



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
61 FORSYTH STREET SW SUITE 23T85  
ATLANTA, GEORGIA 30303-8931

November 20, 2003

Duke Energy Corporation  
ATTN: Mr. G. Peterson  
Vice President  
McGuire Nuclear Station  
12700 Hagers Ferry Road  
Huntersville, NC 28078-8985

SUBJECT: NOTIFICATION OF McGUIRE NUCLEAR STATION - SAFETY SYSTEM  
DESIGN AND PERFORMANCE CAPABILITY INSPECTION - NRC  
INSPECTION REPORT 05000369/2004002 AND 05000370/2004002

Dear Mr. Peterson:

The purpose of this letter is to notify you that the U.S. Nuclear Regulatory Commission (NRC) Region II staff will conduct a safety system design and performance capability inspection at your McGuire Nuclear Station during the weeks of January 25, 2004, and February 8, 2004. A team of five inspectors will perform this inspection. The inspection team will be led by Mr. Norman Merriweather, a Senior Reactor Inspector from the NRC Region II Office. This biennial inspection will be conducted in accordance with baseline pilot inspection program Attachment 71111.21, "Safety System Design and Performance Capability."

The inspection will evaluate the capability of installed plant equipment to detect and respond to a steam generator tube rupture event. Procedures which direct the mitigating actions for this event will also be evaluated.

During a telephone conversation on November 13, 2003, Mr. Merriweather of my staff, and Ms. Kay Crane of your staff, confirmed arrangements for an information gathering site visit and the two-week onsite inspection. The schedule is as follows:

- Information gathering visit: Week of January 4, 2004
- Onsite inspection weeks: January 25, 2004, and February 8, 2004.

The purpose of the information gathering visit is to obtain information and documentation outlined in the enclosure needed to support the inspection. Mr. Rudy Bernhard, a Region II Senior Reactor Analyst, may accompany Mr. Merriweather during the information gathering visit to review probabilistic risk assessment data and identify risk significant components which will be examined during the inspection. Please contact Mr. Merriweather prior to preparing copies of the materials listed in the Enclosure. The inspectors will try to minimize your administrative burden by specifically identifying only those documents required for inspection preparation. During the information gathering visit, the team leader will also discuss the following inspection support administrative details: office space; specific documents requested to be made available to the team in their office space; arrangements for site access; and the availability of knowledgeable plant engineering and licensing personnel to serve as points of contact during the inspection.

Thank you for your cooperation in this matter. If you have any questions regarding the information requested or the inspection, please contact Mr. Merriweather at (404) 562-4627 or me at (404) 562-4605.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

**/RA/**

Charles R. Ogle, Chief  
Engineering Branch 1  
Division of Reactor Safety

Docket Nos.: 50-369, 50-370

License Nos.: NPF-9, NPF-17

Enclosure: Information Request for the Safety System Design and Performance Capability Inspection

cc w/encl:

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(SEE PREVIOUS PAGE FOR CONCURRENCE)

OFFICE	RII:DRS	RII:DRP					
SIGNATURE	RA	RA					
NAME	MERRIWEATHE	R. HAAG					
DATE	11/17/2003	11/20/2003	11/ /2003	11/ /2003	11/ /2003	11/ /2003	11/ /2003
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO
PUBLIC DOCUMENT	YES NO						

**INFORMATION REQUEST FOR THE SAFETY SYSTEM DESIGN AND  
PERFORMANCE CAPABILITY INSPECTION  
MCGUIRE STEAM GENERATOR TUBE RUPTURE EVENT**

Note: Electronic media is the preferred if readily available. (The preferred file format is searchable “.pdf” files on CDROM. The CDROM should be indexed and hyperlinked to facilitate ease of use. Please provide 5 copies of each CDROM submitted.) Information in “lists” should contain enough information to be easily understood by someone who has a knowledge of pressurized water reactor technology.

1. Design basis documents for the engineered safety features and other systems used to mitigate the steam generator tube rupture (SGTR) event. Design basis documents for the high, intermediate, and low voltage electrical systems that power these components. Design basis documents for pressurizer relief valves, secondary system relief valves, atmospheric dump valves and turbine bypass valves. Include performance history of these valves for the past 10 years.
2. All procedures used to implement the mitigation strategy for the SGTR event. Include alarm response procedures as well as emergency, abnormal, and normal operating procedures as appropriate. Also include the EOP users guide and EOP setpoint document.
3. Surveillance procedures used to ensure the operability of equipment required by your Technical Specifications that is used during the mitigation of the SGTR event.
4. Summary results of the steam generator (SG) in service inspection program.
5. A list of all temporary modifications and operator work-arounds for the past 3 years.
6. A list of major modifications completed in the past 5 years to components or systems required for detection or mitigation of a SGTR event.
7. A list of deferred modifications for any components required for detection or mitigation of a SGTR event.
8. System descriptions and operator training modules for the SGTR event and the systems used to mitigate the event.
9. Procedures used to sample the reactor coolant system and the steam generators during a SGTR event.
10. Calibration and functional testing procedures for radiation monitoring instrumentation used to detect a SGTR event ( e.g. main steam line, condenser air ejector, and steam generator blowdown).
11. Performance history of valves or support equipment used to isolate SGs in the event of a tube rupture.

ENCLOSURE

12. Calibration and functional test procedures of instruments used to monitor reactor coolant system (RCS) pressure, pressurizer level and pressure, SG level and pressure, hot and cold leg temperature, subcooling monitor, feedwater flow, steam flow, core exit temperature, high pressure injection (HPI) flow, low pressure injection flow, refueling water storage tank level, pressurized heater status, safety relief valve position indicator, AFW flow, condensate storage tank (CST) level, makeup flow, and letdown flow.
13. P&IDs for RCS, HPI, SI, AFW, chemical and volume control system, main steam and other systems used to mitigate the SGTR event. (Paper copies are preferred for these.)
14. Key electrical one-line drawings depicting the high, intermediate, and low voltage alternating current systems and of the direct current power systems that provide power for the pumps, valves, and instrumentation and control circuits associated with the systems that accomplish the SGTR mitigation strategy. (Paper copies are preferred for these.)
15. Probabilistic risk assessment event tree for the SGTR event. A list of PRA identified system dependencies and success criteria for systems used to mitigate a steam generator tube rupture.
16. System health reports and/or other performance monitoring information for systems used to detect and mitigate the SGTR event and their power supply systems.
17. A list of non-routine work requests initiated since 1998 related to: 1) the systems used to detect and mitigate the SGTR event and 2) inservice inspection activities of steam generator tubes.
18. Maintenance Rule performance criteria for systems used to detect and mitigate the SGTR event and their electrical power systems. A list of maintenance rule failures of equipment and their power supplies that are used to detect or mitigate the SGTR event.
19. Provide a list of equipment used to mitigate a SGTR that changes state or is manually manipulated during implementation of the SGTR mitigation strategy and the indications used by plant operators to make decisions during the event.
20. Plant Technical Specifications, Bases, and Technical Requirements Manual
21. A current copy of the Updated Final Safety Analysis Report.
22. Procedures that provide implementation guidance for the following programs: Corrective Action Program, Maintenance Rule Program, and Operating Experience Program.