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RC-95-0315

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

Gentlemen:

Subject: VIRGIL C. SUMMER NUCLEAR STATION (VCSNS)
DOCKET NO. 50/395
OPERATING LICENSE NO. NPF-12
ASME SECTION XI RELIEF REQUEST (NRR 950001)

South Carolina Electric & Gas Company (SCE&G) hereby requests relief from the ASME Section XI requirements for Class 1 and 2 insulated pressure retaining bolted connections which receive VT-2 Visual Examination during the performance of System Pressure Testing.

The enclosure contains the component identification, code requirements, proposed alternate testing, and basis for this relief request. This relief is modeled after Code Case N-533, expanded to include specified Class 2 connections inside containment. This relief is to exempt the applicable Class 1 and 2 pressure retaining bolted connections that are insulated, in systems borted for the purpose of reactivity control. Specifically, SCE&G requests to exempt the applicable connections from the requirements of ASME Section XI IWA 5242(a), which specifies that insulation must be removed from pressure retaining bolted connections for VT-2 visual examination during the performance of System Pressure Testing.

As an alternate, SCE&G shall remove the insulation and conduct the VT-2 visual examination of pressure retaining bolted connections on applicable Class 1 connections once per refueling outage at static or atmospheric pressure. Applicable Class 2 connections will be similarly inspected once each inspection period during a refueling outage. Insulation will then be reinstalled and upon repressurization of a bolted connection, a four-hour hold time will be utilized to assess potential leakage.

SCE&G contends that the proposed alternate testing provides the equivalent, acceptable level of quality and safety as that provided by the Code. SCE&G desires relief from the above requirements so as not to create an undue hardship without a compensating increase in quality or safety.

SCE&G requests that the NRC review and approve this request as soon as possible, but no later than March 21, 1996, in order to support inspection activities scheduled to begin in April, 1996.

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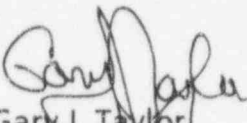


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Should you have any questions on this issue, please call Mr. M. J. Zaccone at (803) 345-1328.

Very truly yours,


Gary J. Taylor

MJZ/GJT/ews
Enclosure

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File (810.19-2)

BOLTED CONNECTIONS ISI RELIEF REQUEST

Subject:

Removal of insulation from pressure retaining bolted connections, in systems borated for the purpose of reactivity control, during system pressure testing

Component Identification:

System : Reactor Coolant
 Chemical and Volume Control
 Residual Heat Removal
 Safety Injection

Components: Insulated pressure retaining bolted connections inside containment which receive a VT-2 visual examination and are normally tested in a high temperature and elevated radiation environment. Code Class 1 components are listed in Attachment I. Code Class 2 components are listed in Attachment II.

ISI Class: 1 and 2

Code Requirements:

Subparagraph IWA-5242 (a) requires that, for systems borated for the purpose of controlling reactivity, insulation shall be removed from pressure retaining bolted connections for visual examination VT-2.

Alternate Testing:

It is proposed that insulated bolted connections inside containment on Class 1 systems that are borated for the purpose of controlling reactivity be examined each refueling outage at atmospheric or static pressure. The examination will be performed with insulation removed. Similarly, insulated bolted connections on Class 2 systems inside containment that are borated for the purpose of controlling reactivity will be examined once each examination period. In addition to the above, all of the piping and components associated with these Class 1 and 2 systems inside containment will be examined at their required frequencies and under the conditions specified in IWA-5000, IWB-5000 and IWC-5000, with the exception of the removal of insulation from bolted connections. These examinations will be performed utilizing a four hour hold time.

Basis for Relief:

Inside containment, the referenced systems are tested in an environment that is hazardous to personnel. Ambient temperature is between 100 and 120 degrees Fahrenheit. Personnel must manipulate undesirable work platforms such as ladders against components that could be in excess of 500 degrees Fahrenheit. Removing and reinstalling insulation under these conditions is difficult to perform and is not considered to be consistent with the ALARA concept when compared to the alternate approach.

This position is supported by the following facts:

1. The ASME issued Code Case N-533 to provide an alternative to the removal of insulation at bolted connections for Class 1 systems.
2. Surry Power Station was granted relief from the referenced code section in NRC letter # 95-404 dated 07/19/95.
3. Pre-existing boric acid leaks will be detected at atmospheric or static pressures due to residue deposits.
4. A four hour hold time will ensure that boric acid leaks that may develop during the outage will be identified during the VT-2 examination that will be performed prior to startup.
5. The alternate test will not be applied to post repair/replacement activities on bolted connections.

Attachment I
Code Class 1 Bolted Connections

COMPONENT DRAWING LOCATION	SIZE	CODE CLASS	COMPONENT DESCRIPTION	APPROXIMATE LOCATION
PCV00444B-RC 302-602 E-15	3"	1	PRESSURIZER POWER OPERATED RELIEF VALVE	RB-477-326-56
PCV00444C-RC 302-602 F-09	4"	1	LOOP C PRESSURIZER SPRAY VALVE	RB-463-313-54
PCV00444D-RC 302-602 G-09	4"	1	LOOP A PRESSURIZER SPRAY VALVE	RB-463-302-49
PCV00445A-RC 302-602 D-15	3"	1	PRESSURIZER POWER OPERATED RELIEF VALVE	RB-477-315-34
PCV00445B-RC 302-602 E-15	3"	1	PRESSURIZER POWER OPERATED RELIEF VALVE	RB-477-323-35
XVG08000A-RC 302-602 D-15	3"	1	PZR PWR OPER RELIEF VLV INLET ISOL VLV	RB-463-316-34
XVG08000B-RC 302-602 E-15	3"	1	PZR PWR OPER RELIEF VLV INLET ISOL VLV	RB-463-326-56
XVG08000C-RC 302-602 D-15	3"	1	PZR PWR OPER RELIEF VLV INLET ISOL VLV	RB-463-325-38
XVS08010A-RC 302-602 D-11	6"	1	PRESSURIZER SAFETY VALVE A	RB-480-313-37
XVS08010B-RC 302-602 D-11	6"	1	PRESSURIZER SAFETY VALVE B	RB-480-308-48
XVS08010C-RC 302-602 D-14	6"	1	PRESSURIZER SAFETY VALVE C	RB-480-325-48
XVG08085-RC 302-601 A-15	3"	1	RC LOOP A NORM LETDOWN OUTLET ISOL VLV	RB-412-268-35
XVT08145-CS 302-673 B-14	2"	1	RCS PRESSURIZER SPRAY HEADER ISOL VLV	RB-425-030-52
XVT08153-CS 302-673 B-09	1"	1	EXCESS LETDOWN HEAT EXCH INLET VALVE	RB-412-070-34
XVT08154-CS 302-673 B-09	1"	1	EXCESS LETDOWN HEAT EXCH INLET VALVE	RB-412-070-34
XVC08346-CS 302-673 A-14	3"	1	ALTERNATE CHARGING HEADER CHECK VALVE	RB-433-280-18
XVC08347-CS 302-673 B-14	3"	1	RCS NORMAL CHARGING HEADER CHECK VALVE	RB-412-155-28

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COMPONENT DRAWING LOCATION	SIZE	CODE CLASS	COMPONENT DESCRIPTION	APPROXIMATE LOCATION
XVC08377-CS 302-673 B-15	2"	1	RCS PZR SPRAY SUPPLY HEADER CHECK VALVE	RB-463-305-46
XVC08378-CS 302-673 B-15	3"	1	RCS NORMAL CHARGING HEADER CHECK VALVE	RB-412-155-28
XVC08379-CS 302-673 A-15	3"	1	ALTERNATING CHARGING HEADER CHECK VALVE	RB-412-280-18
LCV00459-CS 302-673 A-13	3"	1	RC LETDOWN LINE ISOLATION VALVE	RB-412-285-44
LCV00460-CS 302-673 A-14	3"	1	RC LETDOWN LINE ISOLATION VALVE	RB-412-285-44
XPS0024A 302-671 E-17	3/4"	1	REACTOR COOLANT PUMP A SEAL BYPASS ORF	RB-436-245-36
XPS0024B 302-672 E-16	3/4"	1	REACTOR COOLANT PUMP B SEAL BYPASS ORF	RB-436-140-45
XPS0024C 302-673 E-16	3/4"	1	REACTOR COOLANT PUMP C SEAL BYPASS ORF	RB-436-050-45
XVG08701A-RH 302-641 H-15	12"	1	RH HEADER A ISOLATION VALVE (IRC)	RB-412-265-48
XVG08701B-RH 302-641 F-15	12"	1	RH HEADER B ISOLATION VALVE (IRC)	RB-412-110-44
XVG08702A-RH 302-641 H-15	12"	1	RH INLET HEADER A ISOLATION VALVE	RB-412-275-24
XVG08702B-RH 302-641 F-15	12"	1	RH INLET HEADER B ISOLATION VALVE	RB-412-080-30
XVC08948A-SI 302-692 C-16	12"	1	SI LOOP A OUTLET HEADER CHECK VALVE	RB-433-250-28
XVC08948B-SI 302-692 E-16	12"	1	SI LOOP B OUTLET HEADER CHECK VALVE	RB-433-145-44
XVC08948C-SI 302-692 G-16	12"	1	SI LOOP C OUTLET HEADER CHECK VALVE	RB-433-035-28
XVC08993A-SI 302-691 A-04	6"	1	LOOP A HIGH HEAD HOT LEG HDR CHECK VLV	RB-433-260-20
XVC08993B-SI 302-691 A-04	6"	1	LOOP B HIGH HEAD HOT LEG HDR CHECK VLV	RB-433-150-56

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 Code Class 1 Bolted Connections

COMPONENT DRAWING LOCATION	SIZE	CODE CLASS	COMPONENT DESCRIPTION	APPROXIMATE LOCATION
XVC08993C-SI 302-691 A-05	6"	1	LOOP C HIGH HEAD HOT LEG HDR CHECK VLV	RB-433-050-21
XVC08998A-SI 302-691 A-15	6"	1	LOOP A LOW HEAD COLD LEG CHECK VALVE	RB-433-275-18
XVC08998B-SI 302-691 A-15	6"	1	LOOP B LOW HEAD COLD LEG CHECK VALVE	RB-433-135-45
XVC08998C-SI 302-691 B-15	6"	1	LOOP C LOW HEAD COLD LEG CHECK VALVE	RB-433-055-22
XTK0024 302-602 G-12	N/A	1	PRESSURIZER ASSY (Manway Covers)	RB-437-320-42
XSG0002A 302-601 C-14	N/A	1	STEAM GENERATOR A (Primary Manway Covers)	RB-412-290-32
XSG0002B 302-601 E-14	N/A	1	STEAM GENERATOR B (Primary Manway Covers)	RB-412-165-32
XSG0002C 302-601 C-04	N/A	1	STEAM GENERATOR C (Primary Manway Covers)	RB-412-075-32

Attachment II
Code Class 2 Bolted Connections

COMPONENT DRAWING LOCATION	SIZE	CODE CLASS	COMPONENT DESCRIPTION	APPROXIMATE LOCATION
XVG08080-RC 302-602 J-12	3/4"	2	PZR SFTY VLV LOOP SL DRN LINE PZR ISOL	RB-436-315-40
XVT08149A-CS 302-673 A-09	2"	2	RCS LETDOWN FLOW CONTROL VALVE (45 GPM)	RB-425-030-52
XVT08149B-CS 302-673 A-09	2"	2	RCS LETDOWN FLOW CONTROL VALVE (60 GPM)	RB-425-030-52
XVT08149C-CS 302-673 A-08	2"	2	RCS LETDOWN FLOW CONTROL VALVE (60 GPM)	RB-425-030-52
XVG08972A-SI 302-693 E-14	6"	2	SI HEADER A CROSS CONNECTION VALVE	RB-412-225-56
XVG08972B-SI 302-693 F-14	6"	2	SI HEADER B CROSS CONNECTION VALVE	RB-412-155-60
XVC08974A-SI 302-693 E-14	10"	2	SI HEADER A CHECK VALVE (IRC)	RB-412-240-60
XVC08974B-SI 302-693 F-14	10"	2	SI HEADER B CHECK VALVE (IRC)	RB-412-155-60