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the southern electric system

NED-83-350

June 23, 1983

Director, Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

NRC DOCKETS 50-321, 50-366
OPERATING LICENSES DPR-57, NPF-5
EDWIN I. HATCH NUCLEAR PLANT UNITS 1,2
RESPONSE TO ENFORCEMENT ACTION 83-35:
CONTROL OF ELECTRICAL CABLE TRAY SYSTEMS

Gentlemen:

Pursuant to the provisions of 10 CFR 2.201 Georgia Power Company (GPC) hereby submits this response to the Notice of Violation and Proposal of Civil Penalty, EA-83-35 transmitted by the U. S. Nuclear Regulatory Commission's Region II Regional Administrator's letter dated June 2, 1983. The written statement provided below responds to the findings of Inspection Reports 50-321/83-09, 50-321/83-10, 50-366/83-09, and 50-366/83-10 as referenced by Enforcement Action 83-35.

Prior to directly responding to the Notice of Violation, GPC desires to emphasize that although cable trays were found not to be restored to their original design specifications following maintenance, margins of safety for the cable tray system were not significantly impacted. When the condition of the cable trays, as inspected, is compared to a generic model for cable tray seismic response, in most instances the trays had the capability of meeting those design basis conditions. This recognizes the inherent conservatism which was built into the design of the cable tray system. In addition, some of the design details, such as the specifications of some cable tray covers, have been re-evaluated in view of subsequent modifications related to the system, and a determination has been made that in many cases the original specified items may no longer be needed. Therefore, the absence of those details had not had a detrimental impact on plant operation.

VIOLATION

10 CFR 50, Appendix B, Criterion X, is implemented by Section D.9 of the Hatch Unit 1 Final Safety Analysis Report (FSAR) and Section A.33 of the Hatch Unit 2 FSAR, which requires the licensee to comply with ANSI N18.7-1976. Section 5.2.7 of ANSI N18.7-1976 specifies that maintenance and modifications which may affect functioning of safety-related systems be performed in a manner to ensure quality at least equivalent to that specified in original design bases and requirements. It also specifies that a suitable level of confidence in systems on which maintenance or modifications have been performed shall be attained by appropriate inspection.

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VIOLATION (Continued)

Contrary to the above, following maintenance, repair and modifications of the cable tray systems in Units 1 and 2, the licensee failed to restore the cable tray systems to quality conditions at least equivalent to those specified in original design bases and requirements. The licensee's quality assurance program inspection failed to identify these inadequate restorations as degradation of safety-related systems. This violation is evidenced by the following examples identified between February 15 and March 26, 1983 at both Units 1 and 2 unless otherwise noted:

1. Tray holddown clamps were missing or damaged (one section of a cable tray system was without holddown clamps for approximately 60 feet).
2. Tray connectors had missing bolts.
3. Tray covers removed during maintenance or modification activities were not reinstalled upon completion of the work.
4. Kaowool, a tray fire barrier material, was damaged or not properly replaced in cable tray systems after maintenance.
5. Fire stops in horizontal runs of cable trays were broken or damaged.
6. Electrical junction boxes had missing covers and fasteners were loose.
7. Some cables, at the point of transition from a horizontal to vertical tray system, were under tension, and could not properly lay in the associated tray.
8. A disconnected and unidentified cable was suspended from a tray at MCC 2R24-S014 in Unit 2.
9. A damaged cable was identified in the cable spreading room exiting tray 2BHA9-01 in Unit 2.
10. Two safety-related cable trays in both redundant trains of the low pressure coolant injection system did not meet the design bases and requirements; as a consequence, Technical Specification 3.5.B.3 limiting condition for operation was not met in Unit 1.

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RESPONSE:

Admission or denial of alleged violation: The violation occurred. However, as stated above, margins of safety for the cable tray systems were not significantly reduced.

Reason for Violation: Adequate steps were not taken to restore cable tray systems to a condition which adequately addressed design requirements after work that involved modification of cable tray systems. This occurred because of inadequate control measures, inadequate training of personnel to assure proper restoration of these systems at the conclusion of modification work, and the lack of design details at the site to provide acceptance criteria for the inspection program.

Corrective Steps that have been taken and the results achieved: The following corrective actions have been or are being performed by GPC to resolve deficiencies identified by the NRC Inspectors:

1. Cable tray system and electrical design change work was halted at Plant Hatch on March 18, 1983, and did not resume until training of personnel and new administrative controls had been implemented.
2. On March 17, 1983, GPC established a special Quality Assessment Team (QAT) to investigate the cause of the identified tray system deficiencies, as well as examine measures in place that control work on safety-related systems. The QAT monitored retrofit, inspection, and documentation of the cable tray restoration project. This team provided management with an assessment of the overall situation and provided recommendations to resolve the cause of cable tray system deficiencies.
3. Special inspection procedures for the walkdowns, to include tray system details and inspection criteria, were written to control inspection of tray systems. Design details were provided to the site.
4. Training classes were conducted to train inspectors in the special inspection procedures. Inspectors that were used to verify tray system design requirements received this training prior to performing inspections.

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RESPONSE (Continued)

5. A first phase walkdown of Unit 1 accessible safety-related tray systems was conducted from March 20, 1983 to March 25, 1983. Significant deficiencies were evaluated, and deficiencies were reported and corrected as required. At the completion of this walkdown, a preliminary confirmation of system operability for Unit 1 was determined.
6. The as-found condition of each Unit 1 safety-related tray system was recorded and evaluated against a generic model for adherence to design requirements. This was performed during the course of the initial inspection walkdown. Those areas that were found to fall outside of this generic model were restored to meet the requirements of the model during the course of the walkdown. Those as-found conditions that were found to meet the generic model but not the original design were documented and are being fully evaluated and corrected as required under the second phase of the Unit 1 program.
7. A walkdown, evaluation and repair program will have been conducted for Unit 2 cable trays prior to start-up from the current refueling outage which commenced on April 5, 1983.
8. Problems identified by the inspections of safety-related cable trays will be corrected to restore such trays to a condition where a satisfactory margin of safety exists by the startup of Unit 2 from the current refueling outage and by August 1, 1983 for Unit 1, with the exception of approximately 450 feet of inaccessible Unit 1 trays which will be inspected and repaired, if needed, during the next refueling outage. Evaluations of the as-found conditions will be completed by August 1, 1983, and follow-up reporting made as necessary.
9. As noted in our letter dated March 22, 1983, non-safety-related trays will be addressed through an orderly program following the completion of the higher priority effort for safety-related trays.
10. During the course of the walkdowns, additional material condition deficiencies not concerning cable trays were documented and evaluated for safety concerns. Appropriate reports were generated as required by the Technical Specification and plant procedures. These deficiencies have been documented on a punch list and are being resolved by routine actions taken by the Maintenance Department.

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RESPONSE (Continued)

Corrective steps that will be taken to avoid further violations: The following corrective steps have been or will be taken to avoid further violations:

1. Plant procedure HNP-6921, "CABLE AND CABLEWAY INSTALLATION", was revised to improve administrative controls and quality control inspections on cabletray restoration and ensure proper review of specific critical activities. Appropriate plant personnel were also trained on the HNP-6921 revision. Training in this area will be given on an on-going basis to responsible maintenance and contractor personnel.
2. Quality Assurance audit plans and surveillance programs have been revised to include the area of restoration of cable trays and other electrical and mechanical restoration actions for both safety and non-safety related work. Quality Assurance procedures have been revised to ensure that corrective actions performed on Quality Assurance identified problems address the root cause.
3. The Quality Assessment Team has provided assessments and recommendations not only on the specific cable tray deficiencies, but also on those related areas which contributed to those specific problems. Additionally, areas which could result in similar problems were also addressed. Those areas assessed included craft training and supervision, control of outage work, quality control program matters, and systems for the identification of deficiencies. Corrective actions are in progress for several of the areas covered by the QAT. QAT recommendations will be evaluated, and action plans and schedules for all appropriate additional actions will be implemented by October 1, 1983.
4. Plant personnel who inspect cable tray installation and restoration will continue to receive training on cable tray inspection.
5. A "lessons learned" program will be coordinated with the NRC as suggested. A program will be in place by September 1, 1983, dependant upon the availability of appropriate NRC and Georgia Power Company personnel.
6. As noted in our letter dated March 22, 1983, maintenance and plant modification programs other than cable trays will be reviewed to determine if programmatic deficiencies exist similar to those found in work associated with cable trays.

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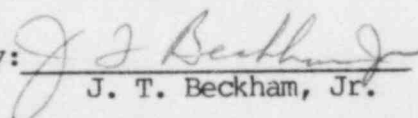
RESPONSE (Continued)

Date when full compliance will be achieved: Full compliance (with the exception of the Unit 1 inaccessible cable trays and non-safety-related trays noted above) will be achieved no later than August 1, 1983, when the safety related cable trays are returned to quality conditions at least equivalent to those specified in original design basis and requirements. For those inaccessible trays in Unit 1, completion of the program will be accomplished by the end of the upcoming Unit 1 refueling outage.

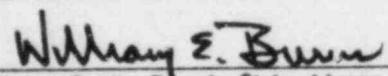
GPC shares the Commission's concerns elaborated in the "Notice of Violation and Proposed Imposition of Civil Penalty". We believe that, through the corrective actions described herein, the necessary actions have been taken to resolve these concerns. Accordingly, GPC does not protest the proposed imposition of civil penalty under 10 CFR 2.205. Therefore, please find the enclosed payment in the sum of \$40,000.00.

J. T. Beckham, Jr. states that he is Vice President of Georgia Power Company and is authorized to execute this oath on behalf of Georgia Power Company, and that to the best of his knowledge and belief the facts set forth in this letter are true.

GEORGIA POWER COMPANY

By: 
J. T. Beckham, Jr.

Sworn to and subscribed before me this 23rd day of June, 1983.


Notary Public, Georgia, State at Large
My Commission Expires Aug. 26, 1986
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Notary Public

Enclosure

xc: H. C. Nix, Jr.
Senior Resident Inspector
J. P. O'Reilly, (NRC-Region II)