



Commonwealth Edison  
1400 Opus Place  
Downers Grove, Illinois 60515

June 25, 1992

Mr. A. Bert Davis  
Regional Administrator  
U.S. Nuclear Regulatory Commission  
Region III  
799 Roosevelt Road  
Glen Ellyn, IL 60137

Dear Mr. Davis:

Subject: Dresden Nuclear Power Station Units 2 and 3  
Supplemental Response to Notice of Violation  
Inspection Report 50-237/91029; 50-249/91031  
NRC Docket Numbers 50-237 and 50-249

- Reference: a) G. Wright letter to C. Reed dated December 10, 1991,  
Transmitting NRC Inspection Report  
50-237/91029; 50-249/91031
- b) T. J. Kovach letter to NRC dated January 7, 1992,  
Transmitting Response to Open Items

Reference b provided Commonwealth Edison's (CECo) response to Open Items identified in the referenced Inspection Report. The Open Items related to issues involving the Dresden Emergency Operating Procedures. A status on these issues including revised completion schedules is provided in the attachment.

If there are any questions or comments regarding this response, please contact Denise Saccomando, Compliance Engineer, at (708)515-7285.

Sincerely,

*P. L. Barnes for*

T.J. Kovach  
Nuclear Licensing Manager

cc: USNRC Document Control Desk  
B.L. Siegel, Project Manager, NRR  
W.G. Rogers, Senior Resident Inspector, Dresden

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## ATTACHMENT

### Supplemental Information on Dresden Emergency Operating Procedure (DEOP) Open Items

#### Open Item 4.a.(1) part I:

During a walkdown of DEOP 100, Reactor Control, a Senior Reactor Operator (SRO) was provided with the necessary data to determine if the Emergency Core Cooling System (ECCS) Net Positive Suction Head (NPSH) requirements were met. The operator incorrectly applied the data to the ECCS NPSH Limit curves. These curves were recently included in a requalification training cycle. Based on these facts, a potential training weakness was identified and further investigation by the licensee was required to determine the extent of the problem. Upon completion of the investigation, the licensee agreed to take appropriate actions to resolve the issue.

#### Supplemental Response

The DEOP coordinator and the requalification training supervisor conducted an impromptu survey of several licensed operators to evaluate whether ECCS NPSH Limit determinations could be appropriately made. The survey consisted of requesting the operator to determine if any of the ECCS pumps in operation were exceeding the ECCS NPSH Limit by providing the curves, data and then evaluating the operators results. Survey results indicated that previous training was sufficient, but some confusion was exhibited by the operators when trying to perform the determination. It was indicated that the previous training did not require the operator to perform the determination on an exam. Refresher training on the ECCS NPSH Limit curves has been provided to the operators. This refresher training does require the operator to perform the ECCS NPSH limit determination. The licensed operator NRC requalification exam bank now contains questions requiring the operator to perform this determination.

#### Open Item 4.a.(1) part II:

A review of the source documents utilized in the calculations of the ECCS NPSH Limit curves assumed one Low Pressure Coolant Injection (LPCI) pump in service and did not allow for the increased head loss in the common section of the suction piping to the two LPCI pumps. The licensee was addressing this issue by reviewing the calculations to determine if the increased head loss would affect the accuracy of the ECCS NPSH Limit curves.

#### Supplemental Response

The DEOP coordinator has reviewed the source documents and engineering calculations utilized in the determination of the ECCS NPSH Limit Curves. The DEOP coordinator agrees with the NRC that the ECCS NPSH Limit Curves are based on one LPCI pump in service instead of two, and is presently determining its effect on the existing DEOPs. Discussions with corporate engineering personnel is also underway to resolve the potential for increased head loss in the common section of the suction piping due to the two LPCI pumps. Upon completion of this evaluation, the DEOP coordinator will generate any necessary procedure changes. The evaluation and the subsequent corrective actions are to be completed by October 31, 1992.

Open Item 4.a.(2) part I:

The maximum safe radiation levels for the Reactor Building, specified in DEOP 300-1 Secondary Control, are set at 150 mr/hr. The generic values specified in the EPGs were set at 1250 mr/hr. Based on the EPG Appendix A definition of the Maximum Safe Operating Radiation level, the EOP requirement for a manual scram prior to any area reaching this level, and the EOP requirement for an emergency depressurization when two or more areas reach this level, the inspectors questioned whether these values really posed a direct and immediate threat sufficient to warrant the severe transients of a scram and emergency depressurization. The licensee agreed to investigate into whether the maximum safe radiation levels specified were appropriate.

Supplemental Response

The DEOP coordinator has reviewed the source documents and methodology utilized in the generation of the Maximum Safe Area Radiation Levels specified in DEOP 300-1. In addition, discussions were conducted with other CECO and non-CECO BWR Utilities EOP personnel. The information gathered from the review and these discussions are currently being evaluated by the DEOP coordinator. Once the evaluation is complete, the necessary changes to the DEOPs will be made. The evaluation and subsequent changes to the DEOPs are to be completed by November 30, 1992.

Open Item 4.a.(2) part II:

In DEOP 300-1, the Maximum Normal Temperatures and Maximum Safe Temperatures were set at 150°F and 180°F, respectively. The small difference between the two values provided limited opportunity for operating personnel to implement remedial actions for a primary system leak prior to initiating a scram or emergency depressurization. The licensee agreed to investigate this issue further.

Supplemental Response

The DEOP coordinator has reviewed the source documents and methodology utilized in the generation of the Maximum Safe Temperatures specified in DEOP 300-1. In addition, discussions were conducted with other CECO and non-CECO BWR Utilities EOP personnel. The information gathered from the review and these discussions are currently being evaluated by the DEOP coordinator. Proposed changes to the temperature values specified are presently being generated. The evaluation and subsequent changes to the DEOPs are to be completed by November 30, 1992.

#### Open Item 4.b:

There are several instances in which there are differences between the Plant Specific Technical Guidelines (PSTGs) and the DEOP flowcharts that are not documented or identified during the licensee's Verification and Validation of the DEOPs. These changes involved changes in sequence, changes in logic and relocation of steps to other DEOPs. Although these changes generally enhanced the useability of the flowcharts, they were not documented in the PSTG or in the Roadmap document, PSTG to flowchart translation document. The concern over these differences was for assurance that the operational strategy of the PSTGs and EPGs were not compromised and that tighter control over procedural maintenance and revision was maintained. The licensee agreed to consider documenting these differences in the Roadmap.

#### Supplemental Response

The DEOP coordinator is reviewing the NRC PSTG/Flowchart consistency concerns specified in Open Item 4.b and those associated examples in Appendix B. Also, Dresden Station is hiring a contractor to aid in the review and process of necessary changes to the respective administrative documents. The review and any necessary changes to the respective administrative documents or DEOPs will be completed by February 28, 1993.

#### Open Item 4.c:

The licensee's philosophy of entering and exiting the DEOPs appears to be contrary to the symptomatic approach utilized in the EOPs. In general, this philosophy allowed operator judgment to determine when the DEOPs are needed to be entered and executed; whereas, the EPGs require entry into the DEOPs any time an entry condition is met. Exiting the DEOPs should require satisfying a predetermined and defined set of criteria. The licensee agreed to re-evaluate the Dresden philosophy on DEOP usage, and to more clearly define expectations for usage to the operations staff.

#### Supplemental Response

Dresden Station has completed their review of the station philosophy on the use of the DEOPs. This review consisted of examining pertinent information on entering and exiting the DEOPs, as well as discussions with other CECOs and non-CECO BWR counterparts. Based on their review, the station determined that no procedure changes would be required. Clarification of station philosophy was provided in a letter to all licensed personnel. This letter contains a predetermined and defined set of criteria for entering and exiting the DEOPs. Currently, the station is training on this material during operator retraining which will be completed by August 31, 1992.