

New Hampshire Yankee

Ted C. Feigenbaum
President and
Chief Executive Officer

NYN-91182

November 6, 1991

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

Attention: Document Control Desk

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

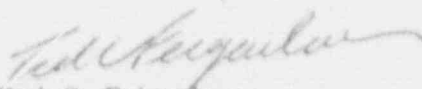
Subject: Licensee Event Report (LER) No. 91-013-00: Reactor Protection System
Actuation During Rod Position Indication 18-Month Surveillance

Gentlemen:

Enclosed please find Licensee Event Report (LER) No. 91-013-00 for Seabrook Station. This submittal documents an event which occurred on October 7, 1991, and is being reported pursuant to 10CFR50.73(a)(2)(iv).

Should you require further information regarding this matter, please contact Mr. Allen L. Legendre, Lead Engineer - Compliance, at (603) 474-9521, extension 2373.

Very truly yours,


Ted C. Feigenbaum

TCF:JES/act

Enclosures: NRC Forms 366, 366A

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New Hampshire Yankee Division of Public Service Company of New Hampshire
P.O. Box 300 • Seabrook, NH 03874 • Telephone (603) 474-9521

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Sea k Station										DOCKET NUMBER (2) 0 5 0 0 0 4 4 3 1 OF 0 3										PAGE (3) 1 OF 0 3	
TITLE (4) Reactor Protection System Actuation During Rod Position Indication 18-Month Surveillance																					
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)							
10	07	91	91	0113	0	01	10	69						0 5 0 0 0							
OPERATING MODE (9) 3			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 3 CFR 5: (Check one or more of the following) (11)																		
POWER LEVEL (10) 1 10			20.402(b)			20.405(a)			<input checked="" type="checkbox"/> 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)(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)(vii)(A)												
			20.405(a)(1)(iv)			50.73(a)(2)(ii)			50.73(a)(2)(vii)(B)												
			20.405(a)(1)(v)			50.73(a)(2)(iii)			50.73(a)(2)(ix)												
LICENSEE CONTACT FOR THIS LER (12)																					
NAME Allen L. Legendre, Lead Engineer - Compliance, Extension 2373										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)																					
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)												<input type="checkbox"/> NO				0	3	0	2	9	12
ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)																					

On October 7, 1991, at 6:45 p.m., EDT, while in MODE 3, manual Reactor Protection System (RPS) actuation was performed per Technical Specification 3.1.3.3 when the Digital Rod Position Indicator (DRPI) for Shutdown Bank C, Rod N5, was greater than plus or minus 12 steps of the position indicated on the Demand Counter. A second planned manual actuation of the Reactor Protection System was performed at 9:36 p.m., EDT, during the conduct of troubleshooting activities.

The root cause of this event has not yet been determined. NHY believes that the DRPI system operated properly and provided an accurate indication of the position of Rod N5, which had dropped due to a malfunction of the Rod Control System. NHY will implement corrective actions to assist with the determination of the root cause of the malfunction of the Rod Control System. Specifically, NHY will conduct additional troubleshooting of the Shutdown Bank C during the monthly DRPI Operability Test (OX1410.02) for at least the next three months unless the root cause is determined prior to the end of this period. Additional corrective actions will be formulated if necessary.

Following completion of the above stated corrective actions, NHY will submit a follow-up report regarding the root cause of this event. It is expected that this report will be submitted to the NRC by March 2, 1992.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

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

Description of Event

On October 7, 1991, at 6:45 p.m., EDT, while in MODE 3 (Hot Standby), during the performance of the Rod Position Indication 18-Month Surveillance (OX1410.07), Shutdown Bank C was driven out to 228 steps and was being stepped in when Rod N5 dropped from a Group Step Demand position of 37 steps to a Digital Rod Position Indicator (DRPI) position of 18 steps. The Shutdown Rod Banks have position indication lights only at rod bottom (RB), 6, 12, 18, 210, 216, 222 and 228 steps. When the Shutdown Rods are between 18 and 210 steps the transition LED is illuminated. The DRPI display panel indicated that the other Shutdown rods in Bank C were between 18 steps and 210 steps (as denoted by the transition LED lights). It was uncertain whether Rod N5 was within plus or minus 12 steps of its Group Step Demand position, therefore, in accordance with Technical Specification 3.1.3.3, "Movable Control Assemblies Position Indication System - Shutdown," the Reactor Trip System breakers were opened.

Following NRC notification (at 8:30 p.m., EDT) of this event, a second manual Reactor Protection System (RPS) actuation was performed at 9:36 p.m., EDT, during trouble shooting of Rod N5 in Shutdown Bank C. This troubleshooting involved stepping Shutdown Bank C out to 228 steps and back in with test equipment installed on the DRPI System. During this test sequence, Rod N5 dropped from a Group Step Demand position of 47 steps to a DRPI position of 18 steps. However, no anomalies were observed by the test equipment.

Following NRC notification (at 9:36 p.m., EDT) of the second manual actuation of the Reactor Protection System (RPS), another test was conducted similar to the previous test. This time, all Shutdown Rods remained within the plus or minus 12 step criteria, and no anomalies were observed on the test equipment.

Safety Consequences

There were no adverse safety consequences as a result of this event. The Reactor Protection System (RPS) functioned as designed. At no time during this event was there any impact on the health and safety of plant employees or the public.

Root Cause

The root cause of this event has not yet been determined. NHY believes that the DRPI system operated properly and provided an accurate indication of the position of Rod N5, which had dropped due to a malfunction of the Rod Control System. NHY will implement corrective actions to assist with the determination of the root cause of the malfunction of the Rod Control System. Additional corrective actions will be formulated if necessary.

Corrective Actions

NHY will conduct additional troubleshooting of the Shutdown Bank C during the monthly DRPI Operability Test (OX1410.02) for at least the next three months unless the root cause is determined prior to the end of this period. This troubleshooting will include evaluation of Shutdown Rod gripper coil currents and verification of adequate fuse contact. Additional corrective actions will be formulated if necessary.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Seabrook Station	DOCKET NUMBER (2) 0 5 0 0 0 4 4 3 9 1	LER NUMBER (8)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		0 1	3	0 0	0 3	OF	0 3

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

Following completion of the above stated corrective actions, NHY will submit a follow-up report regarding the root cause of this event. It is expected that this report will be submitted to the NRC by March 2, 1992.

Plant Conditions

At the time of this event, the plant was in MODE 3, Hot Standby, with a Reactor Coolant System temperature of 557 F and pressure of 2235 psig, and a boron concentration of 1929 ppm.

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