

OYSTER CREEK NUCLEAR GENERATING STATION
FORKED RIVER, NEW JERSEY 08731

Abnormal Occurrence
Report No. 50-219/74/20

Report Date

March 18, 1974

Occurrence Date

March 10, 1974

Identification of Occurrence

Violation of the Technical Specifications, paragraph 4.5.F.1.d, failure of main steam isolation valves NS04A and NS04B to meet the allowable leakage requirements. This event is considered to be an abnormal occurrence as defined in the Technical Specifications, paragraph 1.15D and E.

Conditions Prior to Occurrence

The plant was shut down with reactor coolant at $<212^{\circ}\text{F}$.

Description of Occurrence

The main steam isolation valves were leak rate tested in the "as found" condition. Leakage rates of main steam isolation valves NS04A and NS04B were 64.7 SCFH and 12.2 SCFH, corrected to 20 psi. The maximum allowable leakage rate is 9.945 SCFH, as required by the Technical Specifications, paragraph 4.5.F.1.d.

Apparent Cause of Occurrence

The cause of this occurrence is attributed to component failure. After checking the test assembly and the components of the main steam isolation valves, it was determined that the lower packing rings around the valve shaft was the cause of the excessive leak rate. The leakage was out of the leakoff line between the upper and lower sets of packing.

Analysis of Occurrence

The safety significance of the failure of NS04A and NS04B to pass the leakage rate test was a loss of redundancy in an engineered safety feature designed to minimize the release of fission products under design basis accident conditions. It should be noted that any leakage through the lower set of packing would be into the reactor building equipment drain tank and would be released through the plant stack via the standby gas treatment system. It should also be noted that

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the inside main steam isolation valves had no detectable leakage and, therefore, there would have been no leakage out of the primary containment during an accident condition.

Corrective Action

The main steam isolation valve shaft packing leakoff valve (between upper and lower sets of packing) were closed and the main steam isolation valves were retested successfully. These valves will remain in the closed position until the 1974 refueling outage. At this time, main steam isolation valve NS04A will receive complete preventive maintenance and NS04B will be inspected and completely repacked.

The leak rate tests for NS03A and NS03B assume that NS04A and NS04B have negligible leakage. Therefore, NS03A and NS03B were retested after the packing leakoff valves of NS04A and NS04B had been closed. Valves NS03A and NS03B were found to have acceptable leakage rates.

Failure Data

The valve stem packing on NS04A failed on September 27, 1973 and again on January 16, 1974. Each time, the valve was repacked and subsequently passed its leak rate test. The valve stem packing on NS04B failed on September 27, 1973 and was subsequently repacked and retested successfully. The above occurrences were reported by letter, Mr. A. Giambusso from D. A. Ross dated October 12, 1973 and by Abnormal Occurrence Report No. 50-219/74/5.