

New Hampshire Yankee

Ted C. Feigenbaum
Senior Vice President and
Chief Operating Officer

NYN-90059

March 8, 1990

United States Nuclear Regulatory Commission
Washington, DC 20555

Attention: Document Control Desk

Reference: Facility Operating License NPF-67, Docket No. 50-443

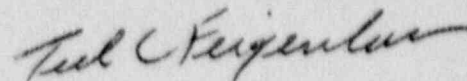
Subject: Licensee Event Report (LER) No. 90-006-00: Actuation of
Control Room Emergency Air Cleanup and Filtration Subsystem due
to Failed Radiation Monitor

Gentlemen:

Enclosed please find Licensee Event Report (LER) No. 90-006-00 for
Seabrook Station. This submittal documents an event which occurred on
February 6, 1990, and is being reported pursuant to 10CFR50.73(a)(2)(iv).

Should you require further information regarding this matter, please
contact Mr. Richard R. Belanger at (603) 474-9521, extension 4048.

Very truly yours,



Ted C. Feigenbaum

Enclosures: NRC Forms 366, 366A

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March 8, 1990
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cc: Mr. William T. Russell
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United States Nuclear Regulatory Commission
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Washington, DC 20555

Mr. Noel Dudley
NRC Senior Resident Inspector
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Seabrook, NH 03874

INPO
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1100 Circle 75 Parkway
Atlanta, GA 30339

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Seabrook Station										DOCKET NUMBER (2) 0 5 0 0 0 4 4 3 1 OF 0 3										PAGE (3) 1 OF 3									
TITLE (4) Actuation of Control Room Emergency Air Cleanup and Filtration Subsystem due to Failed Radiation Monitor																													
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											
0 2		0 6		9 0		9 0		0 0 6		0 0 0		3 0 8		9 0		DOCKET NUMBER(S) 0 5 0 0 0													
OPERATING MODE (9) 5						THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)																							
POWER LEVEL (10) 0 0 0						20.402(b)						20.405(e)						<input checked="" type="checkbox"/> 50.73(a)(2)(iv)						73.71(b)					
						20.405(a)(1)(i)						50.38(c)(1)						50.73(a)(2)(v)						73.71(c)					
						20.405(a)(1)(ii)						50.38(c)(2)						50.73(a)(2)(vi)						OTHER (Specify in Abstract below and in Text, NRC Form 366A)					
						20.405(a)(1)(iii)						50.73(a)(2)(i)						50.73(a)(2)(viii)(A)											
						20.405(a)(1)(iv)						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)(k)																	
LICENSEE CONTACT FOR THIS LER (12)																													
NAME Richard R. Belanger, Lead Engineer - Compliance, Extension 4048																TELEPHONE NUMBER AREA CODE 6 0 3 4 7 4 - 9 5 2 1													
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																													
CAU.	SYSTEM	COMPONENT	MANUFAC- TURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFAC- TURER	REPORTABLE TO NRC																			
X	V I R E		G O 6 3	N																									
SUPPLEMENTAL REPORT EXPECTED (14)																EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR									
<input checked="" type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)																NO		0	4	0 1 9 0									

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

On February 5, 1990 at 6:22 pm EST, following a source check the control room ventilation system Train A radiation monitor (RM-6506A) went into a high alarm condition. The monitor is located within the east air intake structure. The alarm condition resulted in the actuation of the Control Room Emergency Air Cleanup and Filtration Subsystem (CBA) [VI] and the transfer of the system to its recirculation/filtration mode. It appears the radiation monitor check source became mechanically bound in front of the detector window, causing the detector to enter into a high alarm condition. The walls of the guide slots were smoothed, and the tension on the solenoid spring was increased. During troubleshooting activities, the detector became detached from the detector assembly plate. The detector tube was remounted, and after an unsuccessful retest of the detector assembly, due to detector tube damage during troubleshooting and remounting, the detector tube was replaced. The detector was returned to service at 3:54 pm on February 7, 1990. There were no adverse safety consequences as a result of this event. All equipment other than the detector functioned as designed, fulfilling the Engineered Safety Features (ESF) function.

Previous events involving ESF actuations resulting from failed radiation monitors were reported via Seabrook Station LERs 90-005-00, 89-001-00 and 87-001-00.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/90

FACILITY NAME (1) Seabrook Station	DOCKET NUMBER (2) 0 5 0 0 0 4 4 3 9 0 - 0 0 6 - 0 0 0 2 OF 0 3	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			

TEXT (If more space is required, use additional NRC Form 306A's) (17)

On February 6, 1990 at 6:22 pm EST, following a source check the control room ventilation system Train A radiation monitor (RM-6506A) went into a high alarm condition. The monitor is located within the east air intake structure. The alarm condition resulted in the actuation of the Control Room Emergency Air Cleanup and Filtration Subsystem (CBA) [VI] and the transfer of the system to its recirculation/filtration mode. The event occurred following an automatic surveillance test which is performed every 24 hours.

CORRECTIVE ACTIONS

It appears the radiation monitor check source became mechanically bound, such that the check source rod was binding against its guide slots, resulting in the source being positioned in front of the detector window, causing the detector to enter the high alarm condition. The walls of the guide slots were smoothed with emery cloth and the tension of the solenoid spring return was increased to prevent the binding from recurring. During troubleshooting activities, the detector became detached from the detector assembly plate. The detector tube was remounted, and after an unsuccessful retest of the detector assembly, due to detector damage during troubleshooting and remounting, the detector tube was replaced. The detector was returned to service at 3:54 pm on February 7, 1990.

To prevent recurrence of this event, a note will be incorporated into the surveillance procedures for these monitors to look for and remove any burrs on the check sources rod, to adjust spring tension, if necessary, and to visually verify check source smoothness of operation. In addition, the routine performance monitoring and trend analysis activities that have been implemented will continue to track and evaluate future failures of a similar nature. Further corrective actions may result from the investigation into the root cause currently in progress. Any such correction action would be submitted via a supplemental report expected by April 1, 1990.

ROOT CAUSE

It appears the root cause of the detector failure is mechanical binding of the check source. The binding resulted in the check source being positioned in front of the detector window, causing the detector to go into a high alarm condition resulting in initiation of the Control Room Emergency Air Cleanup and Filtration Subsystem transferring to its recirculation/filtration mode. Due to repetitive problems with CBA radiation monitors, a complete and thorough investigation into the root cause is currently underway and will be submitted via a supplemental report expected by April 1, 1990.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/90

FACILITY NAME (1) Seabrook Station	DOCKET NUMBER (2) 0 5 0 0 0 4 4 3 9 10	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

SAFETY CONSEQUENCES

There were no adverse safety consequences as a result of this event. All equipment other than the detector check source linkage functioned as designed, fulfilling the Engineered Safety Features (ESF) function. The failure of the monitor in this manner does not impair the ESF function of the Control Room Emergency Air Cleanup and Filtration Subsystem and automatically places the CBA system in the configuration required by Seabrook Station Technical Specification 3.3.3.1.

PREVIOUS OCCURRENCES

A previous occurrence of an ESF actuation resulting from a radiation monitor check source binding was reported via Seabrook Station LER 90-005-00. Additionally, events involving ESF actuations resulting from failed radiation monitors were reported via Seabrook Station LERs 89-001-00 and 87-001-00; however, these events did not result from check source binding. Four previous instances of check source binding have occurred at Seabrook Station. None of these previous occurrences of binding resulted in an ESF actuation.

At the time of this event, Seabrook Station was in Mode 5, cold shutdown.