UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

TIC

JUL 21 1980

Docket No. 50-440
Docket No. 50-441

Cleveland Electric Illuminating
Company
ATTN: Dalwyn R. Davidson
Vice President - System
Engineering and Construction
Post Office Box 5000
Cleveland, OH 44101

Gentlemen:

Thank you for your interim report dated July 11, 1980, pursuant to 10 CFR 50.55(e), regarding water-soluble purge dam material. We will review your final report on this matter upon receipt.

Your cooperation with us is appreciated.

Sincerely,

D. Fiorelli

G. Fiorelli, Chief
Reactor Construction and
Engineering Support Branch

cc: Director, RCI/IE
Director, AEOD
Chief, OEB/MPA
IE Files

cc w/ltr dtd 7/11/80:
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PDR
Local PDR
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Harold W. Kohn, Power Siting
Commission
Mr. Daniel D. Wilt, Attorney
Helen W. Evans, State of Ohio

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY
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Dalwyn R. Davidson
VICE PRESIDENT
SYSTEM ENGINEERING AND CONSTRUCTION

July 11, 1980

Mr. James G. Keppler
Director of 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 Use of
Mono-Sol brand, 7-0015-3
CWS Polyvinyl Alcohol Film,
Water Soluble Purge Dam Material,
Manufactured by Chris Craft
Industries

Dear Mr. Keppler:

This letter serves as an Interim Report as required by 10CFR50.55(e) concerning use of Mono-Sol brand, 7-0015-3 CWS Polyvinyl Alcohol Film, Water Soluble Purge Dam Material, manufactured by Chris Craft Industries. This was first reported by W. J. Kacer of the Cleveland Electric Illuminating Company to J. Konklin of your office on June 12, 1980.

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

Description of Deficiency:

The PNPP piping contractor (Pullman Power Products) has been using a purge dam material classified as water soluble by the manufacturer Chris Craft Industries. The material is identified as Mono-Sol, 7-0015-3 CWS Polyvinyl Alcohol Film. Under certain environmental conditions (subjected to heat, approximately 400°F), this material is transformed into a substance which will not dissolve in water. Piping systems in which this material was used have been subjected to heat above 400°F in the areas of purge dam placement by post weld heat treating, application of diamond/ring heat patterns for bending pipe, and placing purge dams too close to the weld area. Investigation has determined this problem to be generic to both carbon and stainless steel piping of all sizes in both safety and non-safety systems. It was also determined that the piping contractor did not have a procedure addressing the type of material used or controls for issuing and placing the purge dams.

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Analysis of the Safety Implications:

Certain piping systems will not be subjected to water flush or hydrostatic testing prior to plant operations. System designs do not provide access for installation of temporary strainers at all equipment such as heat exchangers and flow orifices. Undissolved purge dam material could restrict flow of fluids and prevent proper seating of valves during plant operation.

Corrective Action Taken to Date:

A "Corrective Action Request" (CAR 0496) was issued to Pullman Power Products addressing the lack of procedural address. The CAR has been responded to, evaluated, verified and was closed out on June 9, 1980.

Pullman Power Products initiated and implemented Project Procedure IX-29, dated June 2, 1980, for "Control of Purge Dams".

The PNPP Project Organization directed the contractor to discontinue use and remove from site all remaining 7-0015-3 CWS, Polyvinyl Alcohol Film per letter PY-SO/044/045-2873, dated May 30, 1980.

Samples of the material before and after heat transformation have been sent to CEI's laboratory and three independent laboratories to determine a solvent which will dissolve the material without damaging the pipe.

The Nuclear Engineering Department is preparing a list of systems which will not be subjected to water flush or hydrostatic testing. This information will be forwarded to the piping contractor.

The piping contractor is being directed by PNPP Project Organization to identify by weld number all locations where the referenced purge dam material was used.

Nuclear Engineering and Nuclear Test Sections have prepared a list of methods to be used both singularly and in combination to remove and verify removal of undissolved purge dam material. This list includes flushing, poly-pig cleaning, hydrolaser cleaning, chemical cleaning, and visual inspection.

At the present time, CEI is still in the process of identifying locations of deficient material in the piping systems and having chemical analysis performed to identify a solvent capable of dissolving the purge dam material without damaging the pipe. This evaluation should be complete by September 1, 1980. After that, a plan to remove and verify removal can be established, and a final report will be submitted by December 15, 1980.

Very truly yours,

Dalwyn R. Davidson

Dalwyn R. Davidson
Vice President
System Engineering and Construction

ksz

cc: Mr. Victor Stello, 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