

Jeffrey B. Archie
Vice President, Nuclear Operations
803.345.4214



September 8, 2004
RC-04-0148

Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Sir / Madam:

Subject: VIRGIL C. SUMMER NUCLEAR STATION (VCSNS)
DOCKET NO. 50/395
OPERATING LICENSE NO. NPF-12
REQUEST TO USE ALTERNATIVES TO ASME CODE
REQUIREMENTS IN VCSNS THIRD INSERVICE INSPECTION
INTERVAL (RR-III-01, RR-III-02)

- References:
1. NRC Letter to SCE&G, VIRGIL C. SUMMER NUCLEAR STATION - RELIEF REQUEST II-07 ASSOCIATED WITH THE RISK-INFORMED INSERVICE INSPECTION (RI-ISI) PROGRAM (TAC NO. MB6523), May 12, 2003
 2. SCE&G Letter to NRC (Document Control Desk), RC-02-0161, September 16, 2002; Request For Revision To ASME Boiler And Pressure Vessel Code, Section XI Relief Request (NRR 00-0058) RR-II-07
 3. NRC Letter to SCE&G, VIRGIL C. SUMMER NUCLEAR STATION, UNIT NO. 1 (TAC NO. M88860), July 29, 1994
 4. SCE&G Letter to NRC (Document Control Desk), RC-94-0039, February 17, 1994; ASME Section XI Relief Requests (NRR 940003)

South Carolina Electric & Gas Company (SCE&G) hereby submits the attached requests for using alternatives to the examination requirements of the ASME Code. SCE&G has determined that the proposed alternatives will provide an acceptable level of quality and safety.

A detailed description of the proposed alternatives, including basis for relief, is included as attachments to this letter. SCE&G requests NRC review and approval of these requests by March 1, 2005, so that appropriate changes to the VCSNS Examination Program can be completed prior to VCSNS refuel outage 15 currently scheduled for April 15, 2005.

Similar relief requests were previously submitted for the Second Inservice Inspection Interval (References 2 and 4) and were approved by the NRC (References 1 and 3).

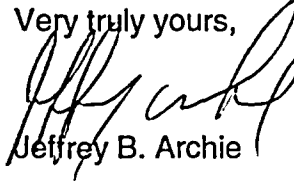
SCE&G is submitting the attached relief request in accordance with 10 CFR 50.55a(a)(3)(ii).

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Should you have any questions, please call Mr. Ronald B. Clary at (803) 345-4757.

Very truly yours,



Jeffrey B. Archie

JT/JBA/dr
Attachments

c: N. O. Lorick
N. S. Carns
T. G. Eppink (w/o Attachments)
R. J. White
W. D. Travers
K. R. Cotton
K. M. Sutton
F. A. Miller

D. G. Dobson
S. C. Smith
NRC Resident Inspector
NSRC
RTS (C-04-2193)
File (810.19-2)
DMS (RC-04-0148)

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**South Carolina Electric & Gas Co. (SCE&G)
Virgil C. Summer Nuclear Station (VCSNS)
Relief Request**

RR-III-01

Subject:

Inspection and testing of snubbers in accordance with the requirements of VCSNS Technical Specification 3/4.7.7.

Components:

Code Class:	1, 2, 3, and MC
References:	IWF-5300, Second Interval ISI Relief Request No. RR-06
Examination Category:	N/A
Item Number:	N/A
Description:	All non-exempt snubbers required to be inspected and tested by the provisions of IWF-5300

Code Requirement:

Subarticle IWF-5300 of the 1998 Edition through 2000 Addenda of the ASME Boiler and Pressure Vessel Code, Section XI, requires that snubbers are to undergo inservice examination and testing in accordance with ASME/ANSI OM, Part 4, using the VT-3 visual examination method described in IWA-2213.

Relief Request:

SCE&G requests relief from the inservice examination and testing of snubbers to the requirements of ASME/ANSI OM, Part 4.

Alternate Test:

As an alternative to performing inservice examination and testing in accordance with ASME/ANSI OM, Part 4, as required by IWF-5300, VCSNS will apply the visual and functional testing requirements that are prescribed by the Technical Specifications (including sampling and frequency requirements) to the components identified above.

Basis for Relief:

Pursuant to 10CFR50.55a(a)(3)(ii), use of an alternative is requested on the basis that compliance with the ASME Section XI requirements would result in a hardship without a compensating increase in quality or safety.

VCSNS is required to incorporate the 1998 Edition through 2000 Addenda of the ASME Code as the governing requirement for the third ten-year inservice inspection interval. These requirements contain snubber examination and testing methodologies that are nearly identical to the methodologies described in the VCSNS Technical Specifications for examination and testing of snubbers. Having two nearly redundant sets of snubber requirements presents unnecessary confusion in sample selection, data collection, acceptance criteria, and corrective actions. These requirements will in some cases cause a duplication of test documentation. However, in other cases, additional confusion is created by the difference in snubber categories. Approximately half the snubbers at VCSNS are required to be tested by one of the requirements. Therefore, sampling becomes very confusing since some of the snubbers may be applicable to both requirements and others to only one. For the same reason acceptance criteria and corrective actions become difficult to apply.

One area where the requirements do not closely resemble each other is the inspection frequency change in response to visual examination failures. The differences can cause different frequency requirements to be prescribed to a single group of snubbers as a result of the same inspection. This situation obviously would increase the possibility of applying a wrong action thus creating a nonconformance, an inoperable component or system, or even a violation of Technical Specifications.

In order to remove the confusion of trying to administer such similar requirements to snubber categories that partially overlap and to remove the possibility of requiring contradictory actions to apply to the same snubber(s), VCSNS believes that meeting the requirements that are contained in the VCSNS Technical Specifications for all the snubbers which apply to either category will provide sufficient testing. Therefore, the proposed alternate test will provide an acceptable level of quality, whereas compliance with the Code would result in a hardship without a compensating increase in quality or safety.

This request is similar to VCSNS Relief Request RR-06, submitted for the Second Interval as Attachment II to letter RC-94-0039, dated February 17, 1994. NRC Letter (TAC-M88860) dated July 29, 1994 approved the Second Interval request.

Implementation Schedule:

Application of the alternative criteria is requested for the third interval of the Inservice Inspection Program at the V. C. Summer Nuclear Station, which began on January 1, 2004.

**South Carolina Electric & Gas Co. (SCE&G)
Virgil C. Summer Nuclear Station (VCSNS)
Relief Request**

RR-III-02

Subject:

Inspection and examination of Class 1 and 2 piping welds in accordance with the requirements of ASME Code, Section XI, Tables IWB-2500-1 and IWC-2500-1.

Components:

Code Class: 1 and 2

References: Table IWB-2500-1,
Table IWC-2500-1
ASME Code Case N-578
EPRI Topical Report TR-112657
Second Interval ISI Relief Request No. RR-II-07

Examination Categories: B-F, B-J, C-F-1, C-F-2

Item Numbers: B5.10, B5.40, B5.70, B9.11, B9.21, B9.31, B9.32,
B9.40, C5.11, C5.21, C5.30, C5.41, C5.51, C5.81

Description: Implementation of Risk-Informed Inservice Inspection Program

Code Requirement:

ASME, Section XI, Tables IWB-2500-1 and IWC-2500-1 for Examination Categories B-F, B-J, C-F-1, and C-F-2 require specific percentages of the weld population to be inspected each Interval.

Relief Request:

SCE&G requests relief from the inservice examination of Code Class 1 and 2 piping welds to the requirements of ASME Section XI.

Alternate Inspection

The proposed alternative is to apply the Risk-Informed Inservice Inspection weld selection criteria as detailed in the EPRI Topical Report TR-112657, V.C. Summer Nuclear Station (VCSNS) Specific Evaluation. TR-112657 is consistent with ASME

Code Case N-578 and has been reviewed and updated to consider all relevant information since the development of the original program.

Basis for Relief:

VCSNS was originally required to schedule piping weld inspections in accordance with ASME Section XI, Tables IWB-2500-1 and IWC-2500-1. The selection of welds for inspection was based on the inherent design stress intensity and usage factor. The alternative EPRI Topical Report TR-112657, and Code Case N-578 require extensive engineering evaluation of all piping segments subject to the ASME Section XI Inservice Inspection Program. This engineering evaluation bases the selection and scheduling of piping welds on probable failure potential. In accordance with the guidelines of the Code Case and the Technical Report, the piping systems subject to the Inservice Inspection Program at VCSNS were evaluated, categorized for failure potential, and ranked relative to risk of failure. The risk-informed inservice inspection (RI-ISI) template, "Risk-Informed Inservice Inspection Program Plan, V. C. Summer Nuclear Station, Rev. 0" was submitted as Relief Request RR-II-07 through Attachment 1 to letter RC-02-0161, dated September 16, 2002, and supplemented in a letter to the NRC dated January 29, 2003. Based upon the RI-ISI template submittal and supplemental submittal described above, this request was determined to provide an acceptable level of quality without an increased level of risk, and the NRC issued an SER on May 12, 2003, which approved use of the RI-ISI Program at the V. C. Summer Nuclear Station.

In accordance with the Safety Evaluation Report, the RI-ISI program has been reviewed and updated to consider all relevant information since the development of the original program through PRA Model Revision @3HUP. The areas addressed and the results of the review are:

- Examination Results - Review of the NIS-1 and NIS-2 forms for RF14 indicated that no flaws were found. No impact on the RI-ISI analysis was identified.
- Piping Failures - Licensee Event Reports (LERs) and Non-Conformance Notices (NCNs) were reviewed for indications of potential failures other than those detected during Section XI examinations. No impact on the RI-ISI analysis was indicated.
- Probabilistic Risk Assessment (PRA) Update - Initiating Events Consequence Ranks (Table 3.2 of the Consequence Evaluation) and Conditional Core Damage Probability (CCDP) Values for System/Train Loss (Table 3.7 of the Consequence Evaluation) were recalculated with the values from the version of the PRA current at the time of evaluation (version @3HUP). While the Risk Achievement Worth (RAW), Core Damage Frequency (CDF), and Large Early Release Frequency (LERF) values changed, the Consequence Rank for each combination of Component/Basic Event/Exposure Time remained the same as those determined in the original Consequence Evaluation.

- **Plant Design Changes** - To determine plant configuration changes, piping system and flow diagrams were reviewed for revisions since August 2002. No configuration changes impacting the RI-ISI analysis were indicated.
- **Programmatic Changes** - As part of the ASME Third Interval update, Code Classification was reviewed for all piping. As a result of this review, additional piping was determined to be in the scope of the RI-ISI Program.
 - Reactor Coolant Pump (RCP) Seal Injection lines had previously been classified as Class 2 based on design stress considerations. These lines were re-classified as Class 1 based on function. The lines had previously been considered out of RI-ISI scope due to exemption of 1-1/2" pipe from Class 2 requirements. As Class 1, they are no longer exempted based on size.
 - The Third Interval program is based on the 1998 edition of ASME Section XI through the 2000 addenda. This edition/addenda reduced the exemption for Emergency Feedwater lines from 4" to 1-1/2". As such, the 4" sections of the Emergency Feedwater lines are no longer out of the RI-ISI scope.
- The Reactor Coolant Pump Seal Injection lines and the 4" portions of the Emergency Feedwater lines were identified for addition to the RI-ISI analysis.
- **Procedural Changes** - Procedures listed as references in the Consequence Evaluation and the Degradation Mechanism Evaluation were reviewed for revisions since the original analysis was performed. No changes to the applicable portions had occurred, and no impact on the RI-ISI analysis was indicated.
- **Changes in Postulated Conditions** - There have been no changes to postulated conditions.

As a result of the above, the RI-ISI Program was updated. The Reactor Coolant Pump Seal Injection lines and the 4" portions of the Emergency Feedwater lines were added to the RI-ISI analysis. A total of 107 welds are in the added piping segments. All of the added lines were determined to be Medium Consequence Category, with no applicable Degradation Mechanisms. As such, these lines are Category 6 - Low Risk, and no elements were selected for examination. As the lines had been exempt from the original ISI Program, there is no impact on the Change in Risk Analysis.

The PRA model will continue to be updated and as a result, the RI-ISI program will require update as well. Update requirements will be based on the NEI Living Program Guideline (NEI 04-05).

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Implementation Schedule:

Application of the alternative criteria is requested for the third interval of the Inservice Inspection Program at the V. C. Summer Nuclear Station, which began on January 1, 2004.