

THE

# PHILADELPHIA ELECTRIC COMPANY

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SHIELDS L. DALTROFF  
VICE PRESIDENT  
ELECTRIC PRODUCTION

October 17, 1979

Re: Docket Nos.: 50-277  
50-278

IE Bulletin 79-01

Mr. Boyce H. Grier, Director  
Office of Inspection & Enforcement  
Region I  
United States Nuclear Regulatory Commission  
631 Park Avenue  
King of Prussia, PA 19406

Dear Mr. Grier:

This letter is an update for items 1, 3, and 4 to our response to Bulletin 79-01 dated June 13, 1979, which pertains to the environmental qualification of safety-related electrical equipment. Our previous response stated that the re-review of equipment qualification was anticipated to be completed by October 15, 1979. The re-review program for equipment inside primary containment has been completed, however, due to a delay in the completion of an environmental analysis by the Architect Engineer, it is now anticipated that the re-review program for outside containment will be completed by January 30, 1980. The "Action to be Taken by Licensees" and our responses are treated sequentially.

## Action to be Taken by Licensees

1. Complete the re-review program described in IE Circular 78-08 within 120 days of receipt of this Bulletin (79-01).

## Response

The re-review of safety-related equipment installed in primary containment has been completed.

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The re-review of safety-related equipment installed outside primary containment is continuing. The Architect Engineer has been unable to meet the previously estimated completion date of early August 1979 for the environmental analysis of outside containment high energy line break accidents. The delay in completion of the analysis by the Architect Engineer is due mainly to an underestimation of the job scope and to some degree a manpower shortage due to numerous TMI related projects. The revised estimated completion date for this analysis is November 1, 1979. Contingent upon receipt of the environmental parameters on or before November 1, 1979, it is anticipated that the re-review for outside containment equipment will be completed by January 30, 1980.

#### Action to be Taken by Licensees

3. Provide written evidence of the qualification of electrical equipment required to function under accident conditions. For those items not having complete qualification data available for review, identify your plans for determining qualification, either by testing or engineering analysis, or combination of these, or by replacement with qualified equipment. Include your schedule for completing these actions and your justification for continued operation.

#### Response

The previously submitted summary sheets (attached) which provide written evidence of the qualification for safety-related electrical equipment located in the primary containment have been revised as described in Appendix (attached).

Summary sheets providing written evidence of the qualification for safety-related electrical equipment located outside primary containment will be submitted following completion of the qualification review.

#### Action to be Taken by Licensees

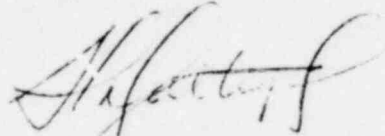
4. Report any items which are identified as not meeting qualification requirements for service intended to the Director, Division of Operating Reactors, Office of Nuclear Reactor Regulation, Nuclear Regulatory Commission, Washington, DC 20555 with a copy to the appropriate NRC Regional Office within 24 hours of identification. If plant operation is to continue following identification, provide justification for such operation. Provide a detailed written report within 14 days of identification to NRR, with a copy to the appropriate NRC Regional Office.

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Response

Our continuing program to this date has not identified any safety-related equipment which is not qualified for its intended service.

Very truly yours,

A handwritten signature in cursive script, likely belonging to a representative of the United States Nuclear Regulatory Commission.

cc: United States Nuclear Regulatory Commission  
Office of Inspection and Enforcement  
Division of Reactor Operations Inspection  
Washington, DC 20555

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## APPENDIX A

The environmental qualification summary sheets for primary containment safety-related equipment have been revised as follows:

1. Note 1 has been added for A02/3-02-39, A02/3-02-316 and RV2/3-02-71, A, B, C, D, F, F, H, J, K & L (Items 1, 2 & 18). These solenoid valves use Buna "N" gasket material and, therefore, they will be replaced on the first outage on each unit that containment is accessible after receipt of the replacement solenoid valves.
2. Documentation Reference 11 has been revised to 11a, 11b, and 11c. The 11a, 11b, and 11c referenced documents are the applicable qualification documents for the PBAPS primary containment MOV actuators as identified by Limitorque Corporation.
3. Note 2 has been added for MOV 2-02-53A, 3-02-53A, 3-02-53B, 2-12-15, 2-13-15 and 2-02-74 (Items 9a, 9c, 9d, 13a, 14a, 15a). Limitorque Corporation has no environmental qualification records for the types of motors used on these actuators, therefore, these motors will be replaced on the first outage on each unit that containment is accessible after receipt of the replacement actuator motors. The environmental qualification values listed do not apply to the actuator motors.
4. Note 3 has been added for MOV 3-13-15, 2-23-15 and 3-02-74 (Items 12a, 13b, 15a). Limitorque records indicate that these are outside-containment actuators. The differences between the in-containment and outside-containment actuators are the torque and limit switch materials and the type of jumper wire between the limit switches. During plant construction the outside containment grade torque and limit switches were replaced with in-containment type. However, due to lack of documentation to firmly establish this condition, these actuators will be inspected to verify that the components are nuclear in-containment grade, and any outside containment grade components, including interlimit switch wiring, will be replaced. This inspection will be completed on the first outage on each unit that containment is accessible.
5. Note 4 has been added for MOV 2-02-53B, 2-10-18, 3-10-18, 3-13-15 and 3-02-74 (Items 9b, 11a, 11b, 13b, 15b). Limitorque is unable to determine if the intermittent gear frames on these actuators is bronze. These actuators will be inspected and any zinc or aluminum gear frame assemblies

will be replaced with bronze gear frame assemblies. This inspection will be completed on the first outage on each unit that containment is accessible.

6. MOV 2/3-02-65A, B and MOV 2/3-02-66A, B (Items 8 and 10) have been deleted from the listing. During normal plant operation MOV 2/3-02-65A, B and MOV 2/3-02-66A, B will be administratively controlled to meet their safety function requirements, and they will not be electrically operated (breakers de-energized).

MOV 2/3-02-43A, B (Item 16) have no safety-function, and, therefore, they have been deleted from the listing.

It is anticipated that the re-review for outside containment safety-related equipment will be completed by January 30, 1980.

1311 182



POOR ORIGINAL

PLANT NAME: Peach Bottom - Unit #2 and #3

ENVIRONMENTAL QUALIFICATION SUMMARY

September 26, 1979

ITEM	EQUIPMENT DESCRIPTION	TIME REQ'D.	ENVIRONMENT (LOCATION) Primary Contain.			QUAL. METHOD*	DOC. REF**	REMARKS
			PARAMETER	SPEC.	QUAL.			
1	AO 2/3-02-39	10 Sec			LOCA & MSLB			
	Recirc. Loop B Sample		Temp. (°F)	Aug. 4, 1978		Analysis	1, 2, & 3	The air operated valve is
	Line isolation valve		Press. (psia)	Letter from		"		used to isolate reactor
	"ASCO" Cat. # T8300C61U 120		Rel. Hum.	G. D. Edwards		"		water sample from loop B.
	volt, 60 Hertz		Radiation	to ASCO		"		See Note 1
			Chem.	-	-	-		
2	AO 2/3-02-316				LOCA & MSLB			
	Main Steam Sample Line		Temp. (°F)	Aug. 4, 1978		Analysis	1, 2 & 3	The air operated valve is
	Isolation Valve		Press. (psia)	Letter from		"		used to isolate main steam
	"ASCO" Cat. # T8300C61U		Rel. Hum.	G. D. Edwards		"		sample line on reactor vessel
	120 Volt, 60 Hertz		Radiation	to ASCO		"		low water level
			Chem.	-	-	-		See Note 1
3	Wiring methods				LOCA & MSLB			
	Buchanan Terminal Blocks		Temp. (°F)		340°F	Test	1, 4 & 5	The Terminal Blocks are
	28100 Series	≤80 Sec.	Press. (psia)		104 Psig	"		used to supply power and
	Marathon Terminal Blocks		rel. Hum.		90-100%	"		control to Safeguard Equipment
	1600 Series		Radiation		≤26 MR	"		
			Chem.	-	-	-		
311	Rockbestos Cable	≤80 sec.			LOCA & MSLB			
	Firewall III		Temp. (°F)		295°F	Test	1 & 6	The cable is used to supply
	Pyrotrol III		Press. (psia)		51 Psig	"		power and control to safeguard
			Rel. Hum.		90-100%	"		equipment
			Radiation		50 MR	"		
			Chem.	-	-	-		

This list is a compilation of items by component. Do not list the same type of component more than once. \*ie, separate effects, sequential, etc.

POOR ORIGINAL

PLANT NAME: Peach Bottom Unit #2 and #3

Environmental Qualification Summary

September 26, 1979

ITEM	EQUIPMENT DESCRIPTION	TIME REQ'D.	ENVIRONMENT (LOCATION) Primary Contain.			QUAL. METHOD*	DOC. REF**	REMARKS
			PARAMETER	SPEC.	QUAL.			
5	Drywell Penetrations	101 Days	LOCA & MSLB					The Safety Function is to
	G.E. Co. (Low Voltage		Temp. (°F)		340°F	Test	1,7,8, & 9	maintain Drywell integrity
	Power and Control)		Press. (psia)		103 psig	"		during normal and during
	G.E. 100 series		Rel. Hum.		90-100%	"		a design basis event
			Radiation		40 MR	"		and post design basis event.
			Chem.	-	-	-		In addition, some penetrations
								are used to supply power and
			Temp. (°F)					control to safeguard equipment.
			Press. (psia)					
			Rel. Hum.					
			Radiation					
			Chem.					
6	Drywell Penetrations	101 days	LOCA & MSLB					The safety function is to
	Physical Sciences		Temp. (°F)		281°F	Test	1, 8, & 10	maintain drywell integrity
	Corp. (High Voltage)		Press. (psia)		62 psig	"		during normal and during
			Rel. Hum.		90-100%	"		design basis event and post
			Radiation		40 MR	Test & Analysis		design basis event.
			Chem.	-	-	-		
7	RPS Drywell equipment	Not required						This equipment does not perform
			Temp. (°F)					a safety function during or
			Press. (psia)					following a LOCA and/or MSLB
			Rel. Hum.					event
			Radiation					
			Chem.					

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 Do not list equipment where more than one applies. \*\*Please attach typed lists of reference documents





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# POOR ORIGINAL

PLANT NAME: Peach Bottom Units 2 and 3

## Environmental Qualification Summary

September 26, 1979

ITEM	EQUIPMENT DESCRIPTION	TIME REQ'D.	ENVIRONMENT (LOCATION) Primary Containment			QUAL. METHOD*	DOC. REF**	REMARKS
			PARAMETER	SPEC.	QUAL.			
9a	MOV 2-02-53A	≤ 80 sec.						2/3-02-53A, B valves
	Limitorque Motor		Temp. (°F)		329°F	Test	1, 11a, 11c	close on DBE to
	Operated Valve SMB-3		Press. (psia)		90 psig			isolate loops.
	Recirc. Loop A		Rel. Hum.		90-100%			
	Pump Discharge Valve		Radiation		204 MR			
			Chem.		N/A			See Note 2 
9b	MOV 2-02-53B	≤ 80 sec.						
	Limitorque Motor		Temp. (°F)		329°F	Test	1, 11a, 11c	
	Operated Valve SMB-3		Press. (psia)		90 psig			
	Recirc. Loop B		Rel. Hum.		90-100%			
	Pump Discharge Valve		Radiation		204 MR			
			Chem.		N/A			See Note 4 
9c	MOV 3-02-53A	≤ 80 sec.						
	Limitorque Motor		Temp. (°F)		329°F	Test	1, 11a, 11c	
	Operated Valve SMB-3		Press. (psia)		90 psig			
	Recirc. Loop A		Rel. Hum.		90-100%			
	Pump Discharge Valve		Radiation		204 MR			
			Chem.		N/A			See Note 2 
9d	MOV 3-02-53B	≤ 80 sec.						
	Limitorque Motor		Temp. (°F)		329°F	Test	1, 11a, 11c	
	Operated Valve SMB-3		Press. (psia)		90 psig			
	Recirc. Loop B		Rel. Hum.		90-100%			
	Pump Discharge Valve		Radiation		204 MR			
			Chem.		N.A.			See Note 2 

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 Use limited environment above more than one another.

\*ie, separate effects, sequential, etc.  
 \*\*Please attach typed lists of reference documents

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# POOR ORIGINAL

PLANT NAME: Peach Bottom Units 2 and 3

## Environmental Qualification Summary

September 26, 1979

ITEM	EQUIPMENT DESCRIPTION	TIME REQ'D.	ENVIRONMENT (LOCATION) Primary Containment			QUAL. METHOD*	DOC. REF**	REMARKS
			PARAMETER	SPEC.	QUAL.			
11a	MOV 2-10-18	≤ 80 sec.						2/3-10-18 valves
	Limitorque Motor		Temp. (°F)		329°F	Test	1, 11a, 11b	isolate RHR shutdown
	Operated Valve		Press. (psia)		90 psig			cooling supply line on
	SMB-4-150. RHR		Rel. Hum.		90-100%			isolation signal.
	Shutdown Cooling		Radiation		204 MR			
	Isolation Valve		Chem.		N.A.			See Note 4 
11b.	MOV 3-10-18	≤ 80 sec.						
			Temp. (°F)		329°F	Test	1, 11a, 11c	
	Description-same as 11a		Press. (psia)		90 psig			
			Rel. Hum.		90-100%			
			Radiation		204 MR			
			Chem.		N.A.			See Note 4
12a	MOV 2-23-15	≤ 80 sec.						2/3-23-15 valves
	Limitorque Motor		Temp. (°F)		329°F			isolate HPCI steam turbines
	Operated Valve		Press. (psia)		90 psig			on non-failsafe isolation
	SMB-0-40. HPCI		Rel. Hum.		90-100%			signal.
	Steam Line Isolation		Radiation		204 MR			
	Valve.		Chem.		N.A.			See Notes 3 and 4 
12b	MOV 3-23-15	≤ 80 sec.						
			Temp. (°F)		329°F	Test	1, 11a, 11c	
			Press. (psia)		90 psig			
	Description-same as 12a		Rel. Hum.		90-100%			
			Radiation		204 MR			
			Chem.		N.A.			

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\*ie, separate effects, sequential, etc.



\*\*Please attach typed lists of reference documents

# POOR ORIGINAL

PLANT NAME: Peach Bottom Units 2 and 3

## Environmental Qualification Summary

September 26, 1979

ITEM	EQUIPMENT DESCRIPTION	TIME REQ'D.	ENVIRONMENT (LOCATION) Primary Containment			QUAL. METHOD*	DOC. REF**	REMARKS
			PARAMETER	SPEC.	QUAL.			
13a.	MOV 2-13-15	80 sec.						2/3-13-15 valve
	Limiterque Motor		Temp. (°F)		329°F	Test	1, 11a, 11c	isolates RCIC turbine
	Operated Valve		Press. (psia)		90 psig			steam supply line on
	SMB-000-5, RCIC		Rel. Hum.		90-100%			non-failsafe signal
	Steam Line Isolation		Radiation		204 MR			
	Valve		Chem.		N.A.			See Note 2 
13b.	MOV 3-13-15	80 sec.						
	Description-same as 13a.		Temp. (°F)		329°F	Test	1, 11a, 11c	
			Press. (psia)		90 psig			
			Rel. Hum.		90-100%			
			Radiation		204 MR			
			Chem.		N.A.			See notes 3 and 4
14a.	MOV 2-12-15	80 sec.						2/3-12-15 Valve
	Limiterque Motor		Temp. (°F)		329°F	Test	1, 11a, 11b	isolates RWCU line
	Operated Valve		Press. (psia)		90 psig			on isolation signal.
	SMB-00-10, Reactor		Rel. Hum.		90-100%			
	Water Cleanup Inlet		Radiation					
	Isolation Valve		Chem.		N.A.			See Note 2 
14b.	MOV 3-12-15							
			Temp. (°F)		329°F	Test	1, 11a, 11c	
	Description-Same		Press. (psia)		90 psig			
	as 14a.		Rel. Hum.		90-100%			
			Radiation		204 MR			
			Chem.		N.A.			

This list is a compilation of items by component. Do not list the same type of component more than once.

\*ie, separate effects, sequential, etc.  
\*\*Please attach typed lists of reference documents

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# POOR ORIGINAL

PLANT NAME: Peach Bottom 2 and 3

## Environmental Qualification Summary

September 26, 1979

ITEM	EQUIPMENT DESCRIPTION	TIME REQ'D.	ENVIRONMENT (LOCATION) Primary Containment			QUAL. METHOD*	DOC. REF**	REMARKS
			PARAMETER	SPEC.	QUAL.			
15a,	MOV 2-02-74 Limitorque	≤ 80 sec.						
	Motor Operated Valve		Temp. (°F)		329 °F	Test		2/3-02-74 Valve
	SMB-000-5, Main		Press. (psia)		90 psig			isolates main steam
	Steam Line Drain		Rel. Hum.		90-100%			line drain on
	Isolation Valve		Radiation					isolation signal
			Chem.		N.A.			See note 2 
15b.	MOV 3-02-74	≤ 80 sec.				Test		
	Description-Same as 15a		Temp. (°F)		329 °F			
			Press. (psia)		90 psig.			
			Rel. Hum.		90-100%			
			Radiation		204 MR			
			Chem.		N.A.			See notes 3 and 4 
			Temp. (°F)					
			Press. (psia)					
			Rel. Hum.					
			Radiation					
			Chem.					
			Temp. (°F)					
			Press. (psia)					
			Rel. Hum.					
			Radiation					
			Chem.					

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SUMMARY SHEETS (Cont'd)

ENVIRONMENTAL QUALIFICATION SUMMARY SHEET NOTES

1. ASCO solenoid valve will be replaced.
2. Limitorque actuator motor will be replaced. The environmental qualification values listed do not apply to the actuator motor.
3. Limitorque actuator will be inspected to verify that components are nuclear in-containment grade.
4. Limitorque actuator will be inspected to determine if intermittent gear frame is bronze. Zinc or aluminum gear frame assemblies will be replaced with bronze gear frame assemblies.

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SUMMARY SHEETS (Cont'd)

REFERENCES

1. RES 5-3 (Qualification Drywell Equipment)
2. G.E. Co. Cover Letter G-HE-8-198
3. ASCO Letter 8/17/78
4. Franklin Institute Test Report F-C5022-1
5. Franklin Institute Test Report for PECO F-C5022-2
6. Franklin Institute Test Report for PECO F-C2750
7. G.E. Co. Cover Letter G-HE-8-153
8. Vendor Print #6280-E-106-113-1
9. G.E. Co. Cover Letter G-HE-8-54
10. Vendor Print #6280-E40-124-2
11.
  - a. Limitorque Test Report 600198
  - b. Limitorque Test Report 600376
  - c. Limitorque Test Report 600376A
12. Franklin Institute Test Report for Pyle-National Company F-C3451
13. G.E. Co. Cover Letter G-HE-7-154 (FDI-123)

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