

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM.

REGULATOR INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8905310351      DOC. DATE: 89/05/25      NOTARIZED: NO      DOCKET #  
 FACIL: 50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylvania      05000387  
 AUTH. NAME      AUTHOR AFFILIATION  
 WEHRY, R.R.      Pennsylvania Power & Light Co.  
 BYRAM, R.G.      Pennsylvania Power & Light Co.  
 RECIP. NAME      RECIPIENT AFFILIATION

SUBJECT: LER 89-012-00: on 890428, unplanned ESF actuation during refueling outage.      W/8      ltr.

DISTRIBUTION CODE: IE22D      COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 4  
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

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	NRR/DEST/ICSB 7	1 1	NRR/DEST/MEB 9H	1 1	
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	NRR/DOEA/EAB 11	1 1	NRR/DRP/RPB 10	2 2	
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May 25, 1989

U.S. Nuclear Regulatory Commission  
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SUSQUEHANNA STEAM ELECTRIC STATION  
LICENSEE EVENT REPORT 89-012-00  
FILE R41-2  
PLAS -366

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

Attached is Licensee Event Report 89-012-00. This event was determined to be reportable per 10CFR50.73(a)(2)(iv) in that an unplanned Engineered Safety Feature actuation occurred when an electrician inadvertently caused a short circuit in the logic for primary containment isolation. The unit was in a defueled condition at the time of the occurrence.

R.G. Byram  
Superintendent of Plant - Susquehanna

RFW/mjm

cc: Mr. W.T. Russell  
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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Susquehanna Steam Electric Station - Unit 1	DOCKET NUMBER (2) 0 5   0 0   0 3   8 7	PAGE (3) 1 OF 03
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TITLE (4)  
Unplanned ESF Actuation During Refueling Outage

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		
04	28	89	89	012	00	05	25	89			
									DOCKET NUMBER(S) 0 5   0 0   0 0		
									0 5   0 0   0 0		

OPERATING MODE (9) 5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)									
POWER LEVEL (10) 0 10   0	20.402(b)	<input checked="" type="checkbox"/>	60.73(a)(2)(iv)	<input type="checkbox"/>	73.71(b)					
	20.405(a)(1)(i)	<input type="checkbox"/>	60.73(a)(2)(v)	<input type="checkbox"/>	73.71(c)					
	20.405(a)(1)(ii)	<input type="checkbox"/>	60.73(a)(2)(vi)	<input type="checkbox"/>	OTHER (Specify in Abstract below and in Text, NRC Form 366A)					
	20.405(a)(1)(iii)	<input type="checkbox"/>	60.73(a)(2)(vii)(A)	<input type="checkbox"/>						
	20.405(a)(1)(iv)	<input type="checkbox"/>	60.73(a)(2)(vii)(B)	<input type="checkbox"/>						
20.405(a)(1)(v)	<input type="checkbox"/>	60.73(a)(2)(ix)	<input type="checkbox"/>							

LICENSEE CONTACT FOR THIS LER (12)							TELEPHONE NUMBER					
NAME Richard R. Wehry - Power Production Engineer - Compliance							AREA CODE 7 11 17			7 5 4   2 1 - 13 16   6 1 4		

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO						

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

At 1016 hours on April 28, 1989, with Unit 1 in the defueled condition, an unplanned Engineered Safety Feature (ESF) actuation occurred when an electrician, who was performing Reactor Protection System (RPS) relay inspections, inadvertently caused a short circuit that initiated a high drywell pressure signal to Division II primary containment isolation valves and secondary containment isolation dampers. The Standby Gas Treatment, Control Room Emergency Outside Air Supply and Reactor Building Recirculation systems started. The applicable isolation valves were already closed or out of service at the time. All equipment operated per design.

The cause was attributed to cognitive personnel error on the part of the electrician. The relay inspections were stopped and a blown fuse was replaced. All isolations and system actuations were verified and then reset. Electrical Maintenance Supervision reviewed the incident and its cause with the involved electrician.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

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

DESCRIPTION OF EVENT

At 1016 hours on April 28, 1989, with the reactor defueled during the Unit 1 fourth refueling outage, an unplanned Engineered Safety Feature (ESF) actuation occurred when an electrician caused a short circuit in the primary containment isolation logic (EIIS Code: JM). The electrician was performing Reactor Protection System (EIIS Code: JC) relay inspections when he inadvertently shorted a removed wire to another terminal causing a fuse in the containment isolation logic to blow. The blown fuse initiated a high drywell pressure signal to Division II primary containment isolation valves and secondary containment isolation dampers (EIIS Code: VA). The Standby Gas Treatment (EIIS Code: BH), Control Room Emergency Outside Air Supply (EIIS Code: BH) and the Reactor Building Recirculation Ventilation (EIIS Code: VA) systems started. The applicable isolation valves were already closed or out of service at the time of the occurrence.

CAUSE OF EVENT

The cause of the unplanned ESF actuation was cognitive personnel error on the part of the electrician (utility, non-licensed). The electrician had removed a wire from a Reactor Protection System (RPS) HFA relay for purpose of performing an inspection per maintenance procedure MI-158-A02, RPS HFA Relay Contact Inspection, when he inadvertently allowed the removed wire to come into contact with another terminal. This created a short circuit and caused fuse F22 in the containment isolation system logic to blow, resulting in the ESF actuation.

REPORTABILITY/ANALYSIS

This event was determined reportable per 10CFR50.73(a)(2)(iv) in that an unplanned ESF actuation occurred when the blown fuse initiated a high drywell pressure signal to Division II primary containment isolation valves and secondary containment isolation dampers. The Standby Gas Treatment, Control Room Emergency Outside Air Supply and Reactor Building Recirculation Ventilation systems started. The applicable isolation valves were already closed or out of service at the time. All equipment operated per design. There were no safety consequences or compromise to public health or safety during this event.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)  Unit 1 Susquehanna Steam Electric Station	DOCKET NUMBER (2)  0   5   0   0   0   3   8   7	LER NUMBER (6)			PAGE (3)		
		YEAR 8   9	SEQUENTIAL NUMBER -   0   1   2	REVISION NUMBER -   0   0			

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

CORRECTIVE ACTIONS

Following the unplanned ESF actuation, the RPS HFA relay inspection activity was stopped. The blown fuse was replaced. All isolations and system actuations were verified by Operations personnel and then were reset.

Electrical Maintenance Supervision reviewed the incident and its cause with the involved electrician.

ADDITIONAL INFORMATION

Licensee Event Reports 88-007-00 (Docket 50-387) and 87-002-00 (Docket 50-388) describe previous unplanned ESF actuations attributed to cognitive personnel