, or nuisance species; and examples of where these plans were implemented (which may include internal review documents related to work on the firing range, or the erosion plan which was developed to minimize erosion during earth-moving activities during pipe repair as listed in 2000 AER).
- Records concerning herbicide use, as required by part 4.2.2 of the EPP, for the last 5 years, and descriptions of pesticide use, amounts and manner of application at the site and in the corridors.
- Copies of the 2004 revision of the Susquehanna Pollution Prevention and Contingency (PPC) Plan and Spill Prevention Control & Countermeasure (SPCC) Plan (could not be found in ADAMS).
- Copy of the results of the most recent sound level survey
- Copies of the most recent bird impact studies, and any information regarding bird and bat injury or mortality at the site or within the in-scope transmission corridors.
- Information regarding invasive and pest plant and animal species at or near the site, and description of how they are controlled.

- Statistics regarding the current and projected levels of visitor use at the Riverlands, and any measures that would be used to limit environmental impacts associated with this projected level of visitor use.
- Description of where, when, and how hunting is allowed at the site, including which species are hunted, and how many are taken each year (see attached website indicating seasonal hunting at the site).
- Annual maintenance and inspection reports for the transmission line corridors for the last 5 years.
- Copies of any additional procedures for transmission line maintenance activities, including vegetation control methods; types of herbicides or pesticides used; maintenance schedules; and special procedures used in areas that support T&E, wetlands, streams, or cultural resources, as applicable.

Meetings with SSES Personnel

General

NRC staff request a tour of the following:

- Intake and discharge areas
- Exterior of major on-site structures
- On-site natural areas
- On-site transmission line
- On-site storage
- Environmental lab
- Visitors center

Non-Radiological Waste:

- Similar to radiological waste, NRC staff would like to conduct a tour of SSES waste management areas for non-radiological wastes.
- NRC staff would like to meet with the plant personnel who are knowledgeable about non-radiological waste management and compliance issues.
- NRC staff would like to see any storage and accumulation areas for mixed wastes.

Water

- NRC staff would like to meet with plant personnel with knowledge of the plant's wastewater system, storm drain system and the cooling-tower-based heat dissipation system.

Cultural Resources

NRC staff request the following:

- A map of sites and a visit to those sites at the audit.

Aquatic

NRC staff request the following:

- Boat Tour (two trips)
- River Intake Structure Tour

Radiological

NRC staff request a tour of the following:

- Rad waste management areas, including gas/liquid/ solid processing, storage (not just spent fuel pool), off-site shipment
 - Effluent release points (liquid and gaseous)
 - Effluent monitoring systems
 - Turbine building
 - Control room
 - Meteorological tower
 - Typical environmental monitoring stations (and if co-located, state monitoring stations).
- NRC staff request consultation with SSES personnel who are knowledgeable about the radiological systems and environmental monitoring programs at SSES.

Terrestrial

NRC staff would like to tour of the following:

- Reverted farmland
- Firing range, if possible
- Drainage swale, if possible
- North storm drain basin
- Transmission line corridor (utility personnel desired)
- 2001 riprap installation, and how it is controlling erosion on Lake Took-a-While.

Susquehanna Steam Electric Station,
Unit Nos. 1 and 2

cc:

Robert A. Saccone
Vice President - Nuclear Operations
PPL Susquehanna, LLC
769 Salem Blvd., NUCSB3
Berwick, PA 18603-0467

Terry L. Harpster
General Manager - Plant Support
PPL Susquehanna, LLC
769 Salem Blvd., NUCSA4
Berwick, PA 18603-0467

Rocco R. Sgarro
Manager - Nuclear Regulatory Affairs
PPL Susquehanna, LLC
Two North Ninth Street, GENPL4
Allentown, PA 18101-1179

Supervisor -
Nuclear Regulatory Affairs
PPL Susquehanna, LLC
769 Salem Blvd., NUCSA4
Berwick, PA 18603-0467

Michael H. Crowthers
Supervising Engineer
Nuclear Regulatory Affairs
PPL Susquehanna, LLC
Two North Ninth Street, GENPL4
Allentown, PA 18101-1179

Steven M. Cook
Manager - Quality Assurance
PPL Susquehanna, LLC
769 Salem Blvd., NUCSB2
Berwick, PA 18603-0467

Luis A. Ramos
Community Relations Manager,
Susquehanna
PPL Susquehanna, LLC
634 Salem Blvd., SSO
Berwick, PA 18603-0467

Bryan A. Snapp, Esq
Assoc. General Counsel
PPL Services Corporation
Two North Ninth Street, GENTW3
Allentown, PA 18101-1179

Supervisor - Document Control Services
PPL Susquehanna, LLC
Two North Ninth Street, GENPL4
Allentown, PA 18101-1179

Richard W. Osborne
Allegheny Electric Cooperative, Inc.
212 Locust Street
P.O. Box 1266
Harrisburg, PA 17108-1266

Director, Bureau of Radiation Protection
Pennsylvania Department of
Environmental Protection
Rachel Carson State Office Building
P.O. Box 8469
Harrisburg, PA 17105-8469

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
P.O. Box 35, NUCSA4
Berwick, PA 18603-0035

Regional Administrator, Region 1
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Board of Supervisors
Salem Township
P.O. Box 405
Berwick, PA 18603-0035

Dr. Judith Johnsrud
National Energy Committee
Sierra Club
443 Orlando Avenue
State College, PA 16803

Susquehanna Steam Electric Station,
Unit Nos. 1 and 2

-2-

cc:

James K. Willams
Unit Supervisor - SSES
PPL Susquehanna, LLC
Two North Ninth Street, GENPL5
Allentown, PA 18101-1179

Duane Filchner
Nuclear Regulatory Affairs
PPL Susquehanna, LLC
Two North Ninth Street, GENPL4
Allentown, PA 18101-1179

Jerome Fields
Senior Environmental Scientist
PPL Susquehanna, LLC
Two North Ninth Street, GENPL5
Allentown, PA 18101-1179