



November 14, 2012  
RC-12-0173

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-09 REQUEST FOR INFORMATION

- Reference:
1. WCAP-15987-P-A Revision 2, "Technical Basis for the Embedded Flaw Process for Repair of Reactor Vessel Head Penetrations" [ML040290246]
  2. Letter from H. N. Berkow (U. S. NRC) to H. A. Sepp (Westinghouse Electric Company), "Acceptance for Referencing - Topical Report WCAP-15987-P, Revision 2, 'Technical Basis for the Embedded Flaw Process for Repair of Reactor Vessel Head Penetrations,' (TAC NO. MB8997)," dated July 3, 2003 [ML031840237]
  3. Letter from T. D. Gatlin (VCSNS) to Document Control Desk (NRC), "Reactor Vessel Head Penetration Weld Repair Under WCAP-15987," dated October 22, 2012 [ML12306A530]
  4. Letter from T. D. Gatlin (VCSNS) to Document Control Desk (NRC), "Relief Request RR-III-09 Alternative Weld Repair For Reactor Vessel Head Penetration," dated October 30, 2012
  5. Letter from T. D. Gatlin (VCSNS) to Document Control Desk (NRC), "Relief Request RR-III-09 Supplemental Information," dated November 5, 2012

South Carolina Electric & Gas Company (SCE&G), acting for itself and as an agent for South Carolina Public Service Authority, hereby submits a response to the Request for Additional Information (RAI). VCSNS is providing the technical basis for the Embedded Flaw Process for repair of the reactor vessel head penetrations. During teleconference between NRC, Westinghouse and SCE&G on November 7, 2012, the NRC identified that additional information was needed to support review of the relief request.

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This letter contains no commitments. In the future, SCE&G may propose a method of monitoring flaw growth during subsequent refueling outage inspections and provide a basis for extending the service life of the repairs.

Should you have any questions, please call Bruce L. Thompson at 803-931-5042.

Very truly yours,



Thomas D. Gatlin

JG/TDG/bj

Enclosure: VCSNS Relief Request RR-III-09, Request for Additional Information  
Attachment 1: LTR-PAFM-12-137-NP, Revision 2

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PRSF (RC-12-0173)

VIRGIL C. SUMMER NUCLEAR STATION UNIT 1  
REQUEST FOR ADDITIONAL INFORMATION  
Relief Request RR-III-09  
Alternative Weld Repair For Reactor Vessel Head Penetration  
Request for Additional Information

During a teleconference between NRC, Westinghouse and SCE&G on November 7, 2012, additional information was requested to support the review of the subject relief request. VCSNS submittals have identified the flaws as being contained within the tube material only. Since the flaw indications extend above the toe of the weld, the technical basis for the flaw repair should conservatively assume the flaw extends radially over the entire depth of the J-Groove weld cross-section.

The following request was developed as a result of discussions during the teleconference.

- 1. VCSNS has identified the flaw as limited to the penetration tube material and that it is located below the J-Groove Weld. The UT results indicate some of the flaws extend above the toe of the J-Groove weld. Since the weld itself cannot be interrogated, conservative analysis assuming a flaw in the J-Groove weld that extends radially over the entire depth is required.***

[VCSNS Response]

Westinghouse has conducted the reanalysis for VCSNS that conservatively assumes postulated axial flaw near the penetration nozzle that encompasses the entire J-Groove weld region. The results of this analysis are provided as Attachment 1.

In the future, SCE&G may propose a method of monitoring flaw growth and provide bases for extending the service life of the repairs.