



CONNECTICUT YANKEE ATOMIC POWER COMPANY

HADDAM NECK PLANT

RR# 1 • BOX 127E • EAST HAMPTON, CT 06424-9341

November 29, 1990

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

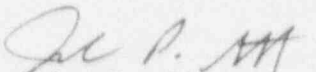
U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D. C. 20555

Reference: Facility Operating License No. DPR-61  
Docket No. 50-213  
Reportable Occurrence LER 50-213/90-024-00

Gentlemen:

This letter forwards the Licensee Event Report 90-024-00, required to be submitted, pursuant to the requirements of Connecticut Yankee Technical Specifications.

Very truly yours,

  
John P. Stetz  
Station Director

JPS/dl

Attachment: LER 50-213/90-024-00

cc: Mr. Thomas T. Martin  
Regional Administrator, Region I  
475 Allendale Road  
King of Prussia, PA 19406

J. T. Shedlosky  
Sr. Resident Inspector  
Haddam Neck

9012070044 901129  
PDR ADGCK 05000213  
S PDC

*Handwritten initials/signature*

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Haddam Neck	DOCKET NUMBER (2) 0 5 0 0 0 2 1 3	PAGE (3) OF 0 4
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TITLE (4)  
Containment Isolation Valve CC-TV-920 Declared Inoperable

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)															
1	0	3	1	9	0	9	0	0	0	2	4	0	0	1	1	2	9	9	0			0	5	0	0	0

OPERATING MODE (9) 5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 50.73 (Check one or more of the following) (11)											
POWER LEVEL (10) 0 0 0	20.402(b)			20.405(c)			50.73(a)(2)(iv)			73.71(b)		
	20.405(a)(1)(i)			50.36(e)(1)			50.73(a)(2)(v)			73.71(e)		
	20.405(a)(1)(ii)			50.36(e)(2)			50.73(a)(2)(vii)			OTHER (Specify in Abstract below and in Text, NRC Form 366A)		
	20.405(a)(1)(iii)			X 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)(ix)						

LICENSEE CONTACT FOR THIS LER (12)									
NAME P. F. L'Heureux, Engineering Supervisor							TELEPHONE NUMBER 2 0 3 2 6 7 - 2 5 5 6		

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)										
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS	
B	J,M	I,S,V	C 6 3 0	Y						

SUPPLEMENTAL REPORT EXPECTED (14)							EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO											

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

ABSTRACT

On October 31, 1990, at 1039 hours, with the plant in Mode 5 (cold shutdown) containment isolation valve CC-TV-920 (component cooling water supply to the neutron shield tank cooler) failed to fully close during surveillance testing and was declared inoperable. The root cause was determined to be excessive friction in the stem area of the valve due to lack of lubrication and possible metal-to-metal contact due to stem/actuator misalignment. The valve was disassembled, lubricated, reassembled and successfully retested. Short term corrective action consisted of increasing the test frequency of the valve for an undetermined period. Long term corrective action consists of evaluating if the valve should be modified or replaced. This event is reportable under 10CFR50.73(a)(2)(i)(B) since it involved a condition prohibited by the plant's Technical Specifications.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

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

BACKGROUND INFORMATION

The containment isolation valve CC-TV-920 (EIIS Code: ISV) forms part of the containment boundary associated with the component cooling water (EIIS Code: CC) supply to the neutron shield tank cooler (Figure 1). Valves CC-TV-917 and 920 close automatically on a high containment pressure actuation signal (EIIS Code: JM). The valves are inservice tested on a quarterly basis and were last tested on June 30, 1990, during the 1989/1990 refueling and maintenance outage.

EVENT DESCRIPTION

On October 31, 1990, at 1039 hours, with the plant in Mode 5 (cold shutdown) containment isolation valve CC-TV-920 (component cooling water supply to the neutron shield tank cooler) failed to fully close during surveillance testing and was declared inoperable. Following the stroke test, operators were able to get the valve to stroke fully by exercising the valve and using a lubricant. A stroke test was reperformed and the valve was successfully tested. The redundant trip valve CC-TV-917 (which is identical to CC-TV-920) was subsequently tested with satisfactory results.

CAUSE OF THE EVENT

CC-TV-920 was disassembled and the body internals were inspected by Engineering personnel for fitup and surface condition. It was noted that the stem did not appear to glide smoothly on the stem seal. If the stem were tilted slightly off center in its bore there was a significant increase in the amount of effort necessary to turn the stem by hand due to metal-to-metal contact between the stainless steel stem and valve body. The stem and actuator alignment appears to be critical for this design. It also appears to be desirable to lubricate the stem to reduce friction and prevent galling with the valve body. The root cause of this failure has been determined to be excessive friction in the valve stem area due to lack of lubrication and possible metal-to-metal contact due to stem/actuator misalignment.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)  Haddam Neck	DOCKET NUMBER (2)  0 5 0 0 0 2 1 3 9 0	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 ASSESSMENT

This event is reportable under 10CFR50.73(a)(2)(i)(B) since it involved a condition prohibited by the plant's Technical Specifications. Specifically, Technical Specification 3.6.3 requires containment isolation valves to be operable in Modes 1 through 4. It's probable that CC-TV-920 was not operable for a portion of time above Mode 5 previous to the stroke test. The significance of this event is diminished due to the operability of the redundant isolation valve CC-TV-917. As such, the assumptions utilized in the design basis analysis for radioactive material release during a loss of coolant accident would have remained valid. Based on the above plant safety was not adversely affected by this event.

CORRECTIVE ACTION

Short term corrective action consisted of:

1. Reassembling the valve, paying particular attention to stem nut adjustment and actuator/stem alignment.
2. Lubricating the stem and stem seals.
3. Successfully re-performing stroke and leak testing for CC-TV-920 prior to plant startup. Both valves CC-TV-920 and 917 will be exercised on a weekly basis. The frequency of testing may be adjusted in the future based on valve performance.

Long term corrective action consists of evaluating if the valves should be modified or replaced.

ADDITIONAL INFORMATION

Plant ID: CC-TV-917 & 920  
 Component: 1 1/2" full port 3-piece ball valve  
 Manufacturer: Contromatics  
 Actuator: Model #375 SRV

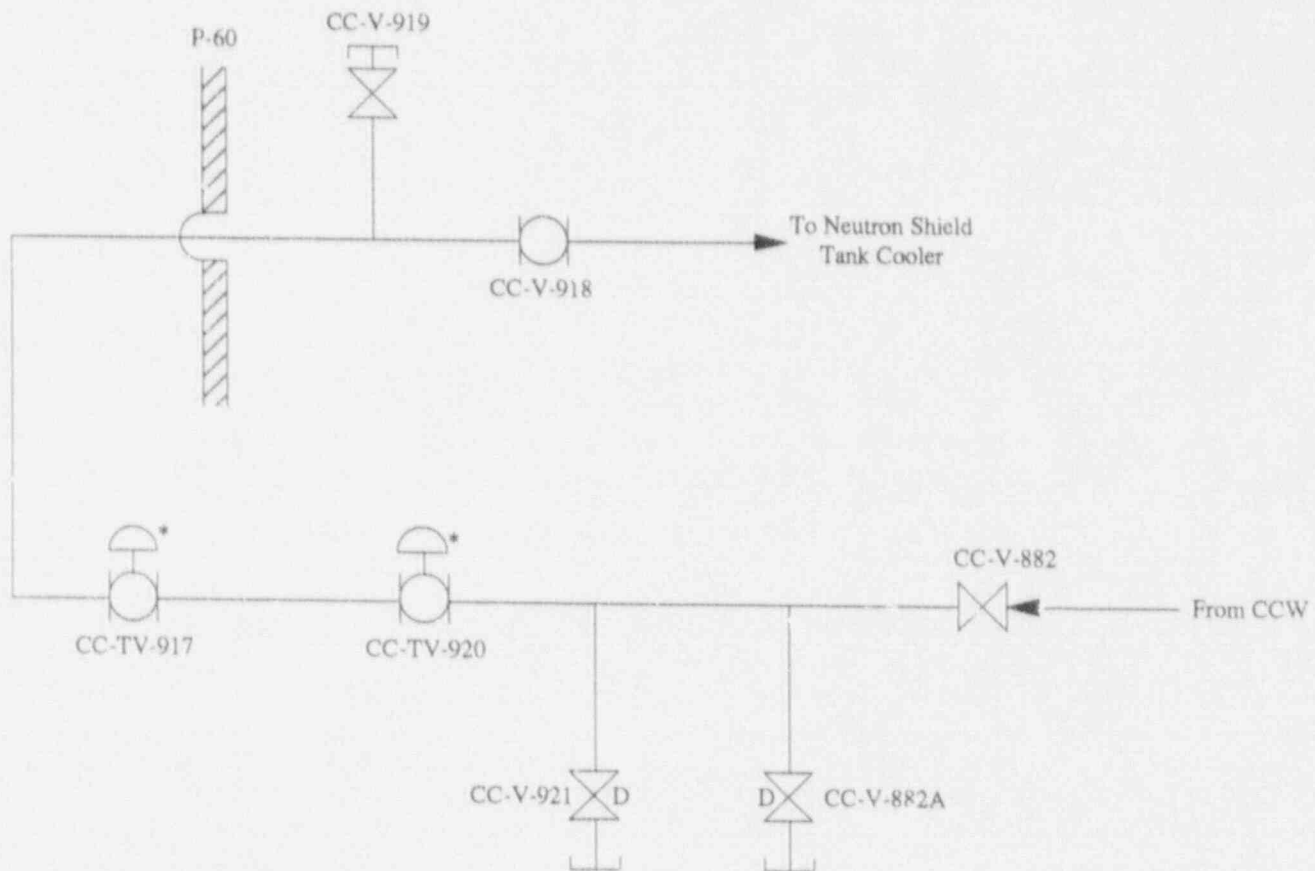
PREVIOUS SIMILAR EVENTS

LER 89-006-01

FACILITY NAME (1)  Haddam Neck	DOCKET NUMBER (2)  0 5 0 0 0 2 1 3	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		9 0	— 0 2 4	— 0 0	0 4	OF 0 4

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

Figure 1  
Neutron Shield Tank Cooling Water Supply Penetration



\* Containment Isolation Valves