

CENTRAL FILES

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
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JUL 29 1976

Consumers Power Company
ATTN: Mr. Stephen H. Howell
Vice President
1945 West Parnall Road
Jackson, Michigan 49201

Docket No. 50-329
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Gentlemen:

The enclosed Circular, No. 76-01, is forwarded to you for information and action. This is the first issue of an expanded system for communication from the Office of Inspection and Enforcement to applicants and licensees, to supplement the issuance of IE Bulletins.

Bulletins have been, and will continue to be, limited to subjects considered to be of appropriate significance to require prompt response. Circulars will cover subjects of lesser significance or immediacy for which a longer response time appears appropriate. Circular No. 76-01 contains the same subject matter as Bulletin No. 76-07, which is being issued concurrently. If you are also the holder of a NRC Operating License, you will also receive a copy of Bulletin No. 76-07 which will require a separate response. The only difference between the two documents is the time allowed for response. Future IE Circulars may be addressed to any class of NRC licensees, and may or may not require response.

Sincerely,

James G. Keppler
Regional Director

Enclosure:
IE Circular No. 76-01

bcc w/encl:
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July 28, 1976
IE Circular No. 76-01

CRANE HOIST CONTROL - CIRCUIT MODIFICATIONS

DESCRIPTION OF CIRCUMSTANCES:

In response to NRC concerns about the potential for, and consequences of, dropping a spent fuel shipping cask or other heavy load, Commonwealth Edison modified the hoist control system for the fuel cask handling cranes at their Dresden Units 2 and 3 and Quad-Cities Units 1 and 2 to provide additional hoist redundancy and slow speed hoist capability. The original design utilized a General Electric "magspeed" hoist control system. In this system which includes two electro-mechanical brakes in series, spring force holds the brakes engaged while DC solenoids, energized when the hoist motor is energized, disengage the brakes.

The modification which added the slow speed hoist capability included installing additional contactors in the brake solenoid power circuit to energize the solenoids when the low speed hoist motor was energized.

The original hoist control system design utilized a single Size 2 DC contactor (two contacts in series) in the solenoid circuit. The design modification added a circuit in parallel with the original DC contactor which utilized four AC rated Size 1 single contacts in a series-parallel array to distribute current carrying and interrupting burden.

Initial experience with the modified hoist control system at Dresden showed that the circuit interrupting capacity of the series-parallel array was marginal. On several occasions when the low speed motor was stopped in the lowering mode, the solenoid circuit contacts arced resulting in power being supplied to the solenoids long enough so that the load dropped some distance before the brakes engaged. Over travel of as much as 15 inches was reported, but no damage to hoist or load was found.

The crane manufacturer's representatives have advised the NRC that the proposed corrective action is to install a single Size 2 DC contactor (two contacts in series) with arc suppressors, the same as originally provided in the General Electric design, in place of the added four AC rated contacts. The original contactor in the normal speed control circuit has shown satisfactory service since initial operation of the plant in 1969.

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July 28, 1976

ACTION TO BE TAKEN BY LICENSEE:

1. Determine and report to this office within 90 days the following information:
 - (a) Have you made, or do you plan to make modifications to the hoist control for your installed cranes similar to the described modifications?
 - (b) If such modifications have been made, or are planned, identify changes required in brake power and control circuitry?
 - (c) What steps have been taken or are planned, to provide assurance that brake power contactors are adequate for the service?
2. If modifications are planned, provide the schedule for completion and a brief description of your plans for design review and functional testing.

Your response should be submitted to the Director of this Office, with a copy to the Director, Division of Reactor Inspection Programs, Office of Inspection and Enforcement, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555.

Approval of NRC requirements for reports concerning possible generic problems has been obtained under 44 U. S. C. 3152 from the U. S. General Accounting Office. (GAO Approval B-180255 (R0072), expires 7/31/77).