

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report Nos. 50-317/89-10
50-318/89-10

Docket Nos. 50-317
50-318

License Nos. DPR-53 Category C
DPR-69

Licensee: Baltimore Gas and Electric Company
MD Rts 2 & 4, P.O. Box 1475
Lusby, Maryland 20657

Facility Name: Calvert Cliffs Nuclear Power Plant, Units 1 and 2

Inspection At: Lusby, Maryland

Inspection Conducted: May 8-12, 1989

Inspector: *R. Loesch* 6/2/89
R. Loesch, Radiation Specialist date

Approved by: *W. Pasciak* 6/6/89
W. Pasciak, Chief, Facilities Radiation date
Protection Section

Inspection Summary: Inspection conducted on May 8-12, 1989 (Combined Inspection Report Nos. 50-317/89-10, 50-318/89-10).

Areas Inspected: Routine, unannounced inspection of licensee radiological controls during the Unit 2 outage. Areas inspected included: training and qualifications, external exposure controls, internal exposure controls, and ALARA.

Results: One violation was identified (failure to follow procedures; details Sections 4.0 and 6.0).

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DETAILS

1.0 Individuals Contacted

1.1 Licensee Personnel

L. Russell	Manager, CCNPP Department
* R. Denton	Manager, QASD
* N. Millis	General Supervisor, Radiation Safety, QASD
* J. Lippold	General Supervisor, Technical Engineering Services
* G. Phair	Assistant General Supervisor, Radiation Controls & Support, QASD
* L. Smialek	Senior Plant Health Physicist, QASD
J. Lenhart	Supervisor, Radiation Controls, Operations, QASD
S. Hutson	Supervisor, Radiation Controls, ALARA, QASD
S. Sanders	Supervisor, Material Processing, QASD
* G. Bell	Licensing Engineering, NESD

1.2 NRC Personnel

* V. Pritchett Resident Inspector

* Attended the exit meeting on May 12, 1989.

Other licensee personnel were also contacted during the course of this inspection.

2.0 Purpose of Inspection

The purpose of this routine, unannounced inspection was to review the implementation of the licensee's Radiological Safety Program during the Unit 2 refueling outage. Areas reviewed included:

- training and qualifications,
- external exposure controls,
- internal exposure controls, and
- ALARA.

3.0 Training and Qualifications

The inspector reviewed the training and qualifications of radiation workers and selected radiological controls personnel. The review was with respect to criteria contained in Technical Specifications, licensee procedures and 10 CFR 19.12, "Instruction to Workers."

Findings

Within the scope of this review, no violations were identified. However, the following weakness was identified and discussed with the licensee.

- The licensee had implemented a program designed to keep radiation protection technicians up to date as procedures are changed or revised. Radiation Safety Procedure Change/Revision Records (RSPCRRs) are circulated to all group supervisors who, in turn, designate individuals required to read and sign the cover sheet by a specified date. The inspector determined that 10 of the 12 RSPCRRs reviewed had not been completed in a timely fashion. Some were as much as 60 days past their designated due dates. This backlog is indicative of a lack of supervisory attention to detail. In addition, although a program for disseminating changes to the field was in effect, the program has not been formally proceduralized to assure continued and consistent implementation. When brought to the licensee's attention, they stated that the technicians would be brought up to date in their required readings and that the program would be formally documented in a procedure.

4.0 External Exposure Controls

The inspector reviewed the adequacy and effectiveness of selected aspects of the External Exposure Control Program. The review was with respect to criteria contained in applicable licensee procedures, Technical Specifications, and regulatory requirements.

The following matters were reviewed:

- use of appropriate Special Work Permits (SWPs) for controlling radiological work,
- performance and documentation of radiological surveys to support ongoing work,
- posting and barricading of radiation and high radiation areas,
- use of calibrated radiation survey instrumentation, and
- placement and use of appropriate personnel dosimetry.

Evaluation of licensee performance in the area was based on:

- independent radiation surveys performed by the inspector during plant tours,
- observation of ongoing work activities,
- review of selected SWPs and associated radiological surveys, and
- discussions with cognizant personnel.

Findings

Within the scope of this review, the following apparent violation was identified:

- Inspector review of completed SWPs indicated numerous examples where the radiation safety technicians had not performed the surveys in accordance with the requirements indicated on the job control data record (JCDR). These examples included JCDRs associated with the following SWP's: 89-829, 89-2303, 89-2305, and 89-2309. Procedure RSP 1-101, "Radiological Surveys", states, in section 3.7.3, that all radiological surveys shall be reviewed by the Supervisor of Radiation Control Operations (SRCO) (or his designee) to ensure that they are complete, correct and contain pertinent data. A final review shall be conducted by the General Supervisor, Radiation Safety (or his designee) prior to final filing. The fact that the JCDRs had been through one or more levels of review and did not contain records of required surveys indicates a lack of adequate supervisory review.

When brought to the licensee's attention, an internal audit of all unit records was promptly initiated to determine the extent of the deficiencies and appropriate corrective actions.

This failure to follow procedures is an apparent violation of Technical Specification 6.11, "Radiation Protection Program" (50-317/89-10-01, 50-318/89-10-01).

5.0 Internal Exposure Controls

The inspector reviewed the adequacy and effectiveness of selected aspects of the internal exposure control program. The review was with respect to criteria contained in applicable licensee procedures and regulatory requirements.

The following matters were reviewed:

- review of airborne radioactivity surveys for establishing radiological controls,
- use of engineering controls to control airborne radioactivity,
- control and issue of respiratory equipment, and
- bioassay measurements.

The evaluation of licensee performance in this area was based on:

- review of documentation,
- independent review and observations of ongoing work, and
- discussions with cognizant personnel.

Within the scope of this review, no violations were identified.

The licensee has an adequate internal dosimetry program. Review of airborne survey documentation indicated that general airborne contamination levels have been low. When a job situation warrants, effective containment devices and/or portable ventilation equipment was utilized to maintain internal exposures ALARA. Respiratory equipment is well maintained and controlled.

6.0 ALARA

The inspector reviewed the adequacy and effectiveness of selected aspects of the ALARA Program. Particular emphasis was placed on review of ongoing work. The review was with respect to criteria contained in applicable licensee procedures and regulatory guidance.

Evaluation of licensee performance in the area was based on review of ongoing work, discussions with cognizant personnel, and review of documentation.

Findings

Within the scope of this review, the following additional example of an apparent violation was identified:

- Requests for ALARA field services (portable ventilation, breathing air systems, containment devices, shielding, etc.) are initiated via an "ALARA Field Services Work Sheet", normally originated by ALARA personnel as part of the process of writing an SWP/ALARA review. The ALARA Coordinator specifies on the Work Sheet the frequency with which ALARA personnel are required to inspect the job site to verify the integrity and/or continued effective operation of the installed ALARA devices to reduce unnecessary personnel exposure. The inspections performed are documented on a "Job/Area Acceptance Inspection Report." During a review of outage related ALARA Field Services Work Sheets and associated Job/Area Acceptance Inspection Reports, the inspector noted numerous examples where the ALARA personnel had not performed the inspections in accordance with the prescribed inspection frequency as specified in Procedure RSP 1-202, "ALARA Field Services", Section 6.3. Specifically, these included jobs covered by SWPs 89-2038, 89-2501, and 89-2503. This is an example of inadequate supervisory oversight (see Sections 3.0 and 4.0 of this report).

This failure to follow procedures is an additional example of an apparent violation of Technical Specification 6.11, "Radiation Safety Program" (50-317/89-10-01, 50-318/89-10-01).

Within the scope of this inspection, the following observations were made and discussed with licensee personnel.

- Several jobs had exceeded their ALARA exposure estimates by a significant margin. SWP 89-829, "Replace 11B RCP Seal", was 117% over its estimate and the job had yet to be completed at the time of the inspection. Post job ALARA reviews typically are not performed until after the outage, therefore no formal documentation was available to justify these discrepancies. The inspector stated that either the initial estimates were inaccurate or unforeseen circumstances (job scope, work environment) had developed. The licensee stated that the post-job ALARA reviews would capture the root cause and allow for improvements in maintained exposures ALARA. This will be reviewed during in a future inspection.
- An aggressive exposure goal has been established for Unit 2 for 1989 of 335 person-rem, of which 235 person-rem is allocated for the outage. The current outage exposure as of May 8, 1989, was 99 person-rem.

7.0 Exit Meeting

The inspector met with licensee representatives (denoted in Section 1.0 of this report) at the conclusion of the inspection on May 12, 1989. The inspector summarized the purpose, scope and findings of the inspection.