

ENCLOSURE

SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2 SEAL WATER INJECTION FLOW ELEMENTS HAVE WRONG ORIFICE SIZE NCR MEB 79-21 10 CFR 50.55(e) FINAL REPORT

Description of Deficiency

During preoperational testing in Unit 1 it was found that the seal water injection flow elements have an orifice size larger than specified by the NSSS design. This deficiency resulted from a confusion over Westinghouse supplied drawings. The original drawing showing the instrument tag numbers was partially superseded by a different later drawing. The change in the tag numbers was not noticed and both drawings were given approved status by TVA. Since the discrepancy between the two drawings was not discovered by design or construction personnel, the orifice size on the original drawing was installed.

Safety Implications

During normal operation these flow elements are used to regulate flow to the Reactor Coolant Pump (RCP) seals. Under accident conditions the centrifugal charging pumps start, flow to the regenerative heat exchanger is isolated and flow is sent to the boron injection tank and the RCP seals. If the orifices are too large, an excess flow would go to the RCP seals and an insufficient flow would go to the boron injection tank. Since the flow to the boron injection tank is then less than the design flow, it would take longer to inject the contents of the boron injection tank. Thus, the boron injection system would not perform as designed.

Corrective Action

In Unit 1 the correct orifices will be installed and the flow elements will be recalibrated before fuel loading. The seal injection flows will be rebalanced after initial heatup.

The orifices in Unit 2 will be checked to determine if the proper size was installed. If the wrong size orifices were installed in Unit 2, the corrective action will also apply to Unit 2.

Action Taken to Prevent Recurrence

To avoid a confusion over drawings in the future, Westinghouse has been requested to revise the original drawing instead of transmitting a new drawing which only partially supersedes the original drawing.

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