

DUKE POWER COMPANY

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March 31, 1983

Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street NW, Suite 2900
Atlanta, Georgia 30303

Re: McGuire Nuclear Station Unit 2
Docket No. 50-370

Dear Mr. O'Reilly:

Pursuant to 10 CFR 50.55e, please find attached Significant Deficiency Report SD-370/83-01 concerning auxiliary feedwater flow transmitter environmental qualification deficiencies.

Very truly yours,

H.B. Tucker

Hal B. Tucker

PBN:jfw
Attachment

cc: Director
Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Mr. W. T. Orders
Senior Resident Inspector
McGuire Nuclear Station

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US NRC REGION II
ATLANTA, GEORGIA

DUKE POWER COMPANY
McGUIRE NUCLEAR STATION
SIGNIFICANT DEFICIENCY

REPORT NUMBER: SD-370/83-01

REPORT DATE: March 31, 1983

FACILITY: McGuire Unit 2

IDENTIFICATION OF DEFICIENCY:

The existing auxiliary feedwater flow transmitters, located in the doghouses, are not qualified for the 330 degree F main steam break environment. This deficiency was identified February 28, 1983.

INITIAL REPORT:

On March 1, 1983, A Ignatonis, NRC Region II, Atlanta, Georgia, was notified of the subject deficiency by W. O. Henry and D. L. Canup of Duke Power Company, 422 South Church Street, Charlotte, North Carolina 28242.

COMPONENT AND/OR SUPPLIER:

Barton Model 386A Class 1E electronic differential pressure transmitters.

DESCRIPTION OF DEFICIENCY:

The subject deficiency involves four safety-related auxiliary feedwater flow transmitters, one per steam generator. These transmitters are located in the inboard and outboard doghouses (main steam and feedwater isolation valve enclosures), for which a main steam break environment of 330 degrees F exists. The existing Barton 386A's are not qualified for this environment.

This instrumentation is identified in McGuire Technical Specification Table 3.3-10 as accident monitoring instrumentation. Safety-related operating procedures rely on this instrumentation for post-accident monitoring of auxiliary feedwater flow. Availability of adequate auxiliary feedwater is a prerequisite for terminating safety injection.

This instrumentation was added in response to NUREG 0578, which required safety-grade control room indication of auxiliary feedwater flow to each steam generator. At the time of this addition, the function of this instrumentation in a harsh environment was not identified. Subsequently, use of this instrumentation was incorporated into safety-related operating procedures. However, the transmitters were overlooked in the review done in response to NUREG 0588. The problem was discovered in a recent review in response to the new environmental qualification ruling 10CFR50.49.

ANALYSIS OF SAFETY IMPLICATIONS:

McGuire safety-related operating procedures rely on these flow transmitters for post-accident monitoring of auxiliary feedwater flow. Availability of adequate auxiliary feedwater flow is a prerequisite for terminating safety injection. Other safety-related control room instrumentation exists sufficient for evaluating auxiliary feedwater supplied to each steam generator, e.g., redundant steam generator level instrumentation. However, loss of the flow transmitters due to high temperatures following an accident could mislead the operator into making a decision resulting in plant failure to meet minimum required safety functions.

CORRECTIVE ACTION:

The existing auxiliary feedwater flow transmitters are being replaced with environmentally qualified transmitters. Rosemount Model 1153 Series D Class 1E transmitters have been procured. They will be installed on McGuire Unit 2 prior to Mode 3 operation.