



THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

P.O. BOX 97 ■ PERRY, OHIO 44081 ■ TELEPHONE (216) 259-3737 ■ ADDRESS-10 CENTER ROAD

Serving The Best Location in the Nation
PERRY NUCLEAR POWER PLANT

July 11, 1985

PY-CEI/OIE 0078 L

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
Nonsafety Sensing Lines on
Safety-Related Receiver
Tanks [RDC 30(81)]

Dear Mr. Keppler:

This letter serves as a revised final report pursuant to 10CFR50.55(e) concerning safety-related receiver tanks for the Standby Diesel Generator Starting Air System being connected to nonsafety-related sensing lines through normally open, safety-related valves for both Units I and II. This was first reported by W. J. Kacer of The Cleveland Electric Illuminating Company to R. Warnick of your office on June 12, 1981. A final report on this subject was originally submitted to your office on July 13, 1981, and a revised final report was submitted on November 15, 1982.

This report includes a description of the deficiency, an analysis of the safety implication, and a revision to the corrective action outlined in our report of November 15, 1982.

8507310281 850711
PDR ADDCK 05000440
S PDR

IE27
110
JUL 15 1985

July 11, 1985

Description of Deficiency

Gilbert Associates, Incorporated (Architect/Engineer for the Perry Nuclear Power Plant) design drawings D302-351 and D352-351, outline the piping system for the Standby Diesel Generator Starting Air System (R-44 System). The design incorporates two air receiver tanks and starting air compressors per diesel generator. Each receiver tank was previously equipped with an air sensing line which automatically started its corresponding air compressor on low pressure. The air sensing included a manually operated isolation valve. The tank, the manual isolation valve, and the sensing line up to and including a reducer located down-stream of the manual isolation valve were designed safety-related. The remaining portion of the sensing line was designed as nonsafety-related.

Analysis of Safety Implications

Failure of the nonsafety portion of the sensing line during a seismic event may result in blowdown through the sensing line of the receiver tank. There was no assurance with this design that the isolation valve could be manually closed in sufficient time to prevent blowdown of the tank below the minimum required pressure. Therefore, with these assumptions, the failure of the nonsafety line would impair the starting air safety function.

Corrective Action

In our report dated November 15, 1982, we stated that an orifice would be installed between the manual isolation valve and the reducer in the safety-related portion of the sensing line. This orifice limits the rate of blowdown from the receiver tank in the event of a break in the nonsafety portion of the sensing line. The referenced design drawings have been revised to incorporate the orifice, and hardware installation has been completed.

Testing of this configuration has demonstrated that the air receiver tank sensing line is being starved upon compressor actuation, resulting in rapid cycling of the compressor, hence reducing reliability. Therefore, the design has been revised by Engineering Change Notice 27664-18-1719 to entirely eliminate the air receiver tank sensing line. The revised design utilizes the signal from the left and right bank pressure transmitters to operate trip units to control their respective compressor/solenoid valves. This revised design serves the equivalent function of the sensing line, and eliminates the blowdown path from the receiver tank.

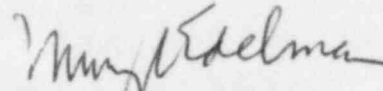
Mr. James G. Keppler
PY-CEI/OIE 0078 L

-3-

July 11, 1985

If you have any questions, do not hesitate to contact us.

Sincerely



Murray R. Edelman
Vice President
Nuclear Group

MRE:sab

cc: Mr. J. A Grobe
USNRC, Site Office (SBB50)

Mr. D. E. Keating
USNRC, Site Office (SBB50)

Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

U.S. Nuclear Regulatory Commission
c/o Document Management Branch
Washington, D.C. 20555

Records Center, SEE-IN
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, Georgia 30339