February 10, 1997

Georgia Power Company
ATTN: Mr. J. D. Woodard
Senior Vice President
Nuclear Operations
P. O. Box 1295
Birmingham, AL 35201

SUBJECT: NRC INSPECTION REPORT NO. 50-321/96-12 AND 50-366/96-12

Gentlemen:

Thank you for your response of December 19, 1996, to our Notice of Violation issued November 22, 1996, concerning activities conducted at your Hatch facility. We initially responded to your December 19, 1996, letter by a letter of January 9, 1997. We stated in that letter that we were evaluating your response to Violations 50-321, 366/96-12-01 and 50-321, 366/96-12-02, and would document our conclusions in a letter to you after appropriate NRC staff review of your response.

We have completed our review of your response to Violations 50-321, 366/96-12-01 (Violation A) and 50-321, 366/96-12-02 (Violation B), and the additional information provided. After careful consideration of the bases for your denial of the violations and the supplemental information, we have concluded, for the reasons presented in the enclosure to this letter, that the violations occurred as stated in the Notice of Violation. Therefore, in accordance with 10 CFR 2.201(a), please submit to this office within 30 days of the date of this letter a written statement describing the steps which have been taken to correct the violations, and the results achieved, corrective steps which will be taken to avoid further violations, and the date when full compliance will be achieved.

We will examine the implementation of your actions to correct the violations during future inspections.

We have also addressed your comments to our NRC inspection report cover letter in the enclosure.

IE01

We appreciate your cooperation in this matter.

Sincerely,

ORIGINAL SIGNED BY
JOHN P. JAUDON

John P. Jaudon, Director
Division of Reactor Safety

Docket Nos.: 50-321, 50-366
License Nos.: DPR-57, NPF-5

Enclosure: Evaluations and Conclusions

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*SEE PREVIOUS CONCURRENCE

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EVALUATIONS AND CONCLUSIONS

On November 22, 1996, a Notice of Violation (Notice) was issued for violations identified during a NRC Maintenance Rule Baseline Team Inspection. Georgia Power Company (GPC) responded to the Notice on December 19, 1996. In the response GPC denied that violation A and part of violation B occurred as stated in the NOV. The NRC's evaluations and conclusions regarding the licensee's response are as follows:

Restatement of Violation A

10 CFR 50.65 (b) establishes the scoping criteria for selection of safety related and non-safety related structures, systems, or components to be included within the Maintenance Rule program. Scoping criteria shall include, in part, non-safety related structures, systems, or components that are relied upon to mitigate accidents or transients, or are used in the plant emergency operating procedures, or whose failure could prevent safety-related structures, systems, and components from fulfilling their safety-related function, or whose failure could cause a reactor scram or actuation of a safety-related system.

Hatch Nuclear Plant Administrative Procedure, 40AC-ENG-020-0S, MAINTENANCE RULE (10 CFR 50.65) IMPLEMENTATION AND COMPLIANCE, Revision 1, and the HATCH NUCLEAR PLANT 10 CFR 50.65 MAINTENANCE RULE SCOPING MANUAL, Revision 1, implemented the requirements of 10 CFR 50.65 and identified those systems and components included within the scope of the Maintenance Rule.

Contrary to the above,

As of October 25, 1996, the licensee failed to include a number of systems or components within the scope of the Maintenance Rule, as required. Specifically, the following systems should have been included within the scope of the Maintenance Rule, but were not.

1. Communications System, Emergency Lighting System, and Appendix R Emergency Lighting System - These non-safety related systems were not included in the scope of the Maintenance Rule even though they are relied upon to mitigate accidents or transients.

2. Cooling Towers System - This non-safety related system was not included in the scope of the Maintenance Rule even though the system experienced a failure on March 24, 1995, which could have caused a Unit 2 reactor scram and actuation of a safety-related system; and experienced a similar failure on September 1, 1995, which resulted in a Unit 2 reactor scram and actuation of a safety-related system.

Summary of Licensee's Response to Violation A

The licensee denied that the violation occurred as stated in the Notice.

The licensee stated, "the communications, emergency lighting, Appendix R emergency lighting, and cooling tower systems do not meet the scoping criteria of 10 CFR 50.65(b). Therefore they are not required to be included in the Hatch Maintenance Rule program and

their exclusion does not represent a violation of the requirements of 10 CFR 50.65 or administrative control procedure, 40AC-ENG-020-OS; 'Maintenance Rule (10 CFR 50.65) Implementation and Compliance'."

The licensee further stated, "Contrary to that stated in item 1 of the Notice of Violation, neither the communications system, the emergency lighting system, nor the Appendix R emergency lighting system is relied upon to mitigate any accident or transient described in the Hatch Unit 1 or Unit 2 Updated Final Safety Analysis Reports. The statement that these systems are "relied upon to mitigate an accident or transient" is an opinion not supported by any documented accident or transient analysis in the Updated Final Safety Analysis Reports. Furthermore, the more specific scoping guidance provided in NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Revision 0, would not lead to the conclusion any of these systems is within the scope of the Maintenance Rule. NUMARC 93-01, Revision 0, has been endorsed in its entirety by the NRC in Regulatory Guide 1.160."

The licensee further stated, "Per section 8.2.1.2 of NUMARC 93-01, Revision 0, only non-safety related structures, systems, or components that are relied upon to mitigate accidents or transients are required to be included within the scope of the Maintenance Rule. A review of Chapter 14, "Plant Safety Analysis," of the Unit 1 Updated Final Safety Analysis Report and Chapter 15, "Accident Analysis," of the Unit 2 Updated Final Safety Analysis Report reveals that neither the communications system, the emergency lighting system, nor the Appendix R emergency lighting system performs either an active or a passive function in mitigating any analyzed accident or transient. Moreover, none of these systems performs a support role for any structure, system, or component which is used to mitigate analyzed accidents or transients."

The licensee further stated, "Operation of these systems is not vital to the successful completion of actions required by Emergency Operating Procedures or other procedures which might be used in responding to an accident or transient. Per section 8.2.1.3 of NUMARC 93-01, Revision 0, a non-safety related structure, system, or component should be included in the scope of the Maintenance Rule if it adds "significant value to the mitigation function of an EOP by providing the total or a significant fraction of the total function ability required to mitigate core damage or radioactive release." These three systems do not meet this definition. Their failure, either singularly or in combination, will not prevent the successful completion of the actions required by the Emergency Operating Procedures and other abnormal operating procedures. That is, their proper operation does not provide a significant portion of the "total functional ability" required to complete the actions required by the aforementioned procedures. Failures of the communication and/or emergency lighting systems can be overcome easily without a significant adverse affect on the operators' ability to complete required procedure actions. The scoping guidance provided in the NRC-endorsed NUMARC 93-01, Revision 0, would not lead to the conclusion that the communications, emergency lighting, and the Appendix R emergency lighting systems are within the scope of the Maintenance Rule."

The licensee further stated, "It should be noted the communication system is a highly reliable system by virtue of the fact it can be powered by either one of two redundant Class 1E power supplies. The Class 1E power supplies are included in the Hatch Maintenance Rule Program. Additionally, the emergency lighting and the Appendix R emergency lighting systems are tested periodically using plant procedures 52IT-MEL-001-0N, "Emergency Lighting Inspection and Test," and 42SV-FPX-003-0S, "Emergency Lighting Surveillance," respectively. The latter test is required by Appendix B of the Hatch Fire Hazards Analysis. The testing performed using these two procedures provides reasonable assurance the emergency lighting systems will function properly."

The licensee further stated, "The failure of the cooling tower system cannot directly cause a scram or actuation of a safety-related system. Neither of the events listed in item 2 of the Notice of Violation directly caused a reactor scram or an actuation of a safety-related system. The 3/24/95 event resulted in a power reduction only; no reactor protection or other safety-related system actuation occurred. The 9/1/95 event eventually resulted in the insertion of a manual scram; however, this action was necessary only because inadequate procedure instructions prevented the proper venting of a main condenser waterbox. With one of the waterboxes air-bound, vacuum could not be maintained and a manual scram was inserted as a conservative action. Had the procedure provided proper instructions for venting the waterbox, vacuum could have been maintained and no manual scram would have been necessary. Problems in the main condenser and circulating water systems more directly led to the decrease in vacuum and the subsequent manual scram; these two systems are in the Hatch Maintenance Rule Program. The failure of the cooling tower system did not result in a reactor scram. Therefore, the system does not meet the criteria listed in 10 CFR 50.65(b)(2)(iii) and it is not required to be included in the scope of the Maintenance Rule. The scoping guidance provided in the NRC-endorsed NUMARC 93-01, Revision 0, would not lead to the conclusion that the cooling tower system is within the scope of the Maintenance Rule."

The licensee concluded by stating, "Georgia Power Company believes it has correctly implemented the requirements of 10 CFR 50.65, by using the NEI (NUMARC) guidance, endorsed by the NRC. GPC has concluded that NUMARC 93-01 does not require the communications, emergency lighting, Appendix R emergency lighting, and cooling tower systems be included in the Maintenance Rule scope for Plant Hatch. Therefore, Georgia Power Company respectfully denies this violation. If the NRC requires that these systems be included, then the issue should be resolved with NEI."

NRC Evaluation of Violation A

The NRC staff has carefully reviewed the licensee's response and has concluded that the licensee did not provide any information that was not already considered in determining that a violation of 10 CFR 50.65(b) occurred.

In reviewing the applicability of the communications, emergency lighting, and Appendix R emergency lighting systems for inclusion in the scope of the Maintenance Rule, the inspectors focused on structures, systems, or components (SSCs) which were required to

support plant operators in performance of their duties for mitigation of accidents or transients. The operators normally used Emergency Operating Procedures to mitigate accidents, and more frequently used off-normal or abnormal operating procedures to mitigate transient events. In cases where operators were performing the duties described above, the inspectors determined that communications system equipment (radios, telephones, public announcement equipment) was used. The report stated, in part, in Section M1.1.b, "The operators verified, based on the inspectors questions, that communications equipment plays a vital role in responding to off-normal conditions." The inspectors also determined that proper procedure performance would require lighting when operators were performing accident or transient mitigation evolutions. The inspectors determined that the emergency lighting system and the Appendix R emergency lighting system provided lighting in plant areas for operators to perform their accident or transient mitigation duties on a loss of normal plant lighting.

On January 9, 1997, the NRC staff met with the Nuclear Energy Institute and industry representatives and discussed issues that have been identified during NRC baseline team inspections relating to Maintenance Rule implementation. The NRC staff stated their position that SSCs such as emergency lighting and communications that are relied on to mitigate accidents or transients should be included within the scope of the Maintenance Rule. This position is based on operator reliance on this equipment to successfully mitigate accidents or transients.

In reviewing the applicability of the cooling tower system for inclusion in the scope of the Maintenance Rule, the inspectors focused on structures, systems, or components that caused unit transients over the last two years. Fill material failures in the cooling tower system caused two unit transients in 1995, and one of the failures was the initiating event that resulted in a Unit 2 manual reactor scram on September 2, 1996. 10 CFR 50.65(b)(2)(iii) provides, in part, that the scope of the monitoring program shall include non-safety related SSCs, "whose failure could cause a reactor scram or actuation of a safety-related system." The inspectors determined that the two unit transients in 1995, could have resulted in reactor scrams and actuation of safety-related systems if operator actions had not mitigated the transient.

NRC Conclusion for Violation A

For the above stated reasons, the NRC staff concluded that the violation occurred as stated.

Restatement of Violation B

10 CFR 50.65 (a)(1) requires, in part, that each holder of an operating license shall monitor the performance or condition of structures, systems, or components against licensee established goals. Such goals shall be established commensurate with safety.

Contrary to the above,

As of October 25, 1996, the licensee failed to establish reliability and/or availability goals or performance criteria commensurate with safety for risk significant structures, systems or components for the following systems:

- Primary Containment System
- Feed and Condensate System
- Circulating Water System
- Electro-hydraulic Control System
- Unit 2 Containment Chilled Water System
- AC Electrical System
- DC Electrical System
- Primary Containment Isolation System
- Analog Transmitter Trip System

For these systems the licensee either failed to establish performance criteria, or established performance criteria that would not satisfactorily monitor system performance.

Summary of Licensee's Response to Violation B

The licensee denied that the violation occurred for 3 (AC Electrical System, DC Electrical System, and Analog Transmitter Trip System) of the 9 systems as stated in the Notice.

The licensee stated, "Georgia Power Company, however, respectively denies performance criteria for the AC and DC electrical and analog transmitter trip systems were not properly established. These systems have reliability criteria established in the Hatch Maintenance Rule Program. Availability criteria for these systems are adequately established by the Hatch Unit 1 and Unit 2 Technical Specifications as very limited out-of-service times. For example, the Unit 1 Technical Specification Limiting Condition for Operation 3.8.4, Action C, allows one station service DC electrical power subsystem to be inoperable for only two hours before the plant must begin to shut down. Similarly restrictive requirements exist for inoperable components in the AC electrical system. Inoperable components in the analog transmitter trip system may be required by the applicable Technical Specification to be placed in the tripped condition in as little as six hours. Realistically, these limited out-of-service times require the systems to be available virtually 100 percent of the time. In effect, the existing plant Technical Specifications establish very stringent availability criteria and no additional availability criteria are necessary. The effectiveness of maintenance on these systems is readily apparent because the short out-of-service times allowed by the Technical Specifications would quickly result in adverse effects on continued unit operation. Additional availability criteria would serve no useful purpose and are not necessary to comply with the requirements of 10 CFR 50.65(a)(1). Therefore Georgia Power Company respectfully denies these three examples constitute a violation of NRC requirements."

The licensee further stated, "The existing NEI (NUMARC 93-01) and NRC (R.G.1.160) guidance documents do not address availability of systems which are required to be virtually 100% available by the plant Technical Specifications. GPC believes that including additional performance criteria for these three systems in the Maintenance Rule program will serve no useful purpose. A draft revision to NUMARC 93-01 guidance document has been developed by NEI. The NRC has drafted endorsement to this revision with a draft revision to R.G.1.160. We believe that these documents further support GPC's position on these three systems."

NRC Evaluation of Violation B

The NRC staff has carefully reviewed the licensee's response and has concluded that the licensee did not provide any information that was not already considered in determining that a violation of 10 CFR 50.65(a)(1) occurred for the three systems discussed above.

Section M1.2.5.2 of the inspection report discussed performance criteria. The report stated, in part, that "the license did not establish unavailability performance criteria for several risk significant highly reliable functions. The licensee stated that unavailability criteria for these functions was not necessary since these functions were historically highly reliable and availability was adequately controlled by Hatch technical specifications. Examples of these risk significant SSC functions included Plant AC Electrical System, DC Electrical System, ... , and the Analog Transmitter System. The team concluded the licensee could not determine the effectiveness of maintenance of these systems without monitoring unavailability." Additional reviews have reached the same conclusion.

The NRC staff recognizes that the Hatch Technical Specifications (TS) have short Limiting Condition for Operation (LCO) ACTION statements for these systems. However, the TS LCO ACTION statements are intended to be a one-time limit for some condition, whereas, the Maintenance Rule performance criteria for availability (unavailability) provides an indication of the cumulative time an SSC is out-of-service, independent of how many times the SSC is taken out-of-service over some established period (e.g., 2 years). Exceeding the Maintenance Rule availability criteria may be an indicator of ineffective maintenance or poor reliability of the SSC. For example, the inspectors were aware of circumstances where the DC electrical system vital batteries were made inoperable for short periods of time to jumper cells for replacement. Although the inoperable windows did not appear to exceed the TS LCO ACTION in each instance, the cumulative time the batteries were inoperable and unavailable was not being tracked. In addition, although components in the analog transmitter trip system may be required by the applicable TS LCO ACTION to be placed in the tripped condition in as little as six hours, lack of tracking of inoperable or unavailable time for specific trains or components also prevents monitoring of system (train) performance as required by the Maintenance Rule. In addition, the inspectors also noted that these systems continue to provide risk significant functions when the units are not operating in Mode 1; however, the time constraints imposed by the TS LCO ACTION statements for these systems are significantly relaxed and would not ensure that these systems were available as described in the response.

NRC Conclusion for Violation B.

For the above stated reasons, the NRC staff concluded that the violation occurred as stated.

Cover Letter Comments

In your response, you provided feedback to address our comments included in the cover letter containing our Notice of Violation. Our cover letter stated "your implementation of the Maintenance Rule did not demonstrate good integration of other maintenance programs with Maintenance Rule requirements." Your comment regarding this statement was, "We respectfully submit that this comment is not supported by examples or other comments in the Inspection Report."

With regard to your comment, we believe that the inspection report does provide examples of a lack of good integration of other maintenance programs with Maintenance Rule requirements in Section M1.2.b.2, associated with 10 CFR 50, Appendix J, and Sections M1.6.b.3 & b.6, where licensee corrective actions for specific maintenance problems were considered "goals" under the Maintenance Rule. We also specifically identified a procedure weakness in the administrative procedure implementing the Maintenance Rule requirements on page 10 of the report (associated with Primary Containment System performance criteria).

A second comment in our cover letter stated, "Although Safety Audit and Engineering Review Group audits on Maintenance Rule implementation identified areas for improvement, few findings were documented. Also, some issues discussed in this report had not been entered into your deficiency control system until NRC discussed the problems with your staff. These indicators call into question the threshold for formal identification of deficiencies and the effectiveness of your corrective action program." In your comments, you stated, "Under the GPC QA audit process, a finding is issued when a noncompliance to the QA program is identified which requires corrective action. The review of the Maintenance Rule audit notes by the NRC inspector included the GPC auditors' observations which may have provided enhancements to GPC's Maintenance Rule program, but did not result in noncompliance with NRC rules or with GPC procedures. It is the opinion of GPC that the comments in the cover letter are subjective and do not reflect a potential weakness in the corrective action program."

With regard to your comment, a review of Maintenance Rule Audits was fully discussed in Section M7.1. The inspector listed several issues which were considered to reach a threshold where a deficiency card may have been warranted. In addition, several other issues were identified in the report which indicated a weakness in formal documentation and disposition of problems. Examples of these issues were identified in Sections M1.4, M1.5, and M1.6.