NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

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Haddam Neck	0 5 0 0 0 2 1 3	1 OF 0 4

TITLE (4)
System Integrity

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)
									Not Applicable	0 5 0 0 0
1 1	1 4	8 5	8 5	0 3 0	0 0	1 2	1 1	8 5	Not Applicable	0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 9 7	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 (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)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
M. J. Ranieri, Associate Engineer	AREA CODE 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 NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
					NA						NA
					NA						NA

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	NO				

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

During a review of Technical Specification 6.15 "System Integrity" it was discovered that portions of the Post Accident Sampling System (PASS - EIIS Code - IP) that are required to be pressure leak tested were not inspected. Specifically, portions of the PASS liquid sampling equipment and all of the gaseous sampling equipment were not inspected during refueling cycle 12. A misinterpretation of the testing requirements is the reason for the missed inspections.

The review of Technical Specification 6.15 was initiated when the NRC Resident Inspector questioned the licensee as to the required testing for the hydrogen purge system.

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

Background

On September 5, 1985 the NRC Resident Inspector approached Engineering personnel with a concern about a commitment to pressure leak test the hydrogen portion of the Containment Atmosphere Sampling System (CASS - EIIS Code - BB). The commitment was made in a memo (Docket No. 50-213) to the NRC from W. Counsil titled, TMI-2 Short Term Lessons Learned Implementation, dated April 11, 1980. A review by Engineering revealed that the hydrogen purge portion of the CASS had not been pressure leak tested since the commitment was made. The hydrogen purge portion is designed to release hydrogen from the containment building after an accident had occurred. Periodically, the hydrogen purge portion of the CASS is used to relieve excess pressure in containment.

The above finding led to an engineering review of Technical Specification 6.15, "System Integrity" to identify the systems that are required to be pressure leak tested. Systems required to be pressure leak tested are those with the potential to carry radioactive fluids outside containment during a serious accident or transient. The review revealed that portions of the PASS liquid sampling equipment and all of the gaseous sampling equipment have not been pressure leak tested since the post installation tests in the spring of 1982.

Reportability

This event is reportable under 10CFR50.73(a)(2)(i) since it involved a violation of a plant Technical Specification.

Root Cause

There are different causes for the missed pressure leak testing of the CASS and PASS.

The CASS pressure leak test was missed because the corporate commitment to perform it contained in Docket No. 50-213 to the NRC from W. Counsil title TMI-2 Short Term Lessons Learned Implementation, dated April 11, 1980 was not incorporated into a station surveillance procedure. This was apparently due to a breakdown in the licensees commitment follow-up system.

The PASS pressure leak test was missed because the need to perform it was not identified and therefore it was not incorporated into a station surveillance procedure. The appropriate place to identify the tie between the PASS and Technical Specification 6.15 is the Plant Design Change Request (PDCR). A review of the PASS PDCR and the current PDCR form revealed that there is no formal way to establish such a tie on either document.

Evaluation

If a serious accident had occurred it is probable that the PASS (Liquid and Gaseous) would not have leaked. Hydrostatic and pneumatic tests performed in April and May of 1982 verified system integrity and almost all connections are welded, which reduces the number of potential leakage paths.

The integrity of the hydrogen purge portion of the CASS is not as certain as that of the PASS since there is a lack of recent test data. However, Docket No. 50-213 from W. Counsil to D. M. Crutchfield - Haddam Neck Plant Combustible Gas Control Evaluation - dated March 4, 1983, states that a 13 month interval after an accident would be available to restore the purge system before it would be needed for use. Thus, ample time would be available to ensure system integrity prior to use.

It should be noted that leakage from either system would end up in the Primary Auxiliary Building (PAB) and would eventually be monitored by either the Particulate Iodine Noble Gas Monitor (PING-1) or the stack monitor. This represents a continuous check, albeit qualitative, on the integrity of both systems.

Corrective Action

1). Short Term Action

In view of the above findings the CY System Integrity Program will be revised to include the hydrogen purge portion of the CASS and the PASS. The following is a list of all systems required to be inspected:

1) Residual Heat Removal System (RHR)
2) Charging System including loop fill header, seal supply, charging suction from RHR and seal return
3) High pressure safety injection discharge and suction from RHR
4) Sample System
   a) PASS liquid portion
   b) PASS air portion
   c) Loop sample to sample sink valves
   d) RHR sample to sample sink valves
   e) 6 common loop sample lines to sink valves
5) Hydrogen Purge System up to VS-V-152 (entrance to PAB ventilation discharge plenum).

All testing will be completed by end of 1986 outage.

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2). Long Term Actions to Prevent Recurrence

The licensee feels that the increased vigilance of its engineering and management personnel in the wake of the recent Connecticut Yankee design change problems, will substantially reduce the chances of missing an important commitment such as pressure leak testing the CASS hydrogen purge portion again. This vigilance was enhanced by several means including strengthening of procedures and training. Perhaps most germane to this event is the "Nuclear Safety Ethic" training that was attended by all Nuclear Engineering, Operations Engineering and Management personnel. This training was designed to foster a desire for excellence in the operation and maintenance of Northeast Utilities' Nuclear Plants.

The licensee is currently evaluating appropriate means to track implementation of Technical Specification and/or procedural requirements in all new PDCR's.

CONNECTICUT YANKEE ATOMIC POWER COMPANY

HADDAM NECK PLANT

RR#1 • BOX 127E • EAST HAMPTON, CONN. 06424

December 11, 1985

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 50-213/85-030-00

Gentlemen:

This letter forwards the Licensee Event Report 85-030-00, required to be submitted within thirty days, pursuant to the requirement of Connecticut Yankee Technical Specifications.

Very truly yours,

Richard H. Graves
Station Superintendent

RHG:MJR/lac
Attachment: LER 85-030-00

cc: Dr. T. E. Murley, Region I

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