



Long
Island
Power
Authority

Shoreham Nuclear Power Station
P.O. Box 628
North Country Road
Wading River, N.Y. 11792

LSNRC-1899

JAN 22 1992

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Application For An Amendment To Facility Operating License NPF-82
Revision To No Significant Hazards Consideration Analysis
Shoreham Nuclear Power Station - Unit 1
Docket No. 50-322

Re: (1) Letter LSNRC-1883 from L.M. Hill, LIPA to U.S. Nuclear
Regulatory Commission, dated January 13, 1992; subject:
License Amendment to Authorize Decommissioning

The referenced letter requested NRC approval of a proposed amendment to the Shoreham Possession Only License (POL) to add a new license condition, which would authorize the decommissioning of Shoreham in accordance with: a) the Shoreham Decommissioning Plan of December 29, 1990 (as supplemented), and b) the Commission's rules and regulations. The appendix to the referenced letter provided LIPA's analysis of no significant hazards consideration, as required by 10 CFR 50.91(a), in support of the requested license amendment.

Following submittal of the referenced letter, LIPA developed additional information for the associated no significant hazards consideration analysis which, it is believed, will facilitate NRC Staff processing of the requested license amendment. The additional information has been prepared by LIPA in the form of a revision to the no significant hazards consideration analysis, and is attached hereto (see Appendix 1). Revised information is indicated by a revision bar in the right margin.

ADD 11

For the reasons specified in the referenced letter, LIPA respectfully requests that this matter continue to be processed as expeditiously as possible and noticed promptly in the Federal Register, to avoid further delay in decommissioning.

Long Island Power Authority

By



L. M. Hill

Resident Manager
Shoreham Nuclear Power Station

cc: D. Ross
S. Brown
T. T. Martin
L. Doerflein
L. Bell
B. Norris

APPENDIX 1

ANALYSIS OF NO SIGNIFICANT HAZARDS CONSIDERATION

LIPA has performed a "no significant hazards consideration" analysis, assessing the proposed amendment using the standards set forth in 10 CFR §50.92(c). This analysis demonstrates that the proposed amendment does not involve a significant hazards consideration.

A. Requirements of 10 C.F.R. § 50.92.

Section 50.92 provides that the NRC may make a determination "that a proposed amendment to an operating license . . . involves no significant hazards consideration" if "operation of the facility in accordance with the proposed amendment" would not

- "(1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or
- (2) Create the possibility of a new or different kind of accident from any previously evaluated; or
- (3) Involve a significant reduction in a margin of safety."

Decommissioning activities at Shoreham would not involve a significant hazards consideration, as shown below.

B. Condition of Shoreham Confirms No Significant Hazards

Given the limited operating history of Shoreham (less than two effective full-power days), the levels of radioactivity and amounts of contamination at Shoreham are much lower than at a plant that has operated for a significant time at full power. This greatly reduces the scope and complexity of decommissioning activities. The Shoreham Decommissioning Plan contains an Accident Analysis for decommissioning activities and for Spent Fuel Storage and Handling. This analysis establishes that, given the defueled and non-operating status of the plant and the limitations in the Technical Specifications applicable to the plant, continued maintenance and decommissioning of Shoreham pose minimal radiological risk.

The radiologically bounding accident -- a fuel damage accident -- is described in Section 3.4.1.8 of the Decommissioning Plan. This same postulated event was analyzed by LILCO in its Defueled Safety Analysis Report and reviewed and approved by the NRC Staff in its Safety Evaluation Related to Amendment No. 7 To Facility Operating License NPF-82 dated June 14, 1991. Because this postulated event is still the applicable radiologically bounding

accident, the previous findings of no significant hazard consideration remain valid. (See Section 4.0 of NRC Staff Safety Evaluation referenced above.) As further evidence of the minimal radiological risk associated with this bounding postulated event, it is noted that the same bounding event also formed the basis for NRC authorization to cease offsite emergency preparedness activities at Shoreham, again, with a determination of no significant hazards consideration.

C. The Requirements of 10 CFR §50.92 Are Met

The following discussion provides a specific analysis of the proposed change against the three standards delineated in 10 CFR 50.92. It confirms that the proposed license amendment is administrative in nature, designed to achieve consistency with the Commission's Decommissioning Order to be issued in accordance with 10 CFR §50.82(e), and therefore involves no matters that would pose a significant hazards consideration.

1. The Proposed Change Does Not Involve a Significant Increase in the Probability or Consequences of an Accident Previously Evaluated

The proposed amendment will do nothing more than authorize decommissioning of Shoreham in accordance with the Shoreham Decommissioning Plan. The Decommissioning Plan contains accident analyses which will have been reviewed by the NRC. The amendment will in no way alter the probability or consequences of the accidents previously analyzed in the Decommissioning Plan, but will simply authorize that those decommissioning activities be performed according to the Plan.

The fuel will not be further irradiated. The non-operating, defueled condition of the reactor further reduces the probability of an operational accident. The potential accident consequences for the low burn-up fuel in the spent fuel pool have been analyzed assuming a fuel damage accident. Further, the analysis conservatively assumed maximum fission product release (release of all fuel gap activity). All of the postulated decommissioning accident analyses demonstrate that accident consequences would be substantially lower than the previous Updated Safety Analysis Report (USAR) accident analyses results and well within regulatory limits.

The fuel, radioactive waste and material will not be handled or treated in a different manner than assumed in previous safety analyses and evaluations. The small amounts of radioactive waste and materials at Shoreham are contained in systems and components specifically designed for their control. Fuel handling will be performed by certified personnel, with approved equipment and approved procedures. The low burn-up fuel is stored in the spent fuel pool. Storage of the fuel in any on-site location other than the spent fuel pool would require a further license amendment.

Therefore, the proposed amendment to NPF-82 does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. The Proposed Change Will Not Create The Possibility of a New or Different Kind of Accident from Any Accident Previously Evaluated

The proposed amendment asks only for permission to conduct activities in accordance with the Shoreham Decommissioning Plan (DP). Section 3.4 of the DP contains a description of postulated accidents and presents their analyzed effects and consequences. The set of accidents contained in DP Section 3.4 have either been previously evaluated directly in approved Shoreham licensing basis documents, or are considered to be subsets of accidents previously evaluated in approved Shoreham licensing basis documents.

Accidents identified in the DP which have previously been directly evaluated in approved Shoreham licensing basis documents include the following:

- ° The Fuel Damage Accident (DP Section 3.4.1.8) is previously evaluated in Defueled Safety Analysis Report (DSAR) Section 15.1.36.
- ° The Effects of Natural Catastrophes (DP Section 3.4.1.9) are previously evaluated in DSAR/USAR Sections 3.3 (wind and tornado loading), 3.4 (floods), 3.5 (tornado missiles) and 3.7 (seismic).
- ° The Breach of Physical Security Measures (DP Section 3.4.1.10) is previously evaluated in the SNPS Safeguards Contingency Plan.

Accidents identified in the DP which are considered to be subsets of accidents previously evaluated in Shoreham licensing basis documents include the following:

- ° The Combustible Waste Fire (DP Section 3.4.1.2), the Contaminated Sweeping Compound Fire (DP Section 3.4.1.3), Oxyacetylene Explosion (DP Section 3.4.1.5) and Explosion of Liquid Propane Gas Leaked From A Front End Loader (DP Section 3.4.1.6) are subsets of events that were previously evaluated in the SNPS Fire Hazard Analysis Report (FHAR).

The FHAR primarily focused on the effects of postulated fires on the plant's ability to achieve and maintain safe shutdown. In Section 2 of the FHAR, however, it is stated under the paragraph titled "General" that:

"In addition to assessing their impact on safe shutdown capability, fire hazards throughout the plant were reviewed with regard to the potential for a fire to cause an

unacceptable radioactive release. The review determined that there is no single postulated fire within the plant which could cause an unacceptable release of radioactivity. No release identified would exceed a small fraction of the guidelines set forth in 10CFR100."

The above conclusions remain valid for the fire and explosion events presented in the DP. Further, the hazards associated with the storage and use of oxygen-acetylene fuel gas systems were also addressed in the FHAR under Section 1, item G, "Special Protection Guidelines." While no specific event is evaluated in this FHAR section, it is indicated that such hazards were explicitly considered, resulting in the development of a permit system at Shoreham to control the use of these materials. This permit system will continue to be in effect at Shoreham to control the use and quantities of any combustible or potentially explosive materials during decommissioning.

- ° The Waste Container Drop (DP Section 3.4.1.1), the Vacuum Filter-Bag Rupture (DP Section 3.4.1.4) and the Contamination Control Envelope Rupture (DP Section 3.4.1.7) are subsets of events that were previously evaluated in the USAR. Specifically, USAR Section 15.1.29 "Miscellaneous Small Releases Outside Primary Containment" indicates that releases other than pipe breaks that could occur outside primary containment include small spills and leaks of radioactive materials inside structures that house process equipment. This USAR section further states that the offsite dose resulting from any small spill that could occur outside the primary containment will be negligible in comparison to the dose resulting from postulated leakages that have been assumed and evaluated in USAR Section 11.2 and 11.3 under routine plant releases. The three DP events noted above are considered to be a subset of the small spills and leaks addressed in USAR Section 15.1.29 because they can also be associated with routine activities that are typically conducted at operating nuclear power plants. The offsite doses from these events as analyzed in the DP are also negligible in comparison to the doses from postulated leakages that are evaluated in USAR Sections 11.2 and 11.3 under routine plant releases. With respect to the present Shoreham licensing basis, such doses remain bounded by the routine plant releases authorized under the POL, and are negligible in comparison to the radiologically bounding fuel damage accident.

Therefore, the proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated by the NRC.

3. The Proposed Change Does Not Involve a Significant
Reduction in a Margin of Safety

The proposed amendment does not involve a reduction in any margin of safety. As noted, the license amendment will permit decommissioning to occur as planned and approved and will be consistent with the Commission's regulations and orders. The margin of safety reflected in the analyses presented in the Decommissioning Plan are unaltered by this proposed amendment.

The fuel handling and radioactive waste storage accidents were reanalyzed for the low-burn-up, decay heat, and radioactive inventory conditions of Shoreham in the Decommissioning Plan. These analyses confirmed a significant increase in the margin of safety from those analyzed for long-term, full power operations in the USAR. Further, the Defueled Technical Specifications and Environmental Protection Plan provide acceptable assurance to protect the public health and safety for the defueled condition. As indicated in the Decommissioning Plan, decommissioning activities will be conducted in accordance with the requirements of these documents.

Therefore, the proposed amendment does not involve a significant reduction in the margin of safety.