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KAUFFMAN, J. T Pennsylvania Power & Light Co.
RECIP. NAME RECIPIENT AFFILIATION
ADENSAM, E. BWR Project Directorate 3

SUBJECT: Application for amends to Licenses NPF-14 & NPF-22, re increasing maximum allowable concetration of sodium pentaborate solution pursuant to 10CFR50.90. Fee paid.

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APR 08 1987

Ms. E. Adensam, Project Director
Director of Nuclear Reactor Regulation
BWR Project Directorate No. 3
Division of BWR Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUSQUEHANNA STEAM ELECTRIC STATION
PROPOSED AMENDMENT NO. 96 TO NPF-14 AND
PROPOSED AMENDMENT NO. 49 TO NPF-22
PLA-2838 FILE A17-2, S053A

Dear Ms. Adensam:

Pursuant to 10CFR50.90, Pennsylvania Power & Light Co. requests amendments, in the form of Technical Specification changes, to Operating Licenses NPF-14 and NPF-22 for Susquehanna Steam Electric Station Units 1 and 2.

This request modifies Figure 3.1.5-2 which is entitled "Sodium Pentaborate Solution Concentration" to increase the maximum allowable concentration from 13.8% to 15.8%.

Pursuant to FSAR Section 9.3.5, the minimum average concentration of natural boron in the reactor to provide adequate shutdown margin, after operation of the Standby Liquid Control system, is 660 ppm. The saturation temperature of the solution is 59°F at the low level alarm volume and approximately 49°F at the tank overflow volume. The concentration will be achieved if the solution is mixed properly and maintained above the saturation temperature. In light of the proposed change, the minimum average concentration remains at 660 ppm. The saturation temperature however will increase from 59°F to 70°F at the maximum allowable solution concentration limit. This increase in temperature will be compensated for by increasing the heat trace setting from 80°F to 90°F.

The proposed change does not:

(1) involve an increase in the probability or consequences of an accident previously evaluated. Standby Liquid Control (SLC) system operation is discussed in FSAR Chapter 15.8 - Event 51, as a special safety system which means it is not required to perform its function during a design

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basis event. The system is however, required to be reliable to a degree consistent with its role as a special safety system. The system reliability is dependent on maintaining the boron solution above the saturation temperature. The proposed increase in concentration level does increase the solution saturation temperature from 59°F to 70°F which increases the risk of precipitation if the heat tracing fails and lowers the design margin between heat trace setting and precipitation point from 20°F to 10°F. This risk has been reduced by the installation of a heat trace trouble alarm in the main control room and increasing the heat trace setting from 80°F to 90°F.

(2) create the possibility of a new or different kind of accident from any accident previously evaluated. As stated in Part (1), the SLC system integrity remains intact, enabling SLC to perform its intended function as a special safety system.

(3) involve a reduction in the margin of safety. The margin of safety with regards to the boron solution has been maintained by the increased heat trace setting and trouble alarm in the control room.

We request these amendments be approved and made effective September 5, 1987.

Pursuant to 10CFR170.22, the appropriate fee is enclosed.

If you have any questions, please contact D. J. Walters at (215) 770-6536.

Very truly yours,

J. T. Kauffman
Executive Vice President - Operations

Enclosure

cc: NRC Document Control Desk (original)
NRC Region I
Mr. L. R. Plisco - NRC Resident Inspector
Mr. M. C. Thadani - NRC Project Manager
Mr. T. M. Gerusky - Pa. DER

BEFORE THE
UNITED STATES NUCLEAR REGULATORY COMMISSION

In the Matter of :

PENNSYLVANIA POWER & LIGHT COMPANY : Docket No. 50-387

PROPOSED AMENDMENT NO. 96

FACILITY OPERATING LICENSE NO. NPF-14

SUSQUEHANNA STEAM ELECTRIC STATION
UNIT NO. 1

Licensee, Pennsylvania Power & Light Company, hereby files proposed Amendment No. 96 to its Facility Operating License No. NPF-14 dated July 17, 1982.

This amendment contains a revision to the Susquehanna SES Unit 1 Technical Specifications.

PENNSYLVANIA POWER & LIGHT COMPANY
BY:

J. T. Kauffman
Executive Vice President-Operations

Sworn to and subscribed before me
this 8th of April, 1987.

Martha C. Barto
Notary Public

MARTHA C. BARTO, NOTARY PUBLIC
ALLENTOWN, LEHIGH COUNTY
MY COMMISSION EXPIRES JAN. 15, 1990
Member, Pennsylvania Association of Notaries

[illegible]

BEFORE THE
UNITED STATES NUCLEAR REGULATORY COMMISSION

In the Matter of :

PENNSYLVANIA POWER & LIGHT COMPANY : Docket No. 50-388

PROPOSED AMENDMENT NO. 49

FACILITY OPERATING LICENSE NO. NPF-22

SUSQUEHANNA STEAM ELECTRIC STATION
UNIT NO. 2

Licensee, Pennsylvania Power & Light Company, hereby files proposed Amendment No. 49 to its Facility Operating License No. NPF-22 dated March 23, 1984.

This amendment contains a revision to the Susquehanna SES Unit 2 Technical Specifications.

PENNSYLVANIA POWER & LIGHT COMPANY
BY:

J. T. Kauffman
Executive Vice President-Operations

Sworn to and subscribed before me
this 8th of April, 1987.

Martha C. Barto
Notary Public
MARTHA C. BARTO, NOTARY PUBLIC
ALLENTOWN, LEHIGH COUNTY
MY COMMISSION EXPIRES JAN. 15, 1990
Member, Pennsylvania Association of Notaries