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United States of America
Nuclear Regulatory Commission
Atomic Safety & Licensing Board

In the Matter of:

Docket # 50-424-OLA

50-425-OLA

ASLEP #90-617-03-OLA

GEORGIANS AGAINST NUCLEAR ENERGY

Response to Georgia Power Statement filed March 22, 1991

Georgians Against Nuclear Energy (GANE) is glad for the opportunity to comment on the safety concerns raised by the failure of the high jacket water temperature switch of the emergency diesel generator to operate properly at Nuclear Plant Vogtle. We comment favorably on the persistence of the parties in addressing this important safety issue.

GANE's concerns have increased rather than lessened as this inquiry has proceeded. Every round of affidavits exposes more mistakes and negligence on the part of Georgia Power.

Georgia Power's agreement with GANE that the rate of temperature rise to the Diesel Jacket Water upon loss of Nuclear Service Cooling Water (NSCW) is substantially greater than 2°F/minute (10°F/minute by their calculations) is a positive step but the work they show is flawed and inconsistent, and still incorrect.

GANE's previous estimates of a rate of rise as high as 32°F/minute were calculated based on Vogtle procedures [VEGP Procedure 13145-1, Rev. 25, § 2.2.6 (at p. 4 of 46)] and data for "normal operation" that were provided by Georgia Power. The original Georgia Power data is not consistent with the referenced FSAR Table and displays that their current procedures are incorrect. Georgia Power should correct these procedures.

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FSAR Table 9.2.1-1 shows the appropriate heat load for the Diesel Jacket Water Cooling and states 17.1×10^6 BTU/hr. at 7000kw. If an extrapolation is performed using the Lisenby assumption of a linear relationship method then 13.5×10^6 BTU/hr. at 5517 kw is the heat load. This is contradictory with Lisenby's affidavit which affirms 10.9×10^6 BTU/hr.

Georgia Power's calculations are not conservative. They cannot assume that the high jacket water temperature will always be at the low end (145°) of a normal operating range of 145°-170°. Georgia Power calculations are also non-conservative in that the diesel generator may be loaded up to its full rating of 7000kw during a Loss of Off Site Power event, once the sequencer times out (FSAR Table 8.3.1-2). Another non-conservative indulgence exhibited in Georgia Power's calculations is the use of a room temperature density of water of $62.4^{lb}/ft^3$ instead of the density of water at actual Jacket Water Temperatures which are as high as 200°F. At this temperature water density is approximately $60^{lb}/ft^3$. The mass of water to cool the diesel is overestimated.

Correcting for the above non-conservatisms and using Georgia Power's methods of calculation one arrives at a rate of rise of 15°F/minute for loss of all jacket water cooling. By both the NRC staff's and Georgia Power's testimony, it takes up to three minutes for an operator to respond to the Diesel Generator Control Room.

In the case of a failure in the cooling system resulting in complete loss of cooling, the alarm is received at 190° and the operator arrives three minutes and 45° (235°) later. Using Georgia Power's 10°F/minute figure the temperature after three minutes would be 220°F. As regards a Control Room Fire the initial rate of rise would be 10°F/minute and the operator would arrive three minutes later with the temperature in excess of 210°F.

Thus, even Georgia Power's calculations prove that an operator cannot perform the function of the original trip design at 200°F as required by their operating license.

The foregoing comments address the most important aspects of switch function compared to operator function. There are other notable displays of either misunderstandings or denial of very real accident scenarios. For instance, Lisenby claims on page 9 of his affidavit that if damage were to occur to the diesel generator that the other train

would be available. This was not the case on March 20, 1990.

Similarly, strike-outs and insertions of unexplained different figures on page 2 of attachment 3 in the most recent filing by Georgia Power imply a poor scientific attitude.

The discussion of calibration drift is proven in Lewis Ward's affidavit to be a danger that Georgia Power has not resolved. Also, in a position that has no basis in logic or common sense, Kenneth Stokes describes routine testing of the diesel generator with the switch they seek to bypass in place. He claims that this satisfies regulations, but we see a failure to address safety or prove that this is a safe procedure.

In conclusion, we have shown that an operator cannot get to the emergency diesel generator in time to trip the generator if it is overheating. We hope that the Atomic Safety & Licensing Board and the Nuclear Regulatory Commission will rule in a way that mandates Georgia Power's immediate resolution of the matter. We offer the solution of an upgrade on the generator from the pneumatic logic, which we believe is the root cause of the switch failure, to an electronic logic. Then, it must be proven that that system works in a uncompromised and safe manner.

A swift and effective ruling on this currently unsafe condition at Plant Vogtle will help protect the health and safety of residents of Georgia and South Carolina.

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