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 ALEXICH,M.P. American Electric Power Co., Inc.
 RECIP.NAME RECIPIENT AFFILIATION
 DAVIS,A.B. Document Control Branch (Document Control Desk)

SUBJECT: Forwards response to request for addl info re IE Bulletin
 85-003, "Motor-Operated Valve Common Mode Failures...."

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**AMERICAN
ELECTRIC
POWER**

AEP:NRC:0966E

Donald C. Cook Nuclear Plant Units 1 & 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
IE BULLETIN 85-03; ADDITIONAL INFORMATION

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

Attn: A. B. Davis

May 11, 1988

Dear Mr. Davis:

Mr. E. G. Greenman's letter of April 11, 1988, requested additional information regarding our response to IEB 85-03, "Motor-Operated Valve Common Mode Failures During Plant Transients Due to Improper Switch Settings." The attachment to this letter provides the requested information.

Sincerely,

M. P. Alexich
Vice President

MPA/mjm

Attachment

cc: D. H. Williams, Jr.
W. G. Smith, Jr.
R. C. Callen
G. Bruchmann
G. Charnoff
NRC Resident Inspector - Bridgman

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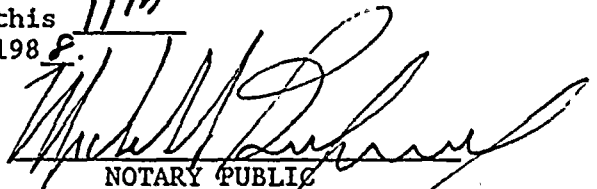
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STATE OF OHIO
COUNTY OF FRANKLIN

Milton P. Alexich, being duly sworn, deposes and says that he is the Vice President of licensee Indiana Michigan Power Company, that he has read the foregoing Response to Request for Additional Information Regarding IE Bulletin 85-03, and knows the contents thereof; and that said contents are true to the best of his knowledge and belief.



Subscribed and sworn to before me this 11th
day of May, 1988.



NOTARY PUBLIC

Commission expires 3-9-91

Mr. A. B. Davis

-2-

AEP:NRC:0966E

bc: P. A. Barrett/R. G. Vasey
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J. B. Shinnock
J. F. Stang, NRC - Washington, D.C.
AEP:NRC:0966E
DC-N-6015.1

ATTACHMENT TO AEP:NRC:0966E

Question 1: Has water hammer due to valve closure been considered in the determination of pressure differentials? If not, explain.

Response:

As part of our valve testing for IE Bulletin 85-03, representative samples from each group of valves were stroke tested under full or partial differential pressure (DP) conditions with flow through the valves. These tests were performed using MOVATS' monitoring equipment which measured the thrust during valve closure. No attempt was made to calculate valve DP due to water hammer. Any additional valve DP (and thrust) resulting from water hammer, if present, was included in the measured closing thrust under flowing conditions.

Water hammer has not been observed during closure of these valves. Water hammer would not be expected in these applications since the valves do not slam shut, but are driven closed relatively slowly.

Question 2: If MOVATS is planned for application to some MOVs which are not included in its data base, commit to and describe an alternative method for determining the extra thrust necessary to overcome pressure differentials for these valves.

Response:

As noted in the response to Question 1, representative samples from each group of valves were tested under DP conditions as well as static conditions. Any valve not in the MOVATS data base was tested under DP conditions. Consequently, valve capability to function under maximum DP conditions could be determined from data obtained from each tested valve. Operability verification did not rely on the MOVATS data base.

Question 3: Unlisted cold leg injection MOVs IMO-51, -52, -53, and -54 (1 1/2-inch) are normally open downstream of BIT outlet valves ICM-250 and -251. These MOVs are shown in zones E-2, D-2, C-2 and F-2

respectively on drawings 1-5142-24 (unit 1) and 2-5142-28 (Unit 2). How would safety injection to the cold legs be ensured if these MOVs were to be left closed inadvertently? Revise Table I of the response of 05-16-86 to include these MOVs, or justify their exclusion.

Response

IE Bulletin 85-03 limits the scope of valves under review to those "that are required to be tested for operational readiness in accordance with 10 CFR 50.55a(g)..." Such valves are included in our In-service Testing (IST) Program.

The valves referred to in Question 3 are passive, i.e., they do not have to stroke to perform a safety function. Consequently, these valves are not within the scope of the Cook Nuclear Plant IST Program which has been approved by the NRC. Therefore, they are also excluded from the scope of IE Bulletin 85-03.

The valves referred to in question 3 are not subject to periodic stroke testing. They must remain open during plant operation. The only way for the valves to be closed is by operator action. In addition, the valves are subject to administrative controls whereby their position is verified and documented twice per month. The control room panel indicator lights (red or green) display the position of the valves at all times. Operators monitor the status of the control panels. Therefore, we believe sufficient justification exists for not including IMO-51, -52, -53 and -54 in the scope of IE Bulletin 85-03.

Question 4a: The proposed program for action items b, c and d of the bulletin is incomplete. Provide the following details as a minimum:

- a. commitment to a training program for setting switches, maintaining valve operators, using signature testing equipment and interpreting signatures

Response

1. A maintenance class is provided covering the setting of valve operator limit switches and general operation of valve operators. All Cook Nuclear Plant electrical maintenance mechanics are scheduled for this training, unless experience is sufficient to justify a waiver.
2. The Maintenance Department has used a combination of vendor and in-house training on maintaining valve operators. The valve operator manufacturer (Limitorque Corp.) has presented classroom instruction to Maintenance Department personnel. The Maintenance Training Section provides skills training classes and on-the-job training modules to Electrical Maintenance personnel for the maintenance of valve operators.
3. Movats Signature test equipment is currently in use at Cook and is controlled by Maintenance Procedure **12-MHP-SP.122, Testing of Motor Operated Valves Using MOVATS Signature Acquisition System. Maintenance engineering, electrical supervisory and electrical maintenance personnel have attended training classes provided by MOVATS in the set-up and use of their test equipment. A formal training program on diagnostic equipment use is currently being prepared by our training section. The plant uses both qualified computer software and vendor technical experts in analyzing MOV signatures at this time. These vendor experts also have been on-site to assist in the training of Cook Nuclear Plant personnel during testing activities.

Question 4b: The proposed program for action items b, c and d of the bulletin is incomplete. Provide the following details as a minimum: commitment to justify continued operation of a valve determined to be inoperable.

Response

If, as a result of MOVATS testing as part of IE Bulletin 85-03, the operability of an MOV becomes questionable, a review would be performed to determine operability. Such a review could include analysis and/or additional testing. If the valve was declared inoperable, then we would take appropriate action in accordance with Cook Nuclear Plant Technical Specification action statements.