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March 7, 1983

50-443  
50-444

Director  
Office of Inspection and Enforcement  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555


Dear Sir:

Subject: 10CFR21 Report of a Defect Related to Public Service  
Company of New Hampshire - Seabrook Station - Units 1 & 2

This is to inform you of a defect which has come to my attention related to the adequacy of the Service Water Cooling Tower structure for the Seabrook station. While this defect has been reported by the Public Service Company of New Hampshire in accordance with 10CFR50.55(e), we are providing this 10CFR21 report to assure that the Commission has been adequately informed.

Details of our report are attached.

Very truly yours,

  
G. E. Barsten  
Vice President - Power

Attachment

Copy: Regional Director  
USNRC - Region 1

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NAME AND ADDRESS OF THE INDIVIDUAL OR INDIVIDUALS INFORMING THE COMMISSION.

G. E. Sarsten  
United Engineers & Constructors Inc.  
30 South 17th Street  
Philadelphia, Pa. 19101

IDENTIFICATION OF THE FACILITY, THE ACTIVITY, OR THE BASIC COMPONENT SUPPLIED FOR SUCH FACILITY OR SUCH ACTIVITY WITHIN THE UNITED STATES WHICH FAILS TO COMPLY OR CONTAINS A DEFECT.

Public Service Company of New Hampshire, Seabrook Station. Design of Ultimate Heat Sink Cooling Tower Structure.

IDENTIFICATION OF THE FIRM CONSTRUCTING THE FACILITY OR SUPPLYING THE BASIC COMPONENT WHICH FAILS TO COMPLY OR CONTAINS A DEFECT.

United Engineers & Constructors Inc.

NATURE OF THE DEFECT OR FAILURE TO COMPLY AND THE SAFETY HAZARD WHICH IS CREATED OR COULD BE CREATED BY SUCH DEFECT OR FAILURE TO COMPLY.

Effects of transverse shear stresses were not considered in the initial design of the cooling tower structure for the ultimate heat sink. This oversight results in overstressed conditions in the tower structure during postulated seismic events.

THE DATE ON WHICH THE INFORMATION OF SUCH DEFECT OR FAILURE TO COMPLY WAS OBTAINED.

March 7, 1983

IN THE CASE OF A BASIC COMPONENT WHICH CONTAINS A DEFECT OR FAILS TO COMPLY, THE NUMBER AND LOCATION OF ALL SUCH COMPONENTS IN USE AT, SUPPLIED FOR, OR BEING SUPPLIED FOR ONE OR MORE FACILITIES OR ACTIVITIES SUBJECT TO THE REGULATIONS IN THIS PART.

This defect was found only in a single concrete structure (ultimate heat sink cooling tower). Checks of certain other seismic Category I structures at Seabrook have shown that provisions were made on those structures for transverse shear. In addition, checks of transverse shear calculations for other seismic Category I structures on both Seabrook and WNP 1 of the Washington Public Power Supply System will be completed by March 31, 1983.

THE CORRECTIVE ACTION WHICH HAS BEEN, IS BEING, OR WILL BE TAKEN; THE NAME OF THE INDIVIDUAL OR ORGANIZATION RESPONSIBLE FOR THE ACTION; AND THE LENGTH OF TIME THAT HAS BEEN OR WILL BE TAKEN TO COMPLETE THE ACTION.

Modifications to the structure as required to accommodate transverse shear forces will be made. United Engineers & Constructors Inc. will be responsible for these modifications. The Commission will be informed by March 31, 1983 when the design of the modifications will be completed.

ANY ADVICE RELATED TO THE DEFECT OR FAILURE TO COMPLY ABOUT THE FACILITY, ACTIVITY, OR BASIC COMPONENT THAT HAS BEEN, IS BEING, OR WILL BE GIVEN TO PURCHASERS OR LICENSEES.

Public Service Company of New Hampshire has reported the defect under the provisions of 10CFR50.55(e).