

U. S. NUCLEAR REGULATORY COMMISSION
REGION I

Report Nos: 50-317/89-16
50-318/89-17

Docket Nos: 50-317
50-318

License Nos: DPR-53 Priority _____ Category C
DPR-69

Licensee: Baltimore Gas and Electric Company
P.O. Box 1535
Lusby, Maryland 20657

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

Inspection At: Lusby, Maryland

Inspection Conducted: July 10-13, 1989

Inspector: Craig Conklin 8/15/89
Craig Conklin, Senior Emergency Preparedness Specialist, DRSS date

Approved By: William Lazarus 8/15/89
William Lazarus, Chief, Emergency Preparedness Section, FRSSB, DRSS date

Inspection Summary: Inspection on July 10-13, 1989, (Combined Inspection Report Nos. 50-317/89-16 and 50-318/89-17)

Areas Inspected: A routine, announced emergency preparedness inspection was conducted at the Calvert Cliffs Nuclear Power Plant. The inspection areas included: Changes to the Emergency Preparedness Program; Emergency Facilities, Equipment, Instrumentation, and Supplies; Organization and Management Control; Knowledge and Performance of Duties (Training); Independent Reviews/Audits; and Licensee Actions on Previously Identified Findings.

Results: One apparent violation of NRC regulations was identified. The violation relates to 10 CFR 50.47(b)(9) and concerns the licensee's inability to perform a dose assessment from the control room for a steam generator tube rupture accident.

DETAILS

1.0 Persons Contacted

The following licensee representatives attended the exit meeting held on July 13, 1989.

R. Denton, Manager, Quality Assurance and Services Department
T. Forgette, Supervisor, Emergency Planning Unit
N. Millis, General Supervisor, Radiation Safety
K. Nietmann, General Supervisor, Nuclear Training
A. Anuje, Supervisor, Quality Audits Unit
J. Osborne, Licensing Engineer

The inspector also interviewed and observed the activities of other licensee personnel.

2.0 Licensee Actions on Previously Identified Items

OPEN (UNR) (50-317/88-04-01 and 50-318/88-05-01) Some Emergency Action Levels (EALs) do not conform to the guidance of NUREG-0654, while others were inappropriate for the levels of intended response.

The inspector noted Emergency Response Plan Implementing Procedure (ERPIP) 3.0, Immediate Actions, Emergency Action Level (EAL) Criteria and SOP-5, Attachment 4, Emergency Action Levels. The EALs were formatted from General Emergency to Unusual Event and were contained on two pages. EALs were based upon measurable plant parameters as appropriate. SOP-5, Attachment 4 contains a detailed analysis of the basis for acceptance, or rejection, of each EAL. This document will be reviewed and comments forwarded in a subsequent Inspection Report.

3.0 Operational Status of the Emergency Preparedness Program

3.1 Changes to the Emergency Preparedness Program

No major changes were noted in the emergency plan or implementing procedures since the last inspection. Changes that have been made received proper management and Plant Operations Review Committee (PORC) review prior to implementation.

Protective action recommendations (PARs) were made in accordance with ERPIP 4.1.2, Site Emergency Coordinator. This procedure indicates that a PAR must be issued when a General Emergency is declared. This procedure also indicates the minimum PAR and refers the Site Emergency Coordinator (SEC) to Attachment 1. Attachment 1 provides PAR guidance for both release and non-release accident sequences. It appears that the SEC could issue the minimum PAR prior to fully analyzing this situation, which could result in a recommendation to shelter when other recommendations may be appropriate. The licensee agreed to review this area.

Based upon the above review, this area was acceptable.

3.2 Emergency Facilities, Equipment, Instrumentation and Supplies

The inspector toured the Technical Support Center (TSC), Operations Support Center (OSC), Emergency Operations Facility (EOF) and the Monitoring Trailers. These facilities were adequate to support emergency response and were generally in agreement with the Emergency Plan and ERPIPs. Equipment was operable and currently calibrated. During one walk-through, MIDAS (the dose assessment model) was not operable. A review of operability records showed that MIDAS was operationally checked twice per week and has an availability rate of approximately 90%. Inventories were conducted for the Emergency Response Facilities (ERFs) and follow-up was evident when discrepancies were identified. The inspector noted that the Supervisor, EPU does not review and/or approve the completed inventories and thus may be unaware of discrepancies. The licensee agreed to evaluate this area.

The licensee utilizes two trailers, as a backup, to perform Post Accident Sampling System sample counting and analysis. These facilities have been out of service for approximately eight months. There was no estimate when the counting trailer will be available for service. The analysis trailer was undergoing improvements and could be pressed into service in a few hours if necessary. The licensee agreed to expedite the work necessary to return these trailers to full service.

Based upon the above review, this area was acceptable.

3.3 Organization and Management Control

The inspector reviewed the normal staffing organization as it pertains to emergency preparedness and noted that major changes have taken place. The Supervisor, Emergency Planning Unit (EPU) reports through the General Supervisor - Radiation Safety, to the Manager, Quality Assurance and Support Department, to the Vice President Nuclear Energy. The inspector noted that this change has not affected the level of management that the Supervisor EPU reports to. Management support for the emergency response program was evident. The Supervisor EPU has a staff of seven, was fully staffed, and does not utilize consultants. The Emergency Plan, Implementing Procedures and Standard Operating Procedure adequately describe the responsibilities of the EPU.

The inspector reviewed the Emergency Response Organization (ERO) and determined that there have been changes. Most ERO positions were filled three deep and the EPU actively strives to fill vacancies. The inspector noted that the positions of Radiological Assessment Directors, both directing and assessing, were only two deep. The licensee agreed to expand these positions to three

deep. The ERO was kept current primarily through a Calvert Cliffs Instruction and an Emergency Preparedness SOP. These documents direct newly hired personnel, as well as those leaving the site, to report through the EPU. Additionally, inter-departmental and company transfers were followed informally by reviewing organization charts and were verified during the quarterly update of the telephone directory. The inspector noted that inter-department and company transfers do not result in changes in ERO assignments without a specific review by the EPU and management.

Based upon the above review, this area was acceptable.

3.4 Knowledge and Performance of Duties (Training)

The inspector verified that the training for the ERO was being conducted with ERPIP 5.4, Training. Training requirements were delineated by a matrix of ERO positions versus courses required. Training was conducted by the Technical Training Unit (TTU) and the EPU. Lesson plans (LPs) were approved by the Supervisor, EPU and were current. LPs utilized for specialty procedures do not provide any guidance for course objectives or preparation and essentially just direct the instructor to review the proper IP. The licensee agreed that these LPs should be improved to be consistent with the format of the other LPs.

Training records were maintained in a computer database. A Training Status Report was prepared monthly based upon information provided in the Emergency Response Training Report. This system was easy to use and training records were current.

The inspector noted that annual Emergency Preparedness training requirements have been tied to General Orientation Training (GOT), and that GOT has been moved from spring to late fall. This has resulted in many members of the ERO being beyond one year since last trained, and in fact beyond the three month grace period allowed by the Emergency Plan. Most of the ERO was currently within the grace period and would fall out of qualification before GOT was conducted for this year. The licensee agreed to immediately schedule and train all members of the ERO who were in or beyond the grace period. This area will be reevaluated in a subsequent inspection.

Selected groups and key ERO positions were given postulated walk-through scenarios to ascertain training effectiveness, particularly for severe accidents and rapidly escalating accidents. The personnel being evaluated were given data such as equipment failures and changes in key parameters to stimulate actions. When decisions required information that would be normally available, the information was provided by the evaluator. Walk-throughs were given to: two control room shifts, with each shift including the Shift Supervisor, Senior Reactor Operator and Shift Technical Advisor; two Radiological Assessment Directors

(RAD), one directing and one assessing; one Interim RAD; and one Site Emergency Coordinator (SEC).

The operators were well trained and disciplined in their approach. They properly recognized initiating events and utilized their Emergency Operating Procedures (EOPs) to mitigate the events. The EOPs referred the operators to the IPs when appropriate. The Shift Supervisor, as the Interim SEC, promptly recognized conditions, properly classified the accident and made the proper PAR. The operators in general had a good awareness of the relationship of accident level versus PAR determination.

The SEC was very knowledgeable in the Emergency Plan and Implementing Procedures. He promptly recognized postulated conditions. However, he did not properly classify the event given.

The two RADs, whose training was evaluated, displayed a great deal of inconsistency in their approach to their duties. They were both very knowledgeable in dose assessment and health physics principles, and both were familiar with their duties. However, in response to a postulated Steam Generator Tube Rupture with damaged fuel, one RAD was not familiar with ERPIP C.1, Dose Assessment Aids. This resulted in the RAD recommending a PAR that was inappropriate based upon the conditions given. It should be noted that this PAR erred in a conservative direction. These individuals were due for retraining in the near future.

The Interim RAD was currently trained and knowledgeable and effectively utilized ERPIP 3.0, Immediate Actions. However, the Interim RAD could not perform a dose assessment based upon a postulated Steam Generator Tube Rupture with damaged fuel. ERPIP 3.0 does not address this type of accident, and the Interim RAD does not receive training on this methodology. 10 CFR 50.47(b)(9) requires that "Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use". A method does exist in ERPIP C.1 which was specified for use by the RAD who assumes the responsibilities of this position when the full ERO has been staffed. The Interim RAD was not aware of this procedure. As a consequence, the Control Room does not have the capability to perform dose assessment for this type of accident. This is an apparent Violation (50-317/89-16-01 and 50-318/89-17-01). At the conclusion of the inspection the licensee committed to develop and implement an ERPIP for the Interim RAD to encompass this type of accident, and any others deemed appropriate, and complete training. Additionally, they committed that a RAD would be present in the Control Room if these actions were not accomplished prior to operating in Mode 1 (power operations above 5% power). This area will be reviewed in a subsequent inspection.

Except as noted above, this area was acceptable.

3.5 Independent Reviews/Audits

The audit to meet 10 CFR 50.54(t) requirements was conducted from June 22 through November, 17, 1988. The audit was conducted by one Quality Assurance (QA) inspector with some emergency preparedness training. The checklist utilized was detailed and thorough. The final report was properly distributed to management and the Off-site Safety Review Committee. The audit also reviewed off-site interfaces and this information was made available to state and local officials. The inspector noted that there was an apparent conflict between the EPU and the QA Auditor over the audit findings. This conflict was in part because the auditor reached an inappropriate conclusion and the Supervisor, EPU did not provide information to management and/or feedback to the auditor to correct the report. In addition, the Supervisor, EPU took exception to some of the audit findings. The inspector determined that some audit findings were not classified properly as a result. QAP-21 of the Quality Assurance Manual states that the Manager, QASS was ultimately responsible for resolving finding discrepancies with the appropriate department manager. In this organization, the Manager, QASS has line responsibilities for both the QA organization and the EPU. 10 CFR 50.54(t) states in part "the licensee shall provide for a review of its emergency preparedness program at least every 12 month by persons who have no direct responsibility for implementation of the emergency preparedness program". The licensee's current audit methodology does not meet the intent of independence, nor does it provide a consistent treatment of disputed findings. As the lack of independence would be classified as a Severity Level 5 Violation, the disputed findings had minor significance and the fact that at the conclusion of the inspection, the licensee presented changes that move the disposition of disputed findings to the Vice President Nuclear Energy (VPNE), it was not cited as a Violation. Additionally, the QA department will review past audits for disputed findings and forward them to the VPNE for review and disposition. This item is Unresolved (50-317/89-16-02 and 50-318/89-17-02).

Except as noted above, this area was acceptable.

The inspector reviewed the drill and exercise program. Drills and exercises were performed as specified in the emergency plan. Documentation was complete and corrective actions were implemented as appropriate.

Based upon the above review, this area was acceptable.

4.0 Exit Meeting

The inspector met with licensee personnel denoted in Section 1 at the conclusion of the inspection to discuss the scope and findings of this inspection as detailed in this report.

The licensee was informed that an apparent Violation was identified. The inspector also discussed several other areas for improvement. The licensee acknowledged the findings and agreed to evaluate them and institute corrective actions as appropriate.

At no time during this inspection did the inspector provide any written information to the licensee.