

# REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

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 FACIL: 50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylvania      05000387  
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 RECIP. NAME      RECIPIENT AFFILIATION

SUBJECT: LER 87-026-00: on 870904, reactor bldg HVAC sys Zones I & III  
 discovered to have been cross-tied. Caused by personnel  
 error & poor communications. Work planning group instructed  
 on correct wording to be used for wall removal. W/871005 ltr.

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	NRR/PMAS/ILRB	1 1	<u>REG FILE</u> 02	1 1
	RES DEPY GI	1 1	RES TELFORD, J	1 1
	RES/DE/EIB	1 1	RGN1 FILE 01	1 1
EXTERNAL:	EG&G GROH, M	5 5	H ST LOBBY WARD	1 1
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**LICENSEE EVENT REPORT (LER)**

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TITLE (4) Reactor Building Heating, Ventilating and Air Conditioning Zones I & III Cross-Tied																																																																																																																																																																																																																																				
<table border="1"> <tr> <th colspan="3">EVENT DATE (5)</th> <th colspan="3">LER NUMBER (6)</th> <th colspan="3">REPORT DATE (7)</th> <th colspan="18">OTHER FACILITIES INVOLVED (8)</th> </tr> <tr> <th>MONTH</th> <th>DAY</th> <th>YEAR</th> <th>YEAR</th> <th>SEQUENTIAL NUMBER</th> <th>REVISION NUMBER</th> <th>MONTH</th> <th>DAY</th> <th>YEAR</th> <th colspan="9">FACILITY NAMES</th> <th colspan="9">DOCKET NUMBER(S)</th> </tr> <tr> <td>0</td> <td>9</td> <td>04</td> <td>87</td> <td>87</td> <td>026</td> <td>00</td> <td>10</td> <td>05</td> <td>87</td> <td colspan="9"></td> <td colspan="9">0 5 0 0 0</td> </tr> <tr> <td colspan="30">           THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)         </td> </tr> <tr> <td colspan="3">OPERATING MODE (9)</td> <td colspan="3">1</td> <td colspan="3">20.402(b)</td> <td colspan="3">20.405(c)</td> <td colspan="3">50.73(a)(2)(iv)</td> <td colspan="3">73.71(b)</td> </tr> <tr> <td colspan="3">POWER LEVEL (10)</td> <td colspan="3">90</td> <td colspan="3">20.405(a)(1)(i)</td> <td colspan="3">50.36(c)(1)</td> <td colspan="3">50.73(a)(2)(v)</td> <td colspan="3">73.71(c)</td> </tr> <tr> <td colspan="3"></td> <td colspan="3">20.405(a)(1)(ii)</td> <td colspan="3">50.36(c)(2)</td> <td colspan="3">50.73(a)(2)(vii)</td> <td colspan="3" rowspan="4">OTHER (Specify in Abstract below and in Text, NRC Form 366A)</td> </tr> <tr> <td colspan="3"></td> <td colspan="3">20.405(a)(1)(iii)</td> <td colspan="3">50.73(a)(2)(i)</td> <td colspan="3">50.73(a)(2)(viii)(A)</td> </tr> <tr> <td colspan="3"></td> <td colspan="3">20.405(a)(1)(iv)</td> <td colspan="3">50.73(a)(2)(ii)</td> <td colspan="3">50.73(a)(2)(viii)(B)</td> </tr> <tr> <td colspan="3"></td> <td colspan="3">20.405(a)(1)(v)</td> <td colspan="3">50.73(a)(2)(iii)</td> <td colspan="3">50.73(a)(2)(ix)</td> </tr> </table>																														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	9	04	87	87	026	00	10	05	87										0 5 0 0 0									THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																														OPERATING MODE (9)			1			20.402(b)			20.405(c)			50.73(a)(2)(iv)			73.71(b)			POWER LEVEL (10)			90			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)			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)		
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**ABSTRACT** (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On September 4, 1987 at 0330 hours, with Unit 1 operating at .90% power, it was discovered that the Reactor Building Heating, Ventilating and Air Conditioning (HVAC) system Zones I and III had been cross-tied from 8/31/87 thru 9/3/87. A similar occurrence, discovered on August 10, 1987, was addressed in LER 87-025-00.

The 9/4/87 occurrence was determined to have been caused by personnel error and poor communications, both written and verbal. Written instructions on an equipment release form were misleading, and operations personnel failed to specify the use of and utilize the operating procedure while aligning the Reactor Building HVAC system to facilitate the transfer of equipment from the Railroad Bay, via removable walls, into the Unit 1 Reactor Building.

To prevent recurrence, the work planning group was instructed on the correct wording to be used when requesting wall removal between the Reactor Building HVAC zones and the Railroad Bay. Also, the Reactor Building HVAC operating procedure was revised to require step-by-step confirmation, verification and administrative tagging of isolation dampers during Railroad Bay evolutions. Although the procedure did not contribute to this incident, it is felt that this enhancement ensures more positive control over Railroad Bay evolutions. During the time frame from 8/31/87 through 9/4/87, a 0.25 inch of vacuum water gauge pressure was maintained in Secondary Containment in accordance with Technical Specification requirements.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT (If more space is required, use additional NRC Form 388A's) (17)

DESCRIPTION OF EVENT

On September 4, 1987 at 0330 hours, with Unit 1 operating at 90% power, it was discovered that the Reactor Building Heating, Ventilating and Air Conditioning system (HVAC, EIIIS Code:VA) Zones I and III had been cross-tied from 8/31/87 through 9/3/87. In preparation for opening a Railroad Bay door to the outside, the operating procedure was being performed to verify that the Railroad Access Bay would be isolated from both Zone I and Zone III of the Reactor Building HVAC system. However, the two isolation dampers between the Railroad Access Bay and Zone III HVAC were found in the open position. A review of the operators' log revealed that these dampers had last been operated (opened) at 1130 hours on 8/31/87. With these dampers open, the Railroad Access Bay is tied to Zone III HVAC. At 1300 hours on 8/31/87, an equipment release form was cleared to allow for the removal of a removable wall between the Railroad Access Bay and the 719' elevation of the Reactor Building. The removal of this wall ties the Railroad Access Bay into Zone I HVAC. As a result, from 8/31/87 through 9/3/87, when the wall was reinstalled, HVAC Zones I and III were inadvertently cross-tied.

CAUSE OF EVENT

This occurrence was caused by personnel error and poor communications, both written and verbal. An equipment release form had been submitted to obtain the operations section's approval to remove the Unit 1 719' elevation removable wall to the Railroad Access Bay. The form further requested that the Railroad Access Bay be aligned to Zone I. This wording was misleading in that the Railroad Access Bay can only be aligned to or isolated from Zone III HVAC via the two manual isolation dampers. The Railroad Access Bay may be tied to: Zone I or II by removing walls or floor plugs or opening personnel access doors; Zone III by removing floor plugs, opening personnel access doors and/or aligning via the two manual isolation dampers; or to the atmosphere by opening the Railroad Bay door. Verbal communications between the Unit Supervisor and the Plant Control Operator failed to clearly detail the planned evolution, i.e., isolation of the Railroad Access Bay in accordance with the operating procedure, for the purpose of removing the Unit 1 719' elevation removable wall.

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 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

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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 9/4/87, isolation dampers between the Railroad Access Bay and Zone III HVAC were discovered to have been open while the 719' elevation removable wall was removed, thus cross-tying the Reactor Building HVAC Zones I and III from 8/31/87 through 9/3/87.

During the period when Zones I and III were cross-tied, there were no events resulting in any Reactor Building HVAC zones being isolated and drawn down by the Standby Gas Treatment System (SGTS). If there would have been a Zone I and III or a Zone I, II and III isolation/drawdown, the impact, if any, would have been inconsequential. It is postulated, however, that for some contamination-type events occurring when Zones I and III are cross-tied, the open Railroad Bay isolation dampers could provide a pathway, though admittedly small, for air flow from Zone II and/or III into Zone I. Even in this scenario, radiation monitors would detect the flow of contaminated air and actuate, thus alerting operations personnel to the problem. Verification would then be made by Health Physics and appropriate action would be taken including, if necessary, entry into the Emergency Plan implementation procedures.

Throughout the duration, the collective Zone I, II and III atmosphere-containment boundary was intact and the 0.25 inch of vacuum water gauge pressure requirement for Secondary Containment was maintained in each zone, as verified by performance of the Daily Surveillance Operating Logs. No safety consequences or compromise to public health or safety occurred.

CORRECTIVE ACTION

The subject isolation dampers were closed to enable the continuation of work.

In an effort to minimize any chance of recurrence, the work planning group was instructed on the correct wording to be used when requesting wall removal between the Reactor Building HVAC zones and the Railroad Access Bay. The Reactor Building HVAC operating procedure was revised to require step-by-step confirmation, verification and administrative tagging of Railroad Access Bay isolation dampers during any Railroad Access Bay evolutions. Although the procedure did not contribute to this incident, it is felt that this enhancement ensures more positive control over Railroad Access Bay evolutions. Training, concerning the operating procedure revisions and the importance of good communications, is being conducted for all licensed and non-licensed operators.

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ADDITIONAL INFORMATION

A previous occurrence of inadvertant cross-tying of HVAC Zones I and III on August 10, 1987, was addressed by LER 87-025-00. The cause of that occurrence could not be determined, since the isolation dampers had been properly closed during the line-up and recorded as such by the operations section prior to their being discovered open. Again, it is felt that the enhancements made to operating procedures and communications will ensure more positive control during future Railroad Access Bay evolutions.





Pennsylvania Power & Light Company

P.O. Box 451 • Berwick, PA 18603-0451 • 717/542-2151

October 5, 1987

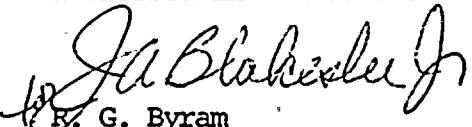
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SUSQUEHANNA STEAM ELECTRIC STATION  
LICENSEE EVENT REPORT 87-026-00  
FILE R41-2  
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Docket No. 50-387  
License No. NPF-14

Attached is Licensee Event Report 87-026-00. 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 8/31/87 through 9/3/87. This system alignment is prohibited by the plant's Technical Specifications. A similar occurrence, discovered on August 10, 1987, was addressed in LER 87-025-00.

  
R. G. Byram  
Superintendent of Plant Susquehanna

RRW/cmw

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