

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Susquehanna Steam Electric Station - Unit 1										DOCKET NUMBER (2) 0 5 0 0 0 3 8 1 7										PAGE (3) 1 OF 4																					
TITLE (4) SGTS and CREOASS Start (Radiography)																																									
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 0 0 0								
0 3			2 3			8 5			8 5			0 1			1			0 0			0 4			2 5			8 5									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) 0 0 0						20.402(b)						20.405(c)						X						50.73(a)(2)(iv)						73.71(b)											
						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 386A)											
						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)																							
LICENSEE CONTACT FOR THIS LER (12)																																									
NAME L.A. Kuczynski - Nuclear Plant Specialist, Level III																TELEPHONE NUMBER 7 1 1 7 5 4 2 - 1 3 7 5 1 9																									
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																																									
CAUSE		SYSTEM		COMPONENT		MANUFACTURER		REPORTABLE TO NPDs		CAUSE		SYSTEM		COMPONENT		MANUFACTURER		REPORTABLE TO NPDs																							
X		IIL		*		*		N																																	
SUPPLEMENTAL REPORT EXPECTED (14)																																									
YES (If yes, complete EXPECTED SUBMISSION DATE)																X NO						EXPECTED SUBMISSION DATE (15)		MONTH		DAY		YEAR													

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

On March 23 and April 2, 1985, radiography being performed on the Refueling Floor tripped refuel floor radiation monitors. This caused the Standby Gas Treatment System (SGTS) and Control Room Emergency Outside Air Supply System (CREOASS) to start. (SGTS and CREOASS are Engineered Safety Features.) During the March 23 occurrence, all systems operated normally. During the April 2 occurrence, the SGTS train 'B' tripped and a fan in the Reactor Building Recirculation System did not start as it should. The SGTS trip was caused by a system low flow signal which has since been deleted from the fan start logic. (The trip is no longer necessary because both SGTS fans are operated in 'Lead'.) The Recirculation Fan did not start due to malfunctioning dampers which were repaired. (See LER 50-388/85-012-00.)

\* Not Applicable

8505030712 850425  
PDR ADCK 05000387  
S PDRIE22  
1/1

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

FACILITY NAME (1) Susquehanna Steam Electric Station Unit 1	DOCKET NUMBER (2) 0500038785	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		85	011	00	02	OF	04

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

Modification to reactor water level instrumentation had been made to upgrade the system to Reg. Guide 1.97 criteria. On March 23, 1985, radiographic testing (RT) of five welds associated with the modification was scheduled to commence and appropriate Health Physics coverage was provided. The radiographers who performed the work are non-utility, non-licensed personnel qualified to perform the RT. The Shift Supervisor was notified by the radiographers that the RT was ready to be performed on the refueling floor and received permission to commence. The RT caused both divisions of the Refuel Floor High Exhaust radiation monitors to trip. HVAC Zone III (Refuel Floor) isolated, Standby Gas Treatment System (SGTS) train 'A' and Control Room Emergency Outside Air Supply System (CREOASS) train 'A' started. (SGTS and CREOASS are Engineered Safety Features.) Reactor Building Recirculation fans also started per design. (The Reactor Building Recirculation System starts automatically to reduce radioactivity concentrations by mixing the air in HVAC Zones upon their isolation and provides an outlet for any radioactive contaminants via the SGTS.) The systems were returned to normal status after the RT was complete.

On April 2, 1985, a similar event occurred. The RT in progress on the refuel floor tripped the Refuel Floor High Exhaust radiation monitor 'B'. This resulted in a Division II isolation signal to HVAC Zone III, and start signals to SGTS train 'B' and CREOASS train 'B'. Zone III isolated and CREOASS train 'B' started and ran properly. SGTS train 'B' started and tripped on low flow. Reactor Building Recirculation Fan 'B' (which had its control switch in 'Standby' per operating procedure) failed to start. SGTS train 'A' was manually started, as was recirculation fan 'B'. The RT was suspended and HVAC systems were restored to normal.

Because only a Division II isolation signal was generated, the normal Zone III, Division I fans remained in service for a short period of time. The secondary containment isolation dampers can take up to six seconds to close, thus the running fans maintained Zone III at the requisite 0.25 in w.g. vacuum while SGTS train 'B' was running. Since Zone III dp was being maintained, the modulating damper from the recirculation plenum to Zone III remained essentially closed. The outside air damper that controls makeup air flow to SGTS has a 120 second time delay to open on a Division II isolation signal. Thus, with the modulating damper from the recirculation plenum closed and the outside air damper closed, the SGTS train 'B' had no suction path and tripped on low flow. (See Figure 1.) To prevent recurrence, the low flow trip of the SGTS fans has been bypassed. (The low flow switch was originally intended to trip the SGTS fan in 'Lead' and start the SGTS fan in 'Standby'. Because both SGTS fans are now operated in 'Lead', the low flow trip signal is not required to start a second fan.) Additional engineering evaluation has been requested to determine if further actions are warranted.

Reactor Building Recirculation Fan 'B' failed to start due to broken counterweight drive linkages in the recirculation plenum backdraft dampers. (See LER 50/388/85-012-00.) The linkages were repaired and a missing setscrew bolt was replaced. Each division of the Zone III/SGTS logic was tested with its respective recirculation fan in 'Standby' and proper system operation was verified.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

FACILITY NAME (1) Susquehanna Steam Electric Station Unit 1	DOCKET NUMBER (2) 0500038785	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		85	011	00	03	OF	04

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

An evaluation of the detector location vis-a-vis the location of the welds to be examined led to the conclusion that the detector could not be shielded during the RT's. The starts of SGTs and CREOASS were unavoidable. Operations personnel will continue to be notified prior to any radiographic testing.

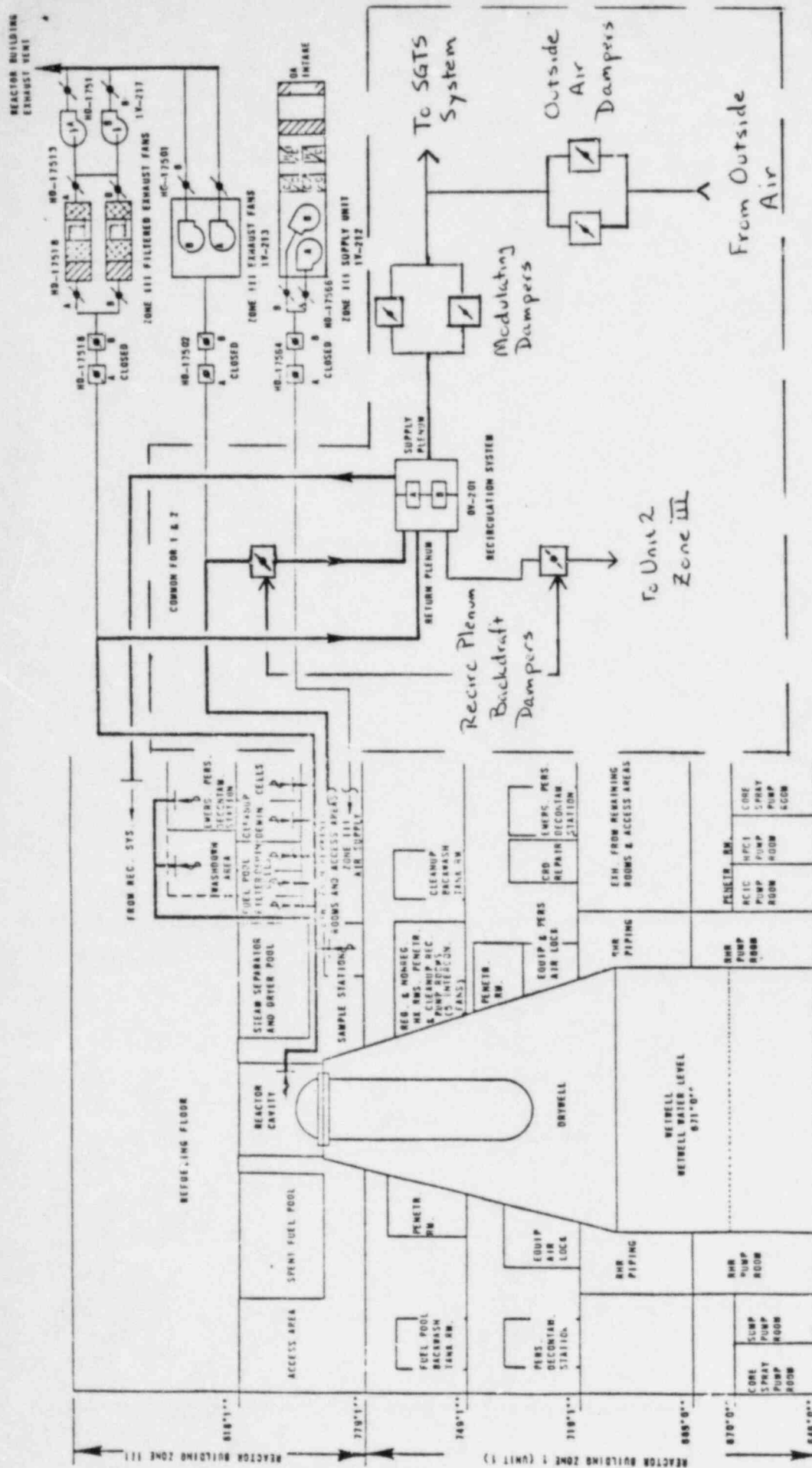


Figure 1



Pennsylvania Power & Light Company

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

April 25, 1985

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

SUSQUEHANNA STEAM ELECTRIC STATION  
LICENSEE EVENT REPORT 85-011-00  
ER 100450 FILE 841-23  
PLAS- 067

---

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

Attached is Licensee Event Report 85-011-00. This event was determined reportable per 10CFR50.73(a)(2)(iv), in that the Standby Gas Treatment System and the Control Room Emergency Outside Air Supply System (both Engineered Safety Features) started twice unexpectedly due to radiography being performed on the Refueling Floor.

H.W. Keiser  
Superintendent of Plant-Susquehanna

LAK/pjg

cc: Dr. Thomas E. Murley  
Regional Administrator, Region I  
U.S. Nuclear Regulatory Commission  
631 Park Avenue  
King of Prussia, PA 19406

Mr. R.H. Jacobs  
Senior Resident Inspector  
U.S. Nuclear Regulatory Commission  
P.O. Box 52  
Shickshinny, PA 18655

IE22  
11