



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

April 18, 2003

Tennessee Valley Authority
ATTN: Mr. J. A. Scalice
Chief Nuclear Officer and
Executive Vice President
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

**SUBJECT: NOTIFICATION OF WATTS BAR NUCLEAR PLANT - SAFETY SYSTEM
DESIGN AND PERFORMANCE CAPABILITY INSPECTION - NRC
INSPECTION REPORT 50-390/03-07**

Dear Mr. Scalice:

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 Watts Bar facility during the weeks of June 23, 2003, and July 7, 2003. A team of five inspectors will perform this inspection. The inspection team will be led by Mr. Frank Jape, a Senior Reactor Inspector from the NRC Region II Office. This biennial inspection will be conducted in accordance with baseline inspection program Attachment 71111.21, "Safety System Design and Performance Capability."

This 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 April 17, 2003, Mr. Jape of my staff, and Ms. R. N. Mays 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 June 2, 2003
- Onsite inspection weeks: June 23, 2003 and July 7, 2003

The purpose of the information gathering visit is to obtain information and documentation outlined in the enclosure needed to support the inspection. Mr. R. Bernhard, a Region II Senior Reactor Analyst, may accompany Mr. Jape 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. Jape 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. Jape at (404) 562-4541 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: James H. Moorman for/

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

Docket No.: 50-390
License No.: NPF-90

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

cc w/encl:
Karl W. Singer
Senior Vice President
Nuclear Operations
Tennessee Valley Authority
Electronic Mail Distribution

James E. Maddox, Acting Vice President
Engineering and Technical Services
Tennessee Valley Authority
Electronic Mail Distribution

William R. Lagergren
Site Vice President
Watts Bar Nuclear Plant
Tennessee Valley Authority
Electronic Mail Distribution

(cc w/encl cont'd - See page 3)

(cc w/encl cont'd)
General Counsel
Tennessee Valley Authority
Electronic Mail Distribution

Robert J. Adney, General Manager
Nuclear Assurance
Tennessee Valley Authority
Electronic Mail Distribution

Mark J. Burzynski, Manager
Nuclear Licensing
Tennessee Valley Authority
Electronic Mail Distribution

Paul L. Pace, Manager
Licensing and Industry Affairs
Watts Bar Nuclear Plant
Tennessee Valley Authority
Electronic Mail Distribution

Larry S. Bryant, Plant Manager
Watts Bar Nuclear Plant
Tennessee Valley Authority
Electronic Mail Distribution

County Executive
Rhea County Courthouse
375 Church Street, Suite 215
Dayton, TN 37321-1300

County Executive
Meigs County Courthouse
Decatur, TN 37322

Lawrence E. Nanney, Director
TN Dept. of Environment & Conservation
Division of Radiological Health
Electronic Mail Distribution

Ann Harris
341 Swing Loop
Rockwood, TN 37854

John D. White, Jr., Director
Tennessee Emergency Management Agency
Electronic Mail Distribution

Distribution w/encl: (See page 4)

Distribution w/encl:
 M. Podavan, NRR
 L. Slack, RII EICS
 RIDSNRRDIPMLIPB
 PUBLIC

OFFICE	RII:DRS	RII:DRS	RII:DRP				
SIGNATURE	JAPE	MOORMAN	CAHILL				
NAME	JAPE	MOORMAN	CAHILL				
DATE	4/18/2003	4/18/2003	4/18/2003	4/ /2003	4/ /2003	4/ /2003	4/ /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
STEAM GENERATOR TUBE RUPTURE EVENT**

Note: Electronic media is preferred if readily available. (The preferred file format is searchable “.pdf” files on CDROM. The CDROM should be indexed to facilitate use. Please provide 5 copies of each CDROM submitted.)

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 abnormal and normal operating procedures as appropriate. Also, include all emergency operating procedures (EOPs), the EOP users guide, and EOP setpoint document. Also, include the EOP writers guide for EOPs used during the SGTR event.
3. Surveillance procedures used to ensure the operability of equipment required by your Technical Specifications that is used during the mitigation of an 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 an SGTR event.
7. List of deferred modifications for any components or systems required for detection or mitigation of a SGTR event.
8. System descriptions and operator training modules for an SGTR event and the systems used to mitigate the event.
9. Procedures used to sample the reactor coolant system and the SGs during an SGTR event.
10. Calibration and functional testing procedures for the main steam line, condenser air ejector, and steam generator blowdown radiation monitoring instrumentation.
11. Performance history of valves or support equipment used to isolate SGs in the event of a tube rupture.
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

Enclosure

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, pressurizer heater status, safety relief valve position indicator, AFW flow, condensate storage tank (CST) level, charging 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 of 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. (ie. PRA system notebooks)
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) to 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 for the previous three years.
19. 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. Provide equipment failure rates over the past 10 years for these components and a list of Problem Evaluation Reports and non-routine work requests initiated since 1998 for these components.
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.