

January 22, 2003

Mr. Stephen A. Byrne  
Senior Vice President, Nuclear Operations  
South Carolina Electric & Gas Company  
Virgil C. Summer Nuclear Station  
Post Office Box 88  
Jenkinsville, South Carolina 29065

SUBJECT: V.C. SUMMER NUCLEAR STATION REQUEST FOR ADDITIONAL  
INFORMATION FOR RELIEF REQUEST NO. RR-II-08 (TAC NO. MB6647)

Dear Mr. Byrne:

By letter dated October 30, 2002, South Carolina Electric and Gas Company, the licensee for V.C. Summer Nuclear Station, submitted request for relief No. RR-II-08 regarding alternate inspections of the Steam Generator Primary Nozzle Inner Radius as required by the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, 1989 Edition.

The U.S. Nuclear Regulatory Commission staff has reviewed your request and determined that it did not provide sufficient information to grant the request for relief No. RR-II-08 regarding alternate inspections of the Steam Generator Primary Nozzle Inner Radius as required by ASME Code, Section XI, 1989 Edition. The enclosed request for additional information (RAI) contains specific questions related to these issues. I have discussed this RAI with Mr. Jim Turkett, Licensing Engineer, Virgil C. Summer Nuclear Station, and he agreed to respond to this request by January 29, 2003. Please contact me if you have any questions.

Sincerely,

*/RA/*

Karen R. Cotton, Project Manager, Section 1  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-395

Enclosure: Request for additional information

cc w/encl: See next page

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DATE	1/21/03	1/21/03	1/21/03

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## REQUEST FOR ADDITIONAL INFORMATION

### INSERVICE INSPECTION RELIEF REQUEST RR-II-08

#### V.C. SUMMER NUCLEAR STATION

1. The submittal states that the relief is being requested in accordance with Title 10, Code of Federal Regulations (10 CFR), Sections 50.55a(a)(3)(i) and 50.55a(a)(3)(ii). Relief such as this has been authorized using 10 CFR 50.55a(a)(3)(ii), the American Society of Mechanical Engineers Boiler and Pressure Vessel Code since (the Code) requirements reflect hardship upon the licensee. To build a case for such hardship, please provide:
  - a. A comparison of worker radiation dosage between the ultrasonic and visual examination techniques.
  - b. The drawings (or pictorial discussion) showing the type and location of interferences with the Code-required ultrasonic examination. The drawing number was provided in the submittal but not the drawing itself. Identify the percent coverage that is able to be achieved on these nozzles using Code-required ultrasonic examinations.
  - c. A material description (cast carbon steel, cast stainless steel, cast nickel-based alloys, etc.) and dimensions (nozzle nominal inside diameter, nominal wall-thicknesses).
2. The staff has been authorizing an enhanced VT-1 with demonstrated capabilities of resolving a 1-mil wire or equivalent flaw for the specified inner nozzle radii. This is in keeping with the current rule published in the *Federal Register*, 67 FR 60541, dated September 26, 2002, regarding 10 CFR 50.55a(b)(2)(xxi). The proposed alternative is relying only on the Code-requirements for VT-1 of ensuring the detection of cracks.
  - a. Discuss the demonstration used for comparing the effectiveness of the enhanced VT-1 and UT.
  - b. Explain the process used for selecting flaw types and sizes used for demonstrating effectiveness.
  - c. Provide a description of the flaws.
  - d. Discuss the variations with respect to true values.
3. Discuss the percentage of Code-required surface coverage that will be examined with the alternate VT examination for each nozzle inner radius.
4. Discuss the procedure for examination of the steam generator primary nozzle inner radius done during the first Inservice Inspection Interval for V.C. Summer Nuclear Station.

Enclosure

Mr. Stephen A. Byrne  
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

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

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  
Department of Health & Environmental Control  
2600 Bull Street  
Columbia, South Carolina 29201

Mr. Gregory H. Halnon, General Manager  
Nuclear Plant Operations  
South Carolina Electric & Gas Company  
Virgil C. Summer Nuclear Station, Mail Code 303  
Post Office Box 88  
Jenkinsville, South Carolina 29065

Mr. Melvin N. Browne, Manager  
Nuclear Licensing & Operating Experience  
South Carolina Electric & Gas Company  
Virgil C. Summer Nuclear Station, Mail Code 830  
Post Office Box 88  
Jenkinsville, South Carolina 29065