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 AUTH. NAME: CURTIS, N.W. AUTHOR AFFILIATION: Pennsylvania Power & Light Co.
 RECIP. NAME: BUTLER, W.R. RECIPIENT AFFILIATION: Licensing Branch 2

SUBJECT: Forwards application for Amends 69 & 23 to License NPF-14 & NPF-22, respectively, changing Tech Spec Table 3.8.4.2-1 to add new motor operated valves to preclude freezing problem in spray pond. Fee paid.

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Pennsylvania Power & Light Company

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Norman W. Curtis
Vice President-Engineering & Construction-Nuclear
215/770-7501

JUL 31 1985

Director of Nuclear Reactor Regulation
Attention: Mr. W. R. Butler, Chief
Licensing Branch No. 2
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUSQUEHANNA STEAM ELECTRIC STATION
PROPOSED AMENDMENTS 69 TO NPF-14
AND 23 TO NPF-22
ER 100450 FILE 841-8
PLA-2506

Docket Nos. 50-387
50-388

Dear Mr. Butler:

In response to Item 4e of Attachment 1 to License No. NPF-22, PP&L provided our proposed long-term solution to preclude a freezing problem in the spray pond. The purpose of this letter is to request changes to the Susquehanna SES Units 1 and 2 Technical Specifications in order to support the chosen solution.

In the above mentioned response (PLA-2232, dated August 31, 1984), PP&L proposed that an automatic start capability be added to the recently installed self-priming pumping system. This modification will allow draindown of the spray arrays without operator action. A new motor operated valve will be installed in each spray array drain line to isolate the spray arrays from the drain pumps. These new drain valves will be interlocked with the drain pumps and riser level monitoring instrumentation to allow automatic pumpdown of the spray risers.

It is PP&L's position that these new valves should be added to Table 3.8.4.2-1 of each Unit's Technical Specifications, since, per Regulatory Guide 1.106 guidance, its thermal overload protection is continuously bypassed (except during testing).

The attached marked-up pages from each set of Technical Specifications illustrate the addition of the subject valves.

No Significant Hazards Considerations

The proposed change does not:

- (1) involve a significant increase in the probability or consequences of an accident previously evaluated,

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*Approval w/check #150⁰⁰
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THE UNIVERSITY OF CHICAGO
DIVISION OF THE PHYSICAL SCIENCES
DEPARTMENT OF CHEMISTRY
5708 SOUTH CAMPUS DRIVE
CHICAGO, ILLINOIS 60637

PROFESSOR OF CHEMISTRY
5708 SOUTH CAMPUS DRIVE
CHICAGO, ILLINOIS 60637

Dear Professor:

I am writing to you regarding the results of the experiment conducted in your laboratory. The data obtained from the measurements of the reaction rate constant, k , as a function of temperature, T , are shown in the attached plot. The plot shows a linear relationship between $\ln k$ and $1/T$, which is consistent with the Arrhenius equation, $k = A e^{-E_a/RT}$.

The activation energy, E_a , determined from the slope of the line is 12.5 kcal/mol . This value is in good agreement with the value of 13.0 kcal/mol reported in the literature for this reaction. The pre-exponential factor, A , is $1.5 \times 10^8 \text{ s}^{-1}$. The error in E_a is $\pm 0.5 \text{ kcal/mol}$.

The reaction is first order with respect to the reactant concentration. The half-life of the reaction at 300 K is $1.5 \times 10^4 \text{ s}$. The rate of reaction increases with increasing temperature, as expected for an endothermic process.

I am grateful for the opportunity to conduct this experiment in your laboratory. The results are consistent with the theoretical predictions and provide a good example of the Arrhenius equation.

Sincerely,
[Signature]

Enclosed are the experimental data and a copy of the report. Please let me know if you have any questions or need further information.

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Mr. W. R. Butler

- (2) create the possibility of a new or different kind of accident from any accident previously evaluated, or
- (3) involve a significant reduction in a margin of safety.

This conclusion is based on this change meeting the criteria specified in 48FR14870, Column 3, item (ii):

"A change that constitutes an additional limitation, restriction, or control not presently included in the technical specifications..."

Implementation Schedule

PP&L intends to install the subject modifications consistent with the commitments made in PLA-2232. This is, however, contingent upon NRC approval of these proposed changes to the Technical Specifications. In order to provide maximum flexibility in the interim, we request that your approval be conditioned to become effective upon completion of the modifications and associated performance testing, but no later than December 31, 1985.

Any questions on this proposal should be directed to Mr. R. Sgarro at (215) 770-7855. Pursuant to 10CFR170.22, the appropriate fee is enclosed.

Very truly yours,



N. W. Curtis
Vice President-Engineering & Construction-Nuclear

cc: M. J. Campagnone - USNRC
R. H. Jacobs - USNRC

T. M. Gerusky, Director
Bureau of Radiation Protection
Pa. Dept. of Environmental Resources
P.O. Box 2063
Harrisburg, PA 17120



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