Long Island Power Authority

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

JUL 01 1992

LSNRC-1972

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

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

Facility Status At Time Of Decommissioning
Order Issuance (June 11, 1992) Relative to
The Shoreham Decommissioning Plan (DP)
Shoreham Nuclear Power Station-Unit 1
Docket No. 50-322

References:

1) LIPA Shoreham Decommissioning Plan, December 1990
2) LIPA (S. Klimberg) letter SNRC-1832 to NRC (Document Control Desk) dated August 26, 1991
3) LIPA (S. Klimberg) letter LSNRC-1859 to NRC (Document Control Desk) dated November 27, 1991
4) LIPA (S. Klimberg) letter LSNRC-1874 to NRC (Document Control Desk) dated December 6, 1991
5) LIPA (L. M. Hill) letter LSNRC-1967 to NRC (Document Control Desk) dated June 12, 1991
6) LIPA (L. M. Hill) letter LSNRC-1968 to NRC (Document Control Desk) dated June 19, 1992
7) LIPA (L. M. Hill) letter LSNRC-1971 to NRC (Document Control Desk) dated June 29, 1992
8) LIPA (S. Klimberg) letter LSNRC-1855 to NRC (Document Control Desk) dated October 16, 1991

Gentlemen:

As agreed to during a visit by members of the NRC Staff to our facility on June 23,1992, LIPA hereby provides a description of decommissioning equipment and activities in place/implemented at Shoreham on or before June 11, 1992, which were not consistent with the descriptions provided in the Shoreham Decommissioning Plan (collectively, Refs. 1 through 4 above).

Along with the actual descriptions of DP differences, LIPA has (either directly or by reference to other letters submitted to the NRC after June 11) provided a description of the rationale and impacts associated with each difference. In all cases, it is LIPA's conclusion that the differences involve no unreviewed safety question and that the environmental impacts of Shoreham decommissioning are not different from and exceeding those set

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forth in the LIPA Supplement to Environmental Report dated December, 1990. Generally, it can also be stated that the differences were made either directly for ALARA and/or safety benefit, or were made for project cost/schedule benefit without adversely affecting safety, environmental or ALARA principles.

The differences from the DP that were in place on or before June 11, 1992 are as follows:

Contaminated System Piping Removal

1) Control Rod Drive piping less than 3 inches in diameter was cut using a combination of band saws and hydraulic shears, whereas the DP indicates band saw removal only. The advantages and impacts associated with the use of hydraulic shears on contaminated piping were described to the NRC in Ref. 5.

2) Flange/bolted valves in the Control Rod Drive, Core Spray, and Residual Heat Removal (RHR) systems have been removed as part of cut pipe spools, whereas the DP indicates that "components" would be removed by mechanical means, i. e., disconnection. Removal of valves with the pipe spools offers both ALARA and schedule benefits, since: a) less time is spent in the work area by elimination of an extra work step, and b) valves are more likely than the piping to contain contamination.

Wet Cutting Station

Changes to the design of the Wet Cutting Station (WCS) have been previously submitted to the NRC for approval prior to utilization via Refs. 5, 6, and 7. The redesigned WCS was installed in preparation for decommissioning prior to June 11, 1992, however, the WCS has not yet been utilized for segmentation pending NRC approval of the changes to the design.

Reactor Pressure Vessel Filtration

A revised approach to filtration of water in the Reactor Pressure Vessel (RPV) has been implemented and is in use, as previously described to the NRC in Refs. 6 and 7.

Dry Cutting Station

The Dry Cutting Station (DCS) installation has been deferred until later in the decommissioning project. It was originally described in the DP as being available at the start of decommissioning to receive certain components removed from the

RPV for further segmentation.

Deferral of the DCS installation was prompted by a need to relocate it because of difficulties associated with its design in the originally intended location. The proximity of the original DCS, a structure of considerable size, to the Spent Fuel Storage Pool required the DCS to be designed to resist seismic loads. The geometry of the structure, however, was dictated by the rigging required to accommodate the moisture separator and steam dryer, which made it difficult to provide the rigidity required to resist seismic loading.

These concerns were resolved by shifting the planned location of the DCS to the Steam Dryer/Moisture Separator Storage Pool. This location, however, is presently occupied by the Wet Cutting Station. Therefore, DCS installation was deferred. Further information regarding the relocation of the DCS and the attendant design changes will be provided to the NRC for review prior to implementation (i.e., use) of the DCS. The implications of theunavailability of the DCS on or before June 11, 1992 are discussed in the section below regarding the steam dryer and moisture separator. Implications for other RPV components which are affected by this change after June 11, 1992 will be addressed in separate correspondence.

Moisture Separator and Steam Dryer

The Moisture Separator and Steam Dryer were to have been removed from the RPV and transferred directly to the DCS at its originally planned location. Because of the deferral of the DCS installation, however, this transfer could not be performed as originally intended. These components have therefore been placed in an interim location on the Reactor Building 175-foot elevation (refuel floor) to allow removal of other RPV internals to begin. This movement was conducted using an approved station procedure and corresponding safety evaluation. These components will be transferred to the DCS for segmentation in the new DCS location at a later date.

These components were placed on the refuel floor after completion of a thorough hydrolazing to remove exterior surface contamination and after conducting a radiation/contamination survey. Survey results revealed loose surface contamination levels to be no greater than approximately 10,000 dpm/100 cm^2 and a contact dose rate of equal to or less than one (1) mrem/hr. These survey results indicated that the interim placement of these components on the refuel floor would have insignificant radiological impact. Appropriate health physics precautions,

i.e., covering with Herculite, establishment of radiation area boundaries, and periodic monitoring, have been taken. No measurable personnel radiation exposure or contamination spread has been observed, nor is any expected, due to interim storage of these components on the refuel floor.

Jib Cranes

1) The jib crane that was to be installed on a pedestal in the Northwest quadrant of the refuel floor for movement of materials to and from the refuel floor through a hatch, has been reconfigured. This crane will no longer be pedestal mounted nor used to move materials to the refuel floor elevation. Instead, it has been mounted across the aforementioned hatch slightly above floor level, and will be used only to move material between lower elevations. This change was implemented to avoid concerns regarding seismic design of this crane, which is near the Spent Fuel Storage Pool and is no longer needed near the area of the originally contemplated DCS.

2) The jib crane that was to be installed in the DCS is no longer required because the relocation of the DCS to the Moisture Separator/Steam Dryer Storage Pool will allow use of the already-installed RPV/WCS jib crane to move RPV components to the DCS.

3) The jib crane installed between the RPV and the WCS is slightly reoriented from its original mounting location. The crane was originally to be mounted on the refuel floor atop the wall section between the RPV and the WCS. The revised mounting location is the vertical face of that wall section which faces South. This change was made because it proved to be an easier mounting location.

4) The jib crane that was to be mounted on the Reactor Building wall in the Southeast quadrant has been mounted instead on a pedestal adjacent to the original wall location. Again, this change was made because it proved to be an easier mounting location.

The above changes to jib crane locations do not result in the possibility for loads to be carried in the vicinity of the Spent Fuel Storage Pool using the subject cranes.

Health Physics Controls

1) Contrary to a statement in the DP, filtered ventilation systems are not always used in areas where the cutting or grinding of contaminated systems is planned. Air samples

i.e., covering with Herculite, establishment of radiation area boundaries, and periodic monitoring, have been taken. No measurable personnel radiation exposure or contamination spread has been observed, nor is any expected, due to interim storage of these components on the refuel floor.

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taken during test cutting with an O.D. milling machine on Reactor Recirculation piping, which is the most contaminated of all system piping, with and without HEPA ventilation have shown no measurable airborne radioactivity. (It should be noted that this test cutting was performed as a pre-decommissioning activity which was identified to the NRC in Ref. 8). Similarly, air samples taken at the outset of pipe cutting using other techniques revealed no measurable airborne radioactivity. Based on these results it was determined that the use of HEPA filtered ventilation is not required on cutting or grinding evolutions where comparable or lower contamination levels exist and similar component cutting methodologies are applied.

2) Contrary to another statement in the DP, debriefing sessions are not always held after completion of projected high-dose jobs, nor are debriefings always held after completion of work involving high dose rates and contamination levels. LIPA procedures require post-job review for a high exposure job if the actual person-rem exposure exceeds the estimate by 25 percent or more. At this point, the ALARA Engineer in conjunction with the job supervisor complete a post-job review checklist. A job debriefing with the workers may be required, if deemed necessary, by the ALARA Engineer. All jobs with exposure estimates greater than 10 person rem have an ALARA post-job review checklist completed and a post-job debriefing with workers. It should be noted, however, that formal and informal in-progress reviews are conducted on high exposure jobs. In-progress reviews are an effective tool utilized at Shoreham for maintaining actual exposures no greater than 25 percent above estimated exposures, and to gain "real time" information from workers. This is perhaps superior to information gained at a post-job debriefing.

3) Contary to another statement in the DP, the identification and tagging of contaminated items does not always include notation of the origin of the material. While this is frequently performed, it is not a procedural requirement. This practice is more of a tracking function than an ALARA function, and is not essential to the safe handling and disposition of contaminated items. Pertinent radiological parameters are required to be provided on all radioactive material tags to enable workers to determine the appropriate handling requirements.

We take this opportunity to thank the Staff for the understanding of the complex nature of the decommissioning project shown during the June 23 site visit. The differences described above are in fact enhancements to the DP which were made in accordance with 10CFR50.59 and offer benefits in the areas of contamination

control, radiation exposure, project cost and scheduling, and safety.

Should you have any questions or require additional information please do not hesitate to call my office.

Yours truly,

L. M. Hill
Resident Manager

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