



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

February 10, 2003

Mr. Dale E. Young, Vice President  
Crystal River Nuclear Plant (NA1B)  
ATTN: Supervisor, Licensing &  
Regulatory Programs  
15760 West Power Line Street  
Crystal River, FL 34428-6708

**SUBJECT: NOTIFICATION OF CRYSTAL RIVER NUCLEAR PLANT - SAFETY SYSTEM  
DESIGN AND PERFORMANCE CAPABILITY INSPECTION - NRC  
INSPECTION REPORT 50-302/2003-02**

Dear Mr. Young:

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 Crystal River Nuclear Plant during the weeks of May 5, 2003, and May 19, 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 biennial 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 February 6, 2003, Mr. Moorman of my staff, and Mr. Sid Powell 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 March 31, 2003
- Onsite inspection weeks: May 5, 2003 and May 19, 2003

The purpose of the information gathering visit is to obtain information and documentation outlined in the enclosure needed to support the inspection. Mr. Walter Rogers, 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.: 50-302  
License Nos.: DPR-72

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

cc w/encl:  
Daniel L. Roderick  
Director Site Operations  
Crystal River Nuclear Plant (NA2C)  
Electronic Mail Distribution

Jon A. Franke  
Plant General Manager  
Crystal River Nuclear Plant (NA2C)  
Electronic Mail Distribution

Richard L. Warden  
Manager Nuclear Assessment  
Crystal River Nuclear Plant (NA2C)  
Electronic Mail Distribution

Donald L. Taylor  
Manager Support Services  
Crystal River Nuclear Plant (NA2C)  
15760 W. Power Line Street  
Crystal River, FL 34428-6708

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

(cc w/encl cont'd)  
 R. Alexander Glenn  
 Associate General Counsel (MAC - BT15A)  
 Florida Power Corporation  
 Electronic Mail Distribution

Attorney General  
 Department of Legal Affairs  
 The Capitol  
 Tallahassee, FL 32304

William A. Passetti  
 Bureau of Radiation Control  
 Department of Health  
 Electronic Mail Distribution

Craig Fugate, Director  
 Division of Emergency Preparedness  
 Department of Community Affairs  
 Electronic Mail Distribution

Chairman  
 Board of County Commissioners  
 Citrus County  
 110 N. Apopka Avenue  
 Inverness, FL 36250

Jim Mallay  
 Framatome Technologies  
 Electronic Mail Distribution

Distribution w/encl:  
 J. Goshen, NRR  
 L. Slack, RII EICS  
 RIDSNRRDIPMLIPB  
 PUBLIC

OFFICE	RII:DRS	RII:DRP					
SIGNATURE	<b>MOORMAN</b>	<b>MUNDAY</b>					
NAME	Moorman	Munday					
DATE	2/10/2003	2/10/2003	2/ /2003	2/ /2003	2/ /2003	2/ /2003	2/ /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 emergency, abnormal, and normal operating procedures as appropriate.
3. Procedures used for the operational testing of check valves in the auxiliary feedwater (AFW) systems and 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.
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. List of major modifications to any components required for detection or mitigation of a SGTR event completed in the past 5 years.
8. List of deferred modifications for any components required for detection or mitigation of a SGTR event.
9. System description and operator training modules for the SGTR event.
10. List of operating experience program evaluations of industry, vendor, or NRC generic issues related to a SGTR event.
11. Procedures used to sample the reactor coolant system during a SGTR event.
12. Calibration and functional testing procedures for the main steam line, condenser air ejector, and steam generator blowdown. radiation monitoring instrumentation.

Enclosure

13. Calculations used to support the set points in Emergency Operating Procedures for a SGTR event.
14. Performance history of valves or support equipment used to isolate SGs in the event of a tube rupture.
15. 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.
16. P&IDs for RCS, HPI, SI, AFW, chemical and volume control system, main steam and other systems used to mitigate the SGTR event. P&IDs for the high, intermediate, and low voltage electrical systems which supply power to these components. (Paper copies are preferred for these.)
17. Electrical schematic showing start circuit for the AFW pumps. (Paper copies are preferred for these.)
18. Test procedures for the primary and secondary system safety relief valves including any position indications and code safety valves.
19. Loop uncertainty calculations for SG level, pressurizer pressure and level, and RCS pressure.
20. Test procedures for any defeat switches associated with AFW starting/control logic, if applicable.
21. Instrument loop diagrams for items identified in Number 16 above. (Paper copies are preferred for these.)
22. 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.
23. System health reports and all performance monitoring information for systems used to detect and mitigate the SGTR event and their power supply systems.
24. A list of Problem Evaluation Reports and non-routine work requests initiated since 1998 affecting the systems used to detect and mitigate the SGTR event.
25. 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.

26. Key electrical single line diagrams 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.)
27. 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.
28. Plant Technical Specifications, Bases, and Technical Requirements Manual
29. A current copy of the Updated Final Safety Analysis Report.