



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

November 6, 1980

Those on Attached Address Listing:

The enclosed IE Bulletin No. 80-21 requires your action with regard to your power reactor facility(ies) holding an operating license or a construction permit. Should you have questions concerning this bulletin or the actions required of you, please contact this office.

Sincerely,

*AB Davis*

*for* James G. Keppler  
Director

Enclosure: IE Bulletin  
No. 80-21

cc w/encl:  
Mr. D. W. Kane,  
Sargent & Lundy  
Reproduction Unit NRC 20b

8101030471

Q

RIII's CORPORATE ADDRESSES FOR OPERATING LICENSEES AND CONSTRUCTION PERMIT HOLDERS  
(BWR's and PWR's)

Docket No. 50-329

Docket No. 50-330

Consumers Power Company  
ATTN: Mr. James W. Cook  
Vice President  
Midland Project  
1945 West Parnall Road  
Jackson, MI 49201

cc w/encl:  
Central Files  
Director, NRR/DPM  
Director, NRR/DOR  
PDR  
Local PDR  
NSIC  
TIC  
Ronald Callen, Michigan  
Public Service Commission  
Myron M. Cherry, Chicago

Docket No. 50-409

Dairyland Power Cooperative  
ATTN: Mr. F. W. Linder  
General Manager  
2615 East Avenue - South  
La Crosse, WI 54601

cc w/encl:  
Mr. R. E. Shimshak,  
Plant Superintendent  
Central Files  
Director, NRR/DPM  
Director, NRR/DOR  
AEOD  
Resident Inspector, RIII  
PDR  
Local PDR  
NSIC  
TIC  
Mr. John Duffy, Chief  
Boiler Inspector

RECEIVED  
NOV 10 11 1 03  
REGISTRATION

SSINS No.: 6820  
Accession No.:  
8008220246  
IEB 80-21

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

*Dupe*

November 6, 1980

IE BULLETIN NO. 80-21: VALVE YOKES SUPPLIED BY MALCOLM FOUNDRY COMPANY, INC.

Description of Circumstances:

On June 17, 1980, Pennsylvania Power and Light Company notified IE Region I that cracks had been discovered in the yokes of a number of valves in the residual heat removal (RHR) system at their Susquehanna Steam Electric Station. The potential for common-mode failure of the yokes on several valves in redundant, safety-related trains of the RHR system constitutes a failure mode whereby all RHR functions could be simultaneously lost. Specifically, the cracks were located in the radii at the yoke mounting flange-to-yoke vertical section interface.

An analysis and evaluation of the most severely cracked valve yoke was performed by the valve manufacturer, Anchor Darling Valve Company. They concluded that the cracking was not due to casting defects, but rather was due to the yoke material not having the proper mechanical properties. Purchased as ASTM A-216, Grade WCB material, the actual valve yoke material had tensile and yield strengths below the minimum values listed in the ASTM material specification. The cracked valve yokes were all cast by Malcolm Foundry Company, Inc., of Newark, New Jersey. The foundry is no longer in business.

Anchor Darling has begun a program of verifying the tensile strengths of the other valve yokes cast by Malcolm and used on Anchor Darling valves at Susquehanna. To date, approximately half of the valve yokes have been tested. Of those tested, over 25 percent of the valve yokes have revealed Brinell hardness values significantly below the appropriate value obtained from the approximate relationship of Brinell hardness to tensile strength included in ASTM Specification A-370. These additional valve yokes are on a wide range of valve sizes and are from a number of different purchase orders placed with Malcolm over a period of at least ten months during 1974 and 1975. Thus, it appears that the problem is not isolated to one heat of material or to one short time period. Anchor Darling intends to replace the defective valve yokes at Susquehanna and to begin a testing program at other nuclear power plants under construction where valves with valve yokes cast by Malcolm have been provided.

Since Malcolm Foundry Company, Inc., is no longer in business, the NRC staff cannot determine directly if Malcolm has provided valve parts to other valve manufacturers for use in nuclear power plants.

Actions To Be Taken by Addressees:

For all power reactor licensees or holders of construction permits the following actions are required:

1. Determine if any of the active valves in use or planned for use in safety-related systems at your facility have valve parts cast by Malcolm Foundry Company, Inc. If no valves are identified as having potentially faulty material, indicate that this is the case and ignore the remaining questions.
2. Licensees having active safety-related valves with potentially faulty material shall immediately visually inspect for cracks all normally accessible valve parts (i.e., those which can be inspected during reactor operation).
3. Licensees or permit holders having active safety-related valves with potentially faulty material shall identify the manufacturer(s) of these valves and either:
  - a. Verify that all valve parts cast by Malcolm have mechanical properties in accordance with the ASTM material specification; if such is not the case, then comply with either b. or c. below also.
  - b. Replace the defective materials and/or valves.
  - c. Identify any other corrective actions that may be exercised and the basis for such actions.

For plants with an operating license, the results of your initial determination (item 1), visual inspection results (item 2), a list of affected valve manufacturers, your planned action (item 3), and the schedule for accomplishing this action shall be reported within thirty days of the date of this bulletin to the Director of the appropriate NRC Regional Office with a copy sent to the NRC Office of Inspection and Enforcement, Division of Reactor Construction Inspection, Washington, DC 20555.

For plants with a construction permit, the results of your initial determination (item 1), a list of affected valve manufacturer(s), your planned action (item 3) and the schedule for accomplishing this action shall be reported within sixty days of the date of this bulletin to the Director of the appropriate NRC Regional Office with a copy sent to the NRC Office of Inspection and Enforcement, Division of Reactor Construction Inspection, Washington, DC 20555.

Compliance with this bulletin by the licensees does not relieve the affected valve manufacturers from the reporting requirements of 10 CFR Part 21.

If you desire additional information regarding this matter, please contact the appropriate IE Regional Office.

Approved by GAO, B180225 (R0072); clearance expires November 30, 1980. Approval was given under a blanket clearance specifically for identified generic problems.

RECENTLY ISSUED  
IE BULLETINS

Bulletin No.	Subject	Date Issued	Issued To
Supplement 3 to 79-108	Environmental Qualification of Class 1E Equipment	10/24/80	All power reactor facilities with an OL
Supplement 2 to 79-018	Environmental Qualification of Class 1E Equipment	9/30/80	All power reactor facilities with an OL
80-22	Automation Industries, Model 200-520-008 Sealed-source Connectors	9/11/80	All radiography licensees
79-26 Revision 1	Boron Loss from BWR Control Blades	8/29/80	All BWR power facilities with an OL
80-20	Failures of Westinghouse Type W-2 Spring Return to Neutral Control Switches	7/31/80	To each nuclear power facility in your region having an OL or a CP
80-19	Failures of Mercury-Wetted Matrix Relays in Reactor Protective Systems of Operating Nuclear Power Plants Designed by Combustion Engineering	7/31/80	All nuclear power facilities having either an OL or a CP
80-18	Maintenance of Adequate Minimum Flow Thru Centrifugal Charging Pumps Following Secondary Side High Energy Line Rupture	7/24/80	All PWR power reactor facilities holding OLs and to those PWRs nearing licensing
Supplement 2 to 80-17	Failures Revealed by Testing Subsequent to Failure of Control Rods to Insert During a Scram at a BWR	7/22/80	All BWR power reactor facilities holding OLs
Supplement 1 to 80-17	Failure of Control Rods to Insert During a Scram at a BWR	7/18/80	All BWR power reactor facilities holding OLs
80-17	Failure of Control Rods to Insert During a Scram at a BWR	7/3/80	All BWR power reactor facilities holding OLs

RIII's CORPORATE ADDRESSES FOR OPERATING LICENSEES AND CONSTRUCTION PERMIT HOLDERS  
(BWR's and PWR's)

Docket Nos. 50-10, 50-237, 50-249;  
50-254, 50-265; 50-295, 50-304; 50-373,  
50-374; 50-454, 50-455; 50-456 and 50-457

Commonwealth Edison Company  
ATTN: Mr. Cordell Reed,  
Vice President  
Post Office Box-767  
Chicago, IL 60690

cc w/encl:

Mr. J. S. Able, Director of Nuclear Licensing	Mr. Gunner Sorensen, Site Project Superintendent
Mr. D. J. Scott, Station Superintendent	Mr. R. Cosaro, Project Superintendent
Mr. N. Kalivianakis, Station Superintendent	Mr. J. F. Gudac, Station Superintendent
Mr. K. Graesser, Station Superintendent	Central Files Director, NRR/DPM
Mr. L. J. Burke, Site Construction Superintendent	Director, NRR/DOR AEOD
Mr. T. E. Quaka, Quality Assurance Supervisor	Resident Inspectors, RIII PDR
Mr. R. H. Holyoak, Station Superintendent	Local PDR NSIC
Mr. B. B. Stephenson, Project Manager	TIC
Mr. V. I. Schlosser, Project Manager	Mr. Dean Hansell, Office of Assistant Attorney General
Mr. R. E. Querio, Station Superintendent	Myron M. Cherry, Chicago

Docket No. 50-358

Cincinnati Gas and Electric  
Company  
ATTN: Mr. Earl A. Borgmann  
Senior Vice President  
Engineering Services  
and Electric Production  
139 East 4th Street  
Cincinnati, OH 45201

cc w/encl:

Mr. J. R. Schott, Plant Superintendent	Local PDR
Central Files	NSIC
Director, NRR/DPM	TIC
Director, NRR/DOR	Harold W. Kohn, Power Siting Commission
AEOD	Citizens Against a Radioactive Environment
Resident Inspector, RIII PDR	Helen W. Evans, State of Ohio

RIII's CORPORATE ADDRESSES FOR OPERATING LICENSEES AND CONSTRUCTION PERMIT HOLDERS  
(BWR's and PWR's)

Docket No. 50-341

The Detroit Edison Company  
ATTN: Mr. Edward Hiles, Assistant  
Vice President and Manager  
of Life Assurance  
2000 Second Avenue  
Detroit, MI 48226

cc w/encl:  
Central Files  
Director, NRR/DPM  
Director, NRR/DOR  
AEOD  
Resident Inspector, RIII  
PDR  
Local PDR  
NSIC  
TIC  
Ronald Callen, Michigan Public  
Service Commission  
Eugene B. Thomas, Jr.,  
Attorney

Docket No. 50-461

Docket No. 50-462

Illinois Power Company  
ATTN: Mr. W. C. Gerstner  
Executive Vice President  
500 South 27th Street  
Decatur, IL 62525

cc w/encl:  
Central Files  
Director, NRR/DPM  
Director, NRR/DOR  
PDR  
Local PDR  
NSIC  
TIC  
Mr. Dean Hansell, Office of  
Assistant Attorney General  
Mr. Gary N. Wright, Chief  
Division of Nuclear Safety

RIII RATE ADDRESSES FOR OPERATING LICENSEES AND CONSTRUCTION PERMIT HOLDERS  
(BWRWR's)

Dock0-331

Iowac Light and Power  
Cor

ATTN: Nuane Arnold  
Agent

IE To  
P. O. :  
Cedar, IA 52405

cc w/

D. Mief

Cent

Direct/DPM

Direct/DOR

AEOD

Residector, RIII

PDR

Local

NSIC

TIC

Docket-367

Northena Public Service  
Comp

ATTN: Gene M. Shorb  
Vice President

5265 Avenue  
Hammor, 6325

cc w/e

Centra

Direct/DPM

Direct/DOR

PDR

Local

NSIC

TIC

Mr. Dell, Office of  
Assistant Attorney General



RIII's CORPORATE ADDRESSES FOR OPERATING LICENSEES AND CONSTRUCTION PERMIT HOLDERS  
(BWR's and PWR's)

Docket No. 50-263  
Docket No. 50-282  
Docket No. 50-306

Northern States Power Company  
ATTN: Mr. Dennis E. Gilberts  
Vice President  
Power Production and System  
Operation  
414 Nicollet Mall  
Minneapolis, MN 55401

cc w/encl:

Mr. W. A. Shamla,  
Plant Manager  
Mr. F. P. Tierney, Jr.,  
Plant Manager  
Central Files  
Director, NRR/DPM  
Director, NRR/DOR  
AEOD

Resident Inspectors, RIII  
PDR  
Local PDR  
NSIC  
TIC  
John W. Ferman, Ph.D.,  
Nuclear Engineer, MPCA

Docket No. 50-546  
Docket No. 50-547

Public Service of Indiana  
ATTN: Mr. S. W. Shields  
Senior Vice President  
Nuclear Division  
Post Office Box 190  
New Washington, IN 47162

cc w/encl:

Mr. Steve J. Brewer, Nuclear  
Safety and Licensing Supervisor  
Central Files  
Director, NRR/DPM  
Director, NRR/DOR  
PDR  
Local PDR  
NSIC

TIC  
LeBoeuf, Lamb, Leiby & MacRae  
Mr. Dave Martin, Office of the  
Attorney General  
Mr. John R. Galloway, Staff  
Director, Environment, Energy  
and Natural Resources Subcommittee

RIII's CORPORATE ADDRESSES FOR OPERATING LICENSEES AND CONSTRUCTION PERMIT HOLDERS  
(BWR's and PWR's)

Docket No. 50-346

Toledo Edison Company  
ATTN: Mr. Richard P. Crouse  
Vice President Nuclear  
Edison Plaza  
300 Madison Avenue  
Toledo, OH 43652

cc w/encl:

Mr. T. Murray, Station  
Superintendent  
Central Files  
Director, NRR/DPM  
Director, NRR/DOR  
AEOD  
Resident Inspector, RIII  
PDR  
Local PDR  
NSIC  
TIC  
Harold W. Kohn, Power  
Siting Commission  
Helen W. Evans, State  
of Ohio

Docket No. 50-483

Docket No. 50-486

Union Electric Company  
ATTN: Mr. John K. Bryan  
Vice President - Nuclear  
P. O. Box 149  
St. Louis, MO 63166

cc w/encl:

Mr. W. H. Weber, Manager,  
Nuclear Construction  
Central Files  
Director, NRR/DPM  
Director, NRR/DOR  
PDR  
Local PDR  
NSIC  
TIC  
Region I & IV  
Ms. K. Drey  
Mr. Ronald Fluegge, Utility  
Division, Missouri Public  
Service Commission

RIORATE ADDRESSES FOR OPERATING LICENSEES AND CONSTRUCTION PERMIT HOLDERS  
(BPWR's)

Do50-266  
Do50-301

Willectric Power Company  
ATSol Burstein  
ative Vice President  
Plants  
23:higan  
MI 53201

cc  
Mred, Plant  
!  
Cers  
Dir/DPM  
Dir/DOR  
Turn, ORB/NRR  
AEC  
Respector, RIII  
PDI

Local PDR  
NSIC  
TIC  
Sandra A. Bast, Lakeshore  
Citizens for Safe Energy  
Mr. John J. Duffy, Chief  
Boiler Inspector  
Mr. Peter Anderson, Wisconsin's  
Environmental Decade

Do0-305

Wisblic Service  
n  
ATL R. Mathews  
President  
Supply and  
ineering  
P. 00  
GreI 54305

cc  
D. Plant  
Sent  
Mr.s, Chief  
E  
Cers  
Dir/DPM  
Dir/DOR

AEOD  
Resident Inspector, RIII  
PDR  
Local PDR  
NSIC  
TIC  
Mr. John J. Duffy, Chief  
Boiler Inspector

RIII'S CORPORATE ADDRESSES FOR OPERATING LICENSES AND CONSTRUCTION  
PERMIT HOLDERS (BWR's and PWR's)

Docket No. 50-315

Docket No. 50-316

American Electric Power Service  
Corporation  
Indiana and Michigan Power Company  
ATTN: Mr. John E. Dolan  
Vice Chairman  
Engineering and Construction  
2 Broadway  
New York, NY 10004

cc w/encl:

Mr. D. V. Shaller,

Plant Manager

Central Files

Director, NRR/DPM

Director, NRR/DOR

AEOD

Resident Inspector, RIII

PDR

Local PDR

NSIC

TIC

Ronald Callen, Michigan

Public Service Corporation

RIII's CORPORATE ADDRESSES FOR OPERATING LICENSEES AND CONSTRUCTION PERMIT HOLDERS  
(BWR's and PWR's)

Docket No. 50-440  
Docket No. 50-441

The Cleveland Electric Illuminating  
Company  
ATTN: Mr. Dalwyn R. Davidson  
Vice President - Engineering  
P. O. Box 5000  
Cleveland, OH 44101

cc w/encl:  
Central Files  
Director, NRR/DPM  
Director, NRR/DOR  
PDR  
Local PDR  
NSIC  
TIC  
Harold W. Kohn, Power  
Siting Commission  
Mr. Daniel D. Wilt,  
Attorney  
Helen Evans,  
State of Ohio

Docket No. 50-155  
Docket No. 50-255

Consumers Power Company  
ATTN: Mr. R. B. DeWitt  
Vice President  
Nuclear Operations  
212 West Michigan Avenue  
Jackson, MI 49201

cc w/encl:  
Mr. D. P. Hoffman, Nuclear  
Licensing Administrator  
Mr. C. J. Hartman,  
Plant Superintendent  
Mr. R. W. Montross, Manager  
Central Files  
Director, NRR/DPM  
Director, NRR/DOR  
AEOD

Resident Inspectors, RIII  
PDR  
Local PDR  
NSIC  
TIC  
Ronald Callen, Michigan  
Public Service Commission  
Myron M. Cherry, Chicago