



## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1)

Limerick Generating Station  
Unit 1

DOCKET NUMBER (2)

LER NUMBER (6)

PAGE (3)

YEAR

SEQUENTIAL  
NUMBERREVISION  
NUMBER

0 5 0 0 0 3 5 2 8 5 - 0 3 7 - 0 1 0 0 2 OF 0 4

TEXT (if more space is required, use additional NRC Form 366A (17))

Description of the Event:

On March 26, 1985, at 8:20 a.m., with Unit No. 1 in the cold shutdown condition, a Division II Loss of Coolant Accident (LOCA) signal was received resulting in an injection into the reactor vessel through the "B" Low Pressure Coolant Injection (LPCI) system. Investigation indicated that a LOCA condition did not actually exist therefore the "B" LPCI pump was secured using manual override. Simultaneously with the LPCI injection the D-12 Diesel Generator started, the D-12 Bus load shed, the "B" Core Spray injection valve opened, the B1 channel of RPS produced a half-scam, a Division II Nuclear Steam Supply Shutoff System (NSSSS) isolation occurred along with various other balance-of-plant isolations. Additionally, a HPCI initiation was also received and a loss of hotwell level control and indication occurred. The operator, after securing the "B" LPCI pump, closed the "B" LPCI and "B" Core Spray loop injection valves using manual override. The operator then secured the "A" condensate pump. The manual hotwell make-up bypass valve was open to provide a flow of condensate water through the condensate filter-demineralizers back to the hotwell which resulted in draining the condensate storage tank. The control rod drive pumps then tripped on low suction pressure.

At 8:27 a.m. as the plant was being restored and an investigation to determine the cause of the LOCA signal was being conducted, a second LOCA signal was received. The "B" LPCI pump started and began to inject and was immediately secured. The "B" LPCI and "B" Core Spray loop injection valves were closed. The D-12 Bus again load shed. Further investigation indicated that an Instrument & Controls Technician was performing an instrument backfill procedure which was immediately halted.

The upset range level recorder indicated that a total of 54 inches of water was injected into the reactor vessel as a result of this event. All initiations, isolations, half-scrams, and diesel starts were reset and secured and the affected systems were returned to normal.

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Consequences of the Event:

All Engineered Safety Features as well as all other systems involved functioned as designed during this event. There were no adverse consequences as a result of the additional reactor vessel water inventory.

Cause of the Event:

The cause of this event was a personnel error. An Instrument & Control (I&C) Technician was performing ST-2-036-630-1, Instrument Line Backfill Procedure, on instrument rack 10C010. All instruments on this rack were valved out of service (i.e. their high and low leg isolation valves were closed.). A 100 psig demineralized water hose was connected to the common drain header for backfilling the various instrument sensing lines back to the process through the drain valves.

The high pressure sensing leg of reactor water level transmitter, LT-42-1N085B was to be backfilled by opening the high side drain valve. Due to the physical installation of tubing on the rack (not the normal configuration), the I&C technician opened the low side drain valve which is properly tagged. The low side of LT-42-1N085B is a reference leg that is shared with most of the instruments on the Division II Safeguard Instrument Rack, 10C027. By pressurizing the reference leg of these instruments, the level transmitters on the 10C027 rack produced an output below the actual reactor pressure vessel water level. All transmitters effectively failed low producing the various ESF actuations.

Corrective Actions:

All isolations were reset in accordance with General Plant Procedure, GP-8; all trips were reset in accordance with Special Event Procedure SE-10; the B1 RPS channel half-scrum was reset; the Division II LPCI, Core Spray and HPCI initiation logics were reset; the D-12 diesel generator was shutdown following assurance that the incident would not recur; and the condensate and control rod drive systems were returned to normal.

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The backfill procedure was revised to include cautionary measures to verify proper valve operation, i.e. prior to repositioning a valve, verify that it is the proper valve for the instrument line to be backfilled by observing valve tagging and/or tracing instrument lines. The I&C technician involved was counseled on proper valving techniques.

The Instrument Valve Rack Training program was reviewed and steps were added to discuss the need for checking tags verses physical piping where possible. Also, steps were added to emphasize that all valving should be thought out and understood before implementing. Additionally, a review was conducted to ensure that all technicians have attended Instrument Valve Rack Training in the recent past.

Previous Similar Occurrences:

None.



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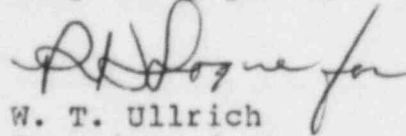
SUBJECT: Licensee Event Report  
Limerick Generating Station - Unit 1

This LER concerns Engineered Safety Feature actuations as the result of an instrument valving error.

Reference:	Docket No. 50-352
Report Number:	85-037
Revision Number:	00
Event Date:	March 26, 1985
Report Date:	April 25, 1985
Facility:	Limerick Generating Station P.O. Box A, Sanatoga, PA 19464

This LER is being submitted pursuant to the requirements of 10 CFR 50.73(a)(2)(iv).

Very truly yours,



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Superintendent  
Nuclear Generation Division

cc: Dr. Thomas E. Murley, Administrator, Region I, USNRC  
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See Service List

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