

April 1, 2005

LICENSEE: DUKE ENERGY CORPORATION
FACILITY: MCGUIRE NUCLEAR STATION, UNITS 1 AND 2
SUBJECT: SUMMARY OF MARCH 23, 2005, MEETING TO DISCUSS MEASUREMENT
UNCERTAINTY RECAPTURE POWER UPRATE (TAC NOS. MC6239 AND
MC6240)

On March 23, 2005, at 1:00 p.m., the Nuclear Regulatory Commission (NRC) staff conducted a Category 1 technical meeting with Duke Energy Corporation (Duke or the licensee), at NRC Headquarters in Rockville, Maryland. The purpose of the meeting was to present the technical merits for utilizing American Society of Mechanical Engineers (ASME) flow nozzles for a measurement uncertainty recapture (MUR) power uprate at McGuire Nuclear Station (McGuire), Units 1 and 2. A list of attendees is provided in Attachment 1 and the handouts provided in the meeting are included in Attachment 2.

The licensee presented a technical drawing and description of the ASME flow nozzles used to measure the feed water flow at McGuire. These flow instruments were installed at McGuire in 1996 to replace venturi flow instruments that had experienced upstream tap erosion. The venturi instrument fouling caused a flow measurement error that resulted in a loss of station electrical generation.

Duke reported that thermal power measurement uncertainty can be as low as 0.25 percent using flow nozzles and that differential pressure based flow instrumentation is a measurement technique based on a mature process. In addition the licensee explained that the low pressure tap, referred to as the "wall tap," is insensitive to fouling. Duke considers the ASME flow nozzles as applied at McGuire suitable for a MUR power uprate. The licensee has a time frame of between three and five years for implementation. If approved, Duke would pursue use of ASME nozzles for MUR power uprate at Oconee and Catawba.

The NRC staff asked a number of technical questions concerning the use of the ASME flow nozzle at McGuire including licensee maintenance practices and calibration. The NRC staff also suggested that a first step toward an approved power uprate would be a site-specific topical report using plant empirical data to demonstrate the accuracy of the flow nozzles. If the instrument accuracy and technical basis can be found acceptable by the NRC staff for use in a MUR power uprate at McGuire then an application for a licensing amendment could be reviewed in the same time frame as other MUR power uprate submittals. The NRC staff also discussed the MUR power uprate licensing process and noted some recent amendment approvals that could model for a future license amendment submittal.

Following the business portion of the meeting a question was asked by a member of the public concerning the licensing process for MUR power uprate. The NRC staff explained in more detail the licensing process for MUR power uprate and noted again that a McGuire licensing amendment submittal would be treated as other MUR power uprate amendments by the NRC staff if a site-specific topical report was approved for McGuire.

After no more questions were identified, the meeting was adjourned.

Please direct any inquires concerning this meeting to myself or Mr. John Stang, Senior Project Manager, Power Uprates. Mr. Stang may be reached at (301) 415-1345, or jfs2@nrc.gov.

/RA/

James J. Shea, Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-369 and 50-370

Attachments: 1. Attendance List
2. Meeting presentation materials

cc w/atts: See next page

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Please direct any inquires concerning this meeting to myself or Mr. John Stang, Senior Project Manager, Power Upates. Mr. Stang may be reached at (301) 415-1345, or jfs2@nrc.gov.

/RA/

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LIST OF ATTENDEES

MEETING TO DISCUSS MUR POWER UPRATE

MARCY 23, 2005

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J. Nakoski
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J. Shea
P. Rebstock
C. Grimes
I. Ahmed

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