

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

Region I

Report No. 50-317/79-01
50-318/79-01
Docket No. 50-317
50-318
License No. DPR-53 Priority -- Category C
DPR-69 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

Inspection at: Lusby, Maryland

Inspection conducted: January 15-19, 1979

Inspectors: *D. F. Johnson*
D. F. Johnson, Reactor Inspector
T. Foley
T. Foley, Reactor Inspector

1-31-79
date signed

1/31/79
date signed

date signed

Approved by: *R. R. Keating*
R. R. Keating, Chief, Reactor Projects Section
No. 1, RO & NS Branch

1-31-79
date signed

Inspection Summary:

Inspection on January 15-19, 1979 (Report Nos. 50-317/79-01; 50-318/79-01)

Areas Inspected: Routine, unannounced inspection by regional based inspectors of reactor operations; licensee followup actions concerning IE Bulletins and Circulars; review of monthly operation status reports for September, October, and November, 1978; licensee action on previous inspection findings and a facility tour. The inspection involved 57 inspector-hours on site by two NRC regional based inspectors (Unit 1 - 29 hours, Unit 2 - 28 hours).

Results: No items of noncompliance were identified.

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DETAILS

1. Persons Contacted

M. Bowman, Supervisor QA Audit Unit
D. Buffington, Fire Protection Inspector
*J. Carroll, Performance Engineer - Operations
*R. Denton, Nuclear Plant Engineer - Operations
T. Gibson, Engineering Technician
*W. Gibson, General Supervisor, Operations QA
A. Kaupa, Radiation Safety and Chemistry Engineer
J. Lagiewski, Engineering Technician
*J. Lemons, Nuclear Plant Engineer - Maintenance
J. Lippold, Nuclear Engineer
M. Miernick, Performance Engineer - Maintenance
E. Reimer, Plant Health Physicist
P. Rizzo, Assistant General Foreman, Electrical and Instrumentation
M. Roberson, Assistant General Foreman - Maintenance
K. Romney, Performance Engineer, Maintenance
*L. Russell, Chief Engineer
J. Watson, Shift Supervisor

The inspector also interviewed other licensee employees, including members of the administrative, technical, and operations staff.

*denotes those present at the exit interview.

2. Licensee Action on Previous Inspection Findings

(Open) Inspector Followup Item (317/77-23-02; 318/77-22-02): Revision of Technical Specification. The licensee has determined that the currently specified amounts of trisodium phosphate dodecahydrate (TSP) required by Technical Specifications are not conservative if certain maximum permissible boric acid inventories are assumed. The licensee has submitted a revision to the Technical Specifications to limit the maximum refueling water tank and safety injection tank boron concentrations. The proposed revision was submitted to NRC:NRR for review and approval.

(Closed) Inspector Followup Item (317/78-02-01): The gaskets on the fuel pool charcoal adsorber bank bypass dampers were replaced. A post-maintenance ventilation flow test was performed and the results were satisfactory.

(Closed) Unresolved Item (317/78-08-02): The inspector verified that equipment certification sheets involving the guide tube modification were reviewed and revised to incorporate calibration data and dates.

(Open) Unresolved Item (317/78-09-02): STP No. 1-T-3, "Containment End Anchorage Concrete Surveillance," Revision 2, November 23, 1977, does not contain definitive acceptance criteria with regard to comparing old cracks with new cracks. The licensee stated that acceptance criteria values are being studied by corporate engineering to be incorporated in STP No. 1-T-3. This item remains unresolved pending licensee action.

(Closed) Unresolved Item (317/78-10-01): The inspector reviewed the certification sheets and verified that the expansion tools used in the upender were included in the modification package for the guide tube sleeving operations.

(Closed) Deficiency (317/78-28-02; 318/78-25-02): The inspector verified that temporary changes to procedures OI-20 and OI-8E have been reviewed by the POSRC and approved by the Chief Engineer. To preclude recurrence, a memo dated December 7, 1978, was issued by the Nuclear Plant Engineer - Operations to all operating personnel reiterating their responsibilities in this area.

(Closed) Deficiency (317/78-28-03; 318/78-25-03): The inspector verified that procedures OP-6 and CP-3 have been updated to include the latest Technical Specification limitations for the Safety Injection Tank nitrogen pressure, Refueling Water Tank temperature and Cold Leg temperature. To preclude recurrence of this event, the licensee has assigned an individual on the operations staff to specifically insure that each time an amendment is issued a copy of the amendment itself will be used as a checklist to make procedure changes. In addition, the licensee has established a system for review, revision and updating facility procedures including the two year periodic review of procedures by licensed operators.

(Closed) Unresolved Item (317/78-28-04; 318/78-25-04): The inspector verified that the licensee has revised administrative controls regarding the handling of revisions/changes to facility procedures. The revised system more adequately maintains control over procedure changes/revisions including record retention requirements for maintenance of an up-to-date history file.

(Closed) Deficiency (317/78-34-01; 318/78-31-01): The inspector verified that procedure STP-0-29-1, "CEA Partial Movement," has been revised to incorporate more detailed instructions for checking the motion inhibit circuitry as well as recording the acceptance criteria on the data sheets.

(Closed) Inspector Followup Item (318/77-09-01): The inspector verified by review of representative records and interviews with cognizant licensee personnel that all portable fire extinguishers are inventoried and checked for operability on a monthly basis through an established preventive maintenance program.

(Closed) Unresolved Item (318/77-12-03): The inspector determined through review of applicable records and discussions held with cognizant licensee representatives that the proposed Rochester Instruments System power supply was not installed as part of the MPT relief protection modification but that an alternate power supply was chosen that met the environmental qualifications of IEEE 344-1975.

(Closed) Inspector Followup Item (318/78-09-01): The inspector verified by direct observation that the safety injection tank level transmitters were properly calibrated during the July outage. Reference: Maintenance Request No. 2-IC-78-58.

(Closed) Unresolved Item (318/78-25-05): The licensee's investigation regarding the oil on the floor in No. 21 diesel generator room, revealed that it was a lubricating oil leak through the timing chain cover. The cover was tightened and cleaned. Subsequent inspections following diesel engine operation did not reveal any excessive leakage. Reference: Maintenance Request No. M78-2496.

(Open) Unresolved Item (317/78-25-05; 318/78-19-05): The licensee has not yet established provisions for determining new reference values or reconfirming previous values after routine maintenance or repair as required by Article IWP-3111 of ASME Section XI. The licensee stated the provisions for determining reference values would be incorporated into Inservice Test Procedures by April 1, 1979.

(Open) Unresolved Item (317/78-25-06; 318/78-19-06): Provisions for allowing bearing temperatures to stabilize such that three successive readings taken at ten minute intervals do not vary by more than 3%, in accordance with Article IWP-3500 of ASME Section XI, have not been incorporated into Surveillance Test Procedures. The licensee stated that provisions for allowing temperature to stabilize in accordance with Section XI would be incorporated by April 1, 1979.

(Open) Unresolved Item (317/78-25-08; 318/78-19-08): The licensee stated that provisions for comparing stroke times measured with the times recorded during the previous test as required by Article 3410(c) (3), would be incorporated into the licensee's procedure by April 1, 1979.

(Open) Unresolved Item (317/78-25-09; 318/78-19-09): The licensee has not yet incorporated maximum permissible leakage rate acceptance criteria for Category A valves or provisions for comparing test results with the acceptance criteria, as required by Article IWP-3420(f). The licensee stated that leak rate acceptance criteria and provisions for comparing test results with the acceptance criteria would be incorporated into the licensee's test procedures by the next refueling outage.

(Open) Unresolved Item (317/78-25-10; 318/78-19-10): Requirements of IWP-3420(g)(2), for comparing leakage rates for valves six inches or larger with previous test results, have not been incorporated into the licensee's test procedures. The licensee stated that these requirements would be incorporated into test procedures by the next refueling outage.

(Open) Unresolved Item (317/78-25-11; 318/78-19-11): The licensee's snubber surveillance program does not yet have provisions for determining snubber operability by verification of proper piston setting. The licensee stated that a provision for determining the snubber piston setting would be incorporated into the appropriate procedures by the next refueling outage.

(Open) Unresolved Item (318/78-19-07): The licensee has not been able to provide the retest results of STP-0-65-2, dated April 18, 1978, and considers them lost; however, the licensee has implemented a method of tracking and recording retest data on pumps and valves which fail IWP and IWV acceptance criteria. This method of tracking and recording retest data has required no documentation to formalize its existence. The licensee stated that the method of tracking and recording retest data would be formalized by April 1, 1979.

3. IE Bulletin and Circular Followup

The inspector reviewed the licensee's followup actions regarding the IE Bulletin and Circulars listed below:

- IEB 78-07, "Protection Afforded by Air-Line Respirators and Supplied Air Hoods," June 12, 1978.
- IEC 78-03, "Packing Greater Than Type A Quantities of Low Specific Activity Radioactive Material For Transport," May 12, 1978.
- IEC 78-05, "Inadvertent Safety Injection During Cooldown," May 26, 1978.
- IEC 78-09, "Arcing of General Electric Company, Nema Size 2 Contactors," June 8, 1978.
- IEC 78-13, "Inoperability of Multiple Service Water Pumps," July 10, 1978.
- IEC 78-16, "Limitorque Valve Actuators," July 26, 1978.
- IEC 78-17, "Inadequate Guard Training/Qualification and Falsified Training Records," October 13, 1978.
- IEC 78-18, "UL Fire Test," November 6, 1978.

The review included discussions with licensee personnel, review of selected facility records, and observation of selected facility equipment and components.

With respect to the above Bulletin, the inspector verified that licensee management forwarded copies of the bulletin response to appropriate onsite management representatives, that information and corrective action discussed in the reply was accurate and effected as described in the bulletins.

With respect to the above Circulars, the inspector verified that the circular was received by appropriate licensee management, a review for applicability was performed, and that action taken or planned is appropriate.

4. In-Office Review of Periodic Reports

The inspector reviewed the Calvert Cliffs Nuclear Power Plant, Units 1 and 2 Monthly Operation Status Reports for September 1978, October 1978, and November 1978 in the Region I office.

The inspector verified that the reports included the information required to be reported by Technical Specifications, and that test results and supporting information was consistent with performance specifications. The inspector ascertained that applicable corrective actions taken or planned were adequate for resolution of identified problems and determined whether any information contained in the report should be classified as an abnormal occurrence. The Monthly status reports were closed out based upon a satisfactory review in the Region I office.

5. In-Office Review of Licensee Event Reports (LER's)

The inspector reviewed LER's received in the NRC Region I office to verify that details of the event were clearly reported including the accuracy of the description of cause and adequacy of corrective action. The inspector determined whether further information was required from the licensee, whether generic implications were involved, and whether the event warranted onsite followup.

The following Unit 1 LER's were reviewed.

- *-- LER 78-55/3L, dated January 5, 1979: During normal operation, a leak was discovered from a cracked weld on No. 11 reactor coolant pump discharge isolation valve.
- *-- LER 78-57/4T, dated December 22, 1978: During normal operation, an inadvertent discharge from #12 Waste Neutralizing Tank occurred due to operator error.
- *-- LER 78-58/3L, dated January 4, 1979: During surveillance testing of #11 diesel generator, the generator room ventilation fan failed to start when the diesel was started.

The inspector had no further questions on these items.

The following Unit 2 LER's were reviewed.

- *-- LER 78-39/3L, dated December 7, 1978: During normal operation, a leakage of reactor coolant was discovered to be in excess of Technical Specification requirements. The cause of the leak was a crack in a weld on the reactor coolant pump pressure sensing line.
- *-- LER 78-40/3L, dated December 14, 1978: Inadvertent discharge of #5 halon fire suppression system due to an overly sensitive thermal detector.
- LER 78-42/3L, dated January 4, 1979: During normal operation, excessive leakage was discovered from the primary packing of #22 charging pump.
- LER 78-43/3L, dated December 7, 1978: During performance of monthly surveillance testing, CEA #3 dropped to the bottom of the core.
- *-- LER 78-44/3L, dated December 21, 1978: During normal operation, Channel C T-Cold was declared inoperable due to erratic readings four degrees higher than the other channels.
- LER 78-48/3L, dated January 4, 1979: During normal operation, #22B safety injection tank pressure was discovered to be less than Technical Specification requirements.

6. Onsite Licensee Event Followup

For those LER's selected for onsite followup (denoted in paragraph 5) the inspector verified that reporting requirements of Technical Specifications, Regulatory Guide 1.16, and Calvert Cliffs Instruction CCI-118B had been met, that appropriate corrective action had been taken, that the event was reviewed by the licensee as required by Calvert Cliffs Instruction CCI-103C, and that continued operation of the facility was conducted in conformance with Technical Specification limits.

The inspector's findings regarding licensee events were acceptable.

7. Review of Tagout Log

The inspector reviewed the following documents:

- CCI-112B, "Safety and Safety Tagging," dated July 17, 1978.
- OP-6, "Prestartup Check Off," Revision 10, October 25, 1978.
- CCI-300B, "Locked Valve Deviation Sheet Log."
- Unit 1 and Unit 2 "Operations Tagout Logs."

The following discrepancies were noted:

- The manner in which tags are closed out from the Tagout Log was found to be inconsistent with CCI-112B, in that, the date the tagout is cleared was not being entered in all cases as required.
- The (s/u) start-up number column was being used to record maintenance numbers, comments or, in some cases, left blank; also inconsistent with CCI-112B.
- Three tagouts previously cleared were reflected in the tagout log as still being active.

In addition, the inspector toured Unit 1 and Unit 2 Turbine Building and Auxiliary Buildings, and performed a random sampling of locked valves and tagged valves for conformance with CCI-112B. Valves on the following systems were observed: Safety Injection, Chemical Volume and Control, Charging System, Component Cooling Water System, Auxiliary Steam and Coolant Discharge System. The inspector also verified by visual observation that tags were not installed on valves associated with tagout numbers 87440, 87442, and 87457, however, these tags were still being carried as active tagouts in the tagout log. It was noted that the licensee has initiated and has in progress a program to correct such discrepancies.

This item will be carried as unresolved item (317/79-01-01; 318/79-01-01) and will be reviewed on a subsequent inspection.

8. Plant Tour

Upon arrival at the site on January 15, 1979, the inspector proceeded directly to the Control Room to observe plant operations during off normal hours. Control Room manning and Control Board monitoring instrumentation and equipment controls were observed for conformance with applicable Technical Specification requirements. The inspector then conducted a tour of the turbine building to check for general cleanliness, housekeeping conditions and potential fire hazards.

At various times during January 15-19, 1979, the inspector conducted tours of the following accessible plant areas.

- Auxiliary Building
- Turbine Building
- Spent Fuel Pool Area
- Control Room
- Outside Peripheral Areas

The following observations/discussions/determinations were made.

- Control Room and local monitoring instrumentation for various components and parameters were observed, including reactor power level, CEA positions, radiation monitoring levels, and refueling activities.
- Radiation controls established by the licensee, including posting of radiation areas, the condition of step-off pads and the disposal of protective clothing were observed. Radiation Work Permit R-79-6 used for entry to radiation areas was reviewed.
- Plant housekeeping conditions, including general cleanliness conditions and storage of material and components to prevent safety and fire hazards, were observed.
- Systems and equipment in all areas toured were observed for the existence of fluid leaks and abnormal piping vibrations.
- The indicated positions of electrical power supply breakers, control board equipment start switches, and control board remote-operated valves and the actual positions of selected manual-operated valves were observed.
- The Control Board was observed for annunciators that normally should not be lighted during the existing plant conditions. The reasons for the lighted annunciators were described by a Control Room Operator.
- The licensee's policy and practice regarding plant tours were reviewed. There were no changes in this area since the previous inspection.
- Control Room manning was observed on several occasions during the inspection.

Acceptance criteria for the above items included inspector judgment and requirements of 10 CFR 50.54(k), Regulatory Guide 1.114, applicable Technical Specifications and the following procedures.

- CCI-107D, "Area and System Cleanliness," Original, July 1977.

- CCI-112B, "Safety and Safety Tagging," dated July 17, 1978.
- CCI-300B, "Calvert Cliffs Operating Manual," Change 4, February 13, 1976.
- CCI-400A, "Radiation Safety Manual," Change 2, July 15, 1977.

The inspector's findings regarding the plant tour were as follows:

- Housekeeping in the area of Unit 1 #12 charging pump - the inspector visually observed a loose black crusty substance scattered about the floor of the cubicle and on the pump casing and piping.
- Housekeeping in the area of Unit 2 #22 charging pump - the inspector visually observed boric acid crystals approximately 1/4" thick and on the foundation of the pump on some of the piping and components in and around the area. The inspector did not observe any leakage at the time of the inspection. The licensee stated that there had been a packing leak in that area.

This is an unresolved item (317/79-01-02; 318/79-01-02) and will be reviewed on a subsequent inspection.

9. Unresolved Items

Unresolved items are findings about which more information is required in order to ascertain whether they are acceptable or items of noncompliance. Unresolved items disclosed during this inspection are discussed in paragraphs 7 and 8.

10. Exit Interview

The inspector met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on January 19, 1979. The purpose, scope, and findings of the inspection as documented in this report were discussed.