

U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

Report No. 50-322/86-02

Docket No. 50-322

License No. CPPR-95

Category B

Licensee: Long Island Lighting Company  
175 East Old York Road  
Hicksville, New York 11801

Facility Name: Shoreham Nuclear Power Station

Inspection At: Shoreham, New York

Inspection Conducted: February 12-14, 1986

Inspectors:

David J. Vito  
D. J. Vito, Senior EP Specialist  
C. G. Amato, RI  
J. Berry, SRI - Shoreham  
C. Warren, RI - Shoreham  
F. Kantor, OIE/EPB  
R. Hogan, OIE/EPB  
G. Bethke, PNL  
D. Schultz, PNL  
G. Stoetzel, PNL

3/31/86  
date

Approved by:

T. L. Harpster  
T. L. Harpster, Chief  
Emergency Preparedness Section

3/31/86  
date

Inspection Summary:

Inspection on February 12-14, 1986 (Report No. 50-322/86-02)

Areas Inspected: Routine announced emergency preparedness inspection and observation of the onsite portion of the first full scale emergency exercise at Shoreham conducted on February 13, 1986. The inspection was performed by a team of nine NRC Region I, NRC Headquarters and NRC contractor personnel.

Results: The licensee's onsite emergency response actions for this exercise were adequate to provide protective measures for the health and safety of the public. No violations were identified.

8604040365 860401  
PDR ADOCK 05000322  
Q PDR

## DETAILS

### 1. Persons Contacted

The following licensee representatives attended the exit meeting on February 14, 1986.

J. Leonard,	Vice President-Nuclear
D. Crocker,	Supervisor-Onsite Emergency Preparedness
C. Daverio,	Manager, Emergency Preparedness
D. Spencer,	Exercise Coordinator
W. Steiger,	Plant Manager
J. Notaro,	Manager, QA Department

In addition, the inspectors interviewed or observed the actions of numerous licensee personnel during the conduct of the exercise.

### 2. Emergency Exercise

The Shoreham Nuclear Power Station full participation exercise was conducted on February 13, 1986, from 5:15 a.m. until 4:30 p.m.

#### 2.1 Pre-Exercise Activities

Prior to the emergency exercise, NRC Region I representatives had telephone discussions with licensee representatives to review the scope and content of the objectives and scenario. As a result, minor revisions were made to certain scenario data by the licensee. In addition, NRC observers attended a licensee briefing for licensee controllers and observers on February 12, 1986, and participated in the discussions of emergency response actions expected during the various phases of the scenario.

The exercise scenario included the following events:

- An excessive Reactor Coolant System leak rate
- A high localized radiation level due to a malfunctioning Traversing Incore Probe.
- Failure of a Condensate Pump causing a loss of feedwater (the other Condensate Pump had been inoperable) and subsequent MSIV closure
- Feedpump turbine exhaust diaphragm failure causing a loss of condenser vacuum
- A leak in the HPCI steam supply line

- Loss of a 4160V Emergency Bus resulting in loss of ECCS capability
- Large offsite release of radioactivity

The above events caused the activation of all the licensee's emergency response facilities.

## 2.2 Exercise Observation

During the conduct of the licensee's exercise, NRC team members made detailed observations of the activation and augmentation of the emergency organization; activation of emergency response facilities; and actions of emergency response personnel during the operation of the emergency response facilities. The following activities were observed:

- Detection, classification and assessment of scenario events;
- Direction and coordination of the emergency response;
- Notification of licensee personnel and offsite agencies;
- Communications/information flow, record keeping, and sample distribution;
- Assessment and projection of radiological doses and protective action recommendations;
- Offsite and in-plant radiological surveys;
- Technical support to operations;
- Repair and corrective actions;
- Use of procedures and other Emergency Plan related documentation
- Radiological controls for emergency workers;
- Security and access controls.

The NRC team noted that the licensee's activation and augmentation of the emergency organization and activation of the emergency response facilities were generally consistent with their emergency plan and implementing procedures. The team also noted the following areas where the licensee's activities were thoroughly planned and efficiently implemented:

- The objectives and scenario package were submitted to the NRC in a timely manner for review. Appropriate changes were made to reflect NRC concerns.
- There was no evidence of a failure to demonstrate any of the exercise objectives nor was there evidence of prompting on the part of the controllers - evaluators who performed in a professional manner throughout the exercise.
- It was readily apparent within the response facilities (Control Room (CR), Operations Support Center (OSC), Technical Support Center (TSC) and Emergency Operations Facility (EOF)) as to who was in control. Facility briefings were timely, frequent and informative.
- The transfer of responsibilities to facilities as the emergency escalated was performed in an effective manner and response facilities were activated in a timely manner.
- Emergency action levels were promptly identified based upon initiating conditions and subsequent required notifications were timely.
- Communications to and control of offsite monitoring teams were very good. Offsite monitoring teams were knowledgeable, dispatched in a timely manner and were able to effectively monitor the plume.
- Forward planning and positioning of offsite teams were very good. Teams were directed in a manner to maximize their effectiveness and minimize dose.
- Plant conditions and projected changes in weather were used to develop protective action recommendations.
- Inplant teams were adequately briefed and equipped prior to dispatch.
- Facility access control was very good.
- ALARA was considered and proper radiological controls and practices were implemented during inplant activities.
- Operational support provided continuous accountability for all inplant corrective action teams.

The following areas were identified which require licensee attention. Most of these findings were also identified by the licensee as part of their post-exercise critique.

- Activation of the Operations Support Center (OSC) was delayed in that the first person to arrive at the facility (a technician from the Chemistry Department) did not begin to activate the facility as is specified by procedure. A delay of over 15 minutes was noted. This delay did not affect the overall operation of the facility as the facility was fully activated prior to the dispatching of the first in-plant team. This is an Open Item (50-322/86-02-01).
- The LERO/Brookhaven offsite field monitoring data was used minimally in the EOF. In addition to the licensee's offsite data, the Brookhaven data should have been used for comparisons and for more complete mapping of the area of deposition. This is an Open Item (50-322/86-02-02).
- The method of verbal transmission of dose assessment information to the State of New York via the RECS line is cumbersome and creates delays. A time difference of as much as one hour and 50 minutes was noted between when a particular message was generated in the EOF and when it was delivered over the phone. The inspectors suggested that the licensee consider the use of telecopy machines for those agencies who will accept the data in that manner. This is an Open Item (50-322/86-02-03).
- Early in the exercise, the Response Manager in the Emergency Operations Facility was spending a lot of time looking for Protective Action Recommendations (PARs) to fit the plant condition. He also looked to the Environmental Assessment Coordinator (EAC) at a time when plant conditions were dominating the event. The Emergency Preparedness Assistant (EPA) is supposed to provide the Response Manager with help and direction in assessing the present situation and formulating appropriate PARs, if necessary. The EPA was paper bound and bogged down with a number of administrative and other technical tasks which diverted him from this Response Manager advisory role. This is an Open Item (50-322/86-02-04).

The licensee has acknowledged these findings and has stated that corrective actions will be initiated shortly to assure that these problems do not occur in the next graded exercise.

### 2.3 Licensee's Critique

The NRC team attended the licensee's post-exercise critique on February 14, 1986, during which lead licensee controllers discussed observations of the exercise. The critique adequately addressed the areas which require further attention.

## 3. Exit Meeting

Following the licensee's self-critique, the NRC team met with the licensee representatives listed in Section 1 of this report. The team leader summarized the observations made during the exercise and discussed the findings of the inspection as noted in this report.

The licensee was informed that no violations were observed. Although there were areas identified which required additional licensee attention, the NRC team determined that within the scope and limitations of the scenario, the licensee's performance in the onsite portion of this exercise demonstrated that they could implement their Emergency Plan and Emergency Plan Implementing Procedures in a manner which would adequately provide protective measures for the health and safety of the public.

Licensee management acknowledged the findings and indicated that appropriate action would be taken regarding the identified items of concern.

At no time during this inspection did the inspectors provide written information to the licensee.