

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9003230124      DOC. DATE: 90/03/16      NOTARIZED: NO      DOCKET #  
 FACIL: 50-388 Susquehanna Steam Electric Station, Unit 2, Pennsylv      05000388  
 AUTH. NAME      AUTHOR AFFILIATION  
 RYDER, T.S.      Pennsylvania Power & Light Co.  
 STANLEY, H.G.      Pennsylvania Power & Light Co.  
 RECIP. NAME      RECIPIENT AFFILIATION

SUBJECT: LER 90-001-00: on 900216, HPCI failure to provide stable flow control in automatic mode.

W/9      ltr.

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March 16, 1990

U.S. Nuclear Regulatory Commission  
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SUSQUEHANNA STEAM ELECTRIC STATION  
LICENSEE EVENT REPORT 90-001-00  
FILE R41-2  
PLAS - 417

Docket No. 50-388  
License No. NPF-22

Attached is Licensee Event Report 90-001-00. This report is being made pursuant to 10CFR50.73(a)(2)(v), in that HPCI was determined to be inoperable resulting in the loss of a single train safety system.

H.G. Stanley  
Superintendent of Plant - Susquehanna

TSR/mjm

cc: Mr. W. T. Russell  
Regional Administrator, Region I  
U.S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, PA 19406

Mr. G. S. Barber  
Sr. Resident Inspector  
U.S. Nuclear Regulatory Commission  
P.O. Box 35  
Berwick, PA 18603-0035

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**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 RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)  Unit 2 Susquehanna Steam Electric Station	DOCKET NUMBER (2)  0   5   0   0   0   3   8   8	LER NUMBER (6)			PAGE (3)	
		YEAR 9   0	SEQUENTIAL NUMBER -   0   0   1	REVISION NUMBER -   0   0	0   2	OF 0   2

TEXT (If more space is required, use additional NRC Form 368A's) (17)

DESCRIPTION OF EVENT

On February 16, 1990 with Unit 2 operating in Condition 1 at 100% power, while a quarterly High Pressure Coolant Injection (HPCI, EIIS Code: BJ) flow surveillance test was being performed, the flow controller failed to provide stable flow control in the automatic mode. HPCI was declared INOPERABLE at 1310 hours since the HPCI system requirements could not be confirmed and the test could not be properly performed.

CAUSE OF EVENT

The cause of this event is attributed to instability in control system electro-hydraulic mechanical turbine governor response caused by incorrect governor needle valve adjustment. The design intent of the needle valve adjustment is to provide control system stability under variable HPCI system conditions.

REPORTABILITY/ANALYSIS

This event was determined reportable per 10CFR50.73(a) (2) (v) in that HPCI was determined to be inoperable resulting in the loss of a single train safety system. Since the remaining Emergency Core Cooling (ECCS) systems required by Technical Specification 3.5.1 were OPERABLE, the Unit was assured of adequate core cooling in the event of a loss of coolant accident. There were no safety consequences or compromise to the public health or safety during the time that HPCI was INOPERABLE nor would there have been at other plant operating conditions.

In accordance with the guidance provided in NUREG 1022 Supplement 1 Items 14.1 and 14.10, the required submission date for this report was determined to be March 19, 1990.

CORRECTIVE ACTIONS

Instrument & Control (I&C) personnel performed a controller calibration and observed no controller problems that would cause the oscillation. The controller gain, reset, and rate settings were in agreement with the data sheets and were left as found. The governor needle valve was adjusted to optimize hydraulic stability. The quarterly flow surveillance was re-performed on February 16, 1990 after needle valve adjustment. No oscillations in turbine speed and minimal oscillations in flow were observed, and the test was successfully completed with satisfactory results. HPCI was restored to OPERABLE status at 2040 hours.

ADDITIONAL INFORMATION

Failed Components Identification : Not Applicable

Previously Reported Events: Although HPCI has been declared INOPERABLE in the past, this was the first occurrence with this root cause.

