

May 21, 1997

EA 96-532

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

SUBJECT: NOTICE OF VIOLATION
(NRC RESIDENT INSPECTION REPORT 50-010/237/249/96014(DRP))

Dear Mr. Perry:

This refers to the inspection conducted from October 21 through December 6, 1996, at the Dresden Station Unit 2 and 3 facilities. The inspection included a review of the failure to adequately test the control room emergency ventilation system to ensure it conformed to its design basis. The written results of this inspection were provided to you on February 4, 1997. A predecisional enforcement conference was conducted on February 28, 1997.

Based on the information developed during the inspection and the information that you and your staff provided during the conference, the NRC has determined that a violation of NRC requirements occurred. The violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in the subject inspection report. The control room ventilation system had not been maintained or properly tested to ensure that the system operated within its design basis, and was declared inoperable on October 8, 1996. Several control room modifications, which had not been completed, contributed to the inability to pressurize the control room as stated in the Updated Final Safety Analysis Report (UFSAR). The modifications resulted in the inability to maintain the control room at a positive pressure during normal operations and at a positive pressure of 1/8-inch water-gauge (iwg) during emergency pressurization modes, with respect to adjacent areas.

Post modification testing was not performed for a 1989 modification of the Unit 1 to Unit 2/3 control room fire-wall. Following the completion of this modification in May 1993, inadequate surveillance tests were performed on the emergency ventilation system. Specifically, the surveillance procedure only required 1/8 iwg positive pressure in the control room and did not ensure that pressure was greater than 1/8 iwg for the surrounding areas. In addition, instrumentation used to verify that the control room pressure was positive in the emergency mode had not been calibrated, and had not been installed in accordance with the piping and instrumentation diagram. The instrumentation

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used to verify the control room differential pressure also was not calibrated and was not verified to be appropriate for the parameters being measured. Control room instrumentation was mislabeled with respect to the areas being sensed and, according to the drawings, other sensing lines were not properly routed or were broken.

The safety significance of this issue was related to the potentially increased radiological consequences to control room operators during a postulated design basis accident. Since the ventilation system was unable to maintain the required positive pressure during the emergency modes, an increased inleakage was likely to occur during the design basis accident. Using this increased inleakage in conjunction with the dose calculation performed in the UFSAR, the dose limits established by 10 CFR 50, Appendix A, General Design Criterion 19 for control room operators potentially would have been exceeded. The barriers in place to ensure these limits would not be exceeded. Specifically, post-modification testing was not performed, and surveillance testing was inadequate. While this condition was identified on September 26, 1996, it is possible that the control room emergency ventilation system had not met its design basis since the 1989 modification was completed. In addition, from January 16 to May 28, 1995, leakage from the Unit 3 main steam line drain primary containment isolation valves would have exceeded accident analysis assumptions during a postulated design basis accident. During this period, it is quite likely that the accident dose to control room operators would have exceeded regulatory requirements.

The failure to perform post-modification testing of the control room emergency ventilation system to ensure design requirements were maintained is of concern because design modification testing controls were inadequate to ensure that system operability was maintained. In addition, engineering backlog reviews conducted by your staff in the spring of 1996 failed to identify the potential for significant system degradation due to the open control room modification packages. As a result, the control room was found not capable of maintaining the required positive pressure or in-leakage limitations. The as-found degradation was significant in that the potential may have existed for control room radiological doses to be in excess of regulatory limits following a design basis accident. Therefore, this violation has been categorized in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600 at Severity Level III.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$50,000 is considered for a Severity Level III violation. Because Dresden Station has been the subject of escalated enforcement actions within the last 2 years, the NRC considered whether credit was warranted for Identification

and *Corrective Action* in accordance with the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy. The NRC determined that credit for Identification was warranted because on September 26, 1996, while closing out the open 1989 modification, the cognizant system engineer noted that there was no differential pressure between the control room and the outside hallway. This observation prompted the performance of a test to determine the actual control room to outside air differential pressure. On October 7, 1996, when the testing was performed, it was determined that the system was unable to maintain the required positive 1/8 iwg pressure in the control room with respect to all adjacent areas. The system was declared inoperable on October 8, 1997. The NRC determined that credit for Corrective Action was warranted based on your staff's prompt and thorough corrective actions. Immediate corrective actions included sealing system duct work and control room emergency zone penetrations, removing wallboard and cabinets to allow access to walls for leak identification and sealing, and properly identifying installed instrumentation. Dresden personnel also notified Quad Cities of potential problems with adequacy of control room emergency ventilation system testing. The control room ventilation system was restored to full operability on January 21, 1997; after the repairs were completed, the pressurization requirements were verified, the control room differential pressure instruments were repaired, the original test engineer qualifications were revoked, management oversight was improved, and the post modification testing program was improved.

Therefore, to encourage prompt identification and comprehensive correction of violations, I have been authorized, after consultation with the Director, Office of Enforcement, not to propose a civil penalty in this case. However, significant violations in the future could result in a civil penalty.

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence and the date when full compliance was achieved is already adequately addressed on the docket in LER 96-017, as supplemented, and the information you provided at the predecisional enforcement conference which is attached to our letter to you dated March 26, 1997. Therefore, you are not required to respond to this letter unless the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed notice.

Sincerely,

Original signed by James L. Caldwell (for)
A. Bill Beach
Regional Administrator

Docket Nos. 50-237; 50-249
License Nos. DPR-19; DPR-25

Enclosure: Notice of Violation

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A. Bill Beach
Regional Administrator

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In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

A. Bill Beach
Regional Administrator

Docket Nos. 50-237; 50-249
License Nos. DPR-19; DPR-25

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cc w/encl: T. J. Maiman, Senior Vice President
Nuclear Operations Division
D. A. Sager, Vice President,
Generation Support
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
Manager
I. Johnson, Acting Nuclear
Regulatory Services Manager
Richard Hubbard
Nathan Schloss, Economist
Office of the Attorney General
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