

November 15, 1999

MEMORANDUM TO: Gary M. Holahan, Director, DSSA:NRR  
Jack R. Strosnider, Jr., Director, DE:NRR  
Bruce A. Boger, Director, DIPM:NRR  
John A. Zwolinski, Director, DLPM:NRR  
David B. Matthews, Director, DRIP:NRR  
Thomas L. King, Director, DRAA:RES  
John W. Craig, Director, DET:RES  
A. Randolph Blough, Director, DRP:RGN-I  
Loren R. Plisco, Director, DRP:RGN-II  
Geoffrey E. Grant, Director, DRP:RGN-III  
Kenneth E. Brockman, Director, DRP:RGN-IV

FROM: Charles E. Rossi, Director Original signed by:  
Division of Systems Analysis and Regulatory Effectiveness  
Office of Nuclear Regulatory Research

SUBJECT: SURVEY OF SCRAMS OCCURRING DURING MAINTENANCE AND  
SURVEILLANCE ACTIVITIES

The final report, "Survey of Scrams Occurring During Maintenance and Surveillance Activities," is attached for your information. A draft of this report was prepared by the former Office for Analysis and Evaluation of Operational Data (AEOD) and, in accordance with the AEOD peer review process, provided to cognizant individuals within the NRC in March 1999 for review and comment.

The study was initiated to identify and categorize scrams which occurred during maintenance and surveillance activities. All licensee event reports (LERS) for the period January 1, 1992, to December 31, 1997, were searched for all automatic and manual scrams except normal shutdown or those which were initiated to meet the technical specification requirements to be shutdown by a certain time. It was found that maintenance and surveillance scrams constitute nearly 40 percent of all scrams for the period of the study. They occur near full reactor power two times out of three. Maintenance and surveillance scrams have decreased proportionally with the decreasing number of scrams. There has been little change in the ratio of maintenance and surveillance-related scrams to total scrams. The ratio of manual scrams to automatic scrams for the period was 1 to 2.8. In 1997, the ratio increased to 1 to 1.7.

The report presents a number of graphs, charts, and tables delineating additional information related to scrams for the period studied.

Attachment: As stated

cc w/att.:  
V. K. Chexal, EPRI  
Pat Lewis, INPO  
Debbie W. Queener, NOAC

CONTACT: Mary S. Wegner (MSW1), RES:DET:ERAB  
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Plants with a scram count in excess of one standard deviation above the average number of scrams (a total of 18) were identified. The LERs for each of these scrams were further reviewed to categorize the scrams. Except for the number of scrams, these events showed similar patterns to those at other plants.

The ratio of manual scrams to automatic scrams for the period was 1 to 2.78. In 1997, the ratio increased to 1 to 1.73.

Attachment: As stated

cc w/att.:  
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