



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 10 TO FACILITY OPERATING LICENSE NO. NPF-36

LONG ISLAND LIGHTING COMPANY

SHOREHAM NUCLEAR POWER STATION

DOCKET NO. 50-322

1.0 INTRODUCTION

By letter dated September 4, 1987, as supplemented November 19, 1987, Long Island Lighting Company (the licensee) requested an amendment to Facility Operating License No. NPF-36 for the Shoreham Nuclear Power Station. The proposed amendment would change the definition of core alteration in the Technical Specifications (TSs) to include certain exceptions and change footnotes in the TSs to be consistent with the new definition.

2.0 EVALUATION

Definition of Core Alteration

The following changes to the TSs would be made:

- a. The definition of core alteration would be modified to exclude normal movement of the source range monitors (SRMs), intermediate range monitors (IRMs), or transversing in-core probes (TIPs).
- b. The "*" footnote to Specification 3.1.1 on shutdown margin would be modified by deleting the exception to the core alteration definition for the movement of SRMs and IRMs. This footnote provides an exception to the core alteration definition for movement of IRMs, SRMs or special movable detectors. The exception for movement of special moveable detectors remains and is not affected by this change.
- c. A "*" footnote to Specification 4.1.2a on reactivity anomalies would be added to allow an exception to the core alteration definition for movement of control rods via their normal drive systems.
- d. The "*" footnote to Surveillance Requirement 4.1.3.2a would be modified by deleting the exception to the core alteration definition for the movement of SRMs, IRMs or special movable detectors. The exception for normal control rod movement remains and is not affected by this proposed change.

- e. The "*" footnote to Table 3.3.1-1 would be modified by deleting the exceptions to the core alteration definition for IRMs and SRMs. The part of the "*" footnote requiring operable SRM instrumentation for replacement of LPRM strings would be retained.
- f. The "*" footnote to Specification 3.9.2 on refueling operation instrumentation would be provided by deleting the exception to the core alteration definition for the movement of SRMs and IRMs. This footnote provides an exception to the core alteration definition for movement of IRMs, SRMs, or special moveable detectors. The exception for movement of special moveable detectors remains and is not affected by this change.
- g. The "*" footnote to Specification 3.9.5 and 4.9.5 on refueling operation communication would be modified by deleting the exception to the core alteration definition for incore instrumentation. The part of the "*" footnote that allows an exception for control rod movement with their normal drive system remains and is not affected by this proposed change.

The present definition of core alteration is:

"Core alteration shall be the addition, removal, relocation or movement of fuel, sources, incore instruments or reactivity controls within the reactor pressure vessel and the vessel head removed and fuel in the vessel. Suspension of core alterations shall not preclude completion of the movement of a component to a safe conservative position".

The proposed change would insert the following after the first sentence:

"Normal movement of the SRMs, IRMs, or TIPS, in the driving system is not considered a core alteration".

The exception to the present definition of core alteration for the normal movement of the SRMs, IRMs, LPRMs, TIPS, and special moveable detectors is needed in certain specifications related to refueling operations in order to preclude unnecessary suspension of the normal movement of these detectors. During a refueling outage, maintenance or modification of equipment can result in TS limiting condition for operation which require that core alteration be suspended. In the present TSs, exceptions to the definition of core alteration for normal movement of detectors are provided by footnotes in those TSs where a need for the exception was foreseen.

However, some TSs that require suspension of core alterations do not presently have a footnote excepting normal movement of detectors. For example, Specification 3.8.1.2 requires suspension of core alterations when the Limiting Conditions for Operation are not met. With the present

TSs, surveillance tests of SRMs and IRMs would not be performed because the tests require movement of the detectors. Making the exception a part of the definition will correct this type of operational problem. Where particular conditions are required for normal movement of detectors, these conditions are retained in the applicable TSs. For example, the requirement for SRMs to be operable when replacing LPRMs is retained in Specification 3/4.3.1, "Reactor Protection System Instrumentation".

The NRC staff has reviewed the proposed changes to the SNPS TSs related to core alterations. The detectors in the SRM, IRM, and TIP are sealed unit fission detectors and their reactivity worth is insignificant with respect to reactivity excursion events. Therefore, allowing the normal movement of these detectors will not significantly increase the probability or consequences of an accident previously analyzed in the Final Safety Analysis Report. The proposed change would only permit normal movement of the incore detectors. Normal movement of these detectors includes insertion and withdrawal using detector drives, and replacement of detectors. The addition, removal or relocation of SRMs, IRMs, and TIPs would still be prohibited.

The staff concludes that the proposed changes to the definition of core alteration, and the deletion references to SRMs, IRMs, and incore instrumentation in certain footnotes in the TSs for consistency with the new definitions and addition of a footnote to reduce the surveillance requirements for reactivity anomaly after core alteration conditions (Operational Condition 5) during which no core changes occur but only movement of control rods in their drive mechanism would not significantly reduce the level of safety and would enhance safety by making the TSs more readable. Accordingly, the proposed changes are acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change to a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes to the surveillance requirements. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement nor environmental assessment need be prepared in connection with the issuance of this amendment.

4.0 CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register (52 FR 47785) on December 16, 1987 and consulted with the State of New York. No public comments were received, and the State of New York did not have any comments.

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and the security nor to the health and safety of the public.

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Dated: November 30, 1989