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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 228 TO FACILITY OPERATING LICENSE DPR-47,

DUKE ENERGY CORPORATION

OCONEE NUCLEAR STATION, UNIT 2

DOCKET NO. 50-270

1.0 INTRODUCTION

By letter dated January 15, 1998, Duke Energy Corporation (the licensee), submitted a request for changes to the Oconee Nuclear Station (ONS), Unit 2 Technical Specifications (TS). The requested changes, which are in support of the upcoming Oconee Unit 2 refueling outage, would provide a one-time extension of the refueling outage interval surveillance test frequency for the (1) Engineered Safeguards (ES) Channel 5 Reactor Building Isolation and Cooling Manual Trip, (2) Engineered Safeguards Channel 6 Reactor Building Isolation and Cooling Manual Trip, (3) Wide Range Hot Leg Level channel test and calibration, (4) Reactor Vessel Head Level channel test and calibration, (5) Core Exit Thermocouples calibration, (6) Subcooling Monitors channel test and calibration, and (7) Reactor Building Cooling System (RBCS). The test frequency change would apply during operating cycle 16 only and would extend the interval for tests (1), (2), and (7) to a maximum of 23 months and the interval for tests (3), (4), (5), and (6) to a maximum of 24 months from the date of performance of the previous surveillance. The maximum allowed interval for these tests as defined in TS 4.0.2 is 22 months, 15 days.

2.0 BACKGROUND

The next ONS Unit 2 refueling outage is presently scheduled to start at the end of operating cycle 16 on March 13, 1998. In preparation for this, the licensee reviewed the testing and calibration requirements to ensure compliance with the schedular requirements of the TS. This review indicated that three instrument channel tests and four instrument calibrations were required to be completed prior to the refueling outage. In addition, testing of the ES channels 5 and 6 and the RBCS was needed prior to the outage. All of these tests are required to be performed at the refueling outage interval and none can be performed during plant operation.

A previous review of surveillances during the forced outage in May of 1997, resulted in the performance of many surveillances during that shutdown that had due dates prior to the projected start date of the next refueling outage. However, the Inadequate Core Cooling Monitor (ICCM) related instruments were incorrectly coded in the ONS work management system and, therefore, were not identified as needing to be performed at that time.

In addition, the ES Channels 5 and 6 surveillances and the RBCS surveillance were not performed at that time because the surveillance review that was performed in May 1997, assumed a refueling outage start date of March 10, 1998, which would have allowed performance of the tests within the required interval. However, during subsequent plant operation, the refueling outage start date was moved to March 13, 1998, which moved the outage beyond the surveillance interval specified in the TS.

3.0 EVALUATION

The ICCM is designed to be used during a small break Loss of Coolant Accident (LOCA), steam line break accident, and/or steam generator tube failure when the operator has time to react to the event. It is composed of three interrelated monitoring systems: Reactor Vessel Level Instrumentation, Subcooling Margin Monitor, and Core Exit Thermocouple Monitor. In addition, the ICCM processor is used with other Regulatory Guide 1.97 instruments. The refueling outage frequency and type of surveillance required for these functions are specified in TS Table 4.1-1 Item 58 (Wide Range Hot Leg Level), Item 59 (Reactor Vessel Head Level), Item 60 (Core Exit Thermocouple), and Item 61 (Subcooling Monitors). The TS-required due dates for reperforming the plant procedures that are related to these functions are February 23, 24, and 27, 1998, corresponding to 22 months, 15 days from the date the procedures were last performed. As a result, the tests will become due prior to the scheduled start of the next refueling outage, March 13, 1998, and the licensee has requested that the interval be extended to 24 months.

The ES System is designed to function under accident conditions to reduce the severity of a serious LOCA. When the system detects plant conditions that may indicate a LOCA, it automatically initiates action to provide emergency cooling to assure structural integrity of the core, maintain the integrity of the reactor building, and collect and filter any potential reactor building penetration leakage. The surveillance requirements for instruments related to this function are specified in Table 4.1-1 Item 45 (Engineered Safeguards Channel 5 Reactor Building Isolation and Cooling Manual Trip), Item 46 (Engineered Safeguards Channel 6 Reactor Building Isolation and Cooling Manual Trip), and TS 4.5.2.1.2a (Reactor Building Cooling System). The TS-required due date for re-performing the plant procedure related to these functions is March 12, 1998, corresponding to 22 months, 15 days from the date the procedure was last performed. As a result, the test will become due prior to the scheduled start of the next refueling outage, March 13, 1998, and the licensee has requested that the interval be extended to 23 months.

The licensee has reviewed the performance records of the two previous surveillances for all of these instruments and determined that no adverse trends or excessive drift were indicated. As-found data was well within the specified tolerances. Thus, these instruments have demonstrated reliable and accurate operation.

To implement the proposed change for Items 45 and 46, the following would be added to Table 4.1-1 under Remarks with a reference to the refueling outage test:

> A one-time extension of the test frequency to a maximum of 23 months is allowed for Oconee Unit 2 during operating cycle 16.

For Items 58, 59, 60, and 61, the proposed change would be reflected similarly, but 23 months would be changed to 24 months.

To implement the proposed change for TS 4.5.2.1.2a, Reactor Building Cooling System, the following note would be added:

> A one-time extension of the Reactor Building Cooling system test frequency to a maximum of 23 months is allowed for Oconee Unit 2 during operating cycle 16.

Periodic surveillance requirements were not intended to adversely affect safe plant operation simply because a specified surveillance interval does not coincide with plant operating schedules. Normally, variations in schedules can be accommodated through the existing technical specifications. Specifically, TS 4.0.2 is an administrative control that ensures surveillance tests are performed within the specified interval, but it provides for an allowable tolerance (25 percent) for performing surveillances beyond the normal surveillance interval. This tolerance provides operational flexibility to allow for scheduling and performance considerations while still ensuring that the reliability of the equipment or system associated with the surveillance is not significantly degraded beyond that obtained from the nominal specified surveillance interval. However, circumstances can develop wherein the relief provided by TS 4.0.2 is inadequate, but good cause for additional relief can be demonstrated by the licensee.

Such is the case here. The licensee has provided compelling evidence that the change in the refueling schedule was not undertaken for a reason or in a manner adverse to safety, that reasonable assurance exists that equipment associated with the subject surveillances will not be degraded significantly by the requested interval extensions, and that good cause exists for granting the extensions. The surveillance interval extensions proposed by the licensee would result in a slightly diminished confidence in the reliability that would be provided by TS 4.0.2, but the licensee has satisfactorily addressed this concern.

Based on our review of the information supplied by the licensee, the staff has determined that the requested one-time extension is acceptable for ONS Unit 2 operating cycle 16 since the extension is of short duration and the instruments have shown no adverse trends that question their reliability or ability to perform their required function.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the South Carolina State official was notified of the proposed issuance of the amendments. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes requirements with respect to the surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (63 FR 3593 dated January 23, 1998). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Date: February 23, 1998