



CONNECTICUT YANKEE ATOMIC POWER COMPANY

HADDAM NECK PLANT

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

October 23, 1996

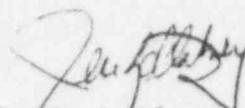
Re: Voluntary
B15935

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 50-213/96-020-00

This letter forwards the Licensee Event Report 96-020-00, 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 50-213/96-020-00

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

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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)

Fuel Transfer Tube Bellows Not in Containment Penetration Test Program

EVENT DATE (5)

MONTH	DAY	YEAR
07	09	96

LER NUMBER (6)

YEAR	SEQUENTIAL NUMBER	REVISION NUMBER
96	020	00

REPORT NUMBER (7)

MONTH	DAY	YEAR
10	23	96

OTHER FACILITIES INVOLVED (8)

FACILITY NAME	DOCKET NUMBER
	05000
FACILITY NAME	DOCKET NUMBER
	05000

OPERATING MODE (9)

1

POWER LEVEL (10)

100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

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)

50.73(a)(2)(i)

50.73(a)(2)(viii)(A)

(Specify in Abstract below and in Text, NRC Form 366A)

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)

Voluntary

LICENSEE CONTACT FOR THIS LER (12)

NAME

John Calderone, 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 NRRS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRS

SUPPLEMENTAL REPORT EXPECTED (14)

YES

(If yes, complete EXPECTED SUBMISSION DATE)

☒ NO

missing

EXPECTED SUBMISSION DATE (15)

MONTH DAY YEAR

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

On July 9, 1996, at 1620 hours, with the plant in Mode 1, at 100% power an engineering evaluation determined that the fuel transfer tube bellows, containment penetration (P50), had not been included in the 10CFR50, Appendix J test program. A local leak rate test (Type B) has not been performed on the fuel transfer tube bellows, located inside containment, since initial unit startup. This condition was identified following a review of a similar situation at Millstone Unit 3. The plant was designed and constructed prior to the implementation of Appendix J and the fuel transfer tube design does not support local leak rate testing. It was determined that the penetration was operable based on the satisfactory performance of the previous integrated leak rate test (ILRT) of the containment. The cause of this condition was an administrative oversight due to the failure to recognize the bellows as requiring a Type B test in accordance with Appendix J. Corrective action consists of modifying the penetration and performing the required local leak rate testing prior to startup from the current refueling and maintenance outage. In addition, the bellows will be added to the Appendix J test program. Implementation of the corrective action is contingent upon resumption of operation of the Haddam Neck Plant. This LER is being submitted as a voluntary report.

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 (4)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Haddam Neck	05000 -213	96	- 020 -	00	OF 2 4

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

BACKGROUND INFORMATION

The fuel transfer tube penetration design is unique and does not follow the typical examples for penetration isolation identified in ANS 56.2, Containment Isolation Provisions for Fluid Systems. This penetration consists of two distinct containment (EIIIS Code: BD) boundaries.

The penetration bellows, as a pressure boundary, is designed to relieve stresses due to thermal growth of the fuel transfer tube. Changes in the physical dimensions of the piping will be absorbed with the flexible portions of the bellows minimizing the stresses imposed on the reactor cavity structure, containment and the refueling cavity attachment welds.

The fuel transfer tube is configured such that, on the containment side, there is a manual gate valve bolted to the penetration flange with a removable blank flange attached to the valve. On the spent fuel building side there is a sluice gate. Both the gate valve and sluice gate are used to isolate the spent fuel pool from the refueling cavity. The blank flange installed on the gate valve is used as the containment penetration boundary and does undergo Type B local leak rate testing.

The penetration design criteria was identified in the Application for a Full Term Operating License: "Criterion 56 - Provisions for Testing of Penetrations". This criterion is met. The only containment penetration designed with an expansion bellows is the fuel transfer penetration. Provisions are provided for testing the integrity of this double bellows at design pressure. When not in use, a gate valve on the refueling canal end of the chute is shut and a blank flange is installed on the valve. The space between the flange and the valve is then pressurized and leakage rate tested prior to plant startup.

EVENT DESCRIPTION

On July 9, 1996, at 1620 hours, with the plant in Mode 1, at 100% power an engineering evaluation determined that the fuel transfer tube bellows, containment penetration (P50), had not been included in the 10CFR50, Appendix J test program. A local leak rate test (Type B) has not been performed on the fuel transfer tube bellows, located inside containment, since initial unit startup. This condition was identified following a review of a similar situation at Millstone Unit 3. The

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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				96	- 020 -	00	

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

plant was designed and constructed prior to the implementation of Appendix J and the fuel transfer tube design does not support local leak rate testing. It was determined that the penetration was operable based on the satisfactory performance of the previous integrated leak rate test (ILRT) of the containment.

CAUSE OF THE EVENT

The cause of this condition was an administrative oversight due to the failure to recognize the bellows as requiring a Type B test in accordance with Appendix J. An exemption to the Appendix J regulation should have been requested during submittal of the SEP Topic VI-4, Containment Isolation System response. The original submittal for application of the full term operating license identified this condition.

SAFETY ASSESSMENT

Although this event did not result in a condition prohibited by the plant's Technical Specifications, this LER is being submitted as a voluntary report. The basis for this event not being reportable under 10CFR50.73(a)(2)(i)(B) is directly related to the penetration design arrangement which does not allow for local leak rate testing. Since testing could not be performed then compliance with the surveillance frequency requirements of Technical Specification 4.6.1.2.d is not considered applicable.

The Technical Specification acceptance criteria for the allowable leakage from the sum of all penetrations and valves being local leak rate tested is 0.6 La. La is defined as the maximum allowable leakage rate and is 0.18 weight percent of the contained air per 24 hours at a 40 psig test pressure. The unit was in compliance with this Technical Specification since the testable portions of this penetration are being tested and added to the total for 0.6 La.

It was determined that the penetration was operable based on the satisfactory performance of the previous integrated leak rate test (ILRT) of the containment which tests the entire fuel transfer tube penetration. Nothing has occurred to this penetration to invalidate the

NRC FORM 366A <small>(5-92)</small>		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95	
LICENSEE EVENT REPORT (LER) TEXT CONTINUATION					
FACILITY NAME (1)		DOCKET NUMBER (2)		LER NUMBER (3)	
Haddam Neck		05000 -213		YEAR	SEQUENTIAL NUMBER
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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

latest test. In addition, the blank flange installed on the gate valve is used as the containment penetration boundary and does undergo Type B local leak rate testing.

No significant safety consequences exist due to the omission of the expansion bellows from the Appendix J test program.

CORRECTIVE ACTION

Corrective action consists of modifying the penetration and performing the required local leak rate testing prior to startup from the current refueling and maintenance outage. In addition, the bellows will be added to the Appendix J test program.

Implementation of the corrective action is contingent upon resumption of operation of the Haddam Neck Plant.

ADDITIONAL INFORMATION

Commitments

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

B15935-1 The penetration will be modified and the required local leak rate testing will be performed prior to startup from the current refueling and maintenance outage.

B15935-2 The bellows will be added to the Appendix J test program.

Implementation of the commitments is contingent upon resumption of operation of the Haddam Neck Plant.

PREVIOUS SIMILAR EVENTS

None.