

May 16, 1996

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

Subject: River Bend Station - Unit 1
Docket No. 50-458
Special Report - Failure of Division I Diesel Generator Air Admission Valves

File No.: G9.5, G9.25.1.7

RBG-42922
RBF1-96-0089

Gentlemen:

This special report is being submitted pursuant RBS Technical Specification Technical Requirements Manual, Section 5.6.9.1. An interim report was submitted on December 19, 1995 which included preliminary results of our root cause investigation and corrective actions. This report is being submitted to document the final results and corrective actions and completes our reporting requirements for this event.

As discussed in the previous report, on December 5, 1995, the Division I Emergency Diesel Generator (EDG) was being prepared for a series of maintenance runs to collect diagnostic information and heat the engine for a hot crankshaft alignment check. During two prestart air roll attempts, the EDG failed to reach satisfactory rotational speed and the maintenance runs were postponed.

The preliminary cause, as described in the previous report, was believed to be a mechanical malfunction of the #4 air admission valve in that sticking occurred due to inadequate piston/cap tolerances for the existing differential thermal expansion. This cause was later corroborated by the vendor.

Corrective action... consisted of replacing and inspecting all eight admission valve piston/cap assemblies and the #2 and #4 admission valve assemblies with the same design. The installed assemblies were inspected in accordance with vendor recommendations and found to meet the

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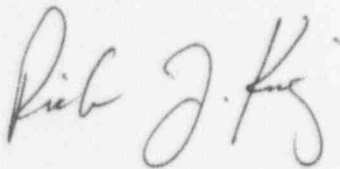
vendor specifications for piston/cap tolerance. Discussions with the vendor confirmed that the failure mechanism for these assemblies is time dependent and that short term use is acceptable. Corrective actions were implemented at the time of the event to ensure operability of the EDG. These assemblies will be replaced during the next Division I EDG maintenance outage with a new design developed to address this type of sticking problem. This maintenance outage is expected to occur by May 30, 1996.

A contributing factor for this mechanical failure was the failure to implement timely actions as recommended by an August 1990, 10CFR Part 21 notification regarding the admission valve actuator pistons. The notification recommended that the actuator pistons be replaced during the next refueling outage; however, an engineering evaluation concluded that the replacement could be implemented during the next 100% Division I EDG overhaul. This overhaul had not occurred prior to the event. Generic corrective actions are being implemented to review a sample of past 10CFR Part 21 notifications for adequacy of corrective actions taken. If discrepancies are identified, additional reviews will be considered.

The Division II EDG air admission valve piston/cap assemblies were replaced during Refueling Outage 6 with the new design developed to resolve the 10CFR Part 21 concerns. Prior to the cap replacement it is believed that the Division II EDG was less susceptible to failure caused from inadequate piston/cap tolerance due to a relatively lower number of starts (Division I had over 60 more starts than Division II) and the recently successful demonstration of start capability. The Division III EDG is a different design and not susceptible to the type of failure described above.

If there are any questions concerning this issue, please contact David Lorring at (504) 381-4157.

Sincerely,



Rick J. King
Director - Nuclear Safety and
Regulatory Affairs

/RMM

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