



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D. C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

RELATED TO AMENDMENT NO. 11 TO

FACILITY LICENSE NO. NPF-82

SHOREHAM NUCLEAR POWER STATION, UNIT 1 (SNPS)

DOCKET NO. 50-322

1.0 INTRODUCTION

By letter dated November 4, 1993, the licensee, Long Island Power Authority (LIPA) requested an amendment to Facility License No. NPF-82. The amendment would modify the Possession-Only License and deletes the Shoreham Nuclear Power Station (SNPS) Technical Specifications (TS), Appendix A, and the SNPS Environmental Protection Plan (non-radiological), Appendix B.

2.0 BACKGROUND

The SNPS license was amended on July 19, 1991, to authorize possession only, but not operation of the reactor located at Wading River, New York. The SNPS has been shut down since February 28, 1989, and only operated intermittently at low-power levels during the period July 1985 and June 1987. At the time of the plant's final shutdown, in June 1987, the average fuel burnup was calculated to be approximately two effective full-power days. Fuel removal from the reactor was completed in August 1989. The Order Authorizing Decommissioning was issued June 11, 1992. In the September 1993, LIPA entered into a contract with Philadelphia Electric Company (PECo) to purchase the SNPS slightly irradiated fuel. LIPA's estimates that the fuel transfer to PECO will be completed by May 1994.

3.0 EVALUATION

The NRC staff has completed its review of the amendment request from LIPA. The staff's bases for granting the amendment are discussed below.

By the time that all fuel has been removed from SNPS, it is expected that all contaminated or activated systems will have been decontaminated or dismantled and removed, except for the structures and systems associated with the Spent Fuel Storage Pool (SFSP). The work remaining involves decontamination of SFSP piping that could not be isolated while the SFSP was filled. In addition, the remaining Spent Fuel Storage racks that had not been

decontaminated will have to be removed and disposed. SNPS estimates the occupational radiation exposure to support this effort will be less than 0.01 person-rem.

The "Shoreham Nuclear Power Station Defueled Safety Analysis Report" (DSAR) and the approved "Shoreham Nuclear Power Station Decommissioning Plan" (DP) analyzed several accident scenarios. The worst-case accident scenario was the fuel damage accident analyzed in Chapter 15 of the DSAR. The worst-case fuel damage accident assumed all 560 fuel assemblies being damaged, with no credit taken for containment isolation. The whole-body dose to an individual at the site boundary was calculated to be 1.08 mrem. The 1.08 mrem dose due to the worst case accident is less than one percent of the U. S. Environmental Protection Agency's "Protective Action Guidelines" dose of 1000 mrem requiring protective action. Once the irradiated fuel has been removed, this accident scenario would not be possible at SNPS. After the fuel is removed, the radioactive material inventory other than sealed sources will be less than 8 millicuries. The only sealed sources that still remain on site are required for instrumentation calibration, and sample analysis. SNPS License Condition No. 3 to this amendment prohibits the amendment from being implemented until the licensee has certified to the NRC that all the fuel has been removed, and the decommissioning/ decontamination work on the biological shield wall is complete.

In summary, the basis for finding the licensee's proposed changes are acceptable are: 1) all irradiated fuel will be removed and shipped off site; 2) all contaminated or activated systems be decontaminated or dismantled and removed, except for the structures and systems associated with the SFSP; 3) the radioactive material inventory other than sealed sources will be less than 8 millicuries; and 4) all remaining accident scenarios are bounded by accidents previously analyzed in the approved Defueled Safety Analysis Report (DSAR) and the approved Decommissioning Plan (DP).

This proposed amendment deletes from the Possession-Only License (POL) the requirements associated with the safe storage and handling of irradiated fuel, the accompanying Appendix A of SNPS Technical Specifications, and Appendix B of SNPS Environmental Protection Plan (non-radiological). This proposed amendment updates the SNPS POL to reflect the status of the facility after irradiated fuel is removal from the site.

### 3.0 ENVIRONMENTAL CONSIDERATIONS

The amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9), and 10 CFR 51.22(c)(10). 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.

### 4.0 AGENCIES AND PERSONS CONSULTED

In accordance with the NRC's regulations, the New York State Official was notified of the proposed issuance of the amendment. The State Official had no comments on the proposed amendment.

## 5.0 CONCLUSION

The NRC has concluded, based on the considerations above, that: (1) because the license amendment did not involve an increase in the probability or consequences of accidents previously evaluated, or create the possibility of a new or different kind of accident from any accident previously evaluated, and does not result in a significant reduction in a margin of safety, the amendment does not involve a significant hazard analysis; (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 NRC's regulations; and (4) the issuance of the amendment will not be inimical to the common defense and security, or to the health and safety of the public.

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Date: 10/25/94

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