

U. S. NUCLEAR REGULATORY COMMISSION
REGION I*Keinig, R. R., 6-5-92*
Signature-Title-Office-Date

Report No. 50-293/92-09

Docket No. 50-293

License No. DPR-35

Licensee: Boston Edison Company
P.O. Box 215
Boston, Massachusetts 02199

Facility Name: Pilgrim Nuclear Power Station

Inspection At: Plymouth, Massachusetts

Inspection Conducted: May 11-15, 1992

Type of Inspection: Routine, Announced Physical Security

Inspector:

Edward B. King
E. B. King, Physical Security Inspector6/5/92
date

Assisted by:

R. B. Manili, Nuclear Reactor Regulation (NRR)
D. N. Orrik, NRR
G. M. Christoffer, NRR
M. P. Sweeney, U. S. Army
R. J. Speer, U. S. Army
J. W. Spalding, U. S. Army

Approved by:

Richard Keinig
R. R. Keinig, Chief, Safeguards Section
Division of Radiation Safety and
Safeguards6-5-92
date

Areas Inspected: Licensee Action on Previously Identified Open Security Items; Management Support, Program Plans, and Audits; Protected and Vital Area Physical Barriers, Detection and Assessment Aids; Protected and Vital Area Access Control of Personnel and Packages; Alarm Stations and Communications; Emergency Power Supply; Testing, Maintenance and Compensatory Measures; Security Training and Qualifications; and Safeguards Information Protection Program.

Results: The licensee was found to be in compliance with the NRC requirements in the areas inspected. However, one potential weakness in the intrusion detection system was identified on the protected area perimeter. Compensatory measures were implemented immediately for the weakness and it was corrected on the day it was identified.

DETAILS

1.0 Key Persons Contacted

1.1 LINDBSC

- *R. A. Anderson, Senior Vice President-Nuclear
- *W. S. Clancy, Deputy Plant Manager
- *W. C. Rothert, Director Nuclear Administration
- *J. F. Neal, Security Section Manager
- *T. J. Nicholson, Security Administration Division Director
- *B. Deacy, Security Division Manager
- *D. W. Ellis, Senior Compliance Engineer
- *N. L. Desmond, Compliance Division Engineer
- *S. L. Bibo, Quality Assurance (QA) Audit Division Manager
- *W. J. Crawford, Instrumentation and Controls (I&C) Division Manager

1.2 U. S. Nuclear Regulatory Commission

- *J. B. Macdonald, Senior Resident Inspector
- *E. M. Kelly, Section Chief, Division of Reactor Projects, Region I

*Denotes those present at the exit interview

The inspector also interviewed other licensee and contractor security personnel during this inspection.

2.0 Followup of a Previously Identified Security Item

(Closed) VIO 50-293/91-20-01: Failure to Maintain Protected Area (PA) Lighting Within the Required Levels

The inspector verified by observation and measurement that three areas identified during a previous inspection that were not illuminated to the required levels were properly corrected. Additionally, the inspector reviewed the corrective actions taken by the licensee to ensure that patrol officers look for and properly report lighting deficiencies to security supervision. The inspector determined the corrective actions to be adequate.

3.0 Management Support, Security Program Plans, and Audits

3.1 Management Support

Management support for the licensee's physical security program was determined to be consistent with program needs. This determination was based upon the inspector review of the various aspects of the licensee's program during this inspection as documented in his report.

Security program enhancements made since the last routine physical security inspection (50-293/91-20) are as follows:

- the installation of state-of-the-art equipment to upgrade the assessment capabilities around the protected area perimeter;
- a number of perimeter intrusion detection zones (IDS) were upgraded to enhance system reliability and minimize maintenance; and
- the incorporation of a tactical weapons course in the training program.

3.2 Security Program Plans

The inspector verified that changes to the NRC-approved Physical Security Plan (the Plan), as implemented, did not decrease the effectiveness of the Plan and that they were submitted in accordance with NRC requirements.

3.3 Audits

The inspector reviewed the licensee's annual Quality Assurance Audit of the security program, No. 91046, which was conducted from October 21 - November 1, 1991. During the audit, no adverse findings were identified but four recommendations were made. The recommendations were not indicative of any programmatic problems and were appropriately addressed. No deficiencies were noted.

4.0 Protected and Vital Area Physical Barrier, Detection and Assessment Aids

During this inspection, the inspector was assisted by a team from the NRC's Office of Nuclear Reactor Regulation and the U. S. Army to evaluate the effectiveness of the protected area perimeter intrusion detection and assessment systems.

4.1 Protected Area Detection Aids

On May 12, 1992, the team conducted testing of the protected area perimeter IDS by attempting to circumvent or penetrate the system in 40 locations. Testing consisted of jumping, running and crawling through or around the system, and probing for sensitivity. Representatives of the licensee observed all testing.

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LEFT BLANK.

The inspector determined that the deficiency existed due to a safety concern with testing for such a vulnerability. The licensee agreed to look into a modified testing procedure. On that same day, all corrective actions were completed and the team concluded, by retesting the system, that the actions were satisfactory. The inspector will review this matter in a subsequent inspection.

4.2 Assessment Aids

The team conducted performance testing of the closed circuit television (CCTV) on May 12, 1992, during day and night periods. The testing was conducted using the video monitors and the new state-of-the-art assessment equipment in the alarm stations to observe team members in the isolation zones as they proceeded around the perimeter. Team members ran or dove through the perimeter IDS and attempted to hide in the darkness or in an area obscured from the view of the fixed cameras. No deficiencies were detected. However, due to poor weather conditions, all performance testing could not be completed at that time. On May 14, 1992, the inspector completed the testing and found no deficiencies.

4.3 Protected Area Barrier

The inspector conducted a physical inspection of the PA barrier on May 11, 1992. The inspector determined by observation that the barrier was installed and maintained as described in the Plan. No deficiencies were noted.

4.4 Protected Area and Isolation Zone Lighting

The inspector conducted a PA and isolation zone lighting survey on May 12, 1992, from approximately 8:00 p.m. to 9:15 p.m., accompanied by a licensee security supervisor. The inspector determined by observation that the station's lighting system was very effective and that the isolation zones were adequately maintained to permit observation of activities on both sides of the PA barrier. No deficiencies were noted.

4.5 Vital Area Barriers

The inspector conducted a physical inspection of selected VA barriers on May 14, 1992. The inspector determined by observation that the VA barriers were installed and maintained and described in the Plan. No deficiencies were noted.

4.6 Vital Area Detection Aids

The inspector requested and observed testing of selected VA detection aids on May 14, 1992, and determined that they were installed, maintained and operated as committed to in the Plan. No deficiencies were noted.

5.0 Protected and Vital Areas Access Control of Personnel and Packages

5.1 Personnel Access Control

The inspector determined that the licensee was exercising positive control over personnel access to the PA and VAs. This determination was based on the following:

5.1.1 The inspector verified that personnel were properly identified and authorization was checked through the security computer prior to issuance of badges and key cards. No deficiencies were noted.

5.1.2 The inspector verified that the licensee was implementing a search program for firearms, explosives, incendiary devices and other unauthorized materials as committed to in the plan. The inspector

observed both plant and visitor personnel access processing during peak and off-peak traffic periods on May 12 and 13, 1992. No deficiencies were noted.

- 5.1.3 The inspector determined, by observation, that individuals in the PA and VAs displayed their badges as required. No deficiencies were noted.
- 5.1.4 The inspector verified that the licensee had escort procedures for visitors into the PA and VAs. No deficiencies were noted.
- 5.1.5 The licensee had a mechanism for expediting access to the vital equipment during emergencies and that mechanism was adequate for its purpose. No deficiencies were noted.
- 5.1.6 The inspector verified that the licensee takes precautions to ensure that an unauthorized name cannot be added to the PA access list by having a member of management review the list every 31 days. No deficiencies were noted.

5.2 Package and Material Access Control

The inspector determined that the licensee was exercising positive control over packages and materials that were brought into the PA through the main access portal. The inspector reviewed the package and material control procedures and found that they were consistent with commitments in the Plan. The inspector 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. No deficiencies were noted.

6.0 Alarm Stations and Communications

The inspector observed the operations in the Central Alarm Station (CAS) and Secondary Alarm Station (SAS) and determined they were operated as committed to in the Plan. CAS and SAS operators were interviewed by the inspector and found to be knowledgeable of their duties and responsibilities. The inspector verified that the CAS and SAS did not require any operational activities that would interfere with the assessment and response functions. No deficiencies were noted.

7.0 Emergency Power Supply

The inspector verified that there are several systems (batteries, dedicated diesel generator within a VA, and plant on-site AC power) that provide backup power to the security systems. The inspector reviewed the test and maintenance records and procedures for these systems and found that they were consistent with the Plan. No deficiencies were noted.

However, during discussions with the licensee, the inspector questioned why testing of the secondary power supply causes access control equipment failure. The licensee stated that the access control search equipment is not connected to the secondary power supply, but a new security diesel is presently being installed and, due to an increased load capacity, connecting the access control search equipment to it is under consideration.

8.0 Testing, Maintenance and Compensatory Measures

The inspector determined that the licensee was conducting testing and maintaining security systems and equipment as committed to in the Plan. This determination was based upon a review of the test records for security equipment. A review of these records indicated repairs were normally made within 24 to 72 hours after a repair request was generated. The inspector also reviewed the use of compensatory measures and security force overtime and found them to be minimal, largely due to the efforts and prompt response of the maintenance group. No deficiencies were noted.

9.0 Security Training and Qualification

The inspector randomly selected and reviewed training and qualification records for ten armed SFMs and security supervisors. The physical and firearms qualification records were included. The inspector determined that the training and qualification had been conducted in accordance with the security training and qualification (T&Q) plan and that it was properly documented. On May 13, 1992, the inspector observed a portion of the firearms tactical shotgun/revolver familiarization course. Based on observations at the range, the inspector determined that the course was well developed placing emphasis on tactical movement and usage of assigned weapons, and that the range was being controlled in a safe manner. No discrepancies were noted.

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 were professional and knowledgeable of the job requirements. No deficiencies were noted.

10.0 Safeguards Information (SGI) Program

The inspector reviewed the licensee's stations procedures and records, interviewed personnel and discussed the training of SFM's and other Security Department personnel on the preparation, receipt, identification, use, reproduction, transmittal and storage of SGI with licensee management. The inspector verified that all SGI is stored within access controlled areas in approved storage cabinets, and is only accessed by authorized personnel with a need-to-know. The inspector determined that the licensee's program for the protection of SGI meets the requirements of 10 CFR 73.21. No deficiencies were noted.

11.0 Exit Interview

The inspector met with the licensee's representatives indicated in Paragraph 1.0 at the conclusion of the inspection of May 15, 1992. At that time, the purpose and scope of the inspection were reviewed, and the findings were presented.