



UNITED STATES
ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

TELEPHONE
(312) 858-2660

December 6, 1972

Northern States Power Company
ATTN: Mr. Leo Wachter, Vice President
Power Production
419 Nicollet Mall
Minneapolis, Minnesota 54401

Docket No. 50-263

Gentlemen:

The attached Directorate of Regulatory Operations Bulletin No. 72-3, "Limitorque Valve Operator Failures," is sent to you to provide you with information we received from the Northern States Power Company and the Commonwealth Edison Company concerning valve operator malfunctions experienced at their respective facilities. This information may relate to the performance of similar motor operated valves at your facilities. The Bulletin also requests certain action on your part related to this matter.

Should you have any questions concerning this matter, we will be pleased to discuss them with you.

Sincerely yours,

Boyce H. Grier
Regional Director

Attachment:
RO Bulletin No. 72-3

bcc: RO Files
DR Central Files
PDR
Local PDR

Limitorque Valve Operator Failures

Regulatory Operations recently received information relating to the malfunction of electric type valve operators at two reactors. The valve operators were identified as Limitorque Models SMB-00 and SMB-000 which are used extensively in safety related systems at a number of PWR and BWR reactor facilities. Subsequent investigation identified a specific production group of these models which were manufactured between 1969 and mid-1971. The specific deficiencies are described as follows:

Plant A

Testing of valves and valve operators used in safety related systems at this facility disclosed ten valves that failed to close following a "valve full open operation" test. The cause of failure was attributed to malfunction of the valve operator torque switch due to a lack of proper clearance between the moving parts of the torque switch unit and the inability of the "torque switch torsion spring" to return the electrical contacts to a closed position following operation of the valve. The weak torsion spring is considered a common mode of failure. Approximately 150 valves ranging up to eight inches in size were equipped with valve operators having the faulty switches.

Plant B

During a reactor startup, the inboard steam supply valve of the reactor core isolation coolant (RCIC) system failed in the open position. Several attempts were made unsuccessfully to close the valve. The failure was attributed to an internal torsion spring in the valve operator torque switch which normally resets the electrical contacts. The valve operator in question is similar to the units which failed at Plant A.

Two additional facilities have recently experienced similar failures since those reported at plants A and B.

It is requested that you determine whether valve operators of the described make, model, and vintage are installed or scheduled to be installed in your facility. If your findings show that valves installed or scheduled to be installed are equipped with the described valve operators, please inform this office within thirty days, in writing, of the number of valves equipped with the valve operators, the systems in which the subject valves are installed or scheduled to be installed, a description of corrective actions taken or planned, and the scheduled completion date of your corrective actions.