

SOUTH CAROLINA ELECTRIC & GAS COMPANY

POST OFFICE BOX 764

COLUMBIA, SOUTH CAROLINA 29218

T. C. NICHOLS, JR.
VICE PRESIDENT AND GROUP EXECUTIVE
NUCLEAR OPERATIONS

February 23, 1981

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

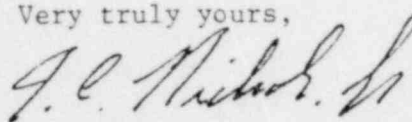
Subject: Virgil C. Summer Nuclear Station
Docket No. 50/395
FSAR Question 421.83 - Q-List

Dear Mr. Denton:

South Carolina Electric & Gas Company (SCE&G) acting for itself and as agent for the South Carolina Public Service Authority, hereby submits forty-five (45) copies of the response to FSAR question 421.83 concerning the Q-list. This question was incorrectly numbered as 420.83 in a previous NRC letter to SCE&G. The response will be incorporated into the FSAR in amendment 24.

If you have any questions, please let us know.

Very truly yours,



T. C. Nichols, Jr.

NEC:TCN:glb

Enclosure

cc: V. C. Summer w/o enclosure
G. H. Fischer w/o enclosure
T. C. Nichols, Jr. w/o enclosure
E. H. Crews, Jr.
O. W. Dixon, Jr.
C. A. Price
D. A. Nauman
W. A. Williams, Jr.
R. B. Clary
A. R. Koon
A. A. Smith
H. N. Cyrus
J. B. Knotts, Jr.
J. L. Skolds
B. A. Bursey
O. S. Bradham
ISEG
PRS
NPCF/Whitaker
File **103020 362**

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421.83 Section 17.1.2.2 of the standard format (Regulatory Guide 1.70) requires the identification of safety-related structures, systems, and components (Q-list) controlled by the QA program. You are requested to supplement and clarify the Q-list in Tables 3.2-1, 3.2-2, 3.10-1, and 3.10-2 of the FSAR in accordance with the following:

- a. The following items do not appear on the Q-list. Add these items or justify not doing so.
 - 1) Biological shielding within reactor building, control building, auxiliary building, fuel handling building, and intermediate building.
 - 2) Missile barriers protecting safety-related equipment within the reactor building, control building, auxiliary building, fuel handling building, intermediate building, diesel generator building pump house, and around air intakes, vent stacks, and other outside structures as applicable.
 - 3) Pressurizer spray nozzles.
 - 4) Steam generator steam flow restrictors.
 - 5) Fuel handling building crane.
 - 6) Meteorological data collection programs.
 - 7) Steel liner of the reactor building.
 - 8) Supports for containment heat removal system.
 - 9) Combustible gas control system
 - a) H₂ purge supply and exhaust system
 - b) H₂ monitoring system
 - c) H₂ analyzer
 - d) Supports
 - 10) Containment and emergency cooling system
 - a) Cooling coils
 - b) Ductwork dampers and supports
 - 11) Onsite power systems (Class IE)
 - a) Diesel generator packages including auxiliaries (i.e., governor, voltage regulator, excitation system)
 - b) 4160 volt switchgear
 - c) 480V load centers
 - d) 480V motor control centers
 - e) Instrumentation, control, and power cables (including underground cable system, cable splices, connectors, and terminal blocks)

- f) Conduit and cable trays and their supports

Note--Raceway installations containing Class 1E cables and other raceway installations required to meet seismic category 1 requirements (those whose failure during a seismic event may result in damage to any Class 1E or other safety-related system or components) should be included.

- g) Transformers
- h) Valve operators
- i) Protective relays and control panels
- j) AC control power inverters
- k) 120 AC vital bus distribution equipment
- l) Containment electrical penetration assemblies
- m) Other cable penetrations (fire stops)

- 12) DC power systems (Class 1E)

- a) 125V battery, battery chargers, and distribution equipment
- b) Cables
- c) Conduit and cable trays and their supports

Note--Raceway installations containing Class 1E cables and other raceway installations required to meet seismic category 1 requirements (those whose failure during a seismic event may result in damage to any Class 1E or other safety-related system or components) should be included.

- d) Battery racks
- e) Protective relays and control panels

- 13) Reactor building charcoal cleanup plenums.
- 14) Reactor building purge exhaust plenum.
- 15) Controlled access area charcoal exhaust plenum.
- 16) Process and effluent radiation monitoring systems.
- 17) Auxiliary building charcoal filter system plenum.
- 18) Buried service water piping systems.
- 19) Safety-related masonry walls (see IE Bulletin No. 80-11).
- 20) Expendable and consumable items necessary for the functional performance of CSSC (i.e., weld rod, fuel oil, boric acid, snubber oil, etc.).
- 21) Measuring and test equipment.
- 22) Leak detection system (per FSAR Section 5.2.7).
- 23) Pressurizer safety and relief valves, block valves, and associated actuators.
- 24) Steamline safety valves and PORVs.

- 25) Pressurizer discharge line to pressurizer drain tank.
 - 26) Containment sump, sump screen, and sump vortex suppression devices.
 - 27) Radiation monitoring (fixed and portable).
 - 28) Radioactivity monitoring (fixed and portable).
 - 29) Radioactivity sampling (air, surfaces, liquids).
 - 30) Radioactive contamination measurement and analysis.
 - 31) Personnel monitoring internal (e.g., whole body counter) and external (e.g., TLD system).
 - 32) Instrument storage, calibration, and maintenance.
 - 33) Decontamination (facilities, personnel, and equipment).
 - 34) Respiratory protection, including testing.
 - 35) Contamination control.
- b. Enclosure 2 of NUREG-0737, "Clarification of TMI Action Plan Requirements" (November 1980) identified numerous items that are safety-related and appropriate for OL application and therefore should be on the Q-list for the Virgil C. Summer Nuclear Station. These items are listed below. Add these items to the Q-list and/or indicate where on the Q-list they can be found. Otherwise justify not doing so.

NUREG-0737
(Enclosure 2)
Clarification Item

- | | |
|--|----------|
| 1) Plant-safety-parameter display console. | I.D.2 |
| 2) Reactor coolant system vents. | II.B.1 |
| 3) Plant shielding. | II.B.2 |
| 4) Post accident sampling. | II.B.3 |
| 5) Valve position indication. | II.D.3 |
| 6) Auxiliary feedwater system. | II.E.1.1 |
| 7) Auxiliary feedwater system initiation and flow. | II.E.1.2 |
| 8) Emergency power for pressurizer heaters. | II.E.3.1 |
| 9) Dedicated hydrogen penetrations. | II.E.4.1 |

- | | |
|---|-------------------|
| 10) Containment isolation dependability. | II.E.4.2 |
| 11) Accident monitoring instrumentation. | II.F.1 |
| 12) Instrumentation for detection of inadequate core-cooling. | II.F.2 |
| 13) Power supplies for pressurizer relief valves, block valves, and level indicators. | II.G.1 |
| 14) Automatic PORV isolation. | II.K.3(1) |
| 15) Automatic trip of reactor coolant pumps. | II.K.3(5) |
| 16) PID controller. | II.K.3(9) |
| 17) Anticipatory reactor trip on turbine trip. | II.K.3(12) |
| 18) Power on pump seals. | II.K.3(25) |
| 19) Emergency plans. | III.A.1.1/III.A.2 |
| 20) Emergency support facilities. | III.A.1.2 |
| 21) Inplant I_2 radiation monitoring. | III.D.3.3 |
| 22) Control-room habitability. | III.D.3.4 |
- c. The instrumentation and control systems and components must be identified on the Q-list to the same scope and level of detail provided in Chapter 7 of the FSAR. (Tables 3.10-1 and 3.10-2 are too general.) Include safety-related display instrumentation such as source range neutron flux monitors. Also include applicable items listed in Section 3.11.

Response:

Section 17.1.2.2 has been revised to include Tables 3.10-1 and 3.10-2 as a part of the Q-list. Tables 3.11-0 and 3.11-0a, as shown in Section 17.1.2.2 have been a part of the Q-list. These tables, along with Tables 3.2-1 and 3.2-2, have been revised as necessary to include items requested by this question as discussed below. The term safety related in this response is defined in 10CFR 50 Appendix B as these systems, structures and components that prevent or mitigate the consequences of potential accidents that could cause undue risk to the health and safety of the public.

- a.1) Included in revised Table 3.2-2.
- a.2) Included in revised Table 3.2-2.
- a.3) The pressurizer spray nozzles are safety related and are an integral part of the pressurizer. The pressurizer is included in Table 3.2-1.
- a.4) The steam generator steam flow restrictors are safety related and are an integral part of the steam generators. The steam generators are included in Table 3.2-1.
- a.5) The fuel handling building crane is not safety related and is not included as an item on the Q-list.
- a.6) The equipment associated with meteorological data collection is not safety related. Refer to Section 2.3. Also, see Note 1 of this response.
- a.7) Included in revised Table 3.2-2.
- a.8) Included in revised Table 3.2-1.
- a.9a) H₂ removal is by use of internal H₂ recombiners. These items are included in Tables 3.2-1, 3.10-2, and 3.11-0.
- a.9b) Included in revised Table 3.2-1.
- a.9c) Included in Tables 3.10-1 and 3.11-0a.
- a.9d) Included in revised Table 3.2-1.
- a.10a) Included in Table 3.2-1. Refer to Note 17 of Table 3.2-1.
- a.10b) Included in revised Table 3.2-1.
- a.11a) Included in Tables 3.10-1 and 3.11-0a.
- a.11b) 7200 volt switchgear is used at the Virgil C. Summer Nuclear Station in lieu of 4160 volt switchgear. 7200 volt switchgear is included in Tables 3.10-1 and 3.11-0a.
- a.11c) Included in Table 3.11-0a.
- a.11d) Included in Tables 3.10-1 and 3.11-0a.
- a.11e) Included in Table 3.11-0a.
- a.11f) Cable trays and supports are included in Table 3.10-1 and 3.11-0a. Conduit is not safety related and is not included on any of these tables. The conduit is, however, seismically supported for safety related circuits and those non safety related circuits over safety related equipment.
- a.11g) The 480 volt vital system transformers are included in Tables 3.10-1 and 3.11-0a. The 7200 volt to 480 volt transformers are a part of the 7200 volt switchgear included on Tables 3.10-1 and 3.11-0a.
- a.11h) Included in Tables 3.10-1, 3.11-0 and 3.11-0a.
- a.11i) Included in Tables 3.10-1 and 3.11-0a.
- a.11j) Included in Tables 3.10-2 and 3.11-0.

- a.11k) The safety related 120 volt vital AC equipment is included in Table 3.11-0a.
- a.11l) Included in Tables 3.10-1 and 3.11-0a.
- a.11m) Included in revised Table 3.2-2.
- a.12a) Included in Tables 3.10-1 and 3.11-0a.
- a.12b) Included in Table 3.11-0a.
- a.12c) Cable trays and supports are included in Table 3.10-1 and 3.11-0a. Conduit is not safety related and is not included on any of these tables. The conduit is, however, seismically supported for safety related circuits and those non safety related circuits over safety related equipment.
- a.12d) Included in Table 3.11-0a.
- a.12e) Included in Table 3.11-0a.
- a.13) Reactor building charcoal cleanup plenum is not safety related and is not included on any of the tables. Refer to FSAR Section 9.4.
- a.14) Reactor building purge exhaust plenum is not safety related and is not included on any of the tables. Refer to FSAR Section 9.4.
- a.15) Controlled access area charcoal exhaust plenum is not safety related and is not included on any of the tables. Refer to FSAR Section 9.4.
- a.16) Radiation monitors which are safety related are included in Table 3.10-1. Also refer to the response to items a.27, a.28, a.29, a.30, a.31, a.33, a.34, a.35 and b.411.
- a.17) Auxiliary building charcoal filter system plenum is not safety related and is not included in any of these tables. Refer to FSAR Section 9.4.
- a.18) Included in Table 3.2-1. Buried pipe is not excluded.
- a.19) There are no safety related masonry walls at the Virgil C. Summer Nuclear Station.
- a.20) Consumable products are addressed in revised notes to Table 3.2-1.
- a.21) Measuring and test equipment is not safety related and is not included in any of the Q-list Tables. The calibration program and control of equipment used in safety related activities are under the aspects of the quality assurance program.
- a.22) Leak detection system consisting of the following elements (flow switches, level switches, temperature sensors, pressure transmitters and radiation monitors) meets the requirements of regulatory guide 1.45 as described in Appendix 3A. The elements which are safety related are included in revised Table 3.10-1 and 3.10-2.
- a.23) Included in revised Table 3.2-1.
- a.24) Since the PORV's and Safety Valves are in between the steam generators and the main steam isolation valves, they are included in Table 3.2-1.
- a.25) Included in revised Table 3.2-1.
- a.26) The reactor building sumps and sump screens are safety related and are a part of the "reactor building interior structures" found on Table 3-2-2.
- a.27) The equipment involved is not safety related per ANS 18.2. The programs which control these activities are in compliance with 10CFR 50 Appendix B and are administered to meet the requirements of 10CFR 20.
- a.28) See response to a.27).
- a.29) See response to a.27).

- a.30) See response to a.27).
- a.31) See response to a.27).
- a.32) See response to item a.21).
- a.33) See response to item a.27).
- a.34) See response to item a.27).
- a.35) See response to item a.27).
- b.1) This item will be addressed when NUREG 0696 Revision 1 is issued.
- b.2) Included as a part of the reactor coolant system in Table 3.2-1.
- b.3) Included in revised Table 3.2-1.
- b.4) Post accident sampling equipment is not safety related and is not included in any of the Q-list Tables. Refer to Chapter 11.
- b.5) Limit switches are included in Tables 3.11-0 and 3.11-0a. Critical system leak monitoring system is included in Table 3.10-2.
- b.6) The emergency feedwater system is included in Table 3.2-1.
- b.7) Included in Tables 3.10-1, 3.10-2, 3.11-0 and 3.11-0a.
- b.8) Backup heaters for the pressurizer are powered from the 7200 volt switchgear which is included in Table 3.10-1.
- b.9) Since SCE&G uses internal H₂ recombiners, no dedicated H₂ penetrations are required.
- b.10) The equipment involved in containment isolation is safety related and is included in Tables 3.2-1, 3.11-0 and 3.11-0a. The program for containment isolation dependability is under the aspects of the quality assurance program and is performed as a part of the pre-operational test program of the plant.
- b.11) Table 7.5-1 provides a list of accident monitoring instrumentation. These instruments are included in Tables 3.11-0 and 3.11-0a.
- b.12) Subcooled monitor and reactor vessel level instrument are included in revised Table 3.10-2.
- b.13) All AC and DC power supplies for the pressurizer relief valves, block valves and level indicators are included in Tables 3.10-1, 3.10-2, 3.11-0 and 3.11-0a.
- b.14) Automatic PORV isolation is determined not to be necessary and is not included in the current design.
- b.15) Automatic trip of reactor coolant pumps is determined not to be necessary and is not included in the current design.
- b.16) The PID controller is turned off. Refer to Figure 7.7-4.
- b.17) That portion of the anticipatory reactor trip on turbine trip which is safety related is on the solid state protection system which is included in Table 3.10-2.
- b.18) Refer to the response to Question 211.123. Devices used are included in Table 3.11-0a.
- b.19) "Emergency Plans" are not a piece of safety related equipment and is therefore not included on any of the Q-list Tables. The emergency plans and applicable implementing procedures are under the aspect of the quality assurance procedure.
- b.20) This item will be discussed when NUREG 0696 Revision 1 is issued.
- b.21) The equipment used for inplant I₂ radiation monitoring is not safety related and is not included in any of the Q-list Tables. The programs which control the monitoring activities are in compliance with 10CFR 50 Appendix B and are administered to meet the requirements of 10CFR 20.
- b.22) Control room ventilation equipment is included in Table 3.2-1.
- c.) Included in Tables 3.11-0 and 3.11-0a.

NOTES:

1. Procedural coverage of some or all aspects of this equipment is covered in the quality assurance program per 10CFR 50 Appendix B.

TABLE 3.2-1

 24
 AMENDMENT 23
 APRIL, 1979
MECHANICAL EQUIPMENT CLASSIFICATION

<u>Component</u>	<u>Scope</u>	<u>ANS Safety Class</u>	<u>Code</u>	<u>Code Class</u>	<u>Seismic Category</u>	<u>QA Class</u>	<u>Notes</u>
<u>MECHANICAL COMPONENTS (by system)</u>							
REACTOR COOLANT SYSTEM							
Reactor Vessel	NSSS	1	ASME III	1	I	1	1
Full Length CRDM Housing (48)	NSSS	1	ASME III	1	I	1	2
Part Length CRDM Housing (5)	NSSS	1	ASME III	1	I	1	2
Reactor Coolant Pump Assemblies (3)	NSSS	1	ASME III	1	I	1	-
Reactor Coolant Pump Casings (3)	NSSS	1	ASME III	1	I	1	2
Reactor Coolant Pump Internals (3)	NSSS	1	ASME III	1	I	1	2
Reactor Coolant Pump Motors (3)	NSSS	2b	NEMA 20	-	I	1	2
Steam Generator, tube side (3)	NSSS	1	ASME III	1	I	1	2
Steam Generator, shell side (3)	NSSS	2a	ASME III	1	I	1	2,3
Pressurizer	NSSS	1	ASME III	1	I	1	2
Reactor Coolant Thermowell	NSSS	1	ASME III	1	I	1	4
Reactor Coolant Piping and Fittings	NSSS	1	ASME III	1	I	1	1,5
Surge Pipe and Fittings	NSSS	1	ASME III	1	I	1	1
Loop Bypass Line	NSSS	1	ASME III	1	I	1	1
Bypass Manifolds	NSSS	1	ASME III	1	I	1	4
Relief Valves (3), Safety Valves (3), Block Valves (3)	NSSS	1	ASME III	1	I	1	1
Valves to Reactor Coolant System Boundary	NSSS/BOP	1	ASME III	1	I	1	6 24
Piping to Reactor Coolant System Boundary	NSSS/BOP	1	ASME III	1	I	1	5,6
Pressurizer Discharge line to PRT	BOP	NNS	B16.5/B31.1	-	I	1	- 24
Pressurizer Relief Tank (PRT)	NSSS	NNS	ASME VIII	-	-	-	4
CRDM Head Adapter Plugs	NSSS	1	ASME III	1	I	1	4
Fuel Assemblies	NSSS	NA	-	-	I	1	-
CHEMICAL AND VOLUME CONTROL SYSTEM							
Regenerative Heat Exchanger	NSSS	2a	ASME III	2	I	1	1
Letdown Heat Exchanger, tube side	NSSS	2a	ASME III	2	I	1	1
Letdown Heat Exchanger, shell side	NSSS	2b	ASME III	3	I	1	1,7
Mixed Bed Demineralizers (2)	NSSS	3	ASME III	3	I	1	4

TABLE 3.2-1 (Continued)

AMENDMENT ²⁴
~~APRIL, 1978~~
 March, 1980

MECHANICAL EQUIPMENT CLASSIFICATION

Component	Scope	ANS Safety Class	Code	Code Class	Seismic Category	QA Class	Notes
NUCLEAR SAMPLING SYSTEM							
Residual Heat Removal Sample Cooler	BOP	3	ASME III	3	I	1	-
Pressurizer Sample Cooler	BOP	3	ASME III	3	I	1	-
Pressurizer Sample Vessel	BOP	NNS	ASME VIII	-	-	-	-
Reactor Coolant Sample Coolers (2)	BOP	3	ASME III	3	I	1	-
Reactor Coolant Sample Cylinders (2)	BOP	NNS	ASME VIII	-	-	-	-
Steam Generator Blowdown Sample Coolers (3)	BOP	3	ASME III	3	I	1	-
Volume Control Tank Gas Space Sample	BOP	NNS	ASME VIII	-	-	-	-
Sample Sink	BOP	NNS	-	-	-	-	-
Steam Generator Blowdown Sample Piping	BOP	3	ASME III	3	I	1	5
Steam Generator Blowdown Sample Valves	BOP	3	ASME III	3	I	1	5
Nuclear Sampling System Piping	BOP	3	ASME III	3	I	1	5
Nuclear Sampling System Valves	BOP	3	ASME III	3	I	1	5
Reactor Coolant Sampling Delay Coils (2)	BOP	2a	ASME III	2	I	1	-
CVCS Sampling Delay Coils (2)	BOP	3	ASME III	3	I	1	-
POST ACCIDENT HYDROGEN REMOVAL ^{and Sample} SYSTEMS							
Electric Hydrogen Recombiner	NSSS	2a	ASME III	2	I	1	-
Sample Vessel	BOP	NNS	ASME VIII	-	-	-	-
Piping, and Valves and Supports	BOP	2a/NNS	ASME III/-	2/-	I/-	1/-	5
REACTOR MAKEUP WATER SYSTEM							
Reactor Makeup Water Storage Tank	BOP	2b	ASME III	3	I	1	-
Reactor Makeup Water Pumps (2)	BOP	2b	ASME III	3	I	1	-

3.2-12

4

24

24

TABLE 3.2-1 (Continued)

AMENDMENT # 24
~~MARCH, 1978~~MECHANICAL EQUIPMENT CLASSIFICATION

<u>Component</u>	<u>Scope</u>	<u>ANS Safety Class</u>	<u>Code</u>	<u>Code Class</u>	<u>Seismic Category</u>	<u>QA Class</u>	<u>Notes</u>
VENTILATION EQUIPMENT							
Reactor Building Cooling Units (4)(25)	BOP	2b	ASME III	3	I	1	16,17
Reactor Building Charcoal Cleanup System Fans (2)	BOP	NNS	-	-	I	1	18
Reactor Building Purge Valves	BOP	2a	ASME III	2	I	1	-
Auxiliary Building Charcoal Exhaust System Fans (4)	BOP	NNS	-	-	-	-	13
Fuel Handling Building Exhaust Fans	BOP	3	-	-	I	1	18
Spent Fuel Pool Supply Fan	BOP	NNS	-	-	-	-	13
Residual Heat Removal/Spray Pump Room Cooling Unit	BOP	2b	ASME III	3	I	1	17,18
Charging Pump Room Cooling Unit	BOP	2b	ASME III	3	I	1	17,18
Auxiliary Building Charcoal Filter System Plenum (2)	BOP	NNS	-	-	-	-	13
Fuel Handling Building Charcoal Filter Plenum (3)	BOP	3	-	-	I	1	13
Intermediate Building Pump Area Cooling Units (2)	BOP	2b	ASME III	3	I	1	17,18
Control Room Emergency Filtering System Fans	BOP	2b	-	-	I	1	18
Control Room Normal Supply Units	BOP	2b	ASME III	3	I	1	17,18
Relay Room Cooling System Units	BOP	2b	ASME III	3	I	1	17,18
Battery Room Air Supply Fans	BOP	2b	-	-	I	1	18
Battery Room Exhaust Fans	BOP	2b	-	-	I	1	18
HVAC Water Chillers	BOP	2b	ASME III	3	I	1	-
HVAC Chilled Water Pumps	BOP	2b	ASME III	3	I	1	-

TABLE 3.2-1 (Continued)

AMENDMENT 3 24

~~March, 1978~~

March, 1981

MECHANICAL EQUIPMENT CLASSIFICATION

<u>Component</u>	<u>Scope</u>	<u>ANS Safety Class</u>	<u>Code</u>	<u>Code Class</u>	<u>Seismic Category</u>	<u>QA Class</u>	<u>Notes</u>
Service Water Pumphouse Supply Fans (2)	BOP	2b	-	-	I	1	18
ESF Switchgear Room Cooling Units (2)	BOP	2b	ASME III	3	I	1	17,18
Speed Switch Room Cooling Units (2)	BOP	2b	ASME III	3	I	1	17,18
Motor Control Center 12-28 Cooling Units (2)	BOP	2b	ASME III	3	I	1	17,18
Switchgear 63-01 Cooling Unit (1)	BOP	2b	ASME III	3	I	1	17,18
Ductwork, Dampers, Supports for Safety Related Ventilation Systems	BOP	2b	-	-	I	1	

3

24

TABLE 3.2-1 (Continued)

MECHANICAL EQUIPMENT CLASSIFICATION

NOTES TO TABLE 3.2-1

Certain pressure retaining parts exist within a system which do not fall within the normal definition of pipes, pumps or valves. In some cases these are not commercially available fabricated from materials conforming to ASTM specifications allowed in ANSI B31.1, ASME III or ASME VIII; in addition, instrumentation is specifically excluded from ASME III. Examples of these items are strainers, sight glasses, level switches, pressure transmitters, thermowells, etc. These items are specified and procured in a manner which ensures that these components are comparable with the remainder of the systems to preclude their structural failure under operating, accident or test conditions. Also, certain consumable products used in conjunction with safety related equipment are considered safety related. Examples of these items are weld rod, diesel fuel oil, boric acid, lithium hydroxide, etc.

1. Meets "Quality Control System Requirements," Westinghouse QCS-1, which satisfies the requirements of 10 CFR 50, Appendix B.
2. Meets the quality assurance program of one of the Westinghouse NES Manufacturing Divisions, and is in accordance with 10 CFR 50, Appendix B.
3. As permitted by Paragraph NA-2134 of the ASME Code, Section III, this component is upgraded from the minimum required Code Class 2 to Code Class 1.
4. Meets "Quality Requirements for Manufacture of Nuclear Plant Equipment," Westinghouse QCS-2, which satisfies the requirements of 10 CFR 50, Appendix B.
5. The classifications shown are for the predominant portion of the system. There may be portions that are classified higher or lower. Safety class boundaries are shown on applicable system diagrams. Seismic category, code and QA classes for other safety classes are consistent with those other safety classes.

TABLE 3.2-1 (Continued)

MECHANICAL EQUIPMENT CLASSIFICATION

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|--|----|
| 15. Main steam and feedwater piping, excluding branch lines, between the associated isolation valves and the wall between the intermediate building and turbine building satisfies all requirements, except for stamping, of the ASME Code, Section III, Code Class 2. | 12 |
| 16. No code. The fans and motors are specifically designed for operation in the containment atmosphere under both normal operating and post LOCA conditions. | 12 |
| 17. Code and Code Class apply to unit coils. | |
| 18. No code. The fans are designed and manufactured in accordance with the intent of ANS Safety Class 2b. | |
| 19. No code. Ductwork is designed to withstand expected pressures and shocks for the section of the plant in which it is located. | |
| 20. Any reactor vessel internal, the single failure of which could cause release of a mechanical piece having potential for direct damage (as to the vessel cladding) or flow blockages, shall be classified to a minimum of Safety Class 2a. | |
| 21. Failure can cause no nuclear safety problem, although an economic loss may result. | |
| 22. Portions which transmit loading from CRDM seismic supports are Safety Class 2a. | |
| 23. Applicable code is Crane Manufacturers Association of America, Specification No. 70 for Electric Overhead Traveling Cranes. | 13 |
| 24. Equipment is not ANS Safety Class but is safety related. | |
| 25. Supports for reactor building cooling units are safety related. | 24 |

TABLE 3.2-2

CLASSIFICATION OF STRUCTURES

AMENDMENT # 24
~~August, 1980~~
 March, 1981

	Seismic Category I	Non-Seismic Category	Method of Tornado Missile Protection ⁽¹⁾	Tornado Missile ⁽²⁾	
				Grade to 30 Feet	Above 30 Feet
Liner, Reactor Building, Penetrations and Hatches (5)(6)	X		A, C	1, 2, 3, 4, 5, 6, 7	3, 5, 6, 7
Reactor Building Interior Structures (5)(6)	X		Reactor Building	Reactor Building	Reactor Building
Control Building (5)(6)	X		A, B, C, D, E	1, 2, 3, 4, 5, 6, 7	3, 5, 6, 7
Auxiliary Building (5)(6)	X		A, B, D, E	1, 2, 3, 4, 5, 6, 7	3, 5, 6, 7
Fuel Handling Building (5)(6)	X				
a. General structures for fuel pools and protective barriers for equipment (see Figures 3.8-58, 3.8-59, 3.8-60)			A, B, C, D, E	1, 2, 3, 4, 5, 6, 7	3, 5, 6, 7
b. Steel superstructure ⁽³⁾ (see Figures 3.8-58, 3.8-59, 3.8-60)			(4)	(4)	(4)
Intermediate Building (5)(6)	X		A, B, C, D, E	1, 2, 3, 4, 5, 6, 7	3, 5, 6, 7
Diesel Generator Building (5)(6)	X		A, B, C, D, E	1, 2, 3, 4, 5, 6, 7	3, 5, 6, 7
Service Water Intake, Pumphouse and Discharge Structures (5)(6)	X		A, B, C	1, 2, 3, 4, 5, 6, 7	Not applicable
Service Water Pond Dams	X		Not applicable	Not applicable	Not applicable
Supports for Safety Class Components	X		A, B, C, D, E	1, 2, 3, 4, 5, 6, 7	3, 5, 6, 7
Turbine Building		X			
Substation Structure and Control House		X			
Water Treatment Building		X			
Circulating Water Intake and Discharge Structure		X			
Service Building		X			
Auxiliary Boiler House		X			
Warehouse(s)		X			
Guard House(s)		X			
Monticello Reservoir Dams		X			
Jetty		X			
Sanitary Waste Facility		X			
Industrial Waste Facility		X			

3.2-23

POOR ORIGINAL

TABLE 3.2-2 (Continued)

CLASSIFICATION OF STRUCTURES

NOTES:

1. Method of tornado missile protection is as follows:
 - A. Reinforced concrete walls.
 - B. Reinforced concrete slabs.
 - C. Reinforced concrete barriers.
 - D. Orientation.
 - E. Probability studies, probability criteria $< 10^{-7}$.
2. Numbers correspond to tornado missiles identified in Table 3.5-5.
3. Refer to discussion of probability study, response to Question 010.7.
4. Steel frame is designed to maintain its integrity under tornado missile impact.
5. Biological shielding and missile barrier structural components related to Category I structures identified in Table 3.2-2 are classified as safety-related.
6. Fire stops for electrical penetrations are safety related.

2

24

TABLE 3.10-2 (Continued)

IDENTIFICATION OF NUCLEAR STEAM SUPPLY SYSTEM
SEISMIC CATEGORY I INSTRUMENTATION, ELECTRICAL
EQUIPMENT AND SUPPORTS

<u>Item</u>	<u>Method</u>
12. Core Subcooling Monitor	Not yet qualified; qualification to be in accordance with methods described in Section 3.10.
13. Critical System Leak Monitoring System	Not yet qualified; qualification to be in accordance with methods described in Section 3.10.
14. Reactor Vessel Level Instruments	Single axis sine beat, <i>flexural</i> multifrequency

24

21 17.2.1.6 Supporting Companies, Vendors or Contractor Organizations

SCE&G may utilize the services of other companies to provide materials or services and augment and support its staff in selected plant operations, or modification and maintenance projects. To qualify for safety-related work, supporting companies must implement an approved QA program or work under the requirements of the SCE&G Operational QA Program. Use of the SCE&G Operational QA Program is limited to those cases where management functions are not performed. After purchase order or contract award, the vendor, supplier, or contractor shall conduct all quality related activities for safety-related structures, systems or components, whether at the plant or other locations, in accordance with the appropriate approved QA program.

21 17.2.2 QUALITY ASSURANCE PROGRAM

21 The Operational QA Program for the Virgil C. Summer Nuclear Station consists of managerial and administrative controls by involved SCE&G organizations, combined with surveillance and audits by the QA Department. As described generally in this section, and following sections of this chapter, the organizations responsible for implementing safety-related action are clearly identified. At the discretion of SCE&G management, certain non-safety related activities may be conducted utilizing control techniques specified for safety-related activities. These activities are outside the scope of required regulatory compliance and are discriminated by the term "Quality Related". All "safety-related" activity is "quality related", but not all "quality related" activity is "safety-related".

12 17.2.2.1 Applicability

24 13 The Operational QA program is applicable to startup, operation, maintenance, and modification of the structures, systems and components of the Virgil C. Summer Nuclear Station classified as safety-related. The safety-related designations for those Mechanical ^{and structural} items are listed in Tables 3.2-1 ^{and 3.2-2.} The list of Class 1E equipment required to function during 3.10-1, 3.10-2, and/or subsequent to design basis accidents is included in Tables 3.11-0 and 3.11-0a. The Operational QA Program, as detailed in the Operational QA Plan, shall be