

June 23, 2003

Mr. Dhiaa Jamil  
Vice President, McGuire Site  
Duke Energy Corporation  
12700 Hagers Ferry Road  
Huntersville, NC 28078-8985

SUBJECT: MCGUIRE NUCLEAR STATION, UNIT 2 RE: SUMMARY OF NRC'S REVIEW  
OF MCGUIRE 2 STEAM GENERATOR TUBE INSERVICE INSPECTION  
REPORT FOR THEIR SPRING 2002 OUTAGE

Dear Mr. Jamil:

By letter dated March 20, 2002, Duke Energy Corporation (the licensee) submitted a steam generator (SG) tube plugging report in accordance with McGuire Nuclear Station, Unit 2 technical specifications (TS). By letter dated May 30, 2002, the licensee submitted a SG inservice inspection outage summary report in accordance with the plant's TS. By letter dated March 11, 2003, the licensee submitted a response to an Nuclear Regulatory Commission (NRC) staff request for additional information. The NRC staff has completed its review of the licensee's inservice inspection report and concludes that the licensee has provided the information required by the TS and that no additional follow-up is required at this time. A copy of the NRC staff's Safety Evaluation is enclosed.

Sincerely,

*/RA/*

Robert E. Martin, Senior Project Manager, Section 1  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-370

Enclosure: As stated

cc w/encls: See next page

Mr. Dhiaa Jamil  
Vice President, McGuire Site  
Duke Energy Corporation  
12700 Hagers Ferry Road  
Huntersville, NC 28078-8985

June 23, 2003

SUBJECT: MCGUIRE NUCLEAR STATION, UNIT 2 RE: SUMMARY OF NRC'S REVIEW  
OF MCGUIRE 2 STEAM GENERATOR TUBE INSERVICE INSPECTION  
REPORT FOR THEIR SPRING 2002 OUTAGE

Dear Mr. Jamil:

By letter dated March 20, 2002, Duke Energy Corporation (the licensee) submitted a steam generator (SG) tube plugging report in accordance with McGuire Nuclear Station, Unit 2 technical specifications (TS). By letter dated May 30, 2002, the licensee submitted a SG inservice inspection outage summary report in accordance with the plant's TS. By letter dated March 11, 2003, the licensee submitted a response to an Nuclear Regulatory Commission (NRC) staff request for additional information. The NRC staff has completed its review of the licensee's inservice inspection report and concludes that the licensee has provided the information required by the TS and that no additional follow-up is required at this time. A copy of the NRC staff's Safety Evaluation is enclosed.

Sincerely,

*/RA/*

Robert E. Martin, Senior Project Manager, Section 1  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

**DISTRIBUTION:**

PUBLIC	ACRS	JNakoski
PDII-1 R/F	OGC	EHackett
WBeckner	GHill(4)	RMartin
RHaag, RII	CHawes	YDiaz
MMurphy	MLesser	

Docket No. 50-370

Enclosure: As stated

cc w/encls: See next page

**ADAMS Accession No. ML031740393**

OFFICE	PDII-1/PM	PDII-1/LA	PDII-1/SC
NAME	RMartin	CHawes	JNakoski
DATE	06/23/03	06/23/03	06/23/03

**OFFICIAL RECORD COPY**

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO EVALUATION OF STEAM GENERATOR TUBE INSPECTION REPORT  
DUKE ENERGY CORPORATION  
MCGUIRE NUCLEAR STATION, UNIT 2  
DOCKET NO. 50-370

By letter dated March 20, 2002, Duke Energy Corporation (the licensee) submitted a steam generator (SG) tube plugging report in accordance with McGuire Nuclear Station Unit 2, technical specifications (TS). By letter dated May 30, 2002, the licensee submitted a SG inservice inspection outage summary report in accordance with the plant's TS. These reports are related to the Spring 2002, End-of-Cycle-14, inservice inspection. By letter dated March 11, 2003, the licensee responded to an NRC request for additional information pertaining to the SG inspection findings. A summary of the NRC staff's review is provided below.

McGuire Nuclear Station, Unit 2 has four Babcock and Wilcox International CFR 80 series vertical U-bend type SGs containing 6,633 tubes each. These SGs have thermally treated Alloy 690 tubes. The tube support plates are lattice grids made of stainless steel. The tubes are hydraulically expanded over the entire length of the tubesheet in both the inlet and outlet. During the End-of-Cycle-14 inservice inspection, 100 percent of the tubes in SGs B and C were inspected over their full length with a bobbin coil probe. In addition to the bobbin coil inspections, the licensee used a rotating pancake coil probe to inspect various special interest locations (i. e., the tube within the tubesheet in the hot and cold legs and the U-bend regions) in SGs B and C.

As a result of the inspection, no tubes were plugged. The inspection results showed that in SG B, the licensee detected 24 indications (in 24 tubes) of fan bar wear that were between 2-percent and 12-percent through-wall. These tubes were left in service because they did not exceed the TS SG tube repair criteria of 40 percent through-wall.

The licensee reported two tubes with two possible loose parts (PLP) indications that were left in service. The indications for each tube, located 7 inches above the third fan bar, were contained in both the 1999 and 2000 bobbin data but failed to meet the criteria for identification. The indications were identified as PLPs in the bobbin data and the indications were confirmed with the rotating pancake probe in 2002. These PLPs have been present for three years and there has been no associated tube degradation. The licensee did not perform any foreign object search and retrieval (FOSAR) because access to the region is limited. The licensee indicated that these PLPs were acceptable based on the absence of any indication of tube wall material loss.

In SG C, the licensee detected 44 indications of fan bar wear that were between 1-percent and 13-percent through-wall. These indications were confirmed with the rotating pancake coil. The licensee reported two tubes with two PLP indications that were left in service. These tubes are adjacent to each other, interior to the tube bundle and the indications were located 13 inches above the secondary face of the hot leg tubesheet. The licensee stated that these indications were not present in the 1999 data. A review of the historical eddy current data indicated that there are deposits on the surface of these tubes. The licensee did not perform FOSAR because access to the region is limited. The indications are above the top of tubesheet in an area having lower cross flow. There was no degradation associated with these indications. The licensee stated that these indications were acceptable based on engineering judgment.

Based on the NRC staff's review of the information provided by the licensee, the NRC staff concludes that the information that the licensee was required to submit according to the TS has been provided and that no additional follow-up is required at this time.

Principal Contributor: Y. Diaz, EMC/DE

Date:

McGuire Nuclear Station

cc:

Ms. Lisa F. Vaughn  
Legal Department (ECIIX)  
Duke Energy Corporation  
422 South Church Street  
Charlotte, North Carolina 28201-1006

County Manager of  
Mecklenburg County  
720 East Fourth Street  
Charlotte, North Carolina 28202

Michael T. Cash  
Regulatory Compliance Manager  
Duke Energy Corporation  
McGuire Nuclear Site  
12700 Hagers Ferry Road  
Huntersville, North Carolina 28078

Anne Cottingham, Esquire  
Winston and Strawn  
1400 L Street, NW.  
Washington, DC 20005

Senior Resident Inspector  
c/o U.S. Nuclear Regulatory Commission  
12700 Hagers Ferry Road  
Huntersville, North Carolina 28078

Dr. John M. Barry  
Mecklenburg County  
Department of Environmental  
Protection  
700 N. Tryon Street  
Charlotte, North Carolina 28202

Mr. Peter R. Harden, IV  
VP-Customer Relations and Sales  
Westinghouse Electric Company  
6000 Fairview Road  
12th Floor  
Charlotte, North Carolina 28210

Ms. Karen E. Long  
Assistant Attorney General  
North Carolina Department of  
Justice  
P. O. Box 629  
Raleigh, North Carolina 27602

Mr. C. Jeffrey Thomas  
Manager - Nuclear Regulatory  
Licensing  
Duke Energy Corporation  
526 South Church Street  
Charlotte, North Carolina 28201-1006

NCEM REP Program Manager  
4713 Mail Service Center  
Raleigh, NC 27699-4713

Mr. Richard M. Fry, Director  
Division of Radiation Protection  
North Carolina Department of  
Environment, Health and Natural  
Resources  
3825 Barrett Drive  
Raleigh, North Carolina 27609-7721

Mr. T. Richard Puryear  
Owners Group (NCEMC)  
Duke Energy Corporation  
4800 Concord Road  
York, South Carolina 29745