



Duke Energy Corporation

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H. B. Barron
Vice President

July 5, 2000

U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
ATTENTION: Document Control Desk

SUBJECT: Duke Energy Corporation
McGuire Nuclear Station Units 1 and 2
Docket Nos. 50-369 and 50-370
RAI "Proposed Amendment to Technical Specification
(TS) 3.3.2 - Engineered Safety Features Actuation
System Instrumentation"
TAC Numbers MA8439/40

REFERENCE: Duke Amendment Request, dated February 29, 2000.

Duke Energy Corporation (Duke) submitted a proposed amendment to McGuire Nuclear Station Technical Specification 3.3.2, dated February 29, 2000. In followup teleconferences, the NRC staff requested additional information regarding the methods used to calculate setpoints in the proposed amendment. In response to those questions, Duke provides the following information.

Duke uses Engineering Directive Manual 102 (EDM-102) "Instrumentation Setpoint/Uncertainty Calculations" as the governing document for developing setpoints for reactor protection or engineered safeguards actuation such as prepared in support of this amendment. This methodology was developed by Duke referencing a number of industry standards including: "Methodologies for the Determination of Setpoints for Nuclear Safety Related Instrumentation" (ISA-dRP67.04, Part II (draft 11, dated August 1994)), "Setpoints for Nuclear Safety-Related Instrumentation" (ANSI/ISA-S67.04-1992), "Process Instrumentation Terminology" (ANSI/ISA-S51.1-1979) and U.S. Nuclear Regulatory Commission Regulatory Guide 1.105, "Instrument Setpoints for Safety Related Systems," Rev. 2, dated February, 1986.

This Duke document includes a statistical methodology relying on Square-Root-Sum-of-the-Squares (SRSS) combination of random independent uncertainty terms for loop uncertainty. Random-dependent and bias uncertainty terms must be addressed through a

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combination of the SRSS and algebraic techniques. Contributors to uncertainty such as drift, calibration effect, calibration tolerance, environmental effects and power supply effects are appropriately identified and included in calculating setpoints.

EDM-102 was not written to be in literal compliance with Regulatory Guide 1.105; however, the Regulatory Guide was one of the references used in the development of the procedure. The methodology and application of EDM-102 and other predecessor engineering references ensure that setpoints in systems important to safety initially are within and remain within specified limits as required by Regulatory Guide 1.105, Rev. 3. Duke's methods of setpoint calculation and uncertainty evaluation are generally consistent with Regulatory Guide 1.105, Rev. 3 and accomplish the stated purpose of this Regulatory Guidance.

Pursuant to 10 CFR 50.91, a copy of this correspondence will be forwarded to the appropriate North Carolina State Officials.

Please direct questions on this matter to Norman T. Simms at (704) 875-4685.

Very truly yours,



H.B. Barron, Vice President
McGuire Nuclear Station

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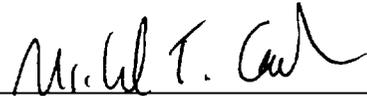
AFFIDAVIT

H.B. Barron, being duly sworn, states that he is Site Vice President of McGuire Nuclear Station, Duke Energy Corporation; that he is authorized on the part of said corporation to sign and file with the U.S. Nuclear Regulatory Commission the license amendment submitted on February 29, 2000 and the supplemental information contained in this correspondence; and, that all statements and matters set forth therein are true and correct to the best of his knowledge.



H.B. Barron, Vice President
McGuire Nuclear Station
Duke Energy Corporation

Subscribed and sworn to before me: July 7, 2000
Date



Notary Public

My Commission Expires: January 22, 2003
Date

MICHAEL T. CASH
Notary Public
Lincoln County, North Carolina
Commission Expires January 22, 2003

bxc:

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ELL (EC050)
MNS Regulatory Compliance File
McGuire Master File
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