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SUBJECT: Submits supplemental response to NRC Bulletin 88-08,
 "Thermal Stresses in Piping Connected to RCS."

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PLANT VOGTLE - UNITS 1, 2
NRC DOCKETS 50-424, 50-425
OPERATING LICENSE NPF-68, CONSTRUCTION PERMIT CPPR-109
RESPONSE TO NRC BULLETIN 88-08: THERMAL STRESSES IN
PIPING CONNECTED TO REACTOR COOLANT SYSTEMS

Gentlemen:

By letter dated September 21, 1988 (HVS-63), Georgia Power Company (GPC) responded to Action 1 of NRC Bulletin 88-08. A supplemental response is required by the Bulletin within 30 days after completion of Actions 2 and 3. This letter provides the required supplemental response for Vogtle Unit 1.

REQUESTED ACTION 2

"For any unisolable sections of piping connected to the RCS that may have been subjected to excessive thermal stresses, examine nondestructively the welds, heat-affected zones and high stress locations, including geometric discontinuities, in that piping to provide assurance that there are no existing flaws."

RESPONSE

Nondestructive examinations (NDE) as required by Bulletin 88-08 were completed for Vogtle Unit 1 on November 9, 1988. NDE was performed for the unisolable sections of piping for normal charging, alternate charging, auxiliary spray, and charging/high head safety injection system piping. Examinations consisted of both penetrant (PT) examination and ultrasonic (UT) examination for twenty (20) butt welds and six (6) elbow locations and PT examination for four (4) socket welds. NDE inspection locations and examination techniques were in accordance with Westinghouse recommendations; per correspondence with Westinghouse, Westinghouse agreed that a surface examination for the socket welds was the only readily available NDE technique and was an acceptable approach for inspecting the four (4) socket welds. Enhanced UT examination techniques were used based on the techniques used at Farley to detect the through-wall indication for

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the Farley six (6) inch safety injection line and included scanning sensitivities of 6dB (small pipe diameter) to 20dB (large pipe diameter) above reference sensitivity with a noise level of less than 15 to 20% full screen height. PT examinations were in accordance with ASME Section XI requirements and included 100% of the outside diameter weld surface plus 1/2 inch on each side of the welds where practical (plus 1.0 inch for the socket side area for the four socket welds).

No existing flaws were detected by the NDE inspections.

REQUESTED ACTION 3

"Plan and implement a program to provide continuing assurance that unisolable sections of all piping connected to the RCS will not be subjected to combined cyclic and static thermal and other stresses that could cause fatigue failure during the remaining life of the unit. This assurance may be provided by (1) redesigning and modifying these sections of piping to withstand combined stresses caused by various loads including temporal and spatial distributions of temperature resulting from leakage across valve seats, (2) instrumenting this piping to detect adverse temperature distributions and establishing appropriate limits on temperature distributions, or (3) providing means for ensuring that pressure upstream from block valves which might leak is monitored and does not exceed RCS pressure."

RESPONSE

Instrumentation installation to detect adverse temperature distributions was completed for the unisolable sections of piping for normal charging, alternate charging, auxiliary spray, and charging/high head safety injection system piping on November 28, 1988 for Vogtle Unit 1. This modification was completed based on Westinghouse recommendations for temperature monitoring instrumentation locations and hardware specifications. The modification consisted of installing fourteen (14) RTD's, one on the top and one on the bottom (0° and 180°) for each of the unisolable sections of piping in question, and installing a programmable FLUKE data logger to monitor the output of the RTD's. The FLUKE data logger has been programmed to perform three specific tasks as follows:

- 1) Recording temperature readings at varying intervals dependent on the Operating Mode.
- 2) Calculating the temperature difference across each line; flagging readings exceeding the delta T acceptance criterion of 50°F.
- 3) Comparing the average temperature in each line to baseline temperature data supplied by Westinghouse.

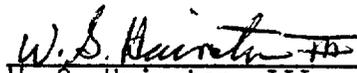
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The FLUKE data logger is programmed such that all three tasks are performed in Operating Modes 1 and 2, while only tasks 1 and 2 are performed during Operating Modes 3 and 4. The Vogtle Engineering Support Department has responsibility for reviewing the data recorded by the Fluke data logger to identify the existence of potentially adverse temperature gradients. The plant parameter data recorded by the plant computer is used as an aid in determining either the acceptability of adverse indications or the need for additional action. The acquisition and analysis of this data has commenced and continues as an ongoing effort.

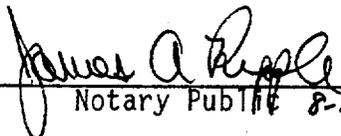
This submittal completes the requirements of NRC Bulletin 88-08 for Vogtle Unit 1. The corresponding Unit 2 action is in progress and will be completed prior to initial criticality. As stated in our initial submittal, the Unit 2 action consists only of instrument installation since NDE inspections are not necessary. GPC will provide written confirmation after the Unit 2 action is complete.

Mr. W. G. Hairston, III states that he is a Senior 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: 
W. G. Hairston, III

Sworn to and subscribed before me this 22nd day of December, 1988.


Notary Public 8-24-92

JH:ijb

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