



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

November 26, 2002

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 SEQUOYAH NUCLEAR PLANT - SAFETY SYSTEM  
DESIGN AND PERFORMANCE CAPABILITY INSPECTION - NRC  
INSPECTION REPORT 50-327/2003-02 and 50-328/2003-02**

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 Sequoyah Nuclear Plant during the weeks of February 10, 2003, and February 24, 2003. A team of five inspectors will perform this inspection. The inspection team will be led by Mr. Jim Moorman, a Senior Reactor Inspector from the NRC Region II Office. This inspection will be conducted in accordance with baseline 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 25, 2002, Mr. Moorman of my staff, and Mr. James Proffitt 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 5, 2003
- Onsite inspection: February 10-14, 2003 and February 24-28, 2003.

The purpose of the information gathering visit is to obtain information and documentation outlined in the enclosure needed to support the inspection. Mr. Rudolph Bernhard, a Region II Senior Reactor Analyst, may accompany Mr. Moorman 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. Moorman 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. Moorman at (404) 562-4647 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.: 50-327,328  
License Nos.: DRP-77, DRP-79

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

Richard T. Purcell  
Site Vice President  
Sequoyah Nuclear Plant  
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

Pedro Salas, Manager  
Licensing and Industry Affairs  
Sequoyah Nuclear Plant  
Tennessee Valley Authority  
Electronic Mail Distribution

D. L. Koehl, Plant Manager  
Sequoyah Nuclear Plant  
Tennessee Valley Authority  
Electronic Mail Distribution

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

County Executive  
Hamilton County Courthouse  
Chattanooga, TN 37402-2801

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

TVA

4

Distribution w/encl:  
R. W. Hernan, NRR  
RIDSNNRRDIPMLIPB  
PUBLIC

OFFICE	RII:DRS	RII:DRP					
SIGNATURE	<b>MOORMAN</b>	<b>CAHILL</b>					
NAME	JMOORMAN	SCAHILL					
DATE	11/26/2002	11/26/2002	12/ /2002	12/ /2002	12/ /2002	12/ /2002	12/ /2002
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO
PUBLIC DOCUMENT	YES NO						

OFFICIAL RECORD COPY

DOCUMENT NAME: C:\ORPCheckout\FileNET\ML023300568.wpd

**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.)

1. Design basis documents for the engineered safety features used to mitigate the steam generator tube rupture (SGTR) event. 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 emergency, abnormal, and normal operating procedures as appropriate.
3. Procedures used for the operational testing of check valves in portions of the emergency core cooling systems used during mitigation of the SGTR event.
4. Surveillance procedures used to ensure the operability of equipment required by your Technical Specifications that is used during the mitigation of the SGTR event
5. Summary results of the steam generator (SG) in service inspection program. (Unit 2 only)
6. List of temporary modifications and operator work-arounds involving any components required for detection or mitigation of a SGTR event for the past 3 years
7. System description and operator training modules for a SGTR event.
8. List of operating experience program evaluations of industry, vendor, or NRC generic issues related to a SGTR event.
9. Procedures used to sample the reactor coolant system during a SGTR event.
10. Calibration and functional testing procedures for the main steam line radiation monitoring instrumentation used to detect and mitigate a SGTR event.
11. Calculations used to support the set points in Emergency Operating Procedures for a SGTR event.
12. Performance history of valves or support equipment used to isolate SGs in the event of a tube rupture.
13. 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,

Enclosure

auxiliary feedwater flow (AFW) flow, condensate storage tank (CST) level, makeup flow, and letdown flow.

14. P&IDs for RCS, HPI, SI, AFW, chemical and volume control system, main steam, and letdown. (Paper copies are preferred for these)
15. Electrical schematic showing start circuit for the AFW pumps. (Paper copies are preferred for these)
16. Test procedures for the primary and secondary system safety relief valves including any position indications and code safety valves.
17. Loop uncertainty calculations for SG level, pressurizer pressure and level, and RCS pressure.
18. Test procedures for any defeat switches associated with AFW starting logic.
19. Instrument loop diagrams for items identified in Number 13 above. (Paper copies are preferred for these)
20. Probability Risk Assessment (PRA) Event tree for a SGTR event. A list of PRA identified system dependencies and success criteria for systems used to mitigate a steam generator tube rupture.
21. System health reports and all performance monitoring information for systems used to detect and mitigate a SGTR event.
22. A list of Problem Evaluation Reports and non-routine work requests initiated since 1998 affecting the systems used to detect and mitigate a SGTR event.
23. Maintenance Rule performance criteria for systems used to detect and mitigate a SGTR event. A list of maintenance rule failures of equipment used to detect or mitigate a SGTR event.
24. Key electrical single line diagrams of the alternating current and 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)
25. Provide a list of equipment used to mitigate a SGTR that changes state or is manually manipulated during implementation of the SGTR mitigation strategy. Provide equipment failure rates over the past 10 years for these components.

Enclosure