



CONNECTICUT YANKEE ATOMIC POWER COMPANY

HADDAM NECK PLANT

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

April 9, 1997

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

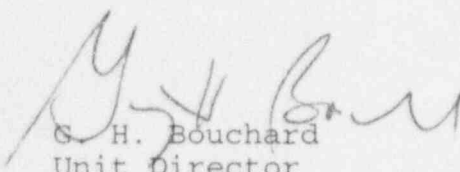
CY-97-028

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 50-213/97-006-00

This letter forwards the Licensee Event Report 97-006-00, required to be submitted, pursuant to the requirements of the Haddam Neck Plant's Technical Specifications.

Very truly yours,


G. H. Bouchard
Unit Director

GHB/reb

Attachment: LER 50-213/97-006-00

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

9704150234 970409
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 3

TITLE (4)

Liquid Effluent Radiation Monitor (R-18) Determined Inoperable Due to Low Sensitivity

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
02	27	97	97	006	00	04	09	97	FACILITY NAME	DOCKET NUMBER
										05000
OPERATING MODE (9)		N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
			20.2201(b)			20.2203(a)(2)(v)			<input checked="" type="checkbox"/> 50.73(a)(2)(i)	50.73(a)(2)(viii)
POWER LEVEL (10)		000	20.2203(a)(1)			20.2203(a)(3)(i)			50.73(a)(2)(ii)	50.73(a)(2)(x)
			20.2203(a)(2)(ii)			20.2203(a)(3)(ii)			50.73(a)(2)(iii)	73.71
			20.2203(a)(2)(iii)			20.2203(a)(4)			50.73(a)(2)(iv)	OTHER
			20.2203(a)(2)(iii)			50.36(c)(1)			50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A
			20.2203(a)(2)(iv)			50.36(c)(2)			50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME

Scott Herd, Acting Chemistry 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 (If yes, complete EXPECTED SUBMISSION DATE).	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION	MONTH	DAY	YEAR

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

On February 27, 1997, at approximately 1630 hours, with the plant defueled, it was determined that, in the present plant configuration, the service water effluent radiation monitor (R-18) does not have the sensitivity required to meet the requirements of the Offsite Dose Calculation Manual (ODCM) when the plant has no circulating water pumps in service. At the time of discovery the monitor had already been declared inoperable for a separate reason and compensatory sampling was already in place. Circulating water pumps have been taken out of service during previous outages, however, there is no documented evidence that monitor R-18 was declared inoperable during these periods. This would have required compensatory sampling in accordance with the Technical Specifications. Efforts to determine historical operability of the monitor proved inconclusive, therefore, on March 10, 1997, it was decided to conservatively report this event under 10CFR50.73(a)(2)(i)(B) as a condition prohibited by the plant's Technical Specifications. The cause of this event was determined to be an inadequate guidance within the ODCM for calculating monitor setpoints. Setpoint calculation methodology did not account for all possible plant configurations. Long term corrective action consists of revising the ODCM methodology for calculating the monitor setpoint to ensure that the resulting value is applicable for all possible plant configurations.

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	97	-- 006 --	00	2 of 3

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

BACKGROUND INFORMATION

The service water effluent monitor, R-18, monitors the activity of service water being discharged to the river. High activity, as sensed by the monitor, will generate an alarm in the control room and automatically close the liquid waste discharge control valve (WD-FRCV-1003). This prevents the discharge of diluted, liquid waste, with higher than expected activity, to the river.

Technical Specification 3.3.3.7 requires that the radioactive liquid effluent monitoring instrumentation be operable with applicable alarm/trip setpoints set to ensure that the concentration of radioactive material released from the site does not exceed the concentrations specified in 10CFR20, Appendix B, Table II, Column 2 for radionuclides other than dissolved or entrained noble gases.

Technical Specification 3.3.3.7 also requires that the alarm/trip setpoints be determined in accordance with methodology and parameters described in the Offsite Dose Calculation Manual (ODCM). The ODCM requires the monitor to have a sensitivity of 1E-07 uCi/ml if at any time the circulating water pumps are not in service.

The action statement associated with Technical Specification 3.3.3.7 requires that grab samples be taken if the monitor is declared inoperable.

EVENT DESCRIPTION

On February 27, 1997, at approximately 1630 hours, with the plant defueled, it was determined that, in the present plant configuration, the service water effluent radiation monitor (R-18) does not have the sensitivity required to meet the requirements of the Offsite Dose Calculation Manual (ODCM) when the plant has no circulating water pumps in service. The setpoint calculation for the monitor uses circulating water flow as a numerator in the equation. If no circulating water flow is available the setpoint will default to a value corresponding to 1.0E-07 uCi/ml, the unidentified MPC for unrestricted areas. The ODCM methodology for achieving this unidentified MPC is inadequate. At the time of discovery the monitor had already been declared inoperable for a separate reason and compensatory sampling was already in place. Circulating water pumps have been taken out of service during previous outages however, there is no documented evidence that monitor R-18 was declared inoperable during these periods. This would have required compensatory sampling in accordance with the Technical Specifications.

CAUSE OF EVENT

The cause of this event was determined to be inadequate guidance within the ODCM for calculating monitor setpoints. The setpoint calculation methodology did not account for plant conditions with no circulating pumps operating.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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

SAFETY ASSESSMENT

Efforts to determine historical operability of the monitor proved inconclusive therefore, on March 10, 1997, it was decided to conservatively report this event under 10CFR50.73(a)(2)(i)(B) as a condition prohibited by the plant's Technical Specifications.

Alarm/trip setpoints are established to ensure that all radioactive effluents released from the site are maintained within the specified limits. Since all of the doses associated with effluents are calculated based on source term activities, and not monitor readings, the dose limits specified in Technical Specification 3.11.1.1 (Liquid Effluent Concentration) were not exceeded. Therefore, the safety significance of this event is low.

CORRECTIVE ACTION

Long term corrective action consists of revising the ODCM methodology for calculating the monitor setpoint to ensure that the resulting value is applicable for all possible plant configurations. All ODCM modifications will be documented in Haddam Neck's Annual Radiological Effluent Report as described by the Technical Specifications.

ADDITIONAL INFORMATION

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

- CY-97-028-1 Long term corrective action consists of revising the ODCM methodology for calculating the monitor setpoint to ensure that the resulting value is applicable for all possible plant configurations.
- CY-97-028-2 All ODCM modifications will be documented in Haddam Neck's Annual Radiological Effluent Report as described by the Technical Specifications.

PREVIOUS SIMILAR EVENTS

- LER 97-005-00 Calibration of Radiation Monitoring System Effluent Monitors Potentially Inadequate