



THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

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Dalwyn R. Davidson
VICE PRESIDENT
SYSTEM ENGINEERING AND CONSTRUCTION

November 24, 1982

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
Suppression Pool Stainless Steel
Cladding Sensitization [RDC 19(80)]

Dear Mr. Keppler:

This letter constitutes a revision to the final report on the subject issue. The purpose of this letter is to define for you our present plan of action relevant to the cladding fissures discovered adjacent to weld seams in the Perry suppression pools.

In the March 15th report to your office, we indicated our plan was to apply an aluminum flame spray/epoxy topcoat nuclear coating system to the fissured region to prohibit crevice corrosion in the underlying carbon steel plate. A follow-up in-service monitoring program was then to be initiated to examine coating durability and check for corrosion notch progression.

After consulting with a research engineer with thirty-five years of experience in the causes and prevention of service failures in pressure vessels, CEI Engineering re-evaluated our proposed corrective action. Overlaying the stainless clad steel plate of the suppression pool by metalizing plasma spraying, welding or other procedure would not be beneficial. The fissuring of type 3 or 4 stainless steel represented only a small percentage of the total length of weld in the pools. Since our consultant's examination of the as-constructed metallurgical sections did not reveal fissuring propagation across the nickel bond layer or the SA-264 plate material, the nickel flash will serve as a corrosion barrier to protect the structural and pressure retaining integration of the containment carbon steel plate.

As was brought to the attention of the NRC Structural Engineering Branch on September 23, 1982, the Perry annulus fix arrangement has been designed in accordance with ASME Section III Division 2 requirements. Effectively, we are taking into account the composite action of the 1½" thick steel liner backed with eight feet of reinforced concrete in the pool region. The placement of the annulus concrete is scheduled to commence in March of 1983, and this

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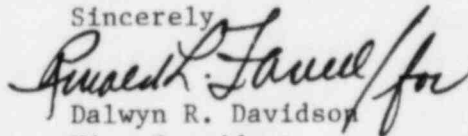
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arrangement will significantly reduce stress levels in the fissured doubler plate region of containment. This modification will be a corrosion ameliorating condition because the concrete backing will keep the containment shell in compression which tends to keep the fissures sealed.

Our consultant's extensive experience with clad plate in environments significantly more severe than that of the Perry Nuclear Power Plant's suppression pools has shown that even where carbon steel has been directly exposed on stainless clad steel, there has been no evidence of adverse effects on the integrity of components such as reactor vessels, steam generators and power piping.

Because of these considerations, The Cleveland Electric Illuminating Company is revising the March 15, 1982, final report to delete item 2 under analysis of the safety implications and to delete items 2 and 3 under the proposed corrective action.

Sincerely,



Dalwyn R. Davidson
Vice President

System Engineering and Construction

DRD:pab

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

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

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