



Long  
Island  
Power  
Authority

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LSNRC-2020

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

Request for a Modification to the Exemption  
from the Emergency Preparedness Requirements  
of 10 CFR §50.54(q)  
Shoreham Nuclear Power Station - Unit 1  
Docket No. 50-322

- Ref: (1) LILCO letter SNRC-1651 dated December 15, 1989 to U.S. Nuclear Regulatory Commission; subject: Request to Cease Offsite Emergency Preparedness Activities and to Implement the Defueled Emergency Preparedness Plan for the Shoreham Nuclear Power Station.
- (2) NRC letter dated July 31, 1990 to Mr. John D. Leonard, Jr.; subject: Defueled Emergency Preparedness License Condition Amendment and Exemption, Shoreham Nuclear Power Station Unit 1.
- (3) NRC letter dated June 14, 1991 to Mr. John D. Leonard, Jr.; subject: Shoreham Nuclear Power Station, Unit 1 - Amendment No. 7 for Facility Operating License to Possession Only License.
- (4) NRC letter dated September 11, 1991 to Mr. John D. Leonard, Jr.; subject: Exemption Related to 10 CFR Part 55 Regarding Requirements for a Simulation Facility and Requalification Training.
- (5) NRC letter dated June 11, 1992 to Mr. Leslie M. Hill; subject: Order Approving the Decommissioning Plan and Authorizing Decommissioning of Shoreham Nuclear Power Station, Unit 1 (TAC No. M80951).
- (6) NRC letter dated September 4, 1992 to Mr. Leslie M. Hill; subject: Shoreham Nuclear Power Station, Unit 1 - Issuance of Amendment No. 9 to Possession Only License No. NPF-82 (TAC No. M84141).

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Hr. Encl

Gentlemen:

The Long Island Power Authority (LIPA) hereby requests Commission approval to cease implementation of the Shoreham Nuclear Power Station (SNPS) Defueled Emergency Preparedness Plan (DEPP).

Since Shoreham is nearing completion of the implementation of the NRC approved Decommissioning Plan (reference 5) and LIPA holds a Possession Only License, there is an insignificant radiological risk to offsite populations from any credible accident scenario. Onsite events will be responded to in accordance with existing Station Procedures and Emergency Operating Procedures. The regulatory and technical bases for LIPA's request are described below.

#### I. Introduction

As requested by SNRC-1651 (reference 1) and pursuant to 10 CFR §50.12, the Nuclear Regulatory Commission (the Commission or NRC) issued to Long Island Lighting Company (LILCO) an exemption from the requirements of 10 CFR §50.54(q). This Exemption (reference 2) dated July 31, 1990 stated:

"The Shoreham Nuclear Power Station is exempt from the requirements of 10 CFR 50.54(q) for emergency preparedness, provided that: (1) the reactor is void of all fuel assemblies; (2) the spent fuel, with a burn up of approximately two effective full-power days, is stored in the spent fuel pool, or other approved storage configuration; and (3) the Shoreham Nuclear Power Station Defueled Emergency Preparedness Plan is implemented.

This Exemption will remain in effect unless and until revoked by the Commission."

LIPA now requests that this Exemption be modified to eliminate the third provision;<sup>1</sup> specifically, that "(3) the Shoreham Nuclear Power Station Defueled Emergency Preparedness Plan is implemented". This modification to the existing Exemption will enable LIPA to (1) relocate applicable emergency response actions from the DEPP to Station Procedures, Standing Orders, and Emergency Operating Procedures; and (2) discontinue the unnecessary implementation of the DEPP.

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<sup>1</sup> The reactor vessel itself and a reactor internals have been dismantled and are either being decontaminated or shipped offsite. The first provision, therefore, has been rendered moot.

The actions to respond to plant events are covered in existing emergency operating procedures and other station procedures (see Attachment 1). These procedures provide for appropriate notifications, response actions and staff augmentations. Events covered include, natural hazards, fuel handling accidents, fires, a contaminated/injured individual and other credible events. These procedures, implemented from the Control Room, provide an appropriate response for the limited spectrum of credible events that are applicable to Shoreham.

The criteria for maintaining Emergency Response Facilities, as detailed in NUREGs 0696 and 0654, have been reviewed. In accordance with NURFG 0696, the Technical Support Center and the Operational Support Center do not provide any additional relevant capabilities for Shoreham in the defueled status (see Attachment 2). NUREG-0654 Appendix 1 only calls for activation of the Emergency News Center upon declaration of a SITE AREA or GENERAL Emergency. Since Shoreham cannot reach either of these emergency levels, this facility is not required.

Therefore, the requested modification will not reduce the effectiveness of the LIPA Organization to protect public health and safety.

## II. Background

Once licensed to operate, the emergency planning requirements for nuclear power plants are detailed in 10 CFR §50.54(q). This section states that:

A licensee authorized to possess and operate a nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in §50.47(b) and the requirements in Appendix E of this part.

On December 15, 1989, LILCO requested an exemption (SNRC-1651) from this regulation to obtain relief from the high cost associated with the maintenance of the offsite Local Emergency Response Organization (LERO). This utility-implemented program had been needed to compensate for governmental non-participation. The NRC issued the exemption on July 31, 1990 with the provision that LILCO implement the SNPS Defueled Emergency Preparedness Plan (DEPP). This Exemption effectively replaced the generic emergency planning standards of 10 CFR §50.47(b) with the site specific SNPS DEPP. The Commission when issuing the Exemption took into account Shoreham's full power operating license. However, the exemption was based upon the Radiological Safety Analysis for Spent Fuel Storage and Handling, the defueled

condition of SNPS and the Confirmatory Order not to load fuel into the reactor vessel.

On February 29, 1992 the NRC issued an Order Approving Transfer of License NPF-82 from LILCO to LIPA. On September 4, 1992, the Commission issued Amendment No. 9 to License No. NPF-82 (reference 6). Amendment No. 9, per LIPA Management decision, became effective and was implemented on October 2, 1992. This administrative license amendment, which reflected the transfer of the license to LIPA, allows LIPA to possess, use, but not operate SNPS. In addition, this amendment extended to LIPA, "those exemptions from specific portions of the regulations, previously granted by the Commission (to LILCO) and are still applicable." Thus the exemption from 10CFR§50.54(q) and the concurrent requirement that the DEPP be implemented is still in effect.

During a November 24, 1992 Commission briefing, Office of General Counsel personnel recommended that a Possession Only License (POL) be defined in the regulations. Furthermore, they proposed to define which regulations apply to issue a POL and which regulations apply to one who holds it.

LIPA is not licensed to operate SNPS, holds a POL, and believes that the emergency preparedness requirement provision of 10 CFR §50.54(q) cited above is no longer applicable. It follows from that belief that provision (3) of the Exemption, which requires the continued implementation of the DEPP, imposes a requirement that would not otherwise apply. Therefore, a modification to the Exemption (i.e., the elimination of provision 3), is being requested.

The requested modification to the Exemption is justified in accordance with the requirements for an exemption detailed in 10 CFR §50.12. This rule uses a two-tier test to determine if a licensee's request for an exemption should be granted. The following sections detail how these requirements are satisfied.

### III. Modification Of The Exemption Is Consistent With The Requirements Of The First Tier Of The Exemption Regulation

In accordance with 10 CFR §50.12(a)(1) the Commission may grant exemptions to the regulations which are:

Authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security.

The following discussion details how the requested exemption modification complies with these first tier requirements.

A. The Modification of LIPA's Existing Exemption is Clearly Authorized by Law.<sup>2</sup>

LILCO's Possession Only License (Amendment 7 to NPF-82, reference 3) effectively changed the status of Shoreham from an operating facility to a facility in preparation for decommissioning (i.e., a fuel facility). 10 CFR §50.54(q), states that:

A licensee authorized to possess and/or operate a ... fuel facility shall follow and maintain in effect emergency plans which meet the requirements of Appendix E to this part.

10 CFR §50 Appendix E (I)(para. 3) further provides that:

The potential radiological hazards to the public associated with the operation of ... fuel facilities licensed under 10 CFR 50 and 70 involve considerations different than those associated with nuclear power reactors. Consequently the ...degree to which compliance with the requirements of this section and sections II, III, IV and V as necessary will be determined on a case by case basis.

Therefore the modification to the Exemption which would eliminate the requirement for LIPA to implement the DEPP is authorized by law.

B. The Requested Exemption Modification Does Not Present an Undue Risk to the Public Health and Safety.

In accordance with the terms of the present Possession Only License, the fuel must remain in the "fuel pool or other approved storage configuration." The potential radiological hazards associated with the Possession Only License were evaluated as part of the Safety Evaluation Report issued by the NRC in support of the Possession Only License. The

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<sup>2</sup> The NRC has granted exemptions from its emergency preparedness requirements in the past. See, e.g., Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant), CLI-86-24, 24 NRC 769 (1986); see also 51 Fed. Reg. 41035-36 (Nov. 12, 1986) (granting LILCO an exemption from the required emergency preparedness requirements of 10 CFR 50.54(q) for the Shoreham Nuclear Power Station.)

staff analyzed the potential consequences of accidents while Shoreham remains in a defueled condition. The staff found that: "all potential accidents for the defueled, non-operating reactor were acceptably analyzed and the results would not result in a radiological release that would require protective actions for members of the public. The staff considered that the fuel, and radioactive waste and materials, are not to be handled or treated in a substantially different manner than assumed in previous safety analyses and evaluations. Further, the low burn-up fuel is stored in the spent fuel pool, and the small amount of radioactive waste and materials at SNPS are stored in systems which were also designed for their control. Fuel handling will be performed by certified personnel, with existing equipment and approved procedures." (SER to Amendment 7 of NPF-82, pg. 4). Therefore, if there are no radiological hazards to the public, the case specific evaluation of the emergency preparedness requirements permitted by 10CFR50 Appendix E (I) (para. 3) cited above, indicates that there are no applicable requirements under 50.47(b) full power operation, or 50.47(d) low power operation.

Furthermore, during any future movement of the fuel outside of the fuel pool, the fuel will be contained in casks that have been approved by the NRC, or licensed by the NRC in accordance with provisions of 10CFR71, Packaging and Transportation of Radioactive Material. These provisions detail the Package Approval Standards, Subpart E; Testing, Subpart F; Operations, Subpart G; and Quality Assurance, Subpart H. These provisions provide the assurance that there will not be any undue risk from a radioactive release to the public.<sup>3</sup>

These findings continue to be applicable to the current situation, with LIPA as the licensee, because as concluded by the NRC Safety Evaluation Report, issued in support of the license transfer to LIPA, (SER to Amendment 9 of NPF-82, pp. 16 and 17):

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<sup>3</sup> When Shoreham's fuel is within licensed casks, the risk to the public is so minimal that the NRC does not have any emergency preparedness or radiation monitoring requirements for loaded casks traveling within public areas, 10CFR73.67(e), "In-transit requirements for special nuclear material of moderate strategic significance."

- (1) "(T)he proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.
- (2) "(T)he proposed amendment does not create the possibility of a new or different kind of an accident from an accident previously evaluated.
- (3) "(T)he proposed amendment does not involve a significant reduction in a margin of safety."

Therefore, the modification to the exemption, which would remove the requirement to implement the DEPP, would not present an undue risk to public health and safety.

- C. Granting LIPA's Request for a Modification to the Present Exemption Will Have No Impact on the "common defense and security".

The Commission has determined that the phrase, "common defense and security", refers principally to "the safeguarding of special nuclear material; the absence of foreign control over the applicant; the protection of Restricted Data; and the availability of special material for defense needs". (Florida Power and Light, 4 AEC 9.12 (1967)). The requested Exemption modification would have no impact in these areas.

Therefore the modification to the Exemption, specifically the removal of the requirement to implement the Defueled Emergency Preparedness Plan, satisfies the initial tier of requirements for an Exemption from the Commission's regulations.

#### IV. Modification Of The Exemption Is Consistent With The Requirements Of The Second Tier Of The Exemption Regulation

The second tier of the exemption regulation requires that one or more of six special circumstances exist. The following section details how three of these special circumstances apply to Shoreham's Defueled status.

- A. The Requirement to Implement the Defueled Emergency Preparedness Plan Does Not Serve the Underlying Purpose of the Rule.

In accordance with 10 CFR 50.12(a)(2)(ii) the Commission may issue an exemption to the regulation when:

- (ii) "Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule;...."

The underlying purpose of emergency planning is detailed in NUREG-0654. This document states that, "(T)he overall objective of emergency response plans is to provide dose savings (and in some cases immediate life savings) for a spectrum of accidents that could produce offsite doses in excess of the Protective Action Guides (PAGs)". (NUREG-0654; FEMA REP-1 Rev. 1, section D, pg 6).

As cited above, the potential radiological hazard associated with LIPA's License (Amendment 9), "does not involve a significant reduction in a margin of safety," relative to LILCO's Possession Only License which was evaluated as part of the Safety Evaluation Report to Amendment 7. The staff found that "(2) no credible accident for SNPS in the defueled condition could result in the release of radioactive materials to the environment in quantities that would require protective actions for the public." (SER to Amendment 7 of NPF-82, pg. 4).

In addition, the NRC has stated in its letter of September 11, 1991 (reference 4) granting LILCO's exemption from simulator training requirements that, "The NRC Staff has determined that requiring a simulation facility at SNPS and requiring the licensee to adhere to requalification standards geared to an operating power reactor while SNPS is in a permanently defueled status would not serve the underlying purpose of the regulations. Therefore, a special circumstance as defined in 10 CFR 50.12(a)(2)(ii) exists". As described, a similar situation now exists with the DEPP, and LIPA believes a similar Staff finding should be made.

Therefore there is no need for an emergency plan, as required by provision 3 of the Exemption, to comply with the underlying purpose of the rule, (i.e., to provide an emergency plan for an accident that could result in offsite protective actions).

- B. Implementation of the Defueled Emergency Preparedness Plan Creates an Undue Expenditure of Funds for a Facility That Poses No Credible Threat to Public Health and Safety.

In accordance with 10 CFR §50.12(a)(2)(iii), the Commission may issue an exemption to the regulation when:

- (iii) Compliance would result in undue hardships or other costs that are ... significantly in excess of those incurred by others similarly situated.

To determine the level of emergency preparedness appropriate for SNPS it is appropriate to consider the regulation that applies to facilities that are 'similarly situated'.

The emergency preparedness requirements for 10 CFR §50 licensed facilities are detailed in §50.47. This section dictates that:

(N)o operating license for a nuclear power reactor will be issued unless a finding is made by NRC that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

LIPA does not possess a license to operate the reactor at any power level. The reactor itself and its internal components have been dismantled and are either being decontaminated or shipped offsite. The Shoreham fuel is only slightly irradiated, and is stored in the spent fuel pool. These conditions place Shoreham in a status similar to that of a plant under construction since, as determined by the NRC, Shoreham does not present any radiological risk to the public health and safety. There are no emergency planning requirements for nuclear power plants under construction so the requirements of the Exemption provision (3), requiring the implementation of the SNPS Defueled Emergency Preparedness Plan, imposes a regulatory requirement that is significantly in excess of those incurred by others similarly situated.<sup>4</sup>

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<sup>4</sup> It is also appropriate to obtain emergency preparedness regulatory guidance from other parts of Title 10 Code of Federal Regulations. 10CFR50 provides regulations that apply to the "Domestic Licensing of Production and Utilization Facilities." In accordance with the definitions of 50.2, SNPS is neither a production nor a utilization facility. Specifically, SNPS is not a production facility because uranium is not being processed and SNPS is not a utilization facility because there is no operating reactor to utilize the uranium. However, as detailed in the DSAR Table 12.2-1, SNPS does possess radioactive Byproduct Material as defined in 10CFR30.4 and Special Nuclear Material as defined in 10CFR70.4. (continued)

Therefore it is appropriate for the SNPS Exemption to be revised by removing provision (3). Continued implementation of the Defueled Emergency Preparedness Plan costs LIPA approximately \$500,000.00 per year. This cost constitutes an undue hardship for a facility that poses no credible threat.

- C. The Possession Only License is a Material Circumstance That Did Not Exist When the Exemption Was Issued.

In accordance with 10 CFR §50.12(a)(2)(vi) the Commission may issue an exemption to the regulations when:

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(4 continued) The emergency planning requirements for facilities licensed to possess Byproduct Material are detailed in 10CFR30.32(i)(1)(i). In accordance with this section, a facility does not require an emergency plan if:

An evaluation showing that the maximum dose to a person offsite due to a release of radioactive materials would not exceed 1 rem effective dose equivalent or 5 rems to the thyroid.

Similarly, the emergency planning requirements for facilities licensed to possess special nuclear materials are detailed in 10CFR70.22(i)(1)(i). In accordance with this section, a facility does not require an emergency plan if:

An evaluation showing that the maximum dose to a member of the public offsite due to a release of radioactive materials would not exceed 1 rem effective dose equivalent or an intake of 2 milligrams of soluble uranium.

Chapter 15 of the DSAR, "Accident Analysis," provides an analysis of the offsite doses due to postulated accidents at SNPS. This evaluation determined the offsite doses resulting from an accident involving radioactive isotopes that could be credibly released.

These doses are only a small fraction of the levels, identified above in the two cited regulations, that would require emergency planning. (As detailed in the DSAR, uranium is not an isotope available for release and therefore the 2 milligram threshold cannot be reached.)

Therefore, if LIPA was today initially applying for a license which would give it the same authority as it currently has, an emergency plan would not be required in the application.

There is present any other material circumstance not considered when the regulation was adopted for which it would be in the public interest to grant an exemption.

LILCO requested an Exemption from 10 CFR 50.54(g) in order to obtain relief from the large costs associated with maintaining the Local Emergency Response Organization. LILCO considered it inappropriate at the time to request relief from all emergency planning requirements because, while operation of Shoreham had been suspended, LILCO still possessed a full power license. With the issuance of Amendment 7 to NPF No. 82, the Possession Only License, and the Shoreham Decommissioning Order, the Commission formally accepted that the Shoreham Nuclear Power Station will never again be operated. Similarly the Defueled Safety Analysis Report (DSAR) became the recognized document of record representing the status of the plant. The issuance of the Possession Only License, the acceptance of the DSAR, and the approval of the Decommissioning Plan and Decommissioning Order constitute material circumstances that were not considered when the present Exemption requiring the implementation of the Defueled Emergency Preparedness Plan was issued.

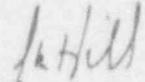
Lastly, modification to the existing exemption is in the public interest. If granted, LIPA's request will result in a reduction in the burden and costs associated with the DEPP. Such savings will benefit LILCO's ratepayers. Even apart from the savings, however, the request is in the public interest because modifying the scope of Shoreham's emergency preparedness activities to reflect the present license status and the extent to which the Decommissioning Plan has been completed as of December 31, 1992 would permit continued compliance with the intent of regulations.

#### V. Conclusion

As detailed above the requested modification to the Exemption, i.e., the elimination of the requirement to implement the DEPP, satisfies both the first and second tier of the requirements for an exemption in accordance with 10 CFR §50.12(a). Since no additional level of public safety is achieved by the continued implementation of the Defueled Emergency Preparedness Plan it would be in the public interest to eliminate provision (3) from the Exemption of July 31, 1990.

Should you have any questions regarding this request, please do not hesitate to contact my office.

Very truly yours,



L. M. Hill  
Resident Manager

MAP/ab

cc: L. Bell  
L. Pittiglio  
T. T. Martin  
R. Nimitz

Attachments:

- 1 Notifications and Station Procedures
- 2 NUREG 0696 ERF Functions Analysis

ATTACHMENT 1 To LSNRC-2020

This attachment provides examples of the notifications and the associated station procedures to be implemented for events, plant conditions or other situations which warrant the notification and/or activation of personnel in addition to the Control Room Staff. It is possible that in the future some of these Emergency Operating Procedures will be deleted and the actions specified in these Emergency Operating Procedures added to the Abnormal Conditions section of the corresponding System Operating Procedure.

EVENTS:

STATION  
PROCEDURE

Emergency conditions which require the implementation of an Emergency Operating Procedure.

a. Acts of Nature	29X001.01
b. Abnormal Radiation Release - Liquid	29X002.02
c. Fuel Handling Accident	29X009.01
d. Loss of Offsite Power	29X015.01
e. Loss of All AC Power	29X015.02
f. Loss of Service Water	29X019.01
Fire Requiring Implementation of Pre-Fire Plan Wading River Fire Department Interface	F9X(series) F1X500.04
Evacuation of All or Portion of Site. Secured Area, Personnel Accountability	DEPIP 1X6* 98X001.01
Fire or Injury/Illness Involving Radiological Hazards	69X040.01
Security Requirements For Operational Emergencies	92X020.01

NRC NOTIFICATIONS

The NRC is notified of abnormal conditions, limiting condition of operation or other events requiring notification in accordance with Report of Abnormal Conditions (RAC) & Limiting Condition of Operation (LCO), SP 12X009.03.

\*Note: DEPIP 1X6 will be redesignated as a Station Procedure.

ATTACHMENT 2 To LSNRC-2020

Elimination of the DEPP removes the requirement for the maintenance of the TSC and OSC. The purpose of these facilities is defined in NUREG-0696, Functional Criteria for Emergency Response Facilities, Section 1.3. An analysis of these functions in Shoreham's current status is provided in the following table:

NUREG 0696 - ERF Functions	Applicability to Current Status
Help the reactor operators determine the plant safety status.	The plant is being decommissioned and the reactor has been removed. Therefore, there is no safety status to be determined.
Relieve the reactor operators of peripheral duties and communications not directly related to reactor system manipulations.	There is no reactor and no reactor systems and therefore only limited peripheral duties. Initial communications will continue to be made from the control room.
Prevent congestion in the control room.	The response to the credible accidents that are applicable during decommissioning, such as fires and fuel handling accidents, will have a response on scene rather than in the Control Room.
Provide assistance to the operators by technical personnel who have comprehensive plant data at their disposal.	Technical personnel will be able to work out of their offices onsite which will enable them to have better access to their own files and data.
Provide a coordinated emergency response by both technical and management personnel.	The number of response personnel will be limited so that coordination will not be an issue.
Provide reliable communications between onsite and offsite emergency response personnel.	The present exemption (dated July 31, 1990) eliminates the requirement for an offsite emergency response plan. Therefore the amount of communications offsite would be minimal.
Provide a focal point for development of recommendations for offsite actions.	Radiation releases, as detailed in the DSAR, and augmented by the Decommissioning Plan, would not necessitate the development of offsite protective actions.
Provide relevant plant data to the NRC for its analysis of abnormal plant operating conditions.	The plant is non-operational. The ENS has been removed by the NRC, however, the communications will be maintained with the NRC via commercial telephone. This communication has always been in the Control Room.