

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

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NAME	P. Milano	T. Clark ETD	C. Carpenter	A. Hodgdon	J. Clifford
DATE	06/22/99	06/22/99	06/1/99	06/06/99	07/14/99

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

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Nuclear Business Unit
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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
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cc:

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Salem Nuclear Generating Station,
Units 1 and 2

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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.

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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 "S. Bajwa", written over a horizontal line.

Singh S. Bajwa, Chief, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation