

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-317/84-24; 50-318/84-24

Docket No. 50-317; 50-318

License No. DPR-53; DPR-69 Priority - Category C

Licensee: Baltimore Gas and Electric Co.
P. O. Box 1475
Baltimore, Maryland 21203

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

Inspection At: Lusby, Maryland

Inspection Conducted: September 10-13, 1984

Inspectors: *E. J. Wojnas* 10/30/84
E. J. Wojnas, Emergency Preparedness Coordinator date

- T. Foley, Resident Inspector
- K. Hawley, Battelle, PNL
- J. Hawxhurst, NRC, RI
- E. Hickey, Battelle, PNL
- J. Pappin, Battelle, PNL
- R. Sommers, Resident Inspector
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Approved by: *T. L. Harpster* 1/8/85
T. L. Harpster, Chief, Emergency Preparedness Section, DETP date

Inspection Summary: Inspection on September 10-13, 1984 (Report No. 50-317/84-24; 50-318/84-24)

Areas Inspected: Routine, announced, emergency preparedness inspection and observation of the licensee's annual full-scale emergency exercise performed on September 10-13, 1984. The inspection involved 216 inspector hours by a team of nine NRC Region I and NRC contractor personnel.

Results: No violations were identified. The licensee's emergency response actions for this exercise scenario were adequate to provide protective measures for the health and safety of the public.

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DETAILS

1. Persons Contacted

The following licensee representatives attended the exit meeting on September 12, 1984.

T. E. Forgette, Supervisor, Emergency Planning
J. A. Metzger, Public Information Spokesperson
S. G. Paks, General Supervisor, Planning and Support
L. B. Russell, Plant Superintendent
J. A. Tiernan, Manager, Nuclear Power

The team observed and interviewed several licensee emergency response personnel, controllers, and observers as they performed their assigned functions during the exercise.

2. Emergency Exercise

The Calvert Cliffs Nuclear Power Plant full scale exercise was conducted on September 11, 1984 from 7:00 a.m. until 4:30 p.m.

a. Pre-Exercise Activities

Prior to the emergency exercise, NRC Region I representatives had telephone discussions with licensee representatives to review the scope and content of the exercise scenario.

In addition, NRC team observers attended a licensee briefing for licensee controllers and observers on September 10, 1984, and participated in the discussion of emergency response actions expected during the various phases of the scenario. The licensee specified the emergency response activities that would be simulated and also that controllers would intercede in activities to prevent disturbing plant operations.

The exercise scenario included the following events:

- Leakage of water from the Reactor Coolant System (RCS);
- A contaminated injured individual requiring hospitalization;
- Power supply failure to the security computer and microwave alarm system;
- Reactor core degradation;
- Release of radioactive material; and
- Implementation of the Recovery Organization.

The above events caused the actuation of the licensee's emergency facilities and also permitted states and local government agencies to exercise their Emergency Plans.

b. Exercise Observation

During the conduct of the licensee's exercise, nine NRC team members made detailed observations of the actuation and augmentation of the emergency organization; activation of emergency response facilities; and actions of emergency response personnel during the operation of the emergency response facilities. The following activities were observed:

- Detection, classification, and assessment of the scenario events;
- Direction and coordination of the emergency response;
- Notification of licensee personnel and offsite agencies of pertinent information;
- Assembly and accounting for licensee and contractor personnel;
- Assessment and projection of radiological (dose) data and consideration of protective actions;
- Provisions for in-plant radiation protection;
- Performance of offsite, onsite, and in-plant radiological surveys;
- Maintenance of site security and access control;
- Performance of technical support;
- Performance of repair and corrective actions;
- Performance of first aid and rescue;
- Communications/information flow and record keeping;
- Provisions for information flow to the public; and
- Management of recovery operations.

The NRC team noted that the licensee's activation and augmentation of the emergency organization; activation of the emergency response facilities; and actions and use of the facilities were generally consistent with their emergency response plan and implementing procedures. The team also noted the following areas where the licensee's activities were thoroughly planned and efficiently implemented.

- Emergency response personnel were knowledgeable in their assignments and emergency procedures. Individuals were conscientious and provided innovative "fixes" to plant problems. In general, personnel demonstrated that they were competent in performing their assigned duties.
- Personnel briefings were conducted in a timely manner by the individual in charge at each emergency facility.
- Status and information displays were generally maintained and continuously updated at the emergency facilities.
- Communications equipment problems were minimal and there was a continuous flow of information within and between the emergency facilities including the news media center.
- In-plant, onsite, and offsite teams were thoroughly briefed prior to being dispatched and assignments were performed with consideration of ALARA.
- Frequent and comprehensive communications were maintained in the EOF with state representatives.
- The operation of the news media center was adequate and recovery operations were thorough and well planned.
- The observed activities performed by the emergency response organization were indicative of an active training and emergency preparedness program.
- Improvement areas identified during the September 14, 1983, exercise appear to have been corrected.

The NRC team identified the following areas for licensee improvement.

- (Open) 50-317/84-24-01; 50-318/84-24-01: The scenario did not provide enough data to fully test the response of the Technical Support Center (TSC).
- (Open) 50-317/84-24-02; 50-318/84-24-02: Access control and identification of response personnel in the TSC should be provided.
- (Open) 50-317/84-24-03; 50-318/84-24-03: Provide additional training to control room personnel as to the methodology used to get incore thermocouple readings.
- (Open) 50-317/84-24-04; 50-318/84-24-04: Perform a reliability study of the MIDAS system and modify the system based on the study to ensure its availability during an incident.

- (Open) 50-317/84-24-05; 50-318/84-24-05: Provide periodic briefings to the TSC to ensure that work to be performed is prioritized and responsibility for accomplishment is assigned.
- (Open) 50-317/84-24-06; 50-318/84-24-06: Status boards in the Operations Support Center (OSC) describing personnel location and dose received were not kept up-to-date.
- (Open) 50-317/84-24-07; 50-318/84-24-07: Consideration should be given to evacuation time estimates before making protective action recommendations.
- (Open) 50-318/84-24-08; 50-318/84-24-08: The Radiological Assessment Director (RAD) failed to demonstrate considerations and recommendations of radioprotective drugs (KI) for site personnel to the Site Emergency Director (SEC) as advised in the appropriate procedure.

c. Exercise Critique

The licensee performed a critique in accordance with 10 CFR 50 Appendix E.IV.F.3 on September 12, 1984, during which key licensee controllers discussed their observations of the exercise. The licensee participants highlighted areas for improvement which included the following: scenario development, controller training, accident analysis, plant parameter trends, and noise levels in emergency response facilities. The licensee indicated that the identified areas would be evaluated and appropriate corrective action taken.

3. Exit Meeting and NRC Critique

Following the licensee's self-critique, the NRC team met with the licensee representatives listed in Section 1. The team leader summarized the observations made during the exercise and discussed the areas described in Section 2.b.

The licensee was informed that no violations were observed and although there were areas identified for improvement, the NRC team determined that within the scope and limitations of the scenario, the licensee's performance demonstrated that they could implement their Emergency Plan and Emergency Plan Implementing Procedures in a manner which would adequately provide for the health and safety of the public.

Licensee management acknowledged the findings and indicated that appropriate action would be taken regarding the identified improvement areas.

At no time during the inspection was written material provided to the licensee by the inspectors.