

March 16, 2001

Mr. Harold W. Keiser
Chief Nuclear Officer & President
PSEG Nuclear LLC - X04
Post Office Box 236
Hancocks Bridge, NJ 08038

SUBJECT: SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2, REQUEST
FOR ADDITIONAL INFORMATION RE: INCREASE LICENSED POWER
LEVELS BY APPROXIMATELY 1.4 PERCENT (TAC NOS. MB0521 AND
MB0522)

Dear Mr. Keiser:

By application dated November 10, 2000, PSEG Nuclear LLC requested amendments to Facility Operating License Nos. DPR-70 and DPR-75 and the Technical Specifications, to increase the licensed power levels at the Salem Nuclear Generating Station, Unit Nos. 1 and 2, by approximately 1.4%.

The U.S. Nuclear Regulatory Commission staff is reviewing your amendment application and requires additional information in order to complete its evaluation. The enclosed request for additional information was discussed with Mr. Brian Thomas during a conference call on February 23, 2001. During the call, we agreed to establish a target date of 30 days from the date of this letter to receive your response. If circumstances result in the need to revise the target date, please contact me at (301) 415-1324.

Sincerely,

/RA/

Robert J. Fretz, Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-272 and 50-311

Enclosure: Request for Additional Information

cc w/encl: See next page

March 16, 2001

Mr. Harold W. Keiser
Chief Nuclear Officer & President
PSEG Nuclear LLC - X04
Post Office Box 236
Hancocks Bridge, NJ 08038

SUBJECT: SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2, REQUEST
FOR ADDITIONAL INFORMATION RE: INCREASE LICENSED POWER
LEVELS BY APPROXIMATELY 1.4 PERCENT (TAC NOS. MB0521 AND
MB0522)

Dear Mr. Keiser:

By application dated November 10, 2000, PSEG Nuclear LLC requested amendments to Facility Operating License Nos. DPR-70 and DPR-75 and the Technical Specifications, to increase the licensed power levels at the Salem Nuclear Generating Station, Unit Nos. 1 and 2, by approximately 1.4%.

The U.S. Nuclear Regulatory Commission staff is reviewing your amendment application and requires additional information in order to complete its evaluation. The enclosed request for additional information was discussed with Mr. Brian Thomas during a conference call on February 23, 2001. During the call, we agreed to establish a target date of 30 days from the date of this letter to receive your response. If circumstances result in the need to revise the target date, please contact me at (301) 415-1324.

Sincerely,

/RA/

Robert J. Fretz, Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-272 and 50-311

Enclosure: Request for Additional Information

cc w/encl: See next page

DISTRIBUTION

PUBLIC	EAdensam	CHolden	GMeyer, RGN-I
ACRS	JClifford	JLazevnick	SBlack
OGC	RFretz	FAkstulewicz	LBerry
PDI-2 Reading	TClark	SPeters	

ACCESSION NUMBER: ML010660032 TEMPLATE = NRR-088

OFFICE	PDI-2/PM	PDI-2/LA	PDI-2/SC
NAME	RFretz	TLClark	JClifford
DATE	03/07/01	3/7/01	3/13/01

OFFICIAL RECORD COPY

REQUEST FOR ADDITIONAL INFORMATION

POWER UPRATE AMENDMENT REQUEST

SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2

By application dated November 10, 2000, PSEG Nuclear LLC (PSEG) submitted a request to increase licensed power levels for Salem Nuclear Generating Station, Unit Nos. 1 and 2 by 1.4 percent. By letter dated December 5, 2000, PSEG Nuclear provided additional information (Westinghouse Topical Reports WCAP-15565, Revision 0 and WCAP-15566, Revision 0) to support its November 10, 2000, submittal. The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the submittals and finds that additional information in the following areas is needed to complete its review.

- (1) Section 4.1.5 in the November 10, 2000, Request for License Amendment states that the uprate will increase the decay heat that is transferred from the residual heat removal (RHR) system to the component cooling water system (CCWS) during accident or normal cooldown. It states that the uprate also increases the decay heat in the spent fuel pool (SFP) transferred by the SFP cooling system to CCWS. Will this additional heat load reflect itself as additional CCWS electrical demand on the safety-related power system?
- (2) In Section 8.6 (500 kV Grid Stability), it stated that no stability issues were identified during a feasibility study performed in support of the proposed uprate. It is further stated that an impact study including stability analysis will be completed before implementation of the proposed change. Is PSEG requesting NRC approval of the uprate before the stability analysis is completed? Although we would expect that the change in 500 kV grid stability would be minimal for such a relatively small power increase, it is unclear how approval could be granted before the actual impact on grid stability is determined. Please explain.
- (3) How will the 1.4% power uprate affect the electrical transients associated with the loss of external load event? There is likely to be some additional generator overspeed as a result of the uprate. What will the effect be of the overspeed and associated overfrequency on the generator and the electrical loads connected to the Unit Auxiliary Power Transformers?
- (4) In Section 6.1 of the submittal, Steam Generator Tube Rupture (SGTR) Evaluation, PSEG stated that the current licensing basis SGTR analysis was performed at 104.5% reactor power. It also stated that the proposed 1.4% increase in power will result in a decrease of steam pressure, and hence, an increase in break flow. In order to evaluate the impact the 1.4% power uprate will have on the SGTR event evaluation, please clarify the following:
 - a. License Amendments 190 (Unit No. 1) and 173 (Unit No. 2) indicate a reactor power of 105.5% was used for the SGTR analysis. Please verify at what power level your current licensing basis is for the SGTR event analysis.

ENCLOSURE

- b. Revision 15 of the Final Safety Analysis Report (FSAR) states that the conservative upper limit for reactor coolant transferred to the steam generator secondary side is 125,000 lbs. In subsequent revisions, the stated mass transfer is 137,250 lbs. These subsequent revisions also state that the operators will take 50 minutes to isolate the steam generators. The mass release of 137,250 lbs. is then equated to a 55 minute operator action time for isolation. Since the original analysis of record is for 125,000 lbs., is the operator action time still bound by the original analysis of record? If not, what are the differences between the calculations? How were the mass/energy releases determined? What were the changes made, if any, to the operator actions?

To assist in answering the questions associated with question number (4), please provide a table indicating the specific initial conditions (including reactor power), assumptions, operator actions, and results of the steam generator tube rupture analysis for FSAR Revisions 15, 16, and 18 and Section 6.1 of the proposed power uprate. Clarify the bases for the specific assumptions, initial conditions, and operator actions that changed between the revisions and discuss how they relate to the proposed power uprate.

PSEG Nuclear LLC
Salem Nuclear Generating Station,
Unit Nos. 1 and 2

cc:

Mr. Elbert C. Simpson
Senior Vice President &
Chief Administrative Officer
PSEG Nuclear - N19
P.O. Box 236
Hancocks Bridge, NJ 08038

Mr. Mark B. Bezilla
Vice President - Technical Support
PSEG Nuclear - X10
P.O. Box 236
Hancocks Bridge, NJ 08038

Mr. David F. Garchow
Vice President - Operations
PSEG Nuclear - X10
P.O. Box 236
Hancocks Bridge, NJ 08038

Mr. Gabor Salamon
Manager - Licensing
PSEG Nuclear - N21
P.O. Box 236
Hancocks Bridge, NJ 08038

Jeffrie J. Keenan, Esquire
PSEG Nuclear - N21
P.O. Box 236
Hancocks Bridge, NJ 08038

Mr. Carter Kresge
External Operations - Nuclear
Conectiv
P.O. Box 6066
Newark, DE 19714-6066

Ms. R. A. Kankus
Joint Owner Affairs
PECO Energy Company
Nuclear Group Headquarters KSA1-E
200 Exelon Way
Kennett Square, PA 19348

Lower Alloways Creek Township
c/o Mary O. Henderson, Clerk

Municipal Building, P.O. Box 157
Hancocks Bridge, NJ 08038

Dr. Jill Lipoti, Asst. Director
Radiation Protection Programs
NJ Department of Environmental
Protection and Energy
CN 415
Trenton, NJ 08625-0415

Richard Hartung
Electric Service Evaluation
Board of Regulatory Commissioners
2 Gateway Center, Tenth Floor
Newark, NJ 07102

Assistant Consumer Advocate
Office of Consumer Advocate
1425 Strawberry Square
Harrisburg, PA 17120

Public Service Commission of Maryland
Engineering Division
Chief Engineer
6 St. Paul Centre
Baltimore, MD 21202-6806

Maryland Office of People's Counsel
6 St. Paul Street, 21st Floor
Suite 2102
Baltimore, MD 21202

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

Senior Resident Inspector
Salem Nuclear Generating Station
U.S. Nuclear Regulatory Commission
Drawer 0509
Hancocks Bridge, NJ 08038