

UNITED STATES NUCLEAR REGULATORY COMMISSIONDUKE ENERGY CORPORATIONOCONEE NUCLEAR STATION, UNITS 1, 2, AND 3DOCKET NOS. 50-269, 50-270, AND 50-287ENVIRONMENTAL ASSESSMENT ANDFINDING OF NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an exemption from the requirements of Title 10 of the Code of Federal Regulations (10 CFR) Section 50.46(b) to the Duke Energy Corporation (the licensee) for operation of the Oconee Nuclear Station, Units 1, 2, and 3, located in Oconee County, South Carolina.

ENVIRONMENTAL ASSESSMENTIdentification of Proposed Action:

The proposed action would exempt the licensee from the provisions in 10 CFR 50.46(b), with respect to the emergency core cooling performance requirements during the performance of the proposed Keowee Emergency Power and Engineered Safeguards Functional (KEP/ESF) Test on Unit 3.

The emergency core cooling system (ECCS) is designed to assure that the consequences of the spectrum of loss of coolant accidents (LOCAs), coincident with a loss of offsite power (LOOP), are within the performance criteria specified in 10 CFR 50.46(b). As explained in the licensee's letter dated October 21, 1998, the planned test on Unit 3 could challenge these performance criteria in the extremely unlikely event that a LOCA and LOOP occurred coincident with the test. The licensee has chosen to address this issue with an

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exemption request. Therefore, pursuant to 10 CFR 50.12, the licensee applied for an exemption from 10 CFR 50.46.

The Need for the Proposed Action:

The proposed action is required to exempt the licensee from the requirement to maintain an ECCS that is designed to conform to the criteria in 10 CFR 50.46(b) during the 10-second time interval when the test is actually being performed during the 24-hour test period. The action is needed to allow the test to be performed.

As stated in its September 17, 1998, letter, the licensee has planned a modification that would add voltage and frequency protection for Oconee loads when supplied from a Keowee hydro unit. The protection would separate Oconee loads from a Keowee unit if that unit's voltage or frequency becomes greater than 110 percent or less than 90 percent of rated value at any time after loading. The planned design would delay the loading of Oconee loads on the underground power path until the Keowee unit reaches greater than 90 percent voltage and frequency. The existing design allows early loading of the underground path Keowee unit at approximately 60 percent voltage. As a result of considering the frequency overshoot the Keowee units experience during an emergency start, and to resolve questions that arose concerning whether the preferred loading design for the emergency power system is 60 percent loading or 90 percent loading, the Keowee Emergency Power and Engineered Safeguards Functional Test is planned.

Environmental Impacts of the Proposed Action:

The Commission has completed its evaluation of the proposed action and concludes that exemption from the requirements of 10 CFR 50.46(b) to allow the licensee to perform the Keowee Emergency Power and Engineered Safeguards Functional Test to increase the reliability of the emergency electrical power system is appropriate.

The planned test will be performed with Unit 3 at cold shutdown and its engineered safeguards (ES) loads on the Standby Bus. The other two Oconee units will be operating and should not be affected by the test. However, in the unlikely event that a real LOCA/LOOP were to occur on either of the operating units during the simulated LOCA/LOOP on Unit 3 (probability, according to the licensee, of approximately $2E-9$), the Oconee emergency power system (EPS) for Oconee Units 1, 2, and 3 could be in a condition outside its design bases. The EPS may not be capable of handling the electrical loading of two instantaneous LOCA/LOOP events without some safety-related equipment being adversely affected. However, the EPS would be able to handle the electrical loading if the two events are offset in time by approximately 10 seconds to allow the first unit's load to reach a steady-state condition prior to starting of the second unit's emergency loads. Therefore, this 10-second window of vulnerability causes an infinitesimally small, but non-zero, increase in the probability of a malfunction of equipment important to safety and the potential consequences of a LOCA/LOOP event during the performance of the test.

The exemption will not significantly 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 environmental impacts, the proposed action does not affect nonradiological plant effluents and has no other environmental impacts. Accordingly, the Commission concludes that there are no significant nonradiological impacts associated with the proposed action.

Alternatives to the Proposed Action:

Since the Commission has concluded there is no significant 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 (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 resources not previously considered in the "Final Environmental Statement Related to the Operation of the Oconee Nuclear Station, Units 1, 2, and 3," dated March 1972.

Agencies and Persons Consulted:

In accordance with its stated policy, on November 4, 1998, the staff consulted with the South Carolina State official, Virgil R. Autry of the Division of Radioactive Waste Management, Bureau of Land and Waste Management, Department of Health and Environmental Control, regarding the environmental impact of the proposed action. The State official had no comments.

FINDING OF NO SIGNIFICANT IMPACT:

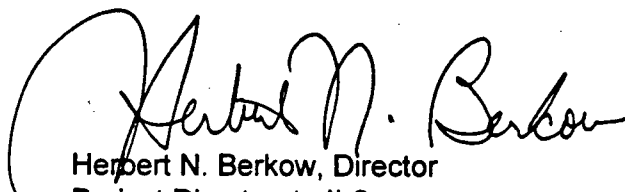
Based on the environmental assessment, the Commission concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the Commission has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's letters dated October 21 and September 17, 1998, which are 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 Oconee County Library, 501 West South Broad Street, Walhalla, South Carolina.

Dated at Rockville, Maryland, this 9th of November 1998.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in cursive script, reading "Herbert N. Berkow". The signature is written in black ink and is positioned above the printed name and title.

Herbert N. Berkow, Director
Project Directorate II-2
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