

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of )  
LONG ISLAND LIGHTING COMPANY )  
(Shoreham Nuclear Power Station, )  
Unit 1 )

Docket No. 50-322-0L

AFFIDAVIT OF EDWARD G. GREENMAN  
IN RESPONSE TO ALAB-788

I, Edward G. Greenman, do depose and say:

1. I am the Chief, Projects Branch No. 1, within the Division of Project and Resident Programs, Region I, United States Nuclear Regulatory Commission. My professional qualifications are already a matter of record in this proceeding. This affidavit is submitted in response to that portion of ALAB-788 dealing with "housekeeping" at the Shoreham site.

2. As part of my responsibilities in my current position, I manage the inspection activities conducted at the Shoreham Nuclear Power Station. This responsibility included the supervision of the Readiness Assessment Team inspection of the Shoreham facility conducted between January 10-15, 1983.

3. The Readiness Assessment Team inspection was a special unannounced inspection at Shoreham in the areas of construction, preoperational testing,

operations, plant operational staffing, NRC Staff bulletins and circulars, organizational interfaces, facility tours, housekeeping, physical condition of the plant and LILCO's action on previous inspection findings. Daily tours of the plant were conducted during the inspection. The purpose of the inspection was to determine the operational readiness status for Shoreham. The Readiness Assessment Team inspection, involving 465 inspector hours on-site, was conducted by eight NRC inspectors, the NRR Project Manager and NRC Region I managers including the undersigned.

4. In the area of housekeeping, the Readiness Assessment Team Report listed a number of unacceptable conditions relative to cleanliness and concluded that housekeeping was not acceptable at Shoreham at the time of the inspection. However, it was the judgment of the inspection team that the housekeeping conditions noted were not adverse to quality and did not affect startup activities or adversely affect plant equipment. The apparent cause of the cleanliness problems appeared to stem from LILCO's view that most of the plant cleanup should be performed after construction of a particular area is complete rather than being performed continually as construction progresses. For example, the Readiness Assessment Team inspected the RCIC barometric condenser, and associated system piping internals for cleanliness. This had just been turned over to operations at the time of the inspection. The team concluded that the applicable cleanliness requirements were satisfied.

5. As a result of the continuing concerns of the NRC staff in the area of plant cleanliness, which were reaffirmed by the Readiness Assessment Team inspection, Regional personnel met with LILCO management in January 25, 1983. On January 19, 1983, a Confirmatory Action Letter (CAL No. 83-01) was issued to LILCO by Region I documenting LILCO's commitments to conduct a general cleanup of the plant. The commitments included:

- a. assignment of personnel for full-time housekeeping activities until housekeeping has improved to a satisfactory level;
- b. establishment of specific eating areas in the plant;
- c. additional instruction to plant personnel and all non-manual construction personnel regarding housekeeping policies and procedures;
- d. housekeeping inspections by plant staff and construction engineers;
- e. surveillance and audit of housekeeping by Field Quality Assurance personnel with emphasis on the issuance of "Stop Work" orders for those work areas not meeting cleanliness zone requirements; and

f. review of the above activities by LILCO management.

6. In response to CAL No. 83-01, LILCO reported on February 28, 1983, that the initial phase of general plant cleanup had been completed and that:

- a. an additional fifty-five craft personnel was assigned to full-time housekeeping activities, in addition to the existing twenty-five craft personnel already assigned to housekeeping activities;
- b. specific eating areas were designated by written instructions and posting of signs;
- c. additional instruction was given to all plant and construction personnel regarding housekeeping policies and procedures;
- d. housekeeping inspections were performed and documented twice a week for each building;
- e. field Quality Assurance personnel were instructed to audit housekeeping and issue "Stop Work" orders for those areas not meeting cleanliness zone requirements; and

- f. the Manager of Construction and Engineering began formal and documented weekly housekeeping inspection tours of the plant.

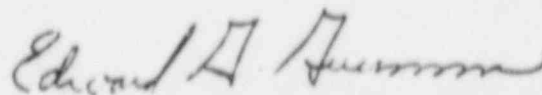
7. The substantial commitments made by LILCO in response to the Readiness Assessment Team inspection and CAL No. 83-01 marked the turning point in the housekeeping conditions and practices by LILCO at Shoreham. These practices have been continually monitored by the resident inspectors since January 1983, to the present during routine tours at the plant. The resident inspectors periodically accompany LILCO's Manager of Construction and Engineering on his weekly tours to assure housekeeping issues are being given proper management attention. Furthermore, Region I staff and managers, who have familiarity with other Region I construction and operation plants, have periodically toured the Shoreham site.

8. In addition to monitoring the general state of plant cleanliness during routine plant tours, since the Readiness Assessment Team inspection, housekeeping has been specifically inspected and the results documented in Inspection Report Nos. 83-01, 83-03, 83-05, 83-07, 83-08, 83-10, 83-11, 83-15, 83-17, 83-20, 83-23, 83-27, 84-07, 84-16, 84-20, 84-23, 84-29, 84-32, and a steady improvement in housekeeping and cleanliness has been observed.

9. Essentially the entire plant has been inspected for cleanliness, as documented by the above referenced inspection reports. Particular areas inspected for cleanliness include the primary containment drywell, all elevations of the reactor building, the turbine building, the screenwell house, the control building including the TDI diesel generator rooms, the radwaste building and the new Colt diesel generator building currently under construction.

10. It is my conclusion, and I certify to this Board, that LILCO has implemented corrective actions in response to the Readiness Assessment Team inspection and CAL No. 83-01 and that the current housekeeping practices provide acceptable levels of cleanliness at Shoreham. This conclusion and certification is based upon: (1) personal visits to the site, most recently on September 27 and 28, 1984; (2) discussions with other Region I personnel who have recently been to the site; (3) discussions with the NRC resident inspectors who are routinely at the reactor site; and (4) review of the inspections documented in the reports referred to in paragraph 8 of this affidavit.

11. As is always the case, should any significant new construction or quality assurance inadequacy be identified, it will be promptly referred to the Board and parties.



Edward G. Greenman  
Chief, Projects Branch 1

Sworn to before me this  
17th day of November 1984

*John P. ...*  
John P. ...  
Notary Public  
King of Prussia, Pennsylvania, PA  
My Commission Expires April 6, 1987