

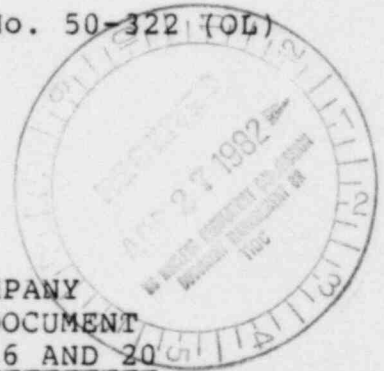
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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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In the Matter of )  
 )  
LONG ISLAND LIGHTING COMPANY )  
 )  
(Shoreham Nuclear Power Station, )  
Unit 1) )  
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Docket No. 50-322 (OL)



RESPONSE OF LONG ISLAND LIGHTING COMPANY  
TO SUFFOLK COUNTY INTERROGATORIES AND DOCUMENT  
REQUESTS ON SUFFOLK COUNTY CONTENTIONS 16 AND 20

On April 1, 1982, "Suffolk County Interrogatories and Document Requests on Suffolk County Contentions 16 and 20" were served on LILCO. This document contains LILCO's response to those interrogatories and document production requests.

I. CONTENTION 16

Interrogatory 1: Provide copies of all Shoreham procedures developed for or relating to the ATWS event. Also provide copies of all analyses or other documents which form the basis for or which relate to the procedure(s).

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Response: Preliminary information was provided in SNRC-623 (October 1, 1981), which was sent to Suffolk County on March 17, 1982. The most recent SP #29.024.01 became effective on April 22, 1982. The SP and the procedures it references are enclosed.

Interrogatory 2: Describe in detail the training program developed for training Shoreham operators on the correct actions to be taken in response to ATWS events.

Response: Shoreham Operations personnel are trained to take the correct action in response to ATWS events in the following programs:

- Cold License Operator Training Program
- Licensed Operator Requalification Training Program
- Hot License Operator Training Program

Each Program includes the following segments related to ATWS event response training:

1. Classroom instruction in ATWS Systems configuration and operation. Systems included are: Control Rod Drive System, Reactor Protection System, and Reactor Manual Control System. Approximately 16 hours are devoted to this segment.
2. Walk-through at the plant of the ATWS scenario. This segment includes "hands on" use of the Station system operating procedures and ATWS emergency procedures.

Walk-throughs are conducted using an operating crew concept in order to reinforce understanding of position responsibilities in the case of this unusual event. Approximately 4 hours are devoted to this segment.

3. ATWS transient analysis instruction utilizing a dynamic control room simulator. This segment is conducted to allow operating crews to observe plant transient response and to practice required actions in the event of ATWS. Approximately 4 hours are devoted to this segment using the Limerick Simulator Facility.

Interrogatory 3: Provide a complete description of the Recirculation Pump Trip features incorporated at the Shoreham Plant. Indicate if all modifications have been completed. If work remains to be done, indicate what work and provide the schedule for its implementation.

Response: The Shoreham Recirculation Pump Trip (RPT) System trips the breakers in the power feed to each of the recirculation pump motors. The trip logic is activated upon receipt of either a high reactor pressure or low reactor water level signal. All components and circuits in the RPT system are redundant and safety grade. All modifications have been completed.

Interrogatory 4: With regard to boron injection capability, provide a full description of the system(s) in place at Shoreham, if not already set forth in the FSAR. Identify any changes from the FSAR description and whether or not such changes have been made. Provide the schedule for implementation of any changes yet to be done.

Response: The general system description is contained in FSAR Section 4.2.3.4.

Interrogatory 5: Provide details of any CRD system changes made or expected to be made as a result of NRC's report NUREG-0803.

Response: This information was provided in SNRC-659, (January 11, 1982), which was sent to Suffolk County on April 12, 1982.

Interrogatory 6: Has LILCO implemented or does LILCO intend to implement any system modifications to provide for automated boron injection? If so, provide full details and the anticipated schedule if not yet completed.

Response: LILCO has not implemented any system modifications to provide for automated boron injection, and at this time none are intended.

Interrogatory 7: Has LILCO performed any analyses to determine the feasibility of making the standby liquid control system initiate automatically? If so, provide copies of all such analyses.

Response: No.

Interrogatory 8: Provide copies of all documents submitted by LILCO to the NRC Staff which relate to LILCO's method(s) for responding to an ATWS event.

Response: See SNRC-623, and also FSAR page 212-105a.

## II. CONTENTION 20

Interrogatory 1: Produce all documents, including the Shoreham simulator design specification and accepted equipment supplier proposals, which evidence LILCO's commitment to provide a Shoreham-specific simulator for operator training.

Response 1: The documents that most strongly evidence LILCO's intent to purchase a Shoreham-specific simulator are enclosed. These documents are:

- a. A memorandum to Mr. M. S. Pollock, Vice President, Nuclear from J. J. Kearney, Jr., noting that the Board approved the purchase of a Shoreham simulator.
- b. A memorandum from James W. Dye, Jr., Senior Vice President of Operations, and Thomas H. O'Brien, Senior Vice-President of Finances, to Mr. Wilfred O.

Uhl, President of LILCO, proposing the purchase of a Shoreham simulator.

- c. Specification For Simulator Project Management Services, Training Program Development, Simulator Facility Management For Shoreham Nuclear Power Station, Unit 1.
- d. A purchase order issued to General Physics Corp., regarding services specified in item c, above.
- e. In draft form, "Specification For a Simulator For the Shoreham Nuclear Power Station, Unit 1."

Interrogatory 2: Produce all documents and drawings which describe or depict (a) the Dresden simulator, and/or (b) the Limerick simulator, including the front panel arrangement of and controls used in the operation of the following systems:

- (i) nuclear steam supply system (i.e., reactor vessel and controls, reactor coolant system, reactor projection systems);
- (ii) emergency safeguards systems;
- (iii) containment systems and containment isolation provisions;
- (iv) radiation monitoring system; and
- (v) balance of plant systems.

Response: LILCO has no current documents in its possession that depict the Limerick or Dresden simulators.

Interrogatory 3: Provide a copy of the classroom training curriculum for Shoreham operators, including those portions pertaining to simulator training.

Response: Syllabuses containing this information for Dresden are enclosed. The syllabus for Limerick will be forwarded under separate cover. In addition two five-volume sets, one each for the Dresden and the Shoreham training programs, will be made available for your review.

Interrogatory 4: Set forth in detail LILCO's schedule for (a) implementation of a Shoreham-specific simulator for operator training; (b) use of the Limerick simulator; and (c) discontinuance of use of the Dresden simulator.

Response: The schedule for implementation of a Shoreham specific simulator is:

- a. Revision of Bid Specifications -- May 1982
- b. Issue Bids -- June 1982
- c. Evaluate Bids -- August 1982
- d. Management approval of bids -- September 1982
- e. Board approval of bids -- October 1982
- f. Contract awarded -- October 1982

g. Simulator in service -- August 1985

The use of Dresden will be discontinued by October 1982. The Limerick simulator has been used in the past and will be used exclusively after October 1982.

Interrogatory 5: Provide a complete listing and description of all transients and accidents which (a) the Dresden simulator is capable of replicating or duplicating; and (b) the Limerick simulator is capable of replicating or duplicating.

Response: This information is included in the syllabuses that are provided in response to Interrogatory 3.

Interrogatory 6: With respect to each transient and accident identified in response to subpart (a) and subpart (b) of number 5 above, state the dynamic characteristics and operator response times for the referenced simulator, and also state the expected control response capability at Shoreham.

Response: A comparison between Limerick and Shoreham is under way and results will be forwarded upon completion. Operators returning from Dresden undergo a Shoreham-specific transient analysis training course, so no analysis between Dresden and Shoreham has been done.

Interrogatory 7: What is the minimum number of people LILCO intends to have trained on (a) the Dresden simulator, and (b) the Limerick simulator, for each of the following positions:



- (i) Reactor Operator (RO)
- (ii) Senior Reactor Operator (SRO)
- (iii) Senior Reactor Operator Limited to Fuel Handling (SRO-R)
- (iv) Auxiliary Operator

Response: At a minimum, LILCO intends to have the following trained at Dresden:

- (a) Reactor Operator -- 14
- (b) Senior Reactor Operator -- 16
- (c) Senior Reactor Operator Limited to Fuel Handling -- 0
- (d) Auxiliary Operator - 0

As a practical matter, the numbers will be much higher. For example, presently there are 38 Reactor Operators certified on the Dresden simulator, and 29 people are certified as Senior Reactor Operators. At present, ten equipment (auxiliary) operators are being certified at Dresden.

The Limerick simulator will be used to requalify operators.

Interrogatory 8: How many hours per week of simulator control room exercises will be provided each operator during the 12-week operator training course discussed in FSAR Section 13.2.1.1.3, and how many of such hours will an operator spend at (a) the Dresden simulator, and (b) the Limerick simulator.

Response: Operators will receive 120 hours of simulator training at Dresden. Hours devoted to specific simulator control room exercises are detailed in the documents provided in response to Interrogatory 3. LILCO has not sent anyone to the 12 week course at Limerick.

Interrogatory 9: Identify and describe all events, transients and accidents studied by Shoreham operators in the simulator control room exercises.

Response: See Documents provided in response to Interrogatory 3.

Interrogatory 10: Identify the criteria to be used by LILCO to determine that a particular simulator meets the requirements stated in FSAR Section 13.2.1.5. ("a complete and accurate nuclear power plant simulator"), i.e., identify the criteria used by LILCO to determine that a simulator duplicates or replicates the Shoreham control room. Produce all documents which relate to these criteria.

Response: LILCO uses the criteria of 10 CFR Part 55, Appendix A to determine the suitability of other simulators for training purposes.

Interrogatory 11: (a) Identify the general qualifications of LILCO employees, or employees of Stone & Webster, General Electric, or other LILCO subcontractors, who will direct

operations from the EOF or TSC during emergency situations, (b) for each of the following categories of personnel, describe the nature and extent of the Shoreham-specific training that they will receive:

- (i) Headquarters Engineering
- (ii) Headquarters Operations Management

Response: The control room personnel report directly to the operations manager who is located in the TSC center during emergency situations. The following personnel may fill the position of operations manager:

Primary - operating engineers

Alternate - plant engineers-operators

Both of these categories will have received Shoreham Specific Training.

Interrogatory 12: (a) Identify the qualifications of the LILCO, G.E., Stone & Webster, other consultants and vendors' startup engineer personnel, who will assist newly-licensed Shoreham operators during the retraining period, as set forth in FSAR Section 13.2.1.6.3; and (b) state how long such personnel will be available.

Response: The Shoreham Startup Organization has the primary responsibility to test the systems and components in accordance with the regulatory requirements to allow for fueling of the Shoreham reactor. At the time of fuel load, the role of

Startup changes to one of supporting the various systems and components under the direction of the Plant Staff as the plant proceeds into the initial Startup test program and power ascension to full power. During this period, several changes in the Startup Organization occur. These include the following:

- A. The G.E. Operations Manager, who reports to the Startup Manager up until the time of fuel load, will report to the Shoreham Plant Manager. Along with the G.E. Operations Manager, the G.E. Operations Superintendent and the On Shift Startup Test Engineers will assume their shift responsibilities in providing technical direction relative to the nuclear steam supply system.
- B. The remainder of the Startup Organization, including the Startup Manager, S&W Lead Advisory Engineer, and various Test Engineers will support testing on systems that were not able to have full integrated operation prior to fuel load (due to the lack of steam, inadequate temperature, etc.).

The description and responsibility of the various personnel mentioned in this letter are included in the Shoreham Startup Manual.

Interrogatory 13: In PSAR Section 13.2.2.1.5, LILCO lists six methods to ensure operators' review of abnormal and emergency operating procedures. Is it LILCO's position that any one of the listed methods is adequate to ensure an operator's review? If not, identify what combination(s) of such methods LILCO would consider adequate.

Response: Any of the first five methods listed in the PSAR will be used to ensure that an operator has, in fact, reviewed the procedures.

Respectfully Submitted,  
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