



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION III  
799 ROOSEVELT ROAD  
GLEN ELLYN, ILLINOIS 60137

APR 17 1981

*Certial Files*

RECEIVED  
APR 17 1981  
COMMUNICATIONS SECTION

Gentlemen:

The enclosed IE Information Notice No. 81-14 titled "Potential Overstress of Shafts on Fisher Series 9200 Butterfly Valves with Expandable T Rings" was sent to the licensees listed below on April 17, 1981:

American Electric Power Service Corporation  
Indiana and Michigan Power Company  
D. C. Cook 1, 2 (50-315, 50-316)

Commonwealth Edison Company  
Dresden 1, 2, 3 (50-10, 50-237, 50-249)  
Quad-Cities 1, 2 (50-254, 50-265)  
Zion 1, 2 (50-295, 50-304)

Consumers Power Company  
Big Rock Point (50-155)  
Palisades (50-255)

Dairyland Power Cooperative  
LACBWR (50-409)

Iowa Electric Light and Power Company  
Duane Arnold (50-331)

Northern States Power Company  
Monticello (50-263)  
Prairie Island 1, 2 (50-282, 50-306)

Toledo Edison Company  
Davis-Besse 1 (50-346)

Wisconsin Electric Power Company  
Point Beach 1, 2 (50-266, 50-301)

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Wisconsin Public Service Corporation  
Kewaunee (50-305)

Sincerely,

Dorothy E. Carroll, Chief  
Word Processing and Document  
Control Section

Enclosure: IE Information  
Notice No. 81-14

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Carroll/np  
4/17/81

SSING No.: 6835  
Accession No.:  
8011040292  
IN 81-14

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT  
WASHINGTON, D.C. 20555

April 17, 1981

IE Information Notice No. 81-14: POTENTIAL OVERSTRESS OF SHAFTS ON FISHER  
SERIES 9200 BUTTERFLY VALVES WITH EXPANDABLE  
T RINGS

Description of Circumstances:

Northern States Power Company recently informed NRC that the design of certain butterfly valves at Monticello Nuclear Generating Station contained a design error that shows the calculated maximum shaft stress to be underestimated. The valves affected are Fisher Controls Company Series 9200 butterfly valves (6 to 48 inches) with expandable T rings (inflatable seals) manufactured from 1968 to 1972. In the calculation of the shaft stress, the length between the shaft bushing and the attachment of the shaft to the valve disc used in the stress calculations was shorter than the actual length. From discussions with the valve manufacturer, the cause of the difference in the design calculation dimension and the actual dimension was that the shaft bushings were recessed into the valve body to accommodate the pneumatic passages for the inflatable seals. Evaluation of the design error for the valves at Monticello indicate that the maximum shaft stress in the closed position remains less than the minimum yield strength of the shaft material. The licensee intends to keep the affected valves closed while operating and plans to replace the shafts with ones of higher strength material.

The potential consequences of the design error is that, under accident loading conditions, there is a possibility for excessive deformation of the shaft. Therefore, these valves when closed under the dynamic conditions of a LOCA or, if already closed, may not seal essentially leaktight. Since these valves are used primarily in the containment purge and vent lines, a substantial safety hazard would exist if these valves could not be closed or if there was excessive leakage past these valves. Containment integrity therefore could not be assured. The operability of containment purge and vent valves is item II.E.4.2 in the TMI Action Plan.

The facilities identified that may have the Fisher valves include Duane Arnold, Monticello, Palisades, Peach Bottom Units 2 and 3, and Point Beach Units 1 and 2. Discussions with the valve vendor indicate that the reviews of the valve calculations affected should be completed by mid-April.

This information is provided as an early notification of a significant safety matter that is still under review by the NRC staff. It is expected that licensees will review the information for possible applicability to their plants. If NRC evaluations so indicate, further licensee actions may be requested.

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April 17, 1981  
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No written response to this information notice is required. If you need additional information with regard to this matter contact the Director of the appropriate NRC Regional Office.

Attachment:  
Recently issued Information Notices

Attachment  
IN 81-14  
April 17, 1981

RECENTLY ISSUED  
IE INFORMATION NOTICES

Information Notice No.	Subject	Date of Issue	Issued to
81-13	Jammed Source Rack in a Gamma Irradiator	4/14/81	Specified Irradiator licensees
81-12	Guidance on Order Issued January 9, 1981 Regarding Automatic Control Rod Insertion on Low Control Air Pressure	3/31/81	All BWR facilities with an OL or CP
81-11	Alternate Rod Insertion for BWR Scram Represents a Potential Path for Loss of Primary Coolant	3/30/81	All BWR facilities with an OL or CP
81-10	Inadvertant Containment Spray Due to Personnel Error	3/25/81	All power reactor facilities with an OL or CP
81-09	Degradation of Residual Heat Removal (RHR) System	3/26/81	All power reactor facilities with an OL or CP
81-08	Repetitive Failures of Limitorque Operator SNB-4 Motor-to-Shaft Key	3/20/81	All power reactor facilities with an OL or CP
81-07	Potential Problem with Water-Soluble Purge Dam Materials Used During Inert Gas Welding	3/16/81	All power reactor facilities with an OL or CP
81-06	Failure of ITE Model K-600 Circuit Breaker	3/11/81	All power reactor facilities with an OL or CP
81-05	Degraded DC System at Palisades	3/13/81	All power reactor facilities with an OL or CP
81-04	Cracking in Main Steam Lines	2/27/81	All power reactor facilities with an OL

OL = Operating Licenses  
CP = Construction Permits