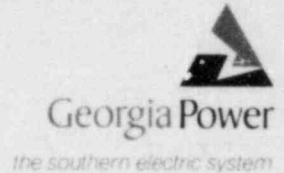


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NED-84-597

December 6, 1984

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 50-321  
OPERATING LICENSE DPR-57  
EDWIN I. HATCH NUCLEAR PLANT UNIT 1  
CORE SPRAY SPARGER CRACKING

Gentlemen:

Pursuant to the requirements of I&E Bulletin 80-13, "Cracking in Core Spray Spargers", Georgia Power Company (GPC) submits herein the justification for continued operation of Plant Hatch Unit 1 with a cracked core spray sparger. This submittal documents the presentation made to the NRC staff on November 15, 1984, in Bethesda, MD.

Visual inspection revealed the presence of the crack on the lower sparger arm near the 350° T-box. The circumferential crack is located in the heat-affected zone of the sparger to T-box weld, approximately 1/8 inch from the weld. It spans at least 180° of pipe circumference and is a maximum of 0.010 inch wide.

The attached report, NEDO-30825, "Core Spray Sparger Crack Analysis for Edwin I. Hatch Nuclear Power Station Unit 1" provides the justification for continued safe operation with the crack. The analysis demonstrates that even if a 360° circumferential through-wall crack is postulated, the sparger would remain intact, no safety concern would be created by loose parts, and the cooling function of the core spray system would not be degraded.

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Director of Nuclear Reactor Regulation  
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December 6, 1984  
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For added margin, GPC has elected to install a clamping device to limit relative movement of the two sections of the sparger even if the crack were to propagate 360° through-wall. The design and function of the clamp assembly are similar to those of clamps installed at other operating BWRs. The clamp can be characterized as a "C-clamp" device which grips the sparger with a pair of fingers on each side of the T-box. The clamping force is provided by two pairs of 3/4-inch bolts which are torqued and locked in place with a proven crimping technique. Lateral movement of the clamp is prevented by the sparger nozzles. The clamp assembly is fabricated from type 304L austenitic stainless steel with a maximum carbon content of 0.02 weight percent. This material has been demonstrated to have good resistance to intergranular stress corrosion cracking in the BWR environment.

The clamp is a passive device which provides added structural margin to the core spray sparger without interfering with its ECCS function. The clamp is single failure-proof in that only two bolts are required for it to perform its function. A stress analysis shows that the clamp, although non-code, meets the stress requirements of ASME Section III, Subsection NG.

The clamp is designed to ensure that it will not become loose during a core spray injection thermal transient; however, the potential consequences of loose parts are adequately bounded by the analysis contained in NEDO-30825.

It has been concluded by the Plant Review board and the Safety Review Board that continued operation of Plant Hatch Unit 1 would not involve an unreviewed safety question under 10 CFR 50.59 because:

1. The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety are not increased above those analyzed in the FSAR since neither the crack nor the clamp interferes with the function of the core spray system.
2. The possibility of an accident or malfunction of a different type than any analyzed in the FSAR is not created.
3. The margin of safety of the core spray sparger as defined in the basis for any Technical Specification is not reduced because its structural integrity is not compromised by the presence of the crack or the clamp.

Georgia Power 

Director of Nuclear Reactor Regulation  
Attention: Mr. John F. Stolz, Chief  
Operating Reactors Branch No. 4  
December 6, 1984  
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This submittal completes the reporting requirements of I&E Bulletin 80-13 for the current refueling outage. Please contact this office if you require any further information.

Yours truly,



L. T. Gucwa

JH/blm

Enclosure

xc: (w/encl.)  
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