

REGULATOR INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8906290318 DOC. DATE: 89/06/21 NOTARIZED: NO DOCKET #
 FACIL: 50-388 Susquehanna Steam Electric Station, Unit 2, Pennsylv 05000388
 AUTH. NAME AUTHOR AFFILIATION
 WEHRY, R.R. Pennsylvania Power & Light Co.
 BYRAM, R.G. Pennsylvania Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 89-005-00: on 890520, reactor bldg HVAC sys Zones I & III
 cross-tied.

W/8 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 5
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES: LPDR 1 cy Transcripts. 05000388 /

	RECIPIENT		COPIES			RECIPIENT		COPIES	
	ID CODE/NAME		LTR	ENCL		ID CODE/NAME		LTR	ENCL
	PD1-2 LA		1	1		PD1-2 PD		1	1
	THADANI, M		1	1					
INTERNAL:	ACRS MICHELSON		1	1	ACRS MOELLER		2	2	
	ACRS WYLIE		1	1	AEOD/DOA		1	1	
	AEOD/DSP/TPAB		1	1	AEOD/ROAB/DSP		2	2	
	DEDRO		1	1	IRM/DCTS/DAB		1	1	
	NRR/DEST/ADE 8H		1	1	NRR/DEST/ADS 7E		1	0	
	NRR/DEST/CEB 8H		1	1	NRR/DEST/ESB 8D		1	1	
	NRR/DEST/ICSB 7		1	1	NRR/DEST/MEB 9H		1	1	
	NRR/DEST/MTB 9H		1	1	NRR/DEST/PSB 8D		1	1	
	NRR/DEST/RSB 8E		1	1	NRR/DEST/SGB 8D		1	1	
	NRR/DLPQ/HFB 10		1	1	NRR/DLPQ/PEB 10		1	1	
	NRR/DOEA/EAB 11		1	1	NRR/DREP/RPB 10		2	2	
	NUDOCS-ABSTRACT		1	1	REG FILE 02		1	1	
	RES/DSIR/EIB		1	1	RES/DSR/PRAB		1	1	
	RGN1 FILE 01		1	1					
EXTERNAL:	EG&G WILLIAMS, S		4	4	FORD BLDG HOY, A		1	1	
	L ST LOBBY WARD		1	1	LPDR		1	1	
	NRC PDR		1	1	NSIC MAYS, G		1	1	
	NSIC MURPHY, G.A		1	1					
NOTES:			2	2					

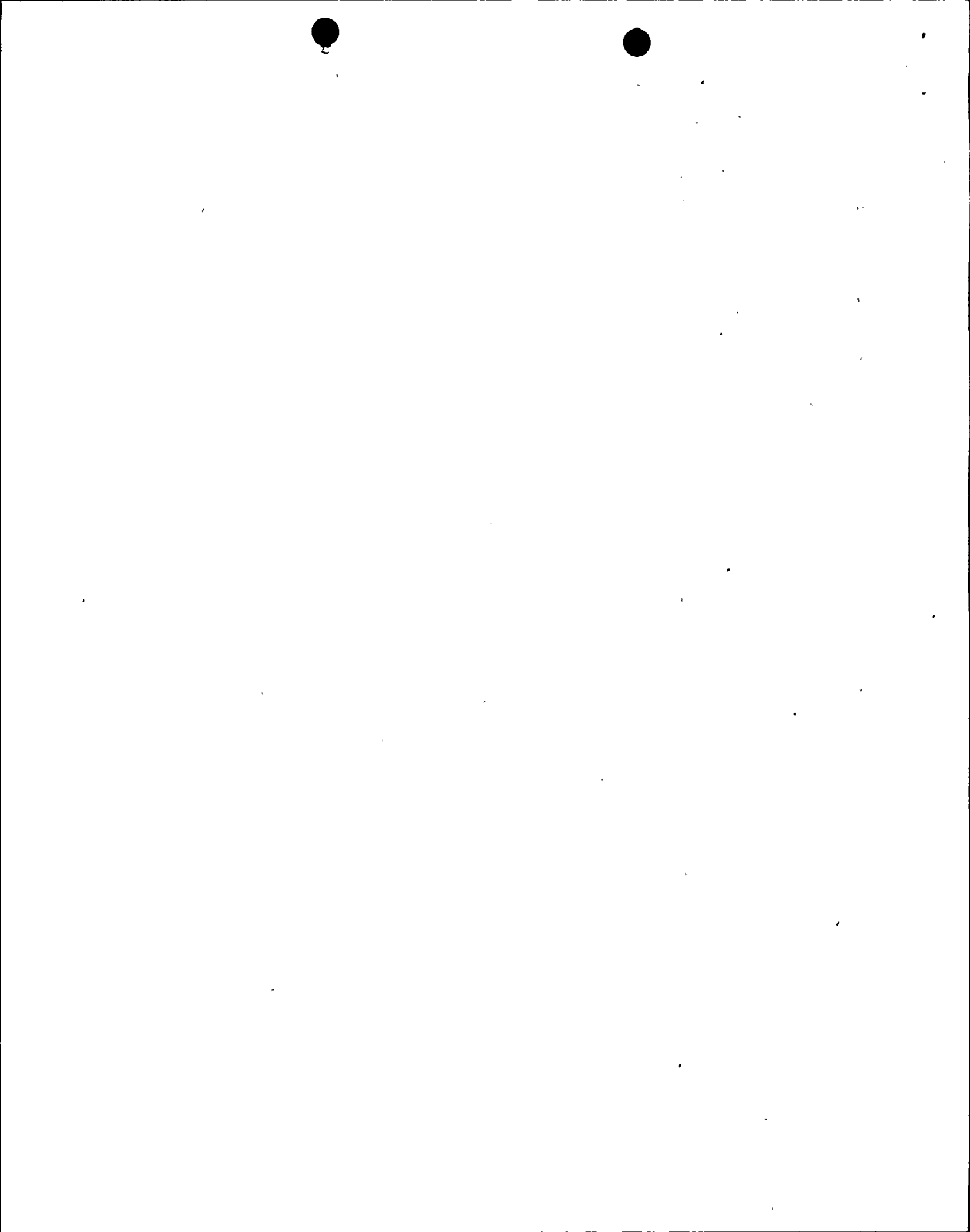
NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK,
 ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION
 LISTS FOR DOCUMENTS YOU DON'T NEED!

FULL TEXT CONVERSION REQUIRED
 TOTAL NUMBER OF COPIES REQUIRED: LTR 45 ENCL 44

R
I
D
S
/
A
D
S
/
A
D
S

1104 g/h



PP&L

Pennsylvania Power & Light Company

Two North Ninth Street • Allentown, PA 18101 • 215/770-5151

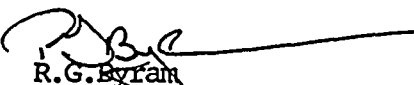
June 21, 1989

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

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 89-005-00
FILE R41-2
PLAS - 373

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

Attached is Licensee Event Report 89-005-00. This event was determined reportable per 10CFR50.73(a)(2)(i)(B) in that Reactor Building Heating, Ventilating and Air Conditioning Zones I and III were cross-tied from May 11, 1989 through May 20, 1989. This system alignment is prohibited by the plant's Technical Specifications.


R.G. Byram
Superintendent of Plant - Susquehanna

RRW/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

8906290318 890621
PDR ADOCK 05000388
S PNU

JE22
1/1

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Susquehanna Steam Electric Station - Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 3 8 8	PAGE (3) 1 OF 0 4
--	--	----------------------

TITLE (4)
Inadvertent Cross-Tie of Reactor Building HVAC Zones I and III

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)
0 5	2 0	8 9	8 9	0 0 5	0 0	0 6	2 1	8 9	SSES- Unit 1		0 5 0 0 0 3 8 7
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)											

OPERATING MODE (9) 1	POWER LEVEL (10) 1 0 0	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.406(a)(1)(i)	<input type="checkbox"/> 20.406(a)(1)(ii)	<input type="checkbox"/> 20.406(a)(1)(iii)	<input type="checkbox"/> 20.406(a)(1)(iv)	<input type="checkbox"/> 20.406(a)(1)(v)	<input type="checkbox"/> 20.406(e)	<input type="checkbox"/> 50.38(e)(1)	<input type="checkbox"/> 50.38(e)(2)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	<input type="checkbox"/> 50.73(a)(2)(ix)	<input type="checkbox"/> 73.71(b)	<input type="checkbox"/> 73.71(c)	<input type="checkbox"/> OTHER (Specify in Abstract below and in Text, NRC Form 368A)
-------------------------	---------------------------	------------------------------------	--	---	--	---	--	------------------------------------	--------------------------------------	--------------------------------------	--	--	---	--	---	--	---	---	---	--	-----------------------------------	-----------------------------------	---

LICENSEE CONTACT FOR THIS LER (12)							TELEPHONE NUMBER							
NAME Richard R. Wehry - Power Production Engineer - Compliance							AREA CODE 7 1 7				7 5 4 2 - 3 6 6 4			

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) <input checked="" type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH 1 2	DAY 3 1	YEAR 8 9
--	-------------------------------	--------------	------------	-------------

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

On May 20, 1989, with Unit 2 operating at 100% power and Unit 1 in the refueling condition, it was discovered that the Reactor Building Heating, Ventilating and Air Conditioning (HVAC) system Zones I and III had been cross-tied from 5/11/89 through 5/20/89. Several items contributed to this incident: Railroad Access Bay design which necessitates complex administrative controls; the lack of details and accuracy in the Equipment Release Form (ERF) prepared for this evolution; and cognitive personnel error on the part of the Unit Supervisor in failing to identify the ERF's deficiencies and the impact on Unit 2 secondary containment integrity. The Operations Section is conducting training for all licensed operators, emphasizing the importance of thorough ERF review. A standardized ERF for all Railroad Access Bay evolutions involving the removal of walls/floor plugs is being developed and incorporated into Maintenance and Construction planning guides to enhance the work group/operations interface for these evolutions. Training for Maintenance and Construction planners will be conducted concerning these enhancements.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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	SEQUENTIAL NUMBER	REVISION NUMBER		
		8 9	- 0 0 5	- 0 0	0 2	OF 0 4

TEXT (If more space is required, use additional NRC Form 305A's) (17)

DESCRIPTION OF EVENT

On May 20, 1989, with Unit 2 operating at 100% power and Unit 1 in the refueling condition, it was discovered during a Nuclear Quality Assurance walkdown of the Unit 1 reactor building, that the Reactor Building Heating, Ventilating and Air Conditioning (HVAC; EIIS Code: VA) system Zones I and III had been cross-tied since May 11, 1989. This system alignment is prohibited by the plant's Technical Specifications. In preparation for transporting shield blocks from the Railroad Access Bay to Unit 1, removable wall plates between Unit 1 elevation 719' and the Railroad Access Bay were removed. The removal of the wall plates connects Unit 1 Zone I HVAC to the Railroad Access Bay, which is normally connected to Zone III HVAC via two manual isolation dampers, one for supply and one for exhaust. The two isolation dampers, which should have been closed prior to removal of the wall plates, were found in the open position, which resulted in a cross-tie between reactor building HVAC Zone I and Zone III.

CAUSE OF EVENT

Several items contributed to this incident:

1) Railroad Access Bay Design

Because the Railroad Access Bay (normally part of Zone III) can be aligned to Zones I or II by removing walls or floor plugs or opening personnel access doors and to atmosphere by opening the Railroad Access Bay door, complex administrative controls are necessitated for these evolutions.

2) The Equipment Release Form (ERF) for this activity lacked accuracy and detail.

The ERF, which had been prepared for this evolution by PP&L Construction personnel (utility, non-licensed), referenced plant system no. 12 (Buildings) rather than plant system no. 34 (Reactor Building HVAC). The ERF also did not properly identify the Technical Specification Limits for this evolution in that it did not note the impact to Unit 2 Technical specification 3.6.5.1.

3) Cognitive personnel error on the part of the Unit 1 Operations Unit Supervisor.

The Unit Supervisor's review failed to identify the ERF's deficiencies. As such, the ERF was not filed against system 34, operating procedure OP-134-002, which provides direction to close the isolation dampers between Unit 1 Zone I and the Railroad Access Bay was not implemented, the effects on Unit 2 Secondary Containment Integrity were not identified and the cross-tie between Zone I and Zone III resulted.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 9	- 0 0 5	- 0 0	0 3	OF	0 4

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

REPORTABILITY/ANALYSIS

This event was determined reportable per 10CFR50.73(a) (2) (i) (B) in that a plant system was aligned in a manner prohibited by the plant's Technical Specifications. Namely, per Technical Specification 3.6.5.1, Secondary Containment Integrity (Railroad Bay outside door closed) shall be demonstrated in Operational Condition 1 by verifying that:

1. All Zone I and III hatches, removable walls, dampers and doors connected to the railroad access bay are closed, or
2. Only Zone I removable walls and/or doors are open to the railroad access shaft, or
3. Only Zone III hatches and/or dampers are open to the railroad access shaft.

Contrary to the above, on May 20, 1989, isolation dampers between the Railroad Access Bay and Zone III HVAC were discovered to have been open while the Zone I 719' elevation removable wall was removed, thus cross-tying the Reactor Building HVAC Zones I and III from 5/11/89/through 5/20/89.

During the time period in which Zone I and Zone III were crosstied, Zone I was not required to be Operable due to Unit 1 being in Condition 5 with NO CORE ALTERATIONS, irradiated fuel handling or operations with the potential of draining the Reactor Vessel in progress. Since Zone I was not required to be OPERABLE during this time period its integrity can not be confirmed. However, it should be noted that throughout the duration of the Zone I - Zone III cross-tie, Zone III differential pressure remained negative with respect to Zone I and the design features of the Standby Gas Treatment System (EIIS Code: BH) should have minimized any leakage out of Secondary Containment. Engineering is performing a calculation to determine the effect of this condition on projected off-site doses had an accident occurred. The results of this calculation will be reported in an update to this LER.

Throughout the duration, the Zone II and III 0.25 inches of water vacuum gauge pressure requirement for Secondary Containment was maintained in each zone, as verified by performance of the Daily Surveillance Operating Logs. No safety consequences occurred during this incident.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Unit 2 Susquehanna Steam Electric Station	0 5 0 0 0 3 8 8	8 9	- 0 0 5	- 0 0	0 4	OF 0 4

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

CORRECTIVE ACTIONS

Upon discovery, Limiting Condition for Operation 3.6.5.1 was entered and then cleared when the subject isolation dampers were closed.

The Operations section is conducting Hot Box Training 89-36 for all licensed operating shift personnel. The importance of thorough ERF review is being emphasized.

Through a joint effort between Operations and Maintenance sections, a standardized Equipment Release Form (ERF) for all Railroad Access Bay evolutions involving the removal of floor plugs and removable walls is being developed and incorporated into the planning guides for both Maintenance and Construction planning groups. The enhancements include direct reference to plant system no. 34 (Reactor Building HVAC), identification of which HVAC Zones are affected by the wall/plug removal, and the referencing of all applicable Tech Specs affected on both Unit 1 and Unit 2. Training for Maintenance and Construction section planners will be conducted, emphasizing the above.

ADDITIONAL INFORMATION

Failed Component Identification: Not applicable

Previous Similar Events: Licensee Event Reports 87-025-00 and 87-026-00 described similar events involving the inadvertent cross-tying of Reactor Building HVAC Zone I and Zone III.