ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8712220106 DOC.DATE: 87/12/18 NOTARIZED: NO DOCKET #
FACIL:50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylva 05000387
AUTH.NAME AUTHOR AFFILIATION
SHAFFER,G.G. Pennsylvania Power & Light Co.
BYRAM,R.G. Pennsylvania Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-035-00:on 871118,procedural inadequacy resulted in inadvertant ESF actuation.

DISTRIBUTION CODE: IE22D COPIES RECEIVED:LTR 1 ENCL 1 W/8 ltr. SIZE: 4
TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

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

	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL
	PD1-2 LA	1	1	PD1-2 PD	1	1
	THADANI,M	1	1			
INTERNAL:	ACRS MICHELSON	1	1	ACRS MOELLER	2	2
	AEOD/DOA	1	1	AEOD/DSP/NAS	1	1
	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			

TOTAL NUMBER OF COPIES REQUIRED: LTTR 50 ENCL 49

RIDS/ADDS RIDS/ADDS

NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

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 3

TITLE (4) Procedural Inadequacy Results in an Inadvertant Engineered Safety Feature (ESF) Actuation

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	1 8	8 7	8 7	0 3 5	0 0	1 2	1 8	8 7		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9): 4

POWER LEVEL (10): 0

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

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 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
Glenn G. Shaffer, Power Production Engineer - Compliance	AREA CODE 7 1 7 5 4 2 - 3 7 5 9

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)

At 1511 on November 18, 1987, an Unplanned Engineered Safety Feature (ESF) actuation occurred on Unit One. Utility Instrumentation and Control (I&C) technicians were performing surveillance test "18 Month Time Response Test of RPS and EOC/RPT Trips for Turbine Stop Valve and Turbine Control Valve Fast Closure" (SI-183-413) when a Main Steam Isolation Valve (MSIV) closure signal was generated. The MSIVs were closed prior to and after the closure signal was generated. The actuation was the result of leads lifted from the panel side rather than the field side of a terminal block during the surveillance test. The leads were relanded and the actuation signal was reset. The surveillance was reperformed by lifting the field side leads and was completed without incident.

The cause of the event was a deficiency in an approved procedure. SI-183-413 did not specify lifting the field side or the panel side leads.

The event will be reviewed at the next I&C monthly shop meeting. In addition, SI-183/283-413 will be revised. An existing note preceeding the list of leads to be lifted will be expanded to specify lifting leads on the field side only. The Prerequisites/Limitations will be revised so that the surveillance can only be performed in plant Conditions 4 and 5 with the MSIVs closed. A procedure step will be added to install a jumper to prevent the Main Condenser Low Vacuum Bypass for the MSIVs from being defeated.

IE22
1/1

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

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

EVENT DESCRIPTION

With Unit One in Condition Four (Cold Shutdown) on November 18, 1987, an unplanned Engineered Safety Feature (ESF) actuation occurred due to a procedural inadequacy.. The Unit was aligned in a configuration with the Reactor isolated from the Main Turbine (EIIS Code: TA) via closure of the Inboard and Outboard Main Steam Isolation Valves (MSIVs) (EIIS Code: JM), the Turbine Stop Valves (TSVs), and the Turbine Control Valves (TCVs). Utility Instrumentation and Controls (I&C) technicians (non-licensed) were performing surveillance test "18 Month Time Response Test of RPS and EOC/RPT Trips for Turbine Stop Valve and Turbine Control Valve Fast Closure" (SI-183-413). Performance of the surveillance requires the technicians to clear the Turbine trip signals and reset the Turbine. Subsequently, TSV and TCV closure is simulated by actuation of temporarily installed test switches. Response time is then calculated by summing a series of timed relay actuations. Step 6.5.2. of the procedure instructed the technician to defeat the Turbine trip signals present by lifting the prescribed leads in Electro-Hydraulic Control (EHC) Cabinet 1C663A in the Lower Relay Room (LRR). At 1511 on November 18, 1987 an I&C technician lifted the panel side rather than the field side leads at the specified terminal block location TBA32-7. The intent of lifting the field side leads was to defeat the Generator Lockout Trip and Reactor Vessel High Water Level Trip of the Main Turbine. In addition to defeating the Turbine trip signals, lifting the panel side leads caused an interruption to the common 125 VDC feed to the Main Generator Breaker relay logic. Subsequent procedure step 6.5.3 instructed the Plant Control Operator (PCO) to reset the Main Turbine. With power lost to the Main Generator Breaker relay logic the result was a simulated Main Generator Synchronization Breaker Closure input to the EHC System. Relay actuations realigned the EHC System for a Main Turbine on-line configuration by opening the TSVs which defeated the Main Condenser Low Vacuum Bypass for the MSIVs. The bypass, when in effect, allows opening of the MSIVs when Main Condenser vacuum is not established. With the bypass defeated and the Main Condenser at atmospheric pressure, an MSIV closure signal was generated.

The plant response to the lifted leads was per design. No MSIV movement occurred as the MSIVs were closed prior to receipt of the isolation signal. Proper Control Room annunciation and indication was verified by Operations personnel. The leads were relanded and the isolation signal was reset. The surveillance was reperformed by lifting the field side leads and was completed without further incidence.

CAUSE OF THE EVENT

Lifting the panel side leads in the EHC Cabinet resulted from a procedure deficiency. SI-183-413 was an approved surveillance procedure which did not specify lifting leads from the panel side versus the field side.

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

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

ANALYSIS OF EVENT

The event was determined reportable per 10CFR50.73(a)(2)(iv) based on category of any event or condition that resulted in manual or automatic actuation of any Engineered Safety Feature (ESF). The MSIV Closure Signal constituted a Primary Containment Isolation Signal.

There were no safety implications associated with this event. The Unit was in Cold Shutdown and the MSIVs were closed during the event. The procedure Prerequisites/Limitations allowed performance "in all plant conditions with the Turbine Stop Valves and the Turbine Control Valves Closed". Thus the procedural guidelines permitted performance with the Reactor at power, the Main Turbine off-line, and the MSIVs open. Susquehanna Units One and Two have twenty-five percent (25%) Bypass Valve capacity. Under these conditions, the ESF signal would have closed the MSIVs and subsequently generated a Reactor Scram. However, the normal scheduling practice is to perform the 18-month surveillance with the Unit Shutdown.

CORRECTIVE ACTION

This event will be discussed at the I&C Department's monthly shop meeting scheduled for December 22, 1987. In addition, surveillance procedures SI-183/283-413 will be revised. An existing note preceeding the list of leads to be lifted will be expanded to specify lifting leads on the field side only. The Prerequisites/Limitations will be revised so that the surveillance can only be performed in plant Conditions 4 and 5 with the MSIVs closed. A procedure step will be added to install a jumper to prevent the Main Condenser Low Vacuum Bypass for the MSIVs from being defeated.

ADDITIONAL INFORMATION

Component failure(s): None

Previous similar events: A review of past occurrences did not reveal any similar events.

Pennsylvania Power & Light Company
P.O. Box 451 • Berwick, PA 18603-0451 • 717/542-2151

December 18, 1987

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

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 87-035-00
FILE R41-2
PLAS - 293

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

Attached is a Licensee Event Report 87-035-00. This event was determined reportable per 10CFR50.73(a)(a)(iv), in that a Main Steam Isolation signal was generated during surveillance testing. This is considered an inadvertent actuation of an Engineered Safety Feature.

R. G. Byram
Superintendent of Plant - Susquehanna

cc: Mr. William Russell
Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

Mr. James Stair
Resident Inspector
U.S. Nuclear Regulatory Commission
P.O. Box 52
Shickshinny, PA 18655

IE22
1/1