



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING PROPOSED EXEMPTION AND AMENDMENT

TO FACILITY OPERATING LICENSE NO. NPF-82

LONG ISLAND LIGHTING COMPANY

SHOREHAM NUCLEAR POWER STATION, UNIT 1

DOCKET NO. 50-322

1.0 INTRODUCTION

By letter dated October 9, 1990, the Long Island Lighting Company (the licensee or LILCO) requested an amendment to Facility Operating License No. NPF-82 for the Shoreham Nuclear Power Station (the facility or SNPS) by proposing a revision to the station's Physical Security Plan (PSP).

Based on the results of a review of the amendment, the licensee was informed that certain additional information was necessary in order for the NRC to find the request acceptable. By letters dated November 4 and 8, 1991, the licensee supplemented the previously submitted information. The supplemental information did not change the intent of the original request or alter the initial determination which was published in the Federal Register on October 2, 1991, (56 FR 4923).

The proposed amendment revises the PSP to reflect the long-term defueled condition (LTDC) of the facility and the protection afforded the fuel storage in the spent fuel pool. The principal changes to the plans were (1) devitalization of vital areas, (2) reduction of the protected area, and (3) reduction in shift staffing.

2.0 EVALUATION

The general performance objectives and requirements of 10 CFR 73.55(a) specify that the physical protection program shall provide high assurance that activities involving special nuclear materials are not hazardous to the common defense and security and do not constitute an unreasonable risk to the public health and safety. The revision to the PSP for the LTDC continues to meet these performance objectives based on (1) fuel being placed in the spent fuel pool (SFP) in the fuel storage building (FSB) on August 9, 1989, and (2) Amendment No. 7 dated June 14, 1991, that modified Facility Operating License No. NPF-82 to a Possession Only License and prohibits placing fuel into the reactor vessel without NRC approval.

The permanent removal of all fuel from the reactor and its long-term storage in the SFP inside the FSB, coupled with the Possession Only License Condition have significantly reduced the spectrum of credible accident scenarios and potential acts of radiological sabotage that are associated with a fueled reactor. Details of the analysis are provided in the Safety Analysis for the Long Term Defueled Condition Technical Specifications. The calculated doses, using conservative assumptions from Updated Safety Analysis Report (USAR) Chapter 15, are well within the guidelines of 10 CFR Part 100. Therefore, the current status of the plant reduces the potential for an act of sabotage to cause a radiological effluent release resulting in radiation doses which exceed the 10 CFR Part 100 limits.

2.1 Physical Security Organization

The licensee has established a physical security organization which provides for a chain of command. The PSP indicates the position onsite with the ultimate security responsibility down to shift-to-shift supervision. The PSP stipulates that no individual shall act as a guard, watchman, armed response person, or other member of the security organization unless such an individual has been trained and qualified to perform each assigned security job duty in accordance with the Security Force Training and Qualification Plan. The PSP further specifies that security force personnel will be requalified in applicable physical fitness standards and training requirements in accordance with the requirements of the approved training and qualification plan. All results of employment suitability, physical and mental qualifications data, and test results for security personnel are documented and made available for NRC inspection.

2.2 Physical Barriers

The Secured Area is enclosed by a cyclone fence of 11 AWG wire fabric or greater, topped with three strands of barbed wire. The Protected Area consists of the refueling deck of the Reactor Building which is located at elevations of 175 ft. There are also four areas accessible only from the refueling deck, they are (1) spent fuel storage pool, (2) dryer and separator storage pool, (3) reactor water cleanup filter demineralizers and holding pumps rooms, and (4) refueling cavity. The Protected Area is totally within the Secured Area. The physical barriers associated with these areas meet the definition contained in 10 CFR 73.2. In the event of degradation of security measures associated with the Protected Area, established compensatory measures will be implemented.

2.3 Access Requirements

An access authorization screening program which is equivalent to Regulatory Guide 5.66 "Access Authorization Program For Nuclear Power Plants," has been established for all personnel who are authorized unescorted access to the Protected Area.

Unescorted personnel access into the Secured Area must be authorized by a designated Shoreham representative. Prior to being granted unescorted access, general employee training must also be completed.

A facility identification badge system is used to identify all personnel who are (1) within the Secured Area, (2) within the Protected Area, and (3) visitors. Visitors are issued a distinctively colored badge indicating "visitor" to be worn while inside the Secured Area. Personnel access through the portals to the secured area is provided by the security organization.

A search of all personnel entering the Protected Area (PA) is conducted through the use of metal and explosive detectors to detect firearms, explosives, incendiary devices, and/or contraband, except law enforcement and fire department personnel on official duty. Definitive identification and authorization criteria for accepting packages and material for delivery into the PA have been established. Detailed procedures covering the searching and handling of packages and material have been developed and implemented.

2.4 Detection Aids

Illumination of the Secured Area is sufficient to observe potential intruders. Lighting within the Protected or Special Security Areas, is sufficient to provide for observation and safe movement of personnel. All access portals into the PA are key locked and alarmed against entry. A security post of a fixed nature is manned at all times in the PA. In addition, special purpose motion detectors will be activated whenever there is no work activity within the PA. These detectors will alarm at the fixed Security Officer's post. All other alarms annunciate in the Alarm Station and indicate open portals, component failure, tampering, or the presence of individuals, and meet the requirements of Regulatory Guide 5.44, Rev. 1, in regard to nuisance and false alarms. The system is protected by line supervision.

Compensatory measures have been developed and will be implemented in the event of a failure or degradation of the PA lighting system or the alarm system.

2.5 Communications

The capability of maintaining continuous communications between the Alarm Station, Control Room Operators, and Security Officers is provided by two-way radios, telephones, and Gai-tronics. Redundant and independent communication between the Alarm Station and the Local Law Enforcement Authority (LLEA) is provided by both a radio and telephone system.

2.6 Test and Maintenance Requirements

Testing and maintenance programs and/or procedures have been established for (a) physical barriers and protected area access portals, (b) search equipment, (c) the intrusion detection, and (d) the communications system.

With regard to test in general, functional tests of search equipment are conducted at the beginning of any period of use. As for the intrusion detection system, each alarm is tested for performance at the beginning of any period that it used for security. If the period of continuous use is longer than seven (7) days, the alarm is tested at least once every seven (7) days. Onsite communications equipment is tested at least once at the beginning of

every eight-hour shift of the Security Guard Force. Communications equipment required for communications offsite is tested for performance not less than once a day.

2.7 Audits

The Shoreham Nuclear Quality Assurance personnel, being independent of the security organization management and supervision, will conduct audits of site security activities at least once every twelve months. Results of the audits will be documented along with any applicable recommendations for corrections and improvements and forwarded to plant management.

2.8 Reponse Requirements

The licensee has provided for armed responders who are immediately available for response duties on all shifts. In addition, liaison with the LLEA is maintained and is documented. LILCO has established alternative law enforcement liaison with the Federal Bureau of Investigations (FBI), which also has jurisdictional responsibilities in the event of a security contingency. The licensee has retained all the necessary commitments in their proposed security plans to continue meeting the requirements of 10 CFR 73.55, Appendix B and Appendix C, as applicable to the long-term defueled condition of fuel storage in the spent fuel pool.

2.9 Exemption

The licensee has requested an exemption from certain safeguards requirements of 10 CFR 73.55.

Based on a review of LILCO's analysis of possible safeguards events at Shoreham in its defueled status and the staff conclusion that the Long-Term Defueled Condition Security Plan provides an adequate basis for an acceptable safeguards program, we find that the licensee's request for an exemption is reasonable in light of the significant reduction in the possibility of a potential act of radiological sabotage resulting in an effluent release in radiation doses which exceed the 10 CFR Part 100 limits.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves changes to the SNPS Physical Security Plan and does not involve any significant construction impacts. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(12). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

In addition, an Environmental Assessment for the related exemption from certain requirements of 10 CFR Part 73.55 was published in the Federal Register on January 28, 1992 (57 FR 3224). Based on the environmental assessment, the Commission has determined that issuance of the amendment will not have a significant effect on the human environment.

4.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that (1) the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (3) such activities will be conducted in compliance with the Commission's regulations, and (4) the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

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