



THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

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Dalwyn R. Davidson
VICE PRESIDENT
SYSTEM ENGINEERING AND CONSTRUCTION

April 23, 1982

Mr. James G. Keppler
Director, 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; Interim
Report on Unit 1 Suppression Pool
Floor Plate Welding Deficiencies
(RDC 51(82))

Dear Mr. Keppler:

This letter will serve as the interim report pursuant to 10CFR50.55(e) concerning defective welds in the Unit 1 Suppression Pool clad floor plates. On March 24, 1982, Mr. E. Riley of The Cleveland Electric Illuminating Company notified Mr. P. Pelke of your office that this problem was being evaluated.

This report contains a description of the deficiency and the evaluations currently underway to determine the extent of the problem and the corrective action required.

DESCRIPTION OF DEFICIENCY

The welds joining the 1/2" thick stainless steel clad floor plates in the Unit 1 Suppression Pool have been found to contain deficiencies such as a lack of fusion at the sidewalls, between the carbon steel/stainless steel layers, and to the embedded steel. The welding problem has been under investigation by Newport News Industrial Corporation of Ohio (NNICO) since October 30, 1981. On February 17, 1982 they wrote Non-Conformance Report (NCR) #17-334 which explains, in detail, their basic research and the problems encountered.

In March, 1982, they presented CEI with a partial resolution copy of the NCR, at which time your office was notified of the problems, based on the extensive evaluation and possible rework required. At this time, it appears that all floor plate welds in this area contain one or more of the above noted defects to some degree.

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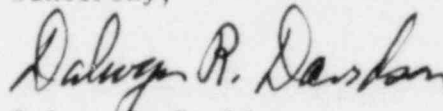
NNICO has undertaken an exhaustive research program aimed at identifying the cause and extent of the defects, and providing an acceptable method of repair of currently identified defects, and the prevention of similar welding problems in the Unit 2 floor plates.

To determine the cause or causes of the problems, NNICO is researching the welding of the floor plates, examining such factors as welding processes, joint geometry, heat input, bead sequencing, deposition technique, and heat sink. These factors were all correlated and mapped out. A random sampling of welding joints was also ultrasonically examined and excavated to determine what combinations of these variables were likely to produce the defects identified. In conjunction with this analysis, NNICO has also been evaluating the results of changing the parameters of the welding variables, thereby arriving at a welding technique that will eliminate these types of problems from recurring during the repair welding and the initial welding of the Unit 2 floor plates.

The evaluation to determine the extent of the problem is also still underway. All of the stainless steel weld metal has been removed from the floor plate joints. The excavated joints are being visually examined to ensure complete removal of all visual defects, and are also being ultrasonically examined to ensure both complete removal of defects within the weld, and to determine the extent of the lack of fusion to the embedded steel.

It is expected that NNICO will be completed with their evaluations and all necessary repair welding during the Fall of this year. Final acceptance of all work by CEI should be completed by January 14, 1983, and at this time we will submit our final report to your office.

Sincerely,



Dalwyn R. Davidson
Vice President
System Engineering and Construction

cc: Mr. M. L. Gildner
NRC Site

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Washington, DC 20555

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