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SUBJECT: Responds to NRC Bulletin 89-002 re stress corrosion cracking of high hardness Type 410 stainless steel.

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August 23, 1990

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

Subject: Oconee Nuclear Station, Unit 1
Docket Nos. 50-269, -270, and -287
NRC Bulletin No. 89-02
Stress Corrosion Cracking of High-Hardness Type 410 Stainless Steel Internal Preloaded Bolting In Anchor Darling Model S350W Swing Check Valves or Valves of Similar Design
Unit 1 Final Response

Gentlemen:

Mr. C.E. Rossi's (NRC/ONRR) July 19, 1989 letter (Bulletin 89-02) concerned stress corrosion cracking of high-hardness type 410 Stainless Steel internal preloaded bolting in Anchor Darling Model S350W swing check valves or valves of similar design. The purpose of this bulletin was to request identification, disassembly, and inspection of certain types of swing check valves which may contain type 410 Stainless Steel (SS) bolting material; and if the Type 410 SS bolting material is of sufficiently high hardness that it is susceptible to stress corrosion cracking (SCC), or has failed, to take appropriate actions.

Pursuant to Reporting Requirement No. 2 of the Bulletin, this letter provides confirmation of the status of our investigation into this bulletin at Oconee Nuclear Station Unit 1.

Although Oconee Nuclear Station Unit 1 does not have any Anchor Darling Model S350 swing check valves, a design review identified nine valves of a similar design. These valves were all manufactured by Velan and are located as follows:

Application	Location and Size
1 HP-105, 109, 113	High Pressure Injection Pump discharge, 3 inches
1 LP-55, 57	Decay heat Cooler discharge to High Pressure Injection pump suction, 3 inches
1 BS-7, 9	Decay heat Cooler discharge to Building Spray pump suction, 3 inches
1 HP-188, 194	High Pressure Injection Pump discharge, 4 inches

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Seven of the nine applicable (i.e., subject to the Bulletin) check valves were disassembled and inspected during the past Unit 1 refueling outage (which ended on June 6, 1990). The internal 410 Stainless Steel fasteners were dye penetrant tested using ASME Section XI criteria. No cracks or unacceptable indications were found but the fasteners were replaced, regardless, with A 193 Grade B8 material with recommendation from the vendor.

The other two check valves, 1 HP-188 and 194, were not disassembled during the outage since the station has included these applications in their valve replacement plan. No further action regarding this Bulletin is planned for Unit 1.

In conclusion, the results of our completed investigation revealed no broken or cracked 410 Stainless Steel Fasteners on Unit 1 check valve internals inspected. Appropriate reports regarding Oconee Units 2 and 3 will be submitted following inspections at their upcoming refueling outages (currently scheduled to begin September 6, 1990 and February 27, 1991, respectively) in accordance with the Bulletin's requirements.

I declare under penalty of perjury that the statements set forth herein are true and correct to the best of my knowledge. Should there be any questions concerning this matter or if additional information is required, please advise.

Very truly yours,

Hal B. Tucker

PBN/212/lcs

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