NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

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 2

TITLE (4)

Intermediate Range Monitor Upscale Spike Causes Reactor Scram

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	1 5	8 6	8 6	— 0 0 9	— 0 0	0 4	1 4	8 6		0 5 0 0 0

OPERATING MODE (9)	*	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 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
Jeffrey A. Hirt, Engineer Level I	AREA CODE 7 1 7 5 4 2 - 3 9 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)

On March 15, 1986 at approximately 1100 hours a half scram was generated on Division I of the Reactor Protection System (RPS) by a noise induced upscale trip of the 'C' and 'G' Intermediate Range Monitors (IRM's). Since a half scram was present on Division II of RPS, from a maintenance inspection of HFA Relay contacts, a full scram signal was engendered. No control rod movements occurred, and none were required, because the reactor was defueled with all rods already inserted. The noise spike resulted from the cycling of a relay during an Instrument and Control surveillance procedure. After the IRM's returned to their downscale position the Division I RPS actuation was cleared. No further action is planned.

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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 6	— 0 0 9	— 0 0	0 2 OF 0 2

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

On March 15, 1986, at approximately 1100 hours, a half scram signal was generated on Division I of the Reactor Protection System (RPS) (EIIS Code: JC) by a noise induced upscale trip of the 'C' and 'G' Intermediate Range Monitors (IRM's) (EIIS Code: IG). Since a half scram was present on Division II of RPS, from a Maintenance inspection of HFA Relay contacts, a full scram signal was produced. No control rod movements occurred, and none were required, because all rods were already inserted into the core.

At the time of the scram, Unit One was shutdown for its second refueling outage. The reactor was defueled for workers to inspect the steam dryer support brackets. Unit Two was unaffected and continued operation at approximately 100%. When the IRM detectors are near irradiated fuel, or other neutron sources, the signal pulses normally generated would suppress any noise spikes. However, with the vessel defueled and no other neutron sources present, an unsuppressed noise spike caused the 'C' and 'G' IRM Channels to exceed 120 units of 125 units full scale. This resulted in the generation of a half scram in Division I of RPS.

The noise was the result of cycling a relay during Instrument and Control (I&C) surveillance procedure SI-183-412 '18 Month Response Time Test of Main Steam Line Pressure Channels PSL-B21-N015A,B,C, and D.' The procedure instructs technicians to attach a recorder across two contacts of relay B21H-K4C and to a pressure switch for the 'C' Main Steam Line. The recorder is used to measure the time between the tripping of the switch and the actuation of the relay. The cable, which connected the relay to the recorder, was located close to the 'C' and 'G' IRM drawers. It appears that when the relay cycled, the signal on the cable induced a noise spike in the 'C' and 'G' IRM drawers causing them to exceed their trip setpoints.

After the IRM's returned to their downscale positions the Division I RPS actuation was cleared. No further action is planned.

PP&L Pennsylvania Power & Light Company
Two North Ninth Street • Allentown, PA 18101 • 215/770-5151

April 14, 1986

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

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 86-009-00
FILE R41-2
PLAS- 162

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

Attached is Licensee Event Report 86-009-00. This event was determined reportable per 10CFR50.73(a)(2)(iv), in that an automatic actuation of the Reactor Protection System, an Engineered Safety Feature, occurred as a result of two Intermediate Range Monitor channels exceeding their upscale trip setpoints.

T.M. Crimmins, Jr.
Superintendent of Plant-Susquehanna

JAH/pjg

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