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April 12, 1991

U.S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, D.C. 20555

Attention: Document Control Desk

Gentlemen:

SUBJECT: Grand Gulf Nuclear Station
Unit 1
Docket No. 50-416
License No. NPF-29
Special Report 89-001-01
Update to Diesel Generator Failure
to Load During Test

GNRO-91/00059

On February 1, 1989 at approximately 1020 during the performance of the monthly functional surveillance, the output breaker for Diesel Generator 12 failed to close while attempting to parallel the generator with an energized bus. The diesel generator was declared inoperable and a maintenance investigation was conducted. The cause of the incident was determined to be a malfunction of a tachometer transmitter. The transmitter was replaced and the diesel generator functional test was successfully completed by 2215 on February 1.

The tachometer transmitter malfunction would not have prevented the diesel generator breaker from closing in the emergency operating mode. The diesel generator is equipped with two redundant start circuits. During non-emergency starts, the transmitter in each circuit must function to provide a breaker closing permissive when paralleling the generator to the grid. During an emergency start, either tachometer transmitter can provide the breaker closing permissive signal. Therefore, the unsuccessful load attempt is not considered a valid test or failure in accordance with position C.2.e(2) of Regulator Guide 1.108. The testing frequency of Diesel Generator 12 remains at once per 31 days in accordance with the schedule of Technical Specification Table 4.8.1.1.2-1.

The failure of the transmitter (Airpax Model number 080-321-2112) was attributed to an excessive voltage input to the transmitter during periods of battery equalization. Since February 1, 1989, GGNS has not experienced any similiar failures.

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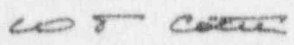
Original plans were to install transmitters with a higher voltage input range to prevent recurrence of the failure. Following discussions with the supplier, it was determined that a qualified transmitter with a higher voltage input range was not available from any source.

GGNS was supplied with an upgraded version of the original transmitter. The current rating of the internal relays for this type of transmitter was found to be below the actual current flow for our application. This deficiency was documented on a Material Nonconformance Report.

GGNS installed the upgraded transmitters and made wiring changes to resolve the current rating deficiency with a Minor Change Package during RF04 on the Division 1 Diesel Generator. The wiring changes reduce the current load on the internal relays to improve reliability.

GGNS currently plans to install the upgraded transmitters and make wiring changes to the Division 2 Diesel Generator during RF05, in accordance with the Minor Change Package.

Yours truly,



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