

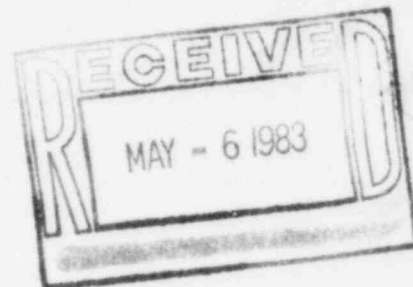
GULF STATES UTILITIES COMPANY

POST OFFICE BOX 2951 • BEAUMONT, TEXAS 77704

AREA CODE 713 838-6631

April 29, 1983
RBG- 14,908
File Nos. G9.5, G9.25.1.1

Mr. John T. Collins, 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. Collins:

River Bend Station Unit 1
Docket No. 50-458
Final Report/DR-23

On February 12, 1982, Gulf States Utilities Company (GSU) notified Region IV of a condition that was determined to be reportable under 10CFR50.55(e) concerning the HPCS diesel generator radiative heat loss value used in the sizing of the HPCS room cooling fans. GSU subsequently issued Interim Reports dated May 14, 1982, August 13, 1982, October 28, 1982, and February 15, 1983. Attached is GSU's Final Report pursuant 10CFR50.55(e)(3).

This concludes GSU's response on this subject.

Sincerely,

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

JEB/LAE/kt

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

R. L. Brown (SRI)

8305120367 830429
PDR ADOCK 05000458
S PDR

IE27

April 29, 1983
RBG-14,908

ATTACHMENT
FINAL REPORT DR-23

Description of the Deficiency

The room cooling fan for the High Pressure Core Spray (HPCS) diesel room was sized to remove 34,000 CFM of room air to limit the room temperature to 122F. The room design heat load was 769,000 BTU/hr of which 522,000 BTU/hr was for the diesel engine heat load. The diesel engine heat load data was provided by General Electric Company (GE) who obtained the data from Stewart & Stevenson, their vendor for the HPCS diesel generator assembly. Stewart & Stevenson procured the diesel engine from Electro Motors Division (EMD) of General Motors who provided the estimate for the diesel heat load. This heat rate value was found to be low by a factor of approximately three.

Safety Implications

The initial design could have resulted in a low heat removal rate which could have allowed the diesel room temperature to rise above its design limit possibly affecting adversely the safety of operations of the plant.

Corrective Action

The HPCS diesel room cooling system has been redesigned to accommodate the new heat rate value of 1,290,000 BTU/hr for the diesel engine. The new heat rate value is based on tests performed for GE by Morrison-Knudson for a turbo-charged 20 cylinder engine similar to the one provided for River Bend Station. EMD has confirmed this heat radiation load. The resulting design heat load for the HPCS room is 1,514,000 BTU/hr.

The new HPCS room cooling system will employ the same size cooling fans used for the Standby Diesel Generator room whose design heat load is 2,611,000 BTU/hr. These fans have a capacity of 118,000 CFM. To maintain the HPCS room at 122F, a fan capacity of 63,000 CFM is required, thus providing a conservative design for heat removal.

In order to ensure that diesel engine heat loads will be correct in the future, GSU understands that GE has committed to the NRC to change the heat load data in the manuals supplied for diesel engines. GE document 23A1591 Rev. 0 issued April 22, 1983, contains the revised heat load data.