



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

August 11, 2011

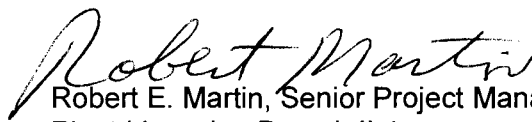
Mr. Thomas D. Gatlin
Vice President, Nuclear Operations
South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station
Post Office Box 88
Jenkinsville, SC 29065

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION, UNIT NO. 1 – REQUEST FOR
ADDITIONAL INFORMATION (TAC NO. ME6093)

Dear Mr. Gatlin:

By letter dated April 18, 2011 (Agencywide Documents Access and Management System, Accession No. ML11109A113), South Carolina Electric and Gas Company submitted of a license amendment request for U.S. Nuclear Regulatory Commission (NRC) review that would revise the Technical Specifications (TSs), for the Virgil C. Summer Nuclear Station, Unit No. 1. The changes would revise TS Table 4.3-2 for the Engineered Safety Feature Actuation System Instrumentation to allow the surveillance frequency to be expanded from quarterly to every 18 months or refueling for the specific Westinghouse type AR relays used as Solid-State Protection System slave relays or auxiliary relays. The NRC staff has determined that additional information is required as addressed in the enclosure. We request that a response be provided within thirty (30) days of the date of this letter.

Sincerely,


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 w/encl: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION

FOR VIRGIL C. SUMMER NUCLEAR STATION, UNIT NO. 1 (VCSNS)

DOCKET NO. 50-395

Regulatory Basis

Title 10 of the Code of Federal Regulations (10 CFR), Part 50, paragraph 50.36(c)(3), "Surveillance Requirements," states, "Surveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met." Thus, 10 CFR 50.36(c)(3) establishes a need for surveillance testing that demonstrates the ability of the associated devices to perform its functions. However, this regulation does not establish schedule-related requirements concerning such testing.

Generic Letter 93-05, "Line-Item Technical Specifications [TSs] Improvements to Reduce Surveillance Requirements for Testing During Power Operation," supports the extension of surveillance intervals and states that safety can be improved, equipment degradation decreased, and an unnecessary burden on personnel resources eliminated by reducing the amount of testing that the TSs require during power operation.

The Nuclear Regulatory Commission (NRC) staff's safety evaluation (SE) (Agencywide Documents Access and Management System (ADAMS), Accession No. ML073240259) for the Westinghouse Electric Company Topical Report concerning Westinghouse Type AR relays is based on WCAP-13877, Revision 1, "Reliability Assessment of Westinghouse Type AR Relays Used as SSPS [Solid-State Protection System] Slave Relays." This SE establishes criteria that must be addressed in plant-specific applications that cite the Topical Report for support. Revision 1 of the report has been superseded by Revision 2 (ADAMS Accession No. ML003753905). The NRC staff approved this revision (ADAMS Accession No. ML003731486) and determined that it does not alter the plant-specific criteria established in Revision 1.

Request for Additional Information

1. In Section 4.1 of the License Amendment Request (LAR) the licensee explains the applicability of WCAP-13877-P-A to VCSNS. In it, the licensee states that the SSPS slave relays and auxiliary relays used at VCSNS are Westinghouse AR440 or AR880 relays and that the SSPS cabinets housing these relays were purchased from Westinghouse Electric Corporation and installed during construction.

However, in Section 4.2 of the LAR, the licensee states that VCSNS utilizes Westinghouse supplied Cutler Hammer type AR relays. In Section 4.3.3, the licensee states that VCSNS utilizes Westinghouse supplied part number AR440ARY, Cutler Hammer 4-pole type AR relays.

Finally, in TS Table 4.3-2, "Engineered Safety Feature Actuation System Instrumentation Surveillance Requirements", the licensee is proposing to add note (3) which states that

Enclosure

replacement relays other than Westinghouse type AR or reconciled Cutler-Hammer relays will require further analysis and NRC approval to maintain the established frequency.

- a. The AR440ARY Cutler Hammer 4-pole type AR relay is not covered in the WCAP-13877-P-A analysis. Please provide justification as to why this type of relay, and any other type of relay used at VCSNS that is within the scope of the LAR, is considered acceptable for use and why the licensee believes a surveillance extension for these types of relays is appropriate. In your justification, provide a functional description comparing the proposed relays to the ones identified in the approved topical report.
 - b. Please describe what types of SSPS slave and auxiliary relays (i.e. Westinghouse AR440, AR880, Cutler Hammer AR440ARY, or others) are being used at VCSNS. Please specify which type of relay is being used for each of the following functional units described in TS Table 4.3-2, "Engineered Safety Feature Actuation System Instrumentation Surveillance Requirements":
 - i. Safety Injection, Reactor Trip, Feedwater Isolation, Control Room Isolation, Start Diesel Generators, Containment Cooling Fans and Essential Service Water
 - ii. Reactor Building Spray
 - iii. Containment Isolation, Phase "A" Isolation
 - iv. Containment Isolation, Phase "B" Isolation
 - v. Containment Isolation, Purge and Exhaust Isolation
 - vi. Steam Line Isolation
 - vii. Turbine Trip and Feedwater Isolation
 - viii. Emergency Feedwater
 - ix. Automatic Switchover to Containment Sump
 - c. Please identify when the relays not covered in WCAP-13877-P-A were installed at VCSNS. What are the operational history and failure rates for these types of relays?
 - d. Please submit the data sheets for the SSPS slave and auxiliary relays being used at VCSNS which are not covered in WCAP-13877-P-A.
 - e. Please explain what is meant by the term "reconciled Cutler-Hammer relay".
2. Please provide a summary of the contact loading analysis results for the SSPS slave and auxiliary relays, as well as a description of how the analysis was performed.

August 11, 2011

Mr. Thomas D. Gatlin
Vice President, Nuclear Operations
South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station
Post Office Box 88
Jenkinsville, SC 29065

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION, UNIT NO. 1 – REQUEST FOR
ADDITIONAL INFORMATION (TAC NO. ME6093)

Dear Mr. Gatlin:

By letter dated April 18, 2011 (Agencywide Documents Access and Management System, Accession No. ML11109A113), South Carolina Electric and Gas Company submitted of a license amendment request for U.S. Nuclear Regulatory Commission (NRC) review that would revise the Technical Specifications (TSs), for the Virgil C. Summer Nuclear Station, Unit No. 1. The changes would revise TS Table 4.3-2 for the Engineered Safety Feature Actuation System Instrumentation to allow the surveillance frequency to be expanded from quarterly to every 18 months or refueling for the specific Westinghouse type AR relays used as Solid-State Protection System slave relays or auxiliary relays. The NRC staff has determined that additional information is required as addressed in the enclosure. We request that a response be provided within thirty (30) days of the date of this letter.

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 w/encl: Distribution via Listserv

DISTRIBUTION

PUBLIC
RidsNrrDorLpl2-1 Resource
RidsOgcRp Resource
RidsNrrPMSummer Resource

LPL2-1 R/F
RidsRgn2MailCenter Resource
RidsNrrDeEicb Resource

RidsAcrsAcnw_MailCTR Resource
RidsNrrLAMOBrienResource
SDarballi NRR

ADAMS Accession Number: ML11207A239

*by memo dated 7/14/11

OFFICE	LPL2-1/PM	LPL2-1/LA	NRR/EICB/BC	LPL2-1/BC	LPL2-1/PM
NAME	RMartin	MO'Brien	GWilson *	GKulesa (PBoyle for)	RMartin
DATE	8/5/11	8/8/11	7/14/11	8/10/11	8/11/11

OFFICIAL RECORD COPY