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October 11, 1984

MURRAY R. EDELMAN
VICE PRESIDENT
NUCLEAR

Mr. James G. Keppler
Regional Administrator, Region III
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

RE: Perry Nuclear Power Plant
Docket No. 50-440; 50-441
Air Handling Units
[RDC 113 (84)]

Dear Mr. Keppler:

This letter serves as a final report pursuant to 10CFR50.55(e) concerning a discrepancy with seismic equipment qualification data for Units I and II Air Handling Units which were fabricated and supplied under procurement specification SP-646 by Carrier Corporation. A total of twelve Air Handling Units were supplied, seven for Unit I and common and five for Unit II which may be subject to this deficiency. Mr. J. W. McCormick-Barger of your office was notified on September 11, 1984, by Mr. P. P. Martin of The Cleveland Electric Illuminating Company that this problem was being evaluated per our Deviation Analysis Report 200.

This report contains a description of the deficiency, an analysis of safety implications, and the corrective action taken.

Description of Deficiency

During preoperational testing of one of the Air Handling Units, fan vibration problems were encountered. A field test to determine natural frequency was conducted in both the operating and static mode. Results of this test indicated natural frequencies at both the motor and fan within the range of 15 to 28 Hz. The natural frequencies found during this test were in conflict with the qualification report for the units, which indicated rigidity out to approximately 42 Hz.

Analysis of Safety Implication

An analysis was performed on the equipment hold down bolts for seismic considerations, and the potential effect on the bearings for operability was considered.

The analysis performed on the hold down bolts indicated that the stresses that would be seen are far less than the allowable stresses of the bolts. As a result of this seismic analysis it was determined that no adjacent equipment will be affected.

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Additionally, assuming failure of the bearings at the frequencies identified, an equipment/system analysis was performed that addresses a failure of an operating air-handling unit. The affected equipment is utilized in two systems: (1) The Emergency Closed Cooling Pump Area Cooling System (M28) and (2) ECCS Pump Room Cooling System (M39). If the air handling unit is inoperable due to a bearing failure, the temperature in the ECCS pump room could achieve a level high enough to exceed equipment qualification parameters established for the respective ECCS pump motor components which could result in pump unavailability.

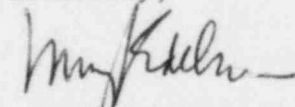
Corrective Action

Nonconformance Reports TAS 037 and TAS 088 were initiated to track resolution of this problem for Units I and II respectively. The Air Handling Unit identified as deficient by the field test was reinforced with braces to increase its natural frequency above 33 Hz. This frequency will be verified by an additional field test. The remaining six units for Unit I and common will be investigated to determine if additional braces are required. Installation of braces will be made as applicable. All corrections to Unit I and common air handling units will be made by January 31, 1985. Full compliance to Perry Nuclear Power Plant's seismic requirements will be verified by this date.

Resolution of NR TAS088 will be accomplished consistent with the Unit II construction schedule prior to turnover of the affected systems.

Please call if there are any questions.

Sincerely,



Murray R. Edelman
Vice President
Nuclear Group

MRE:ca
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cc: Mr. J. A. Grobe
USNRC, Site Office

Director
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