

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

In the Matter of)	
PUBLIC SERVICE COMPANY OF)	Docket Nos. 50-443 OL-1
NEW HAMPSHIRE, <i>et al.</i>)	50-444 OL-1
(Seabrook Station, Units 1 and 2))	Onsite Emergency Planning

AFFIDAVIT OF EDWIN F. FOX, JR.

I, Edwin F. Fox, Jr., being duly sworn, state as follows:

1. My name is Edwin F. Fox, Jr., and I am an emergency preparedness specialist with the Nuclear Regulatory Commission. A statement of my professional qualifications is attached.

2. I was the NRC Team Leader for the June 27-29, 1988, full participation emergency preparedness exercise to test the emergency plans for the Seabrook facility. That team observed and evaluated the onsite portion of the exercise and subsequently issued Inspection Report (IR) No. 50-443/88-09, dated July 6, 1988, setting out the results of the inspection. As stated in the report, it was the conclusion of the team that "[n]o violations were identified" and that the Public Service Company of New Hampshire's ("applicant" or "licensee") "[e]mergency response actions were adequate to provide protective measures for the health and safety of the public." IR No. 50-443/88-09 at 1.

3. Prior to the June 1988 exercise, the applicant submitted the exercise objectives and the exercise scenario to the NRC for review and approval. I

reviewed those objectives and the scenario in accordance with NRC Inspection Manual Inspection Procedure 82302 and concluded that the objectives and scenario (following minor revisions) would support a full participation exercise. IR No. 50-443/88-09, at 2.

4. As stated in IR No. 50-443/88-09, at 5:

The NRC identified the following exercise weaknesses which need to be evaluated and corrected by the licensee. The licensee conducted an adequate self critique of the exercise that also identified these areas.

1. The Technical Support Center (TSC) and Emergency Operations Facility (EOF) displayed questionable engineering judgment and/or did not recognize or address technical concerns (50-443/88-08-01). For example:

- Neither the EOF nor TSC staff questioned a release of greater than 7000 curies per second with only clad damage and no core uncover;
- Efforts continued to restore the Emergency Feedwater Pump after a large break LOCA;
- A questionable fix for the Containment Building Spray system;
- A lack of effort to locate and isolate the release path; and
- No effort was noted to blowdown Steam Generators to lessen the heat load in containment.

5. A follow-up inspection (NRC Region I, Inspection Report (IR) No. 50-443/88-10) conducted July 6 - September 6 and September 21, 1988, concluded that, based on information obtained during this inspection, the exercise weaknesses identified during the 1988 full participation exercise were satisfactorily resolved. IR No. 50-443/88-10 at 8-10.

6. Another full participation exercise was conducted in December 1990. The objectives and scenario were submitted to and approved by the NRC (August 27 and September 24, 1990, respectively). I was a member of the NRC inspection

team which observed and evaluated this exercise. NRC Region I, IR No. 50-443/90-85, issued February 20, 1991 (Attachment A), summarizes the results of that inspection and states that "no exercise weaknesses or plan deficiencies were identified. The licensee demonstrated the ability to implement their plan in a manner which would protect the health and safety of the public." IR No. 50-443/90-85, at 1.

7. Although the same specific events/conditions are not used in formulating the accident scenario for successive exercises, the events/conditions employed in the scenario should fully test the response capabilities of the onsite organization, including the TSC and EOF Staffs, to implement the emergency plan. Therefore, although the events/conditions specified in the 1990 full participation exercise scenario were not exactly the same as those used for the 1988 full participation exercise scenario, the 1990 exercise scenario provided an opportunity for the observation and evaluation of the licensee's implementation of the emergency plan comparable to that provided during the 1988 exercise.

8. The performance of the response personnel during the 1990 exercise demonstrated that they were adequately trained to perform the tasks assigned to them. The 1990 exercise, although different than the 1988 exercise, included comparable events which allowed for the testing of the previously identified weakness in IR No. 50-443/88-09. For example, the 1990 exercise required the Technical Support Center (TSC) and Emergency Operations Facility (EOF) staffs to respond to similar conditions and perform similar functions in assessing plant

conditions, analyzing parameter trends and developing solutions, as did the 1988 exercise. After observing the activities specified in Section 2.3 of the Inspection Report, the NRC inspection team found the overall performance of the TSC and EOF staffs adequate, noting only two Areas for Improvement concerning the processing of inhalation pathway samples, which did not relate to training deficiencies. IR No. 50-443/90-85, at 1-7.

9. The specific manner in which each of the purported 1988 exercise weakness areas were tested in the 1990 exercise is discussed below:

- a. Neither the TSC or EOF staff questioned a release greater than 7000 curies per second with only clad damage and no core uncovery.

During the 1988 exercise, the events specified in the scenario led to clad damage without core uncovery. Although this was inconsistent with the reported release rate of 7000 curies per seconds, the NRC inspection team first listed, as an example of an exercise weakness, its belief that neither the TSC nor EOF staff had questioned the discrepancy between reactor conditions and the resulting release rate to the environment. A later inspection revealed that the release rate was questioned by the TSC staff during the exercise. See IR No. 50-443/88-10, at 9.

The December 1990 scenario included similar events, clad damage and resulting release rates, which led to the observation and evaluation of TSC and EOF staff activities in this area. In the 1990 scenario, fuel damage occurs because of the presence of loose parts from the irradiation specimen basket. Because of the failure of a reactor coolant system loop piping weld, a leak into the containment

occurs, and as a result of a damaged containment spray pump, radioactive material is released to the environment. See IR No. 50-443/90-85, at 3-4. Among the specific activities observed onsite during the December 1990 exercise were the assessment and projection of offsite radiological doses and consideration of protective actions. The NRC Staff listed as exercise strengths (areas which provide strong positive indication of their ability to cope with abnormal plant conditions and implement the plan) the ability of the TSC staff to trend and extrapolate data, anticipate problems and accurately predict when conditions would be reached justifying the declaration of a Site Area Emergency. Also listed as strengths were the EOF staff's anticipation of possible release pathways and performance of "what if" dose calculations based upon possible containment breach in anticipation of a possible release. IR No. 50-443/90-85, at 7-8. The report identifies no weaknesses in this area. *Id.*

b. Efforts continued to restore the Emergency Feedwater (EFW) Pump after a large break LOCA.

Following the simulated large break loss-of-coolant accident (LOCA) in the 1988 exercise, the TSC staff began efforts to restore the Emergency Feedwater Pump in order to support steam generator cooldown in the recovery phase. The NRC inspection team questioned the TSC staff's judgment in directing resources to restore a system that would not ameliorate the LOCA and listed that action as an example of an exercise weakness. Information gathered in a subsequent inspection showed the repair effort was prudent. See IR No. 50-443/88-10, at 8.

The December 1990 scenario included a simulated large break loss-of-coolant accident which resulted from complete failure of a leaking reactor coolant loop piping weld. Among specific activities observed was accident analysis and mitigation and the use of emergency operations procedures and emergency plan implementing procedures. The report (No. 50-443/90-85, at 7-8) does not identify any exercise weakness associated with TSC or EOF staff activities in this area.

c. A questionable fix for the Containment Building Spray (CBS) System.

The 1988 exercise scenario called for repair of the CBS system in order to lessen the heat load on the containment. The NRC inspection team at first listed the questionable fix for the CBS system as an example of an exercise weakness on the basis that the proposed fix to rig an alternative water source was questionable, but later gathered information which showed the actions taken by the licensee were appropriate. See IR No. 50-443/80-10, at 9.

The December 1990 scenario specifically required the accident to cause a radioactive release to the environment. Among the EOF and TSC staff activities observed during the exercise were the analysis and mitigation of that problem, including their ability to assist in the utilization of emergency operations procedures and to follow emergency plan implementing procedures. Thus, the scenario called on them to assist in the mitigation of the results of a damaged spray pump. Upon review of their performance, the NRC inspection team did not identify any exercise weakness associated with TSC or EOF staff activities in this area. IR No. 50-443/90-85, at 6-7.

d. A lack of effort to locate and isolate the release path.

Locating and isolating the release pathway can be performed directly from inside the containment or indirectly through other means, such as remote temperature and pressure and sump level indications. During the 1988 exercise, no entry was made into containment due to simulated high radiation levels and indirect methods were used to locate and isolate the release pathway. Because the NRC inspection team was unaware of the use of these indirect methods, the failure to enter the containment was listed as an example of an exercise weakness, which was later resolved. See IR No. 50-443/88-10, at 9.

The December 1990 exercise scenario also included a release into the environment. The inspection team reviewed the licensee's assessment and projection of off site radiological doses and found no weaknesses. In fact, the ability of the EOF staff to anticipate possible release pathways was listed as an exercise strength (IR No. 50-443/90-85, at 7), showing a strong positive indication of their ability to cope with abnormal plant conditions.

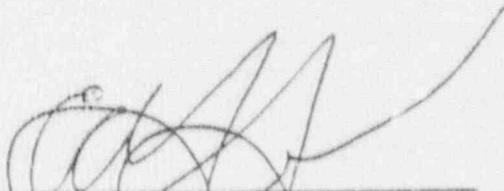
e. No effort was noted to blowdown Steam Generators (S/G) to lessen the heat load in containment.

Under the 1988 exercise scenario, the emergency operating procedures called for blowdown of the steam generators. The NRC staff listed the TSC staff's failure to depressurize the steam generators as required by the emergency operating procedures under the circumstances of the exercise scenario as an example of an exercise weakness. An NRC inspection team subsequently determined that this

action was not taken because the TSC staff was reasonably concerned about the integrity of the steam generator tubes, and the NRC noted that improved operator guidance in the procedure might be warranted. IR No. 50-443/88-10, at 9-10.

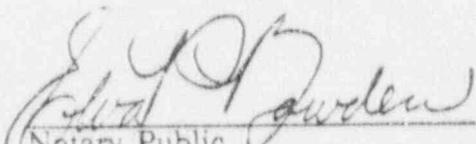
While the scenario of the 1990 exercise did not call for the particular procedure involved (the blowdown of steam generators), it did test the ability of the TSC staff to follow the emergency operating procedures which were appropriate to the scenario. Under the circumstances of the 1990 scenario, the TSC staff was required to analyze a number of unexpected abnormal plant conditions and provide technical solutions to decisionmakers. The NRC Staff found no weakness or areas for improvement in the TSC's staff's ability to analysis conditions and provide appropriate technical solutions. IR No. 50-443/90-85, at 6.

The foregoing and attached statement of professional qualifications are true and correct to the best of my knowledge and belief.



Edwin F. Fox, Jr.

Subscribed and sworn to before
me this 12th day of March, 1991



Notary Public
My commission expires: 12/1/91

PROFESSIONAL QUALIFICATIONS
OF
EDWIN F. FOX, JR.

EDUCATION Bachelor of Science in Civil Engineering
Virginia Military Institute, Lexington, VA, 1961

Master of Science in Nuclear Engineering
North Carolina State University, Raleigh, NC, 1975

PROFESSIONAL POSITIONS

1961 to 1976 U.S. Army Corps of Engineers
Commissioned Officer

1976 to 1977 Quality Assurance Engineer, Virginia Electric Power
Company, North Anna Nuclear Power Plant

1977 to 1982 Technical Trainer, Technical Training Center
Nuclear Regulatory Commission (Washington, DC)

1982 to 1986 Technical Advisor, Office of Inspection and Enforcement
Nuclear Regulatory Commission (Washington, DC)

1986 to 1990 Senior Emergency Preparedness Inspector, Region I
Nuclear Regulatory Commission (King of Prussia, PA)

1990 to Present Emergency Preparedness Specialist, NRR,
Nuclear Regulatory Commission (Rockville, MD)

As a Quality Assurance Engineer at North Anna, Mr. Fox was responsible for auditing the pre-operational and start-up phase of the reactor. In these audits, he identified numerous issues which were required to be and were corrected prior to criticality.

Mr. Fox was primarily responsible for the technical training program for reactor construction inspectors while a member of the NRC Technical Training Center. As such, he developed, oversaw, and attended all courses associated with this training. These included Non-Destructive Examination, Welding and Concrete Technology and Codes, and Management Oversight Risk Tree Analysis (MORT).

During his tenure as a technical assistant in the Office of Inspection and Enforcement (I&E), he was responsible for reviewing the operational status of each operating reactor in the country on a daily basis, and analyzing all operational events in order to provide a summary of these to I&E managers. At the same time, he participated in numerous emergency exercises involving both nuclear power plants and accidents in the transportation of radioactive material.

In October 1986, Mr. Fox was appointed as a Senior Emergency Preparedness Specialist in the Emergency Preparedness Section, Region I, U.S. Nuclear Regulatory Commission. Mr. Fox has been the lead NRC inspector for the emergency preparedness implementation appraisal of various nuclear power facilities and has conducted numerous emergency preparedness inspections of nuclear power and research facilities in Region I. He is the NRC Regional Assistance Committee (RAC) member for FEMA Region II and is one of the NRC RAC members for FEMA Region III. As such, he has reviewed and evaluated numerous state and local emergency plans and has assisted FEMA in the observation and evaluation of state and local governments' implementation of those plans during numerous exercises.

In October, 1990, Mr. Fox was appointed as an Emergency Preparedness Specialist in the Emergency Preparedness Branch, NRR, U.S. Nuclear Regulatory Commission. Mr. Fox has been the lead staff officer for emergency preparedness staffing, medical and emergency action level issues. Among his other duties, he serves as one of the policy and staff persons who assist in the review of Seabrook onsite and offsite emergency preparedness issues.

Mr. Fox is a Vietnam veteran (two tours), having served over fifteen years on active duty as an U.S. Army Corp of Engineers and Intelligence Officer. He retired as a Lieutenant Colonel in the U.S. Army Reserves. His awards include two Bronze Stars, Vietnamese Cross of Gallantry, Vietnamese Honor Medal and the Army Commendation Medal as well as a number of Army Reserve medals and both the Airborne and Combat Infantryman Badge.

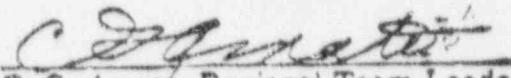
Mr. Fox is a practicing registered professional engineer in the State of Virginia.

ATTACHMENT A

U. S. Nuclear Regulatory Commission
Region I

Report No. 50-443/90-85
Docket No. 50-443
License No. NPF-86
Licensee: Public Service Company of New Hampshire
New Hampshire Yankee Division
Seabrook, New Hampshire 03874
Facility Name: Seabrook Station, Unit 1
Inspection Dates: December 11-14, 1990
Inspection At: Bolton, Massachusetts, and Newington and Seabrook, New
Hampshire

Inspector:


C. G. Amato, Regional Team Leader
NRC Region I

1/30/91
date

N. Dudley, Senior Resident Inspector, Seabrook Station
E. Fox, NRR/PEPB
R. Fuhrmeister, Resident Inspector, Seabrook Station

Approved:


W. J. Lazarus, Chief, Emergency
Preparedness Section, DRSS

1/30/91
date

Inspection Summary: Inspection on December 11-14, 1990 (Inspection
Report No. 50-443/90-85)

Areas Inspected: Announced, routine, safety inspection of the licensee's emergency
preparedness exercise.

Results: No exercise weaknesses or plan deficiencies were identified. The licensee
demonstrated the ability to implement their emergency plan in a manner which would
protect the health and safety of the public.

DETAILS

1. PERSONS CONTACTED

Unless indicated otherwise the following personnel are Public Service Company of New Hampshire, New Hampshire Yankee Division, Seabrook Station (NHY) staff, who attended the exercise exit meeting at Seabrook on December 14, 1990.

R. Boyd, Jr., Manager, Performance Services
E. Darois, Health Physics Supervisor
B. Drawbridge, Executive Director, Nuclear Production
S. Ellis, Emergency Preparedness Manager, Response and Implementation
T. Feigenbaum, President and Chief Executive Officer, New Hampshire Division, Public Service Company of New Hampshire
G. Gram, Executive Director, Office of Emergency Preparedness and Community Relations
T. Grew, Specialty Training Manager
J. MacDonald, Emergency Preparedness Technical Issues Coordinator
D. McLain, Production Services Manager
D. Moody, Seabrook Station Manager
J. Peschel, Corporate Support Manager
J. Peterson, Assistant Operations Manager
N. Pillsbury, Director of Quality Programs
D. Scanzoni, Corporate Communications Manager
S. Schultz, Vice President, Yankee Atomic Electric Company
P. Stroup, Director, Emergency Preparedness
W. Sturgen, Nuclear Services Manager
D. Tailleart, Emergency Preparedness Manager
D. Young, Scenario Department Supervisor

The inspectors also interviewed and observed the actions of other licensee personnel.

2. EMERGENCY EXERCISE

The Seabrook Station, Unit No. 1 announced, full-participation exercise was conducted on December 13, 1990, from 11:00 a.m. to 7:00 p.m. The State of New Hampshire, the New Hampshire Yankee Off-Site Response Organization, and surrounding New Hampshire Towns participated.

2.1 Pre-exercise Activities

The exercise objectives were submitted to NRC Region I on August 27, 1990 and, the complete scenario package on September 24, 1990 for NRC review and evaluation. Region I representatives had telephone conversations with the licensee's emergency preparedness staff to discuss the scope and content of the scenario. As a result, minor revisions were made to the scenario which allowed

adequate testing of the major portions of the Seabrook Station Unit No. 1 Emergency Plan and Implementing Procedures and also provided the opportunity for the licensee to demonstrate those areas previously identified by the NRC as in need of corrective action. NRC observers attended a licensee briefing on December 13, 1990. NRC suggested changes to the scenario made by the licensee were discussed during the briefing. The licensee identified which emergency response activities would be simulated and indicated that controllers would intercede in exercise activities if necessary to prevent disruption to normal plant activities.

2.2 Exercise Scenario

The exercise scenario included the following events:

- Initial condition equipment out of service: a charging pump, a containment spray pump, a Waste Building Exhaust Fan, and a Control Building Intake Fan;
- A reactor coolant system loop piping weld fails and a leak into the containment results;
- Declaration of an Alert (reactor coolant leak greater than 70 gallons per minute);
- The irradiation specimen basket and specimens fall to the bottom of the reactor vessel;
- The resulting loose parts from the irradiation specimen basket caused fuel damage and the release of fission products to the reactor coolant system water;
- A high radiation alarm on let-down system monitor occurs as a result of high fission product activity;
- Solar storm induced geomagnetic disturbances cause damage to unit substations at the Seabrook Station site and the Newington Emergency Operations Facility (EOF). One alternating current supply to the EOF is lost and several Waste Processing Building electrical loads are lost;
- The high range post-loss-of-coolant monitor indicates exposure rates in excess of 2,500 rem/hr inside the containment as a result of the failed fuel and coolant system leak, causing declaration of a Site Area Emergency;

- The leaking reactor coolant loop piping weld fails completely, resulting in a large break loss-of-coolant accident followed by a reactor trip and safety injection;
- The loss-of-coolant accident results in a high range post-loss-of-coolant monitor reading of 25,000 rem/hr inside containment and declaration of a General Emergency;
- As a result of a damaged containment spray pump, radioactive material is released into the environment.

2.3 Activities Observed

During the conduct of the licensee's exercise, NRC inspection team members made detailed observations of the activation and augmentation of the Emergency Response Facilities and the Emergency Response Organization staff and actions of the Emergency Response Organization staff during operation of the Emergency Response Facilities in response to the simulated emergency. The following activities were observed:

- Use of operations and emergency plan implementing procedures;
- Detection, classification, and assessment of scenario events;
- Direction and coordination of emergency response;
 - Notification of licensee and New Hampshire State government personnel and communication of pertinent plant status information to State personnel;
 - Communications/information flow, and record keeping;
- Assessment and projection of off-site radiological dose and consideration of protective actions;
- Accident analysis and mitigation.

3. CLASSIFICATION OF EXERCISE FINDINGS

Emergency preparedness exercise findings are classified as follows:

Exercise Strengths

Exercise strengths are areas of the licensee's staff response that provide strong positive indication of their ability to cope with abnormal plant conditions and implement the emergency plan implementing procedures.

Exercise Weaknesses

Exercise weaknesses are areas of the licensee's staff response in which the performance was such that it could have precluded effective implementation of the emergency plan implementing procedures in the event of an actual emergency in the area being observed. Existence of an exercise weakness does not of itself indicate that overall response was inadequate to protect public health and safety.

Areas for Improvement

An area for improvement is an area of the licensee's staff response which did not have a significant negative impact on the licensee's ability to implement the emergency plan and implementing procedures and response was adequate. However, it should be evaluated by the licensee to determine if corrective action could improve performance.

4. EXERCISE OBSERVATIONS

The NRC team noted that the licensee's activation of the Emergency Response Organization, Emergency Response Facilities, and use of these facilities were consistent with their Emergency Plan and Emergency Plan Implementing Procedures. No exercise weaknesses were identified. Following are the detailed observations of performance in each of the emergency response facilities.

4.1 Control Room

The following strengths were identified:

1. Reactor operators recognized symptoms and selected the correct control room procedures and used them properly.
2. Operators correctly interpreted changing containment conditions indicating a reactor coolant leak and took corrective action including estimation of the leak rate.

3. When control room habitability was challenged following loss of positive pressure, air samples were taken and the correct evaluation was made preventing an unnecessary control room evacuation.
4. Operators responded correctly to an anomalous safety parameter display system indication for subcooling margin and reactor coolant system integrity.

No exercise weaknesses or areas for improvement were identified.

4.2 Technical Support Center (TSC)

The following exercise strengths were identified:

1. Excellent command and control was demonstrated and frequent staff briefings were conducted.
2. Data were trended and extrapolated. Problems were anticipated. As a result, the time to reach conditions justifying a Site Area Emergency declaration were accurately predicted.
3. The need to identify plant vulnerabilities as early as possible led to a request to use probabilistic risk assessment.
4. Support resources from Yankee Nuclear Service Division engineers were appropriately requested and utilized.

No exercise weaknesses or areas for improvement were identified.

4.3 Operations Support Center (OSC)

The following exercise strengths were identified.

1. The OSC was promptly staffed with health physics personnel and the various disciplines of maintenance personnel.
2. Command and control were excellent. OSC operations were conducted in a quiet professional atmosphere.
3. Repair teams were quickly established, well controlled, and dispatched with adequate protection from hazards.

No weaknesses or areas for improvement were identified.

4.4 Emergency Operations Facility (EOF)

The following exercise strengths were identified:

1. There was excellent support of and interaction with representatives of the New Hampshire State government and the New Hampshire Yankee Massachusetts Off Site Response Organization.
2. There was prompt and correct response to a simulated loss of the main electrical supply to the EOF.
3. Dose assessment personnel anticipated possible release pathways and performed a "what if" calculation based on possible containment breach in anticipation of a possible release.
4. There was good command and control, frequent staff briefings and EOF manager's meetings, which included government representatives and the NHY Massachusetts Off-Site Response Organization.
5. Environmental monitoring teams were repositioned to minimize mission dose.
6. Feedback was obtained regarding implementation of off site protective actions. This information was announced to EOF staff and relayed to other Emergency Response Facilities and Seabrook Station staff.

No exercise weaknesses were identified.

The following areas for improvement were identified:

1. The responsibilities of the NHY staff member processing inhalation pathway samples should be reviewed to ensure that activities which might impede his performance are assigned to other response personnel.
2. The procedure for processing of inhalation pathway samples could be streamlined by restricting concerns to iodine and noble gas concentrations.

4.5 Media Center

The following strengths were identified:

1. There were good press briefings using language understandable to the public.
2. There was good response to the inquiries of real and simulated reporters.

No exercise weaknesses or areas for improvement were identified.

4.6 Correction of Previously Identified Exercise Weaknesses and Areas for Improvement

The inspectors observed licensee response in areas which had previously been identified as weaknesses or areas for improvement during the 1988 and 1989 evaluated emergency exercises.

Four exercise weaknesses were identified during the June, 1988 exercise. All of these weaknesses were re-addressed and closed in a special inspection. The satisfactory resolution of these weaknesses is documented in NRC Inspection Report 50-443/88-10.

Three areas for improvement were identified during the 1989 exercise:

1. Transfer of authority from the Short Term Emergency Director (Shift Supervisor) to the Site Emergency Director was not announced on the plant paging system.
2. Telephone line noise caused some minor communications problems in the Technical Support Center.

These items did not recur. Performance in the above areas was acceptable during this exercise.

3. Boron concentration curves should be reviewed to verify that they cover all reasonably expected conditions.

This item was the result of the scenario which involved a core at end-of-life while the plant was actually at beginning-of-core-life. The curves used during the exercise were appropriate for the actual plant conditions. As the core ages the licensee revises the curves as appropriate. The inspector has no further concerns regarding this item.

The inspector considers each of the previously identified weaknesses or areas for improvement to be satisfactorily resolved.

5. YANKEE ATOMIC ELECTRIC COMPANY (YAEC) SUPPORT OF SEABROOK STATION EMERGENCY PREPAREDNESS ACTIVITIES

5.1 Emergency Response Support

Through contractual arrangement YAEC provides emergency response support to New Hampshire Yankee (NHY) (as well as several other New England area utilities) to supplement emergency response functions performed by the station emergency response organization. Generally, the support services provided are a back-up to functions performed by the NHY staff, however in two cases the functions are the primary tasks of YAEC.

The first of these is the task of core damage assessment, which is conducted for NHY by the Yankee Nuclear Service Division (YNSD) of Yankee Atomic Electric Company at the YAEC Engineering Support Center. The relationship and function are described in the Seabrook Station Radiological Emergency Plan. During the exercise, core damage assessments were conducted promptly, results were consistent with the scenario information available to the emergency response organization, and the information was promptly communicated to the Site Emergency Director in the TSC.

The other emergency response task is the analysis of non-airborne environmental samples (water, soil, milk, vegetation, etc.). As this exercise was not an ingestion pathway exercise, demonstration of this capability was not an objective of the exercise. The YNSD support personnel responsible for this function were observed to arrive at the EOF and set up and test their equipment and would have been ready to perform the appropriate sample analyses if necessary.

5.2 Audit of YNSD Functions

The inspector interviewed YAEC Quality Assurance (QA) personnel and NHY personnel to ascertain whether audits are performed of the emergency response functions that YNSD provides under the Seabrook Emergency Plan. Although YAEC performs audits of the support provided by YNSD to several utilities, the audits are not specific to services provided to NHY. NHY performs project management reviews of the YAEC Nuclear Service Division program. A NHY representative indicated that he believed that a combination of the YAEC audits, YAEC program reviews, and the NHY management reviews adequately ensured the quality of emergency response services provided by YNSD. However, based on the inspector's concerns, NHY agreed to add the audit of the YNSD-supplied services to the routine 10 CFR 50.54(t) audit of the NHY emergency preparedness program.

The inspector had no further questions in this area.

6. LICENSEE CRITIQUE

The NRC team attended the licensee's exercise critique on December 14, 1990 during which the licensee's lead controllers and observers discussed observations of the exercise. The licensee's critique was critical and thorough.

7. SEABROOK STATION EMERGENCY RESPONSE ORGANIZATION (ERO) TRAINING STATUS

To determine if an adequate number of personnel were qualified to implement the on-site portion of the Seabrook Radiological Emergency Plan, the inspector reviewed training summaries, the qualification list, and the drill schedule.

There are 242 positions described in the emergency response organization (ERO). The training status at the time of this inspection indicated that 1088 persons were qualified to fill these positions. A check of the ERO qualification list indicated an adequate number of personnel were qualified for each key position. During 1990 the licensee conducted 14 drills as follows: pre dress rehearsal, six medical drills, one radiation monitoring drill, two evacuation drills, two combined functional drills, one NHY Off-site Response Organization call-in drill, and one Post Accident Sampling System drill.

Based on the above review, this portion of the licensee's emergency preparedness program is acceptable.

8. EXIT MEETING

Following the licensee's exercise self-critique, the NRC team met with the licensee's representatives listed in Section 1 on December 14, 1990 to discuss findings as detailed in this report. The NRC team leader summarized the observations made during the exercise. The licensee was advised that no exercise weaknesses were identified and that all previously identified exercise weaknesses and areas for improvement had been adequately demonstrated. The NRC team also determined that within the scope and limitation of the scenario, the licensee's performance demonstrated the capability to implement the Emergency Plan and Emergency Plan Implementing Procedures in a manner that would adequately protect the health and safety of the public.

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION '91 MAR 13 AM 11:31

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

DOCKETING & SERVICE
BRANCH

In the Matter of)
PUBLIC SERVICE COMPANY OF)
NEW HAMPSHIRE, *et al.*)
(Seabrook Station, Units 1 and 2))

Docket Nos. 50-443 OL-1
50-444 OL-1
Onsite Emergency Planning

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF RESPONSE TO FEBRUARY 22, 1991 APPEAL BOARD ORDER and AFFIDAVIT OF EDWIN F. FOX, JR." in the above captioned proceeding have been served on the following by deposit in the United States mail, first class or, as indicated by an asterisk, by deposit in the Nuclear Regulatory Commission's internal mail system, or, as indicated by double asterisks, by express mail, or as indicated by triple asterisks, by facsimile transmission, this 12th day of March 1991:

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Atomic Safety and Licensing
Board
U.S. Nuclear Regulatory
Commission
Washington, DC 20555

Richard F. Cole*
Administrative Judge
Atomic Safety and Licensing
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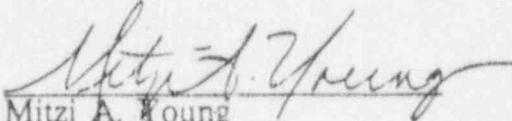
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