

Mr. Harold W. Keiser  
Chief Nuclear Officer & President-  
Nuclear Business Unit  
Public Service Electric & Gas Company  
Post Office Box 236  
Hancocks Bridge, NJ 08038

July 14, 1999

SUBJECT: ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT  
IMPACT RELATED TO ISSUANCE OF AMENDMENTS TO INCREASE THE  
MAXIMUM FUEL ENRICHMENT TO 5.0 WEIGHT PERCENT, SALEM  
NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2  
(TAC NOS. MA4691 AND MA4692)

Dear Mr. Keiser:

Enclosed is a copy of an "Environmental Assessment and Finding of No Significant Impact" related to your proposed amendments to the Technical Specifications (TS) dated February 2, 1999, as supplemented on April 26, 1999, for the Salem Nuclear Generating Station, Unit Nos. 1 and 2. The proposed amendments would revise TS 5.6, "Fuel Storage, Criticality," to change the maximum unirradiated fuel assembly enrichment value for new fuel storage from 4.5 to 5.0 weight percent Uranium-235 and to allow the use of equivalent criticality control to that provided by the current TS requirement of 2.35 milligrams of Boron-10 per linear inch loading in the Integral Fuel Burnable Absorber pins. This assessment has been forwarded to the Office of the Federal Register for publication.

Sincerely,

ORIGINAL SIGNED BY:

Patrick D. Milano, Senior 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: Environmental Assessment  
cc w/encl: See next page

**NRC FILE CENTER COPY**

DISTRIBUTION:

Docket File	J. Zwolinski	P. Milano	OGC
PUBLIC	J. Clifford	T. Clark	ACRS
PDI-2 Reading File	R. Blough, RGN-I	C. Carpenter	G. Meyers, RGN-I

DOCUMENT NAME: G:\MILANO\EAa4691.wpd

52 11/199 No DFOI

OFFICE	PDI-2/PM	PDI-2/LA	RGEB/C	OGC	PDI-2/SC
NAME	PMilano	TClark ETD	CCarpenter	AHodgdon	JClifford
DATE	06/22/99	06/22/99	06/1/99	06/06/99	07/14/99

OFFICIAL RECORD COPY

9907190158 381



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001

July 14, 1999

Mr. Harold W. Keiser  
Chief Nuclear Officer & President-  
Nuclear Business Unit  
Public Service Electric & Gas Company  
Post Office Box 236  
Hancocks Bridge, NJ 08038

SUBJECT: ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT  
IMPACT RELATED TO ISSUANCE OF AMENDMENTS TO INCREASE THE  
MAXIMUM FUEL ENRICHMENT TO 5.0 WEIGHT PERCENT, SALEM  
NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2  
(TAC NOS. MA4691 AND MA4692)

Dear Mr. Keiser:

Enclosed is a copy of an "Environmental Assessment and Finding of No Significant Impact" related to your proposed amendments to the Technical Specifications (TS) dated February 2, 1999, as supplemented on April 26, 1999, for the Salem Nuclear Generating Station, Unit Nos. 1 and 2. The proposed amendments would revise TS 5.6, "Fuel Storage, Criticality," to change the maximum unirradiated fuel assembly enrichment value for new fuel storage from 4.5 to 5.0 weight percent Uranium-235 and to allow the use of equivalent criticality control to that provided by the current TS requirement of 2.35 milligrams of Boron-10 per linear inch loading in the Integral Fuel Burnable Absorber pins. This assessment has been forwarded to the Office of the Federal Register for publication.

Sincerely,

A handwritten signature in black ink, appearing to read "Patrick D. Milano", is written over a horizontal line.

Patrick D. Milano, Senior 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: Environmental Assessment

cc w/encl: See next page

Mr. Harold W. Keiser  
Public Service Electric & Gas  
Company

Salem Nuclear Generating Station,  
Units 1 and 2

cc:

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

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

General Manager - Salem Operations  
Salem Nuclear Generating Station  
P.O. Box 236  
Hancocks Bridge, NJ 08038

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

Mr. Louis Storz  
Sr. Vice President - Nuclear Operations  
Nuclear Department  
P.O. Box 236  
Hancocks Bridge, NJ 08038

Lower Alloways Creek Township  
c/o Mary O. Henderson, Clerk  
Municipal Building, P.O. Box 157  
Hancocks Bridge, NJ 08038

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

Director - Licensing Regulation & Fuels  
Nuclear Business Unit - N21  
P.O. Box 236  
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

Mr. David Wersan  
Assistant Consumer Advocate  
Office of Consumer Advocate  
1425 Strawberry Square  
Harrisburg, PA 17120

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

Manager - Joint Generation  
Atlantic Energy  
6801 Black Horse Pike  
Egg Harbor Twp., NJ 08234-4130

Ms. R. A. Kankus  
Joint Owner Affairs  
PECO Energy Company  
965 Chesterbrook Blvd., 63C-5  
Wayne, PA 19087

Carl D. Schaefer  
External Operations - Nuclear  
Delmarva Power & Light Company  
P.O. Box 231  
Wilmington, DE 19899

Mr. Elbert Simpson  
Senior Vice President-  
Nuclear Engineering  
Nuclear Department  
P.O. Box 236  
Hancocks Bridge, NJ 08038

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

UNITED STATES NUCLEAR REGULATORY COMMISSIONSALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2DOCKET NOS. 50-272 AND 50-311ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of amendments to Facility Operating License Nos. DPR-70 and DPR-75, issued to the Public Service Electric and Gas Company (the licensee), for operation of the Salem Nuclear Generating Station, Unit Nos. 1 and 2, located in Salem County, New Jersey.

ENVIRONMENTAL ASSESSMENTIdentification of Proposed Action:

The proposed action is in response to the licensee's application dated February 2, 1999, as supplemented on April 26, 1999, for proposed amendments to the Technical Specifications (TS) to change the maximum unirradiated fuel assembly enrichment value for new fuel storage from 4.5 to 5.0 weight percent Uranium-235 and to allow the use of equivalent criticality control to that provided by the current TS requirement of 2.35 milligrams of Boron-10 per linear inch loading in the Integral Fuel Burnable Absorber pins.

The Need for the Proposed Action:

The licensee intends, in the future, to use the more highly enriched fuel to achieve higher energy core reloads which can contribute substantially to improved capacity factors for the spent fuel pool by decreasing the cumulative amount of fuel stored during the lifetime of the plant. Currently, TS 5.6, "Fuel Storage, Criticality," limits the storage of fuel to an enrichment of 4.3 weight percent U-235. Thus, the proposed change to the TS was requested.

9907190161

Environmental Impacts of the Proposed Action:

The Commission has completed its evaluation of the proposed action and concludes that the storage and use of fuel enriched with U-235 up to 5.0 weight percent at Salem Units 1 and 2 is acceptable. The safety considerations associated with higher enrichments have been evaluated by the staff, and the staff has concluded that such changes would not adversely affect plant safety. The proposed changes have no adverse effect on the probability of any accident. There will be no change to the authorized power level. There is no change to the allowable fuel burnup (60,000 MWD/MTU) already approved for Salem Units 1 and 2. As a result, there is no significant increase in individual or cumulative radiation exposure.

The environmental impacts of transportation resulting from the use of higher enrichment fuel and extended irradiation are discussed in the staff assessment entitled, "NRC Assessment of the Environmental Effects of Transportation Resulting from Extended Fuel Enrichment and Irradiation." This assessment was published in the FEDERAL REGISTER on August 11, 1988 (53 FR 30355), as corrected on August 24, 1988 (53 FR 32322), in connection with the Shearon Harris Nuclear Power Plant, Unit 1, Environmental Assessment and Finding of No Significant Impact. As indicated therein, the environmental cost contribution of an increase in fuel enrichment of up to 5.0 weight percent U-235 and irradiation limits up to 60,000 MWD/MTU are either unchanged, or may in fact be reduced from those summarized in Table S-4 as set forth in 10 CFR 51.52(c). These findings are applicable to the proposed amendments for Salem Units 1 and 2. Therefore, the Commission concludes that this proposed action would result in no significant radiological environmental impact.

With regard to potential non-radiological impacts, the proposed changes involve systems located within the restricted area as defined in 10 CFR Part 20. The proposed action does not involve any historic sites. It does not affect non-radiological plant effluents and has no

other environmental impact. Therefore, the Commission concludes that there are no significant non-radiological environmental impacts associated with the proposed amendments.

Accordingly, the Commission concludes that there are no significant environmental impacts associated with this action.

Alternative 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 related to the Salem Nuclear Generating Station dated April 1973.

Agencies and Persons Contacted:

In accordance with its stated policy, on June 22, 1999, the staff consulted with the New Jersey State official, Mr. Dennis Zannoni, Chief, Bureau of Nuclear Engineering, regarding the environmental impact of the proposed action. The State official had no comments.

FINDING OF NO SIGNIFICANT IMPACT

Based upon the foregoing environmental assessment, the Commission concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the Commission has determined not to prepare an environmental impact statement for the proposed amendments.

For further details with respect to this action, see the licensee's request for the amendments dated February 2, 1999, as supplemented on April 26, 1999, which are available for public inspection at the Commission's Public Document Room, Gelman Building, 2120 L

Street, NW., Washington DC, and at the local public document room located at the Salem Free Public Library, 112 West Broadway, Salem, NJ 08079

Dated at Rockville, Maryland, this 14th day of July 1999.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read "W. Clifford" with a stylized flourish underneath.

James W. Clifford, Chief, Section 2  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation