



**North
Atlantic**

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The Northeast Utilities System

Ted C. Feigenbaum
Senior Vice President &
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April 15, 1994

United States Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Document Control Desk

Reference: Facility Operating License No. NPF-86, Docket No. 50-443

Subject: Licensee Event Report (LER) No. 94-006-00: Unanalyzed Tornado Loading on
Ventilation Dampers/Ductwork and Metal Partitions

Gentlemen:

Enclosed please find Licensee Event Report (LER) No. 94-006-00 for Seabrook Station. This
submittal documents a condition which was identified as reportable on February 24, 1994. This event is
being reported pursuant to 10CFR50.73(a)(2)(ii)(A).

Should you require further information regarding this matter, please contact Mr. James M. Peschel,
Regulatory Compliance Manager, at (603) 474-9521, extension 3772.

Very truly yours,

Ted C. Feigenbaum

TCF:MJM/act

Enclosures: NRC Forms 366, 366A

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United States Nuclear Regulatory Commission
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cc: Mr. Thomas T. Martin
Regional Administrator
United States Nuclear Regulatory Commission
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Mr. Albert W. De Agazio, Sr. Project Manager
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United States Nuclear Regulatory Commission
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Mr. Antone C. Cerne
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LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)

SEABROOK STATION

DOCKET NUMBER (2)

05000443

PAGE (3)

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TITLE (4)

Unanalyzed Tornado Loading on Ventilation Dampers/Ductwork and Metal Partitions

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
03	17	94	94	06	00	04	15	94	FACILITY NAME	DOCKET NUMBER
										05000
										05000
OPERATING MODE (9)		1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
POWER LEVEL (10)		100	20.402(b)		20.405(c)		50.73(a)(2)(iv)		73.71(b)	
			20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)		73.71(c)	
			20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)		OTHER	
			20.405(a)(1)(iii)		50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		(Specify in Abstract below and in Text, NRC Form 366A)	
			20.405(a)(1)(iv)		X 50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)			
			20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)			

LICENSEE CONTACT FOR THIS LER (12)

NAME

Mr. James M. Peschel, Regulatory Compliance Manager

TELEPHONE NUMBER (Include Area Code)

(603) 474-9521 ext. 3772

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On March 17, 1994, North Atlantic Energy Service Corporation (North Atlantic) determined that a reportable condition existed involving the tornado design of ventilation dampers, associated ductwork, and Diesel Generator Building metal partitions. Specifically, design documentation to support the analysis of the effects of differential pressure loadings on these components in vented buildings, and the effects of positive pressures, during a tornado, could not be substantiated for the design basis tornado.

There were no adverse safety consequences as a result of this event. The components in question were capable of meeting the original design basis tornado criteria as defined in the Seabrook Station UFSAR at all times.

The root cause of this condition has been determined to be an oversight in the design control process during construction, either in not considering these components when analyzing tornado loading or in not properly controlling the design documents.

North Atlantic has prepared the design documentation to support the capability of these components to withstand the design basis tornado and will maintain these documents as part of the plant design basis.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

Description of Event

On August 27, 1992 North Atlantic reported in LER 92-013-00 that six tornado doors were not designed to withstand the differential pressure associated with the design basis tornado as defined in the Seabrook Station Updated Final Safety Analysis Report (UFSAR). As part of the subsequent evaluation of this condition, North Atlantic performed a comprehensive reevaluation of plant design features relative to tornado design criteria which included a thorough inspection of the existing plant barrier drawings and plant walkdowns. During this reevaluation, the analysis to support the ability of various heating, ventilation and air conditioning (HVAC) components (dampers and ductwork), and Diesel Generator Building metal partitions to withstand the effects of the design basis tornado of 360 mph maximum wind speed could not be substantiated. North Atlantic performed the necessary evaluation to confirm the acceptability of these components using site specific tornado criteria that was developed using the methodology presented in NUREG/CR-3058, "A Methodology for Tornado Hazard Probability Assessment". This site specific tornado was calculated to have a 260 mph maximum wind speed.

North Atlantic met with the NRC on March 14, 1994, to discuss the use of a site specific tornado analysis. The NRC stated that a maximum wind speed of at least 290 mph would be more appropriate for the Seabrook site. North Atlantic subsequently reanalyzed these components for the 360 mph maximum wind speed tornado that is currently defined as the design basis tornado in the Seabrook Station UFSAR and in Regulatory Guide 1.76. All components were found to be capable of meeting the criteria for the 360 mph tornado.

The result of the evaluation of the above components is that all structures, systems and components that must withstand the effects of a tornado have been analyzed and found to be capable of meeting the criteria for the design basis tornado as defined in the Seabrook Station UFSAR and Regulatory Guide 1.76.

On March 17, 1994, North Atlantic Energy Service Corporation (North Atlantic) determined that a reportable condition had previously existed involving the tornado design of HVAC components and metal partition walls in the Diesel Generator Building. Design documentation evaluating the tornado design of these components could not be substantiated and subsequent analyses used site specific tornado wind speeds that were questionable to the NRC.

North Atlantic had performed a preliminary analysis of these components by March 17, 1994 that determined they could withstand the design basis tornado. Therefore, North Atlantic did not report this event pursuant to 10CFR50.72 since the unanalyzed condition no longer existed on that date.

Safety Consequences

There were no adverse safety consequences as a result of this event. All of the HVAC components and metal partition walls were found to have been capable of meeting the criteria of the design basis tornado as defined in the Seabrook Station UFSAR and Regulatory Guide 1.76 at all times.

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TEXT CONTINUATION

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		94	04	00	

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

Root Cause

The root cause of this event was determined to be an oversight in the design control process during construction, either in not considering these components when analyzing tornado loading or in not properly controlling the design documents. North Atlantic expects the current design control process to preclude a recurrence of this problem.

Corrective Actions

1. North Atlantic has completed the evaluation of the HVAC components and metal partitions. This evaluation demonstrates the ability of these components and structures to meet the criteria of the design basis tornado.

Plant Conditions

At the time of this event, the plant was in Mode 1, at 100 percent power.

Related Events

North Atlantic has reported a similar condition in LER 92-013-00 and 92-013-01.