

REVIEWED BY:

R. R. Keimig
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NRC: REGION I
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6-6-89
(DATE)

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report Nos. 50-317/89-13
50-318/89-13

Docket Nos. 50-317
50-318

License Nos. DPR-53
DPR-69

Licensee: Baltimore Gas and Electric Company

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

Inspection At: Lusby, Maryland

Inspection Conducted: May 1-5, 1989

Type of Inspection: Routine, Unannounced Physical Security

Inspectors:

D. F. Cameron

D. F. Cameron, Reactor Engineer -
Physical Security

6/2/89

date

W. K. Lancaster

W. K. Lancaster, Physical Security Inspector

6/2/89

date

Approved by:

(Signature)

R. R. Keimig, Chief, Safeguards Section
Division of Radiation Safety and Safeguards

6-5-89

date

Inspection Summary: Routine, Unannounced Physical Security Inspection
(Combined Inspection Report Nos. 50-317/89-13 and 50-318/89-13)

Areas Inspected: Licensee Actions on Findings of the NRC's RER; Management Support, Program Plans, and Audits; Protected and Vital Area Physical Barriers, Detection and Assessment Aids; Protected and Vital Area Access Control of Personnel, Packages, and Vehicles; Alarm Stations and Communications; Power Supply; Testing, Maintenance, and Compensatory Measures; Training and Qualifications.

Results: The licensee was in compliance with NRC requirements in the areas inspected.

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DETAILS

1. Key Personnel Contacted

Licensee Personnel

- *R. Dernoga, Manager, Facilities Management
- V. Bradly, Director, Security Services
- *L. Gibbs, General Supervisor, Calvert Cliffs Security Operations
- *G. Gwiazdowski, Assistant General Supervisor, Nuclear Security
- *C. Hart, Supervisor, Security Training and Education Unit
- *J. Ross, Security Licensing Analyst
- *J. Alvey, Nuclear Security Supervisor
- *J. Flinn, Nuclear Security Supervisor
- *T. Lund, Nuclear Security Supervisor
- *R. Leonard, Supervisor, Security Screening Unit
- *M. Cox, Supervisor, Security Support Unit
- *S. Rae, Security Systems Analyst

U. S. Nuclear Regulatory Commission (NRC)

- *H. Eichenholz, Senior Resident Inspector

*Indicates those present at the Exit Interview.

2. Licensee Action on Findings from the NRC's Regulatory Effectiveness Review (RER)

- a. The RER, which was conducted on October 7-11, 1985, identified two inadequacies and six weaknesses in the licensee's security program which were considered to provide a level of protection significantly less than intended by the NRC, and, if allowed to continue, could degrade to safeguards vulnerabilities.
- b. Current Status - all but four items identified in the report (RER report Paragraph Nos. 2.2.1, 2.2.2, 2.3.1 and 2.3.5) were identified in NRC Combined Inspection Report No. 50-317/87-28 and 50-318/87-29, as being satisfactorily corrected. Following is a status of the items that remained open:

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The NRC considers these three items (2.2.1, 2.3.1 and 2.3.5) to be resolved.

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This matter remains open and will be reviewed during future inspections of the licensee's security program.

3. Management Support, Security Program Plans, and Audits

- a. Management Support - Management support for the licensee's physical security program was determined to be adequate by the inspectors. This determination was based upon the inspectors' review of various aspects of the licensee's program.

The licensee has continued to upgrade the Calvert Cliffs physical security program since the last routine physical security inspection. Some of these security program upgrades are as follows:

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- Upgrading the firearms training program to include procurement of a computerized firearms target system and improvements to the range;
- Conducting expanded and formalized self-assessments of the various aspects of the security program;
- Maintaining an excellent security training program for the security force;
- Conducting annual contingency drills with off-site local law enforcement agencies;
- Sending security supervision to other nuclear power plants to evaluate other nuclear security programs; and,
- Expanding nuclear operations personnel involvement in security related contingency drills.

The inspectors found these types of upgrades to be indicative of a high quality and performance oriented security program. The inspectors noted that security force members (SFM) are, in general, very knowledgeable of their post duties, contents of procedures and their other responsibilities and exhibit a very professional demeanor. On-site security managers and supervisors appeared to be effectively implementing a quality program and corporate support is highly evident. Minor security concerns identified by the inspectors during the inspection were addressed with on-site security management and prompt corrective actions were taken as applicable. The inspectors noted, however, that some of the licensee's security systems are showing signs of age as evidenced by their marginal effectiveness. The SFMs are adequately compensating for these systems and equipment deficiencies but human performance has inherent weaknesses. In summary, the inspectors determined that the licensee has a good, strong security program that is generally very effective. However, the effectiveness of the program could be further improved by upgrading the aging systems and equipment.

- b. Security Program Plans - The inspectors verified that changes to the licensee's Security, Contingency, and Guard Training and Qualification Plans, as implemented, did not decrease the effectiveness of the respective plans, and had been submitted in accordance with NRC requirements.
- c. Audits - The inspectors reviewed the 1988 and 1989 annual security program audit reports and verified that the audits had been conducted in accordance with the Security Plan (the Plan). The audits were comprehensive in scope with the results reported to the appropriate levels of management. The inspectors' review included the response of the security organization to the audit findings and the corrective

actions taken to remedy any adverse findings. The documented corrective actions appeared appropriate for the findings.

The inspectors noted during the review of the 1989 audit report that the Quality Assurance (QA) auditors appeared to focus on the performance and effectiveness of the SFM's but not on the security systems and equipment. The inspectors expressed a concern to the licensee that the performance and effectiveness of the security systems and equipment should also be reviewed as stringently as all other areas that are audited. The licensee informed the inspectors that those areas are routinely evaluated by the corporate security staff. The results of those evaluations will be reviewed in subsequent inspections.

4. Protected and Vital Area Physical Barriers, Detection and Assessment Aids

- a. Protected Area Barriers - The inspectors conducted a physical inspection of the protected area (PA) barrier on May 1 and 2, 1989. The inspectors determined, by observation, that the barriers were installed and maintained as described in the Plan. The inspectors observed that the PA barrier had been upgraded since the last inspection. The upgrade consisted of the addition of "razor ribbon" to the top of the barrier at selected locations.

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- b. Protected Area Detection Aids - The inspectors observed the protected area perimeter detection aids on May 2 and 3, 1989, and determined that they were installed, maintained and operated as committed to in the Plan.

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- c. Isolation Zones - The inspectors verified that isolation zones were adequately maintained to permit observation of activities on both sides of the protected area barrier.
- d. Assessment Aids - The inspectors observed the protected area perimeter assessment aids and determined that they were generally installed, maintained, and operated as committed to in the Plan.

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The licensee committed to analyze these potential weaknesses and initiate corrective actions as necessary. This matter will be reviewed in future inspections.

- e. Vital Area Barriers - The inspectors conducted a physical inspection of several vital area barriers on May 4 and 5, 1989. The inspectors determined, by observation, that the barriers were installed and maintained as described in the Plan.
- f. Vital Area Detection Aids - The inspectors observed the vital area detection aids and determined that they were installed, maintained and operated as committed to in the Plan.

5. Protected and Vital Area Access Control of Personnel, Packages and Vehicles

a. Personnel Access Control - The inspectors determined that the licensee was exercising positive control over personnel access to the protected and vital areas. This determination was based on the following:

- (1) The inspectors verified that personnel are properly identified and authorization is checked prior to issuance of badges and key-cards.
- (2) The inspectors verified that the licensee has a program to confirm the trustworthiness and reliability of employees and contractor personnel. This program includes checks on employment, credit, and criminal history, and a psychological examination.
- (3) The inspectors verified that the licensee has a fitness-for-duty program in place. The drug testing program consists of:
 - All new hires (licensee and contractors) are tested before being granted unescorted access;
 - Testing for cause of all personnel; and,
 - Beginning June 1, 1989, random testing of all personnel.

The licensee has also begun periodic searches of the owner-controlled area and the PA with drug detection dogs.

- (4) The inspectors reviewed the security lock and key procedures and determined that they were consistent with commitments in the Plan. The inspectors also reviewed the protected and vital area key inventory logs, and discussed lock and key procedures with members of the security force and the licensee's security staff.
- (5) The inspectors verified that the licensee takes precautions to ensure that an unauthorized name cannot be added to the access list by having a member of management review the list every 31 days.
- (6) The inspectors verified that the licensee has a search program, as committed to in the Plan, for firearms, explosives, incendiary devices and other unauthorized materials. The inspectors observed personnel access processing during shift changes, visitor access processing, and interviewed members of the security force and licensee's security staff about personnel access procedures.

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- (7) The inspectors determined, by observation, that individuals in the Protected Area (PA) and Vital Area (VA) display their access badges as required.
 - (8) The inspectors verified that the licensee has escort procedures for visitors to the PA and VAs.
 - (9) The inspectors verified that the licensee has a mechanism for expediting access to vital equipment during emergencies and that the mechanism is adequate for its purpose.
 - (10) The inspectors verified that unescorted access to VAs is limited to authorized individuals. The access list is revalidated at least once every 31 days as committed to in the Plan.
- b. Package and Material Access Control - The inspectors determined that the licensee was exercising positive control over packages and material that are brought into the protected area at the main access portal. The inspectors reviewed the package and material control procedures and found that they were consistent with commitments in the Plan. The inspectors also observed package and material processing and interviewed members of the security force and the licensee's security staff about package and material control procedures.

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- c. Vehicle Access Control - The inspectors determined that the licensee properly controls vehicle access to and within the protected area. The inspectors verified that vehicles are properly authorized prior to being allowed to enter the PA. Identification is verified by the SFM at the vehicle access portal. This procedure is consistent with the commitments in the Plan. The inspectors also reviewed the vehicle search procedures and determined that they were consistent with commitments in the Plan. This determination was made by observing vehicle processing and search, inspection of vehicle logs, and by interviewing members of the security force and licensee's security staff about vehicle search procedures. The inspector also determined that at least two SFMs control vehicle access at the main vehicle access point.

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6. Alarm Station and Communications

The inspectors observed the operation of the central and secondary alarm stations (CAS/SAS) and determined that they were maintained and operated as committed to in the Plan. CAS and SAS operators were interviewed by the inspectors and found to be knowledgeable of their duties and responsibilities. The inspectors verified that the CAS does not contain any operational activities that would interfere with the assessment and response functions.

The inspectors also observed tests of all communications capabilities in both the CAS and the SAS and reviewed the testing records for the communications channels. All were found to be as committed to in the Plan.

7. Emergency Power Supply

The inspectors verified that there are several systems (batteries, security diesel generator, plant emergency diesel generators, and plant on-site AC power) that provide backup power to the security systems and reviewed the accompanying test and maintenance procedures. The systems and procedures were consistent with the Plan. The batteries, battery chargers, inverters, and the diesel generators are located in locked areas.

8. Testing, Maintenance and Compensatory Measures

The inspectors reviewed testing and maintenance records. The testing and maintenance records committed to in the Plan were on file and readily available for review. The security systems are maintained and repaired by several different groups, located both on and off-site, therefore, the security organization is not always ensured of prompt repair and return to service of malfunctioning security equipment. The licensee agreed to review this situation.

The inspectors also reviewed the licensee's use of compensatory measures and determined them to be as committed to in the Plan.

9. Security Training and Qualification

The inspectors randomly selected and reviewed the training and qualifications records for ten SFMs. Physical qualifications and firearms qualifications records were inspected. These records were for armed guards, security monitors and supervisory personnel. The inspectors determined that the required training had been conducted in accordance with the security program plans and that it was properly documented.

The licensee administers the training program with eight professionals (1 supervisor, 3 instructors/on-site, 2 instructors/off-site, 1 clerk and 1 part-time firearms instructor). Newly hired SFMs receive a minimum of ten weeks of basic training (including 40 hours of firearms training). The Colbert County Junior college is awarding 20 college credits for the completion of this basic training program to qualified students. SFMs are also on a five week routine training schedule, i.e., every fifth week they receive one week of training. Training schedules are prepared one year in advance.

Several SFMs were interviewed to determine if they possessed the requisite knowledge and ability to carry out their assigned duties. The interview results indicated that they are very professional and knowledgeable of their job requirements.

The inspectors determined that the turnover rate in the security force (both proprietary and contractor personnel) is very low, with almost all turnover as a result of transfers within the licensee's organization.

At the time of the inspection, the licensee's security force consisted of 150 personnel (10 supervisory personnel, 10 security system operators, 42 SFMs and 88 contract watchmen, 53 of whom were outage-related only). The inspectors verified that the armed response force meets the commitments in the Plan and that there is always one full-time member of the security organization on-site who has the authority to direct security activities. The corporate security department has also added one full-time investigator to the site to conduct on-site investigations.

10. Exit Interview

The inspectors met with the licensee representatives indicated in paragraph 1 at the conclusion of the inspection on May 5, 1989. At the time, the purpose and scope for the inspection were reviewed and the findings were presented.

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