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June 14, 1996

EA No. 96-207

Mr. J. S. Perry
Site Vice President
Dresden Station
Commonwealth Edison Company
6500 North Dresden Road
Morris, IL 60450

SUBJECT: NRC REGION III AUGMENTED INSPECTION TEAM REVIEW OF THE MAY 15, 1996, DRESDEN UNIT 3 FAILURE OF THE 3B FEEDWATER REGULATING VALVE. INSPECTION REPORT NO. 50-249/96008.

Dear Mr. Perry:

The enclosed report refers to a special review by an NRC Augmented Inspection Team (AIT) from May 16 through 23, 1996, relative to the May 15, 1996, failure of a feedwater regulating valve (FRV) and subsequent reactor trip and emergency core coolant systems (ECCS) actuation at the Dresden Nuclear Station, Unit 3. The AIT was composed of Messrs. P. Hiland (Team Leader), J. Hopkins, P. Louden, J. Guzman, D. Butler, and D. Roth of this office; and J. Stang of the Office of Nuclear Reactor Regulation (NRR). The report also refers to the followup activities of your staff and to the discussion of our findings with you and others of your staff during a public meeting at the conclusion of the inspection on May 23, 1996.

The enclosed copy of our AIT report identifies areas examined during the inspection. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations, and interviews with personnel.

The AIT was formed to assess information regarding the May 15 loss of feedwater event. Specifically, the AIT examined the plant equipment and personnel response to the event and root causes for equipment failures. During the event, no operational safety limits were approached or exceeded. Response to the event by operations, engineering, and plant support was good.

The AIT determined that the event's immediate safety consequence was minimal, since the safety systems operated as designed to safely mitigate the consequences of the total loss of feedwater transient. However, the AIT also concluded that the engineering and maintenance backlogs contributed to the transient. Specifically, at the time of the transient, the plant was operating with only a single feedwater regulating valve in service. The redundant feedwater regulating valve was isolated due to a steam leak that was known to be a problem since September 1995. When the in-service valve failed, the total loss of feedwater resulted in a reactor trip and emergency core cooling system (ECCS) automatic injection. If the redundant valve had been in service, ECCS injection would not be expected. In addition, the failure

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mechanism for two primary containment isolation valves, which opened unexpectedly, could have been corrected in 1994 and 1995 had a thorough review of earlier problems been performed.

The decision to isolate the redundant FRV and operate Unit 3 for a prolonged period with only a single FRV in service was primarily based on the existing personnel safety hazard associated with the steam leak from the FRV in the redundant train. Past feedwater system performance and the risk contribution described in the Dresden Station Individual Plant Evaluation were not adequately considered. In addition, the decision to inspect the 3B FRV valve stem at a frequency of every two refueling outages had no technical or risk-informed basis. We conclude these narrowly focussed decisions are inconsistent with the conservative operational philosophy that has been demonstrated over the past several months at the Dresden Station.

We recognize your efforts over the past year to reduce the engineering and maintenance backlogs. However, the loss of feedwater transient emphasizes the need for continued senior management attention to assure the station minimizes the backlogs and their potential impact on the operation of the plant.

It is not the responsibility of an AIT to determine compliance with NRC rules and regulations or to recommend enforcement actions. These aspects will be reviewed in a subsequent inspection.

In accordance with 10 CFR 2.790 of the Commission's regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC Public Document Room.

Sincerely,

Original Signed by A. B. Beach

Hubert J. Miller
Regional Administrator

Docket No. 50-249

Enclosure:
Inspection Report
No. 50-249/96008

cc w/encl: J. C. Brons, Vice President,
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H. W. Keiser, Chief Nuclear
Operating Officer
T. Nauman, Station Manager Unit 1
M. Heffley, Station Manager Units 2 and 3
F. Spangenberg, Regulatory Assurance
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