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August 27, 1984  
EF2-69279

DMB

Mr. James G. Keppler  
Regional Administrator  
Region III  
U. S. Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Dear Mr. Keppler:

- Reference:
- (1) Fermi 2  
NRC Docket No. 50-341
  - (2) Letter, D. A. Wells to J. G. Keppler,  
October 20, 1983, EF2-65288
  - (3) Letter, D. A. Wells to J. G. Keppler,  
December 22, 1983, EF2-66490
  - (4) Letter, W. H. Jens to J. G. Keppler,  
May 11, 1984, EF2-68541.

Subject: Final Report of 10CFR50.55(e) Item 101  
"Debris in Piping Systems"

This is Detroit Edison's final report concerning Item 101, "Debris in Piping Systems." Item 101 was originally reported as a potential deficiency on September 20, 1983. Additional information was provided in References (2), (3), and (4).

Description of Deficiency

During the preoperational testing phase, construction debris was found within safety-related piping systems contrary to approved Detroit Edison cleanliness requirements. The debris typically consisted of tool parts, pieces of plywood, duct tape, sludge and black iron oxide and sand. Each discovery was documented, evaluated and corrected in accordance with the Fermi 2 Quality Assurance Program and approved cleanliness control procedures.

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Upon completion of Detroit Edison's extensive flushing program, all construction work was to be performed in a manner that would preserve the cleanliness class designated for the system. The cleanliness requirement was specified on the work package and was to have been verified upon completion of the work activity.

In spite of these program provisions, debris was allowed to enter, or remain within, safety related piping systems after these systems had been flushed.

#### Analysis of Safety Implications

Debris remaining in safety related piping systems could result in the affected system not performing its intended function, thus possibly degrading those functions in an indeterminate manner.

#### Corrective Action

Detroit Edison's program to correct this deficiency and prevent its recurrence consisted of steps to:

- o Prevent the introduction of additional debris into piping systems by the adoption of additional cleanliness controls and worker training;
- o Locate and remove any remaining debris from safety related piping systems;
- o Verify that safety related piping systems operate reliably and meet all specifications for flow, pressure drop and valve leak tightness.
- o Analyze the safety implications if similar debris remains trapped in safety systems.
- o Implement procedures to ensure that if additional debris is discovered, it is documented and evaluated for safety implications and that appropriate corrective action is taken.

Specifically, Detroit Edison has established strict controls to ensure that no foreign materials will be introduced into safety related piping systems. Maintenance and construction

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organizations have incorporated cleanliness control measures into work packages for all work inside safety related piping systems. The work packages now specify the following:

- o In high traffic areas, appropriate barriers will limit access to immediate work areas.
- o The opening of a Level I piping system is a Quality Assurance Hold Point. Upon opening, a visual inspection is made and Engineering is notified of the presence of any foreign material.
- o Tools and materials will be controlled and verified to have been removed from the internals of the system.
- o Open systems will not be left unattended; or, a solid and securely fastened protective cover will be provided to prevent undetected access to the system.
- o Prior to final closure, Quality Assurance will visually inspect for the presence of foreign material and maintain surveillance until system closure.

To locate and remove debris which was introduced into or remained in the system after the flushing program, Detroit Edison conducted inspections of portions of systems considered suspect. Descriptions of the method and extent of these inspections along with detailed descriptions of the debris found is contained in Detroit Edison's Internal Correspondence NP-84-798. This document is available for inspection at the Fermi 2 site.

To verify the reliability of operation and that systems and components meet design specifications, parameters such as flow rate, pressure drop or valve leak tightness are being verified during the system testing process or are being retested.

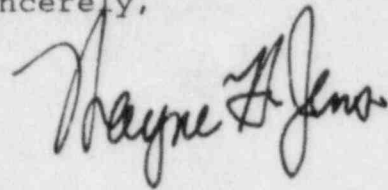
Safety analyses of debris and foreign material found in safety related piping systems was performed. No significant safety concerns were identified. These reports are available for inspection at the Fermi 2 site.

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To ensure that additional debris which is discovered is documented, trended, corrected and that a safety analysis is performed, Detroit Edison evaluated and revised the appropriate procedures.

This is Detroit Edison's final report on this item. If you have questions concerning this matter, please contact Mr. Lewis P. Bregni, (313) 586-5083.

Sincerely,

A handwritten signature in cursive script, appearing to read "Wayne H. Jones". The signature is written in dark ink and is positioned to the right of the word "Sincerely,".

cc: Mr. P. M. Byron  
Mr. R. C. DeYoung  
Mr. R. C. Knop