

Iowa Electric Light and Power Company

August 2, 1982

DAEC-82-513

Mr. James G. Keppler
Regional Administrator
Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Change in Reportability Status of
July 20, 1982 Prompt Notification

Reference: DAEC 82-499 D. Mineck to J. Keppler
Prompt Notification of a Reportable
Occurrence, dtd July 20, 1982

File: A-118a, TE-2, TE-3

Dear Mr. Keppler:

On July 20, 1982, the enclosed prompt notification letter was telecopied to your office. During startup surveillance testing, the reactor recirculation jet pumps appeared not to meet Technical Specification flow balance requirements. Conservatively, the jet pumps were declared inoperable and a 24-hour limiting condition for operation (LCO) was entered in accordance with Technical Specification 3.6.E.1. Upon further investigation, it was found that the limit switch for the "A" M/G set (1G-201A) had drifted low enough to cause a 15 percent flow imbalance when compared to the "B" M/G set (1G-201B) running at the correct minimum speed. The "A" limit switch was adjusted and the jet pumps met flow balance requirements. The LCO was cancelled after 2.25 hours. This event was then determined to be not reportable. This letter contains the justification for that determination.

During startup from a cold shutdown condition, surveillance testing indicated that the reactor recirculation jet pumps did not meet Technical Specification flow balance requirements. Technical Specification 4.6.E.1.a requires that during operation or startup from a cold shutdown condition the two recirculation loops have a flow imbalance of less than 15 percent with the recirculation pumps operated at identical speeds. The surveillance procedure is used to identify leakage in the recirculation system. The test ensures that the jet pump integrity is not compromised and therefore water level would be maintained to two-thirds core height during and after a loss-of-coolant accident.

Due to the zero power level of the reactor at the time of the test, the pumps were being operated at their minimum speed. The minimum recirculation pump speed is set to be the minimum speed of the recirculation motor-generator (M/G) set. The minimum M/G set speed is controlled by the 20 percent runback limit switch on the M/G set dual limiter, and cannot be adjusted when

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feedwater flow is less than or equal to 20 percent and the M/G set is running. The minimum speed set by the adjustment of the limit switch is the running speed of the M/G set whenever the feedwater flow is less than 20 percent. Below this level of flow, the water in the downcomer region of the reactor is at saturation conditions and the pressure changes associated with jet pump operation can theoretically cause the water travelling through the jet pump to change to steam. This steam formation can result in jet pump cavitation. Feedwater flow of greater than 20 percent provides a subcooling margin sufficient to avoid jet pump cavitation. In order to avoid cavitation at low power, the recirculation pumps are required to operate no faster than the minimum speed when feedwater flow is less than 20 percent.

At the time of the surveillance test, the limit switch for the "A" M/G set (1G-201A) had drifted low enough to cause a 15 percent flow imbalance when compared to the "B" M/G set (1G-201B) running at the correct minimum speed. The plant was brought to a condition where the minimum M/G set speed for 1G-201A could be adjusted. The minimum speed of 1G-201A was set to match that of 1G-201B, and subsequent surveillance testing indicated that the jet pumps were and had been operable. The LCO was cancelled 2.25 hours after its initiation.

With the jet pump flow balance proven for identical recirculation pump speeds, the requirements of Technical Specification 4.6.E.1.a were met. The drifting of the limit switch was in the conservative direction. The lower jet pump flow would decrease the magnitude of the pressure changes of the water going through the jet pump and therefore provide an additional margin of protection from jet pump cavitation. This event is not one of the tested equipment failing, but one of the test criteria not being met. For these reasons, it has been determined that this event is not reportable.

If there are any questions concerning this event or the interpretation thereof, please advise.

Very truly yours,

D. L. Mineck / Bus

Daniel L. Mineck
Plant Superintendent - Nuclear

DLM/KLH/pl

cc: B. York
J. Vinquist
D. Wilson
R. Hannen
S. Brown
NRC Resident Inspector