

February 20, 1980

Mr. Boyce H. Grier, Director
United States Nuclear Regulatory
Commission - Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

RE: Docket No. 50-220
LER 80-06

Dear Mr. Grier:

Prior to January 23 at 1630 it was observed that the condenser inlet/circulating water discharge temperature ΔT exceeded the technical specification of 31.2°F as indicated on the hourly computer print out. At the same time the chart recorder indicated only $30^{\circ}\text{F}\Delta T$. Since previous computer readings had been in question, it was assumed that the $30^{\circ}\text{F}\Delta T$ was correct.

Subsequently at ≈ 1600 on January 23 a calibration test was run on the circulating water temperature system and it was found that the true ΔT was about 32°F and that the chart recorder had been indicating about $2^{\circ}\text{F}\Delta T$ less than actual due to failure in an electronic component. It is uncertain when this failure occurred but the reading of the computer and the chart recorder were reasonably close to the same on January 17 and 18 (well below $31.2^{\circ}\text{F}\Delta T$), and the first major departure was noted on January 21, 22.

On this basis it may be presumed that the $>31.2^{\circ}\text{F}$ T started on January 21, 22 when trouble with the circulating water screens was encountered. Analysis of the temperature problem was complicated by subsequent failure of two circulating water traveling screen drives and the necessity of reversing flow on January 24 because of intake icing. However, as soon as it was established that $>31.2^{\circ}\text{F}$ T existed, the station power output was reduced to bring the ΔT below 31.2°F .

On January 24, 25 the discharge temperature/lake intake ΔT was between 51 and 53°F more than two hours following reverse flow contrary to the $50^{\circ}\text{F}\Delta T$ specification. This was caused by an inability to rapidly reduce recirculation flow.

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Following restoration to normal flow and during the reascent to full power, on January 28, 29, 1980, the 31.2°FΔT limit was again exceeded according to both the computer and chart readout. This condition was terminated when reactor power was subsequently reduced. Investigation disclosed that a reduction in circulating water flow was the primary cause.

On February 9, 1980, when the station was partially shut down for required tests, the condenser inlet water boxes were inspected and cleared of debris. An approximately 20,000 gallon per minute increase in condenser circulating water flow resulted.

Regular surveillance of redundant circulating water temperature measurements and prompt analysis of operating conditions leading to greater than normal condenser circulating water ΔT should assure that the occurrence of a prolonged period of excessive condenser ΔT will be prevented in the future. Instrument technicians, operators, and maintenance personnel have been informed on the causes, consequences and prevention of these occurrences.

Very truly yours,

original signed by James Bartlett

James Bartlett
Executive Vice President

MH:jl