



# Nebraska Public Power District

COOPER NUCLEAR STATION  
P.O. BOX 98, BROWNVILLE, NEBRASKA 68321  
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CNSS800344

June 12, 1980

Mr. K. V. Seyfrit  
U.S. Nuclear Regulatory Commission  
Office of Inspection and Enforcement  
Region IV  
611 Ryan Plaza Drive  
Suite 1000  
Arlington, Texas 76011

Dear Sir:

This report is submitted in accordance with Section 6.7.2.B.2 of the Technical Specifications for Cooper Nuclear Station and discusses a reportable occurrence that was discovered on May 21, 1980. A licensee event report form is also enclosed.

Report No.: 50-298-80-12  
Report Date: June 12, 1980  
Occurrence Date: May 21, 1980  
Facility: Cooper Nuclear Station  
Brownville, Nebraska 68321

During the spring 1980 refueling outage, all primary containment double "O" ring seals, testable expansion bellows, electrical penetrations, and testable isolation valves were tested in accordance with Technical Specifications Section 4.7.A.2.f and Tables 3.7.2 through 3.7.4. This report describes a condition which may have resulted in the limiting condition for operation established in Section 3.7.A.2 of the Technical Specifications not being met. There were a total of 47 Type "B" penetrations and 46 Type "C" penetrations tested. There were 8 Type "C" penetrations that were found to be leaking above established limits which necessitated repair and retest. One double "O" ring seal (Type "B") was leaking excessively. The seal was cleaned and retested satisfactorily. Leak rate limits for each penetration are arbitrary limits established from the preoperational local leak rate test results. No electrical penetrations, or testable bellows were leaking excessively. Listed is a summary of each primary containment penetration which was repaired due to a high leakage rate.

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X-7D

Main Steam Isolation Valves MS-AO-80D (inboard isolation valve) and MS-AO-86D (outboard isolation valve) Test Pressure 29 PSIG

Initial leakage was found to be 14.2 cfh. The established limit is 5.0 scfh, and the Technical Specification is 11.5 scfh per valve. Investigation revealed a slight packing leak on MS-AO-86D. The packing was adjusted and the valve was stroked and retested. The leak rate after the adjustment was 6.2 cfh. MS-AO-80D was not repaired or adjusted. Therefore, primary containment would have been maintained by the inboard isolation valve MS-AO-80D. The leaking valve is a 24" air operated angle globe valve manufactured by Rockwell.

X-10

RCIC Turbine Steam Supply Line, RCIC-MO-15 (inboard isolation valve) and RCIC-MO-16 (outboard isolation valve)

Initial leakage was found to be 23.73 cfh. The established limit is 2.0 scfh. RCIC-MO-15 was disassembled and the seats polished. After repair the leakage was reduced to 16.68 cfh. RCIC-MO-16 was then disassembled and the seats polished. After the repair of RCIC-MO-16, leak rate was reduced to 6.92 scfh. Even though this value was above the established limit, further repair was not initiated because of the safety margin in the established limits and for personnel ALARA concerns. The leaking valves are Anchor 3" gate valves with Limitorque motor operators.

X-26

Purge and Vent Exhaust from the Drywell. PC-231 MV (inboard isolation valve), PC-56 (inboard isolation valve bypass), PC-246 AV (outboard isolation valve) and ACAD-1310 MV (ACAD Drywell Vent)

Initial leakage was found to be 60.5 cfh. The established limit is 3.0 scfh. PC-231 MV was disassembled and the rubber seating ring replaced. After repair, the leakage was 3.1 cfh. PC-246 AV and ACAD-1310 MV were not repaired or adjusted. Therefore, primary containment would have been maintained by the outboard isolation valves. PC-231 MV is a 24" Allis-Chalmers butterfly valve.

X-39B

ACAD "B" Loop Supply to the Drywell. ACAD-1311 MV (inboard isolation valve and ACAD-1312 MV (outboard isolation valve)

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Initial leakage was found to be 4 cfh. The established limit is 0.1 scfh. Both ACAD-1311 MV and ACAD-1312 MV were disassembled and the seats were polished. After repair, the leakage was reduced to 0.16 cfh. Even though this valve was above the established limit, further repair was not initiated because of the safety margin in the established limits. The leaking valves are Anchor 1" gate valves with Limitorque motor operators.

#### X-210B and X-211B

RHR to Suppression Pool. RHR-MO-34B (suppression pool cooling inboard)  
RHR-MO-38B (suppression pool inboard spray) and RHR-MO-39B (suppression pool cooling and spray outboard block valve)

Initial leakage was found to be 164 cfh. The established limit is 8.0 scfh. RHR-MO-39B was disassembled and the seats were lapped. After repair of RHR-MO-39B, the leakage was 6.0 cfh. RHR-MV-34B and RHR-MO-38B were not repaired or adjusted. Therefore, primary containment would have been maintained by the outboard isolation valves. RHR-MO-39B is an Anchor 18" gate valve.

#### X-212

RCIC Turbine Exhaust to the Suppression Chamber, RCIC-15 CV and RCIC-37 CV

The test volume for this penetration is between RCIC-15 CV and RCIC-37. RCIC-37 is a manually operated globe stop check valve. Initial leakage was found to be 20.5 cfh. The established limit was 1.0 scfh. Both RCIC-15 CV and RCIC-37 were disassembled for repair and it was found the seating surfaces were rough. The seats were lapped on both valves. After repair of both valves the leak rate was 4.11 cfh. Even though the leakage was above the established limit, further repair was not initiated because of the safety margin in the established limits. RCIC-15 CV is an Anchor 8" swing check valve. RCIC-37 is an Anchor 8" globe stop check valve.

#### X-220

Purge and Vent Exhaust from the Suppression Chamber. PC-230 MV (inboard isolation valve), PC-57 (inboard isolation bypass), PC-245 AV (outboard isolation valve) and ACAD-1308 MV (ACAD torus vent)

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Initial leakage was found to be 227.6 cfh. The established limit is 5.0 scfh. PC-245 AV was disassembled and the rubber seating ring replaced. After repair the leakage was 0.91 cfh. PC-230 MV and PC-57 were not repaired or adjusted. Therefore, primary containment would have been maintained by the inboard isolation valves. PC-245 AV is a 24" Allis-Chalmers butterfly valve.

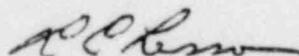
X-6

CRD Removal Hatch

Initial leakage was found to be 1.15 cfh. The established limit is .1 scfh. The hatch was reopened and the seal was cleaned and lubricated. After reclosing, the hatch was retested with zero leakage. The CRD removal hatch is a 24" penetration with double "O" ring seals manufactured by Tube Turns.

Per Section 4.7.A.2.f of the Technical Specifications, all valves were tested at greater than 58 psig with the exception of the MSIV's. Pressure decay or water collection was used to determine the leakage. The total as found leakage was 602.8 cfm. Of this, the uncontained leakage was determined to be less than 160.8 scfh. This is less than the Technical Specification limit of 0.6 La (189 scfh). After repair of the leaking valves, the leak rate was reduced to less than 124.21 scfh.

Sincerely,



L. C. Lessor  
Station Superintendent  
Cooper Nuclear Station

LCL:DLP:cg  
Attach.