



THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

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VICE PRESIDENT

SYSTEM ENGINEERING AND CONSTRUCTION

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August 3, 1981

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
Final Report on Use of
Mono-Sol brand, 7-0015-3
CWS Polyvinyl Alcohol Film,
Water Soluble Purge Dam Material,
Manufactured by Chris Craft
Industries
[RDC 18(80)]

Dear Mr. Keppler:

This letter serves as a Final 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. First reported by W. J. Kacer of The Cleveland Electric Illuminating Company to J. Konklin of your office on June 12, 1980, our Interim Report was subsequently mailed on July 11, 1980. In letters dated December 4, 1980, and January 30, 1981, we documented additional conversations with Mr. Konklin during which extensions from our original commitment date for the filing of this Final Report were granted.

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

DESCRIPTION OF DEFICIENCY

Pullman Power Products, the PNPP piping installation contractor, was using a water soluble purge dam material identified as 7-0015-3 CWS polyvinyl alcohol film. This material is manufactured by the Mono-Sol Division of Chris-Craft Industries, Inc. Three problems have been identified as a result of using this material.

1. The contractor did not have a procedure addressing the material used or controls for issuing and placing the purge dams.

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2. When subjected to heat, this material is not readily soluble in water. Heat had been introduced by post weld heat treating, diamond/ring heat application for bending pipe, and placing dam material too close to the weld.
3. Certain piping systems will not be subjected to water flush or hydrostatic testing prior to plant operations. Other systems may not provide strainers for all equipment, such as heat exchangers and flow orifices.

These problems are generic to both butt welded carbon and stainless steel piping.

ANALYSIS OF SAFETY IMPLICATION

Had the presence of the insoluble purge dam material gone undetected, the possibility existed that this material could have adversely affected the operation of a limited number of safety-related systems and/or equipment which may, in turn, have led to an increased risk to the safety of the public.

CORRECTIVE ACTION TAKEN AND METHODS FOR REMOVAL

On May 30, 1980, Corrective Action Request (CAR) 0496 was issued to the contractor for using purge dam material without prior establishment of procedural controls. On this same date, the PNPP Project Organization directed the contractor to discontinue use and remove from site all remaining 7-0015-3 CQS, Polyvinyl Alcohol Film per letter PY-SO/044/045-2873. In response to CAR 0496, Pullman Power Products initiated and implemented their Project Procedure IX-29, dated June 2, 1980, for "Control of Purge Dams."

The contractor was also directed to perform a review of weld data prior to May 30, 1980. From this data, information was compiled which identified possible locations of insoluble purge dam material. After location of the suspect purge dams, drawings were marked to define the areas of concern by application of the following criteria, developed to identify those areas where the insoluble mono-sol material could affect the safe operation of safety-related Systems.

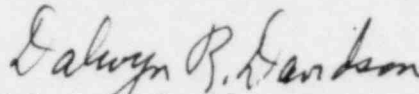
- a. All lines which could eventually lead to the reactor vessel.
- b. All lines which supply sealing water or sealing steam.
- c. The Suppression Pool and all lines leading to the pool.
- d. The Condensate Storage Tank and all lines leading to the tank.
- e. Augmented Quality Program portions of Fire Protection and Off-Gas systems.

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Removal of purge dam material from the defined areas will be done in accordance with an approved program which we are in the process of documenting. The existing Flush Program will be augmented by a chemical cleaning and/or mechanical cleaning program reviewed and approved by the Project Organization. Each affected system will be identified. Based on analysis of each system, we will determine the extent and degree of cleaning material and technique.

The completion date for this work will follow the Project Organization Schedule, with completion of the removal program prior to the Reactor Pressure Vessel In Flush performed during the Integrated Flush, presently scheduled for September 15, 1982 for Unit 1, and July 1, 1985, for Unit 2.

Very truly yours,



Dalwyn B. Davidson

Vice President

System Engineering and Construction

DRD:pab

cc: L. McGregor

Mr. Victor Stello, Director
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