U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-443/87-25

Docket No. 50-443

License No. CPPR-135 Priority _____ Category C

Licensee: Public Service Company of New Hampshire
P. O. Box 330
Manchester, New Hampshire 03105

Facility Name: Seabrook Nuclear Power Station

Inspection At: Seabrook, New Hampshire

Inspection Conducted: December 15-17, 1987

Inspectors: C. Conklin, Team Leader, EPS, EP&RPB, DRSS — 12/21/87 date

C. Amato, EP Specialist, EPS, EP&RPB, DRSS
D. Perrotti, NRR

Approved By: W. J. Lazarus, Chief, EPS, EP&RPB, DRSS — 12/22/87 date

Inspection Summary: Inspection on December 15-17, 1987 (Report No. 50-443/87-25)

Areas inspected: Routine announced emergency preparedness inspection and observation of the licensee's annual emergency exercise performed on December 15, 1987. The inspection was performed by a team of three NRC Region I personnel.

Results: No violations were identified. Emergency response actions were adequate to provide protective measures for the health and safety of the public.

DETAILS

1.0 Persons Contacted

The following licensee representatives attended the exit meeting held on December 17, 1987.

G. Thomas, Vice President, Nuclear Production
D. Moody, Station Manager
P. Casey, Senior Emergency Planner
J. MacDonald, Radiological Assessment Manager
S. Perkins, Emergency Preparedness Trainer
E. Brown, President and Chief Executive Officer
W. Hall, Manager of Regulatory Services
P. Stroup, Director of Emergency Implementation and Response
G. Kline, Manager of Technical Services
F. Straccia, Supervisor of Emergency Preparedness Training

The team observed and interviewed several licensee emergency response personnel, controllers and observers as they performed their assigned functions during the exercise.

2.0 Emergency Exercise

The Seabrook Nuclear Power Station partial participation exercise was conducted on December 16, 1987 from 8:00 AM to 3:30 PM. There was limited participation by New Hampshire Civil Defense Personnel in the Emergency Operations Facility.

2.1 Pre-exercise Activities

Prior to the emergency exercise, NRC Region I representatives held meetings and had telephone discussions with licensee representatives to discuss objectives, scope and content of the exercise scenario. As a result, changes were made in order to clarify certain objectives, revise certain portions of the scenario and ensure that the scenario provided the opportunity for the licensee to demonstrate those areas previously identified by NRC as in need of corrective action.

NRC observers attended a licensee briefing on December 15, 1987, and participated in the discussion of emergency response actions expected during the various phases of the scenario. The licensee stated that controllers would intercede in exercise activities to prevent scenario deviation or disruption of normal plant operations.

The exercise scenario included the following events:

- A loss of Radiation Monitoring System Instrumentation;

- High radiation levels in the PAB;
- An ejected control rod accident, with subsequent LOCA and fuel damage;
- Declaration of Unusual Event, Alert, Site Area Emergency and General Emergency Classifications;
- Calculation of offsite dose consequences; and
- Recommendation of protective actions to state officials.

2.2 Activities Observed

During the conduct of the licensee's exercise, three 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:

1. Detection, classification and assessment of scenario events;
2. Direction and coordination of the emergency response;
3. Augmentation of the emergency organization and response facility activation;
4. Notification of licensee personnel and offsite agencies of pertinent plant status information;
5. Communications/information flow, and record keeping;
6. Assessment and projection of offsite radiological dose and consideration of protective actions;
7. Provisions for inplant radiation protection;
8. Performance of offsite and inplant radiological surveys;
9. Maintenance of site security and access control;
10. Performance of technical support, repair and corrective actions;
11. Assembly, accountability and evacuation of personnel; and
12. Preparation and dissemination of information at the Emergency News Center.

3.0 Exercise Observations

The NRC team noted that the licensee's activation and augmentation of the emergency organization, activation of the emergency response facilities, and use of the facilities were generally consistent with their emergency response plan and implementing procedures.

3.1 Exercise Strengths

The team also noted the following actions that provided strong positive indication of their ability to cope with abnormal plant conditions:

- Positive command and control of all emergency response facilities (ERF's) was demonstrated by the respective managers;

- Classifications made by the Technical Support Center (TSC) staff were prompt and correct, and subsequent notifications were timely;

- Dose Projections were performed often and utilized plant conditions as well as field conditions. Subsequent Protective Action Recommendations (PAR's) were timely and conservative;

- Staff augmentation was prompt and each ERF was setup and activated in a timely manner;

- Staff members in each ERF demonstrated a thorough knowledge of the plant and coordinated effectively with their respective counterparts; and

- Staff members in each ERF demonstrated very good use of procedures and record keeping.

3.1 Exercise Weaknesses

The NRC team identified the following areas where weaknesses were observed which could have degraded the response and should be evaluated by the licensee for corrective action. This item is tracked as an Inspector Followup Item (IFI).

- 50-443/87-25-01: The Shift Superintendent (SS) in the Simulator Control Room did not classify the loss of both trains of the Radiation Monitoring System as an Unusual Event until prompted by the Lead Controller. Although the SS was strongly involved in troubleshooting the problem, he did not refer to the Emergency Action Levels, nor did utilized procedures refer him to the EAL's.

- 50-443/87-25-02: Dose assessment personnel in the EOF did not provide an estimate of radioiodines in the containment atmosphere. They were unable to provide this estimate because there was not a Post Accident Containment Air Sample available. While the HP-41

computer model has default values built in for the noble gas to iodine ratio, the METPAC system, which is the primary system, does not. The licensee needs to upgrade their present methodology to ensure they have the ability to estimate the impact of releases or potential releases with regard to the radioiodine component for releases which occur prior to obtaining and analyzing a containment sample.

4.0 Licensee Actions on Previously Identified Items

The following items were identified during previous inspections (Inspection Report No. 50-443/86-10). Based upon observations made by the NRC team during the exercise the following open items were acceptably demonstrated and are closed:

(CLOSED) 50-443/86-10-04: There was no dose assessment/dose projection capability demonstrated in the TSC;

(CLOSED) 50-443/86-10-05: Priorities of TSC activities were occasionally inappropriate;

(CLOSED) 50-443/86-10-06: The TSC was somewhat slow in analyzing the indications of a DBA LOCA;

(CLOSED) 50-443/86-10-07: The SED was not informed of the failure of the Containment Building Spray discharge cross-connect valve until 30 minutes after the failure was identified;

(CLOSED) 50-443/86-10-08: The general plant status board in the TSC at times lagged actual plant conditions by 30 minutes;

(CLOSED) 50-443/86-10-13: EBS messages are not monitored for accuracy;

(CLOSED) 50-443/86-10-14: Tracking of feedback on actual offsite protective actions taken was not indicated on the EOF status board;

(CLOSED) 50-443/86-10-16: The Response Manager interfaced with several different levels in the various organizations in the EOF; and

(CLOSED) 50-443/86-10-18: Critical information was not recapitulated on a frequent enough basis during press briefings in the media center.

5.0 Licensee Critique

The NRC team attended the licensee's post-exercise critique on December 17, 1987, during which the key licensee controllers discussed observations of the exercise. The licensee indicated these observations would be evaluated and appropriate corrective actions taken.

6.0 Exit Meeting and NRC Critique

The NRC team met with the licensee representatives listed in Section 1 of this report at the end of the inspection. The team leader summarized the observations made during the exercise.

The licensee was informed that previously identified items were adequately addressed and no violations were observed. Although there were areas identified for corrective action, the NRC team determined that within the scope and limitations of the scenario, the licensee's performance 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 open items.

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