

Public Service
Electric and Gas
Company

Corbin A. McNeill, Jr.
Vice President -
Nuclear

Public Service Electric and Gas Company P.O. Box 236, Hancocks Bridge, NJ 08038 609 339-4800

February 14, 1986

Director of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
7920 Norfolk Avenue
Bethesda, Maryland 20814

Attention: Ms. Elinor Adensam, Director
Project Directorate 3
Division of BWR Licensing

Dear Ms. Adensam:

TESTABILITY OF BAILEY SOLID STATE LOGIC MODULES
HOPE CREEK GENERATING STATION
DOCKET NO. 50-354

Public Service Electric and Gas Company (PSE&G) hereby submits the attached to document commitments made during recent discussions with the NRC regarding the testability of the Bailey 862 Solid State Logic Modules. PSE&G commits to implement a surveillance test program for a total test population of 577 modules as specified in Attachment 1. The entire test population will be tested at a rate of 5% per month. The module test selection criteria is based upon modules which perform a safety-related control function or provide a status of safety-related equipment. Safety-related equipment status is limited to valve open/closed, motor running/stopped and circuit breaker closed/tripped.

This program entails removing those modules, identified by system in Attachment 1, and performing bench tests of the logic modules beginning with the issuance of a full power license. The bench test will confirm that the logic modules input/output logic functions as designed. The results of each test will be documented and maintained in a retrievable data base. This program will continue until sufficient statistical data is obtained to verify the reliability of the Bailey 862 Solid State Logic Modules.

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PDR ADOCK 05000354
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Director of Nuclear
Reactor Regulation

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Should you have any questions on the subject filing, please
do not hesitate to contact us.

Sincerely,

A handwritten signature in dark ink, appearing to read "C. H. Wagner", with a stylized flourish at the end.

Attachment

C D.H. Wagner
USNRC Licensing Project Manager

R.W. Borchardt
USNRC Senior Resident Inspector

TEST POPULATION
ATTACHMENT #1
POWER DISTRIBUTION SYSTEM (4.16KV)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
1-3-2	1-3-2	1-3-2	1-3-2
1-3-3	1-3-3	1-3-3	1-3-3
1-3-5	1-3-5	1-3-5	1-3-5
1-3-8	1-3-8	1-3-8	1-3-8
1-3-11	1-3-11	1-3-11	1-3-11
1-4-2	1-4-2	1-4-2	1-4-2
1-4-3	1-4-3	1-4-3	1-4-3
1-4-5	1-4-5	1-4-5	1-4-5
1-4-8	1-4-8	1-4-8	1-4-8
1-4-11	1-4-11	1-4-11	1-4-11
1-7-2	1-7-2	1-6-13	1-6-12
1-7-3	1-7-3	1-7-2	1-7-2
1-7-4	1-7-4	1-7-3	1-7-3
1-7-12	1-7-13	1-7-4	1-7-4
1-7-13			

STANDBY DIESEL GENERATOR

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
1-8-2	1-8-2	1-8-2	1-8-2
1-8-3	1-8-3	1-8-3	1-8-3
1-8-5	1-8-5	1-8-5	1-8-5
1-8-6	1-8-6	1-8-6	1-8-6

REACTOR RECIRCULATION PUMP BREAKER

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
1-9-2	1-9-2		
1-9-7	1-9-7		

POWER DISTRIBUTION SYSTEM (480V)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
1-6-2	1-6-2	1-6-2	1-6-2
1-6-7	1-6-7	1-6-7	1-6-7
1-6-12	1-6-12	1-7-11	

DIESEL AREA CHILLERS (H-88)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
4-4-2	4-4-2	4-4-2	4-4-2

REACTOR BUILDING HVAC (H83,84)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
4-4-7	4-4-7	4-4-12	4-4-10
4-4-8	4-4-8	4-6-2	4-6-2
4-4-9	4-4-9	4-6-3	4-6-3
4-6-2	4-6-2	4-6-5	4-6-5
4-6-3	4-6-3	4-6-8	4-6-8
4-6-5	4-6-5	4-6-13	4-6-13
4-6-8	4-6-8		
4-6-12	4-7-2		
4-6-13	4-7-3		
4-6-14	4-7-5		
4-7-2	4-7-8		
4-7-3			
4-7-5			
4-7-8			

FIRE PROTECTION (H-22)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
	4-8-2		

BREATHING AIR (H-15)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
	4-9-2		
	4-9-4		

AUXILIARY BUILDING CHILLED WATER (H-90)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
4-10-2	4-9-11	4-10-2	4-9-7
4-10-3	4-10-2	4-10-3	4-9-8
4-10-5	4-10-3	4-10-5	4-9-9
4-10-6	4-10-5	4-10-6	4-10-2
4-10-7	4-10-6	4-10-7	4-10-3
4-10-10	4-10-7	4-10-10	4-10-5
4-10-11	4-10-10	4-10-11	4-10-6
4-10-12		4-10-12	4-10-7

AUXILIARY BUILDING HVAC (H-89)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
		4-7-3	4-7-3
		4-7-4	4-7-4
		4-7-5	4-7-5
		4-7-7	4-7-7
		4-7-8	4-7-8
		4-7-9	4-7-9
		4-7-10	4-7-10
		4-7-13	4-7-13
		4-7-14	4-7-14
		4-8-3	4-8-3
		4-8-4	4-8-4
		4-8-5	4-8-5
		4-9-9	4-10-12
		4-9-10	4-10-13

CHILLED WATER (H-87)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
		4-9-2	4-9-2
		4-9-3	4-9-3
		4-9-4	4-9-4
		4-9-5	4-9-5
		4-9-6	
		4-9-7	

STATION SERVICE WATER SYSTEM (J-10)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
5-3-2	5-3-2	5-3-2	5-3-2
5-3-4	5-3-4	5-3-4	5-3-4
5-3-5	5-3-5	5-3-5	5-3-5
5-3-7	5-3-7	5-3-7	5-3-7
5-3-12	5-3-12	5-4-2	5-4-2
5-4-2	5-4-2	5-4-3	5-4-3
5-4-4	5-4-3	5-4-8	5-4-8
5-4-8	5-4-8	5-4-9	5-4-9
5-4-9	5-4-9	5-4-12	5-4-12
5-4-12	5-4-12	5-4-13	5-4-13
5-4-13	5-4-13	5-6-10	
5-6-2	5-6-2	5-6-11	
5-6-5	5-6-5		
5-6-8	5-6-8		
5-6-10	5-6-10		

CONDENSER AND REFUELING WATER STORAGE AND TRANSFER (J-08)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
5-9-9	5-9-2 5-9-9		

NUCLEAR BOILER (J-41)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
5-10-2	5-10-4	5-9-2	5-10-2
5-10-4	9-9-9	5-10-2	5-10-4
	9-9-10	5-10-4	5-10-6
	9-9-11	5-10-6	5-10-8
	9-9-12	5-10-8	5-10-10
		5-10-10	

REACTOR WATER CLEANUP (J-44,45)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
5-10-9			5-7-2
5-10-11			5-7-4
			5-7-6
			5-7-8

REACTOR AUXILIARIES COOLING SYSTEM (J-13)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
5-7-11	5-7-12		5-6-12
5-7-13	5-7-13		5-6-13

DEMINERALIZED WATER MAKEUP AND STORAGE (J-18)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
	5-9-5		

PLANT LEAK DETECTION (J-25)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
5-9-3			5-9-3
5-9-4			5-9-4

REACTOR RECIRCULATION SYSTEM (J-43,791E40AC)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
9-10-2			8-9-8 8-9-10 9-10-2

SAFETY AUXILIARIES COOLING SYSTEM (J-11)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
8-3-2	8-3-2	8-3-2	8-3-2
8-3-3	8-3-3	8-3-3	8-3-3
8-3-4	8-3-4	8-3-4	8-3-4
8-3-5	8-3-5	8-3-5	8-3-5
8-3-7	8-3-7	8-3-7	8-3-7
8-3-12	8-3-12	8-3-10	8-3-12
8-4-2	8-4-2	8-4-2	8-4-2
8-4-3	8-4-3	8-4-3	8-4-3
8-4-4	8-4-4	8-4-5	8-4-5
8-4-5	8-4-5	8-4-6	8-4-6
8-6-2	8-6-2	8-6-2	8-6-2
8-6-3	8-6-3	8-6-3	8-6-3
8-6-5	8-6-5	8-6-5	8-6-5
8-6-6	8-6-6	8-6-6	8-6-6
8-6-8	8-6-8	8-6-10	8-6-10
8-6-10	8-6-10		
8-6-14	8-6-14		

STANDBY LIQUID CONTROL (J-48)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
8-8-4	8-7-8		8-8-7
8-8-7	8-7-10		
8-8-11	8-7-13		

AUTOMATIC DEPRESSURIZATION SYSTEM (791E403AC)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
	9-9-9		9-9-11
	9-9-10		9-9-12
	9-9-11		
	9-9-12		

HIGH PRESSURE COOLANT INJECTION (J-55)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
8-10-5		8-9-8	
8-10-6		8-9-9	
8-10-7			
8-10-8			
8-10-9			
8-10-10			
8-10-11			

REACTOR CORE ISOLATION COOLING (J-49)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
	8-9-5		8-9-4
	8-9-6		8-9-5
	8-9-7		
	8-9-8		
	8-9-9		

SOLID RADWASTE (J-6)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
	8-10-2	8-10-2	8-10-2
	8-10-3		
	8-10-5		
	8-10-6		

LIQUID RADWASTE (J-61)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
		8-10-7	
		8-10-9	

RESIDUAL HEAT REMOVAL (J-51,791E401AC)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
9-4-2	9-4-2	9-4-2	9-4-2
9-4-3	9-4-3	9-4-3	9-4-3
9-4-4	9-4-4	9-4-4	9-4-4
9-4-5	9-4-5	9-4-8	9-4-5
9-4-6	9-4-6		9-4-10
9-4-7	9-4-7		9-10-4
9-4-8	9-4-8		
9-4-9	9-4-9		
9-10-4			

CORE SPRAY (J-52)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
9-6-13	9-6-13	9-6-15	9-6-15
9-6-14	9-6-14		
9-6-15	9-6-15		

CONTROL ROD DRIVE (J-46)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
		9-10-7	

PRIMARY CONTAINMENT ISOLATION SYSTEM (J-102)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
9-7-9	9-10-2	9-9-2	9-9-2
9-9-2	9-10-4	9-9-4	9-9-4
9-9-3	9-10-6	9-9-6	9-9-6
9-9-6	9-10-7	9-9-7	9-9-7

CONTAINMENT ATMOSPHERE CONTROL (J-57)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
9-7-2	9-8-2	9-7-2	9-7-2
9-7-3	9-8-3	9-7-3	9-7-3
9-7-4	9-8-4	9-7-4	9-7-4
9-7-5	9-8-5	9-7-5	9-7-5
9-7-6	9-8-6		9-8-2
9-8-5	9-8-13		9-8-3
9-8-6	9-8-15		9-8-4
9-8-8			9-8-5
9-8-9			9-8-6
9-8-10			9-8-8
9-8-13			9-8-9
9-8-15			9-8-11
			9-8-13
			9-8-15

REDUNDANT REACTIVITY CONTROL SYSTEM (J-109)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
9-7-8	9-7-9		
12-6-9	12-6-10		
12-6-12	12-6-12		

SCRAM DISCHARGE VOLUME (791E414AC)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
9-10-9			

HYDROGEN RECOMBINER SYSTEM (J-58)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
12-7-2	12-7-2	12-7-2	12-7-2
12-7-3	12-7-3	12-7-3	12-7-3
12-7-4	12-7-4	12-7-4	12-7-4

FUEL POOL COOLING (J-53)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
12-4-2	12-4-2		
12-4-3	12-4-3		
12-4-6	12-4-6		
12-4-7	12-4-8		
12-4-9	12-4-9		
12-4-10	12-4-11		
12-4-12	12-4-13		
12-4-14	12-4-14		
12-6-2	12-6-2		

PRIMARY CONTAINMENT INSTRUMENT GAS (J-59)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
12-8-2	12-8-2	12-8-2	12-8-2
12-8-4	12-8-4	12-8-4	12-8-4
12-8-6		12-8-5	12-8-6
12-8-8		12-8-6	12-8-8
		12-8-8	12-8-10
		12-9-2	12-8-11
		12-9-3	12-8-12
		12-9-4	12-9-2
			12-9-3
			12-9-4

LOCA/LOP FAN OUT (J-105)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
12-10-2	12-10-2	12-10-2	12-10-2
12-10-4	12-10-4	12-10-4	12-10-4

MAIN STEAM ISOLATION VALVE SEALING SYSTEM (J-72)

<u>AC652</u>	<u>BC652</u>	<u>CC652</u>	<u>DC652</u>
		12-4-2	12-4-2
		12-4-3	12-4-3
		12-4-4	12-4-4
		12-4-5	12-4-5
		12-4-6	12-4-6
		12-4-7	12-4-7
		12-4-8	12-4-8
		12-4-9	12-4-9
		12-6-2	12-6-2
		12-6-4	12-6-4
		12-6-6	12-6-6
		12-6-13	

MM:thj