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May 13, 1983

Mr. A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Docket Nos: 50-352
50-353

SUBJECT: Limerick Generating Station, Units 1 and 2
Requests for Additional Information (RAIs) from
NRC Mechanical Engineering Branch

REFERENCE: Letter, A. Schwencer to E. G. Bauer, Jr. dated
April 11, 1983

Dear Mr. Schwencer:

Transmitted herewith are draft responses and FSAR page changes related to the RAI which were transmitted by the reference letter. This material is provided in draft form at the request of Mr. Kirkwood, NRC staff reviewer. These responses and related page changes will be incorporated into FSAR Revision 20 to be submitted in May 1983.

Very truly yours,

Eugene J. Bradley

JLP/cam d/8
Copy to: See attached service list

B001

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DRAFT

QUESTION NO. 90

Show how the Miter in the Non-straight Main Steam Line has been included in the piping analysis.

RESPONSE

The 1° Miter required to align the Main Steam Line 'D' with the flued head was within the Code allowables and General Electric's design requirements, therefore, no analysis revision was required.

DRAFT

QUESTION NO. 91

As a result of the Independent Design Verification Program (IDVP) for Susquehanna, a question was raised concerning the implementation of NB-3113. How is NB-3113 implemented for the Limerick Project?

RESPONSE

The condition cited on the SSES IDVP (F.W. pump trip, MSIV closed) is classified as an emergency condition on the F.W. system design specification of Limerick Generating Station. The number of cycles associated with that condition will be included in the fatigue evaluation of the Feedwater System.

RDP: hmm/D02019*-127
3/25/83

210.92
3/JM

Table 3.2-1, Page 3 of 38, Residual Heat Removal System, Item 6 - The piping, containment spray line (inside containment) is incorrectly classified Quality Group C. To be acceptable, this piping and ring headers should be classified Quality Group B and constructed to Section III, Class 2 (or equivalent).

Response:

Table 3.2-1, Page 3 of 38, RHR System, Item 6 - The piping, containment spray line (inside containment) ~~The containment spray piping~~ is designed to ASME Section III, Class 3 / Quality Group C standards, which are is adequate for the reasons discussed in the response to Question 480.7, paragraph c.

.93 9 Table 3.2-1, Page 8 of 38, Control Room HVAC System, Item a - Water
JHL chillers (except condenser) is incorrectly classified Quality Group D.
To be acceptable these components should be classified Quality Group C
and constructed to Section III, Class 3 (or equivalent).

RESPONSE

Section 3.2.2.f.h and Table 3.2-1 have been changed to correct the Quality Group classification and provide the applicable codes and standards.

INSERT

~~to full quality assurance requirements (Q-listed), and was designed to seismic Category I criteria.~~

f. Instrument tubing downstream of the containment isolation valve of instrument lines connected to the reactor coolant pressure boundary is Quality Group D for instruments that are "passive" (i.e., do not actuate safety systems), rather than Quality Group B or C as discussed in Paragraphs 1.e and 2.c of the guide. This is based on considerations given in Regulatory Guide 1.11 for instrument lines penetrating containment and having two restriction devices.

g-h, INSERT (1)

3.2.3 QUALITY ASSURANCE i-j } INSERT (3)

Structures, systems, and components whose safety functions require conformance to the applicable quality assurance requirements of 10 CFR Part 50, Appendix B, are summarized in Table 3.2-1 under the heading, "Q-List." Quality assurance during construction is discussed in PSAR Appendix D. The quality assurance program during the operational phase is described in Chapter 17.

INSERT (1)

g-h. THE WATER CHILLERS IN THE CONTROL ROOM HVAC SYSTEM ~~ACS~~ DESIGNED AND FABRICATED IN ACCORDANCE WITH ASME SECTION VIII, DIVISION I REQUIREMENTS, WITH THE EXCEPTION OF THE ASME SECTION III, CLASS 3 CONDENSER. THE CONDENSER IS CONNECTED TO THE EMERGENCY SERVICE WATER SYSTEM.

SUPPLEMENTARY MATERIAL CERTIFICATION AND DESIGN REQUIREMENTS HAVE BEEN APPLIED TO THE SECTION VIII PORTIONS OF THE CHILLERS TO ENSURE THAT THEIR QUALITY IS ESSENTIALLY EQUIVALENT TO ASME SECTION III, CLASS 3 AT THE TIME OF PURCHASE. THE CHILLERS WERE DESIGNED TO SEISMIC CATEGORY I REQUIREMENTS AND FABRICATED UNDER AN APPROVED QUALITY ASSURANCE PROGRAM. THE MAJOR SIMILARITIES AND DIFFERENCES ARE LISTED BELOW ALONG WITH THE SUPPLEMENTARY REQUIREMENTS.

(2)

(CONT'D ON 21(93))

INSERT (1)

ASME III, CLASS 3	ASME VIII, DIV. 1	LIMERICK SUPPLEMENTARY REQUIREMENTS
REQUIRES USE OF ASME MATERIALS THAT ARE LISTED IN THE STRESS TABLES OR IN ASME SECTION VIII FOR NON-FERROUS MATERIALS	REQUIRES USE OF ASME MATERIALS THAT ARE LISTED IN THE STRESS TABLES.	MATERIALS USED IN THE VESSELS ARE PERMITTED BY ASME SECTION III, WITH THE EXCEPTION OF SA-306, GRADE 60 BAR USED FOR THE VESSEL WATER BOX FLANGE. USE OF THIS MATERIAL IS PERMITTED BY ASME SECTION VIII.
REQUIRES CERTIFIED MATERIAL TEST REPORTS (CMTR's).	CMTR's OR CERTIFICATES OF COMPLIANCE NOT REQUIRED.	CMTR's WERE PROVIDED FOR THE PRESSURE RETAINING MATERIAL, WITH THE EXCEPTION OF SOME VESSEL NOZZLES
REQUIRES EXAMINATION OF MATERIALS IN ACCORDANCE WITH THE ASME MATERIAL SPECIFICATION FOR THE PRODUCT FORMS INVOLVED.	REQUIRES EXAMINATION OF MATERIALS IN ACCORDANCE WITH THE ASME MATERIAL SPECIFICATION.	
REQUIRES THE VESSEL DESIGN TO BE IN ACCORDANCE WITH ASME SECTION VIII, DIV. 1.	PROVIDES RULES FOR VESSEL DESIGN.	REQUIRES VESSEL TO BE DESIGNED TO SEISMIC CATEGORY I REQUIREMENTS.
REQUIRES THE VESSEL FABRICATION TO BE IN ACCORDANCE WITH ASME SECTION VIII, DIV. 1.	PROVIDES RULES FOR VESSEL FABRICATION.	
REQUIRES THE VESSEL WELD EXAMINATION TO BE IN ACCORDANCE WITH ASME SECTION VIII, DIV. 1.	PROVIDES RULES FOR VESSEL WELD EXAMINATION.	

INSERT (1) DRAFT ~~TABLE 19.2~~

ASME III, CLASS 3	ASME VIII, DIV. 1	LIMERICK SUPPLEMENTARY REQUIREMENTS
REQUIRES HYDROSTATIC TESTING AT 1.5 X DESIGN PRESSURE.	REQUIRES HYDROSTATIC TESTING AT 1.5 X DESIGN PRESSURE.	
REQUIRES THE MANUFACTURER TO IMPLEMENT A QUALITY CONTROL SYSTEM.	REQUIRES THE MANUFACTURER TO IMPLEMENT A QUALITY CONTROL SYSTEM.	
REQUIRES AUTHORIZED INSPECTOR AND CODE DATA REPORT.	REQUIRES AUTHORIZED INSPECTOR AND CODE DATA REPORT.	
REQUIRES THE MATERIAL MANUFACTURER TO DOCUMENT AND MAINTAIN A QUALITY ASSURANCE PROGRAM.	NO REQUIREMENT.	REQUIRES THE MATERIAL MANUFACTURER TO DOCUMENT AND MAINTAIN A QUALITY ASSURANCE PROGRAM.

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INSERT (3)

i. THE CONTROL STRUCTURE CHILLED WATER PUMPS ARE DESIGNED AND FABRICATED IN ACCORDANCE WITH THE MANUFACTURER'S STANDARDS WITH SUPPLEMENTARY REQUIREMENTS APPLIED. THE PUMPS ARE DESIGNED TO SEISMIC CATEGORY I REQUIREMENTS AND FABRICATED UNDER AN APPROVED QUALITY ASSURANCE PROGRAM USED FOR ASME SECTION III, CLASS 3 PUMPS. THE PRESSURE RETAINING MATERIALS USED ARE APPROVED FOR USE IN ASME SECTION III, CLASS 3 PUMPS AND WERE SUPPLIED WITH CERTIFIED MATERIAL TEST REPORTS (CMTR's). THE PUMPS WERE HYDROTESTED AT A PRESSURE GREATER THAN THAT REQUIRED BY THE CODE. THE ELECTRICAL COMPONENTS WERE ENVIRONMENTALLY QUALIFIED. THEREFORE, THE QUALITY OF THE PUMPS IS ESSENTIALLY EQUIVALENT TO ASME SECTION III, CLASS 3.

j. THE SEISMIC CATEGORY I CONTROL STRUCTURE CHILLED WATER COOLING COILS IN SAFETY RELATED AIR (CONT'D)

INSERT (3) CONT'D

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HANDLING UNITS ARE FABRICATED FROM ASME SECTION III, CLASS 3 APPROVED MATERIALS, WITH CMTR's, FOR THE PRESSURE RETAINING PARTS. THE COILS ARE FABRICATED IN ACCORDANCE WITH THE SAME QUALITY ASSURANCE PROGRAM USING EQUIVALENT PROCESSES, TESTED TO THE SAME PROCEDURES AND ARE OF THE SAME DESIGN AS THE ASME SECTION III, CLASS 3 ECCS UNIT COOLER COOLING COILS. ~~THE CONTROL STRUCTURE COOLING COILS ARE NOT N-STAMPED.~~

SYSTEM/COMPONENT [40]	FSAR SECTION	SOURCE OF SUPPLY [1]*	LOCATION [2]*	QUALITY GROUP CLASSIFICATION [3]*	PRINCIPAL CODES AND STANDARDS [4]*	SEISMIC CATEGORY [5]*	Q-LIST [6]*	COMMENTS
VI DIESEL GENERATOR SYSTEM	9.5.4, 9.5.5, 9.5.6, 9.5.7							
1. Fuel oil day tanks and jacket water expansion tanks		P	G	-	III-3	I	Y	[47]
2. Diesel generators		P	G	-	IEEE-387	I	Y	[47]
3. Tanks, diesel fuel storage		P	O	-	III-3	I	Y	[22][47]
4. Heat exchangers, jacket water and lube oil, air cooler coolant		P	G	C	III-3/ TEMA C	I	Y	[47]
5. Filters and strainers, lube oil and fuel oil systems		P	G	-	VIII-1/ MF STD	I	Y	[47]
6. Lube oil heater		P	G	-	IV	I	Later	[47]
7. Air receivers		P	G	-	III-3	I	Y	[47]
8. Compressors		P	G	-	MF STD	I	N	
9. Cooling jacket water heater		P	G	-	IV	I	Later	[47]
10. Drain tank, dirty fuel oil		P	G	-	MF STD	IIA	N	
11. Piping and valves, fuel oil system		P	G,O	-	III-3/B31.1/MF STD	I	Y	[47]
12. Piping and valves, diesel lubrication oil system (on and off skid)		P	G	-	III-3/B31.1/ MF STD	I	Y	[47]
13. Piping and valves, diesel starting air system from receiver to diesel skid		P	G	-	III-3/ MF STD	I	Later	[47]
14. Piping and valves, intake and exhaust		P	G	-	B31.1/MF STD	I/IIA	Y/N	[48][47]
15. Transfer pumps, fuel oil system		P	G,O	-		I	Y	[22]
16. Pumps, lube oil		P	G	-	MF STD	I	Y	[47]
17. Pumps, jacket water cooling		P	G		MF STD	I	Y	[47]
18. Pump motors, fuel oil system		P	G,O	-	IEEE-323, 344	I	Y	
19. Electrical modules, with safety function		P	G,CS	-	IEEE-323, 344, 279	I	Y	[11], [12]
20. Pumps, circulating water, pre-lube, air cooler, and standby circulating lube		P	G	-	MF STD	I	Y	[47]
21. Lube oil storage tanks		P	G	-	III-3	I	Y	[47]
22. Air coolers		P	G,O	-	MF STD	I	Later	[47]
23. Piping and valves, water system		P	G	-	III-3/ MF STD	I	Y	[19][47]
24. Crankcase evacuation systems, ejectors, oil separators, and crankcase breathers		P	G	-	MF STD	I	Later	
VII HEATING, VENTILATING, AND AIR CONDITIONING SYSTEMS								
A. Control Structure								
1. Control Room HVAC System	9.4.1.1							
a. Water chillers (except condenser)		P	CS	B C	VIII-1/	I	Y	[54]

DRAFT

TABLE 3.2-1 (Cont'd)

SYSTEM/COMPONENT [40]	FSAR SECTION	SOURCE OF SUPPLY [1]*	LOCATION [2]*	QUALITY GROUP CLASSIFICATION [3]*	PRINCIPAL CODES AND STANDARDS [4]*	SEISMIC CATEGORY [5]*	Q-LIST [6]*	COMMENTS
b. Water chiller condensers		P	CS	C	/IEEE-323			
c. Chilled water pumps		P	CS	C	III-3	I	Y	
					~~III-3/NF STD~~ IEEE-323, 344	I	Y	[55]
d. Piping and valves		P	CS	BC	B31.1	I	Y	[19][53]
e. Fans		P	CS	-	AMCA	I	Y	
f. Motors, fan		P	CS	-	NEMA MG-1/ IEEE-323	I	Y	
g. Coils, cooling		P	CS	C	ARI	I	Y	[56]
h. Coils, electric heating		P	CS	-	NEC	IIA	N	
i. Ductwork and registers		P	CS	-	AISI/AWS		Y	[23]
j. Dampers, isolation and control		P	CS	-	AMCA	I	Y	[25]
2. Auxiliary Equipment Room HVAC System	9.4.1.2							
a. Chilled water system		P	CS	C	Item VII -A.1.a/d	I	Y	[19][53]
b. Fans		P	CS	-	AMCA	I	Y	
c. Motors, fans		P	CS	-	NEMA MG-1/ IEEE 323	I	Y	
d. Coils, cooling		P	CS	C	API	I	Y	[56]
e. Coils, electric heating		P	CS	-	NEC	IIA	N	
f. Ductwork and registers		P	CS	-	AISI/AWS	I	Y	[23]
g. Dampers, isolation and control		P	CS	-	AMCA	I	Y	[25]
3. Emergency Fresh Air Supply System	9.4.1.3							
a. Fans		P	CS	-	AMCA	I	Y	
b. Motors, fans		P	CS	-	NEMA MG-1/ IEEE-323	I	Y	
c. Coils, electric heating		P	CS	-	NEC	I	Y	
d. Ductwork		P	CS	-	AISI/AWS	I	Y	[23]
e. Dampers, isolation and control		P	CS	-	AMCA	I	Y	[25]
f. Prefilters		P	CS	-	UL CLASS 1	I	Y	[24]
g. HEPA filters		P	CS	-	-	I	Y	[39]
h. Charcoal adsorbers		P	CS	-	-	I	Y	[39]
4. Cable Spreading/Auxiliary Switchgear Room HVAC	9.4.1.4							
a. Chilled water and steam heating systems		P	T	D	NF STD/ /B31.1	II	N	
b. Fans		P	T	-	AMCA	II	N	
c. Coils, cooling		P	T	-	ARI	II	N	
d. Coils, steam heating		P	T	-	NF STD	II	N	
e. Ductwork and registers		P	CS	-	AISI/AWS	IIA	N	[23]
f. Dampers, fire		P	CS	-	UL	IIA	N	[25]

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TABLE 3.2-1 (Cont'd)

SYSTEM/COMPONENT [40]	FSAR SECTION	SOURCE OF SUPPLY [1]*	LOCATION [2]*	QUALITY GROUP CLASSIFICATION [3]*	PRINCIPAL CODES AND STANDARDS [4]*	SEISMIC CATEGORY [5]*	Q-LIST [6]*	COMMENTS
XI AUXILIARY SYSTEMS								
A. Safeguard Piping Fill System, including Feedwater Fill System	6.3							
1. Piping and valves, from and including isolation valves, to feedwater lines		P	P	A	III-1	I	Y	
2. Piping and valves, other		P	R	B	III-2	I	Y	
3. Pumps		P	R	B	III-2	I	Y	
B. Suppression Pool Cleanup System	Fig. 6.3-9							
1. Piping and valves, to second isolation valve		P	R	B	III-2	I	Y	
2. Piping and valves, after second isolation valve		P	R	D	B31.1	IIA	N	
3. Pumps		P	R	D	MF STD	IIA	N	
C. Demineralized Water Makeup System	9.2.5							
1. Tanks		P	N	~~A~~ D	API-650	II	N	
2. Piping and valves		P	ALL	~~A~~ D	B31.1	II	N	
3. Pumps		P	N	~~A~~ D	B31.1/ HYD.I	II	N	
D. Drywell Chilled Water System	9.2.10							
1. Chillers		P	T	D	VIII-1	II	N	
2. Cooling coils		P	T	-	ARI	II,IIA	N	
3. Piping and valves, other		P	T,P	D	B31.1	II,IIA	N	
4. Valves, isolation to primary containment		P	R	B	III-2	I	Y	
5. Pumps		P	T	D	HYD.I/ B31.1	II	N	
6. Piping associated with isolation valves at primary containment penetration		P	C	D	B31.1	I	Y	
E. Control Structure Chilled Water System	9.2.10							
1. Piping		P	C3	~~B~~ C	B31.1	I	Y	[53]
2. Valves		P	C3	~~B~~ C	B31.1	I	Y	[53]
3. Pumps		P	C3	C	III-3	I	Y	[55]
4. Motors, pump		P	C8	-	IEEE-323, 344	I	Y	
5. Chillers (except condensers)		P	C8	~~B~~ C	VIII-1/ IEEE-323	I	Y	[54]
6. Chiller condensers		P	C6	C	III-3	I	Y	

[54] The basis for classification of non-ASME Section III equipment as Quality Group C is provided in Section 3.2.2.h. 153514 153650

INSERT (2)

[55] } → INSERT (4)
[56] }

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TABLE 3.2-1 (Cont'd) (Page 38 of 38)

[37] The final survey and measurement of the as-built emergency spillway are conducted under the applicable portions of the quality assurance program to ensure that the geometry and riprap gradation satisfy design requirements.

[38] A complete description of the codes and standards, seismic category, and Q-list status of piping and instrumentation within the spray pond is shown on Figure 9.2-3.

[39] Design codes and standards are under consideration and will be added to this table when finalized.

[40] Specific components that comprise parts of major components with the same design criteria are generally not listed. For example, transformers are a part of load centers or switchgear, and valve operators are a part of motor operated valves.

[41] Raceway systems include conduit, cable trays, and their supports. Raceway firestops and seals are not Q-listed. However, quality control provisions commensurate with Branch Technical Position 9.5-1 are applied to the raceway firestops and seals.

[42] Inverters do not supply power to safety related loads. The Class 1E battery loads are discussed in Section 8.3.2.1.1.4.

[43] Primary, backup and fault current protection devices are subcomponents of switchgear, load centers, motor control centers and distribution panels, which are Q-listed as shown in items X.A, X.B and X.C.

[44] Cast iron exhaust piping beyond the roof penetration is not Q-listed.

[45] Equipment is qualified in accordance with the conformance statements made in Section 7.2, 7.3, 7.4, 7.5 and 7.6 in reference to IEEE-279 paragraph 4.4 and IEEE-323.

[46] Supports associated with this piping are constructed in accordance with quality assurance and seismic Category I requirements. AEB 6

[53] The basis for classification of non-ASME Section III equipment as Quality Group C is provided in Section 3.7.2.e.

[54] → INSERT (2)

Rev. 15, 12/82

INSERT (4)

[55] THE BASIS FOR CLASSIFICATION OF NON-ASME SECTION III EQUIPMENT AS QUALITY GROUP C IS PROVIDED IN SECTION 3.2.2.i.

[56] THE BASIS FOR CLASSIFICATION OF NON-ASME SECTION III EQUIPMENT AS QUALITY GROUP C IS PROVIDED IN SECTION 3.2.2.j.

210.94
9/JHL

9. Table 3.2-1, Page 9 of 38, Control Room HVAC System, Item d - Piping and valves are incorrectly classified Quality Group D. To be acceptable, this piping and valves should be classified Quality Group C and constructed to Section III, Class 3 (or equivalent).

RESPONSE:

Section 3.2.2.c and Table 3.2-1 have been changed to correct the Quality Group classification and provide the applicable principal codes and standards.

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ASME III Class 3	ANSI B31.1	Limerick Supplementary Requirements
Requires ASME materials and certified material test reports (CMTR) for all piping larger than 3/4 inch nominal pipe size. Certificates of compliance may be substituted for CMTRs for piping less that 3/4 inch.	Requires materials that conform to either ASME or ASTM specification	ASME materials were procured and CMTRs were supplied ~~supplied~~
Requires seismic design in addition to the B31.1 requirements	Requires design for pressure, temperature, and and normal operating loads.	Piping is designed to seismic Category I with minimum wall thicknesses in conformance with ASME III, Class 3.
Requires liquid penetrant, magnetic particle, or radiographic examination for circumferential welds greater than 2 inches nominal pipe size.	Requires only visual inspection of welds at the design pressure and temperature of the auxiliary systems.	All pipe welds greater than 2 inches are radiographed.
Requires pneumatic testing as 1.25 x design pressure	Requires initial service leak test	All piping is pneumatically test ~~e~~d to 1.25 x design pressure.

e. ~~The control structure chilled water system is~~ designed to ~~Quality Group~~ D ~~standards~~; ~~however, it was subjected~~

INSERT

INSERT

~~to full quality assurance requirements (Q-listed), and was designed to seismic Category I criteria.~~

f. Instrument tubing downstream of the containment isolation valve of instrument lines connected to the reactor coolant pressure boundary is Quality Group D for instruments that are "passive" (i.e., do not actuate safety systems), rather than Quality Group B or C as discussed in Paragraphs 1.e and 2.c of the guide. This is based on considerations given in Regulatory Guide 1.11 for instrument lines penetrating containment and having two restriction devices.

3.2.3 QUALITY ASSURANCE

Structures, systems, and components whose safety functions require conformance to the applicable quality assurance requirements of 10 CFR Part 50, Appendix B, are summarized in Table 3.2-1 under the heading, "Q-List." Quality assurance during construction is discussed in PSAR Appendix D. The quality assurance program during the operational phase is described in Chapter 17.

INSERT

e. The chilled water piping system for the Control structure ~~room~~ chilled water system is designed to ANSI B31.1 with supplementary material certification and design requirements to ensure that the quality is essentially equivalent to ASME Section III, Class 3~~III~~. The technical differences between ~~ASME~~ ANSI B31.1 and ASME Section III Class 3 are few. The major differences were addressed by supplemental requirements and are listed ~~in the precautionary note~~ in Section 3.2.2a1.

SYSTEM/COMPONENT [00]	FSAR SECTION	SOURCE OF SUPPLY [1]*	LOCATION [2]*	QUALITY GROUP CLASSIFICATION [3]*	PRINCIPAL CODES AND STANDARDS [4]*	SEISMIC CATEGORY [5]*	QA LIST [6]*	REMARKS
b. Water chiller condensers		P	CS	C	/IEEE-323	I	Y	
c. Chilled water pumps		P	CS	C	III-1	I	Y	[55]
d. Piping and valves		P	CS	C	IEEE-323, 344	I	Y	
e. Fans		P	CS	-	B31.1	I	Y	[19][53]
f. Motors, fan		P	CS	-	AMCA	I	Y	
g. Coils, cooling		P	CS	-	NEMA MG-1/ IEEE-323	I	Y	
h. Coils, electric heating		P	CS	C	ARI	I	Y	
i. Ductwork and registers		P	CS	-	NEC	IIA	N	
j. Dampers, isolation and control		P	CS	-	AISI/AWS	I	Y	[23]
		P	CS	-	AMCA	I	Y	[25]
2. Auxiliary Equipment Room HVAC System	9.4.1.2							
a. Chilled water system		P	CS	C	Item VII .A.1.a/d	I	Y	[19][53]
b. Fans		P	CS	-	AMCA	I	Y	
c. Motors, fans		P	CS	-	NEMA MG-1/ IEEE 323	I	Y	
d. Coils, cooling		P	CS	C	API	I	Y	[56]
e. Coils, electric heating		P	CS	-	NEC	IIA	N	
f. Ductwork and registers		P	CS	-	AISI/AWS	I	Y	[23]
g. Dampers, isolation and control		P	CS	-	AMCA	I	Y	[25]
3. Emergency Fresh Air Supply System	9.4.1.3							
a. Fans		P	CS	-	AMCA	I	Y	
b. Motors, fans		P	CS	-	NEMA MG-1/ IEEE-323	I	Y	
c. Coils, electric heating		P	CS	-	NEC	I	Y	
d. Ductwork		P	CS	-	AISI/AWS	I	Y	[23]
e. Dampers, isolation and control		P	CS	-	AMCA	I	Y	[25]
f. Prefilters		P	CS	-	UL CLASS 1	I	Y	[28]
g. HEPA filters		P	CS	-	-	I	Y	[39]
h. Charcoal adsorbers		P	CS	-	-	I	Y	[39]
4. Cable Spreading/Auxiliary Switchgear Room HVAC	9.4.1.4							
a. Chilled water and steam heating systems		P	T	D	MF STD/ /B31.1	II	N	
b. Fans		P	T	-	AMCA	II	N	
c. Coils, cooling		P	T	-	ARI	II	N	
d. Coils, steam heating		P	T	-	MF STD	II	N	
e. Ductwork and registers		P	CS	-	AISI/AWS	IIA	N	[23]
f. Dampers, fire		P	CS	-	UL	IIA	N	[25]

MEB-12

2.10.9

TABLE 9.2-1 (Cont'd)

SYSTEM/COMPONENT (39)	FSAR SECTION	SOURCE OF SUPPLY (1)*	LOCATION (2)*	QUALITY GROUP CLASSIFICATION (3)*	PRINCIPAL CODES AND STANDARDS (4)*	SEISMIC CATEGORY (5)*	Q-LIST (6)*	COMMENTS	
XI AUXILIARY SYSTEMS									
A. Reactor Piping Fill System, Including Feedwater Fill System	9.3								
1. Piping and valves, from and including isolation valves, to feedwater lines		P	P	A	III-1	I	Y	[44]	MEB-6
2. Piping and valves, other		P	R	B	III-2	I	Y	[46]	
3. Pumps		P	R	B	III-2	I	Y		
B. Suppression Pool Cleanup System	Fig. 6.3-9								
1. Piping and valves, to second isolation valve		P	R	D	III-2	I	Y	[44]	MEB-6
2. Piping and valves, after second isolation valve		P	R	D	B31.1	IIA	N		
3. Pumps		P	R	D	MP STD	IIA	N		
C. Demineralized Water Makeup System	9.2.3								
1. Tanks		P	N	-	API-650	II	N		
2. Piping and valves		P	ALL	-	B31.1	II	N		
3. Pumps		P	N	-	B31.1/ STD.1	II	N		
D. Drywell Chilled Water System	9.2.10								
1. Chillers		P	T	D	VIII-1	II	N		
2. Cooling coils		P	T	-	API	II,IIA	N		
3. Piping and valves, other		P	T,P	D	B31.1	II,IIA	N		
4. Valves, isolation to primary containment		P	R	B	III-2	I	Y		
5. Pumps		P	T	D	STD.1/ B31.1	II	N		
6. Piping associated with isolation valves at primary containment penetration		P	C	D	B31.1	I	Y	[46]	MEB-6
E. Control Structure Chilled Water System	9.2.10								
1. Piping		P	CS	B/C	B31.1	I	Y	[53] [49]	MEB6
2. Valves		P	CS	B/C	B31.1	I	Y	[53]	
3. Pumps		P	CS	C	III-3	I	Y	[55]	
4. Motors, pump		P	CS	-	IEEE-323, 344	I	Y		
5. Chillers (except condensers)		P	CS	C	VIII-1/ IEEE-323			[54]	
6. Chiller condensers		P	CS	C	III-3	I	Y		

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[37] The final survey and measurement of the as-built emergency spillway are conducted under the applicable portions of the quality assurance program to ensure that the geometry and riprap gradation satisfy design requirements.

[38] A complete description of the codes and standards, seismic category, and Q-list status of piping and instrumentation within the spray pond is shown on Figure 9.2-3.

[39] Design codes and standards are under consideration and will be added to this table when finalized.

[40] Specific components that comprise parts of major components with the same design criteria are generally not listed. For example, transformers are a part of load centers or switchgear, and valve operators are a part of motor operated valves.

[41] Raceway systems include conduit, cable trays, and their supports. Raceway firestops and seals are not Q-listed. However, quality control provisions commensurate with Branch Technical Position 9.5-1 are applied to the raceway firestops and seals.

[42] Inverters do not supply power to safety related loads. The Class 1E battery loads are discussed in Section 8.3.2.1.1.4.

[43] Primary, backup and fault current protection devices are subcomponents of switchgear, load centers, motor control centers and distribution panels, which are Q-listed as shown in items X.A, X.B and X.C.

[44] Cast iron exhaust piping beyond the roof penetration is not Q-listed.

[45] Equipment is qualified in accordance with the conformance statements made in Section 7.2, 7.3, 7.4, 7.5 and 7.6 in reference to IEEE-279 paragraph 4.4 and IEEE-323.

[46] Supports associated with this piping are constructed in accordance with quality assurance and seismic Category I requirements. MEB 6

[~~X~~] 53 The basis for classification of non-ASME Section III equipment as Quality Group C is provided in Section 3.7.2.6.

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97 Table 3.2-1, Page 9 of 38, Control Room HVAC System, Item i - Ductwork and registers. The seismic classification has been omitted. To be acceptable these components should be classified seismic Category 1.

RESPONSE

~~The seismic I classification for the ductwork and registers will be added to the table.~~

Table 3.2-1, ~~page 9 of 38~~ has been changed to ~~omit~~ add the seismic classification.

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TABLE 3.2-1 (Cont'd)

SYSTEM/COMPONENT [40]	FSAR SECTION	SOURCE OF SUPPLY [1]*	LOCATION [2]*	QUALITY GROUP CLASSIFICATION [3]*	PRINCIPAL CODES AND STANDARDS [4]*	SEISMIC CATEGORY [5]*	Q-LIST [6]*	COMMENTS
b. Water chiller condensers		P	CS	C	/IEEE-323 III-3	I	Y	
c. Chilled water pumps		P	CS	C	III-3/ IEEE-323, 344	I	Y	
d. Piping and valves		P	CS	D	B31.1	I	Y	[19]
e. Fans		P	CS	-	AMCA	I	Y	
f. Motors, fan		P	CS	-	NEMA MG-1/ IEEE-323	I	Y	
g. Coils, cooling		P	CS	-	ARI	I	Y	
h. Coils, electric heating		P	CS	-	NEC	IIA	N	
i. Ductwork and registers		P	CS	-	AISI/AWS	I	Y	[23]
j. Dampers, isolation and control		P	CS	-	AMCA	I	Y	[25]
2. Auxiliary Equipment Room HVAC System	9.4.1.2							
a. Chilled water system		P	CS	C/D	Item VII .A.1.a/d	I	Y	[19]
b. Fans		P	CS	-	AMCA	I	Y	
c. Motors, fans		P	CS	-	NEMA MG-1/ IEEE 323	I	Y	
d. Coils, cooling		P	CS	-	API	I	Y	
e. Coils, electric heating		P	CS	-	NEC	IIA	N	
f. Ductwork and registers		P	CS	-	AISI/AWS	I	Y	[23]
g. Dampers, isolation and control		P	CS	-	AMCA	I	Y	[25]
3. Emergency Fresh Air Supply System	9.4.1.3							
a. Fans		P	CS	-	AMCA	I	Y	
b. Motors, fans		P	CS	-	NEMA MG-1/ IEEE-323	I	Y	
c. Coils, electric heating		P	CS	-	NEC	I	Y	
d. Ductwork		P	CS	-	AISI/AWS	I	Y	[23]
e. Dampers, isolation and control		P	CS	-	AMCA	I	Y	[25]
f. Prefilters		P	CS	-	UL CLASS 1	I	Y	[24]
g. HEPA filters		P	CS	-	-	I	Y	[39]
h. Charcoal adsorbers		P	CS	-	-	I	Y	[39]
4. Cable Spreading/Auxiliary Switchgear Room HVAC	9.4.1.4							
a. Chilled water and steam heating systems		P	T	D	MF STD/ /B31.1	II	N	
b. Fans		P	T	-	AMCA	II	N	
c. Coils, cooling		P	T	-	ARI	II	N	
d. Coils, steam heating		P	T	-	MF STD	II	N	
e. Ductwork and registers		P	CS	-	AISI/AWS	IIA	N	[23]
f. Dampers, fire		P	CS	-	UL	IIA	N	[25]

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9. Table 3.2-1, Page 9 of 38, Auxiliary Equipment Room HVAC System, Item a - Chilled water system. Certain portions of this system may be incorrectly classified Quality Group D. To be acceptable the system should be classified Quality Group C. Identify those portions of the system that are classified Quality Group D and provide a basis for this classification.

Response:

Section 3.2.2 ~~.X~~ and Table 3.2-1 have been changed to correct the Quality Group classification and provide the applicable codes and standards.

Note to PECo: FSAR changes are attached to 210.94.

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10.97 97 Table 3.2-1, Page 12 of 38, Primary Containment, Item 1 - Piping associated with isolation valves at primary containment penetration. This piping is incorrectly classified Quality Group D and constructed to B31.1. To be acceptable this piping should be classified Quality Group B and constructed to Section III, Class 2.

ISJK

Table 3.2-1 has been changed to classify the piping associated with ocw isolation valves at the primary containment penetration as Quality Group B. The basis for classifying non-ASME equipment as Quality Group B is provided in section 3.2.2.g.

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(2) Field audits are performed by representatives of the originating design group to ensure that the final installation of such items is in accordance with documents that formed the basis for the seismic analysis of the items.

(3) Such items are not included in the "Q" List.

3.2.2 SYSTEM QUALITY GROUP CLASSIFICATIONS

General Design Criterion 1 of 10 CFR Part 50, Appendix A, requires that structures, systems, and components important to safety be designed, fabricated, erected, and tested to quality standards commensurate with their importance to safety. Components of the reactor coolant pressure boundary meet the requirements for Class 1 components of the American Society of Mechanical Engineers (ASME) B&PV Code, Section III, or equivalent quality standards, as required by 10 CFR Part 50.55.a. Regulatory Guide 1.26, Rev. 3, describes a quality classification system that may be used to determine applicable standards for other components in nuclear power plants. Quality group classifications are assigned to systems and components in accordance with the reliance placed on these systems to:

a. Prevent, or mitigate the consequences of, accidents and malfunctions originating within the RCPB

b. Permit shutdown of the reactor, and maintain it in the safe shutdown condition

c. Contain radioactive material

A tabulation of quality group classification for each component so defined is shown in Table 3.2-1 under the heading, "Quality Group Classification." The applicable codes and standards of each quality group are given in Table 3.2-2. The locations of these components, and the quality group classification of the piping, valves, and interfaces between components of different classifications, are indicated on the system piping and instrumentation diagrams in the pertinent section of the FSAR. A cross reference of system to FSAR figure number is provided in Section 1.7.

System quality group classifications, and design and fabrication requirements as indicated in Table 3.2-1, meet the guidelines of Regulatory Guide 1.26, except as noted below.

The Limerick design is based on quality group commitments made before Regulatory Guide 1.26 was issued, and in some cases alternate approaches to the guide have been used, as follows:

as described by Regulatory Guide 1.26,

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INSERT (N)

g. The piping between the two containment isolation valves, and the outboard isolation valves, on the Drywell Chilled Water System are the equivalent of Quality Group B although they were originally designed and constructed as ANSI B31.1. Equivalency has been assured through the ~~pose~~ imposition of supplemental design, fabrication, and testing requirements:

- materials used are permitted by ASME Section III, Class 2.
- seismic, accelerations were considered in design and and hydrodynamic analysis.
- design temperatures and pressures are greater ~~than~~ than ~~containment~~ design values for the primary containment.
- documented quality control inspections were performed (by trained and qualified inspectors) on piping installation, welds, valves, and hangers
- the installation is of fully welded construction
- a hydrostatic test was performed at a pressure ~3 times greater than containment ~~code posture~~ design pressure

These provisions meet or exceed the committments made in PSAR appendix A and Figure A.2.1.

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TABLE 3.2-1 (Cont'd)

SYSTEM/COMPONENT [40]	FSAR SECTION	SOURCE OF SUPPLY [1]*	LOCATION [2]*	QUALITY GROUP CLASSIFICATION [3]*	PRINCIPAL CODES AND STANDARDS [4]*	SEISMIC CATEGORY [5]*	Q-LIST [6]*	COMMENTS
f. Ductwork and registers		P	R	-	AISI/AWS	I	Y	[23]
C. Primary Containment								
1. Drywell Cooling System	9.2.10, 9.4.5							
a. Piping and valves		P	T,R	D	B31.1	II,IIA	N	
b. Motors, fan		P	C	-	IEEE-334/ NEMA-MG-1	I	Y	
c. Fans		P	C	-	AMCA	I	Y	
d. Coils, cooling		P	C	-	ARI	IIA	N	
e. Ductwork		P	C	-	AISI/AWS	I	Y	[23]
f. Dampers		P	C	-	AMCA	I	Y	
g. Chilled water equipment		P	R	D	MF STD	II	N	
h. Chilled water isolation valves at primary containment		P	R	~~B~~	III-2	I	Y	
i. Piping associated with isolation valves at primary containment penetration		P	C	~~B~~	B31.1	I	Y	(21)
2. Purge System								
a. Piping and valves		P	R	B	III-2	I	Y	
b. Piping and valves, beyond outermost containment isolation valves (smaller than 18-inch nominal diameter)		P	R	D	B31.1	IIA	N	
3. Hydrogen recombiner								
a. Piping and valves		P	R	B	III-2	I	Y	
b. Reaction chamber		P	R	B	III-2	I	Y	
c. Blower		P	R	B	III-2	I	Y	
4. Vacuum relief system								
a. Valves		P	C	N	III-2	I	Y	
D. Radwaste and Offgas Enclosure	9.4.3							
1. Fans		P	RW	-	AMCA	II	N	
2. Coils, cooling		P	RW	-	ARI	II	N	
3. Heating coil, steam		P	RW	-	MF STD	II	N	
4. Ductwork		P	RW,T, CS	-	SMACNA	II	N	

210.97

[21] ~~Not used~~ The basis for classification of Non-ASME Section III equipment as Quality Group B is provided in Section 3.2.2.g.

[22] Diesel fuel oil storage tanks and transfer pumps were designed to ASME Section III, Class 3 but were not stamped.

[23] The structural design of seismic Category I and IIA HVAC ducts was verified by testing duct specimens as permitted by the AISI Code, to substantiate the duct width to duct sheet thickness ratio (w/t) and duct height to duct sheet thickness ratio (h/t) of up to 1500.

Seismic Category II ducts were designed and constructed in accordance with SMACNA.

[24] NRC Regulatory Guide 1.52, July 1976, suggests various industry standards and codes for this equipment. These references were used for system design, with exceptions as noted in Section 6.5.

[25] Dampers with electro-hydraulic operators were designed to IEEE-323. Fire dampers are labeled by Underwriters' Laboratories.

[26] Portions of ducts and dampers in the reactor enclosure and refueling floor HVAC system are seismic Category II, non Q-listed, and the remainder are seismic Category I, Q-listed.

[27] Deleted

[28] The main steam system (MSS) from its outer isolation valve up to, but not including, the turbine stop valve and bypass valve chest, and all branch lines 2-1/2 inches in diameter and larger up to, and including, the first valve (including their restraints), will be designed by the use of an appropriate dynamic seismic-system analysis to withstand the Operating Basis Earthquake (OBE) and Safe Shutdown Earthquake (SSE) design loads in combination with other appropriate loads, within the limits specified for Class 2 pipe in the ASME, Section III Code. The mathematical model for the dynamic seismic analyses of the MSS and branch line piping includes the turbine stop valves and the piping from the stop valves to the turbine casing. The dynamic input loads for design of the MSS are derived from a time history model analysis (or an equivalent method) of the reactor and

210.98 ~~100~~ Table 3.2-1, Page 12 of 38, Primary Containment, Item h - Chilled water isolation valves at primary containment. These valves are incorrectly classified Quality Group D. To be acceptable these components should be classified Quality Group B. The component code is correctly identified.

3/SJK

Table 3.2-1 has been changed to correctly indicate that the chilled water isolation valves at primary containment are Quality Group B.

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TABLE 3.2-1 (Cont'd)

SYSTEM/COMPONENT [40]	FSAR SECTION	SOURCE OF SUPPLY [1]*	LOCATION [2]*	QUALITY GROUP CLASSIFICATION [3]*	PRINCIPAL CODES AND STANDARDS [4]*	SEISMIC CATEGORY [5]*	Q-LIST [6]*	COMMENTS
f. Ductwork and registers		P	R	-	AISI/AWS	I	Y	[23]
C. Primary Containment								
1. Drywell Cooling System	9.2.10, 9.4.5							
a. Piping and valves		P	T,R	D	B31.1	II,IIA	N	
b. Motors, fan		P	C	-	IEEE-334/ NEMA-MG-1	I	Y	
c. Fans		P	C	-	AMCA	I	Y	
d. Coils, cooling		P	C	-	ARI	IIA	N	
e. Ductwork		P	C	-	AISI/AWS	I	Y	[23]
f. Dampers		P	C	-	AMCA	I	Y	
g. Chilled water equipment		P	R	D	MF STD	II	N	
h. Chilled water isolation valves at primary containment		P	R	B	III-2	I	Y	
i. Piping associated with isolation valves at primary containment penetration		P	C	D	B31.1	I	Y	
2. Purge System								
a. Piping and valves		P	R	B	III-2	I	Y	
b. Piping and valves, beyond outermost containment isolation valves (smaller than 18-inch nominal diameter)		P	R	D	B31.1	IIA	N	
3. Hydrogen recombiner								
a. Piping and valves		P	R	B	III-2	I	Y	
b. Reaction chamber		P	R	B	III-2	I	Y	
c. Blower		P	R	B	III-2	I	Y	
4. Vacuum relief system								
a. Valves		P	C	N	III-2	I	Y	
D. Radwaste and Offgas Enclosure	9.4.3							
1. Fans		P	RW	-	AMCA	II	N	
2. Coils, cooling		P	RW	-	ARI	II	N	
3. Heating coil, steam		P	RW	-	MF STD	II	N	
4. Ductwork		P	RW,T, CS	-	SMACNA	II	N	

210.99 ~~101~~ Table 3.2-1, Page 12 of 38, Vacuum relief system, Item a - Valves.
These valves are incorrectly classified Quality N (a typo) and should be
3/SJK classified Quality Group B. The component code is correctly identified.

RESPONSE:

Table 3.2-1 has been changed to indicate the correct Quality Classification.

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SYSTEM/COMPONENT [40]	FSAR SECTION	SOURCE OF SUPPLY [1]*	LOCATION [2]*	QUALITY GROUP CLASSIFICATION [3]*	PRINCIPAL CODES AND STANDARDS [4]*	SEISMIC CATEGORY [5]*	Q-LIST [6]*	COMMENTS
f. Ductwork and registers		P	R	-	AISI/AWS	I	Y	[23]
C. Primary Containment								
1. Drywell Cooling System	9.2.10, 9.4.5							
a. Piping and valves		P	T,R	D	B31.1	II,IIA	N	
b. Motors, fan		P	C	-	IEEE-334/ NEMA-MG-1	I	Y	
c. Fans		P	C	-	AMCA	I	Y	
d. Coils, cooling		P	C	-	ARI	IIA	N	
e. Ductwork		P	C	-	AISI/AWS	I	Y	[23]
f. Dampers		P	C	-	AMCA	I	Y	
g. Chilled water equipment		P	R	D	MF STD	II	N	
h. Chilled water isolation valves at primary containment		P	R	D	III-2	I	Y	
i. Piping associated with isolation valves at primary containment penetration		P	C	D	B31.1	I	Y	
2. Purge System								
a. Piping and valves		P	R	B	III-2	I	Y	
b. Piping and valves, beyond outermost containment isolation valves (smaller than 18-inch nominal diameter)		P	R	D	B31.1	IIA	N	
3. Hydrogen recombiner								
a. Piping and valves		P	R	B	III-2	I	Y	
b. Reaction chamber		P	R	B	III-2	I	Y	
c. Blower		P	R	B	III-2	I	Y	
4. Vacuum relief system								
a. Valves		P	C	B	III-2	I	Y	
D. Radwaste and Offgas Enclosure	9.4.3							
1. Fans		P	RW	-	AMCA	II	N	
2. Coils, cooling		P	RW	-	ARI	II	N	
3. Heating coil, steam		P	RW	-	MF STD	II	N	
4. Ductwork		P	RW,T, CS	-	SMACNA	II	N	

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210. ~~102~~ Table 3.2-1. Page 20 of 38, Demineralized Water Makeup System, Items 1, Tanks; 2, Piping and valves; and 3, Pumps. These items should be identified as Quality Group D.

1/SJK RESPONSE

Table 3.2-1 XI.C. has been changed to show Quality Group D for these components.

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TABLE 3.2-1 (Cont'd)

SYSTEM/COMPONENT [40]	FSAR SECTION	SOURCE OF SUPPLY [1]*	LOCATION [2]*	QUALITY GROUP CLASSIFICATION [3]*	PRINCIPAL CODES AND STANDARDS [4]*	SEISMIC CATEGORY [5]*	Q-LIST [6]*	COMMENTS
XI AUXILIARY SYSTEMS								
A. Safeguard Piping Fill System, Including Feedwater Fill System	6.3							
1. Piping and valves, from and including isolation valves, to feedwater lines		P	R	A	III-1	I	Y	
2. Piping and valves, other		P	R	B	III-2	I	Y	
3. Pumps		P	R	B	III-2	I	Y	
B. Suppression Pool Cleanup System	Fig. 6.3-9							
1. Piping and valves, to second isolation valve		P	R	B	III-2	I	Y	
2. Piping and valves, after second isolation valve		P	R	D	B31.1	IIA	N	
3. Pumps		P	R	D	MF STD	IIA	N	
C. Demineralized Water Makeup System	9.2.[illegible]				AWWA D100			
1. Tanks		P	W	~~D~~	API-650/	II	N	
2. Piping and valves		P	ALL	~~D~~	B31.1	II	N	
3. Pumps		P	W	~~D~~	B31.1/	II	N	
Filter vessels		P	W	D	~~HYD.I~~	~~II~~	N	
Demineralizer vessels		P	W	D	~~VIII -1~~	~~II~~	N	
D. Drywell Chilled Water System	9.2.10				~~VIII -1~~	~~II~~	N	
1. Chillers		P	T	D	VIII-1	II	N	
2. Cooling coils		P	T	-	ARI	II,IIA	N	
3. Piping and valves, other		P	T,P	D	B31.1	II,IIA	N	
4. Valves, isolation to primary containment		P	R	B	III-2	I	Y	
5. Pumps		P	T	D	HYD.I/ B31.1	II	N	
6. Piping associated with isolation valves at primary containment penetration		P	C	D	B31.1	I	Y	
E. Control Structure Chilled Water System	9.2.10							
1. Piping		P	CS	D	B31.1	I	Y	
2. Valves		P	CS	D	B31.1	I	Y	
3. Pumps		P	CS	C	III-3	I	Y	
4. Motors, pump		P	CS	-	IEEE-323, 344	I	Y	
5. Chillers (except condensers)		P	CS	D	VIII-1/ IEEE-323			
6. Chiller condensers		P	CS	C	III-3	I	Y	

210.101 ~~103~~ Table 3.2-1, Page 20 of 38, Drywell Chilled Water System, Item 6 - piping associated with isolation valves at primary containment penetration. This piping is incorrectly classified Quality Group D and constructed to B31.1. To be acceptable this piping should be classified Quality Group B and constructed to Section III, Class 2 (or equivalent).

B/SJK

The response to NRC Question 210.97 addresses the Quality Group classification of the piping associated with the drywell chilled water isolation valves at the primary containment penetration

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210.102 ~~104~~ Table 3.2-1, Page 20 of 38, Control Structure Chilled Water System, Items 1 Piping and 2 Valves. These components are incorrectly classified Quality Group D and constructed to B31.1. To be acceptable these components should be classified Quality Group C and constructed to Section III Class 3 (or equivalent).

B/JHL

Response:

Section 3.2.2.e and Table 3.2-1 have been changed to correct the Quality Group classification and provide the applicable codes and standards.

Note to PECo: FSAR changes are attached to 210.94.

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(Revised to conform this response draft) 4/11/83

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QUESTION No. 210.103

(Table 3.2-1, Note 17)

Identify the "specific design requirements" that General Electric has established for the HPCI and RCIC turbines in order to ensure that these components are constructed to standards commensurate with their safety function.

Response:

Although not under the jurisdiction of the ASME code, the HPCI and RCIC turbines are designed and fabricated following the basic guidelines for ASME ~~code~~ Section III, class 2 components.

The operating and design conditions included in the design of HPCI and RCIC turbines are described in FSAR sections 3.9.3.1.14 and 3.9.3.1.9 respectively.

210.104 ~~106~~ - The statement in FSAR Section 5.2.1.1 with respect to compliance with 10 CFR 50.55a is incorrect. As noted in Table 3.2-1, note 7, permission was granted by NRC on 7/15/75 to use alternate codes to those required by 10 CFR 50.55a. Correct FSAR SEction accordingly.

B/JM

RESPONSE:

~~The FSAR~~ Section 5.2.1.1 has been changed to correct the statement.

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5.2 INTEGRITY OF REACTOR COOLANT PRESSURE BOUNDARY

This section discusses measures employed to provide and maintain the integrity of the reactor coolant pressure boundary (RCPB) for the plant design lifetime.

5.2.1 COMPLIANCE WITH CODES AND CODE CASES

5.2.1.1 Compliance with 10 CFR, Part 50, Section 50.55a

A table that shows compliance with the rules of 10 CFR Part 50, Codes and Standards, is included in Section 3.2. ~~The code edition, applicable addenda, and component dates are in accordance with 10 CFR, Part 50.55a.~~ As noted in Table 3.2-1, alternative codes to those required by 10CFR 50.55a. for primary pressure boundary components.

5.2.1.2 Applicable Code Cases

The reactor pressure vessel and appurtenances and the RCPB piping, pumps, and valves have been designed, fabricated, and tested in accordance with the applicable edition of the ASME Code, including addenda that were mandatory at the order date for the applicable components. Section 50.55a of 10 CFR, Part 50 requires code case approval only for Class 1 components. These code cases contain requirements or special rules that may be used for the construction of pressure-retaining components of Quality Group Classification A. The various ASME code case interpretations that were applied to components in the RCPB are listed in Table 5.2-1. The listed code cases are either in accordance with the recommendations of Regulatory Guides 1.84 and 1.85 or special written acceptance has been obtained for their use. Conformance to Regulatory Guides 1.84 and 1.85 for other than Class 1 components is discussed in Section 1.8.

5.2.2 OVERPRESSURE PROTECTION

Overpressure protection for the RCPB is provided by the nuclear pressure relief system. The nuclear pressure relief system includes 14 main steam relief valves (MSRVs), which are dual function safety/relief valves.

5.2.2.1 Design Basis

Overpressure protection is provided in conformance with 10 CFR, Part 50, Appendix A, General Design Criterion 15. Preoperational and startup instructions are given in Chapter 14.

5.2.2.1.1 Safety Design Bases

The nuclear pressure relief system is designed to perform the following functions:

210.105 ~~107~~ - In FSAR Table 5.2-1, ASME Code Case 1516-2 is incorrectly identified as 1561-2. Revise this code case number accordingly.
B/JM

RESPONSE:

Table 5.2-1 has been changed to correct the ASME Code Case.

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TABLE 5.2-1

APPLICABLE CODE CASES FOR REACTOR COOLANT PRESSURE BOUNDARY COMPONENTS

1332-5	Requirements for Steel Forgings, Section III and VIII
1361-1	Socket Welds, Section III
1441-1	Waiving of 2Sm Limit for Section III Construction
1464	Requirements for Stamping, Section III
1492	Postweld Heat Treatment Sections I, III, and VIII
1561-2	Welding of Seats in Valves for Section III Applications

516-2

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