



CONNECTICUT YANKEE ATOMIC POWER COMPANY

HADDAM NECK PLANT

362 INJUN HOLLOW ROAD • EAST HAMPTON, CT 06424-3099

June 10, 1997

Re: 10CFR50.73(a)(2)(ii)

CY-97-069

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

Reference: Facility Operating License No. DPR-61
Docket No. 50-213
Reportable Occurrence LER 50-213/96-009-01

This letter forwards the Licensee Event Report 96-009-01, required to be submitted, pursuant to the requirements of the Haddam Neck Plant's Technical Specifications.

Very truly yours,

R.A. Mellor
Director - Site Operations and Decommissioning

RAM/reb

Attachment: LER 50-213/96-009-01

cc: Mr. H. J. Miller
Regional Administrator, Region I
475 Allendale Road
King of Prussia, PA 19406

Mr. William J. Raymond
Sr. Resident Inspector
Haddam Neck

1/1
Lezz



9706170199 970610
PDR ADOCK 05000213
S PDR

LICENSEE EVENT REPORT (LER)

(See reverse for required number of
digits/characters for each block)ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY
INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS
LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED
BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN
ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-
6 F33), 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)

Haddam Neck

DOCKET NUMBER (2)

05000213

PAGE (3)

1 of 4

TITLE (4)

Use of Abnormal Operating Procedure Could Impact Transfer to Sump Recirculation

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
04	29	96	96	009	01	06	10	97	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)							
			20.2201(b)			20.2203(a)(2)(v)			50.73(a)(2)(ii)	
			20.2203(a)(1)			20.2203(a)(3)(i)			50.73(a)(2)(ii)	
POWER LEVEL (10)		100	20.2203(a)(2)(i)			20.2203(a)(3)(ii)			50.73(a)(2)(iii)	
			20.2203(a)(2)(ii)			20.2203(a)(4)			50.73(a)(2)(iv)	
			20.2203(a)(2)(iii)			50.36(c)(1)			50.73(a)(2)(v)	
			20.2203(a)(2)(iv)			50.36(c)(2)			50.73(a)(2)(vii)	
									Specify in Abstract below or in NRC Form 366A	

LICENSEE CONTACT FOR THIS LER (12)

NAME

Gerry Waig, Operations Manager

TELEPHONE NUMBER (Include Area Code)

(860) 267-2556

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	NO	EXPECTED SUBMISSION	MONTH	DAY	YEAR
(If yes, complete EXPECTED SUBMISSION DATE).					

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)
(16)

On April 29, 1996, at 1012 hours, with the plant in Mode 1 at 100% power, it was determined, based upon operator review of the abnormal operating procedure for a loss of component cooling water, that cross tying the service water system to the component cooling water system could potentially render the Residual Heat Removal heat exchangers inoperable during the sump recirculation phase of an accident. On May 3, 1996, at 1538 hours, with the plant in Mode 1 at 100% power, an evaluation determined that, although this configuration never existed, it was reportable from a historical perspective. The procedure was changed on May 3, 1996 to delete the requirement for the cross tying of the two systems. The cause of the event was inadequate procedure review in that the occurrence of an accident during this condition was not postulated. This condition has existed since the original issue of the procedure. Corrective action consisted of reviewing all abnormal operating procedures (AOP) for similar conditions and none were identified. Based on this review it was determined that an AOP upgrade program was not necessary. This event is reportable under 10CFR50.73(a)(2)(ii)(B) as a condition that was outside the design basis of the plant. Since this is a historical report and the plant was never in this alignment, a prompt report under 10CFR50.72 was not issued.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
		96	-- 009 --	01	

Haddam Neck

05000213

2 of 4

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

BACKGROUND INFORMATION

Abnormal Operating Procedure (AOP) AOP 3.2-10, "Loss of Component Cooling Water" addresses a total loss of component cooling water and also the loss of component cooling water (CCW) to the individual components served by the system. Section 4.5 of the procedure provides guidance on a loss of CCW flow due to a malfunction of all three CCW pumps with the Residual Heat Removal (RHR) system not in service. This evolution cross-connects the service water system with the CCW system at the RHR heat exchangers to cool the CCW system components (See attachment 1).

The performance of AOP 3.2-10 removes the 'B' RHR heat exchanger from service by closing the service water outlet isolation valve (SW-V-250B). The normal alignment for the RHR heat exchanger cooling flow is for the service water outlet valves to be in a locked throttled condition to maintain the system flow model. In the event that sump recirculation is required the service water inlet motor operated valves (SW-MOV-5&6) are opened to provide heat exchanger and ultimately sump water cooling. The alignment performed in the AOP closes the service water outlet valve (SW-V-250B) and opens the CCW inlet valve (CC-V-760B) on the "B" RHR heat exchanger. As a result of the valve alignment the "B" heat exchanger is rendered inoperable to support sump recirculation cooling. The procedure also opens the CCW outlet valve (CC-V-764A) and service water outlet valve (SW-V-250A) on the "A" RHR heat exchanger. The effectiveness of the 'A' RHR heat exchanger is also impaired as well as the total flow model of the service water system.

EVENT DESCRIPTION

On April 29, 1996, at 1012 hours, with the plant in Mode 1 at 100% power, it was determined, based upon operator review while performing training on abnormal operating procedure AOP 3.2-10, "Loss of Component Cooling Water", that cross tying the service water system to the component cooling water system could potentially render the Residual Heat Removal heat exchangers inoperable during the sump recirculation phase of an accident. If a loss of coolant accident occurred while in this cross-tie configuration and operators performed ES-1.3, "Transfer to Sump Recirculation" there would be no flow through the 'B' RHR heat exchanger because the service water outlet valve SW-V-250B would be in the closed position. The valve is located in the RHR heat exchanger cubicle and would be inaccessible when aligned for sump recirculation due to excessive radiation levels. If SW-MOV-6 failed to open post LOCA, while in this alignment, the 'A' RHR heat exchanger would also be rendered inoperable. Also, since the service water outlet valve (SW-V-250A) on the 'A' RHR heat exchanger is fully open there could be excessive service water flow through the heat exchanger if SW-MOV-6 was opened, possibly damaging the heat exchanger. This would also reduce service water flow to an unacceptable level through other components such as the emergency diesel generators and containment air recirculation (CAR) fans if a loss of normal power occurred coincident with the LOCA.

**LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION**

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Haddam Neck	05000213	96	-- 009 --	01	3 of 4

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

On May 3, 1996, at 1538 hours, with the plant in Mode 1 at 100% power, an evaluation determined that, although this configuration never existed, it was reportable from a historical perspective. The procedure was changed on May 3, 1996 to delete the requirement for the cross tying of the two systems.

CAUSE OF THE EVENT

The cause of the event was inadequate procedure review in that the occurrence of an accident during this condition was not postulated. This condition has existed since the original issue of the procedure.

SAFETY ASSESSMENT

This event is reportable under 10CFR50.73(a)(2)(ii)(B) as a condition that was outside the design basis of the plant.

AOP 3.2-10 allowed for a valve alignment which could result in the loss of post LOCA sump recirculation cooling via the Residual Heat Removal heat exchangers. In particular, the cross-tie valve lineup, in combination with the failure of SW-MOV-6 to open on switchover, would result in the loss of sump recirculation cooling. In addition, the potential existed that, if SW-MOV-6 was fully opened, and a loss of normal power occurred coincident with the LOCA, excessive flow through the 'A' RHR heat exchanger could result in damage to the heat exchanger and a potentially unacceptable reduction in service water flow through other components such as the emergency diesel generators and containment air recirculation (CAR) fans.

Had a design basis accident occurred after implementation of AOP 3.2-10 and SW-MOV-6 failed to open, inadequate core cooling due to loss of sump recirculation would have resulted. Had a design basis accident occurred along with a loss of normal power after implementation of AOP 3.2-10 and SW-MOV-6 was opened excessive containment temperatures and pressures may have resulted due to lower service water flow through the CAR fan cooling coils.

Since this is a historical report and the plant was never in this condition, a prompt report under 10CFR50.72 was not issued.

CORRECTIVE ACTION

Corrective action consisted of reviewing all abnormal operating procedures (AOP) for similar conditions and none were identified. Based on this review it was determined that an AOP upgrade program was not necessary.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Haddam Neck	05000213	96	-- 009 --	01	4 of 4

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

ADDITIONAL INFORMATION

This supplemental LER was issued to document the results of the review of the abnormal operating procedures.

PREVIOUS SIMILAR EVENTS

None.