



**Consumers
Power
Company**

COPY

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Office of Inspection & Enforcement
Region III
US Nuclear Regulatory Commission
799 Roosevelt Road
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DOCKET 50-155 - LICENSE DPR-6 -
BIG ROCK POINT PLANT - DEFICIENCIES
FOUND IN ANALYSIS FOR VERY SMALL BREAK LOCA

This letter is written to inform you of a possible deficiency which may exist in previous LOCA analyses for Big Rock Point. This deficiency is not considered a reportable occurrence under Technical Specifications requirements.

Big Rock Point normally operates with the reactor containment ventilated. Preliminary evaluation has shown that this condition may hinder detection and initiation of action for a loss of coolant accident caused by a pipe break smaller than those previously analyzed.

The reactor feed-water system and the water inventory normally present in the steam drum could accommodate the reactor coolant lost during a very small break. In this case, reactor trip might not occur due to low steam drum level. Previous analyses have assumed that the reactor would trip as a result of increased pressure in the containment. Recent, preliminary evaluation has identified that very small breaks might exist for which the containment ventilation system could prevent, or significantly delay, an increase in containment pressure. Delay of reactor scram in this case would result in the introduction of steam to the containment atmosphere, thereby increasing containment temperature. Subsequent initiation of the reactor depressurization system might result in containment temperature exceeding the design limit considered in the Final Hazards Summary report.

Several indicators exist by which the operator would know that a very small break had occurred. Principal indicators (alarmed in the control room) are containment temperature and dew point temperature monitors and low levels for both the condensate storage tank and condenser hot well. Additional indications include recirculating pump room temperature and steam leak detectors (not individually alarmed), observed mismatch in steam flow and feed flow, and local alarms on continuous air monitors.

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At this time, it is not known whether the condition discussed above would result in development of an unsafe condition or exceeding analyzed temperatures. Consumers Power Company is initiating a detailed analysis of this problem. This type of analysis (considering the effect of varying containment ventilation conditions) has not been previously performed for Big Rock Point and methods must be developed for performing the analysis. This analysis is currently expected to be completed in late summer of 1979.

Consumers Power Company considers it prudent to initiate temporary corrective actions to alleviate any problem which may exist. A containment temperature or dew point temperature alarm will be set to detect increases from normally observed conditions. Procedural corrective action will require the operator to immediately close the ventilation system intake and exhaust valves on receipt of this alarm. This action would lead to an increase in containment pressure in the event a very small break LOCA exists, thereby initiating reactor trip.

The discovery of this condition is not considered a reportable occurrence because of the uncertainty as to whether an unsafe condition could exist. If the analysis discussed above determines that permanent corrective action is required to prevent development of an unsafe condition, a licensee event report will be submitted.

David A Bixel (Signed)

David A Bixel
Nuclear Licensing Administrator

CC: Director, Office of Nuclear Reactor Regulation
Director, Office of Inspection and Enforcement