U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 50-317/80-20
50-318/80-17

Docket No. 50-317
50-318

License No. DPR-53
DPR-69 Priority _____ Category C

Licensee: Baltimore Gas and Electric Company

Gas and Electric Building - Charles Center

Baltimore, Maryland 61203

Facility Name: Calvert Cliffs, Units 1 and 2

Inspection at: Lusby, Maryland

Inspection conducted: October 27 - 29, 1980

Inspectors: A D Sassani Jr. 11-20-80
A. D. Sassani, Jr., Reactor Inspector date signed

_____ date signed

_____ date signed

Approved by: S D Ebneter 11/21/80
S. D. Ebneter, Chief, Engineering Support Section No. 2, RC&ES Branch date signed

Inspection Summary:
Combined Inspection on October 27-29, 1980 (Report Nos. 50-317/80-20 and 50-318/80-17)
Areas Inspected: Routine, announced inspection by a regional based inspector to inspect installed Class 1E electrical equipment in accordance with IE Bulletin 79-01B. The inspector performed an installation verification of components of the Condensate and Feedwater System, and Compressed Air System. The inspection involved 20 hours on site by one Regional based NRC inspector.

Results: One item of apparent noncompliance was identified. Failure to use written Maintenace Procedures or a Maintenance Request. (Paragraph 7)

Region I Form 12
(Rev. April 77)

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DETAILS

1. Persons Contacted

Baltimore Gas and Electric Company

*L. Russell, Plant Superintendent
*W. Gibson, General Supervisor Electrical and Controls
*R. Honaker, Engineering Technician
W. Lemko, Quality Control Inspector
*A. Marion, Senior Engineering Technician
*P. Rizzo, Assistant General Foreman
*K. Sebra, Principal Engineer

*denotes those present at the exit interview.

2. IE Bulletin 79-01B Installation Verification

The inspector on October 27-29, 1980 performed an installation verification of components of the Condensate and Feedwater System, and Compressed Air System. The installation verification consisted of an inspection of components located inside primary containment on Unit 1 and components located outside primary containment on Unit 2. The inspection was performed in accordance with IE inspection requirements entitled "Inspection Requirements for Verifying Reactor Licensee Responses to IE Bulletin 79-01B."

3. Condensate and Feedwater System - Unit 1

a. The following documentation was reviewed by the inspector:

(1) Instrument Location Drawing Containment and Auxiliary Building Elevation 45', J-4

(2) Electrical Circuit Schedule, GC-E-411

(3) Conduit Drawing Containment 1, E-295

(4) Tray Drawing Containment 1, E-291

(5) Penetration Drawing Containment 1, E-293

(6) Electrical Penetration Drawing, 205-0037

(7) Penetration Terminal Box, 205-10096

(8) Instrument Installation Drawing, M-572B

b. The inspector performed installation verification of the following components:

(1)

Equipment No.	Serial No.	Penetration No.
ILT-1113A	7004A5539A118	1ZEE4
ILT-1113B	7004A5539A119	1ZEE9
ILT-1113C	7004A5539A120	1ZWE3
ILT-1113D	7004A5539A121	1ZWE9

(2) Fischer and Porter, model 13D2495KBNS, transmitters, located above the 45 ft. elevation.

(3) Amphenol Sams penetrations. Terminal strips within penetration connection boxes. No drain holes in the connection boxes.

(4) The physical configuration from transmitters to penetrations consists of the following:

(a) Transmitter to Anaconda flexible conduit.

(b) Flexible conduit to condulets.

(c) Condulets to rigid conduit.

(d) Rigid conduit to pull boxes to trays or rigid conduit to trays.

(e) Trays to penetration connection boxes.

(f) Transmitters to flexible conduit and rigid conduit were not sealed.

(g) Terminations in 2 transmitters were by terminal strips. Terminations for 2 transmitters were in transmitter terminal strips to condulet with ring lugs, screws and nuts, and electrician's tap.

c. During the inspection, the inspector identified the following components that were installed but were not identified in the May 23, 1980 submittal:

(1) Anaconda flexible conduit

(2) Rigid conduit

(3) Penetration connection boxes

(4) Cable trays

The apparent omission of data on these items in the submittal is considered unresolved pending NRC review of final licensee submittal of IEB 79-01B. (50-317/80-20-1)

d. During the inspection, the inspector observed that the penetration connection boxes have not been maintained to agree with the "As Built" design drawing, No. 205-10096. The connection box covers had missing screws, the cork gasket material had deteriorated, and cables entering the top of the connection box were not properly sealed.

This would indicate that the licensee's maintenance practices in this area are inadequate. This item is considered unresolved pending NRC review of licensee corrective action. (50-317/80-20-2)

e. The transmitter physical interface with the conduit and cable described in paragraph 3.b (4) above, does not appear to meet the environmental qualifications because of improper termination and sealant.

This item is considered unresolved pending NRC review of licensee corrective action. (50-317/80-20-3)

4. Compressed Air System - Unit 1

a. The following documentation was reviewed by the inspector:

(1) Trays and Conduit Drawing Containment Unit 1, E-290, Elevation 27 ft.

b. The inspector performed installation verification of the following components:

(1) Equipment No.	Serial No.	Penetration No.
ISU-2085	04124J	1ZEC4

(2) Asco solenoid valve, model No. NP 8320A195V, located at Elevation 27 ft.

(3) Amphenol Sams penetration. Terminal strips within penetration connection box. No drain hole in the connection box.

(4) The physical configuration from the solenoid valve to the penetration consisted of the following:

(a) Solenoid valve to Anaconda flexible conduit.

(b) Flexible conduit to condulet.

(c) Condulet to rigid conduit to terminal box.

(d) Rigid conduit to tray.

(e) Tray to Penetration.

(f) Terminations for the solenoid valve in the condulet are ring lugs, screws and nuts, and electrician's tape. Terminations in the terminal box are terminal strips.

(g) Solenoid valve to flexible conduit and terminal box are not sealed.

c. The Compressed Air System has physical installations identical to those addressed in the Condensate and Feedwater System, paragraphs 3.c, d and e above. This is considered part of the unresolved items above.

5. Compressed Air System - Unit 2

a. The following documentation was reviewed by the inspector.

(1) Trays and Conduit Drawing Auxiliary Building, Elevation 27 ft., E-270

(2) Reactor Safeguards Instrument Air Containment Isolation, E-76

b. The inspector performed installation verification of the following components.

(1) Equipment No.	Serial No.
2 MOV-2080	146794

(2) Limitorque actuator, type SMB-000.
The physical configuration from actuator to building penetration consists of the following:

(a) Actuator to flexible conduit

(b) Flexible conduit to rigid conduit

(c) Rigid conduit to pull box

(d) Rigid conduit to building penetration

6. Containment Isolation Valve Position Indication

Baltimore Gas and Electric Company submittal, dated May 23, 1980 did not include containment isolation valve position indication for engineered safeguards. The position switches for this function are required to meet environmental qualifications.

The apparent omission of data on this item in the submittal is considered unresolved pending NRC review of final licensee submittal of IEB 79-01B. (50-317/80-20-4)

7. Steam Generator Level Transmitter

The inspector examined steam generator No. 11 safety-related instrumentation, level transmitter ILT-1113c and found the transmitter isolated from the instrument process lines and temporary tygon tubing connected to the transmitter drain line. This arrangement was not in agreement with "As-Built" design drawing M-572B, Revision 3.

The Calvert Cliffs Technical Specifications, Section 6.8.1, states, in part, "Written procedures should be established, implemented and maintained covering the activities referenced below.

(a) The applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, November, 1972.

(b) Refueling operations ...".

QAP 14, Section 5.1, Control of Maintenance, states, in part, "Maintenance that can affect the performance of Safety-Related structures, systems, or components must be properly pre-planned and performed in accordance with written Procedures, (Maintenance Procedures, Functional Test Procedures), documented instructions or Maintenance Requests. Such maintenance includes Preventive Maintenance, Corrective Maintenance and modifications ...".

Contrary to the above, this activity was performed without written Maintenance Procedures or a Maintenance Request. The licensee was informed that this was in noncompliance with 10 CFR 50, Appendix B, Criterion V, which states, in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and ... shall include appropriate quantitiative or qualitative acceptance criteria ...". (50-317/80-20-5)

8. Safety Evaluation Report (SER)

The information gathered during this inspection will be used as a data base to assist in the overall evaluation of the test data and details provided by the licensee in their IEB-79-01B report submittal. The final evaluation

will be documented in the SER that is to be written for the Vermont Yankee plant. The SER is planned to be issued for this site by February 1981.

9. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items or items of noncompliance. Unresolved items identified during the inspection are discussed in Paragraphs 3, 4 and 6.

10. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on October 29, 1980. In addition, the NRC Resident Inspector, Mr. R. E. Architzel attended the meeting. The inspector summarized the scope and findings of the inspection.