

PHILADELPHIA ELECTRIC COMPANY

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S. J. KOWALSKI
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10CFR50.55(e)

Mr. W. T. Russell, Administrator
U. S. Nuclear Regulatory Commission
Attn: Document Control Clerk
Mail Station P1-137
Washington, D.C. 20555

Docket No. 50-353
CPPR-107

Subject: Limerick Generating Station - Unit 2
Significant Deficiency Report - SDR No. L2-89-23
Essential Equipment Location in an Unanalyzed
Environment

Reference: Telecon, R. J. Lees to J. Gajzalla March 16, 1989

File: QUAL 2-10-2 (SDR No. L2-89-23)

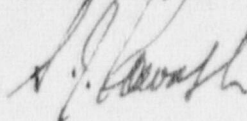
Dear Mr. Russell:

As committed to in the referenced telephone conversation, we are submitting the attached Significant Deficiency Report SDR No. L2-89-23 concerning Essential Equipment located in an unanalyzed environment. This condition has been determined to be reportable per 10CFR Part 50.55(e).

Our corrective action being taken is the installation of conduit seals or the re-orientation of conduit runs to avoid moisture intrusion into electrical equipment prior to startup of Limerick Generating Station Unit 2.

In conclusion, we consider SDR No. L2-89-23 closed with the issuance of this report. If you have any further questions, please contact us.

Sincerely,



Attachment

Copy to: W. T. Russell, USNRC, Region I Administrator
R. A. Gramm, USNRC, LGS 2 Senior Resident Inspector
R. J. Clark, USNRC, LGS 2 Project Manager

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NUCLEAR ENGINEERING
ENGINEERING DIVISION
N2-1, 2301 MARKET STREET

Significant Deficiency Report SDR No. L2-89-23
Essential Equipment Located in an Unanalyzed Environment

DESCRIPTION OF DEFICIENCY:

As part of the start-up activities for Limerick Generating Station Unit 2, an engineering review of the overall implementation of the EQ program was conducted. To assure compliance with the program enhancements, detailed walkdowns of Unit 2 equipment items were performed. During these walkdowns it was identified that equipment associated with backpressure dampers, MSIV limit switches, and leak detection temperature elements lacked conduit seals or conduit low point drains, which are now required to support the qualification of the equipment. The NRC was notified on March 16, 1989, of this condition in accordance with the requirements of 10CFR 50.55(e).

SAFETY IMPLICATIONS:

If a High Energy Line Break (HELB) had occurred during reactor operation, moisture intrusion into the backpressure damper devices (solenoid valves, pressure switches, and limit switches) may have prevented closure of the backpressure dampers. This could have allowed steam to enter areas of the reactor building not analyzed for a HELB environment. The backpressure dampers in question serve the following areas:

- . Reactor Core Isolation Cooling (RCIC), EL. 201'
- . Safeguard System Room, EL. 217'
- . Main Steam and Feedwater Pipe Chase, EL. 253' and 283'
- . Reactor Water Cleanup (RWCU) Recirculation Pump, EL. 283'
- . RWCU Non-Regenerative Heat Exchanger, EL. 283'
- . RWCU Regenerative Heat Exchanger, EL. 283'
- . Steam Vent Tunnel, EL. 283'

Each of the four outboard MSIV's have three limit switches. Two of the limit switches function to indicate open or closed valve position, the third limit switch provides a trip signal to the Reactor Protection System (RPS). Failure of an outboard MSIV limit switch would have initiated a half scram. Had all four limit switches to RPS been affected by moisture intrusion, the reactor would have scrambled. Failure of any of the eight position indication limit switches, would not have had adverse effects on the plant.

Failure of the leak detection system temperature elements could have precluded timely steam isolation for small steam line breaks up to the point where the flow sensing elements located in the system piping would initiate automatic system isolation valve closure upon a high flow situation. The temperature elements in question are located in the following areas:

- . High Pressure Coolant Injection (HPCI) Room
- . RCIC Room
- . RWCU Room
- . Main Steam Tunnel

Corrective Action:

Startup Change Requests (SCRs) have been issued to add conduit seals or low point drains to the Unit 2 equipment in question. These changes will be completed prior to Unit 2 start-up.

Actions Taken to Prevent Recurrence:

The EQ documentation review procedures have been revised to include a detailed evaluation checklist. This checklist includes items such as installation and orientation limitations and required interfaces. This information will be included as special instruction to the field in the Engineering Work Letter for installation and will be included in the EQ Report.

WJC/kh/04188902