

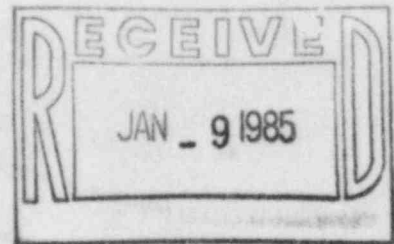


GULF STATES UTILITIES COMPANY

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January 3, 1985
RBC- 19832
File Nos. G9.5, G9.25.1.1

Mr. Robert D. Martin, Regional Administrator
U. S. Nuclear Regulatory Commission
Region IV, Office of Inspection and Enforcement
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011



Dear Mr. Martin:

River Bend Station Unit 1
Docket No. 50-458
Final Report/DR-231

On December 4, 1984, GSU notified Region IV by telephone that it had determined DR-231 concerning cylinder liners in the standby diesel generator 1EGS*EG1A supplied by Transamerica Delaval, Incorporated to be reportable under 10CFR50.55(e). The attachment to this letter is GSU's final 30-day written report pursuant to 10CFR50.55(e)(3) with regard to this deficiency.

Sincerely,

J. E. Booker
Manager-Engineering,
Nuclear Fuels & Licensing
River Bend Nuclear Group

JEB/ED/lp

Attachment

cc: Director of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

NRC Resident Inspector-Site

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ATTACHMENT

January 3, 1985
RBG-19832

DR-231/Cylinder Liners in the Standby Diesel Generator
Supplied by Transamerica Delaval, Incorporated

Background and Description of the Problem

This deficiency concerns out of roundness of cylinder liners in excess of the manufacturer's specified tolerance limits for standby diesel generator IEGS*EG1A supplied by Transamerica Delaval, Incorporated (TDI). This was identified in Report of a Problem (ROAP) No. RBI-E-105 and Nonconformance and Disposition Report (N&D) No. 6665. During installation of new piston assemblies in engine IEGS*EG1A, a measurement check was performed on all cylinder liners in accordance with the engine manufacturer's manual. It was discovered that cylinder liners 5, 6 and 8 exceeded out of roundness tolerance limits specified in the manufacturer's Service Information Memo 99 and the Instruction Manual, Vol. 1, Section 6-C-10. The specified out of roundness tolerance is 0.0003 in. per in. of the bore diameter (17 in. for this engine's cylinders), whereas the measured out of roundness was 0.0066 in., 0.0078 in., and 0.0070 in. for cylinders 5, 6 and 8 respectively.

The engine in question had undergone 50 hours of shop testing at the Seller's shop. The engine was not run at the site prior to disassembly for performing various inspections recommended by the TDI Owner's Group.

It is assumed that the liner defects were existent during engine assembly at TDI's Shop and that either the TDI quality control inspector did not perform all inspections or the procedures were inadequate.

Safety Implication

The out of roundness of the liners was located within the ring travel zone. Upon disassembly and inspection of the engine, no signs of scuffing and blowby were observed. However, had the condition remained uncorrected, the possibility of distress in the future cannot be excluded. The noted deficiency in this area could result in a blowby of the combustion gases, which causes the engine to use excessive amounts of lubrication oil. Additionally, during extended operation of the diesel generator, a severe blowby can destroy the lubrication oil film on the liner wall and could cause the piston rings to scuff the cylinder wall and possibly result in piston seizure.

Had these problems remained uncorrected and not been discovered during the inspection and maintenance program, the performance of the standby diesel generator to supply power to safety-related electrical equipment

could have been reduced or degraded. The same rat. as of the plant could have been adversely affected in the event of the assumed degradation of diesel A, loss of offsite power, and the independent failure of diesel B.

Corrective Action

The defective liners of diesel generator 1EGS*EG1A were replaced with acceptable cylinder liners from diesel generator 1EGS*EG1B. Diesel generator 1EGS*EG1B was inspected for this same condition, and the cylinder liner installed during rebuilding were within the manufacturer's specified tolerances. In accordance with the Seller's instructions, liners for cylinders 5 and 6 were honed to the correct roundness in accordance with its Service Information Memo 99. The liner for cylinder 8 was scrapped completely. Since a measurement check of the remaining cylinder liners did not reveal any deficiencies, it is believed that the problem is random in nature and is limited to the identified cylinder liners only. The process of honing the correctable liners and replacing the incorrectable liners is a technically acceptable solution to the identified problem.