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the southern electric system

NED-83-418

August 5, 1983

Director of Nuclear Reactor Regulation
Attention: Mr. John F. Stolz, Chief
Operating Reactors Branch No. 4
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

NRC DOCKET 50-366
OPERATING LICENSE NPF-5
EDWIN I. HATCH NUCLEAR PLANT UNIT 2
SPECIAL IGSCC INSPECTION PROGRAM

Gentlemen:

Pursuant to Paragraph IV.2 of the NRC confirmatory order issued to Georgia Power Company (GPC) by letter dated July 8, 1983, the following information is hereby submitted regarding the special examination to be performed on selected stainless steel Recirculation System and RHR System piping welds at Plant Hatch Unit 2 during the present fuel cycle.

Eight (8) welds have been chosen to be examined during an outage scheduled to begin no later than December 31, 1983. Attachment 1 lists the welds to be examined and their 1983 maintenance/refueling outage examination/repair status. The subject welds will be examined with procedures similar to those utilized during the 1983 maintenance/refueling outage. Techniques to determine crack size will also be similar to those used in that outage. The results of the special examination will be compared with the results of the earlier examination of the respective welds during the 1983 maintenance/refueling outage to determine the relative stability of crack growth.

The aforementioned examination sample is of sufficient size to be indicative of significant changes which may have occurred since the examination conducted during the 1983 maintenance/refueling outage. Additionally, the condition of the Plant Hatch Unit 2 stainless steel Recirculation System and RHR System piping welds is known since one hundred percent (100%) of the ASME Category B-J welds in the Recirculation System (i.e., 4", 6", 12", 22", and 28" piping) and one hundred percent (100%) of the ASME Category B-F and B-J welds in the RHR System (i.e., 20" and 24" stainless piping) were examined during that outage.

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Director of Nuclear Reactor Regulation
Attention: Mr. John F. Stolz, Chief
Operating Reactors Branch No. 4
August 5, 1983
Page Two

Please be advised that the performance of these special examinations by December 31, 1983, is contingent upon the availability of qualified examination personnel. Availability of examination personnel may be limited as a result of the required inspections of the five plants remaining to perform their NRC I&E Bulletin 82-03 or 83-02 inspections. In the event that qualified examination personnel are unavailable, GPC will negotiate an examination schedule with NRC which is mutually agreeable to both parties.

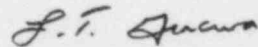
Previous examination results of Recirculation System and RHR System piping welds were reviewed to determine if existing estimates of crack growth rates are valid. This information was of particular interest to Mr. Harold Denton of the NRC. Results of examinations conducted during the Spring and Fall of 1980 and the Spring of 1982 did not reveal any reportable ultrasonic indications, although, some geometric indications were present. Re-examination of the same welds in 1983 revealed some of the welds to have reportable ultrasonic indications. It should be noted that the earlier examinations were performed prior to the issuance of NRC I&E Bulletins 82-03 and 83-02 and, consequently, examination techniques were used which may not have been as effective in the detection of intergranular stress corrosion cracking (IGSCC) and in distinguishing such cracks from geometric reflectors as techniques used in the earlier 1983 outage and proposed for the upcoming examination. Because the examination techniques used in the 1980 and 1982 outages were not as sensitive as those currently being used, we have not found any evidence that the existing estimates of crack growth rates are not valid. Ultrasonic detection techniques, operator training and qualification, signal evaluation procedures, and indication reporting requirements have improved as a result of the issuance of the aforementioned NRC bulletins and, consequently, the recent increase in reported IGSCC indications within the industry has occurred.

By copy of this letter, NRC Region II is being provided information on the special examinations required by the confirmatory order.

Director of Nuclear Reactor Regulation
Attention: Mr. John F. Stolz, Chief
Operating Reactors Branch No. 4
August 5, 1983
Page Three

Should you have any questions or comments in this regard, please contact this office.

Sincerely yours,



L. T. Gucwa

JAE/mb
Attachment

xc: J. T. Beckham, Jr.
H. C. Nix, Jr.
J. P. O'Reilly (NRC- Region II)
Senior Resident Inspector

ATTACHMENT 1
SPECIAL EXAMINATION
OF
RECIRCULATION SYSTEM AND RHR SYSTEM PIPING WELDS

<u>SYSTEM</u>	<u>WELD NO.</u>	<u>1983 R/F CUTAGE EXAMINATION/REPAIR STATUS</u>
Recirculation	2B31-1RC-12AR-J-1 ⁽²⁾	No Reportable Indications
	2B31-1RC-12BR-C-2 ⁽¹⁾	Reportable Indications, Mini-Overlay Applied
	2B31-1RC-12BR-C-3 ⁽¹⁾	Reportable Indications, Standard Overlay Applied
	2B31-1RC-28A-5 ⁽²⁾	No Reportable Indications
	2B31-1RC-28B-15 ⁽¹⁾	Reportable Indications, Unrepaired
RHR	2E11-1RHR-20RS-2 ⁽¹⁾	Reportable Indications, Unrepaired
	2E11-1RHR-24A-R-13 ⁽²⁾	No Reportable Indications
	2E11-1RHR-24B-R-11 ⁽¹⁾	Reportable Indications, Unrepaired

(1) Quadrant containing deepest cracking to be examined by appropriate angle beam to determine if cracking has increased in depth.

(2) Entire weld to be examined by angle beam technique to determine if any cracking has initiated in this previously uncracked weld.