

December 3, 2002

Mr. P.E. Katz, Vice President
Calvert Cliffs Nuclear Power Plant, Inc.
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, MD 20657-4702

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 2 (TAC. NO.
MB5646)

Dear Mr. Katz:

Enclosed is a copy of an Environmental Assessment and Finding of No Significant Impact related to your request for exemption dated July 17, 2002, that would allow up to four lead fuel assemblies manufactured by Westinghouse Electric Company (Westinghouse) with a limited number of fuel rods clad with advanced zirconium-based alloys to be inserted into the core during the next Unit 2 Refueling Outage, scheduled to begin in February 2003.

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

Sincerely,

/RA by GVissing for/

Richard J. Laufer, Chief, Section 1
Project Directorate I
Division Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-318

Enclosure: Environmental Assessment

cc w/encl: See next page

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DATE	11/25/02	12/2/02		

OFFICIAL RECORD COPY

Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 and 2

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UNITED STATES NUCLEAR REGULATORY COMMISSIONCALVERT CLIFFS NUCLEAR POWER PLANT, INC.DOCKET NO. 50-318CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 2ENVIRONMENTAL ASSESSMENT AND FINDING OFNO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of an exemption from Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50.44, 46 and Appendix K for Facility Operating License No. DPR-69, issued to Calvert Cliffs Nuclear Power Plant, Inc. (the licensee), for operation of the Calvert Cliffs Nuclear Power Plant, Unit No. 2 (Calvert Cliffs), located in Calvert County, Maryland. Therefore, as required by 10 CFR 51.21, the NRC is issuing this environmental assessment and finding of no significant impact.

ENVIRONMENTAL ASSESSMENTIdentification of the Proposed Action:

The proposed action, as described in the licensee's application for exemption dated July 12, 2002, would allow the licensee to use up to four lead fuel assemblies (LFAs) with an advanced cladding material, a zirconium-based alloy, that does not meet the definition of Zircaloy or ZIRLO, which are referred to in Title 10 of the *Code of Federal Regulations* Section 50.46(a)(1)(i). The LFAs are scheduled to be loaded into the Calvert Cliffs Unit 2 reactor core during the upcoming refueling outage and would remain in the core for two (2) cycles.

The Need for the Proposed Action:

The proposed exemption from 10 CFR 50.44, 10 CFR 50.46, and Appendix K to 10 CFR Part 50 is needed because these regulations specifically refer to light-water reactors containing fuel consisting of uranium oxide pellets enclosed in zircaloy or ZIRLO tubes. A new zirconium-

based alloy cladding has been developed, which is not the same chemical composition as zircaloy or ZIRLO. Therefore, the licensee needs an exemption to insert up to four assemblies containing the new fuel cladding material into the Calvert Cliffs reactor core for test during operation.

Environmental Impacts of the Proposed Action:

The NRC has completed its evaluation of the proposed action and concludes that the proposed exemption will not present an undue risk to the public health and safety. The safety evaluation performed by Westinghouse demonstrates that the predicted chemical, mechanical and material performance of the Advance zirconium-based cladding is within that approved for Zircaloy-4 or ZIRLO under all anticipated operational occurrences and postulated accidents. Furthermore, the LFAs will be placed in non-limiting core locations. In the unlikely event that cladding failures occur in the LFAs, environmental impact would be minimal and is bounded by previous environmental impact statements.

The proposed action will not significantly increase the probability or consequences of accidents, no changes are being made in the types of effluents that may be released off site, and there is no significant increase in occupational or public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

In regard to potential nonradiological impacts, the proposed action does not have a potential to affect any historic sites. It does not affect nonradiological plant effluents and has no other environmental impact. Therefore, there are no significant nonradiological environmental impacts associated with the proposed action.

Accordingly, the NRC concludes that there are no significant environmental impacts associated with the proposed action.

Environmental Impacts of the Alternatives 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:

The action does not involve the use of any different resource than those previously considered in the Final Environmental Statement for the Calvert Cliffs Nuclear Power Plant (CCNPP) dated April 1973 or the Final Environmental Impact Statement for licence renewal for the CCNPP dated October 1999.

Agencies and Persons Consulted:

On September 5, 2002, the staff consulted with the Maryland State official, Richard McLean of the Maryland Department of the Environment, regarding the environmental impact of the proposed action. The State official had no comments.

FINDING OF NO SIGNIFICANT IMPACT

On the basis of the environmental assessment, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC 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 July 17, 2002. Documents may be examined, and/or copied for a fee, at the NRC's Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible electronically from the Agencywide Documents Access and Management System (ADAMS) Public Electronic Reading Room on the Internet at the NRC Web site, <http://www.nrc.gov/reading-rm/adams.html>.

Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS, should contact the NRC PDR Reference staff by telephone at 1-800-397-4209 or 301-415-4737, or by e-mail to pdr@nrc.gov.

Dated at Rockville, Maryland, this 3rd day of December 2002.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Guy S. Vissing, Acting Chief, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation