NRC FORM 366
(7-77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

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2456.00

Additional Event Description and Probable Consequences

The Plant Nuclear Safety Committee (PNSC) reviewed the evaluation of the Unit 4 Reactor Coolant System leakage rate that was in excess of 1 gpm. The sequence of events and the evaluation follows:

At about 7:00 AM on Tuesday, March 20, 1979, the routine calculation of RCS leak rate indicated a leak rate of 1.27 gpm. An investigation was initiated to determine the source of this excess leakage.

By 3:00 PM, March 20, 1979, it was tentatively determined that the source of the excess leakage was from:

(1) The 4A Reactor Coolant Pump number 2 seal leak-off as there were periodic standpipe "high level" alarms,

(2) valve packing leak-off to the Reactor Coolant Drain Tank (RCDT) as observed by periodically needing to quench the Reactor Coolant Drain Tank to maintain temperature below 180°F, and

(3) the 4A and 4B charging pump seal pots overflowing.

The leak rate remained stable at approximately 1.60 gpm through Wednesday, March 21, 1979.

By about 7:00 AM on Thursday, March 22, 1979, the leak rate had increased to 1.85 gpm and by 12:30 PM had increased to 2.85 gpm. At about 1:35 PM, the decision was made to place the reactor in hot shutdown in order to make entry inside the containment biological shield to determine the source of the increased leak rate.

The reactor was in hot shutdown at about 2:40 PM.

At 4:45 PM, a containment entry was made. The source of the leaks was found to be valve packing leak-offs to the RCDT from pressurizer valves MOV-4-535, MOV-4-536 and PCV-4-455A. In addition, a minor leak was found from a swagelok fitting at the incore detector seal table for one of the incore detector thimbles that was draining to the containment sump. All leaks were evaluated as minor.

At about 8:30 AM on Friday, March 23, 1979, a second containment entry was made to ensure that all leakage areas had been identified and that the leakage at the incore detector seal table had not increased. No additional leaks were found and the leak rate at the incore detector seal table had not increased above the original leak rate observed.

Unit 4 was returned to service at about 2:40 PM on Friday, March 23, 1979.

The PNSC agreed with the evaluation that the leakage rate was minor and recommended the leak rate be checked once per each 8 hour shift in order to monitor trends in the water inventory. The PNSC determined operation of Unit 4 with this leakage would not involve any unreviewed safety questions.