



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

November 14, 1980


Those on Attached Address Listing:

Enclosed is IE Bulletin No. 80-23 which requires action by you with regard to your nuclear power facility.

In order to assist the NRC in evaluating the value/impact of each bulletin on licensees, it would be helpful if you would provide us an estimate of the manpower expended in conduct of the review and preparation of the report(s) required by the bulletin. Please estimate separately the manpower associated with corrective actions necessary following identification of problems through the bulletin.

Should you have any questions regarding this bulletin or the actions required by you, please contact this office.

Sincerely,

  
James G. Keppler  
Director

Enclosure: IE Bulletin  
No. 80-23

cc w/encl:  
Mr. D. W. Kane,  
Sargent & Lundy  
Mr. Gary N. Wright, Chief  
Division of Nuclear Safety  
Reproduction Unit NRC 20b

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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

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

November 14, 1980

IE\_Bulletin No. 80-23: FAILURES OF SOLENOID VALVES MANUFACTURED BY VALCOR  
ENGINEERING CORPORATION

Introduction:

Valcor Engineering Corporation (Valcor) has submitted 10 CFR Part 21 Reports addressing failures of Valcor solenoid valves used at nuclear power facilities. These failures have occurred at nuclear facilities owned by Duke Power Company and Omaha Public Power District, and are purportedly limited to solenoid valves having part numbers (P/N's) V70900-21-1 and V70900-21-3.

The information presented in this bulletin is intended to shed light on the defective solenoid valves so that appropriate actions can be taken to circumvent the degradation of any safety-related system using such solenoid valves.

DISCUSSION:

The specific Valcor solenoid valves addressed herein were purportedly designed as Class IE components. However, in light of the reported failures, it appears that neither the design nor the qualification tests were adequate for Class IE service. Valcor has attributed the failures to a latent defect in the magnet wire. Valcor believes that this defect manifests itself when the solenoid valves are continuously energized at elevated temperatures by an incompatibility between the magnet wire's polyvinyl varnish coating and the wire's polyimide insulation which causes a dielectric breakdown leading to turn-to-turn shorts within the coil.

Valcor states that the above incompatibility is limited to solenoid valves having P/N's V70900-21-1 and V70900-21-3, and that all customers affected by the aforementioned defect have been notified. A listing of Valcor customers so notified and valves purchased follows.

CUSTOMER	P.O. NO.	VALVE P/N	QTY
Anchor-Darling	P-327	V70900-21-1,-3	24
Anchor-Darling	N663	V70900-21-1	6
Cesare Bonetti (Italy)	1535/79	V70900-21-3	10
Duke Power Company	E95188-11	V70900-21-3	100
Duke (Mill Power)	C-97733	V70900-21-1,-3	335
Duke Power Company	E97822-11	V70900-21-3	70
Ralph Hiller	HA-18		
Mill Power	E5246		
Omaha Public Power Dist.	43472		
Stone and Webster	L000		
Copes Vulcan	911,5		

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