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August 22, 2000

U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Document Control Desk

Subject: Oconee Nuclear Station
Docket Numbers 50-269, 270, and 287
License Amendment Request for Automatic Feedwater
Isolation System Modification affecting Technical
Specifications 3.3.11, 3.3.12, 3.3.13 - Main Steam
Line Break Detection and Main Feedwater Isolation
Circuitry - Revised No Significant Hazards
Determination
Technical Specification Change (TSC) Number 99-10

Pursuant to the telephone call on August 10, 2000 between Messrs. Emch and LaBarge of the Nuclear Regulatory Commission and Messrs. Nicholson and Johnson of Duke Energy, we are submitting a revised No Significant Hazards Determination. The revision removes unneeded detail that is generally duplicated in the Technical Justification section of Duke's submittal dated July 18, 2000.

This submittal also includes a replacement for page 7 of Attachment 2, Technical Justification of our submittal. This page contained a statement that the justification for the LOCA event was contained in the No Significant Hazards Determination. During preparation of the submittal, the justification was duplicated in the Technical Justification attachment and the statement referring to the No Significant Hazards Determination should have been deleted at that time. The current revision to the No Significant Hazards Determination deleted this duplicated material thereby making the reference statement in the Technical Justification erroneous. The revised page 7 deletes this statement.

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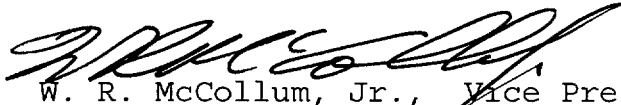
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If there are any questions regarding this submittal, please
contact Eric Johnson at (864) 885-4716.

Very truly yours,



W. R. McCollum, Jr., Vice President
Oconee Nuclear Site

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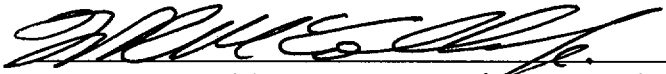
cc: Mr. D. E. LaBarge, Project Manager
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Mr. L. A. Reyes, Regional Administrator
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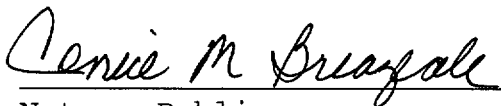
Mr. Virgil R. Autry, Director
Division of Radioactive Waste Management
Bureau of Land and Waste Management
Department of Health & Environmental Control
2600 Bull Street
Columbia, SC 29201

W. R. McCollum, Jr., being duly sworn, states that he is Vice President, Oconee Nuclear Site, Duke Energy Corporation, that he is authorized on the part of said Company to sign and file with the U. S. Nuclear Regulatory Commission this revision to the Facility Operating License Nos. DPR-38, DPR-47, DPR-55; and that all the statements and matters set forth herein are true and correct to the best of his knowledge.



W. R. McCollum, Jr., Vice President
Oconee Nuclear Site

Subscribed and sworn to before me this 22 day of August,
2000



Notary Public

My Commission Expires:

2-12-2002

Attachment 4
No Significant Hazards Determination

Pursuant to 10 CFR 50.91, Duke Power Company (Duke) has made the determination that this amendment request involves a No Significant Hazards Consideration by applying the standards established by the NRC regulations in 10 CFR 50.92. This ensures that operation of the facility in accordance with the proposed amendment would not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated:

No. There is no significant increase in the probability of a loss of Main Feedwater (MFW) or Emergency Feedwater (EFW) event due to spurious actuation of the Automatic Feedwater Isolation System (AFIS). AFIS provides a means of automatic response to improve the ability to isolate MFW and EFW to mitigate containment overpressurization and steam generator tube stresses resulting from Main Steam Line Break (MSLB) accidents. AFIS replaces the need for manual operator actions currently required by emergency operating procedures, but these remain as a defense-in-depth. AFIS is highly reliable, being designed with two independent trains of diverse digital control systems, each having four channels of inputs. The AFIS modification will also upgrade some existing components that were actuated by MSLB Detection and Feedwater (FDW) Isolation Circuitry that were not safety grade to safety grade quality thereby improving system reliability. Therefore, the installation of AFIS does not involve a significant increase in the probability or consequences of an accident previously evaluated.

- (2) Create the possibility of a new or different kind of accident from any kind of accident previously evaluated:

No. AFIS replaces the MSLB Detection and FDW Isolation Circuitry as described in the Updated Final Safety Analysis Report. AFIS is capable of determining which

steam generator has been affected and will isolate MFW and EFW to that steam generator. In this regard, AFIS performs the same functions that are currently performed by the combination of the MSLB Detection and FDW Isolation Circuitry plus the additional operator actions needed to isolate the affected steam generator. Safety features have been designed into AFIS to prevent spurious actuation. The system must be energized to trip therefore AFIS will not cause a trip on loss of power. There are no postulated failures such as loss of power that differ from those assumed for an analog control system that would prevent proper system actuation. The design of the two out of four input logic provides redundancy against the affects of single failures that could cause spurious actuation. In the unlikely event of spurious actuation, manual manipulation of EFW pump controls will override the AFIS trip signals. Therefore, AFIS does not introduce hardware failures that inhibit proper operation of MFW or EFW. In conclusion, AFIS does not create the possibility of a new or different kind of accident from any kind previously evaluated.

(3) Involve a significant reduction in a margin of safety.

No. The proposed change does not adversely affect any plant safety limits, set points, or design parameters. The change also does not adversely affect the fuel, fuel cladding, Reactor Coolant System, or containment integrity. For a postulated feedwater line break (FLB)/MSLB inside containment, AFIS will improve the margin of safety by reducing the mass and energy release to containment. AFIS will also improve the margin of safety for departure from nucleate boiling by minimizing the overcooling transient from a FLB/MSLB. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Duke has concluded, based on the above, that there are no significant hazards considerations involved in this amendment request.

Replacement Page 7

Attachment 2
Technical Justification

SG depressurization. However, plant procedures contain guidance to throttle EFW while SG level is increasing in order to prevent excessive RCS overcooling which limits SG depressurization. The throttling of EFW should preclude exceeding the AFIS rate of depressurization setpoint. In the event that AFIS actuates and causes a MDEFWP trip during the small break LOCA event, manual restoration of EFW is required. Single failure criteria apply.

Anticipated Transient Without Scram (ATWS). This event (beyond design basis event) is mitigated by the Diverse Scram System (DSS) shutting down the reactor and by the ATWS Mitigation System Actuation Circuitry (AMSAC) tripping the main turbine and actuating the EFW System. SG depressurization below the AFIS low pressure setpoint should not occur, and thus AFIS will not actuate. Consideration of a single failure or seismic event is not required. Since AFIS trips the MFW pumps and AMSAC actuates EFW upon loss of MFW, an AFIS interlock is provided in the MDEFWP switchgear controls to inhibit EFW pump starts due to AMSAC actuation.

Loss of All Feedwater

The plant response to a total loss of MFW and EFW (beyond design basis event) can result in SG depressurization and approach the AFIS setpoint. It is unlikely that the decreasing pressure rate component of the setpoint will be exceeded. Regardless of AFIS actuation, manual operator restoration of EFW is required.

Turbine Bypass System Failure

For events which cause both SGs to depressurize (e.g. all turbine bypass valves open), AFIS may actuate on both SGs. This would require manual operator restoration of EFW.

Accident Analysis:

An accident analysis model was used in the development of the AFIS algorithm which detects a MSLB event. This algorithm was then evaluated for other events (SBLOCA, reactor trip, loss of FDW, and ATWS) to confirm the distinguishing characteristics of a MSLB. The proposed AFIS circuitry is designed to discriminate between severe overcooling events