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# 57

September 6, 1994

MEMORANDUM TO: Brian W. Sheron, Director  
Division of Engineering  
Office of Nuclear Reactor Regulation

FROM: Lawrence C. Shao, Director  
Division of Engineering  
Office of Nuclear Regulatory Research

SUBJECT: REVIEW OF CORE SHROUD CRACKING ULTRASONIC  
INSPECTION RESULTS

At the request of your staff, Dr. Steven Doctor of Pacific Northwest Laboratories has reviewed the ultrasonic examination results reported by Commonwealth Edison for the core shroud cracking at Dresden Unit 3 and Quad Cities Unit 1. The results of this review, performed within our research project job code B2289, are described in the enclosed letter from Dr. Doctor. In his review Dr. Doctor focuses on the undersizing of the flaws by the ultrasonic inspection methods used at the two plants. He provides several ideas for actions the licensee could take to improve confidence in the inspection results by providing understanding of the undersizing. In addition, he recommends that the licensee consider alternative inspection probes, additional computer processing of the inspection data, or both, as means to improve the accuracy of the flaw sizing.

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

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A handwritten signature in dark ink, appearing to read "Lawrence C. Shao", is written over the typed name of the sender.

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