

Wayne H. Jens  
Vice President  
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**Detroit  
Edison**

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6400 North Dixie Highway  
Newport, Michigan 48166  
(313) 586-4150

August 15, 1984  
EF2-69669

*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,  
February 23, 1984, QA-84-0084
- (3) Letter, D. A. Wells to J. G. Keppler,  
November 5, 1982, EF2-60505
- (4) Letter, D. A. Wells to J. G. Keppler,  
July 9, 1982, EF2-58749
- (5) Letter, D. A. Wells, to J. G. Keppler,  
March 12, 1982, EF2-57149

Subject: Final Report 10CFR50.55(e) Item 55  
"Defective Spot Welds in Powerstrut  
Support Material"

This is Detroit Edison's final report of Item 55, "Defective Spot Welds in Powerstrut Support Material." Item 55 was originally reported as a potential deficiency on February 11, 1982, and subsequently documented in References (2), (3), (4) and (5).

Description of Deficiency

In November 1981, L. K. Comstock Quality Control reported to Detroit Edison Engineering that Powerstrut combined channels of various configurations in stock at Fermi 2 exhibited a lack of fusion at the spot welds that join the channel sections. Powerstrut channel material was being used at the time to fabricate conduit and cable tray supports. The material was supplied by the Van Huffel Tube Corporation.

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### Analysis of Safety Implications

The structural integrity of safety-related conduit and cable tray supports, fabricated from Powerstrut combined channels could not be assured for design seismic event conditions without engineering evaluation of this deficiency.

### Corrective Action

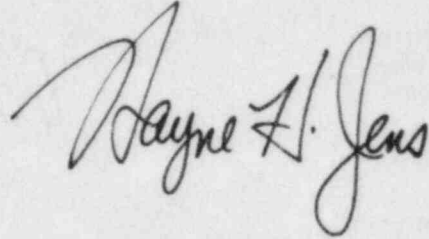
The following actions have been completed to correct the deficiency and prevent recurrence:

- o L. K. Comstock suspended the purchase and installation of all Powerstrut configurations at Fermi 2.
- o Seventy-five representative Powerstrut combined channel samples were sent to Detroit Testing Laboratory, Inc. in 1982. A peel test, a macro-etch, and a check for impurities were performed on 12 of the samples. Shear strength tests were performed on 63 samples. From these test results, Detroit Edison Engineering formulated allowable load criteria for Powerstrut channels.
- o Detroit Edison Engineering completed an analysis of the electrical supports using the results of the channel analysis. With the exception of 138 supports in the Reactor and Auxiliary Buildings, Powerstrut members used for Seismic Category I cable tray and conduit supports were determined to be seismically qualified without modifications. Powerstrut members from the 138 defective supports were identified under DDR E-7366, Rev. C and reinforced or replaced as required.
- o At the request of Detroit Edison, Sargent & Lundy Engineers completed a review of cable tray supports with Powerstrut members taking into account loading and design changes made after the date of the Detroit Edison Engineering analysis. Sargent & Lundy determined that no further support modifications were required.
- o Detroit Edison revised the Electrical Engineering Standard Specifications to prohibit the use of Powerstrut channels.

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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 dark ink, appearing to read "Wayne L. Jens". The signature is fluid and cursive, with a large initial "W" and a long, sweeping tail.

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