

June 19, 2001

Mr. Robert G. Byram
Senior Vice President
and Chief Nuclear Officer
PPL Susquehanna, LLC
2 North Ninth Street
Allentown, PA 18101

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2 -
ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT
(TAC NOS. MB0444 AND MB0445)

Dear Mr. Byram:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application for amendment dated October 30, 2000, as supplemented on February 5, May 22, and May 31, 2001, for an increase in allowable thermal power level. The proposed license amendment would allow an increase in the licensed core power level from 3441 megawatts thermal (MWt) to 3489 MWt for the Susquehanna Steam Electric Station, Units 1 and 2.

The assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

/RA/

Robert G. Schaaf, Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-387 and 50-388

Enclosure: Environmental Assessment

cc w/encl: See next page

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UNITED STATES NUCLEAR REGULATORY COMMISSION

PPL SUSQUEHANNA, LLC

DOCKET NOS. 50-387 AND 50-388

SUSQUEHANNA STEAM ELECTRIC STATION

ENVIRONMENTAL ASSESSMENT AND FINDING OF

NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of amendments to Facility Operating License (FOL) Nos. NPF-14, and NPF-22, issued to PPL Susquehanna, LLC (the licensee), for operation of the Susquehanna Steam Electric Station (SSES), Units 1 and 2, located in Luzerne County, Pennsylvania.

ENVIRONMENTAL ASSESSMENT

Identification of the Proposed Action:

The proposed license amendment would revise the FOLs and Technical Specifications (TS) of SSES, Units 1 and 2, to allow the licensee to increase the licensed core power level from 3441 MWt to 3489 MWt, which represents a 1.4 percent increase in the allowable thermal power. SSES Unit 1 was granted conditional authorization for power production by its FOL issued on July 17, 1982. Full power operation of Unit 1 at 3,293 MWt core power was authorized by Amendment No. 5 to the FOL, issued on November 12, 1982. Amendment No. 143 to the FOL, issued on March 22, 1995, authorized a power uprate for Unit 1 to 3,441 MWt. SSES Unit 2 was granted conditional authorization for power production by its FOL issued on March 23, 1984. Full power operation of Unit 2 at 3,293 MWt core power was authorized by Amendment No. 1 to the FOL, issued on June 27, 1984. Amendment No. 103 to the FOL, issued on April 11, 1994, authorized a power uprate for Unit 2 to 3,441 MWt.

The proposed action is in accordance with the licensee's application for license amendment dated October 30, 2000, as supplemented by letters dated February 5, May 22, and May 31, 2001.

The Need for the Proposed Action:

The proposed action would allow an increase in power generation at SSES, Units 1 and 2, to provide additional electrical power for distribution to the grid. Power uprate has been widely recognized by the industry as a safe and cost-effective method to increase generating capacity.

Environmental Impacts of the Proposed Action:

The environmental impact associated with operation of SSES, Units 1 and 2, has been previously evaluated by the U.S. Atomic Energy Commission in the "Final Environmental Statement Related to Operation of Susquehanna Steam Electric Station, Units 1 and 2," dated June 1981. In this evaluation, the staff considered the potential doses due to postulated accidents for the site, at the site boundary, and to the population within 50 miles of the site. With regard to consequences of postulated accidents, the licensee has reevaluated the current design basis accidents (DBAs) in its application for license amendments and determined that accident source terms are based on core power levels that bound the proposed core power level of 3489 MWt. Therefore, the current analyses bound the potential doses due to DBAs based on the proposed 1.4 percent increased core power level. No increase in the probability of these accidents is expected to occur.

With regard to normal releases, the licensee has calculated the potential impact on the radiological effluents from the proposed 1.4 percent increase in power level. The licensee concluded that the offsite doses from normal effluent releases remain significantly below the bounding limits of Title 10 of the Code of Federal Regulations (10 CFR), Part 50, Appendix I. Normal annual average gaseous releases remain limited to a small fraction of 10 CFR Part 20, Appendix B, Table 2 limits. The licensee evaluated the effects of power uprate on the radiation

sources within the plant and the radiation levels during normal operating conditions. Post-operation radiation levels are expected to increase slightly due to the power uprate; but are expected to have no significant effect on the plant. Occupational doses for normal operations will be maintained within acceptable limits by the site ALARA (as-low-as-reasonably-achievable) program. Solid and liquid waste production may increase slightly as a result of the proposed 1.4 percent uprate; however, waste processing systems are expected to operate within their design requirements.

The NRC has completed its evaluation of the proposed action and concludes that the proposed action will not increase the probability or consequences of accidents, no changes are being made in the types of effluents that may be released offsite, and there is no significant increase in occupational or public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

With regard to potential non-radiological impacts, the proposed action does not involve any historic sites. With regard to thermal discharges to the Susquehanna River, the staff has previously evaluated temperature effects during normal operations at full power and determined the temperature impact on the river to be insignificant. The licensee indicated that an increase in the cooling tower air flow rate will compensate for the slight increase in condenser outlet circulating water temperature, such that no perceptible change in the temperature of the cooling tower basin blowdown to the Susquehanna River is expected. Therefore, the temperature effects on the river will be insignificant. Existing administrative controls ensure the conduct of adequate monitoring such that appropriate actions can be taken to preclude exceeding the limits imposed by the National Pollution Discharge Elimination System permit. No additional requirements or other changes are required as a result of the power uprate. No other non-radiological impacts are associated with the proposed action.

Based upon the above, the NRC concludes that the proposed action does not affect non-radiological plant effluents and has no other environmental impact. Therefore, there are no significant non-radiological environmental impacts associated with the proposed action.

Accordingly, the NRC concludes that there are no significant environmental impacts associated with the proposed action.

Alternatives to the Proposed Action:

As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the "no-action" alternative). Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources:

This action does not involve the use of any resources not previously considered in the Final Environmental Statement for the SSES, Units 1 and 2.

Agencies and Persons Consulted:

In accordance with its stated policy, on June 19, 2001, the staff consulted with the Pennsylvania State official, Mr. Michael Murphy of the Pennsylvania Department of Environmental Protection, regarding the environmental impact of the proposed action. The State official had no comments.

FINDING OF NO SIGNIFICANT IMPACT

On the basis of the environmental assessment, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's letter dated October 30, 2000, as supplemented by letters dated February 5, May 22, and May 31, 2001.

Documents may be examined, and/or copied for a fee, at the NRC's Public Document Room, located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible electronically from the Agencywide Documents Access and Management Systems (ADAMS) Public Electronic Reading Room on the Internet at the NRC web site, <http://www.nrc.gov/NRC/ADAMS/index.html>. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC Public Document Room (PDR) Reference staff at 1-800-397-4209, 301-415-4737 or by e-mail to pdr@nrc.gov.

Dated at Rockville, Maryland, this 19th day of June 2001.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Richard P. Correia, Acting Chief, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Mr. Robert G. Byram
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Enclosure: Environmental Assessment

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