

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Report Nos. 82-17 & 82-15

Docket Nos. 50-317 & 50-318

License Nos. DPR-53 & DPR-69 Priority \_\_\_\_\_ Category \_\_\_\_\_

Licensee: Baltimore Gas and Electric Company

P.O. Box 1475

Baltimore, Maryland

Facility Name: Calvert Cliffs Nuclear Power Station Units 1 & 2

Inspection at: Lusby, Maryland

Inspection conducted: July 6-9, 1982

Inspector: E. T. Shaub  
E. T. Shaub, Reactor Inspector

7-27-82  
date signed

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\_\_\_\_\_ date signed

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Approved by: D. L. Caphton  
D. L. Caphton, Chief, MPS Section, EPB

8/2/82  
date signed

Inspection Summary:

Inspection on July 6-9, 1982 (Combined Inspection Report 50-317/82-17 and 50-318/82-15)

Areas Inspected: Routine unannounced inspection by one region based inspector of administrative controls for safety related surveillance and Inservice Testing Program; program and implementation for Technical Specification surveillance; implementation of Inservice Testing Program for pumps and valves; and licensee actions on previous inspection findings. The inspection involved 26 hours onsite.

Results: No violations identified.

## DETAILS

### 1. Persons Contacted

- M. Bowman, Engineer, Nuclear Fuels Management
- C. Mahon, Plant Engineer, Nuclear
- A. Miranda, Technical Support and Fire Protection Surveillance Coordinator
- W. Gibson, General Supervisor, Electrical and Controls (E&C)
- \* B. Rudell, ISI Engineer
- \* L. Russell, Plant Superintendent
- R. Sprecher, Supervisor, Plant Chemistry
- R. Sydnor, E&C Surveillance Test Coordinator
- R. Talley, Assistant General Supervisor - Production Maintenance Department (PMD)
- \* R. Wenderlich, Operations Surveillance Test Coordinator

### USNRC

- \* D. Trimble, Resident Inspector

The inspector also interviewed other licensee personnel including reactor operators, technicians, and members of the clerical staff.

\* Denotes those present at the exit interview.

### 2. Licensee Action on Previous Inspection Findings

(Closed) Inspector follow item (317/82-05-03): Procedure RCP 1-604, "Radioactive Gaseous Waste Permits" and the associated release permits had several problems: 1) the Technical Specification limits for gaseous releases were not included on the permits, and 2) the procedural step that calculates release rate ( $\text{m}^3/\text{sec}$ ) also requires administrative approval for releases exceeding the discharge rate ( $\text{m}^3/\text{sec}$ ) administrative limit. This is confusing because release rate and discharge use the same units ( $\text{m}^3/\text{sec}$ ).

The inspector reviewed RCP 1-604, to verify that the licensee has revised 1) the gaseous release permits to include Administrative and Technical Specification limits and require an additional signature for approval to exceed administrative limits; and 2) remove the possibility of confusion

with release rates and discharge rates by changing "discharge rates" to "discharge flow rate" and giving the administrative limits in m<sup>3</sup>/sec and SCFM. Based on the above this item is closed.

(Closed) Violation (318/82-04-04): Failure to perform shutdown margin calculation within one hour after determining an inoperable Control Element Assembly (CEA), as required by Technical Specification surveillance 4.1.1.1.1.

The inspector reviewed the licensee's corrective action which included 1) incorporating the incident into the current licensed operator requalification program (LER & Usual Event Review) and, 2) Discussions with the operators to emphasize the need for strict procedure adherence and performance of Technical Specifications surveillance for Limiting Conditions for Operations. Based on the above, this item is closed.

(Closed) Unresolved (317/81-11-04): The exact method of calculating the amount of curies released during containment venting was not included in procedures RCP 1-207 "Gaseous Waste Releases" and RCP 1-501 "Sampling of Gaseous Activity". The inspector reviewed the recent revision to RCP 1-605, "Gaseous Waste Accounting and Reports" and the associated worksheets which now incorporate the calculations for determining total release from each containment venting. Based on the above, this item is closed.

(Open) Inspector Follow Item (317/82-U3-01, 318/82-03-01): During review of licensee action for NRC IE Bulletin 79-24, the inspector determined that a section of piping insulation on the recirculation line for the Refueling Water Tank (RWT) No. 11 had come off. This line is outside and requires freeze-protection.

Maintenance Request (MR) 0-82-450, replaced missing insulation, however, subsequently a Containment Tendon inspection platform ripped the insulation and heat tracing off a large section of the No. 11 RWT recirculation line. MR-0-82-1468 has been issued to repair/replace heat tracing and reinsulate the entire No. 11 RWT recirculation piping. Completion of MR-0-82-1468 will be followed by NRC RI.

### 3. Administrative Controls for Safety Related Surveillances

Administrative controls governing the performance of safety related surveillances were inspected to determine their conformance with the requirements of 10 CFR 50 Appendix B, "Quality Assurance Criteria for Nuclear Power Plants..."; Technical Specification Section 6, "Administrative Controls"; Regulatory Guide 1.33 - 1978, "Quality Assurance Program Requirements (Operation)" and ANSI N18.7 - 1976, "Administrative Control and Quality Assurance for the Operational Phase of Nuclear Power Plants". The following procedures were reviewed:

- QAP-13, In-Service Inspection, Revision 7, January 23, 1981
- QAP-16, Surveillance Testing, Revision 13, May 11, 1980

- Calvert Cliffs Instruction (CCI) 104F, Surveillance Test Program, Change 6, April 28, 1982
- CCI-114C Plant Logs Change 1, November 18, 1981
- QAP-20, Training Revision 12, August 7, 1981
- CCI-135B, Administration of In-Service Inspection, January 14, 1982
- CCI-204C, Functional Test Procedure, July 15, 1980
- CCI-211C, Preventive Maintenance Program, August 27, 1980
- CCI-613, Qualification of Test and Inspection Personnel, April 13, 1982
- RCP 1-202, Specification and Surveillance Reactor Coolant System, Revision 12, March 13, 1982

No violations were identified.

4. Surveillance Testing Required by Technical Specifications-Program and Implementation

4.1 An inspection was conducted, on a sampling basis, of the program and its implementation for the surveillance testing of equipment and systems as required by the Technical Specifications. The program was inspected for conformance to the requirements of ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants" and Regulatory Guide 1.33-1978, "Quality Assurance Program Requirements (Operation)". Additionally, the program was inspected for implementation in accordance with the above standards and the appropriate plant administrative requirements detailed in paragraph 3. The following areas were verified:

- A master schedule has been established for surveillance testing
- Responsibilities have been assigned for performance of tests and to assure that test schedules are satisfied
- Methods and responsibilities have been established for review and evaluation of test data, for reporting test deficiencies and failures, and for verification that LCO requirements have been satisfied
- Tests required by Technical Specifications are available and covered by properly approved procedures
- Test format and technical content are adequate and provide satisfactory testing of related systems or components
- Tests have been reviewed as required by facility administrative requirements
- Tests were performed within the time frequencies specified by the Technical Specifications and appropriate action was taken for any item failing acceptance criteria

4.2 The following surveillance tests and data for completed tests were reviewed:

- STP 0-7-1, Engineered Safety Features Logic and Performance Test, Revision 25, February 10, 1982, Section II & V. Data reviewed for tests performed June 5, May 5 and April 5, 1982
- STP 0-5-1, Auxiliary Feedwater System Test, Revision 19, February 3, 1982. Data reviewed for tests performed June 7, May 7, April 7 and March 7, 1982
- STP 0-73-1, Engineered Safety Features Equipment Performance Test Revision 17, May 26, 1982. Data reviewed for charging pump operability June 28, June 2, March 25, April 11 and February 10, 1982
- STP 0-69-1, SGIS Logic Test, Revisions, October 14, 1981. Data reviewed for test performed June 19, 1982
- STP 0-54-0, Seismic Instrument Channel Check, Revision. Data reviewed for tests performed monthly January through June, 1982
- STP 0-35-1 & 2, SI Tank Isolation Valve Test, Revision 5, October 14, 1981. Data reviewed for tests performed
- STP 0-70 and 71-1, Staggered Test of "A" and "B" Train Components, Revisions 3 and 4, October 19, 1981. Data reviewed for monthly tests performed January 1 through July 1982
- STP 0-76 and 77-0, Staggered Test of Electric and Diesel Fire Pumps, Revisions 2 and 4, March 25, 1981. Data reviewed for monthly tests performed January through June, 1982
- STP 0-8-0, Diesel Generator, Revision 11, December 30, 1981. Data reviewed for weekly tests performed May through July 1982
- STP 0-90-1, Breaker Line-up Verification, Revision 3, February 10, 1982. Data reviewed for tests performed weekly May through June 1982
- STP 0-61-1, Source Range Instrument Functional Test, Revision 5, October 14, 1981. Data reviewed for tests performed weekly, May through June 1982
- Control Room Logs (1) Containment atmospheric radiation monitor. Data review for logs performed every 8 hrs., June 7 through July 5, 1982; (2) Neutron Monitoring 12 hr. channel check. Data reviewed for logs taken every 8 hrs., June 2 through June 20, 1982



- STP 0-74-2, Engineered Safety Features Equipment In-Service Bearing Temperature Test, Revision 8, October 20, 1981. Data reviewed for tests performed March 4, 1981 on Service Water Pumps 11 & 12.
- STP M-693-0, Fire Suppression System Valve Cycling Test - Operating Revision 1, October 3, 1979. Data reviewed for tests performed July 1, 1981 and June 23, 1980
- STP M-697-0, Fire Suppression System Functional Test, Revision 1, December 8, 1981. Data reviewed for test performed December 16, 1981
- STP M-291-0, Halon System Valve Position Verification, Revision 2, January 25, 1982. Data reviewed for tests performed January through June 1982
- Reactor Coolant Chemistry Logs reviewed logs for June 1982 for unit 1 & 2 to verify chemistry specifications for CL, F and total activity
- CEDM/CEA Performance Test, Revision 3, Appendix B, Rod Drop times. Data reviewed for tests performed July 1982
- STP M-375-1, Local Leak Rate Tests Revision 4, March 4, 1981. Data reviewed for test performed June 28, 1982, on SI-316 and SI-326, containment isolation valves
- STP M-350-0, Station Battery Quarterly Checks, Revision 4, January 14, 1981. Data reviewed for checks performed April 22, 1982; July 21, 1981, February 1, 1982 and October 21, 1981
- STP M-471-2, Air Lock Door Operability and Leak Rate test, Revision 4, January 9, 1981. Data reviewed for tests performed March 3, 1981 partial test; July 14, and December 16, 1981
- STP M-511-2, RPS Response Times Test, Revision 4, September 24, 1980. Data reviewed for test performed January 24, 1981
- STP M-210-2B, RPS Functional Test, Revision 17, February 13, 1981. Data reviewed for test performed monthly, February through June 1982
- STP M-220-2, ESFAS Functional Test, Revision 6, March 3, 1982. Data reviewed for tests performed monthly February through June 1982
- STP M-5-1, Chemical and Volume Control Valves, Revision 2, September 9, 1981. Data reviewed for test performed May 15, 1982 on Relief Valves 1-RV-150 and 1-RV-33

- STP M-12-1, Snubber Inspection (accessible), Revision 2, October 17, 1980. Data reviewed for test performed July 9, 1981
- STP M-1-2, Steam Generator Snubber Inspection, Revision 1, January 13, 1982. Data reviewed for tests performed monthly May through July 1982.

4.3 The inspector witnessed the performance of STP M-213-1, "Calibration of Power Range Nuclear Instruments with Incore Nuclear Instruments", Revision 4, December 19, 1981, Channel B, to verify the following:

- Test procedure available and used
- Test equipment required by the procedure was calibrated
- Test prerequisites were met
- System (Channel B) restoration was correct

4.4 The inspector reviewed training records and qualification certifications for six operators/instrument & control technicians to verify that those personnel were qualified to perform surveillance testing and/or review and evaluate test results, in accordance with ANSI N45.2.6, "Qualification of Inspection Examination, and Testing Personnel for Nuclear Power Plants" and CCI-613, Qualification of Test and Inspection Personnel".

No violations were identified.

## 5. Inservice Testing Program Pumps and Valves-Implementation

5.1 An inspection was conducted, on a sampling basis, for the implementation of the licensee's Inservice Testing Program (IST) for Pumps and Valves. The IST program implementation was inspected for conformance to the licensee's current program submittal, the Technical Specifications Sections 3 and 4, and the appropriate plant administrative requirements detailed in paragraph 3.

Inservice Testing of Pumps is incorporated into the Technical Specifications and the testing of pumps is addressed in paragraph 3 above. The following valves were selected at random from the licensee's IST program submittal to determine if appropriate procedures were established for testing these valves:

- SI-616 and 636, 11A and 12A, HPSI Loop Isolation valves
- SI-4145, Containment Sump Outlet Isolation valve
- SI-113, 123, 133 and 143, HPSI header check valves
- SI-5464 and 5465, Reactor Coolant System Sample line Isolation valves

- SI-313 and 323, Containment Spray Pump Discharge check valves
- CVC-231, Minimum flow return throttle valves for 11 Boric Acid Transfer pump
- SI-333, Containment spray minimum return isolation valve
- AFW-132, Unit 1 & 2 Auxiliary Feedwater recirculation valve

The inspector determined that test procedures for the above valves were established. These procedures were reviewed for the following:

- Tests were in conformance with inservice test program requirements.
- Test frequency was in conformance with Technical Specifications and the Inservice Test Program.
- Test results were required to be reviewed as required by facility administrative requirements and appropriate action was required to be taken for results failing acceptance criteria.

5.2 The following procedures were reviewed:

- STP 0-62-2, Monthly Valve Position Verification, Revision 12, May 12, 1982. Data review for valve position checks performed monthly for containment sump valves and High Pressure Safety Injection Isolations performed February through June 1982.
- STP 0-65-1, Quarterly Valve Operability Verification - Operating, Revision 21, April 15, 1982. Verified operability of SI-113, 123, 133 and 143, High Pressure Safety Injection header check valves. Data reviewed for March 15, 1982 and April 12, 1982
- STP 0-66-1, Quarterly Valve Operability Verification - Shutdown, Revision 9, October 19, 1981. Data reviewed for tests performed April 18, 1982 and June 24, 1982 verified operability of PS-5464 and PS-5465, Reactor Coolant Sample Isolation Valves
- STA 0-67-1, Check Valve Operability Verification, Revision 10, March 10, 1982. Verified operability of Containment Spray pump discharge check valves 52-313 and 323. Data reviewed for test performed February 23, 1982.
- STP 0-93-1, Locked Valve Verification, Revision 9, data reviewed for checks performed June 1, and May 1, 1982. Verified position of AFW-166 and 167 Unit 2 AFW recirculation valve and storage supply valve

No violations were identified.



6. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable, deviations, or items of noncompliance. No unresolved items were identified during this inspection.

7. Management Meetings

Licensee Management was informed of the scope and purpose of the inspection at the entrance interview conducted on July 6, 1982. The findings of the inspection were periodically discussed with licensee representatives during the course of the inspection. An exit interview was conducted on July 9, 1982 (see paragraph 1 for attendees) at which time the findings of the inspection were presented.