

U.S. NUCLEAR REGULATORY COMMISSION

Region I

Report Nos. 50-317/82-03
50-318/82-03

Docket Nos. 50-317
50-318

License Nos. DPR-53
DPR-69 Priority -- Category C

Licensee: Baltimore Gas and Electric Company

P. O. Box 1475

Baltimore, Maryland 21203

Facility Name: Calvert Cliffs Nuclear Power Plant, Units 1 and 2,
and Baltimore Gas and Electric Company

Inspection at: Lusby, Maryland and Baltimore, Maryland

Inspection conducted: January 25 - 29, 1982

Inspector: *E. Howard Shaver (for)* 2.24.82
N. Blumberg, Reactor Inspector date signed

Approved by: *Donald L. Capton* 2/24/82
Donald L. Capton, Chief, Management Programs Section date signed

Inspection Summary:

Inspection on January 25 - 29, 1982 (Combined Inspection Report 50-317/82-03 and 50-318/82-03)

Areas Inspected: Routine, unannounced inspection by one region based inspector of licensee action on previous inspection findings and NRC Bulletins. This inspection involved 29 inspector-hours onsite and one inspector-hour at corporate offices by one region-based inspector.

Results: Violations - None.

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DETAILS

1. Persons Contacted

Calvert Cliffs

- * W. Gibson, General Supervisor, Electrical and Control (E&C)
- R. Heibel, Principal Engineer, Technical Support
- * D. Latham, Principal Engineer, Operational Licensing and Safety
- * N. Millis, General Supervisor, Radiation Safety
- J. Phifer, Supervisor, Nuclear Plant Documents
- E. Reimer, Plant Health Phycist
- P. Rizzo, Engineering Analyst, E&C Section
- B. Rudell, Inservice Inspection Engineer
- * L. Russel, Plant Superintendent
- * L. Salyards, Operational Licensing and Safety Engineer
- J. Snyder, Unit 2, Instrument and Control Supervisor (I&C)
- * J. Tiernan, Manager, Nuclear Power

Baltimore Gas and Electric Company

M. Patterson, Off Site Safety Review Committee (OSSRC) Chairman

USNRC

- * R. Architzel, Senior Resident Inspector
- N. Choules, Performance Appraisal Section

*Denotes those present at exit interview.

2. Licensee Action on Previous Inspection Findings

- a. (Closed) Unresolved Item (317/80-13-03, 318/80-12-03): Maintenance procedure, RCS-15, "Pressurizer Safety Valve Installation", required use of a torque wrench for installation of various studs and torque adjustments up to 355 ft.-lbs. with a tolerance of ± 5 ft.-lbs. The torque wrench was calibrated to an accuracy of ± 3 percent, which would be ± 11 ft.-lbs. at 355 ft.-lbs. torque.

The inspector determined that procedure RCS-15 has been revised to allow a torque tolerance of ± 15 ft.-lbs. This change was reviewed by the POSRC and concurred in by the Site Quality Control Supervisor. A licensee representative stated that the safety valve vendor was consulted in making the above change and had concurred that a tolerance of ± 15 ft.-lbs. was acceptable.

Based on the above, this item is closed.

- b. (Closed) Inspector Follow Item (317/80-15-01, 318/80-14-01): The licensee is to issue a "Competence Matrix", demonstrating the

background of each Off Site Safety Review Committee (OSSRC) member, and revise the resumes of each OSSRC member in order to ensure that the OSSRC members have the technical experience as required by the Technical Specifications. The inspector verified that two competence matrices have been established - one for OSSRC members, and one for alternate OSSRC members. The matrices included all the technical categories listed in the Technical Specifications, and every OSSRC member had background in at least one category as specified on the matrix. A resume was established for each OSSRC member and alternate, and a sampling of these resumes confirmed the accuracy of the matrix. Additionally, the matrices and resumes were up-to-date in that they reflected the latest OSSRC appointments made in a memorandum dated January 11, 1982.

Based on the above, this item is closed.

- c. (Closed) Unresolved Item (317/80-15-02, 318/80-14-02): The licensee was questioned concerning implementation of the requirement for the OSSRC to review the safety evaluation for changes to procedures which are summarized or delineated in the FSAR. The licensee stated this area would be evaluated.

During this inspection, a licensee representative informed the inspector that an evaluation of OSSRC safety reviews had been accomplished, and they were determined to be adequate.

The inspector reviewed the OSSRC charter, which is an attachment to Procedure QAP-21, "Review and Audit of the Quality Assurance Program". The charter requires the OSSRC to review all items listed in Technical Specification 6.5.2.7. Additionally, based on a sampling review of recent OSSRC meeting minutes, the inspector determined that safety reviews are being accomplished.

Based on the above, this item is closed.

- d. (Closed) Unresolved Item (317/80-25-01, 318/80-21-01): A weakness was observed in the Site Emergency Plan, which required the Shift Supervisor to personally make all notification calls in an emergency situation. The licensee was informed that, while NUREG-0654 requires emergency classification and notification decision to be made by the senior management person on site, the communication of this decision can be accomplished by others.

The inspector observed that Emergency Response Procedure (ERPIP)-4.1.2, "Site Emergency Coordinator Checklist", has been revised to state that the Site Emergency Coordinator (SEC) has the responsibility for classifying emergencies and making the decision to make initial notifications. The actual phone calls may be made by others. The Shift Supervisor is the interim SEC until relieved by the designated SEC.

The inspector also observed that a memorandum has been issued designating certain personnel, other than the SBC or Shift Supervisor, as emergency communicators.

Based on the above, this item is closed.

- e. (Closed) Unresolved Item (317/80-16-07, 318/80-15-06): FCR 79-1056 was completed, which transferred two sets of pressurizer backup heaters per unit to the 480 kv emergency busses. The new design included tripping of the breakers in the event of a Safety Injection Actuation Signal (SIAS) to protect the emergency power sources. Two sets of backup heaters remain powered from non-vital busses, and the sets on the vital busses can be reset locally. The procedures, which reflected the above change, consisted of Caution Notes posted on the Main Control Board to reset the respective backup heaters following an SIAS initiation or an undervoltage condition. The licensee was informed that these Caution Notes should be incorporated into permanent plant procedures.

The inspector verified that the following procedures, which reflect a possible SIAS initiation or an undervoltage condition, contain a procedural note concerning reset of the backup heaters:

- EOP-4, Steam Line Rupture, Revision 5, August 5, 1981;
- EOP-5, Loss of Reactor Coolant, Revision 12, March 16, 1981;
- EOP-6, Steam Generator Tube Rupture, Revision 6, August 5, 1981; and
- EOP-15, Loss of A. C. Power, Revision 3, August 5, 1981.

Based on the above, this item is closed.

- f. (Closed) Violation (317/81-02-01, 318/81-02-01): Q-list classification number 718, dated December 4, 1978, downgraded the Hydrogen Analyzer System from safety-related to non-safety-related, although this system is essential to post accident hydrogen monitoring, which may effect containment integrity.

The inspector verified that the Q-list has been revised to include the containment hydrogen analyzer. Facility Change Request (FCR) 80-1005, installed a new containment hydrogen sampling system to meet the requirements of NUREG-0578. The inspector verified that the FCR designated the hydrogen sampling system as safety-related.

In a letter to the NRC, dated October 23, 1981, detailing the status of various NUREG-0737 items, the licensee stated that the

new hydrogen analyzer would be placed in service by April 5, 1982. The NRC, in its response, did not object to this date.

Although the old hydrogen sampling system is still in use and is a non "Q" item, based on the change to the Q-list and the installation of the new system, this item is closed.

- g. (Closed) Violation (317/81-03-01): Both Unit 1 and Unit 2 Lifted Wire or Temporary Jumper log books located in the shift supervisors office did not contain the latest revision of Procedure CCI-117, "Lifted Wire and Temporary Jumper Log". Additionally, since the establishment of a requirement for second verification of lifted lead/jumper installation/removal, a jumper had been removed without a second verification. Other jumpers, which had been installed before the second verification requirement had been established, had not been reverified, using a second verification.

The inspector verified that Procedure CCI-100, "Calvert Cliffs Nuclear Power Plant Instructions and Notices" has been revised to add the Lifted Wire and Jumper log maintained in the shift supervisor's office to the controlled distribution for Procedure CCI-117, and that the shift supervisor's log does contain the latest revision to CCI-117. Additionally, the inspector verified that blank forms for the "Lifted Wire/Temporary Jumper Record" maintained in the shift supervisor's office were the latest revisions. Based on a sampling inspection of lifted wires and/or temporary jumpers currently in effect, the inspector determined that second verifications are being performed.

Based on the above, this item is closed.

- h. (Closed) Unresolved Item (317/81-04-01, 318/81-04-01): Procedure CCI-118D, "Reporting Requirements" contained the following notes, which appeared to misinterpret the reporting requirements of 10 CFR 50.72:

"50.72(a)5) Any event requiring initiation of shutdown of the nuclear power plant in accordance with Technical Specification Limiting Conditions for Operation.

- NOTE -

This item should be reported when the unit is placed in Mode 2.

50.72(a)(8) Any accidental, unplanned, or uncontrolled radioactive release. (Normal or expected releases from maintenance or other operational activities are not included).

- NOTE -

For gaseous activity, this item should be reported anytime either main vent monitor count rate increases to a count rate equivalent to 25% of the limits specified in Appendix B, Technical Specification 2.3.B.1., if the alarms and increases in count rates cannot be attributed to maintenance or operational activities in progress, such as Reactor Coolant diversion."

During combined inspection 317/81-13 and 318/81-13, the inspector informed the licensee that the NRC would enforce a threshold of 25% of the Technical Specification limits with respect to reporting unplanned or uncontrolled releases of radioactive material. This was based on proposed rulemaking for 10 CFR, Part 50, 46 FR 61894, published December 21, 1981. Hence, the note in the procedure for reporting per 50.72(a)(8) was acceptable. Based on the above, the aspect of the item concerning reporting requirement 50.72(a)(8) was closed.

During this inspection, the inspector observed that the note in Procedure CCI-118, concerning reporting requirement 50.72(a)(5), had been changed to read, "This item should be reported when the reactor power reduction is commenced". The inspector determined that this note is acceptable.

Based on the above determinations made during this inspection and during combined inspections 317/81-13 and 318/81-13, this unresolved item is closed in its entirety.

- i. (Closed) Unresolved Item (317/81-12-03, 318/81-12-03): Generic Procedure FTI-107, "Flow Transmitter Calibration/Calibration Check Procedure", provides a data sheet with eleven data points when performing the calibration of flow transmitters. Two calibrations of flow transmitters were performed during 1980 using every second data point. Other generic procedures allow the option of using every second data point; however, FTI-107 does not. A licensee representative stated that FTI-107 would be revised to allow the option of using every second data point.

During this inspection, the inspector determined that the licensee later decided that it was desirable to record all data points specified in FTI-107. A note has been added to FTI-107 requiring the recording of all data points and that the reasons for any data points not entered must be noted in the procedure and approved by the Instrument Maintenance Supervisor.

Based on the above, this item is closed.

- j. (Closed) Inspector Follow Item (317/81-12-04, 318/81-12-04): The Control Room wind recorder, which had previously monitored both wind speed and turbulence, has been modified to record wind speed only. The recorder scale, which measured wind speed at the 200 ft. elevation, had not been changed to read in units of wind speed only. During this inspection, the licensee changed the scale to read in units of wind speed only.

Based on the above, this item is closed.

- k. (Closed) Unresolved Item (317/81-12-05, 318/81-12-05): Technical Specification, Appendix B, Section 2.3.B.5 requires that releases of gaseous wastes shall be measured continuously and recorded. An inclined manometer is installed on the main vent of each unit to take this measurement, and a chart is located at each manometer to convert differential pressure (D/P) into flow rate. The licensee was requested to establish the derivation and accuracy of these charts.

During this inspection, the licensee provided to the inspector the installation tests which established the charts of D/P versus flow rate.

Based on the above, this item is closed.

However, the inspector determined that the manometers were not periodically rezeroed. A technician checked the manometers in the presence of the inspector, and determined that they were reading less than zero at no flow, which will cause measured flow readings to be less than actual. The manometers were immediately rezeroed.

Although the manometer readings are recorded every four hours, they are not used in calculating plant release rates. The procedure for calculating release rates uses a calculated flow of 130,000 SCFM, which is more conservative than the measured flows of 115,000 SCFM for Unit 2, and 126,000 SCFM for Unit 1 observed by the inspector.

Emergency Plan Procedure ER PIP No. 4.4.3, "Initial Determination of Accident Radioactivity Release Rates", Exhibit 4.4.3-A, "Noble Gas Release Estimates Based on Station Vent Monitor Readings", Step 3 states, in part, "Record the station vent flow rate (if unknown, use 131,500 CFM - the full flow rate of UI-RE-5415 and 107,500 CFM - the full flow rate of U2-RE-5415) . . ." The licensee representative, who wrote the procedure, stated that it was his intent to use design flow rates, rather than record manometer readings. The inspector informed the licensee that ER PIP 4.4.3 should be revised to state more clearly the desired flow rate and also informed the licensee that 107,500 CFM for

Unit 2 was less conservative than 115,000 observed by the inspector.

The licensee stated that the method for determining release flow rates in ER PIP 4.4.3 would be reevaluated, the procedure revised accordingly, and a preventive maintenance (PM) procedure would be developed to periodically rezero the manometers.

This item is unresolved, pending licensee action and subsequent NRC:RI review (317/82-03-02, 318/82-03-02).

The licensee further stated that new equipment was being installed to measure main vent flow rates and when placed into operation, would be incorporated into the resolution of the above item.

- l. (Closed) Unresolved Item (317/81-12-02, 318/81-12-02): Plant logs, which contained safety-related information, had been issued and revised without obtaining POSRC review and Plant Superintendent approval. The inspector determined that CCI-114C, "Plant Logs", has been revised to ensure that changes to safety-related plant logs receive POSRC review and Plant Superintendent approval. An Operating Log Change Report (OLCR) has been developed for documenting reviews and approvals for changes to logs. Over 50 OLCRs have been issued since the system was implemented.

However, the inspector noted that, although changes to logs had received proper review and approval, the original information in the logs had not. To correct this, during this inspection, OLCR 82-2 was issued, which documented formal review and approval of existing safety-related logs.

Based on the above, this item is closed.

- m. (Open) Unresolved Item (317/80-17-01, 318/80-16-01): The records storage vault lacked a four hour rated door, as required by ANSI N45.2.9 - 1974 to which the licensee is committed. Additionally, the licensee is updating its QA program to a version of ANSI N45.2.9 later than 1974. This updated QA program needs NRC - NRR approval.

The inspector verified that the licensee's vault door has been certified as a four hour rated fire door; therefore, this aspect of the item is resolved.

The licensee's QA program, which is part of its FSAR, has been revised to commit to ANSI 45.2.9 - 1976 DRAFT, "Requirements for Collection, Storage, and Maintenance of Quality Assurance Records for Nuclear Power Plants", although later versions of ANSI N45.2.9 are in effect. This QA program has not yet been submitted to the NRC for approval. The licensee stated that a major revision to FSAR will be submitted to the NRC - NRR by July, 1982, which will also include the current QA program.

This item remains open, pending submittal of the QA program for NRC - NRR review and the results of this review.

3. Licensee Action on NRC IE Bulletins:

- a. (Closed) NRC IE Bulletin 79-17 (Revision 0 and Revision 1): Licensee was requested to determine if cracking existed in the welds of safety-related stainless steel piping systems and portions of systems which contain oxygenated, stagnant or, essentially, stagnant-borated water, based on occurrences of cracks found in equivalent piping at other nuclear power plants.

The inspector verified that the licensee performed the evaluations as requested by the Bulletin (revisions 0 and 1) and that the response was submitted within the required time period. The licensee reported that no weld cracking was identified.

The response was based on inservice inspections performed on Unit 1 during the February, 1977 and April, 1979 refueling outages, and on Unit 2 during November, 1979. The actual inspections were performed by a vendor. Documentation was provided concerning the procedures used, material and equipment certifications, calibration of instruments, and qualifications of personnel performing the inspection. Additionally, the inspector reviewed a random sampling of inspection records for applicable welds.

Based on the above review, this item is closed.

- b. (Closed) NRC IE Bulletin 79-21: Licensee is to review and evaluate the effect of post-accident conditions on steam generator and pressurizer level indications and safety setpoints. NRR is to provide a technical review of the licensee's evaluation on a case by case basis.

The inspector verified that licensee performed the evaluation as requested by the Bulletin, and submitted its response in the required time period. The licensee noted that their evaluation concluded that setpoint adjustments were not required to compensate for reference leg heating; however, curves were provided to show the effect of post-accident containment temperatures on pressurizer and steam generator level indications. Additionally, the inspector verified that appropriate tables and curves have been added to the following emergency operating procedures to show the effect of post-accident temperatures on steam generator and pressurizer levels:

- EOP-4, "Steam Line Rupture";
- EOP-5, "Loss of Reactor Coolant"; and

-- EOP-12, "Loss of Reactor Coolant Flow/Natural Circulation".

Based on the above, this item is closed.

- c. (Closed) NRC IE Bulletin 79-24: Based on an occurrence at another plant where a HPCI pump recirculation line to the Borated Water Storage Tank froze, licensees were requested to determine that adequate protective measures have been taken to assure that safety-related process, instrument, and sampling lines do not freeze during extremely cold weather.

The inspector verified that the licensee performed the evaluation and submitted its response within the required time period. The licensee concluded that their freeze protection on safety-related piping is adequate.

The inspector toured the facility with licensee representatives to inspect exposed safety-related piping, and determined that most safety-related piping was inside the plant; however, those pipes and tanks exposed to cold weather were adequately freeze protected, except as noted below.

The insulation had come off approximately three feet of recirculation piping for the Refueling Water Tank (RWT) No. 11. This piping is insulated, but not heat-traced, and provides recirculation from a heat exchanger to the RWT to maintain RWT temperature. The inspector reviewed Control Room logs for RWT No. 11, and determined the temperature was well within acceptable limits, although subfreezing temperature conditions had existed for several weeks. The licensee submitted a maintenance request (MR-0-82-450) to repair the insulation.

Combined Inspection Reports 317/81-27 and 318/81-25 issued a notice of violation, dated January 14, 1982 (item A.3) concerning certain uninsulated boric acid system piping. This piping is internal to the plant, and does not involve freeze protection. During this inspection, the licensee stated that its corrective action to this violation will include all insulated piping, including that piping identified during this inspection. The licensee's corrective action concerning insulation on freeze-protected piping will be reviewed during a subsequent NRC:RI inspection (Inspector follow item (IFI) 317/82-03-01, 318/82-03-01).

Although this inspection and combined inspections 317/81-27 and 318/81-25 identified certain recent problems concerning pipe insulation, the actions, as requested by the bulletin, were completed, and the bulletin can be considered closed.

4. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable, deviations, or violations. One unresolved item was identified during this inspection, and is detailed in paragraph 2.k.

5. Management Meetings

Licensee management was informed of the scope and purpose of the inspection at an entrance interview conducted on January 25, 1982. The findings of the inspection were periodically discussed with licensee representatives during the course of the inspection. An exit interview was conducted on January 29, 1982 (see paragraph 1 for attendees), at which time the findings of the inspection were presented.