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FACIL:50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylva 05000387
AUTH.NAME AUTHOR AFFILIATION
LLOYD,H. Pennsylvania Power & Light Co.
STANLEY,H.G. Pennsylvania Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 90-026-00:on 901114,determined that control structure ventilation dampers could fail closed curing LOCA/LOOP postulated scenario.Caused by inadequate original design. Dampers gaged-open.W/901214 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. 05000387

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	AEOD/ROAB/DSP	2	2	NRR/DET/ECMB 9H	1	1
	NRR/DET/EMEB 7E	1	1	NRR/DLPQ/LHFB11	1	1
	NRR/DLPQ/LPEB10	1	1	NRR/DOEA/OEAB	1	1
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EXTERNAL:	EG&G BRYCE,J.H	3	3	L ST LOBBY WARD	1	1
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December 14, 1990

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

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 90-026-00
FILE R41-2
PLAS -460

Docket No. 50-387
License No. NPF-14

Attached is Licensee Event Report 90-026-00. This event was determined reportable per 10CFR50.73(a)(2)(v). The identified condition impacts the long term ability to maintain control room habitability within design parameters of the Control Room Emergency Outside Air Supply System. This condition has been corrected.

H.G. Stanley
Superintendent of Plant - Susquehanna

HL/mjm

cc: Mr. T. T. Martin
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

IE22
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NRC FORM 366 (6-89)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104
EXPIRES: 4/30/92

ESTIMATED BURDEN PER RESPONSE TO COMPLY WTH 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.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Susquehanna Steam Electric Station - Unit 1	0 5 0 0 0 3 8 7	1 OF 0 4

TITLE (4)

Control Structure Ventilation Dampers Could Fail Closed During LOAC/LOOP

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)
									SSES - Unit 2	0 5 0 0 0 3 8 8
1 1	1 4	9 0	9 0	0 2 6	0 0	1 2	1 4	9 0		0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	1 0 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	X 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)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
H. Lloyd, Jr. - Power Production Engineer	7 1 7 5 4 2 - 3 9 1 1 7

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)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

During an internal review of open Nonconformance Reports and Significant Operating Occurrence Reports, a condition was noted which was determined to meet the threshold of reportability. Nonconformance Report 87-0279 reported a situation in which some dampers in the Control Structure HVAC system which were required to remain open in the LOCA/LOOP postulated scenario could in fact fail closed. This was due to the fact that they are maintained open by a non-safety related air system. When this condition was identified, plant staff determined the appropriate action was to gag the dampers open. In addition, procedural changes were implemented to ensure the Chlorine Isolation function of the system remained functional. This condition was the result of inadequacy in the original design by the Architect-Engineer. Since this condition was immediately corrected, it was considered at the time of occurrence not to be reportable since it had already been corrected when the reportability evaluation was performed. However the current review has concluded that it should have been determined to be reportable and, in fact, would have been, had it been discovered today. We are therefore reporting this condition per 10CFR50.73(a)(2)(v). The condition was immediately corrected and no new compensatory actions are required.

DESCRIPTION OF EVENT

An internal review of all open Nonconformance Reports (NCR's) and Significant Operating Occurrence Reports (SOOR's) at SSES was performed to reduce the number and impact of identified deficiencies. In addition to assessing significance, basis for continued operation, and adequacy of schedules for closure of the deficiencies, a re-evaluation of the initial reportability determinations was performed using current philosophy. During this review it was concluded that the following condition should have been determined to be reportable and in fact, would have been, had it been discovered today. NCR 87-0279 reported a situation in which four dampers in the Control Structure HVAC System (Control Bldg. Env. Control; EIIS Code VI), which were required to remain open in the LOCA/LOOP postulated scenario, would, in fact, fail closed. This was due to the fact that they were maintained open via non-safety related Instrument Air supply which is assumed unavailable for this accident scenario. The dampers failing closed would have inhibited maintaining the required positive 1/8 inch water gauge pressure above outside atmosphere in the Control Structure since the make-up line would be isolated.

When this condition was identified to the Plant Staff on July 2, 1987, a Plant Operations Review Committee meeting was convened and recommended that the subject dampers be gagged open. This corrective action was immediately performed under the plant bypass program (temporary modification) on July 2, 1987. One concern with this activity was the effect on Chlorine Isolation function of the system. Since part of the chlorine isolation function includes closing of these dampers, procedures were modified to trip appropriate control structure fans upon receipt of an isolation signal to prevent negative pressure in portions of the Control Structure. These actions resulted in a condition in which the HVAC system was capable of performing its safety functions and as such continued operation was justified. The determination was then made that since the condition no longer existed it was not reportable. This conclusion is now viewed as incorrect.

The attached sketch shows the subject dampers and fans. The dampers are HD-07824A2, B2, A4, B4 and fans are OV-103A/B and OV-115A/B. The chlorine isolation of outside air is actually via HD-07802A&B thus the 24A2,B2,A4,B4 dampers do not in fact have to close. The procedural steps to trip the OV-103A/B and OV-115A/B fans were to preclude the possibility of drawing the Control Room to a negative pressure since the 24A2,B2,A4,B4 dampers would remain open.

CAUSE OF EVENT

The cause of this condition was inadequate original design in the Control Structure HVAC system by the Architect - Engineer. The cause of failure to report the condition is attributed to personnel error in applying reporting criteria.

REPORTABILITY/ANALYSIS

This condition was immediately corrected as previously discussed. It was therefore considered at the time of occurrence not to be reportable since the condition had already been corrected when documentation of the reportability evaluation was performed. However, using current philosophy, it would have been determined reportable had it occurred today. We are therefore reporting this condition per 10CFR50.73(a)(2)(v) as a condition that alone could have prevented the fulfillment of the safety function of a system needed to shutdown the reactor and maintain it in a safe shutdown condition. There were no safety consequences to the public health or safety.

In accordance with guidance provided in NUREG 1022, Supplement 1, item 14.1 and 14.2, the required submission date for this report was determined to be 12/14/90. The event was determined to be reportable on 11/14/90 and the required ENS notification was completed at that time.

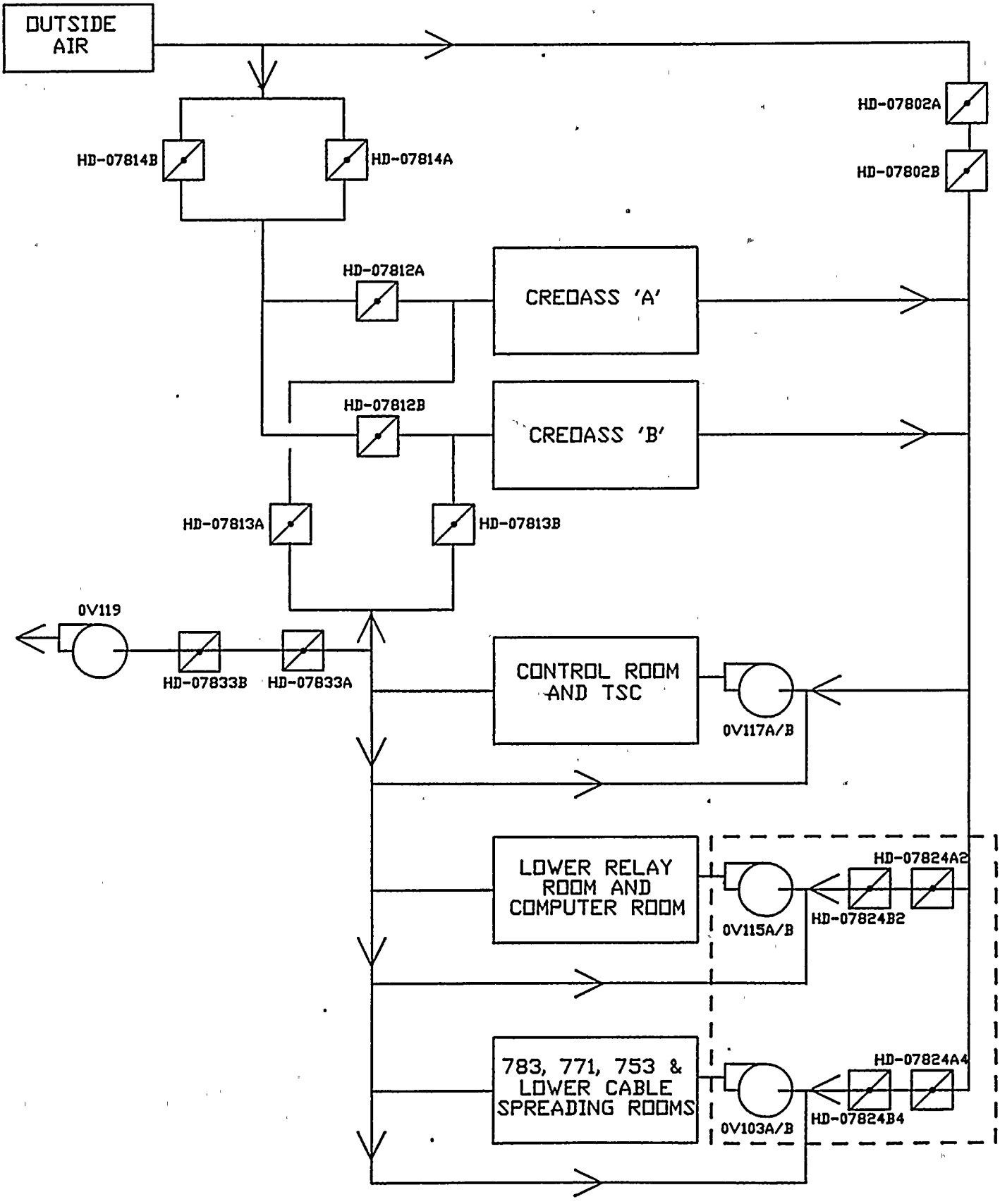
CORRECTIVE ACTIONS

Upon discovery of this condition, immediate corrective action was to gag open the subject dampers to prevent them from failing closed and to implement appropriate procedural changes for Control Structure ventilation for operation in the event of a chlorine isolation signal. In addition, a study completed in August, 1989 concluded that the immediate corrective actions regarding a chlorine isolation signal, taken following discovery of the condition, were, although appropriate at the time, not actually necessary. The conclusion was that the damper isolations were not necessary nor were the fan trips for the plant to properly respond to a chlorine event. Based on this study, a permanent modification was completed to leave the dampers in the gagged open position and procedural controls to trip the fans in the event of a Chlorine Isolation were removed. This condition has been corrected and no new compensatory actions are required.

ADDITIONAL INFORMATION

Failed Component Identification: N/A

Previous Similar Events: None


OUTSIDE AIR
HD-07814B
HD-07814A
HD-07802A
HD-07802B
HD-07812A
CREOASS 'A'
HD-07812B
CREOASS 'B'
HD-07813A
HD-07813B
0V119
HD-07833B
HD-07833A
CONTROL ROOM AND TSC
0V117A/B
LOWER RELAY ROOM AND COMPUTER ROOM
HD-07824A2
HD-07824B2
0V115A/B
783, 771, 753 & LOWER CABLE SPREADING ROOMS
HD-07824A4
HD-07824B4
0V103A/B