



CONNECTICUT YANKEE ATOMIC POWER COMPANY

HADDAM NECK PLANT

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

October 24, 1996

Re: 10CFR50.73(a)(2)(i)  
B15956

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 50-213/96-025-00

This letter forwards the Licensee Event Report 96-025-00, required to be submitted, pursuant to the requirements of the Haddam Neck Plant's Technical Specifications.

Very truly yours,

J. J. LaPlatney  
Unit Director

JJL/eda

Attachment: LER 50-213/96-025-00

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

IE221

9610310189 961024  
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 INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 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)

Haddam Neck

DOCKET NUMBER (2)

05000 -213

PAGE (3)

1 OF 4

TITLE (4)

Spent Fuel Building Air Filtration System Failed Air Flow Test

EVENT DATE (5)			LER NUMBER (6)			REPORT NUMBER (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
09	27	96	96	-- 025 --	00	10	24	96	FACILITY NAME	05000
									FACILITY NAME	DOCKET NUMBER
										05000

OPERATING MODE (9)	5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)				
POWER LEVEL (10)	000	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)	X	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	(Specify in Abstract below and in Text, NRC Form 365A)
		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)(x)	

## LICENSEE CONTACT FOR THIS LER (12)

NAME

Diane Carnesi, Technical Support

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 (If yes, complete EXPECTED SUBMISSION DATE)	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
X			12	31	96

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

On September 27, 1996, at 1617 hours, with the plant in Mode 5 (cold shutdown) for the cycle 19 refueling outage, while performing air flow testing, it was determined that the spent fuel building (SFB) air cleanup system did not meet the Technical Specification air flow requirement of 4,000 cfm +/- 10%. The measured flow rate was 1,990 cfm. Although the system has not been required to be operable during the current outage it is likely that the system was operated during a previous refueling outage with a flow rate below the minimum requirement. The cause is still under investigation which includes a review of the adequacy of the test procedure and the effects of the coincident operation of the primary auxiliary building (PAB) air cleanup system on the test results. When the SFB and PAB air cleanup systems discharge into a common duct, the SFB air flow is affected by the PAB system total air flow. Initial corrective action was to adjust a SFB air cleanup system damper to achieve the required air flow rate. Long term corrective action will be based upon the results of the investigation. A supplemental report will be issued detailing the results of the investigation and any associated corrective actions. This event is reportable under 10CFR50.73(a)(2)(i)(B) as any operation or condition prohibited by the plant's Technical Specifications.

REQUIRED NUMBER OF DIGITS/CHARACTERS  
FOR EACH BLOCK

BLOCK NUMBER	NUMBER OF DIGITS/CHARACTERS	TITLE
1	UP TO 46	FACILITY NAME
2	8 TOTAL 3 IN ADDITION TO 05000	DOCKET NUMBER
3	VARIES	PAGE NUMBER
4	UP TO 76	TITLE
5	6 TOTAL 2 PER BLOCK	EVENT DATE
6	7 TOTAL 2 FOR YEAR 3 FOR SEQUENTIAL NUMBER 2 FOR REVISION NUMBER	LER NUMBER
7	6 TOTAL 2 PER BLOCK	REPORT DATE
8	UP TO 18 -- FACILITY NAME 8 TOTAL -- DOCKET NUMBER 3 IN ADDITION TO 05000	OTHER FACILITIES INVOLVED
9	1	OPERATING MODE
10	3	POWER LEVEL
11	1 CHECK BOX THAT APPLIES	REQUIREMENTS OF 10 CFR
12	UP TO 50 FOR NAME 14 FOR TELEPHONE	LICENSEE CONTACT
13	CAUSE VARIES 2 FOR SYSTEM 4 FOR COMPONENT 4 FOR MANUFACTURER NPRDS VARIES	EACH COMPONENT FAILURE
14	1 CHECK BOX THAT APPLIES	SUPPLEMENTAL REPORT EXPECTED
15	6 TOTAL 2 PER BLOCK	EXPECTED SUBMISSION DATE

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

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 (MNBB 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)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Haddam Neck	05000 -213	96	- 025	- 00	2 OF 4

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

**BACKGROUND INFORMATION**

The spent fuel building (SFB) exhaust fan takes suction on the area over the spent fuel pool and discharges to a duct that leads to the vent stack. During normal operation the exhaust fan is manually aligned to bypass the charcoal filtration train. During operations involving movement of fuel within the storage pool or crane operation with loads over the storage pool, the system is manually aligned with the charcoal filtration train in service. The charcoal filtration train consists of prefilters, high efficiency particulate air (HEPA) filters, and charcoal adsorbent trays. The SFB air cleanup system exhaust duct joins a common duct that also directs the primary auxiliary building (PAB) air cleanup system to the vent stack. Technical Specification 3.9.12 requires the SFB air cleanup system to be operable during operations involving movement of fuel within the storage pool or crane operation with the loads over the storage pool. Technical Specification 4.9.12 requires that the system be capable of operating with a flow rate of 4000 cfm +/- 10%.

**EVENT DESCRIPTION**

On September 27, 1996, at 1617 hours, with the plant in Mode 5 (cold shutdown) for the cycle 19 refueling outage, while performing air flow testing, it was determined that the spent fuel building (SFB) air cleanup system did not meet the Technical Specification air flow requirement of 4,000 cfm +/- 10%. The measured flow rate was 1,990 cfm. Although the system has not been required to be operable during the current outage it is likely that the system was operated during a previous refueling outage with a flow rate below the minimum requirement.

**CAUSE OF THE EVENT**

The cause is still under investigation which includes a review of the adequacy of the test procedure and the effects of the coincident operation of the primary auxiliary building (PAB) air cleanup system on the test results.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

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The surveillance procedure did not indicate how the PAB system should be configured during flow testing.

Air flow tests showed that the PAB air cleanup system configuration has an effect on the SFB air cleanup system air flow. This is due to the increased pressure in the common exhaust duct caused by the operation of the second PAB exhaust fan.

The cause will be determined prior to fuel movement within the storage pool or crane operation with loads over the storage pool.

## SAFETY ASSESSMENT

This event is reportable under 10CFR50.73(a)(2)(i)(B) as any operation or condition prohibited by the plant's Technical Specifications.

The SFB air cleanup system is required to be operable in various modes. Preliminary investigations determined that the system surveillance was typically performed in Mode 1. During Modes 1 through 4 only one of two PAB exhaust fans would be operating. Therefore, if movement of fuel in the pool or crane operation over the pool was performed in Modes 1 through 4, the air flow would likely have met the Technical Specification requirement. However, during Modes 5 and 6 when the second PAB exhaust fan is in operation, purging containment, it is likely the SFB air cleanup system would have been below the Technical Specification requirement.

The design basis for the SFB air cleanup system specifies manually setting the damper positions and obtaining a negative pressure in the SFB. The system operation during fuel handling activities assumes a minimum air flow of 4000 cfm +/- 10% through the filters maintaining the slightly negative pressure. If a fuel handling accident occurred under the as-found test conditions the potential existed for adequate air filtration not being available.

Prior to the Systematic Evaluation Program (SEP) in 1981, no credit was taken for the SFB filtration system. As part of SEP Topic XV-20, the radiological consequences of the fuel handling accident were reevaluated. The resulting thyroid dose was 210 REM (less than 10CFR Part 100 limit) without credit for charcoal filters. However, since



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this exceeded the SRP acceptance criteria of 75 REM, Technical Specifications were incorporated to ensure the filters were tested and to ensure the system was in service while moving fuel.

Although the system has not been required to be operable during the current outage it is likely that the system was operated during a previous refueling outage with a flow rate below the minimum requirement. Therefore, this event is being reported as a potential, historical condition prohibited by the Technical Specifications.

## CORRECTIVE ACTION

Initial corrective action was to adjust a SFB air cleanup system damper to achieve the air flow rate required by the Technical Specifications. Any additional corrective action will be completed prior to fuel movement within the storage pool or crane operation with loads over the storage pool. Long term corrective action will be based upon the results of the investigation.

## ADDITIONAL INFORMATION

Commitments

The following are commitments made within this report. All other statements are for information only.

B15956-1 A supplemental report will be issued detailing the results of the investigation and any associated corrective actions.

## PREVIOUS SIMILAR EVENTS

None.