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November 1, 1979

Director
Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Sir:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
Adequacy of Station Electric Distribution
System Voltages

Your letter dated August 8, 1979, requested that we supply certain information in regard to IE Information Notice No. 79-04. Specifically, we were requested to perform an analysis of the onsite distribution system, powered from the offsite network, to determine the adequacy of this system to start and operate all safety related loads without the need for manual load shedding. Also, we were requested to review the station's electric power systems to determine any events or conditions that could result in simultaneous or consequential loss of both required circuits to the offsite network in regard to GDC-17.

The enclosed report presents the results of an analysis which shows that the offsite power system and the onsite distribution system have sufficient capacity and capability to automatically start as well as operate all required safety loads within their required voltage ratings in the event of: 1) an anticipated transient (such as a unit trip); or 2) an accident (such as a LOCA). This analysis is based on the guidelines enumerated in enclosure 2 of your August 8, 1979, letter. The results of the analysis indicate that in one instance, which is pointed out in the enclosure, there is the possibility of an overvoltage situation at the 480 volt level. As per item 11 of the guidance presented in enclosure 2 of your letter, this was reported to the NRC Regional Office on October 12, 1979, pursuant to the prompt reporting requirements of our Technical Specifications, even though we do not believe this situation represents a significant safety hazard since this event could only occur with the plant in a shutdown condition in conjunction with minimum load on the electrical distribution system and the highest expected grid voltage. Should this improbable situation exist at a time when operation of safety related pumps is required, they can be expected to start and operate. As explained in the

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enclosure, the resulting load imposed on the bus due to these motor starts will reduce bus voltage to acceptable limits within 3 minutes.

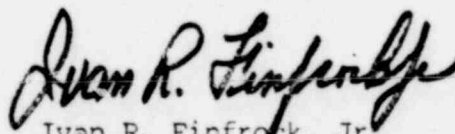
Additionally, our letter dated September 25, 1979, in response to your letter of August 11, 1979, provides a description of our proposed modification to provide undervoltage protection in the event of a sustained degraded grid voltage condition. The results of this analysis have been considered in the proposed modification. Voltage and time settings were selected to avoid spurious separation of safety buses from offsite power during plant startup, normal operation, and shutdown due to startup and/or operation of electric loads. The installation of this system will further enhance the capability of the electric power system since voltage regulators will be installed on the startup transformers which will automatically regulate the voltage on the 4160 volt distribution buses by $\pm 10\%$. That is at low grid voltage, the voltage on the 4160 volt buses will be increased by up to 10%; and at high grid voltage, the voltage on the 4160 volt buses will be decreased by up to 10%. This modification will prevent the overvoltage situation discussed above and also assures that an automatic transfer to onsite power is initiated should the incoming grid voltage fall below the minimum expected value. As indicated in our September 25, 1979 submittal, technical specifications for this system will be proposed at the time of implementation.

In relation to the second part of your request, Amendment 68 to the Oyster Creek Facility Description and Safety Analyses Report presents a discussion of our electrical design with regard to GDC-17 and IEEE-308, 1971. The installation at Oyster Creek exceeds the offsite power facility and capacity requirements of both GDC-17 and IEEE-308, 1971. Additional information concerning failures of the offsite power supply will be submitted in our response to your letter of September 25, 1979.

The enclosed report along with the other information referenced in this letter provides the information requested in your August 8, 1979, letter. This information shows that the electrical power supply and distribution system at Oyster Creek has sufficient capability and capacity to assure a reliable source of power to the Station during all modes of operation.

Very truly yours,

POOR ORIGINAL



Ivan R. Finfrock, Jr.
Vice President