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Georgia Power

*THE SOUTHERN ELECTRIC SYSTEM*

HL-2035  
002895

February 5, 1992

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

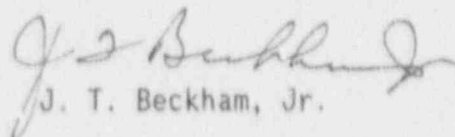
PLANT HATCH - UNITS 1, 2  
NRC DOCKETS 50-321, 50-366  
OPERATING LICENSES DPR-57, NPF-5  
REPLY TO A NOTICE OF VIOLATION

Gentlemen:

In response to your letter of January 6, 1992, and in accordance with the provisions of 10 CFR 2.201, Georgia Power Company is providing the enclosed response to the Notice of Violation associated with NRC Inspection Report 91-31. A copy of this response is being provided to NRC Region II for review. In the enclosure, a transcription of the violation precedes GPC's response.

If you have any questions in this regard, please contact this office.

Sincerely,

  
J. T. Beckham, Jr.

JKB/cr

Enclosure

cc: (See next page.)

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U.S. Nuclear Regulatory Commission  
February 5, 1992  
Page Two

cc: Georgia Power Company  
Mr. H. L. Sumner, General Manager - Nuclear Plant  
NORMS

U.S. Nuclear Regulatory Commission, Washington, D.C.  
Mr. K. Jabbour, Licensing Project Manager - Hatch

U.S. Nuclear Regulatory Commission, Region II  
Mr. S. D. Ebner, Regional Administrator  
Mr. L. D. Wert, Senior Resident Inspector - Hatch

ENCLOSURE

PLANT HATCH - UNITS 1 AND 2  
NRC DOCKETS 50-321 AND 50-366  
OPERATING LICENSES DPR-57 AND NPF-5  
VIOLATION 91-31-01 AND GPC RESPONSE

VIOLATION 91-31-01

10 CFR 50, Appendix A, Criteria 1 Quality Standards and Records, requires that structures, systems, and components important to safety shall be designed, fabricated, erected, and tested to quality standards commensurate with the importance of the safety functions to be performed. It also states that appropriate records of the design, fabrication, erection, and testing of structures, systems, and components important to safety shall be maintained by or under the control of the nuclear power unit licensee throughout the life of the unit.

Contrary to the above, Georgia Power Company could not locate 700 pipe support calculations for each unit of Plant Hatch.

This is a Severity Level IV violation (Supplement I).

RESPONSE TO VIOLATION 91-31-01

Admission or denial of the violation:

The violation occurred as described in the Notice of Violation. Georgia Power Company (GPC) admits that calculations for approximately 1400 safety related pipe supports (350 for Unit 1 and 1050 for Unit 2) were not retained as permanent plant records and are no longer available from the original supplier. However, for the reasons presented below, GPC believes that the level of documentation currently available is sufficient.

The pipe supports for Plant Hatch were originally designed by Bergen-Paterson Corporation, one of the primary pipe support design organizations in the nuclear industry. During original construction, the output of a piping system stress analysis performed by the architect/engineer for Plant Hatch was supplied to Bergen-Paterson. Using the location and design loads provided by the stress analysis, Bergen-Paterson designed an appropriate pipe support to resist the loads.

Design drawings were generated by Bergen-Paterson and supplied to GPC as the contractual deliverable. The design drawing for each pipe support was considered as the final design document and as such reflects the design load, as provided by the A/E, and the support design, as determined by Bergen-Paterson, that is adequate for the design load. Each drawing was originated, checked, and approved by qualified pipe support designers consistent with the quality assurance and documentation requirements at

ENCLOSURE (Continued)

VIOLATION 91-31-01 AND GPC RESPONSE

that time. The signatures on the design drawings represent their documented concurrence that the specified supports are adequate for the design load documented on the drawing. These drawings are maintained as permanent plant records.

In designing a particular support, calculations were prepared by Bergen-Paterson; however, they were not transmitted to GPC except on a support by support basis as requested. The detail of the calculation depended on the complexity of the pipe support. It should be noted the industry practice at the time of original construction primarily consisted of cookbook design techniques. The pipe supports are primarily composed of standard hardware with specified allowable loads published in a catalog. For example, the original Bergen-Paterson "calculation" for a simple support typically consisted of the required design load, a list of the support components, and a reference to the published catalog allowable. A slightly more complex support design might have also included simple beam formula computations. This type of calculation essentially provides a bookkeeping record of the catalog allowables and a comparison of the design load to the allowable load. More detailed calculations were prepared for pipe supports considered as anchors or supports of significant complexity. These calculations were typically requested by GPC and are retained by GPC's architect/engineer as permanent plant records.

During the IE Bulletin 79-14 program, the lack of the original Bergen-Paterson calculations did not restrict the A/E's ability to ensure IEB 79-14 requirements were met. GPC's program required new calculations to be generated for supports requiring modifications or re-evaluation due to increased design loads or significant configuration discrepancies. The Notice of Violation concerns safety-related pipe supports for which new calculations were not generated as part of the IEB 79-14 program or subsequent plant modifications. New calculations were generated for approximately 80 percent of the safety-related pipe supports on Unit 1 and approximately 50 percent of the safety-related pipe supports on Unit 2. Calculations were not generated for approximately 1400 pipe supports where there were no significant design/as-built discrepancies and the design loadings decreased or remained unchanged from the original design loadings.

Design calculations are available for the majority of the safety-related pipe supports at Plant Hatch. At a minimum, design drawings are maintained which specify the required design load and the original hardware design to adequately resist the load. Consistent with the cookbook design methods used at the time of original construction, matching the support and support hardware shown on each design drawing to determine the support is adequate for the indicated load is a relatively simple task. While detailed calculations are not available in all cases, GPC believes the existing

ENCLOSURE (Continued)

VIOLATION 91-31-01 AND GPC RESPONSE

documentation, combined with the method by which IEB 79-14 was implemented, provides a high degree of confidence in the adequacy of the pipe supports in question.

Reason for the Violation:

The violation was caused by GPC's failure to request all detailed design records (calculations) from the supplier. During original plant construction, GPC did not require Bergen-Paterson to transmit all pipe support calculations as contractual deliverables. Bergen-Paterson failed to retain the calculations as permanent records. Apparently, the subject calculations were discarded during subsequent reorganizations and consolidations of Bergen-Paterson's offices and operations.

Corrective Steps Which Have Been Taken and the Results Achieved

As part of GPC's investigation of the missing pipe support calculations, the current quality assurance manager at Bergen-Paterson Corporation and personnel previously associated with Bergen-Paterson activities at Plant Hatch were contacted to review the procedures and practices used to generate pipe support designs and design drawings. These efforts concluded the design activities were conducted consistent with quality assurance and regulatory requirements in effect at the time of original construction.

Current design control procedures and programs require calculations to be generated and retained whenever existing safety-related pipe supports are modified or design loads increase. Pipe support calculations are regenerated on an as-needed basis.

Current procurement processes ensure design records supporting Plant Hatch comply with applicable regulations. Design calculations are transmitted to GPC or GPC's architect/engineer for permanent retention. In cases where design calculations are retained by the vendor, generally calculations designated as proprietary information, permanent retention by the vendor is specified as part of the purchase specifications.

Corrective Steps Which Will be Taken to Avoid Further Violations

A review of the approximately 1400 pipe support drawings for which design calculations do not exist will be performed, or confirmed to have been previously performed, by personnel qualified and experienced in pipe support design. The review will assess the relative complexity of each individual support and consider the need for generation of a calculation to enhance existing records. Supports that have questionable documentation due to their complexity or placement, will be reanalyzed and the calculations retained. This action will be completed by 10/31/92.

ENCLOSURE (continued)

VIOLATION 91-31-01 AND GPC RESPONSE

Date When Full Compliance Will be Achieved:

Full compliance will be achieved by 10/31/92 when the supports with missing calculations are reviewed to ensure existing documentation is sufficient to provide a high degree of confidence that the supports have adequate load carrying capability.