

March 21, 2006

Mr. Jeffery Archie
Vice President, Nuclear Operations
South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station
Post Office Box 88
Jenkinsville, South Carolina 29065

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION — REQUEST FOR ADDITIONAL
INFORMATION REGARDING INSTRUMENTATION TEST AND COMPLETION
TIMES (TAC NO. MC8898)

Dear Mr. Archie:

The Nuclear Regulatory Commission staff is reviewing the license amendment application for the Virgil C. Summer Nuclear Station dated November 15, 2005, concerning instrumentation test and completion times and find that we need additional information as identified in the enclosure.

This request for additional information was discussed with your staff on March 20, 2006, and your staff indicated that a response could be provided by May 1, 2006. Please contact me if you have any questions.

Sincerely,

/RA/

Robert E. Martin, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-395

Enclosure: Request for Additional Information

cc: See next page

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REQUEST FOR ADDITIONAL INFORMATION

RISK INFORMED JUSTIFICATION FOR EXTENDING

ALLOWED OUTAGE TIME (AOT) BYPASS TEST TIMES

VIRGIL C. SUMMER NUCLEAR STATION (VCSNS)

1. Westinghouse Commercial Atomic Power report (WCAP) -14333-P-A, Rev. 1, "Probabilistic Risk Analysis of the RPS [reactor protection system] and ESFAS [engineered safety feature actuation system] Test Times and Completion Times," dated October 1998, Section 11.0, "Implementation of the Proposed Technical Specification Changes," Item 3, notes that a change to the action for an inoperable slave relay to "following the expiration of the slave relay AOT, the component affected by the inoperable slave should be declared inoperable and the TS [Technical Specification] action for this component should be followed." Is this modification required for the Virgil C. Summer Nuclear Station (VCSNS) TS? Explain why or why not.
2. Confirm that the VCSNS RPS utilizes the solid state protection system for the logic portion of the RPS.
3. Regulatory Guide (RG) 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," Section 2.3 and RG 1.177, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications," Section 3, as part of the key principles in implementing risk-informed decisionmaking, establishes the need for an implementation and monitoring program to ensure that extensions to TS AOT or surveillance test intervals do not degrade operational safety over time and that no adverse degradation occurs due to changes in the licensing basis due to unanticipated degradation or common cause mechanisms. An implementation and monitoring program is intended to ensure that the impact of the proposed TS change continues to reflect the reliability and availability of structures, systems and components impacted by the change. Provide information on the VCSNS implementation and monitoring program as applied to the incorporation of WCAP-14333 at VCSNS.
4. The analysis for WCAP-14333 assumed that maintenance on master and slave relays, logic cabinets, and analog channels while at power occurs only after a component failure, and that preventive maintenance does not occur. The topical report does not preclude the practice of at-power preventive maintenance but limits the total time a component is unavailable due to corrective or preventive maintenance to the values used in the analysis. If preventive maintenance is to be performed at VCSNS, confirm that the unavailability for components evaluated in WCAP-14333 are consistent with the plant specific estimates at VCSNS and do not exceed those assumed in the analysis.

Enclosure

See the submittal, "Implementation Guideline," Table 1, "Analog Channel Calibration" as an example.

5. Provide the date of the VCSNS probabilistic risk assessment (PRA) industry peer review and date of certification.
6. Confirm that the WCAP-14333 reference plant assumptions for human reliability are applicable to VCSNS. As an example, see the "B" level Facts and Observations (F&Os) discussion for HR-06 on pages 18 and 19 of the submittal.
7. The licensee's submittal states that due to the generic analysis of WCAP-14333 the second F&O concerning internal floods has no impact on the proposed changes. The Nuclear Regulatory Commission (NRC) staff notes that internal flooding may have unique plant specific vulnerabilities and may not be bounded by the generic analysis. Internal floods were not part of the implementation guidance for WCAP-14333. Provide a plant-specific assessment (either qualitative or quantitative) to confirm that VCSNS internal flooding results are bounded by WCAP-14333 for this F&O.
8. Provide an assessment of the external events risk impact including seismic, fire, and external floods and high wind risk with respect to the proposed completion time and bypass time extensions in RG 1.177 Section 2.3.2, "Scope of the PRA for TS Applications."
9. Provide a discussion on the following aspects of PRA quality as applicable to the VCSNS PRA.
 1. The plant-specific PRA reflects the as-built, as-operated plant.
 2. Applicable PRA updates conducted since completion of individual plant examination (IPE) and individual plant examination of external events (IPEEE) and the status of any improvements identified by the IPE and IPEEE.
 3. Reference PRA quality assurance programs/procedures, including expected PRA revision schedules.
 4. PRA adequacy and completeness with respect to evaluating the proposed AOT and bypass time extensions with emphasis on Tier 3.
 5. Plant design or operational modifications not reflected in the WCAP-14333 PRA used in this application that are related to or could impact this license amendment application. Justify the acceptability of not including these modifications in the PRA as part of this application.
10. RG 1.174 states that as part of the evaluation of risk, the cumulative risk of the present TS change in light of past applications should be understood. Cumulative risks were not

addressed by VCSNS. Provide an evaluation of the cumulative risk impact of previous TS changes (including WCAP-10271) per RG 1.174, Section 3.3.2, as applicable to the implementation of WCAP-14333.

11. Regarding page 9 of 26 of the application, for the restriction listed under Tier 2 provide a procedure reference that incorporates these changes. Are these restrictions considered licensee commitments?
12. Page 9 of 26 of the licensee's submittal states that the VCSNS Tier 3 requirements are addressed through VCSNS Operations Administrative Procedures consistent with the requirements Title 10 of the *Code of Federal Regulations* (10 CFR), section 50.65(a)(4). Provide a discussion on the applicability of the VCSNS 10 CFR 50.65(a)(4) configuration risk management program (CRMP) to the additions and clarifications provided in RG 1.177, Section 2.3.7.2, Key Components 1 through 4, for CRMP programs that implement section a(4) of 10 CFR 50.65(a)(4) and the guidance provided by RG 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants." In addition, identify the programs and procedures in place to implement the CRMP at VCSNS.

Mr. Jeffrey B. Archie
South Carolina Electric & Gas Company

VIRGIL C. SUMMER NUCLEAR STATION

cc:
Mr. R. J. White
Nuclear Coordinator
S.C. Public Service Authority
c/o Virgil C. Summer Nuclear Station
Post Office Box 88, Mail Code 802
Jenkinsville, South Carolina 29065

Resident Inspector/Summer NPS
c/o U.S. Nuclear Regulatory Commission
576 Stairway Road
Jenkinsville, South Carolina 29065

Chairman, Fairfield County Council
Drawer 60
Winnsboro, South Carolina 29180

Mr. Henry Porter, Assistant Director
Division of Waste Management
Bureau of Land & Waste Management
Dept. of Health & Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Mr. Thomas D. Gatlin, General Manager
Nuclear Plant Operations
South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station
Post Office Box 88, Mail Code 300
Jenkinsville, South Carolina 29065

Mr. Ronald B. Clary, Manager
Nuclear Licensing
South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station
Post Office Box 88, Mail Code 830
Jenkinsville, South Carolina 29065

Ms. Kathryn M. Sutton, Esquire
Winston & Strawn Law Firm
1400 L Street, NW
Washington, DC 20005-3502