



PECO NUCLEAR

A Unit of PECO Energy

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10CFR50.73

May 5, 2000

Docket Nos. 50-352

License No. NPF-39

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

SUBJECT: Licensee Event Report
Limerick Generating Station - Units 1

This LER reports an unplanned actuation of the Engineered Safety Features during refueling. The actuation caused two (2) valves in the Containment Instrument Gas system and four (4) valves in the Drywell Chilled Water system to close as a result of a blown fuse. The most probable cause of the blown fuse was testing in progress on the affected equipment.

Reference:	Docket No. 50-352
Report Number:	1-00-001
Revision Number:	00
Event Date:	April 7, 2000
Discovery Date:	April 7, 2000
Report Date:	May 5, 2000
Facility:	Limerick Generating Station P.O. Box 2300, Sanatoga, PA 19464

This LER is being submitted pursuant to the requirements of 10CFR50.73(a)(2)(iv).

Very truly yours,

cc: H. J. Miller, Administrator Region I, USNRC
A. L. Burritt, USNRC Senior Resident Inspector, LGS

IE22

NRC FORM 366 U.S. NUCLEAR REGULATORY COMMISSION (6-1998)					APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001 Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.						
LICENSEE EVENT REPORT (LER) (See reverse for required number of digits/characters for each block)											
FACILITY NAME (1) Limerick Generating Station, Unit 1					DOCKET NUMBER (2) 05000352		PAGE (3) 1 OF 2				
TITLE (4) ESF automatic actuation of PCIVs due to failed fuse											
EVENT DATE (5) MONTH DAY YEAR			LER NUMBER (6) YEAR SEQUENTIAL NUMBER REVISION NUMBER			REPORT DATE (7) MONTH DAY YEAR			OTHER FACILITIES INVOLVED (8)		
04 07 2000			2000 -- 001 -- 00			05 05 2000			FACILITY NAME DOCKET NUMBER 05000		
04 07 2000			2000 -- 001 -- 00			05 05 2000			FACILITY NAME DOCKET NUMBER 05000		
OPERATING MODE (9) 5		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more) (11)									
POWER LEVEL (10) 000		20.2201(b)			20.2203(a)(2)(v)			50.73(a)(2)(i)		50.73(a)(2)(viii)	
		20.2203(a)(1)			20.2203(a)(3)(i)			50.73(a)(2)(ii)		50.73(a)(2)(x)	
		20.2203(a)(2)(i)			20.2203(a)(3)(ii)			50.73(a)(2)(iii)		73.71	
		20.2203(a)(2)(ii)			20.2203(a)(4)			X 50.73(a)(2)(iv)		OTHER	
		20.2203(a)(2)(iii)			50.36(c)(1)			50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A	
20.2203(a)(2)(iv)			50.36(c)(2)			50.73(a)(2)(vii)					
LICENSEE CONTACT FOR THIS LER (12)											
NAME K. P. Bersticker, Manager - Experience Assessment					TELEPHONE NUMBER (Include Area Code) (610) 718-3400						
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)											
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX		
X	CE	Fuse	B569	N							
SUPPLEMENTAL REPORT EXPECTED (14) <input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE).					<input checked="" type="checkbox"/> NO						
					EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR		
ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16) On April 7, 2000 at 10:56 hours, Unit 1, while in Mode 5 for refueling outage 1R08, experienced an Engineered Safety Features (ESF) actuation (Channel D) which isolated six primary containment isolation valves (Drywell Chilled Water supply & return loops and Containment Instrument Gas supply). The isolation was a result of a blown fuse. The fuse was replaced and the valves were returned to service on April 8 at 15:54 hours. The most probable cause of the blown fuse was testing in progress on the affected equipment											

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Limerick Generating Station Unit 1	05000				2 OF
	-352	2000	-- 001	-- 00	2

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

BACKGROUND

At the time of the event Unit 1 was in Operational Condition 5 (Refueling) with the reactor cavity flooded and reactor coolant temperature at approximately 82 degrees Fahrenheit(F). The B loop of the Residual Heat Removal (RHR) {EIS:RO} system was in the alternate decay heat removal mode of operation. The Fuel Pool Cooling (FPC) {EIS:DA} system was inservice and removing decay heat. Various refueling and surveillance tests and fuel movement were in progress.

EVENT DESCRIPTION

On April 7, 2000 at 10:56 hours, Unit 1 while in Mode 5 for refueling outage 1R08 experienced an unplanned Engineered Safety Features (ESF) {EIS: JM } actuation (Channel D) which isolated six primary containment isolation valves. A licensed operator observed the valves were closed at 14:05 hours and commenced an investigation.

The affected valves were the Containment Instrument Gas supply valves (HV-059-129B & 135 and the Drywell Chilled Water [EIS:KM] loops A & B supply & return valves (HV-087-122,123,128 & 129). The isolation was a result of a blown fuse (B21H-F15D) in panel (10-C623). Reactor Water Cleanup (RWCU) {EIS: CE} system time response testing (ST-2-044-401-1) was being conducted. A test recorder was being installed at the approximate time of the event.

A 4 hour notification was made to the NRC for ESF actuation per 10CFR50.72(b)(2)(ii) on April 7, 2000 at 17:55 hours. The event was determined to be reportable under the requirements of 10CFR50.73(a)(2)(iv).

CAUSE OF THE EVENT

The most probable cause of the blown fuse was testing in progress on the affected equipment. No actual cause could be identified during the investigation. However, a test recorder was being installed at the approximate time of the event. The investigation included interviews of the technicians; lab analysis of the fuse, inspection of the test leads; inspection of panel 10-C623; inspection, testing and failure analysis on the recorder; testing of the RWCU differential flow timer; stroking of the affected valves; cycling of the handswitch; and testing of the logic relays. Each inspection and test indicated no evidence of problems or abnormalities.

CONSEQUENCES OF THE EVENT

There were no actual consequences of the event. The reactor was in a refueling condition, and the Drywell hatch was removed. The potential consequences of the event were minimal. All valves closed upon receipt of the isolation signal. Failure of logic control power causes the equipment to actuate to its accident mitigation position. No release of radioactivity and no Emergency Core Cooling System actuations occurred as a result of this event.

CORRECTIVE ACTION COMPLETED

The blown fuse was replaced and the logic was reset. The Containment Instrument Gas and the Drywell Chilled Water supply and return valves were returned to service. The RWCU surveillance test (ST-2-044-401-1) was completed satisfactory.

CORRECTIVE ACTION PLANNED

The test recorder in use during the event has been removed from service. The recorder will be refurbished prior to return to service.

PREVIOUS SIMILAR EVENTS: LER 1-94-004-00

FAILURE DATA: Fuse; Bussman Model-5A, 250 VAC MIN-5