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# INDIANA & MICHIGAN ELECTRIC COMPANY

P.O. BOX 16631  
COLUMBUS, OHIO 43216

August 26, 1987  
AEP:NRC:0971C

Donald C. Cook Nuclear Plant Units 1 and 2  
Docket Nos. 50-315 and 50-316  
License Nos. DPR-58 and DPR-74  
10 CFR 21 NOTIFICATION:  
BEADS FOUND IN VALVE MOTORS

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

Attn: T. E. Murley

Dear Dr. Murley:

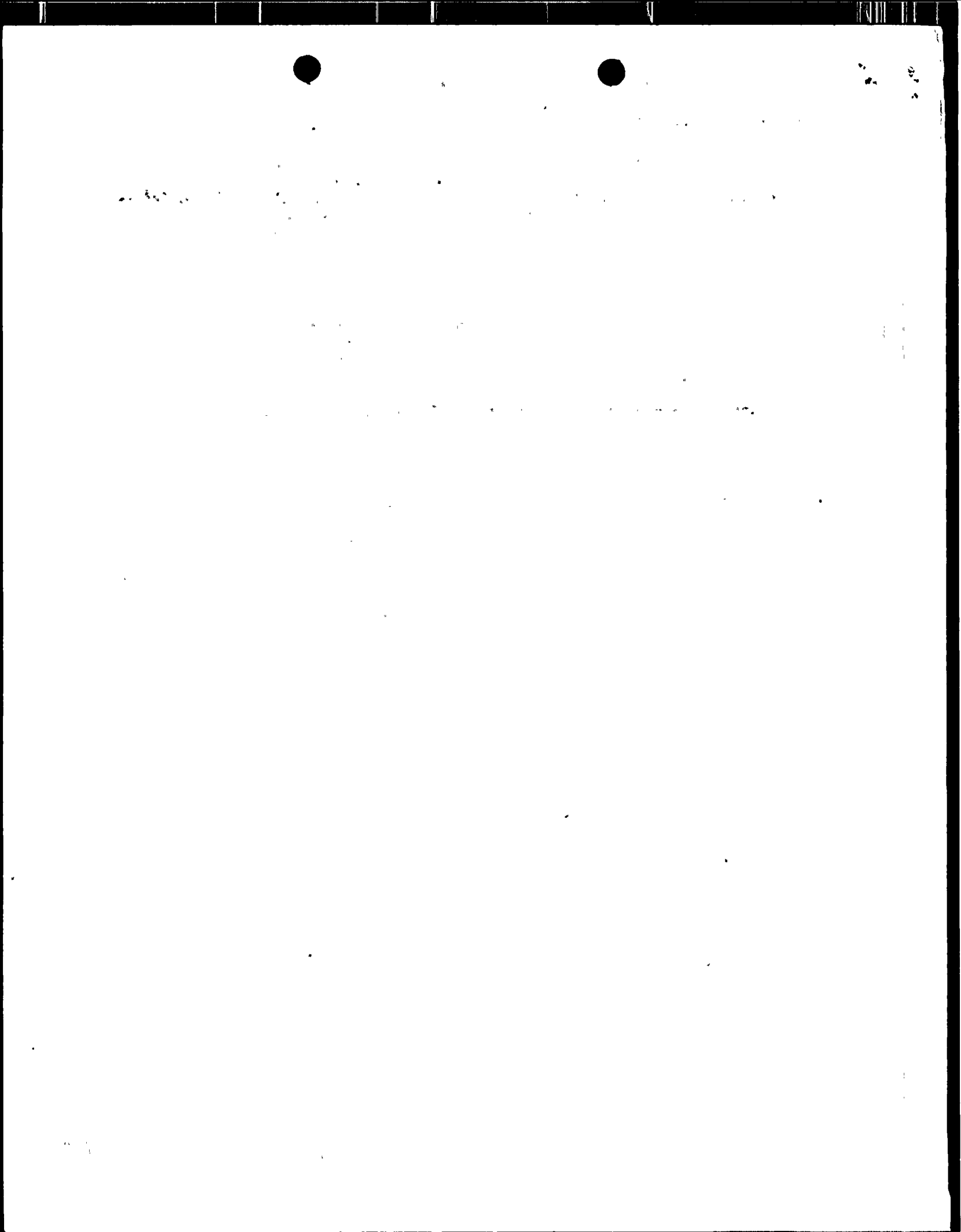
Pursuant to 10 CFR 21, this letter is being submitted to provide written notification of the existence of a defect associated with motor-operated valves (MOV's) supplied to the D. C. Cook Nuclear Plant by Hammel-Dahl & Jamesbury Controls Company, Inc. through Midwest Controls Company, Inc. Initial notification was made in a telephone conversation between representatives of the American Electric Power Service Corporation and Mr. D. C. DiIanni of the NRC Office of Nuclear Reactor Regulation on August 21, 1987.

On August 13, 1987, during the installation of four motor-operated valves in the Auxiliary Feedwater System at the D. C. Cook Nuclear Plant, metallic beads were found in the valve motor casings. The beads appeared to be of the type associated with an abrasive cleaning process. The beads were found in one of the motors during installation of T-drain fittings for the motor casings. Noise being made by the valve motor during MOVATS (motor-operated valve analysis and test system) testing prompted disassembly of that motor. During the subsequent investigation for the remaining Unit 1 AC motors, beads were found in two of the three motors. The valve motors (575 VAC) were manufactured by Reliance Electric Company and sent to Limitorque Corporation to be installed on valve operators (Limitorque SMB-000). The entire motor-operator assemblies were then shipped to Hammel-Dahl & Jamesbury Controls Company, Inc., where they were mounted to the valves. The valves, with the motor operators attached, were received by the plant in May 1987 and installed during the current outage.

After the problem was discovered, it was analyzed by American Electric Power personnel, and on August 21, 1987, it was concluded that the beads found in the valve motors of the MOV's were sufficient to

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create a potential safety hazard. This conclusion was based on the fact that we determined that the beads could have either affected the mechanical rotation of the motor or created the possibility of the beads wearing into the winding insulation, thus causing failure of the motors and the electrical inoperability of safety-related valves.

A similar problem exists with at least one of the valve motors purchased but not installed for Unit 2 (the Unit 2 valves were scheduled to be installed during the next refueling outage). Six of the defective motors have been returned to Limitorque via Reliance Electric Company. The remaining two have been returned directly to the Limitorque Corporation. We have received six refurbished motors from Limitorque and are presently installing four of these on Unit 1.

We are not aware of other facilities or activities subject to 10 CFR 21 for which these valve motors have been supplied.

This document has been prepared following Corporate procedures which incorporate a reasonable set of controls to insure its accuracy and completeness prior to signature by the undersigned.

Very truly yours,

  
M. P. Alexich  
Vice President

cm

cc: John E. Dolan  
W. G. Smith, Jr. - Bridgman  
R. C. Callen  
G. Bruchmann  
G. Charnoff  
NRC Resident Inspector - Bridgman  
A. B. Davis - Region III

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