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SCE&G®
A SCANA COMPANY

March 18, 2016
RC-16-0046

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

Dear Sir / Madam:

Subject: VIRGIL C. SUMMER NUCLEAR STATION (VCSNS) UNIT 1
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12
RELIEF REQUEST RR-III-12 PROPOSED ALTERNATIVE INSPECTION REQUIREMENTS FOR PIPING WELDS – RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

References:

1. SCE&G Letter from T. D. Gatlin to NRC Document Control Desk, "Relief Request RR-III-12 Proposed Alternative Inspection Requirements for Piping Welds," dated November 10, 2015 (ML15316A556)
2. NRC Letter to G. A. Lippard (SCE&G), "Virgil C. Summer Nuclear Station, Unit No. 1 – Request for Additional Information (CAC No. MF7085)," dated February 18, 2016 (ML16042A471)

South Carolina Electric & Gas Company (SCE&G), acting for itself and as an agent for South Carolina Public Service Authority pursuant to 10CFR50.55a(g)(5)(iii), requested relief from the volumetric requirement of ASME Code Section XI per Reference 1. NRC review of this relief request determined that additional information was required. A request for additional information (RAI) was issued by Reference 2.

The Attachment provides the VCSNS response to the RAIs.

This letter contains no commitments. If you have any questions or require additional information, please contact Bruce Thompson at (803) 931-5042.

A047
NRR

Very truly yours,

George A. Lippard

WLT/GAL/mz

Attachment

c: K. B. Marsh
S. A. Byrne
J. B. Archie
N. S. Carns
J. H. Hamilton
J. W. Williams
W. M. Cherry
C. Haney
S. A. Williams
NRC Resident Inspector
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RTS (CR-15-04026)
File (810.19)
PRSF (RC-16-0046)

VIRGIL C. SUMMER NUCLEAR STATION (VCSNS)
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12

Attachment

VCSNS Response to Request for Additional Information

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the South Carolina Electric & Gas Company (SCE&G) alternative request dated November 10, 2015 (Agencywide Documents Access and Management System Accession No. ML15316A556), for the Virgil C. Summer Nuclear Station, Unit 1. The NRC staff has determined that the following request for additional information (RAI) is required to complete its review.

RAI No. 1:

Please discuss the ASME Code Section XI, Appendix I requirement from which procedure SCANA-UT-98-13 is based. If supplements apply, please discuss which supplements were used.

VCSNS Response:

The procedure, SCANA-UT-98-13, states "...describes the manual contact ultrasonic examination of full penetration vessel welds not greater than 2 inches in thickness. This procedure is in accordance with the requirements of ASME Boiler and Pressure Vessel Code Section XI...This procedure is applicable to full penetration butt welds and adjacent base metal in vessels having nominal wall thickness of 0.2 inches to 2.0 inches inclusive." The applicable ASME BPV Code for Sections V and XI is 1998 edition through 2000 addenda.

Section XI, Appendix I, Ultrasonic Examinations, Article I-2200 states "Vessels not greater than 2 in. in thickness and all piping welds" is applicable to procedure SCANA-UT-98-13. Article I-2210 is for vessels, and instructs "Ultrasonic examination of vessels not greater than 2 in. in thickness shall be conducted in accordance with Appendix III, as supplemented by Table I-2000-1." Table I-2000-1 shows the required supplements of Appendix I to be used.

TABLE I-2000-1
REQUIRED SUPPLEMENTS

Supplement	Reactor Vessel Flange and Attachment Welds I-2110(b)	Reactor Vessel CRD Housing Welds I-2110(c)	Other Vessels > 2 in. Thick I-2120	Other Vessels ≤ 2 in. Thick I-2210	Other I-2400
1 — Calibration Block Material and Thickness	X		X		X
2 — Calibration Blocks for Clad Welds/ Components	X		X	X	X
3 — Calibration Blocks for Curved Surfaces			X	X	X
4 — Alternative Calibration Block Design	X		X	X	X
5 — Electronic Simulators	X		X	X	X
6 — Pulse Repetition Rate	X		X	X	X
7 — Instrument Calibration	X		X		X
8 — Scan Overlap and Search Unit Oscillation			X		X
9 — Scan Angles			X		
10 — Recording Criteria	X	X	X	X	X
11 — Geometric Reflectors	X		X	X	X
12 — Flaw Sizing	X	X	X	X	X

Appendix III, as instructed to be utilized by Appendix I Article I-2210, is titled "Ultrasonic Examination of Vessels Not Greater Than 2 Inches in Thickness." According to Appendix III, Article III-1100(c), Supplement 1 of Appendix III is to be used on austenitic welds such as the welds CGE-2-1110-1B/1 and CGE-2-1110-1B/2.

RAI No. 2:

Please discuss any plant-specific operating experience regarding potential degradation in welds CGE-2-1110-1 B/1 and CGE-2-1110-1 B/2, such as stress corrosion cracking, fatigue cracking, and general corrosion.

VCSNS Response:

There is no plant specific operating experience regarding potential degradation in welds CGE-2-1110-1B/1 and CGE-2-1110-1B/2. The VC Summer Unit 1 exam data for welds CGE-2-1110-1B/1 and CGE-2-1110-1B/2 from the 2nd and 3rd intervals revealed no findings indicative of any potential degradation being present in these welds. An industry OE search/review was conducted by the Heat Exchanger Engineer just prior to the fall 2015 refueling outage (RF-22). The search returned no operating experience and no instances of degradation for these heat exchangers.