May 22, 1998

Mr. W. R. McCollum
Vice President, Oconee S
Duke Energy Corporation
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Seneca, SC 29679

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SUBJECT: POSITION AMPLIFICATION AND REQUEST FOR ADDITIONAL INFORMATION - OCONEE NUCLEAR STATION ELECTRICAL DISTRIBUTION SYSTEM TECHNICAL SPECIFICATIONS (TAC NOS. M86027, M86028, AND M86029)

Dear Mr. McCollum:

On May 11 and 12, 1998, the NRC staff met with Duke Energy Corporation personnel to discuss issues relating to the staff's review of the Oconee Nuclear Station Emergency Electrical Distribution System application for amendments to the current Technical Specification (TS) Section 3.7, and conversion to the Improved TS. Two issues that remained unresolved after the meeting dealt with battery performance discharge testing and the main feeder bus monitoring system. For these two items, the staff committed to amplify its position regarding why it feels the items should be included in the Oconee TS. This information is supplied in the enclosure. In addition, the staff is requesting information relating to the second offsite power circuit (for each Oconee unit) from the 230 kV switchyard to the main feeder buses by way of the main step-up and unit auxiliary transformers.

Sincerely,
ORIGINAL SIGNED BY:

David E. LaBarge, Senior Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-269, 50-270, and 50-287

Enclosure: As stated

cc w/encl: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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Vice President, Oconee Site
Duke Energy Corporation
P. O. Box 1439
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REQUEST FOR ADDITIONAL INFORMATION
OCONEE NUCLEAR STATION ELECTRICAL SYSTEM

Battery Discharge Testing

Although not a current requirement in the Oconee Technical Specifications (TS), the staff has expressed concern regarding the lack of a battery performance discharge test requirement in TS Section 3.7. Duke Energy Corporation's (the licensee's) response to this concern has been that battery performance discharge testing is not included in the Oconee licensing bases. However, such testing is performed to assist in predictive maintenance to indicate the need for battery replacement. The response further notes that the results of such testing do not indicate the operability of the batteries and, as such, should not be included as a TS required surveillance.

In the development of the Improved TS (ITS), during which the NRC staff discussed numerous issues with industry, the issue of whether battery performance discharge testing results provided information relating to battery operability was addressed. During these discussions, the NRC staff noted that when battery capacity degrades near the end of its life, the battery may be capable of passing a battery service test but not capable of passing the next scheduled service test due to rapid battery capacity degradation that could occur between the service test interval. Thus, the plant could be operating for a period of time when the battery is unable to meet its design requirements. Within this context, the NRC staff determined that battery performance discharged testing is related to battery operability and, as such, was included as a required surveillance in the ITS. As an additional item, the staff notes that in order to preclude two relatively deep discharges of the batteries within a short period of time, a modified performance discharge test has been previously proposed and accepted, and is presently included as an option within the ITS.

For these reasons, the staff believes battery discharge testing should be included in the Oconee TS.

Main Feeder Bus Monitoring

For main feeder bus monitoring panel circuitry, the staff has expressed concern regarding not retaining current TS requirements for this system in TS Section 3.7. In essence, the response to this concern has been that this panel circuitry is not within the Oconee licensing bases and that manual operator action is credited for this circuitry function. Criteria 3 and 4 of the Commission's interim and final policy statement, as well as 10 CFR 50.36, provide guidance regarding what is to be retained in the TS. Criterion 3 notes that it is the Commission's policy to retain in the TS a system that is part of the primary success path and which functions to mitigate a transient that presents a challenge to the integrity of the fission product barrier. While it is recognized that manual operator actions could form a part of the primary success path, the intent of this criterion in the electrical area is to focus on hardware item response, particularly in the initial stage of a need for the function. Criterion 4 of the final policy statement addresses operating experience. Within this context, and on previous occasions for localized plant centered loss of electrical power, the feeder bus monitoring panel circuitry has performed a very useful and necessary function in restoration of power to the main feeder buses. In addition, a localized plant centered loss of power occurrence has been found much more likely

than an area-wide grid disturbance for which additional hardware has been designed and implemented for power restoration. Thus, measures to ensure a continuing high degree of functional performance for the main feeder bus monitoring panel circuitry are viewed as being necessary.

For these reasons, the staff believes main feeder bus monitoring should be retained in the Oconee TS.

Second Offsite Power Circuit Questions

The last paragraph on page 8-5 of the Updated Final Safety Analysis Report (UFSAR) provides the following information. Each unit is provided with two physically independent circuits from the switching station. One is the circuit from the 230 kV switching station through the startup transformer, which is designed to be available within a few seconds following a loss-of-coolant accident. The second circuit is the path from the switchyard through the main step-up transformer, the main generator bus, and the unit's auxiliary transformer with the generator disconnected from the main bus. This second circuit is designed to be available in time following a loss-of-coolant accident to assure that specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded. With regard to this second circuit, provide responses to the following:

(a) Within the context of a loss-of-coolant accident, explain the intended meaning of the above with regard to the role of the second circuit path being available in time such that specified acceptable fuel design limits and conditions of the pressure boundary are not exceeded.

(b) Describe in detail how and when the capability and capacity of the second circuit path has been demonstrated or analyzed to meet the criteria specified in the UFSAR.

(c) The second circuit path is not addressed in the current TS or TS Section 3.7. In addition, the Bases to TS Section 3.7 states that once the 230 kV lines enter the switchyard, an electrical pathway must exist through operable power circuit breakers and disconnects such that both sources are available to energize the unit's startup transformer; and once within the switchyard, the electrical pathway may be the same for both independent offsite circuits. This description of two independent 230 kV offsite circuits ending in a single unit startup transformer appears to be in conflict with the UFSAR description of an offsite circuit through a unit startup transformer, and a second offsite circuit through the second circuit path. Please address this discrepancy, and explain why the second circuit path is not included in the current TS or TS Section 3.7.