

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) **Perry Nuclear Power Plant, Unit 1** DOCKET NUMBER (2) **05000440** PAGE (3) **1 OF 03**

TITLE (4) **Electrical Relay Failure Causes Annulus Exhaust Gas Treatment System 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)	
0	5	12	8	6	8	6	0	13	0	0	060686	050000
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THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 8: (Check one or more of the following) (11)

OPERATING MODE (9) 5	20.402(b)	20.408(e)	<input checked="" type="checkbox"/>	80.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10) 000	20.408(a)(1)(i)	80.38(a)(1)		80.73(a)(2)(v)	73.71(e)
	20.408(a)(1)(ii)	80.38(a)(2)		80.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 365A)
	20.408(a)(1)(iii)	80.73(a)(2)(i)		80.73(a)(2)(viii)(A)	
	20.408(a)(1)(iv)	80.73(a)(2)(ii)		80.73(a)(2)(viii)(B)	
	20.408(a)(1)(v)	80.73(a)(2)(iii)		80.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Paul Russ, Compliance Engineer, ext. 6472	2116 2591-3737

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	EID	IRILYGI	11814	N					

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 May 12, 1986, at 1320 and 1630, the standby train of the Annulus Exhaust Train Gas Treatment System (AEGTS) actuated when the operating train experienced a loss of power due to the deenergization of a Division 2 480V load center. In both occurrences Operations restored power to the load center within 12 minutes.

The cause of the events was determined to be a faulty ground over current relay which was tripping prematurely, thus opening the load center supply breaker. The faulty relay was subsequently replaced.

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		YEAR 8 6	SEQUENTIAL NUMBER - 0 1 3	REVISION NUMBER - 0 0	OF		

TEXT (If more space is required, use additional NRC Form 306A's) (17)

On May 12, 1986, at 1320 and 1630, the standby train of the Annulus Exhaust Gas Treatment System (AEGTS)[VC] actuated when the operating train experienced a loss of power due to the deenergization of a Division 2 480V load center [BU]. At the time of the event, the plant was in Operational Condition 5 (Refuel) prior to initial criticality; all control rods [ROD] were fully inserted. Reactor coolant temperature was 75 degrees and, reactor vessel pressure was atmospheric.

The first event occurred on May 12 at 1320, while train B of AEGTS was operating for the performance of Surveillance Test (SVI)-M15-T1241, "Annulus Exhaust Gas Treatment System Post-Maintenance Operability Test." The 50G (Ground Over Current) relay [RLY] for the EH1209 breaker [BKR] tripped causing the breaker to open, disconnecting power to load center EF-1-D. AEGTS train B, which was energized through EF-1-D, deenergized resulting in an autostart of AEGTS train A. The standby AEGTS train will autostart when a low flow condition is sensed on the operating train. The supervising operator alerted by a control room alarm instructed the plant operator to reset the 50G relay and reenergize EF-1-D. At 1332 bus EF-1-D was reenergized; train B of AEGTS was restarted and train A was placed in standby readiness. SVI-M15-T1241 was subsequently resumed and completed.

The second event occurred at 1630 when breaker EH1209 tripped again due to a 50G relay trip. AEGTS train A subsequently autostarted upon the deenergization of train B. At 1635 the supervising operator reenergized load center EF-1-D by cross connecting to another Div. 2 480V load center (EF-1-C). AEGTS train A remained in operation and train B was left in standby readiness.

After the first event, a Work Order was generated to troubleshoot the cause of the 50G relay trip. The investigation discovered that the relay [Manufacturer: Gould Brown Boveri Co.; Model #: GR-5] was defective in that it was overly sensitive to normal electrical transients. This caused the relay to trip prematurely thus opening breaker EH1209 and deenergizing load center EF-1-D. During the first event such a transient may have been caused by the replacement of a local status indicating light bulb coincident with the tripping of the relay. No such source of electrical transient could be found in the second event. The defective 50G relay was replaced. The replacement 50G relay was installed, calibrated and successfully passed its' retest requirements. No further problems are anticipated as this electrical design is in operation at numerous locations in the plant with this being the sole identified occurrence of the problem to date.

The AEGTS is designed to continuously discharge filtered air from the reactor building [NG] annulus. This maintains the annulus at a slightly negative pressure with respect to the shield building and the containment [NH]. The negative pressure in the annulus causes all leakage through the shield building to be in leakage and ensures that any leakage from the containment

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

vessel will be filtered. During this event, the AEGTS operated as designed. Had this ESF actuation occurred during normal plant operation (ie. 100% power), it would have had no effect on the plant. This is attributed to the short amount of time needed to reenergize the load center and the fact that AEGTS responded as designed. Consequently, the event had no safety significance. No previous similar events were identified.

Energy Industry Identification System Codes are identified in the text as [XX].