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NRC PDR

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

October 31, 1978

Docket Nos. 50-317
and 50-318

Mr. A. E. Lundvall, Jr.
Vice President - Supply
Baltimore Gas & Electric Company
Post Office Box 1475
Baltimore, Maryland 21203

Dear Mr. Lundvall:

As previously discussed with your staff, representatives of the Nuclear Regulatory Commission will meet with your representatives at Calvert Cliffs on November 8 and 9, 1978. The purpose of the meeting is to discuss the enclosed comments and questions on the Inservice Testing (IST) Program for Calvert Cliffs Unit Nos. 1 and 2.

The NRC representatives that will attend the meeting are:

V. Nerses	- NRC
A. Wang	- NRC
J. Fehringer	- EGG
H. Rockhold	- EGG

We request that your staff be prepared to discuss the enclosure at the meeting and document the answers in a formal submittal by November 27, 1978. Please contact me if you require any further information on this meeting.

Sincerely,

Robert W. Reid

Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors

Enclosure:
IST Comments and Questions

cc w/enclosure:
See next page

Baltimore Gas & Electric Company

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ENCLOSURE

IST COMMENTS AND QUESTIONS

NOTE: Numbers shown refer to notes in the BG&E in-service testing report.

Pump Testing Program

1. You state that all Note 1 parameters are measured monthly during plant operation. Are these parameters recorded in accordance with IWP-6240?

2. Review the safety related function of the emergency diesel transfer pumps to determine if they should be listed and tested in accordance with the ASME Section XI code requirements.

3. Are emergency diesel air starting valves used? If so, these valves should be included in your IST program.

Valve Testing Program - General Comments and Questions

1. It is assumed that Unit 1 valve notes also apply to Unit 2 since Unit 1 notes provide a more detailed discussion of the valve testing program.

2. Provide prints M-53 and M-68 for our review.

3. All motor, hydraulic and air-operated valves should be identified, stroke time tested and limiting specification values given for each valve. Only portions of these requirements were identified in the in-service test report.

4. Identify all valves that require a check off valve position indicators per IWV-3300.

5. Are all valve position and operational test results recorded in accordance with IWV-6230?

Valve Testing Program - Specific Questions

A. High Pressure Safety Injection (HPSI) System
Low Pressure Safety Injection (LPSI) System
Containment Spray (CS) System

1. Review the safety related function of check valves SI-215, SI-217, SI-225, SI-227, SI-235, SI-237, SI-245, SI-247, SI-330, SI-340 and the four SI header checks to determine if they should be categorized A/C.

2. Specific relief was requested from full stroke exercising check valves SI-316, SI-326, SI-340 and SI-330. When will these valves be full stroked?

3. Review the safety related function of valve SI-455 to determine if it should be categorized A/E.

4. Specific relief was requested from full stroke exercising check valves SI-4148 and SI-4149. Does the containment sump have a water level inventory? Explain why these check valves cannot be full stroked or partial stroked every three months.

5. You state that check valves SI-4943 through SI-4948 cannot be stroked during operation without hazarding plant equipment (Note 9). Specifically, how would equipment be damaged?

6. Has power been removed from SI-651 and SI-652?

7. Review the safety related function of valve SI-661 to determine if it should be categorized A.

8. The NRC staff considers the following valves safety related, and therefore they should be included in your I.S.T. Program and categorized as indicated:

Category C

22 LPSI PP min. flow return chk.	(H-11)

Category E (manual valves on print M-74)

21 LPSI PP discharge	(B-9)
21 LPSI PP min. flow return isolation	(B-10)
21 CS PP suction isolation	(C-10)
21 CS spray nozzle isloation	(A-4)
22 LPXI PP min. flow return isolation	(H-10)
22 LPSI PP shutdown cooling suction isolation	(H-11)
22 LPSI PP normal suction isolation	(J-11)
22 LPSI discharge isolation	(H-9)
22 CS spray header isolation	(H-5)
22 CS spray nozzle isolation	(H-4)

21 HPSI PP min. flow return isolation	(D-10)
21 HPSI PP suction isolation	(d-10)
21 HPSI PP discharge isolation	(D-9)
22 HPSI PP min. flow return isolation	(E-10)
22 HPSI PP suction isolation	(E-10)
22 HPSI PP discharge isolation	(E-9)
23 HPSI PP min. flow return isolation	(F-10)
23 HPSI PP suction isolation	(F-10)
23 HPSI PP discharge isolation	(F-9)

(manual valves on print M-52)

21, 22 and 23 containment charcoal filter units isolation valves

9. Valves SI-464, SI-465 and SI-475 are only identified for Unit 2 and could not be found on the available prints. Are there corresponding valves applicable to Unit 1? Provide prints and coordinates for our review.

10. Valves SI-352, SI-325, SI-432, SI-440 and SI-450 are only identified for Unit 1. Are there corresponding valves applicable to Unit 2?

B. Service Water Cooling (SRW) System (P&ID M-46)

1. Review the safety related function of manual valves SRW-117 through SRW 124 to determine if they should be categorized E.

2. Shouldn't valves SRW-1598 and SRW-1599 actually be identified SRW-1596 and SRW-1597 respectively?

3. What equipment would be damaged by exercising valves SRW-1637-CV, SRW-1638-CV, SRW-1639-CV and SRW-1600-CV? Explain how this equipment would be damaged.

4. There are six manual isolation valves associated with cooling water to emergency diesels 21 and 22. Review the safety related function of these valves to determine if they should be categorized E.

5. The NRC staff considers the following valves safety related, and therefore they should be included in your IST program and categorized as indicated:

Category C

21 diesel check valves	(C-9)
22 diesel check valves	(D-9)

Category B

22 diesel back-up discharge SRW-1646-2CV	(D-9)
23 diesel back-up supply SRW-1645-2CV	(F-8)

C. Circulation Salt Water (SW) System

1. Review the safety related function of manual valves SW-112 through SW-115 to determine if they should be categorized E.

2. What equipment would be damaged if valve SW-5149-CV is exercised?

D. Component Cooling (CC) System

There are a number of manual in-line valves supplying cooling water to the HPSI and LPSI pumps. Review the safety related function of these valves to determine if they should be categorized E.

E. Auxiliary Building Waste Process System

Motor operated valve EAC-5463 is only identified for Unit 1. Is there a corresponding valve applicable to Unit 2?

F. Chemical and Volume Control (CVC) System

The NRC staff considers the following valves safety related, and therefore they should be included in your IST program and categorized as indicated (P&ID M-73):

Category E

concentrated boric acid tank outlet valve	(H-9)
boric acid pumps suction and discharge valves	(J-9)
charging pumps suction and discharge valves	(H-3)
charging pump common discharge to containment valve	(F-2)
manual bypass valve around CVC-519-CV	(F-3)
manual valve downstream of CVC-519-CV	(F-3)
manual valve downstream of CVC-518-CV	(F-3)

Category C

Check valve in bypass loop around CVC-519-CV (F-3)

RV-345 letdown heat exchanger relief valve (D-1)

Volume control tank outlet check valve (F-4)

Category A

CVC-110P-CV letdown containment isolation valve (C-1)

CVC-110Q-CV letdown containment isolation valve (C-1)

G. Steam Generating Blowdown (BD) System

Steam generator blowdown valves BD-113 through BD-124 are only identified for Unit 2. Are there corresponding valves applicable to Unit 1?

H. Reactor Coolant (RC) System

1. Quench tank (A-11) demineralized water inlet check valve is identified as DW-251 for Unit 1 and DW-283 for Unit 2. Which is correct? Review the safety related function of this valve to determine if it should be categorized A/C.

2. Review the safety-related function of quench tank (A-11) N_2 inlet check valve N2-247 to determine if it should be categorized A/C. Is there an outside containment isolation valve? Print M-68 is required for an adequate evaluation.

3. Review the safety related function of pressurizer electric relief isolation valves MOV-403 and MOV-405 to determine if they should be categorized B.

I. Main Steam and Reheat (MS, BD) System (P&ID M-35)

1. Review the safety related function of the following valves to determine if they should be categorized A.

BD-4010 BD-4012 S/G surface blow isolations (F-13, A-21)

BD-4013 BD-4011 S/G bottom blow isolations (C-11)

2. You identify S/G blow orifice isolation and bypass valves, BD-113 through BD-124 as category B. What is the safety related function of these valves?

3. The NRC staff considers the following valves safety related, and therefore should be included in your IST program and categorized as indicated:

   Category B

   MOV-4070 and MOV-4071 steam to auxiliary feed pump (D-11, E-10)

   Category C

   Four steam check valves to auxiliary feed pumps (D-10, E-11, H-9, F-9)

   Category E

   Steam isolations to auxiliary feed pumps (H-8, F-9)

J. Condensate and Feedwater (AFW) System

1. How do you partial stroke AFW pump discharge check valves without thermal shocking the steam generator?

2. The NRC staff considers the AFW pumps suction, discharge and feed regulating valves safety related, and therefore they should be categorized and inlcuded in your IST program.

K. Spent Fuel Pool Cooling (SFP) System

1. Sixteen containment isolation valves on P&ID M-58 were not identified. The NRC staff considers these valves safety related, therefore, they should be included in your IST program and categorized A/E.

2. What are the safety related functions of all valves identified on P&ID M-58? If these valves are safety related as identified in the IST program, then the SFP pumps and suction isolation valves should be included in your IST program.

3. The following valves are identified under Category E on Unit 1 and Category B on Unit 2. Which listing does BG&E consider correct?

L. Gas Analysis System

1. Twenty-eight containment isolation valves on P&ID M-463 were not identified. The NRC staff considers these valves safety related, therefore, they should be included in your IST program and categorized A.