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MURRAY R. EDELMAN

VICE PRESIDENT
NUCLEAR

October 6, 1983

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 Nos. 50-440; 50-441
Design of the Diesel Generator
Exhaust Piping [RDC 78(83)]

Dear Mr. Keppler:

This letter serves as the second interim report pursuant to 10CFR50.55(e) on the deficiencies concerning exhaust line back pressures exceeding manufacturer's recommendations on the Standby Diesel Generators and the Diesel Generators for the High Pressure Core Spray System (HPCS). Mr. P. R. Pelke of your office was notified on August 5, 1983, by Mr. C. M. Shuster of The Cleveland Electric Illuminating Company that this problem was being evaluated. On July 27, 1983, Gilbert Associates, Inc. (GAI), the Architect/Engineer for PNPP, notified the Nuclear Regulatory Commission, under 10CFR21, of a deficiency involving the design of diesel generator exhaust piping. This problem was formally reported in our first interim report dated August 30, 1983.

This report contains a description of the deficiencies and corrective action.

Description of Deficiencies

The present design of the exhaust piping for the Standby Diesel Generators is such that the engines may stall if loaded beyond 75% of their rated capacity. The current design loading is less than 75% of the rated load for both Units.

The present design of the exhaust piping for the High Pressure Core Spray (HPCS) Diesel Generators is such that the manufacturer's recommended exhaust pressure could be exceeded, thus causing deteriorated performance of these diesels and possible failure of the HPCS system to perform.

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Corrective Action

Thus far, the Architect/Engineer, Gilbert Associates, Inc. (GAI), has begun design activities to modify the exhaust rain hoods of each of the diesel generators in order to reduce exhaust pressure. This modification will reduce the HPCS diesel exhaust pressure sufficiently to conform with the maximum allowable backpressure recommended by the manufacturer.

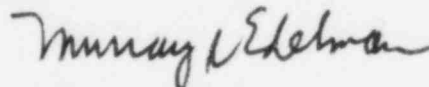
Modification of the exhaust rain hoods for the Standby Diesel Generators will lower the exhaust pressure of the present configuration somewhat. However, further modifications will be required to comply with the manufacturer's allowable for full rated load. GAI is continuing to investigate a number of options in this area.

The presently designed configurations resulted from an error in the calculations for diesel exhaust pressure drop. GAI is reviewing other calculations performed by the originator of the calculations to determine if this was an isolated instance and will determine what, if any, further corrective action is necessary.

We anticipate that the finalization of the necessary design changes will require an extended period of time. We will submit the next report on this subject by January 30, 1984.

Please call if there are any additional questions.

Sincerely,



Murray R. Edelman
Vice President
Nuclear Group

MRE:pab

cc: Mr. M. L. Gildner
NRC Site Office

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