

FEB 07 1990

AEOD/E90-01

MEMORANDUM FOR: Jack E. Rosenthal, Chief
 Reactor Operations Analysis Branch
 Division of Safety Programs, AEOD

THRU: Matthew Chiramal, Chief
 Engineering Section
 Reactor Operations Analysis Branch
 Division of Safety Programs, AEOD

FROM: Mary S. Wegner, Reactor Systems Engineer
 Engineering Section
 Reactor Operations Analysis Branch
 Division of Safety Programs, AEOD

SUBJECT: FAILURES OF ELECTRICAL SUPPLY AND POWER GENERATION
 EQUIPMENT WHICH DISRUPTED PLANT FUNCTION AT NUCLEAR
 POWER PLANTS

Enclosed is the subject engineering analysis. This study was initiated because of the occurrence of several events in early 1989 involving major electrical equipment or offsite power problems. The issues addressed in this report concern disruptions of normal station auxiliary alternating current (AC) power supply caused by grid, switchyard, and non-1E electrical system problems and major electrical equipment failures.

Failures addressed in this report include major equipment failures which is addressed in AEOD/E905, "Electrical Bus Bar Failures" and in on-going studies on main transformer failures and failure of the fast bus transfer scheme. The operating experience, particularly maintenance surveillance and procedural problems, should be utilized by NRR in developing procedures for the upcoming electrical team inspections.

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Mary S. Wegner, Reactor Systems Engineer
 Engineering Section
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 Division of Safety Programs
 Office for Analysis and Evaluation
 of Operational Data

Enclosure:
 As stated

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MEMORANDUM FOR: Jack E. Rosenthal, Chief
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THRU: Matthew Chiramal, Chief
Engineering Section
Reactor Operations Analysis Branch
Division of Safety Programs, AEOD

FROM: Mary S. Wegner, Reactor Systems Engineer
Engineering Section
Reactor Operations Analysis Branch
Division of Safety Programs, AEOD

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Failures addressed in this report include major equipment failures which is addressed in AEOD/E905, "Electrical Bus Bar Failures" and an on-going study on main transformer failures; failure of the fast bus transfer scheme which is being addressed in an on-going AEOD study; and various maintenance and surveillance problems which will be forwarded to the NRR group (DRIS/NRR) developing procedures for the upcoming electrical team inspections.

Mary S. Wegner, Reactor Systems Engineer
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