



Commonwealth Edison  
Quad-Cities Generating Station  
Post Office Box 216  
Cordova, Illinois 61242  
Telephone 309/654-2241

December 28, 1973



J. F. O'Leary, Director  
Directorate of Licensing  
U. S. ATOMIC ENERGY COMMISSION  
Washington, D. C. 20545

REFERENCE: A. Quad-Cities Nuclear Power Station, Unit 1 and 2  
Dockets 50-254 and 50-265  
License DPR-29 and DPR-30

B. My letter to you BBS-73-266 of December 4, 1973.

Dear Mr. O'Leary:

The purpose of this letter is to report the findings of our further inspections of the Ohio Injector Company (OIC) valves installed at Quad-Cities Nuclear Power Station. These inspections were conducted after the disc separated from the stem of one of the OIC valves as reported in my letter to you on December 4, 1973.

#### INVESTIGATION

After discovering that the stem to the downstream service water isolation valve 2-1001-185B to the 2B RHR system heat exchanger was uncoupled from its disc, an inspection of valves installed in similar locations revealed that five valves of this type are installed in the station; two in Unit 1 and three in Unit 2. All valves were checked for stem-disc attachment by attempting to rotate the stem with each valve in an intermediate position. Since these are gate valves rotation of the stem should not be possible; no abnormalities were detected. In addition to the 2-1001-185B valve, two valves were disassembled and inspected.

The results of the inspection revealed that there are two different types of valves. Two of the valves have higher bonnets than the other three valves. These two valves are 2-1001-185B and 1-1001-185A. The three valves with lower bonnets are numbered 1-1001-187B, 2-1001-186B and 2-1001-187B.

Measurements taken on a high bonnet valve and on a low bonnet valve show that the stem-disc assembly on a low bonnet valve is limited in travel to its backseat by 3 3/8 inches less than the stem-disc assembly on the high bonnet valve. The significance of this is that in the high bonnet type valve the disc is pulled out far enough so that it comes off the valve body ways and falls off its stem. Conversely, the low bonnet type valve is limited in travel so that when it is on its backseat the disc is still sitting in the valve body ways and cannot fall off its stem.

8306130253 731228  
PDR ADOCK 05000254  
S PDR

*Handwritten:* 8-25-75

76

COPI SENT REGION

Mr. John F. O'Leary

-2-

December 28, 1973

The 1-1001-185A high bonnet valve was repaired in the same manner as the 2-1001-185B valve. This repair consisted of drilling a 1/4 inch hole perpendicular to the disc on either side of the disc notch and bolting a 1/4 inch thick strap on either side of the disc over the flared stem. Nuts were tightened and welded to the bolts.

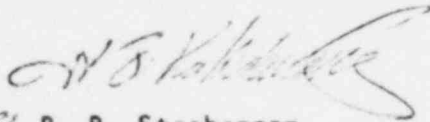
EVALUATION

No repair was necessary on the low bonnet valves 1-1001-187B, 2-1001-186B and 2-1001-187B since they are correctly designed and the stem-disc arrangement cannot uncouple when the valves are on their backseats. The repair to both high bonnet valves 1-1001-185A and 2-1001-185B pinned the disc onto the stem and the coupling cannot disengage. Therefore, we now have assurance that all of the OIC valves installed at Quad-Cities will perform their intended functions in the future.

Since the valves in question were purchased and installed during plant construction by the General Electric Company, we have advised them of the results of our investigations. We have requested that they review this apparent design inadequacy further and make recommendations for any further corrective action with regard to this problem.

Very truly yours,

COMMONWEALTH EDISON COMPANY  
QUAD-CITIES NUCLEAR POWER STATION



*For* B. B. Stephenson  
Station Superintendent

BBS/dkp

BBS-73-282

cc: Regional Director  
Directorate of Regulatory Operations - Region III