



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

NOV 30 1979

Docket Nos. 50-369
and 50-370

Mr. William O. Parker, Jr.
Vice President, Steam Production
Duke Power Company
P. O. Box 2178
422 South Church Street
Charlotte, North Carolina 28242

Dear Mr. Parker:

SUBJECT: SEPARATION OF ELECTRICAL EQUIPMENT AND SYSTEMS AT NUCLEAR POWER
PLANTS
(McGuire Nuclear Station, Units 1 and 2)

We would like to advise you of a letter (Enclosure 1) dated August 16, 1979 to the Office of Inspection and Enforcement from the Washington Public Power Supply System which indicates that a review of the equipment and systems installed in the control room of the WPPSS Nuclear Project No. 2 uncovered over 150 instances of violations of separation criteria.

In view of the large number of violations cited in the letter of August 16, 1979 for the control room, and the apparent ease with which they can occur anywhere in the plant, we require that you conduct a plant-wide field audit of your installed electric equipment and systems to determine conformance to your stated criteria.

Enclosure 2 specifies the procedures to be used for conducting an acceptable electrical separation field audit at your facility.

Within fifteen days of receipt of this letter, please advise us of your intent to comply with our requirements as specified in Enclosure 2.

Sincerely,

Robert L. Baer
Robert L. Baer, Chief
Light Water Reactors Branch No. 2
Division of Project Management

Enclosures:
As Stated

ccs w/enclosures:
See next page

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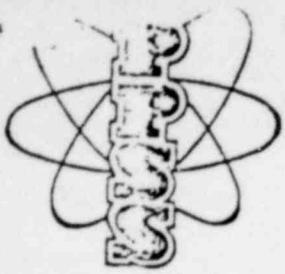
Mr. William O. Parker, Jr.

cc: Anthony Z. Roisman, Esq.
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Washington Public Power Supply System
A JOINT OPERATING AGENCY

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August 16, 1979
G02-79-145

Nuclear Regulatory Commission
Region V
Suite 202, Walnut Creek Plaza
1900 N. California Boulevard
Walnut Creek, California 94596



Attention: Mr. R. H. Engelken, Director

Subject: WPPSS NUCLEAR PROJECT NO. 2
DOCKET NUMBER 50-397, CPPR-93
REPORTABLE DEFICIENCY - 10CFR50.55(e)

Dear Mr. Engelken:

In accordance with the provisions of 10CFR50.55(e), your staff was informed by telephone on July 16, 1979, of a reportable deficiency involving Plant Electrical Separation.

Attached is our report concerning this deficiency.

Please contact us if you have any questions.

Very truly yours,

D L Renberger
D. L. RENBERGER
Assistant Director
Technology

DLR/GWB/ln

Attachment

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WPPSS NUCLEAR PROJECT NO. 2
REPORTABLE DEFICIENCY AND CORRECTIVE ACTION
PLANT ELECTRICAL SEPARATION

WASHINGTON PUBLIC POWER SUPPLY SYSTEM
DOCKET NO. 50-397
LICENSE NO. CPPR-93

Description of Deficiency

To date the Plant Main Control Room has been reviewed and approximately 150 instances have been discovered involving violations in the application of WNP-2 Electrical Separation Criteria to safety related cables and panel wiring. In general, the deficiencies involved incorrect labeling, routing, termination, or power source of safety related cabling within PGCC or Control Room Panels. Examples of deficiencies found are as follows:

1. Division 3 HPCS instrumentation powered from a Division 1 source;
2. Division 3 HPCS cables routed in Division 1 PGCC ducts and Division 1 cable trays in the cable spreading room.

Safety Implication

The deficiencies found to date could have resulted, under single failure conditions, in the simultaneous loss of redundant safety related equipment with possible subsequent loss of safety function.

Corrective Action

A task force is currently reviewing the Main Control Room and plant areas for other violations of WNP-2 Separation Criteria in all safety related applications.

The WNP-2 Separation Criteria has been refined and clarified and is being used by the Separation Task Force as criteria by which to judge plant separation as designed and installed. This same criteria will be submitted in an FSAR amendment. All instances of deficiencies identified as criteria violations will be evaluated and corrected via Project Engineering Directives (PED's) to the appropriate contractor.

The task force is working to an action plan which to date has resulted in the completion of the Main Control Room review and identification of deficiencies as described above. The remainder of the review which includes such things as MCC's, Local Panels, etc., is scheduled to be complete by October of 1979. Note that ongoing reviews will be conducted as warranted by construction completion.

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SEPARATION FIELD AUDIT

You are requested to perform a detailed field audit of installed electric equipment and systems to determine conformance to the criteria relating to the separation of electric equipment and systems to which you have committed in your FSAR (e.g., Regulatory Guides 1.75 and 1.120).

This audit should include a sample not less than 10% of the installed equipment and cables, and should emphasize, but not necessarily be limited to:

- a) Separation of redundant Class 1E equipment (e.g., motors, valve operators, instruments).
- b) Separation of redundant Class 1E cables.
- c) Separation of associated circuits.
- d) Identification (marking) of redundant Class 1E equipment and cables.
- e) Identification (marking) of associated circuits to a level indicative of the Class 1E system with which they are associated.
- f) Separation of redundant wiring, indicators and controls at panels and control boards.

The audit should be performed by engineering and supporting technical personnel who understand the criteria, standards and guides relating to the separation of electric equipment and systems, and who were not involved in the design and installation of the equipment and systems under audit.

The results of this audit should be reported to NRC, with a discussion of any corrective actions taken and any additional audit to be conducted in the event numerous violations are uncovered.

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