9/12/FD

MISSISSIPPI POWER & LIGHT COMPANY
Helping Build Mississippi
P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

JAMES P. McGAUGHY, JR.
ASSISTANT VICE PRESIDENT

September 8, 1980

NRC Part 21 ID #
80-211-002

Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, N.W.
Suite 3100
Atlanta, Georgia 30303

Attention: Mr. J. P. O'Reilly, Director

Dear Mr. O'Reilly:

SUBJECT: Grand Gulf Nuclear Station
Units 1 and 2
Docket Nos. 50-416/417.
File 0260/15525/15526
PRD-80/21, 10CFR21 Report,
Defects in Diesel Generator
Control Panels
AECM-80/208

Reference: 1) AECM-80/110, 5/22/80
2) AECM-80/142, 6/25/80

On April 22, 1980, Mississippi Power & Light Company (MP&L) notified Mr. F. Cantrell of your office of a Potentially Reportable Deficiency (PRD) at the Grand Gulf Nuclear Station (GGNS) construction site. The deficiency concerns defects that were detected in diesel generator control panels. This deficiency was reported to the NRC pursuant to 10CFR21 by the Morrison-Knudsen Company. The panels were manufactured by International Control and Switchgear Company (ICSC).

We have since determined that this deficiency is also reportable under 10CFR21. A supplemental report to the ones previously filed under 10CFR50.55(e) is attached.

Yours truly,

J. P. McGaughy, Jr.
Assistant Vice President,
Nuclear Production

WDH:mt
Attachment

cc: Mr. N. L. Stampley
Mr. R. B. McGehee
Mr. T. B. Conner
Mr. Victor Stello, Director, w/
Division of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

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Name(s):

W. D. Hays
W. E. Edge

by telephone, 9/8/80, to Mr. M. Hunt, USNRC Region II

Address: Mississippi Power & Light Company, P. O. Box 1640, Jackson, MS 39205

2. Identification of entity failing to comply or containing a defect (check appropriate blocks):

GRAND GULF NUCLEAR STATION

Unit 1 [X]

Unit 2 [ ]

Other [ ] _____
(Specify)

3. Supplier:

General Electric Company
Nuclear Power Systems Division
175 Curtner Ave.
San Jose, CA 95125

4. Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply:

See Paragraphs I and II of attached Final Report, PRD-80/21

5. Date information obtained for this report: 9/8/80

6. Additional information for defective components incorporated in other facilities, as applicable:

Facility/Location	Number in use, supplied for, or being supplied
Phipps Bend Nuclear Power Station	*
Hartsville Nuclear Power Station	*

*See attached letter, Morrison-Knudsen Division, Power Systems, to USNRC dated 4/7/80

7. Corrective Action: See Paragraph III of attached Final Report, PRD-80/21

Responsibility: Mississippi Power & Light Quality Assurance Section
(Name of individual or organization)

Time Required To Complete Action: Corrective Action began on 4/22/80 and will be complete at the close of MCAR 75 (estimate 12/1/80)

8. Advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees:

General Electric issued field repair instructions in FDDR #JB1-940 dated 5/13/80.

I. Description of Deficiency

Power Systems Division of Morrison-Knudsen Company notified the NRC of deficiencies pertaining to diesel generator control panels which were considered reportable under 10CFR21. The generator control panels were manufactured by the International Control & Switchgear Company in Rocky Mount, North Carolina.

Morrison-Knudsen made an on-site inspection of the diesel generator control panels on May 5 and 6, 1980. Of the defects reported to the NRC, the following defects were identified at Grand Gulf.

Defect #2 - There were instances in which 600 volt lugs were used on 4160 and 6900 volt cables. This could contribute to a degradation after a long period of time due to possible corona damage.

Defect #3 - There were AC rated fuses found in DC circuits. An AC fuse may not adequately clear a DC fault due to the shorter gap in the AC fuse.

II. Safety Implications

If these defects were to have remained uncorrected, they could have affected adversely the safety of operation of the plant at any time throughout the expected lifetime of the plant. The diesel generators are the emergency power source for the High Pressure Core Spray (HPCS) system.

III. Corrective Action Taken

The equipment is being repaired per FDDR #JB1-940 under the supervision of Morrison-Knudsen. The action taken to preclude recurrence is (1) Morrison-Knudsen is increasing its QA activity and has since revised its entire QC/QA program and (2) General Electric is increasing its QA activities regarding surveillance of Morrison-Knudsen efforts.

Details of the corrective actions are delineated in Management Corrective Action Report, MCAR-GGNS No. 75.

CREATORS OF ELECTRICAL
POWER SUPPLY SYSTEMS

POWER SYSTEMS
A MORRISON KNUDSEN DIVISION

101 GELD ROAD · POST OFFICE BOX 1208
ROCKY MOUNT, NORTH CAROLINA 27801
PHONE (919) 977-2720 / TWX (510) 929-0725

April 7, 1980

Nuclear Regulatory Commission
Region II Office
101 Marietta St. N.W.
Suite 3100
Atlanta, Georgia 30333

Reference: Reportable Deficiency, 10CFR21

Gentlemen:

In response to General Electric's letter, subject, AG895/6005, TVA X17-X20, Control Panel Discrepancies, we wish to take this opportunity to notify you of our findings and actions in accordance with 10CFR21.

Power Systems Division of Morrison-Knudsen Company, Inc. has conducted an in-depth inspection of the generator control panels for the emergency diesel generators located at the Phipps Bend and Hartsville Nuclear Plants. The generator control panels were manufactured by the International Control and Switchgear Company of P.O. Box 4847, Rocky Mount, North Carolina 27801.

The results of the inspection have been reviewed by Power Systems Division to determine if the defects found are reportable as required by 10CFR21.

It has been determined that the control panel defects found could degrade the emergency diesel generator unit to the extent that it may not perform its intended safety function.

Since defects were found at the two sites mentioned above, similar defects may also exist in generator panels manufactured by the International Control and Swtichgear Company which were furnished to other domestic nuclear facilities as follows:

*1. Grand Gulf I & II (NRC Docket No. 50-416/50-417)
*2. St. Lucie II (NRC Docket No. 50-389)
*3. Skagit (NRC Docket No. 50-522/50-523)
*4. Black Fox (NRC Docket No. 50-556)

*These facilities are not in operation at this time.

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Corrective action has been essentially completed at the Phipps Bend and Hartsville Nuclear Plants. The corrective action consisted of:

1. In-depth inspection by Power Systems Division.
2. Repairs by TVA personnel under the supervision of Power Systems Division, and General Electric Company Hartsville Nuclear Plant Quality Control Engineer.

The identified defects are as follows:

1. A small percentage of wire lugs were not crimped correctly. The potential result could be a poor electrical connection which may result in the loss of an essential circuit.

2. There were instances in which 600 volt lugs were used on 4160 volt and 6900 volt cables. This could contribute to a degradation after a long period of time due to possible corona damage.

3. AC rated fuses were found in DC circuits. An AC fuse may not adequately clear a DC fault due to the shorter gap in the AC fuse.

4. Some of the bolts used in the electrical connections of the magnetics showed evidence of corrosion. These bolts should be replaced with silicon bronze bolts.

5. Three wire lugs per panel were modified by drilling the bolt hole to a larger size to fit onto a stud. The enlargement of the bolt hold degraded the strength of the lug.

Corrective action shall be implemented by Power Systems Division to prevent recurrence of these defects. The corrective action includes:

1. In-depth inspection utilizing Power Systems Division Quality Control personnel during manufacturing process at International Control and Switchgear facility.

2. Have revised our engineering control panel specifications to prevent recurrence of defects.

3. Implementation of training program to cover revisions in engineering control panel spectifications.

The action required for the other installations is to schedule and perform an inspection of the generator control panels to determine if those panels have similar defects. Should defects be found, necessary corrective action will be initiated.

Very truly yours,

POWER SYSTEMS
A MORRISON-KNUDSEN DIVISION

Harry W. Falter
Division Engineer

HWF:sjw

Attachment