

U.S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 50-443/78-12  
50-444/78-12  
Docket No. 50-443  
50-444  
License No. CPPR-135 Group 4 Category A-2  
CPPR-136  
Licensee: Public Service Company of New Hampshire  
1000 Elm Street  
Manchester, New Hampshire 03105

Facility Name: Seabrook Station, Units 1 and 2

Investigation at: Seabrook, New Hampshire

Investigation conducted: July 26 - August 11, 1978

Investigators: R. H. Smith  
R. H. Smith, Investigation Specialist

9/8/78  
date signed

S. A. Folsom  
S. A. Folsom, Reactor Inspector

9/12/78  
date signed

date signed

date signed

Approved by: J. W. Devlin  
J. W. Devlin, Chief, Security and  
Investigation Section

9/12/78  
date signed

Investigation Summary:

Investigation from July 26 to August 11, 1978 (Report Nos. 50-443/78-12 and 50-444/78-12)

Areas Investigated: Unannounced investigation by one regional based investigator and one regional based inspector, of complaints concerning blasting and other unauthorized work being performed after the construction permits were suspended on July 21, 1978. The investigation involved 114 investigative-hours by an NRC regional based investigator and a regional based inspector.

Results: The noise and earth tremor which formed the basis of a complaint about blasting were observed. No information or evidence was found to indicate that any of the complaints were related to violations of regulatory requirements or violations of the Commission Order. No apparent items of noncompliance were identified.

## TABLE OF CONTENTS

### I. BACKGROUND

- A. Reason for Investigation
- B. Order of the Nuclear Regulatory Commission
- C. Identification of Involved Organizations

### II. SUMMARY OF FINDINGS

- A. Complaints and Investigation Findings
- B. Conclusions

### III. DETAILS

- A. Introduction
- B. Scope of Investigation
- C. Persons Directly Interviewed and/or Contacted during the NRC Investigation
- D. NRC Comments and Findings Regarding the Complaints
- E. Management Meetings

## I BACKGROUND

### A. Reason for Investigation

During the period from July 26 to July 31, 1978, the Nuclear Regulatory Commission (NRC, Region I) received several telephone calls from members of the public who reside in the vicinity of the Seabrook Station site. In each case, the individuals stated that blasting was continuing on the site even though the construction permits for the Seabrook Units 1 and 2 were suspended effective 6:00 p.m. (EDT) on July 21, 1978.

An investigation regarding these complaints was initiated by the NRC, Region I on July 26, 1978.

### B. Order of the Nuclear Regulatory Commission

By Order of the NRC on June 30, 1978, the construction permits for the Seabrook Station, Units 1 and 2, were suspended effective 6:00 p.m. (EDT) on July 21, 1978.

The Order permitted, "only such actions as are necessary to protect the environmental integrity of the site or to protect buildings, material or personnel at the site."

### C. Identification of Involved Organizations

Public Service Company of New Hampshire  
1000 Elm Street  
Manchester, New Hampshire 03105

A utility company, the licensee, which has been issued a Construction Permit for the construction of two nuclear fueled power stations, Seabrook Units 1 and 2.

## II SUMMARY OF FINDINGS

### A. Complaints and Investigation Findings

The following complaints were obtained by telephone calls to the Region I office and also during interviews of individuals in and around Seabrook, New Hampshire. All complainants were aware that the construction permits for Seabrook Units 1 and 2 were suspended effective 6:00 p.m. (EDT) on July 21, 1978.

#### 1. Complaint No. 1

That blasting was continuing on the site after July 21, 1978.

The NRC investigation found no information or evidence that any explosives were used on the site during the period from 6:00 p.m. on July 21, 1978 through August 5, 1978, which was the end of the onsite portion of this investigation.

#### 2. Complaint No. 2

That construction activities at the site had not ceased, for the following reasons:

- Large numbers of people entering and leaving the site on all shifts.
- Tower cranes in different orientations from one day to the next.
- Motors roaring throughout the night.
- Sounds of trucks dumping large rocks.
- Dump truck tailgates slamming.
- Trees being cut down.
- A truck loaded with crushed rock entering plant.

The NRC investigation found that the Order of the Nuclear Regulatory Commission which suspended the construction permits was being complied with and that only those actions permitted by the Order were being performed.

B. Conclusions

1. No items of noncompliance were identified during the investigation.
2. There were no violations of the NRC Order identified.

### III DETAILS

#### A. Introduction

Pursuant to the Nuclear Regulatory Commission Order on June 30, 1978, the Seabrook Station Units 1 and 2 construction permits were suspended effective 6:00 p.m. (EDT) on July 21, 1978.

An inspection<sup>1</sup> was conducted by a NRC Region I representative on July 21-27, 1978. The purpose of this inspection was to insure, by observation, interviews, and examination of applicable records, that the NRC Order to halt construction had been fully and correctly implemented.

This investigation was initiated as a result of the NRC receiving telephone complaints that blasting and construction activities had not ceased as of July 21, 1978.

#### B. Scope of Investigation

This investigation included an examination of pertinent documents and records, interviews and contacts with individuals having significant information, and observations by the investigators while at the Seabrook Station Unit 1 and 2 sites. It also included interviews and contacts with the complainants, individual members of the public, Pease Air Force Base and the Federal Aviation Administration.

The scope of this investigation was limited to those complaints relating to the suspension of the construction permits.

#### C. Persons Directly Interviewed and/or Contacted during the NRC Investigation

##### Yankee Atomic Electric Company

R. S. Faulkner, Jr., Section Leader, Field Monitoring  
J. H. Herrin, Site Manager  
F. R. Kotowski, Manager, Educational Center  
P. A. Nason, Staff Engineer  
R. P. Pizzuti, Construction Manager  
J. W. Singleton, Field Quality Assurance Manager  
R. B. Staples, Civil Supervisor  
A. J. Stewart, Site Geologist

<sup>1</sup>Office of Inspection and Enforcement Inspection Report Numbers 50-443/78-11 and 50-444/78-11.

United Engineers and Constructors

R. N. Moyer, Field Superintendent Quality Assurance/Quality Control

Pittsburgh Testing Laboratory

H. Ruffner, Site Manager/Test Laboratory Supervisor

Morrison - Knudsen Company, Inc.

J. N. Allan, Project Manager  
 D. Downs, Engineer  
 J. Hendrix, Engineer  
 J. P. Nossereau, Assistant Project Manager  
 R. Obradovic, Project Engineer

Pease Air Force Base

E. L. Byrd, Disaster Preparedness Officer

Federal Aviation Administration

C. Hudnall, Planning and Appraisal Staff

Others

The complainants and other individual members of the public.

D. NRC Comments and Findings Regarding the Complaints1. Complaint No. 1(a) Complaint

That blasting was continuing on the site after July 21, 1978.

(b) NRC Comments

The investigators interviewed several individuals regarding the blasting noise and/or ground tremors which they believed to be related to blasting at the Seabrook site subsequent to 6:00 p.m. on July 21, 1978. The following information was compiled from records maintained by the individuals and shows the approximate time of day for the reported sounds and/or ground tremors.

6:30 AM	-	1 reported sound on	8-1-78
7:10 AM	-	1 reported sound on	7-29-78
8:00 AM	-	2 reported sounds on	7-22-78
	-	1 reported sound on	7-23-78
8:10 AM	-	1 reported sound on	7-24-78
8:20 AM	-	3 reported sounds on	7-20-78
	-	3 reported sounds on	7-21-78
	-	3 reported sounds on	7-22-78
	-	2 reported sounds on	7-23-78
	-	3 reported sounds on	7-24-78
	-	2 reported sounds on	7-25-78
	-	3 reported sounds on	7-26-78
	-	5 reported sounds on	7-27-78
	-	5 reported sounds on	7-28-78
	-	3 reported sounds on	7-29-78
	-	3 reported sounds on	7-30-78
	-	6 reported sounds on	7-31-78
	-	1 reported sound each day during the period of 8-1 thru 8-10-78	
8:30 AM	-	2 reported sounds on	7-22-78
	-	3 reported sounds on	7-25-78
	-	3 reported sounds on	7-26-78
9:30 AM	-	1 reported sound on	7-22-78
9:50 AM	-	2 reported sounds on	7-23-78
	-	1 reported sound on	7-24-78
	-	2 reported sounds on	7-26-78
	-	2 reported sounds on	7-27-78
	-	3 reported sounds on	7-29-78
	-	1 reported sound on	7-30-78
	-	1 reported sound on	7-31-78
	-	4 reported sounds on	8-4-78
	-	1 reported sound on	8-5-78
10:45 AM	-	1 reported sound on	7-31-78
11:20 AM	-	1 reported sound on	8-1-78
12:40 AM	-	1 reported sound on	7-29-78
2:15 PM	-	1 reported sound on	7-29-78
2:45 PM	-	1 reported sound on	7-22-78
3:00 PM	-	2 reported sounds on	7-22-78
	-	1 reported sound on	7-23-78
	-	1 reported sound on	7-25-78
3:30 PM	-	3 reported sounds on	7-29-78



3:55 PM	-	1 reported sound on	7-27-78
	-	1 reported sound on	7-28-78
4:30 PM	-	1 reported sound on	7-22-78
5:50 PM	-	1 reported sound on	8-2-78
	-	1 reported sound on	8-4-78

There was general agreement that the reports from 8:20 to 8:30 AM; at 9:50 AM; and, from 3:00 to 3:30 PM were louder than others and created more vibration.

During a discussion at one residence, at about 9:55 a.m. on August 3, 1978, the investigators and all present heard a sound and felt a tremor similar to others that those present had previously reported. An immediate telephone call to neighbors confirmed that they had heard and felt it also. No other similar sounds were heard by the investigators while in the Seabrook, New Hampshire area during the period from August 2 through August 5, 1978.

During an inspection conducted at the Seabrook, construction site, the investigators examined blasting areas, explosives magazines (all found to be empty), photographed dump area for blasted rock from ground level and also aerial to provide a method of comparing change, interviewed blasting personnel, and examined blasting records and explosive material accounting records. The documentation provided to the investigators indicated that the final explosive charge which was detonated prior to the suspension orders occurred on July 21, 1978 at 11:48 a.m. in the Unit 1 foundation. Documentation also confirmed that all explosive materials were removed from the site on July 25, 1978. This information was also confirmed by discussions with the involved individuals.

The investigators contacted the Pease Air Force Base, Portsmouth, New Hampshire, and were informed that no similar complaints of sounds had been received at that location.

The investigators contacted the Federal Aviation Administration (FAA), Burlington, Massachusetts and were informed that they had received reports from citizens in the Boston North Shore Area and southern New Hampshire of sounds similar to those reported to the NRC.

The FAA has installed a sound monitoring device in Cambridge and is continuing an evaluation to determine the cause of the sound.

(c) NRC Findings

The NRC investigation found no information or evidence that any explosives were used on the site during the period from 6:00 p.m. on July 21, 1978, through August 5, 1978, which was the end of the onsite portion of this investigation.

2. Complaint No. 2

(a) Complaint

That construction activities at the site had not ceased, for the following reasons:

- Large numbers of people entering and leaving the site on all shifts.
- Tower cranes in different orientations from one day to the next.
- Motors roaring throughout the night.
- Sounds of trucks dumping large rocks.
- Dump truck tailgates slamming.
- Trees being cut down.
- A truck loaded with crushed rock entering plant.

(b) NRC Comments

An inspection<sup>1</sup> was conducted prior to initiation of this investigation to insure that, the NRC Order to halt construction had been fully and correctly implemented.

<sup>1</sup>Office of Inspection and Enforcement Inspection Report Numbers 50-443/78-11 and 50-444/78-11.

During this investigation, all plant areas were examined for evidence of unauthorized work being performed. Areas examined included the offshore jackup barge, onshore tunnel shaft area, reactor building excavations, cooling water pumphouse excavation, concrete and ironwork, concrete batch plant, settling basins, storage buildings, rock dumps, maintenance and testing shops, laydown areas, office areas, and the Educational Center area.

The investigators observed authorized activities of an environmental nature in progress, which included ditching and seeding work on the borders of the new plant access road, planting and seeding adjacent to the Educational Center, watering-down of dusty roads and parking areas, and removal of water from some low elevations by pumping. Equipment was also observed being loaded onto trucks for removal from the site.

The investigators determined that the total work force at the site on July 21, 1978 had been reduced by 62 percent as of August 2, 1978. There were individuals assigned on all shifts with the majority being on day shift. On August 2, 1978, supervision and office workers accounted for 75 percent of the total work force.

The investigators found that tower cranes did change in orientation which was a normal condition since they are free to turn in the wind when not in use. The other reported complaints were correlated with activities on site and none were found related to site activities which were not permissible.

In addition to direct observation of the site, the investigators took ground and aerial photographs to provide a method of comparing change.

(c) NRC Findings

The NRC investigation found that the Order of the Nuclear Regulatory Commission which suspended the construction permits was being complied with and that only those actions permitted by the Order were being performed.

E. Management Meetings

On July 26, 1978, the investigator discussed the reason for the investigation with Mr. J. H. Herrin, Site Manager.

On August 8, 1978, during a telephone discussion with Mr. Herrin, the investigator discussed the investigation findings and informed the licensee that no items of noncompliance had been identified.