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NYN-920125

September 25, 1992

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

Attention: Document Control Desk

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


Subject: Licensee Event Report (LER) No. 92-013-00: Tornado Design of Plant Doors

Gentlemen:

Enclosed please find Licensee Event Report (LER) No. 92-013-00 for Seabrook Station. This submittal documents an event which was discovered on August 27, 1992 and is being reported pursuant to 10 CFR 50.73(a)(2)(ii)(B). This event was previously reported to the NRC on August 27, 1992 pursuant to 10 CFR 50.72(b)(1)(ii)(B).

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/

Enclosures: NRC Forms 366, 366A

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September 25, 1992
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cc: Mr. Thomas T. Martin
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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) SEABROOK STATION										DOCKET NUMBER (2) 0 5 0 0 0 4 4 3 1				PAGE (3) 1 OF 0 3		
TITLE (4) Tornado Design of Plant Doors																
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 NAMES				DOCKET NUMBER(S)			
0 8	2 7	9 2	9 2	0 1 3	0 0	0 9	2 5	9 2					0 5 0 0 0 1 1			
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)														
1		20.402(b)				20.405(a)				50.73(a)(2)(iv)				73.71(b)		
POWER LEVEL (10)		20.406(a)(1)(i)				50.38(a)(1)				50.73(a)(2)(v)				73.71(a)		
0 1 9 1 9		20.406(a)(1)(ii)				50.38(a)(2)				50.73(a)(2)(vi)				OTHER (Specify in Abstract Below and in Text, NRC Form 366A)		
		20.406(a)(1)(iii)				50.73(a)(2)(i)				50.73(a)(2)(vii)(A)						
		20.406(a)(1)(iv)				50.73(a)(2)(ii)				50.73(a)(2)(viii)(B)						
		20.406(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(ix)						
LICENSEE CONTACT FOR THIS LER (12)																
NAME Mr. James M. Peschel, Regulatory Compliance Manager X3772										TELEPHONE NUMBER AREA CODE 6 1 0 3 4 1 7 4 1 - 9 1 5 1 2 1 1						
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC						
SUPPLEMENTAL REPORT EXPECTED (14)												EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
<input checked="" type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)												NO		1 1	2 0	9 2

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On August 27, 1992 North Atlantic Energy Service Corporation (North Atlantic) determined that a reportable condition exists involving the tornado design of six plant doors. The affected doors are not designed to withstand the differential pressure of the design basis tornado as defined in the Updated Final Safety Analysis Report (UFSAR). However, they are either designed to withstand the differential pressure of the Seabrook Station site specific tornado, or the affected safety related plant equipment has been evaluated for the associated depressurization effects.

UFSAR section 2.3.1.2.b.2 states that all seismic Category I structures at the Seabrook site, with the exception of the refueling water tank, spray additive tank enclosure and the cooling tower, are designed to withstand the design basis tornado as described in Regulatory Guide 1.76. One of the characteristics of the Regulatory Guide design basis tornado is a pressure drop of 3.0 pounds per square inch (psid). The six plant doors which are not designed to withstand the 3.0 psid differential pressure include two doors in the Emergency Feedwater Pumphouse, and one door each in the Primary Auxiliary Building, Residual Heat Removal Vault, Fuel Storage Building, and Main Steam and Feedwater Pipechase. North Atlantic has evaluated these six doors using the site specific tornado data. This evaluation determined that the doors are either designed to withstand the differential pressure of the Seabrook Station site specific tornado, or the affected safety related plant equipment has been evaluated for the associated depressurization effects. In addition, North Atlantic verified that each of the plant spaces associated with these doors is protected from tornado missile strikes.

This condition is outside the plant design basis as documented in the UFSAR and is being reported pursuant to 10 CFR 50.73(a)(2)(ii)(B).

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/86

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (3)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
SEABROOK STATION	015000443912	0113	00	02	OF	03	

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

BACKGROUND

On August 27, 1992, the Atlantic Energy Service Corporation (North Atlantic) determined that a reportable condition exists involving the tornado design of six plant doors. The affected doors are not designed to withstand the differential pressure of the design basis tornado as defined in the Updated Final Safety Analysis Report (UFSAR). However, they are either designed to withstand the differential pressure of the Seabrook Station site specific tornado, or the affected safety related plant equipment has been evaluated for the associated depressurization effects.

General Design Criteria 2, "Design Bases for Protection Against Natural Phenomena" of Appendix A to 10 CFR 50 requires, in part, that structures, systems, and components be designed to withstand the effects of natural phenomena such as tornadoes without losing the capability to perform their safety function. Regulatory Guide 1.117, "Tornado Design Classification", provides guidance for identifying the structures, systems, and components that should be protected from the design basis tornado. Regulatory Guide 1.76, "Design Basis Tornado for Nuclear Power Plants", describes the acceptable design basis tornadoes for each of three regions within the contiguous United States.

Regulatory Guide 1.76 locates Seabrook Station in Tornado Intensity Region I. The Regulatory Guide 1.76 value for differential pressure of the design basis tornado in Tornado Intensity Region I is 3.0 psid. This value, and the other parameters which define the design basis tornado in Regulatory Guide 1.76, are specified in UFSAR section 2.3.1.2.b.2. Regulatory Guide 1.76 also allows the use of a site specific tornado in place of the design basis tornado described in Regulatory Guide 1.76, Table 1, provided a comprehensive analysis is performed to justify the use of less conservative design basis tornado characteristics.

UFSAR section 2.3.1.2.b.2 states that all seismic Category I structures at the Seabrook site, with the exception of the refueling water tank, spray additive tank enclosure and the cooling tower, are designed to withstand the design basis tornado as described in Regulatory Guide 1.76. However, six doors were not designed to withstand the differential pressure of the Regulatory Guide 1.76 design basis tornado. These doors are in structures described in Regulatory Guide 1.117 for which tornado protection should be provided. The doors are located in the Emergency Feedwater Pumphouse (two doors), the Primary Auxiliary Building roof, the Residual Heat Removal Vault, the Fuel Storage Building, and the Main Steam and Feedwater Pipechase.

North Atlantic performed an evaluation of the site specific meteorological conditions. This evaluation determined that the differential pressure experienced during the site specific tornado is less than 1.5 psid. However, this site specific tornado data has not been documented as the design basis tornado via inclusion in the UFSAR.

North Atlantic has evaluated the six doors specified above and verified that the doors are designed to withstand a differential pressure of 1.5 psid, or the affected safety related plant equipment has been evaluated for the depressurization effects of the site specific tornado. This evaluation also verified that adequate protection against tornado missile strikes exists

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (5)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		05000443	92	013	00	03	OF 03

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

for each plant space accessible through a door which is not designed to withstand a differential pressure of 1.5 psid.

SAFETY CONSEQUENCES

There are no adverse safety consequences associated with this condition. North Atlantic has evaluated the six doors which are not designed to withstand a differential pressure of 3.0 psid and determined that they are fully capable of withstanding the effects of a site specific tornado or the affected safety related plant equipment has been evaluated for the associated depressurization effects. The use of site specific tornado characteristics is allowed by Regulatory Guide 1.76. In addition, each of the plant spaces associated with a door which is not designed to withstand a differential pressure of 1.5 psid was evaluated to ensure that protection from tornado missiles exists.

ROOT CAUSE

The root cause of this condition has not yet been determined. North Atlantic is performing a thorough evaluation of this condition and will provide this information in a supplement to this report.

CORRECTIVE ACTIONS

North Atlantic will revise section 2.3.1.2.b.2 of the UFSAR to redefine the design basis tornado. The new design basis tornado will be based on site specific tornado data. Additional corrective actions identified during the ongoing evaluation of this condition will be included in a supplement to this report. It is expected that this report will be submitted to the NRC by November 20, 1992.

PLANT CONDITIONS

The plant was in MODE 1, Power Operation, at 99 percent power with a reactor coolant system temperature of 587 °F and pressure of 2235 psig.

This is the first event of this type at Seabrook Station.