

January 31, 1996

Mr. William L. Stewart
Executive Vice President, Nuclear
Arizona Public Service Company
Post Office Box 53999
Phoenix, Arizona 85072-3999

SUBJECT: ENVIRONMENTAL ASSESSMENT - PALO VERDE NUCLEAR GENERATING
STATION, UNIT NO. 2 (TAC NO. M94020)

Dear Mr. Stewart:

Enclosed is a copy of the Environmental Assessment and Finding of No
Significant Impact related to your application for exemption dated
December 20, 1995. The proposed exemption would permit the use of fuel rods
clad with Zirconium-based alloys other than Zircaloy-4 in Unit 2 for Cycles
7, 8, and 9.

The assessment is being forwarded to the Office of the Federal Register for
publication.

Sincerely,

Original signed by:

Charles R. Thomas, Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. STN 50-529

Enclosure: Environmental Assessment

cc w/encl: See next page

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NAME	E Peyton	CThomas	BHolian	Welling
DATE	1/23/96	1/23/96	1/24/96	1/31/96

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

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Arizona Public Service Company
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Phoenix, Arizona 85072-3999

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Charles R. Thomas, Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. STN 50-529

Enclosure: Environmental Assessment

cc w/enc1: See next page

Mr. William L. Stewart

- 2 -

cc w/encl:

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UNITED STATES NUCLEAR REGULATORY COMMISSIONARIZONA PUBLIC SERVICE COMPANYDOCKET NO. STN 50-529PALO VERDE NUCLEAR GENERATING STATION, UNIT NO. 2ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an exemption from Facility Operating License No. NPF-51, issued to Arizona Public Service Company (the licensee), for operation of the Palo Verde Nuclear Generating Station, Unit No. 2, located in Maricopa County, Arizona.

ENVIRONMENTAL ASSESSMENTIdentification of the Proposed Action:

The exemption from 10 CFR 50.46; 10 CFR Part 50, Appendix K; and 10 CFR 50.44 would allow the substitution of up to a total of 80 fuel rods clad with advanced zirconium-based alloys in two fuel assemblies for in-reactor performance evaluation purposes during Cycles 7, 8, and 9 for PVNGS Unit 2.

The proposed action is in accordance with the licensee's application for exemption dated December 20, 1995.

The Need for the Proposed Action:

The proposed action would permit the use of fuel rods clad with Zirconium-based alloys other than Zircaloy-4 in PVNGS Unit 2 for Cycles 7, 8, and 9.

Environmental Impacts of the Proposed Action:

The temporary exemption will not significantly change the environmental impact of operating the facility. The analysis generated by ABB-Combustion Engineering, Inc. (ABB-CE), demonstrates that the predicted chemical,

mechanical, and material performance of the advanced zirconium-based cladding is within that approved for zircaloy under anticipated operational occurrences and postulated accidents. Thus, the normal fuel performance characteristics of the advanced zirconium-based clad fuel rods will be essentially the same as those observed for standard Zircaloy-4 fuel rods. Furthermore, the lead fuel assemblies will be placed in nonlimiting core locations which do not experience core power density throughout the irradiated periods. The current design bases requirements were applied to the proposed advanced zirconium-based cladding. Because the expected operating conditions (both normal and LOCA) are within those assumed for the fuel rods currently licensed for Palo Verde Unit 2, it is concluded that the licensing basis will not be compromised by incorporating a limited number (40) of advanced zirconium-based clad fuel rods and the environmental impacts of operation under the proposed action will be similar to those currently experienced at the facility.

The change will not increase the probability or consequences of accidents, no changes are being made in the types of any effluents that may be released offsite, and there is no significant increase in the allowable individual or cumulative occupational radiation exposure. Accordingly, the Commission concludes that there are no significant radiological environmental impacts associated with the proposed action.

With regard to potential nonradiological impacts, the proposed action does involve features located entirely within the restricted area as defined in 10 CFR Part 20. It does not affect nonradiological plant effluents and has no other environmental impact. Accordingly, the Commission concludes that

there are no significant nonradiological environmental impacts associated with the proposed action.

Alternatives to the Proposed Action:

Since the Commission has concluded there is no measurable environmental impact associated with the proposed action, any alternatives with equal or greater environmental impact need not be evaluated. As an alternative to the proposed action, the staff considered denial of the proposed action. 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 Operation of the Palo Verde Nuclear Generating Station, Units 1, 2, and 3," dated February 1982.

Agencies and Persons Consulted:

In accordance with its stated policy, on February 1, 1996, the staff consulted with the Arizona State official, Mr. William Wright of the Arizona Radiation Regulatory Agency, regarding the environmental impact of the proposed action. The State official had no comments.

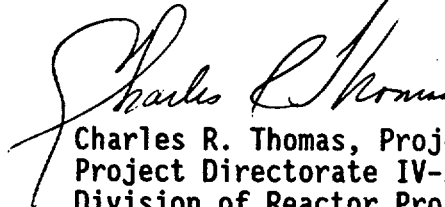
FINDING OF NO SIGNIFICANT IMPACT

Based upon the 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 action.

For further details with respect to the proposed action, see the licensee's letter dated December 20, 1995, which is available for public inspection at the Commission's Public Document Room, The Gelman Building, 2120 L Street, NW., Washington, DC, and at the local public document room located at the Phoenix Public Library, 1221 N. Central Avenue, Phoenix, Arizona 85004.

Dated at Rockville, Maryland, this 31st day of January 1996.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in cursive script, appearing to read "Charles R. Thomas". The signature is written in dark ink and is positioned to the left of the typed name and title.

Charles R. Thomas, Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation