

March 15, 1990

Docket No. 50-346

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Mr. Donald C. Shelton
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Dear Mr. Shelton:

SUBJECT: ENVIRONMENTAL ASSESSMENT RELATED TO REQUEST FOR EXEMPTIONS FROM THE REQUIREMENTS OF APPENDIX R TO 10 CFR PART 50 (TAC NO. 60995)

Enclosed for your information is a copy of an Environmental Assessment and Finding of No Significant Impact. This assessment relates to your requests dated January 12, 1987 and July 31, 1989, for a number of exemptions from the requirements of Appendix R to 10 CFR Part 50.

This Environmental Assessment has been forwarded to the Office of the Federal Register for publication.

Sincerely,

Thomas V. Wambach, Sr. Project Manager
Project Directorate III-3
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosure:
As stated

cc: See next page

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Davis-Besse Nuclear Power Station
Unit No. 1

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UNITED STATES NUCLEAR REGULATORY COMMISSIONTOLEDO EDISON COMPANYANDTHE CLEVELAND ELECTRIC ILLUMINATING COMPANYDAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1DOCKET NO. 50-346ENVIRONMENTAL ASSESSMENT AND FINDING OFNO SIGNIFICANT IMPACT

The U. S. Nuclear Regulatory Commission (the Commission) is considering issuance of a number of exemptions from the requirements of Appendix R to 10 CFR Part 50 in response to a request filed by the Toledo Edison Company and The Cleveland Electric Illuminating Company (the licensees), for the Davis-Besse Nuclear Power Station, Unit No. 1, located in Ottawa County, Ohio.

ENVIRONMENTAL ASSESSMENTIdentification of Proposed Action

The Toledo Edison Company (the licensee) submitted in its letter dated January 12, 1987, a request for nine specific exemptions from the requirements of Appendix R to 10 CFR Part 50. The licensee later submitted in its letter dated July 31, 1989, a request for three additional exemptions from Appendix R.

In its subsequent letters dated January 18, March 15, and October 26, 1989, the licensee withdrew its requests for three of these exemptions. Additionally, the staff found that one of the others was not required. Each of the remaining eight exemption requests is discussed below with a description of the pertinent Appendix R requirement and a brief description of the nature of the deviation from the applicable Appendix R requirement.

For Fire Areas R, EE and AB, the last paragraph of Section III.G.3 of Appendix R requires that a fixed fire suppression system be installed in these three fire areas in that an alternate shutdown capability and its associated circuits is provided for these areas. Fire Area R has an alternate shutdown capability in Fire Area BD for the service water system and has an alternate shutdown capability in Fire Area II for the control valves of the turbine driven auxiliary pumps.

Fire Area EE has an alternate shutdown capability in Fire Area II which is physically and electrically independent in the event of fire damage to the circuits or electrical components of the MS106 main steam inlet isolation valve for auxiliary feedwater pump turbine No. 1

Fire Area AB has an alternate shutdown capability in Room No. 115 for potential fire damage to circuits associated with the emergency core cooling system (ECCS) room cooler fans C31-1 and C31-2.

For Fire Area A and for embedded conduits, Section III.G.2.a of Appendix R requires in part that cables and equipment and associated nonsafety circuits of redundant trains be separated by a fire barrier having a 3-hour rating. While there are, in general, 3-hour fire barriers in Fire Area A between redundant circuits used to achieve and maintain hot shutdown conditions, there is a nonrated door as well as a number of nonrated heating ventilating and air-conditioning (HVAC) penetrations. These nonrated features compromise the fire barrier between redundant electrical circuits in Room Nos. 124 and 123 and those in Room No. 115 within Fire Area A.

Certain cables of electrical circuits required to achieve a safe shutdown in the event of a fire and which are enclosed in conduit and embedded in concrete were not evaluated by the licensee in its safe shutdown analysis for a fire. As discussed above, the placement of these cables does not meet the Appendix R requirements specifying that they be separated by a 3-hour fire barrier. The specific cables involved are listed in Appendix B-2 of the Davis-Besse Appendix R Compliance Assessment Report (CAR).

Section III.J of Appendix R requires that emergency lighting units with at least an 8-hour battery power supply be provided in all areas needed for operation of safe shutdown equipment and in access and egress routes thereto. The licensee has requested approval to utilize existing "hard-wired" AC/DC essential lighting systems in portions of the auxiliary and turbine buildings and to utilize hand-held portable lighting units in outside plant areas, in lieu of meeting the specific requirements of Section III.J cited above.

For Fire Area D, Section III.G.2.d of Appendix R requires for non-inerted containments that cables and equipment and associated nonsafety circuits of redundant trains be separated by a horizontal distance of more than 20 feet with no intervening combustibles or fire hazards. However, in Fire Area D (i.e., the primary reactor containment), redundant containment air cooler fans C1-1, C1-2 and C1-3 are about 10 feet apart.

In manhole MH 3001, Section III.G.2.b of Appendix R requires in part that cables and equipment and associated nonsafety circuits located within the same fire area outside of primary containment and required to achieve and maintain hot shutdown conditions of the reactor be separated by a horizontal distance of more than 20 feet with no intervening combustibles or fire

hazards. However, there are redundant circuits in manhole MH 3001 associated with the service water system, including pumps (P3-1, P3-2 and P3-3), the backup pump (P-180), valves (SW 1395 and SW 1399) and motor control centers (MCCs, E12C and F12C) which are less than 6 feet from one another.

The Need for the Proposed Action

The proposed exemptions are needed because the features described in the licensee's requests regarding the existing level of fire protection and proposed modifications at the plant are a practical method of meeting the intent of Appendix R and literal compliance would not significantly enhance the fire protection capability.

Environmental Impacts of the Proposed Action

The proposed eight exemptions cited above are from the specific requirements of certain provisions of Appendix R to 10 CFR Part 50. For each of the requested exemptions, the licensee has provided justification for the requests demonstrating that it is providing equal protection for the safe shutdown capability of the Davis-Besse facility in the event of a fire within any of the fire areas affected by the proposed exemptions. On this basis, there are no changes in the manner of the plant operation in the event of a fire. Accordingly, there will be no increase in either the probability or the amount of radiological release from the Davis-Besse plant in the event of a fire. Therefore, the Commission concludes that there are no significant radiological environmental impacts associated with the proposed exemptions.

With regard to potential nonradiological impacts, the proposed exemptions cause no change in the manner of the plant operation. They do not affect nonradiological plant effluents and have no other environmental impact. Therefore, the Commission concludes that there are no significant nonradiological environmental impacts associated with the proposed exemptions.

Alternative to the Proposed Action

Since the Commission concluded that there are no significant environmental impacts associated with the proposed actions, any alternatives would have either no or greater environmental impact.

The principal alternative would be to deny the requested exemptions. This would not reduce the environmental impacts attributed to the facility but would result in the expenditure of resources without any compensating benefit.

Alternative Use of Resources

This action does not involve the use of any resources not previously considered in the Final Environmental Statement for the Davis-Besse Nuclear Power Station, Unit 1, dated March 1973 and its supplement dated October 1975.

Agencies and Persons Consulted

The NRC staff reviewed the licensee's request and did not consult other agencies or persons.

FINDING OF NO SIGNIFICANT IMPACT

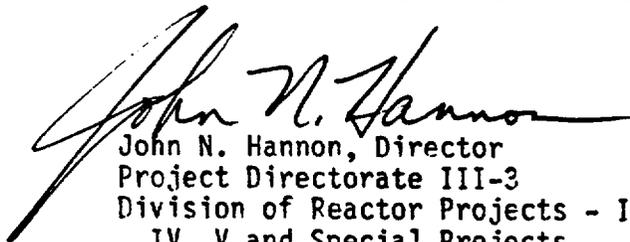
The Commission has determined not to prepare an environmental impact statement for the proposed exemptions.

Based upon the foregoing environmental assessment, we conclude that the proposed action will not have a significant effect on the quality of the human environment.

For further details with respect to these actions, see the requests for exemptions dated January 12, 1987 and July 31, 1989 which are available for public inspection at the Commission's Public Document Room, 2120 L Street, N.W., Washington, D.C. and at the University of Toledo Library, Documents Department, 2801 Bancroft Avenue, Toledo, Ohio 43606.

Dated at Rockville, Maryland, this 15th day of March 1990.

FOR THE NUCLEAR REGULATORY COMMISSION



John N. Hannon, Director
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IV, V and Special Projects
Office of Nuclear Reactor Regulation