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

January 21, 2004

Virginia Electric and Power Company
ATTN: Mr. David A. Christian
Senior Vice President and
Chief Nuclear Officer
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060

SUBJECT: NOTIFICATION OF SURRY POWER STATION SAFETY SYSTEM DESIGN AND PERFORMANCE CAPABILITY INSPECTION - NRC INSPECTION REPORT 05000280/2004006 AND 05000281/2004006

Dear Mr. Christian:

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 Surry Power Station during the weeks of March 22-26, 2004, and April 5-9, 2004. A team of six inspectors will perform this inspection. The inspection team will be led by Mr. Robert Schin, 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 focus on the prevention and mitigation of internal flooding events.

During a telephone conversation on January 20, 2004, Mr. R. Schin and Ms. C. Lovett 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 1-5, 2004
- Onsite inspection weeks: March 22-26, 2004, and April 5-9, 2004

The purpose of the information gathering visit is to obtain information and documentation, outlined in the Enclosure, that are needed to support the inspection. Mr. W. Rogers, a Region II Senior Reactor Analyst, may accompany Mr. Schin 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. Schin 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. Schin at (404) 562-4629 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 Publically 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, III For:/

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

Docket Nos.: 50-280, 50-281
License Nos.: DPR-32, DPR-37

Enclosure: Information Request for the Safety System Design and Performance Capability Inspection Focusing On Internal Flooding Events

cc w/encl:
Chris L. Funderburk, Director
Nuclear Licensing and
Operations Support
Virginia Electric & Power Company
Electronic Mail Distribution

Richard H. Blount, II
Site Vice President
Surry Power Station
Virginia Electric & Power Company
Electronic Mail Distribution

Virginia State Corporation Commission
Division of Energy Regulation
P. O. Box 1197
Richmond, VA 23209

Lillian M. Cuoco, Esq.
Senior Counsel
Dominion Resources Services, Inc.
Electronic Mail Distribution

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

(cc w/encl cont'd)
Attorney General
Supreme Court Building
900 East Main Street
Richmond, VA 23219

Distribution w/encl:
C. Gratton, NRR
L. Slack, RII EICS
RIDSNRRDIPMLIPB
PUBLIC

OFFICE	RII:DRS	RII:DRS	RII:DRP				
SIGNATURE	**RA**	**RA**	RA				
NAME	RSchin	JMoorman	KLandis				
DATE	01/21/2004	01/21/2004	01/21/2004	1/ /2004	1/ /2004	1/ /2004	1/ /2004
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\ML040220367.wpd

INFORMATION REQUEST
FOR THE SAFETY SYSTEM DESIGN AND PERFORMANCE CAPABILITY INSPECTION
FOCUSING ON INTERNAL FLOODING EVENTS

Note: Electronic media is 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 6 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 that could initiate internal flooding events or that are used to mitigate internal flooding events (e.g., circulating water, stop logs / seal plates, door seals, service water, fire water, charging / high pressure injection, auxiliary feedwater, primary and secondary power operated relief valves). Include design basis documents for the high, intermediate, and low voltage electrical systems that power and control these components.

2. Piping and instrumentation drawings (P&IDs) for the circulating water, service water, fire water, charging/high pressure injection, safety injection, reactor coolant system, auxiliary feedwater, main steam, and other systems used to mitigate internal flooding events. (Two paper copies are preferred for these.)

3. 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 internal flooding mitigation strategy. (Two paper copies are preferred.)

4. All procedures used to implement the mitigation strategy for internal flooding events. Include alarm response procedures as well as normal, abnormal, and emergency operating procedures (EOPs) as appropriate. Please include or have available on site the EOP users guide, EOP setpoint document, and EOP step deviation document. Also, please describe how Procedure 0-FCA-6.01, 'Uncontrollable Turbine Building Flooding', differs from your EOPs in procedural controls (e.g., verification and validation, step deviation document) and in rapidly cooling down and depressurizing the reactor coolant system. Please include an explanation of why implementation of this procedure involves 10 CFR 50.54(x).

5. Procedures / programs used for the operational testing / inspection / preventive maintenance of valves and other active components that could initiate flooding or are relied upon to mitigate flooding (e.g., circulating water, service water, and fire water valves, including circulating water valve components whose failure could initiate a water hammer; stop logs / seal plates; sump pumps). Include the turbine building sump pump reliability program. Also, procedures used for operational testing / inspection / preventive maintenance of check valves / backflow preventers in the floor drain systems that are relied upon to prevent floor drain flooding (e.g. of charging pump rooms or switchgear rooms). Include frequency of testing / inspection / preventive maintenance,

performance history, and maintenance history of these components for the past 10 years.

6. Procedures for preventive maintenance or inspection of expansion joints, piping, manways, flood dikes and other passive components that could initiate or are relied upon to mitigate internal flooding. Also, design drawings for the flood dikes. Include frequency of preventive maintenance / inspection, performance history, and maintenance history of these components for the past 10 years.

7. Surveillance procedures used to ensure the operability of equipment required by your Technical Specifications that is used during the mitigation of internal flooding events.

8. Calibration and functional testing procedures for instrumentation used to detect an internal flooding event or to provide an automatic actuation to mitigate an internal flooding event.

9. Calculations used to support the set points for alarms and automatic actuations that are relied upon for detection or mitigation of internal flooding events. Also, calculations used to support the operator action setpoints in procedures for mitigation of internal flooding events (e.g., 0-AP-13.0 and 0-FCA-6.01).

10. A list of all temporary modifications and operator work-arounds (for the past 3 years).

11. A list of major modifications completed in the past 5 years to components or systems that could initiate or are required for detection or mitigation of internal flooding events.

12. A list of deferred modifications for any components or systems that could initiate or are required for detection or mitigation of internal flooding events.

13. System descriptions and operator training modules for internal flooding events and the systems used to mitigate the events.

14. A list of operating experience program evaluations of industry, vendor, or NRC generic issues related to internal flooding events.

15. Probabilistic risk assessment (PRA) event trees for internal flooding events. A list of PRA identified system dependencies and success criteria for systems used to mitigate internal flooding events. Provide internal flooding cutsets and risk achievement worths for those basic events (only assuming an internal flooding initiating event).

16. A brief description of the mitigation strategy for handling internal flooding events, including operator actions and equipment used.

17. System health reports and/or other performance monitoring information for systems used to detect and mitigate internal flooding events and their power supply systems.

18. A list of condition reports and non-routine work requests initiated since 1998 related to: 1) the systems used to detect and mitigate internal flooding events, and 2) the systems and components that could initiate internal flooding.

19. Quality Assurance audits, self-assessments, and third party assessments performed on the systems that could initiate or are used to detect and mitigate internal flooding events.

20. Maintenance Rule performance criteria for systems used to detect and mitigate internal flooding events and their electrical power systems. A list of maintenance rule failures of equipment and their power supplies that are used to detect or mitigate internal flooding events.

21. A list of equipment used to mitigate internal flooding events that changes state or is manually manipulated during implementation of the internal flooding mitigation strategy and the indications used by plant operators to make decisions during the event.

22. Plant Technical Specifications, Bases, and Technical Requirements Manual.

23. A current copy of the Updated Final Safety Analysis Report (UFSAR).

24. Current engineering / safety analyses for internal flooding events other than those in the UFSAR.

25. Procedures that provide implementation guidance for the following programs: Corrective Action Program, Maintenance Rule Program, and Operating Experience Program.