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PRODUCTION DEPARTMENT

October 31, 1979

Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, N. W., Suite 3100
Atlanta, Georgia 30303

ATTENTION: Mr. J. P. O'Reilly, Director

Dear Mr. O'Reilly:

SUBJECT: Grand Gulf Nuclear Station
File 0262/0472/L-401.0/15521
Evaluation of IE Bulletin 79-24
AECM-79/124

NRC IE Bulletin 79-24, "Freeze Lines" expresses a concern regarding the adequacy of protective measures taken to assure that safety-related process, instrument and sampling lines do not freeze during extremely cold weather.

For the Grand Gulf Nuclear Station, the minimum temperature inside plant structures containing safety-related equipment will be maintained above freezing at all times. Duct-mounted heating coils will be provided to maintain this condition in the auxiliary building where the HPCS, LPCS, RHR and RCIC systems are located. The condensate storage tank, which is a nonsafety grade source of water for HPCS and RCIC, does not have freeze protection. The contents of this tank are not expected to freeze since the water is continuously circulated to and from the tank. Heat tracing is provided for instruments mounted on the tank and for instrument lines to and from the tank to prevent freezing. The level transmitters, sensing lines and process taps used to detect low water level in the condensate storage tank and cause automatic switchover of HPCS and RCIC pump suction to the suppression pool are physically located inside the auxiliary building and thus are protected from the effects of cold weather.

As described in FSAR subsection 9.4.7.2.2, the outside air makeup to the containment, where the standby liquid control system is located, is tempered to 65°F.

The ultimate heat sink is a below-grade, reinforced concrete basin approximately 50 feet deep. The water temperature in the basin in the vicinity of the pump suction will not vary more than a few degrees below the surrounding ground temperature of 60°F.

Several sensing lines of the standby service water system are located above the water level in the ultimate heat sink, and below the concrete slab. The freeze protection design for these lines has not been finalized at this time.

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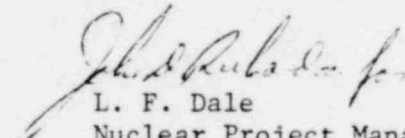
AECM-79/124

The primary source of water for the control rod drive hydraulic system is the condensate system. The turbine building, where the condensate system is located, is maintained at a minimum indoor temperature of 65°F. During shutdown, fan coil units maintain this temperature.

Further, as described in FSAR section 9.4.5, heaters have been provided for freeze protection in the safeguard switchgear and battery rooms, diesel generator rooms, and standby service water pump houses.

Heating equipment has been sized to maintain a minimum temperature inside plant structures of 65°F, based on an outside design temperature of 20°F, and assuming no internal heat loads within the structure. Based on the minimum temperature ever recorded in the locality of -5°F, the heating equipment would still be adequate to maintain the ambient temperature within the plant structures above freezing.

Yours truly,


L. F. Dale
Nuclear Project Manager

RTE/JDR:mlc

cc: Mr. N. L. Stampley
Mr. R. B. McGehee
Mr. T. B. Conner

Mr. Victor Stello, Jr., Director
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