

October 30, 1997

Mr. John K. Wood
Vice President - Nuclear, Davis-Besse
Centerior Service Company
c/o Toledo Edison Company
Davis-Besse Nuclear Power Station
5501 North State Route 2
Oak Harbor, OH 43449-9760

Dear Mr. Wood:

SUBJECT: ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT -
REQUEST FOR EXEMPTION FROM 10 CFR 70.24 REGARDING CRITICALITY
ACCIDENT REQUIREMENTS, DAVIS-BESSE NUCLEAR POWER STATION, UNIT 1
(TAC NO. M97924)

Enclosed is a copy of the Environmental Assessment and Finding of No
Significant Impact related to your application for exemption dated January 30,
1997, as supplemented May 28 and October 3, 1997. Your application requested
an exemption from certain requirements of 10 CFR 70.24, "Criticality Accident
Requirements."

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

Sincerely,

Original signed by:

Allen G. Hansen, Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-346

Enclosure: Environmental Assessment

cc w/encl: See next page

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John K. Wood
Toledo Edison Company

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UNITED STATES NUCLEAR REGULATORY COMMISSION

TOLEDO EDISON COMPANY

CENTERIOR SERVICE COMPANY

AND

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

DOCKET NO. 50-346

DAVIS-BESSE NUCLEAR POWER STATION, UNIT 1

ENVIRONMENTAL ASSESSMENT AND FINDING OF

NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an exemption from certain requirements of its regulations to Facility Operating License No. NPF-3, issued to Toledo Edison Company, Centerior Service Company, and The Cleveland Electric Illuminating Company (the licensees), for operation of the Davis-Besse Nuclear Power Station, Unit 1, located in Ottawa County, Ohio.

ENVIRONMENTAL ASSESSMENT

Identification of the Proposed Action:

The proposed action would exempt the licensees from the requirements of 10 CFR 70.24, which requires in each area in which special nuclear material is handled, used, or stored a monitoring system that will energize clear audible alarms if accidental criticality occurs. The proposed action would also exempt the licensees from the requirements to maintain emergency procedures for each area in which this licensed special nuclear material is handled, used, or stored to ensure that all personnel withdraw to an area of safety upon

the sounding of the alarm, to familiarize personnel with the evacuation plan, to designate responsible individuals for determining the cause of the alarm, and to place radiation survey instruments in accessible locations for use in such an emergency.

The proposed action is in accordance with the licensees' application for exemption dated January 30, 1997, as supplemented May 28 and October 3, 1997.

The Need for the Proposed Action:

The purpose of 10 CFR 70.24 is to ensure that if a criticality were to occur during the handling of special nuclear material, personnel would be alerted to that fact and would take appropriate action. At a commercial nuclear power plant, the inadvertent criticality with which 10 CFR 70.24 is concerned could occur during fuel handling operations. The special nuclear material that could be assembled into a critical mass at a commercial nuclear power plant is in the form of nuclear fuel; the quantity of other forms of special nuclear material that is stored onsite in any given location is small enough to preclude achieving a critical mass. Because the fuel is not enriched beyond 5.0 weight percent uranium-235, and because commercial nuclear plant licensees have procedures and design features that prevent inadvertent criticality, the staff has determined that it is unlikely that an inadvertent criticality could occur due to the handling of special nuclear material at a commercial power reactor. Therefore, the requirements of 10 CFR 70.24 are not necessary to ensure the safety of personnel during the handling of special nuclear materials at commercial power reactors.

Environmental Impacts of the Proposed Action:

The Commission has completed its evaluation of the proposed action and concludes that inadvertent or accidental criticality will be precluded through compliance with the Davis-Besse Technical Specifications, the design of the fuel storage racks providing geometric

spacing of fuel assemblies in their storage locations, and administrative controls imposed on fuel handling procedures.

The proposed exemption would not result in an increase in the probability or consequences of accidents, affect radiological plant effluents, or cause any significant occupational exposures. Therefore, there are no radiological impacts associated with the proposed exemption.

The proposed exemption does not result in a change in nonradiological effluents and will have no other nonradiological environmental impact.

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

Alternatives to the Proposed Action:

Since the Commission has concluded that 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 exemption, the staff considered denial of the requested exemption. Denial of the request 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 Davis-Besse dated October 1975.

Agencies and Persons Consulted:

In accordance with its stated policy, on July 30, 1997, the staff consulted with the Ohio State official, Carol O'Claire, of the Ohio Emergency Management 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 licensees' letters dated January 30, May 28, and October 3, 1997, which are available for public inspection at the Commission's Public Document Room located at the Gelman Building, 2120 L Street, NW., Washington, DC, and at the local public document room located at the University of Toledo, William Carlson Library, Government Documents Collection, 2801 West Bancroft Avenue, Toledo, OH 43606.

Dated at Rockville, Maryland, this 30th day of October 1997.

FOR THE NUCLEAR REGULATORY COMMISSION



Gail H. Marcus, Director
Project Directorate III-3
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation