



Long  
Island  
Power  
Authority

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

SEP 10 1992

LSNRC-1996

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

ATTN: Mr. Robert Bernero, Director  
Office of Nuclear  
Material Safety and Safeguards

Request For Approval of  
Decommissioning Plan Change:  
Control Rod Drive Housings and  
Remaining In-Core Guide Tube Sections  
Shoreham Nuclear Power Station - Unit 1  
Docket No. 50-322

- Ref:
- 1) LIPA (L. M. Hill) letter LSNRC-1969 to NRC (Document Control Desk) dated June 26, 1992
  - 2) LIPA (L. M. Hill) letter LSNRC-1989 to NRC (Document Control Desk) dated August 7, 1992
  - 3) Long Island Power Authority, Shoreham Nuclear Power Station, Supplement to Environmental Report (Decommissioning), December 1990

Gentlemen:

In accordance with Condition 4 of the Shoreham Decommissioning Order, LIPA hereby requests NRC approval of a proposed change to the Shoreham Decommissioning Plan. The request is for a change to include the removal and offsite disposal of the Control Rod Drive (CRD) housings, remaining incore guide tube sections and other small miscellaneous components which are attached to the inner bottom of the reactor pressure vessel (RPV). Such components include, but are not limited to, the standby liquid control system pipe and instrument lines.

Although the decommissioning of the CRD system piping and CRD-related reactor internals are described in LIPA's Decommissioning Plan (DP), the DP did not specifically address the disposition of CRD housings. The DP also did not address the removal of in-core guide tube sections from the bottom of the RPV. This notwithstanding, it had been LIPA's intent to mechanically decontaminate (periplaze) the CRD housings and guide tube sections and release them in place together with the decontaminated lower RPV head.

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In order to improve accessibility for lower head decontamination and surveying, however, it has been determined that the CRD housings and guide tube sections should be removed. It has also been decided to send them to a volume reduction vendor for decontamination instead of decontaminating them in place.

#### Removal of the CRD Housing and Guide Tube Sections

The CRD housings are planned to be removed by the use of an OD-mounted milling machines operating inside the RPV. Prior to installation of the milling machines, the RPV will be vacuumed, flushed, drained, decontaminated to the extent practical, and radiologically surveyed. Following the initial survey, further decontamination efforts will be undertaken as necessary to ensure acceptable area dose rates and contamination levels. The milling machines will sever the CRD housings and stub tubes from the RPV, allowing both the in-vessel and out-vessel portions of the housings to be removed. Remaining guide tube sections and other small miscellaneous components will be removed by the use of suitable mechanical cutting techniques (abrasive saw, hydraulic shears, etc) which have been previously approved by the NRC for other Shoreham decommissioning applications.

The use of milling machines and mechanical cutting techniques in this application poses no accident or malfunction hazards which would affect public safety. The accidents evaluated in the DP remain valid and bounding under this change, and there are no new or different accidents or malfunctions created by this change from those previously evaluated in the DP.

Based on the prior removal of activated components and cutting debris from the RPV and on the source term reduction activities described above, it is expected that this activity will incur negligible additional occupational radiation exposure to workers. The CRD housings and guide tube sections themselves and the lower RPV head are not activated. The use of milling machines and mechanical cutting techniques will result in the generation of negligible additional airborne radioactive material. Thus, neither the occupational exposure estimate presented in the DP nor the estimate of expected airborne releases from the decommissioning project are increased. The process characteristics of milling machines have been previously described to the NRC in Refs. 1) and 2), and the mechanical cutting techniques have been previously described to the NRC in Ref. 1).

#### Volume Reduction

The amount of additional radioactive waste resulting from this activity is expected to be zero. The non-activated CRD housings

and guide tube sections will be sent for decontamination to a volume reduction vendor, where it is expected that they will be decontaminated to free release levels. If the components were to be sent for burial as low level radioactive waste instead, the maximum (unreduced) volume to be buried would be 1100 cubic feet. This amount would represent a small (less than 1.5 percent) increase in the estimated amount of low level radioactive waste presented in the DP for the entire decommissioning project. The DP radwaste volume estimate assumed that the entire RPV would be disposed of as low level radioactive waste. The decontamination and release of the RPV upper head has already, in fact, offset the CRD housing and guide tube section contributions providing a net reduction in burial volume that more than offsets any potential increase from these components.

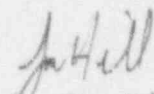
With respect to non-radiological environmental impacts such as air quality, land and water use, noise and dust, these will not be increased beyond that described in Ref. 3) due to confinement of the work within the Reactor Building.

#### Conclusion

Based on the above, LIPA has concluded that there are no unreviewed safety questions associated with the proposed change, and that there would be no environmental impacts different from and exceeding those set forth in Ref. 3). LIPA respectfully requests that the NRC review and approve the proposed change as expeditiously as possible.

Should you have any questions or require any additional information, please do not hesitate to contact my staff.

Very truly yours,



L. M. Hill  
Resident Manager

SMS/sw

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