



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

MAR 24 1988

Docket No. 50-295
Docket No. 50-304

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

Gentlemen:

Commonwealth Edison's letters of May 15 and August 28, 1986, and April 24 and November 24, 1987, pertaining to Zion Units 1 and 2, contained your responses to IEB 85-03, "Motor-Operated Valve Common Mode Failures During Plant Transients Due to Improper Switch Settings". Our review of the responses indicates the need for additional information before the program to assure valve operability can be approved. The specific information necessary for the completion of our review is enclosed. Additional information is requested within one month of the date of this letter.

The written report shall be submitted to the Regional Administrator, Region III, under oath or affirmation under provisions of Section 182a, Atomic Energy Act of 1954, as amended. Also, the original copy of the cover letter and a copy of the report shall be transmitted to the U.S. Nuclear Regulatory Commission Document Control Desk, Washington, DC 20555 for reproduction and distribution.

Questions addressing this issue may be forwarded to Richard J. Kiessel, NRR (301) 492-1154.

Sincerely,

Edward G. Greenman, Director
Division of Reactor Projects

Enclosure: Request for
Additional Information

See Attached Distribution

IEB
1/1

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Distribution

cc w/enclosure:

T. J. Maiman, Vice President,
PWR Operations

D. Butterfield, Nuclear
Licensing Manager

G. J. Pliml, Station Manager

Jan Norris, Project Manager, NRR

DCD/DCB (RIDS)

Licensing Fee Management Branch

Resident Inspector, RII

Richard Hubbard

J. W. McCaffrey, Chief, Public
Utilities Division

Mayor, City of Zion

R. J. Kiessel, NRR

REQUEST FOR ADDITIONAL INFORMATION (RAI) RE:

Review of Responses to Action Item e of IE Bulletin 85-03

Licensee:
Commonwealth Edison
P. O. Box 767
Chicago, Illinois 60690-0767

Unit(s): Zion 1,2
Date of Response: 05-15-86
08-28-86
04-24-87
11-24-87

Respondent:
M. S. Turbak,
Operating Plant
Licensing Director

The information provided in your response to Action Item e of IE Bulletin 85-03 was found to be deficient in some areas. Provide the additional information necessary to resolve the following comments and questions:

1. Has water hammer due to valve closure been considered in the determination of pressure differentials? If not, explain.
2. The response of 05-15-86 does not include the maximum differential pressures expected during opening and closing valves for both normal and abnormal events. Revise the response to include differential pressures, as required by Action Item a of the bulletin.
3. MOVs SI8814 and SI8813 are shown normally open in series in the SI pump miniflow line, in Zone B-8 of Drawing M-64 Revision Z (Unit 1) and Zone B-3 of Drawing M-521 Revision M (Unit 2). These MOVs are not included in Attachment A of the response of 05-15-86. However, they are shown as HV-8814A and HV-8813 on Page 25 of the WOG Report of March 1986. Revise Attachment A to include these MOVs, or justify their exclusion. As required by Action Item a of the bulletin, assume inadvertent equipment operations.
4. The following MOVs in the AFW System are not included in Attachment A of the response of 05-15-86. Explain this exception to the Westinghouse recommendation that "all MOVs within the AFW system should be included on the list of valves to be examined for maximum differential pressure", as stated on Page 5 of the WOG Report. Revise Attachment A of the response of 05-15-86 to include these valves, or justify their exclusion. As required by Action Item a of the bulletin, assume inadvertent equipment operations.

- (a) MOVs FW0050, FW0051, FW0052, FW0053, FW0054, FW0055, FW0056, and FW0057 are shown normally open on the left side of Drawing M-22 Revision UU (Unit 1), in the AFW pump discharge lines to the steam generators. These MOVs are shown on Page 27 of the WOG Report.

Note: Similarly located MOVs are used on Unit 2 also.

- (b) MOVs FW0074, FW0075 and FW0076 are shown normally open in suction lines from the secondary storage tank to the AFW pumps, in zones E-5 and E-4 of Drawing M-37 Sheet 1 Revision AC (Unit 1) and in zones E-5 and E-4 of Drawing M-37 Sheet 2 Revision T (Unit 2). These MOVs are shown as HV-35, -36 and -34, on Page 27 of the WOG Report.
- (c) Steam admitting MOVs MS0005 and MS0011 are shown normally open in zones E-8 and C-8 of Drawing M-20 Revision AN (Unit 1) and in zones B-7 and D-6 of Drawing M-500 Revision AE (Unit 2), in the steam supply lines from steam generators A and D to the AFW Turbine. These MOVs are shown normally closed on Page 28 of the WOG Report.
- (d) Steam supply isolation valve MS0006 is shown normally open in Zone F-8 of Drawing M-20 Revision AN (Unit 1) and in Zone A-7 of Drawing M-500 Revision AE (Unit 2), in the steam supply line from steam generators A and D to the AFW Turbine.
- (e) Unlisted MOV SW 0105 is shown normally closed in Zone C-4 of Drawing M-32 Sheet 2 Revision AS (units 1 and 2), in a suction line from the service water system to motor-driven AFW Pump 1C.
5. According to the second paragraph of the response of 05-15-86, demonstration of operability for normal system operating loads is proposed. Include abnormal loads, as required by Action Item a of the bulletin.
6. According to the response of 05-15-86 to Action Item b, the valve supplier must certify compliance with the requirements established by the plant designer, and "therefore, no further review of the method for establishing torque switch settings is necessary or practical". Verify that the pressures used in setting the switches envelope the maximum pressures determined in Action Item a and that additional factors such as friction, margin of safety, degradation and wear are addressed.
7. The proposed program for action items b, c and d of the bulletin is incomplete. Provide the following details as a minimum:

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RAI for Zion 1,2

- (a) commitment to a training program for setting switches and maintaining valve operators,
- (b) commitment to justify continued operation of a valve determined to be inoperable,
- (c) description of a method possibly needed to extrapolate valve stem thrust measured at less than maximum differential pressure,
- (d) justification of a possible alternative to testing at maximum differential pressure at the plant, and
- (e) consideration of pipe break conditions as required by the bulletin.