

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8712140084 DOC. DATE: 87/12/10 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.
 RECIPIENT AFFILIATION

SUBJECT: LER 87-032-00: on 871122, emergency diesel generator A
 unplanned automatic start.

W/8 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 3
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES: 1cy NMSS/FCAF/PM. LPDR 2cys Transcripts. 05000387

	RECIPIENT ID CODE/NAME	COPIES LTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTR ENCL	
	PD1-2 LA THADANI, M	1 1	PD1-2 PD	1 1	A
INTERNAL:	ACRS MICHELSON	1 1	ACRS MOELLER	2 2	D
	AEOD/DOA	1 1	AEOD/DSP/NAS	1 1	D
	AEOD/DSP/ROAB	2 2	AEOD/DSP/TPAB	1 1	S
	ARM/DCTS/DAB	1 1	DEDRO	1 1	
	NRR/DEST/ADS	1 0	NRR/DEST/CEB	1 1	
	NRR/DEST/ELB	1 1	NRR/DEST/ICSB	1 1	
	NRR/DEST/MEB	1 1	NRR/DEST/MTB	1 1	
	NRR/DEST/PSB	1 1	NRR/DEST/RSB	1 1	
	NRR/DEST/SGB	1 1	NRR/DLPQ/HFB	1 1	
	NRR/DLPQ/QAB	1 1	NRR/DOEA/EAB	1 1	
	NRR/DREP/RAB	1 1	NRR/DREP/RPB	2 2	
	NRR/DRIS/SIB	1 1	NRR/PMAS/ILRB	1 1	
	REG FILE 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	FORD BLDG HOY, A	1 1	R
	H ST LOBBY WARD	1 1	LPDR	2 2	
	NRC PDR	1 1	NSIC HARRIS, J	1 1	I
	NSIC MAYS, G	1 1			
NOTES:		3 3			D

TOTAL NUMBER OF COPIES REQUIRED: LTR 50 ENCL 49

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 2
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TITLE (4)
Emergency Diesel Generator "A" Unplanned Automatic Start

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)																								
1	1	2 2 8 7	8 7	0 3 2	0 0	1	2 1	0 8 7	SSES - Unit 2		0 5 0 0 0 3 8 8																								
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="12">DOCKET NUMBER(S)</td> </tr> <tr> <td colspan="12">0 5 0 0 0 1 1 1</td> </tr> </table>												DOCKET NUMBER(S)												0 5 0 0 0 1 1 1											
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OPERATING MODE (9) **1**

POWER LEVEL (10) **0 0 9**

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input checked="" type="checkbox"/> 60.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
<input type="checkbox"/> 20.406(a)(1)(i)	<input type="checkbox"/> 60.36(c)(1)	<input type="checkbox"/> 60.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)
<input type="checkbox"/> 20.406(a)(1)(ii)	<input type="checkbox"/> 60.36(c)(2)	<input type="checkbox"/> 60.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
<input type="checkbox"/> 20.406(a)(1)(iii)	<input type="checkbox"/> 60.73(a)(2)(i)	<input type="checkbox"/> 60.73(a)(2)(viii)(A)	
<input type="checkbox"/> 20.406(a)(1)(iv)	<input type="checkbox"/> 60.73(a)(2)(ii)	<input type="checkbox"/> 60.73(a)(2)(viii)(B)	
<input type="checkbox"/> 20.406(a)(1)(v)	<input type="checkbox"/> 60.73(a)(2)(iii)	<input type="checkbox"/> 60.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME Richard R. Wehry - Power Production Engineer - Compliance	TELEPHONE NUMBER
	AREA CODE: 7 1 7 NUMBER: 5 4 2 7 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
X	E, K		A, 1 0 9	YES					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

On November 22, 1987 at 1105 hours, with Unit 1 operating at 9% power and Unit 2 operating at 100% power, an unplanned Engineered Safety Feature (ESF) actuation occurred when the "A" Diesel Generator automatically started. Investigation revealed that the cause of the auto start was the failure of a coil in a relay of the electrical control circuit. The coil was found to be "burned out". Failure of the coil (open circuit) simulated the emergency start condition (failsafe, deenergized relay), allowing the engine to start. The Diesel Generator started, ran properly and was available to energize the emergency bus and perform its design function, if required. As such, this event is not classified as a valid test failure, as defined by Reg. Guide 1.108. The diesel was manually shut down, the defective relay was replaced and it was returned to its normal standby condition. Based on a historical review, the coil failure of this relay has been determined to be attributed to normal energized life and there appears to be no recurrence trend. Operation of both Units continued uninterrupted.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

TEXT (If more than one page, use NRC Form 266A's) (17)

On November 22, 1987 at 1105 hours, with Unit 1 operating at 9% power and Unit 2 operating at 100% power, an unplanned Engineered Safety Feature (ESF) actuation occurred when the "A" Emergency Diesel Generator (EIIS Code: EK) automatically started. The diesel started, ran properly and was available to energize its emergency 4.16 KV bus (EIIS Code:EB) and perform its design function, if required. Following verification that a bona fide emergency start signal was not present, the Diesel Generator was manually shut down. Operation of both generating Units continued uninterrupted.

CAUSE OF EVENT

Investigation revealed that the cause of the diesel automatic start was the failure of a coil in a relay (relay 4LOCAL) of the engine electrical control circuit. The coil was found to be "burned out" and "open". Failure of the coil simulated an emergency condition (failsafe, de-energized relay), allowing the diesel generator to start.

REPORTABILITY/ANALYSIS

This event was determined reportable per 10CFR50.73(a) (2) (iv) in that an unplanned Engineered Safety Feature (ESF) actuation occurred when the "A" Diesel Generator automatically started. The diesel generator started, ran properly and was available to energize its emergency bus and perform its design function if required. As such, no safety consequences or compromise to public health or safety occurred.

CORRECTIVE ACTION

Following verification by Operations personnel that a bona fide emergency start signal (LOCA condition or Loss of Offsite Power to Essential 4.16 KV Bus 1A or 2A) was not present, the diesel generator was manually shut down. Upon discovering that the 4LOCAL relay coil was "burned out", the relay was replaced and tested and the diesel generator was returned to its normal standby condition.

ADDITIONAL INFORMATION

A historical review of unplanned diesel generator automatic start events was performed. One previous occurrence, in August, 1986, had been attributed to coil burnout of a similar relay (4LOCA2) in a diesel generator electrical control circuit. The frequency of failure of this coil, however, has not been excessive and is considered to be attributed to relay normal energized life. There appears to be no recurrence trend.

Previously, unplanned emergency diesel generator starts were not reported as unplanned ESF actuations because the SSES FSAR does not list the Standby Power as an ESF System, but rather as an ESF Auxiliary Support System. However, based on recent discussions between the Plant Staff and the NRC Resident Inspector, it was decided that SSES would begin to report unplanned diesel starts as unplanned ESF actuations.



Pennsylvania Power & Light Company

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

December 10, 1987

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

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 87-032-00
FILE R41-2
PLAS - 290

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

Attached is Licensee Event Report 87-032-00. This event was determined reportable per 10CFR50.73(a)(2)(iv) in that an unplanned Engineered Safety Feature (ESF) actuation occurred when the "A" Emergency Diesel Generator automatically started due to a control circuit relay failure.


R. G. Byram

Superintendent of Plant - Susquehanna

RRW/cmw

cc: Mr. William T. Russell
Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
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U.S. Nuclear Regulatory Commission
P.O. Box 52
Shickshinny, PA 18655

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ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8712100256 DOC. DATE: 87/12/07 NOTARIZED: NO DOCKET #
 FACIL: 50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylv 05000387
 AUTH. NAME AUTHOR AFFILIATION
 SHERANKO, R.G. Pennsylvania Power & Light Co.
 BYRAM, R.G. Pennsylvania Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-031-00: on 871105, unanticipated ESF actuation due to installation of jumper in wrong panel.

W/8 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 3
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	THADANI, M		1	1					
INTERNAL:	ACRS MICHELSON		1	1	ACRS MOELLER		2	2	
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	AEOD/DSP/ROAB		2	2	AEOD/DSP/TPAB		1	1	
	ARM/DCTS/DAB		1	1	DEDRO		1	1	
	NRR/DEST/ADS		1	0	NRR/DEST/CEB		1	1	
	NRR/DEST/ELB		1	1	NRR/DEST/ICSB		1	1	
	NRR/DEST/MEB		1	1	NRR/DEST/MTB		1	1	
	NRR/DEST/PSB		1	1	NRR/DEST/RSB		1	1	
	NRR/DEST/SGB		1	1	NRR/DLPQ/HFB		1	1	
	NRR/DLPQ/QAB		1	1	NRR/DOEA/EAB		1	1	
	NRR/DREP/RAB		1	1	NRR/DREP/RPB		2	2	
	NRR/DRIS/SIB		1	1	NRR/PMAS/ILRB		1	1	
	REG FILE 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	FORD BLDG HOY, A		1	1	
	H ST LOBBY WARD		1	1	LPDR		2	2	
	NRC PDR		1	1	NSIC HARRIS, J		1	1	
	NSIC MAYS, G		1	1					
NOTES:			3	3					

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