

U. S. NUCLEAR REGULATORY COMMISSION
REGION I

Report Nos. 50-317/89-29
50-318/89-30

Docket Nos. 50-317
50-318

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

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: November 13-17, 1989

Inspector: *Richard A. Strubmeier* 11/27/89
for J. C. Jang, Senior Radiation Specialist, date
Effluents Radiation Protection Section,
FRSSB, DRSS

Approved by: *Robert J. Bares* 11/27/89
R. J. Bares, Chief, Effluents Radiation date
Protection Section, FRSSB, DRSS

Inspection Summary: Inspection of November 13-17, 1989 (Combined Inspection
Report Nos. 50-317/89-29 and 50-318/89-30)

Areas Inspected: Routine, unannounced inspection of the gaseous and liquid effluent control programs including management controls, calibration of effluent and process monitors, ventilation systems, ODCM, and implementation of the above programs.

Results: Within the areas inspected, no violations were identified, however, an unresolved item was identified relative to the calibration of effluent monitors (Section 6.0). The licensee was implementing gaseous and liquid effluent control programs that met the requirements of the Technical Specifications and control procedures.

DETAILS

1.0 Individuals Contacted

1.1 Principal Licensee Personnel

- *S. Cowne, Senior Engineer, QA
- *P. Crinigan, General Supervisor-Chemistry
- C. Dunkerly, Surveillance Test Program Manager
- *D. Furio, Licensing Engineer
- *D. Lenko, Primary System Engineer
- S. Moore, Primary System Engineer
- *D. Muth, Licensing Engineer
- M. Polak, Primary System Engineer
- E. Roach, QA Auditor
- D. Ross, Test Equipment Supervisor
- *J. Snyder, Acting General Supervisor, E&C
- *R. Wenderlich, General Supervisor-Operations

1.2 NRC Personnel

- *J. Beall, Acting Senior Resident Inspector
- *D. Limroth, Acting Senior Resident Inspector

*Denotes those individuals present at the exit meeting on November 16, 1989.

The inspector also interviewed other licensee employees including members of the Electric & Control (E&C) staff, engineering staff, and chemistry staff during this inspection.

2.0 Purpose

The purpose of this routine inspection was to review the licensee's ability to control and quantify radioactive liquids, gases, and particulates during normal and emergency operations.

3.0 Management Controls

3.1 Program Changes

The inspector reviewed the organization for administration of the effluent controls and discussed with the licensee any changes made since the last inspection in December, 1988. The inspector determined that the effluent controls program had not changed since the time of the last inspection in this area.

3.2 Audits

The inspector reviewed the results of a quality assurance audit documented in AL Report Number 89-06. This audit covered the areas of the Offsite Dose Calculation Manual (ODCM), gaseous release permits, liquid release permits, semi-annual reports, and Technical Specification compliance and surveillance of unmonitored effluents. The inspector noted that the audit was performed by qualified auditors and appeared to be a thorough assessment of the effluent controls program. The audit identified a number of findings; none of safety significance. The licensee was responding to these findings. The inspector also noted that the licensee was using a tracking system for the open items. The inspector had no further questions in this area.

3.3 Review of Semiannual Reports

The inspector reviewed the Semiannual Effluent Reports for 1988 and the first half of 1989. These reports provided total released radioactivity for liquid and gaseous effluents including projected radiation dose to the public. Through review of these reports, the inspector determined that the licensee met the Technical Specification requirements. No violations were noted.

4.0 Liquid Effluent Controls

The inspector reviewed the licensee's procedures to determine the implementation of the following Technical Specification (TS) requirements for both units.

- o TS 3/4.11.1.1, "Liquid Effluents, Concentration"
- o TS 3/4.11.1.2, "Liquid Effluents, Dose"
- o TS 3/4.11.1.3, "Liquid Radwaste Treatment System"
- o TS 3/4.11.4, "Total Dose"
- o TS 6.17, "Offsite Dose Calculation Manual (ODCM)"

The inspector reviewed selected liquid discharge permits including associated procedures, analytical data, and dose assessment results. The inspector noted that the licensee analyzed grab samples of the liquid radwaste before the releases were initiated. The pre-release analytical results were used for the dose assessment. The licensee also took composite samples during releases of the liquid radwaste and analyzed the composite samples for dose assessment to assure compliance with the Technical Specifications. The inspector stated that this method was good because a composite sample was more representative of the liquid radwaste than a grab sample. The inspector had no further questions in this area.

5.0 Gaseous Effluent Controls

The inspector reviewed the licensee's procedures to determine the implementation of the following Technical Specifications (TS) for both units.

- o TS 3/4.11.2.1, "Gaseous Effluents, Dose Rate"
- o TS 3/4.11.2.2, "Dose-Noble Gases"
- o TS 3/4.11.2.3, "Dose-Iodine-131 and Radionuclides in Particulate Form"
- o TS 3/4.11.2.4, "Gaseous Radwaste Treatment System"
- o TS 3/4.11.2.5, "Explosive Gas Mixture"
- o TS 3/4.11.2.6, "Gas Storage Tanks"
- o TS 3/4/11.4. "Total Dose"
- o TS 6.17, "Offsite Dose Calculation Manual (ODCM)"

The inspector reviewed selected gaseous discharge permits including associated procedures, analytical data, and dose assessment results. The inspector found that the licensee followed procedures to comply with the Technical Specification requirements. No violations were identified in this area.

6.0 Calibration of Effluent and Process Monitors

The inspector reviewed the licensee's procedures and the most recent calibration results for both units to determine the implementation of the Technical Specification requirements for the following monitors.

- o Containment Area Monitors
- o Containment High Range Radiation Monitors
- o Containment Atmospheric Radiation Monitors
- o Wide Range Noble Gas Monitoring System
- o Main Steam Line Radiation Monitors
- o Steam Generator Blowdown Discharge Monitors
- o Main Vent Gaseous Effluent Monitor
- o Liquid Effluent Monitor

The inspector noted that the licensee was not able to retrieve the most recent calibration results for the Waste Gas Holdup System Monitor (RI-2191) and the Liquid Discharge Monitor (RI-2201). The licensee stated that Procedure STP-M-567-0, "Radiological/Environmental Technical Specifications (RETS)," was used to calibrate the above two effluent monitors. These monitors were the common effluent monitors for both units. The licensee stated that the monitors were calibrated in 1988 as documented by the E&C Department Calibration Log and the Shift Supervisor's Log. The inspector verified that the logs indicated that the monitors were calibrated on May 27, 1988 using Procedure STP-M-567-0, however, the actual calibration results were not available for the inspection. The licensee

stated that the calibration results might have been inadvertently misplaced during the licensee's review process. The inspector stated that this was an unresolved item pending retrieval of the calibration results and subsequent review by the NRC. (50-317/89-29-01; 50-318/89-31-01) The inspector reviewed calibration results of these two effluent monitors, performed on June 17, 1986, and found them to be within the licensee's acceptance criteria.

During the review of calibration results of other monitors, the inspector noted that the licensee had performed maintenance and repairs frequently in order to meet the licensee's acceptance criteria. The inspector held discussions with the licensee regarding the radiation monitoring systems that were evaluated and documented in a report entitled "Radiation Monitoring System, Upgrade Scoping Document", dated September 14, 1989. The inspector reviewed this report and noted that the recently initiated Radiation Monitoring System Upgrade Project appeared to be taking the right approach and promised to yield excellent results. The inspector had no further questions in this area.

7.0 Ventilation Systems

The inspector reviewed the licensee's procedures to determine the implementation of the following Technical Specification (TS) requirements for both units.

- o TS 3/4.6.3, "Containment, Iodine Removal System"
- o TS 3/4.6.6, "Penetration Room Exhaust Air Filtration System"
- o TS 3/4.7.6, "Control Room Emergency Ventilation System"
- o TS 3/4.7.7, "ECCS Pump Room Exhaust Air Filtration System"
- o TS 3/4.9.12, "Spent Fuel Pool Ventilation System"

The inspector also reviewed the most recent test results. Reviewed test results were air flow capacity, visual inspection, pressure drop, in-place tests for HEPA and charcoal beds, and laboratory tests. The above test results reviewed by the inspector were within the Technical Specification requirements. The inspector noted that the licensee had a good understanding of test purposes and current industry practices. The inspector had no further questions in this area.

8.0 Unresolved Item

Unresolved items require more information to determine their acceptability, and one such item is discussed in Section 6.0 of this inspection report.

9.0 Exit Interview

The inspector met with licensee representatives (denoted in Section 1.1) at the conclusion of the inspection on November 16, 1989. The inspector summarized the purpose, scope, and findings of the inspection. The inspection was continued after the exit interview until November 17, 1989.