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March 16, 1987

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

NRC DOCKETS 50-321, 50-366
OPERATING LICENSES DPR - 57, NPF-5
EDWIN I. HATCH NUCLEAR PLANT UNITS 1, 2
NRC EQUIPMENT QUALIFICATION INSPECTION
REPORT 50-321/86-35 AND 50-366/86-35

Gentlemen:

During the week of November 3, 1986, the Nuclear Regulatory Commission (NRC) performed an inspection of equipment qualification at Plant Hatch. The findings of the inspection were discussed, in detail, at an exit meeting at the conclusion of the inspection on November 7, 1986.

The report of the inspection dated February 6, 1987 has been reviewed by Georgia Power Company (GPC). Much of the information contained in the report was anticipated by GPC based on the valuable exit interview and statements made by the seven NRC inspectors and consultants during the week long inspection. Significantly, however, the report documents only the negative aspects of these discussions. A number of positive observations were made about the Hatch EQ Program. Further, based on our understanding of these discussions, we believe that the findings primarily involved documentation retrievability.

The highlighting in the transmittal letter of the deficiencies identified during the walkdown was unexpected since they were repeatedly referred to as minor, and the inspectors acknowledged that most of them had been, or would have been, identified by plant personnel prior to Unit startup. A major Unit 2 outage, involving significant maintenance and modification activities, was in progress during this inspection.

GPC comments on selected parts of the report are provided in the enclosure to this letter. There are two points in the report that appear to require clarification. These clarifications are presented in Section A of the enclosure. The remainder of the enclosure (Section B) is devoted to a discussion of each of the potential enforcement/unresolved items and a status of GPC efforts to completely resolve each of these items.

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Your consideration of these areas of mutual concern is appreciated. Should you have questions or need additional information, please do not hesitate to contact me.

Sincerely,



L. T. Gucwa

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Enclosures

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ENCLOSURE

Comments on NRC Inspection Report
of Inspection of Equipment Qualification at
Plant Hatch on November 3 - 7, 1986
(50-321/86-35 and 50-377/86-35)

A. Clarification

1. Cover Letter

In the second paragraph of the cover letter, the statement, "The fifth Potential Enforcement/Unresolved Item concerns failure to address the qualified life of Target Rock solenoid valves based on the incorrect premise that EQ-related failures would always place the valve in the same state and condition as electrical deenergization." implies that EQ related failures of Target Rock solenoid valves would sometimes cause the valves to fail in the unsafe condition. GPC has shown, based on available information and evaluations, that the Target Rock solenoid valves will fail in the safe (deenergized) condition. The statement in Section 4.F. (5) of the Details of the Inspection Report "In addition, prior to the end of the inspection the licensee produced sufficient information to show that (1) there are no elastomers to hinder closing of the valves when the power is removed ---" appears to support the GPC position. Therefore, the conclusion by GPC that the valves would 'fail safe' appears to be a correct premise. File documentation is available on site.

2. Section 4.F (1).b

In the second paragraph of this section the statement "During the Plant Hatch Unit 1 outage from November 1985 through May 1986, all EQ operators either had actuator replacement to address 10 CFR 50.49 concerns or had a full grease replacement" appears to indicate that certain information provided by GPC may have been misinterpreted by the inspectors. This information only applies to Unit 1 environmentally qualified Limitorque operators that are not routinely stroked at least once every six months per Plant Hatch procedures. The actuators were replaced or the grease was inspected and replaced if appropriate for all Plant Hatch Unit 1 EQ operators during the subject outage.

B. Potential Enforcement/Unresolved Items

1. Limitorque Operators

Two concerns were identified with Unit 2 Limitorque valve operators which constitute Potential Enforcement/Unresolved Item 50-366/86-35-01. These concerns were as follows:

1. Plant specific JCOs for internal wiring were not in place until July 24, 1986, although Unit 1 JCOs were declared generically applicable on June 2, 1986.

2. Physical inspection to identify unqualified internal wiring in Unit 2 did not commence until July 7, 1986, and replacement of unqualified wiring was completed for only 32 of 66 Unit 2 operators by August 14, 1986.

With regard to the first concern, GPC believes that responsible and timely action was initiated upon receipt of Inspection and Enforcement Notice 86-03, entitled "Potential Deficiencies in Environmental Qualification of Limatorque Motor Valve Operator Wiring." These actions are detailed in GPC's August 22, 1986 letter to the NRC.

Upon learning of the unidentified wiring at GPC Plant Hatch Unit 1 in mid-March 1986, a Deficiency Report was generated. An initial assessment was made of plant operability for Units 1 and 2 in that deficiency report based upon industry data and the condition of the wiring. A more detailed evaluation and JCO was developed for Unit 1 on May 6, 1986. This Unit 1 JCO was generic in nature. Since GPC recognized that Unit 2 valves were of a later vintage than Unit 1 (and based upon vendor supplied information, were qualified), the generic report was known to be directly applicable to Unit 2 except for the valves inside the Unit 2 containment. Further, documentation from Limatorque showed that environmentally qualified valves purchased for inside containment on Unit 2 were supplied with qualified wire. A brief concern arose in August 1986, with the identification of the possibility that Anaconda SIS wire was used in Limatorque operators in Units 1 and 2 of Plant Hatch. This led to the JCO for inside containment applications for Plant Hatch, which was transmitted to the NRC on August 22, 1986. However, GPC subsequently determined, in late August 1986, that this wire was misidentified during inspections and was actually Anaconda NSIS which is qualified wire for Limatorque operators at Plant Hatch. An equipment walkdown by GPC verified that the wire was qualified.

Between November 30, 1985 and July 1986, general industry concerns arose about the applicability of environmental qualification JCOs after November 30, 1985 and how JCOs should apply. These issues were not fully resolved until the draft of NRC Generic Letter 86-15 was received by GPC in July 1986. Once the overall issue of the applicability of JCOs was resolved in mid-July by this generic letter, the Unit 2 JCO was finalized. GPC committed to the NRC to inspect all Unit 2 Limatorque valves required to be qualified by startup from the 1986 refueling outage in a letter dated August 20, 1986. This commitment was fulfilled.

In conclusion, GPC acted in a timely and responsible manner to resolve qualification issues. In this regard, GPC notes that it notified the NRC of Limatorque related wiring deficiencies at Plant Vogtle which resulted in Information Notice 86-71.

2. Okonite cable (Okoguard EPR, Okolon EPR, Okozel tefzel, and Okonite FMR), QDP 14, and Okonite splice tape (T-95 insulating tape and T-35 jacketing tape), QDP 29

During the inspection, the NRC noted that the qualification files on Okonite cable contained no data reflecting cable performance (e.g., insulation resistance) during the LOCA test, or performance criteria. These concerns constitute Potential Enforcement/Unresolved Item 50-321/86-35-01 and 50-366/86-35-02. The depth of documentation

associated with EQ requirements has evolved in recent years. The cable performance/performance criteria information was not identified as a deficiency during the NRC 1983 review of the Plant Hatch environmental qualification program. GPC's understanding is that the adequacy of Okonite documentation was reviewed by the NRC at that time. Once identified during the current inspection, GPC readily obtained the documentation from Okonite which we always believed was readily available. Review of this documentation led the NRC to conclude that sufficient onsite information was present to correct the QDP 14 deficiencies and to support qualification. The Central File has been updated to reflect this additional information.

3. States Terminal Blocks (ZWM and NT), QDP 4

During the inspection, the NRC tentatively concluded that the EQ files did not compare errors determined during type testing with plant application performance criteria in order to establish acceptability for Resistance Temperature Detector application. These concerns constitute Potential Enforcement/- Unresolved Item 50-321/86-35-02 and 50-366/86-35-03. During the inspection, a preliminary calculation was prepared to demonstrate the approach to be used. More detailed calculations and evaluations are currently underway to address the environmental qualification acceptability of the circuits. Additional information will be provided to the NRC upon completion of our reevaluation.

4. Rosemount 1153B Transmitters, QDP 26

During the inspection, the NRC tentatively concluded that the EQ files did not address the impact of terminal blocks on transmitter circuit accuracy for harsh environments. This concern constitutes Potential Enforcement/Unresolved Item 50-321/86-35-03 and 50-366/86-35-04. GPC prepared a preliminary calculation using the methodology of NUREG/CR-3691 which showed that the terminal block error increased the overall error of the transmitter so that the calculated allowable value increased from 2.63 to 2.64 inches. This was still within the current allowable value of 2.7 inches. Calculations and evaluations are currently underway to address all applicable environmentally qualified circuits and the Central File will be updated when this work is complete. Additional information will be provided to the NRC upon completion of our reevaluation.

5. Target Rock Solenoid Valves, QDP 10

During the inspection, the NRC noted that the files did not fully address the qualified life of certain Target Rock solenoid valves; that similarity between the installed and tested models had not been adequately addressed; and that there was no analysis to support the file position that the valve would fail safe. These concerns constitute Potential Enforcement/Unresolved Item 50-321/86-35-04 and 50-366/86-35-05. During 1983, these valves were considered qualified only to DOR guidelines because a qualified life had not been established for the energized valves. The vendor recommended that a five year replacement of certain of the elastomers be performed. Also, in 1983 similarity concerns between the installed model and the tested model were expressed by the NRC after a review of these files. These concerns were resolved at that time to the mutual satisfaction of NRC and GPC, by a letter from the vendor providing a material listing of the tested valve (for comparison to the installed valve) and a statement indicating that these installed valves were of

similar design. The current issue arose because in late 1985 GPC inadvertently revised the files to indicate that the valves were qualified to the later 10 CFR 50.49 standards established in late 1985. In fact, DOR guidelines were the applicable standards.

Notwithstanding DOR criteria, during the inspection GPC generated adequate documentation to support the basis of qualification to the later 10 CFR 50.49 standards. The Central File has since been revised to reflect this documentation.

6. HPCI turbine hydraulic controller (Terry, General Electric, Square D, Namco, Woodard) QDP 51 and 56

During the inspection the NRC tentatively concluded that motor maintenance which is routinely performed on the HPCI auxiliary lube oil pump motor was not referenced in our qualification files. By procedure, maintenance was being performed monthly and semiannually. At the time of the inspection the regulatory requirement for the periodic maintenance was not clear. Also, some difficulty was experienced in retrieving certain records.

The missing maintenance records have been found which confirm that the maintenance was accomplished. The monthly maintenance is a visual inspection only and is considered an appropriate practice, but is not required to maintain environmental qualification. The six month maintenance consists of greasing certain areas of the motor and inspection of brush and commutator parts. This semiannual maintenance maintains the operability and therefore the qualification of the motor. However, the applicable maintenance manual indicates that this maintenance must be performed only once every seven years. The six months maintenance interval will be maintained for the near term until more data on extending this interval can be collected. Both the Central File and the computerized surveillance and maintenance program will be updated by April 15, 1987 to reflect this maintenance.