



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

December 18, 1992

Docket No. 50-341

Mr. William S. Orser
Senior Vice President - Nuclear
Operations
Detroit Edison Company
6400 North Dixie Highway
Newport, Michigan 48166

SUBJECT: FERMI-2 REMOVAL OF 24 CONDENSATE AND FEEDWATER SYSTEM WELDS FROM THE
INSERVICE INSPECTION NONDESTRUCTIVE EXAMINATION (ISI-NDE) PROGRAM
(TAC NO. M84177)

Dear Mr. Orser:

The staff has completed its review of your submittal dated July 29, 1992, requesting removal of 24 condensate and feedwater system welds from the Fermi-2 Inservice Inspection, Nondestructive Examination (ISI-NDE) program. These are nozzle-to-safe-end or safe-end-to-piping welds located on the Numbers 3, 4, 5, and 6 feedwater heaters which were previously identified as Generic Letter (GL) 88-01 welds and which were inspected during the first refueling outage and, subsequently, recategorized from "Category G" to "Category D" welds. Your justification for removing the welds from the ISI-NDE program is summarized as follows:

- (1) GL 88-01 applies to welds that are located in austenitic stainless steel piping that contains reactor coolant or are located on reactor vessel attachments or appurtenances. The subject welds are located in a portion of the condensate and feedwater system piping outboard of the containment isolation valves; and the subject piping does not contain reactor coolant.
- (2) The subject welds are non-safety-related, non-seismically qualified ANSI B31.1 welds and are not a part of the reactor pressure boundary. The subject condensate and feedwater systems are not required for the safe shutdown of the reactor or for operation of the nuclear steam supply system safety features.
- (3) Intergranular stress corrosion cracking (IGSCC) would be insignificant for those welds because under normal conditions, dissolved oxygen levels are approximately 20 ppb and the conductivity is less than 0.06 uS/cm.

We do not agree with your contention that the condensate and feedwater piping system outboard of the containment isolation valves does not contain reactor coolant. The water in the subject piping is the same water that will enter the reactor vessel to serve as reactor coolant. As stated in GL 88-01, the staff positions in GL 88-01 apply to all BWR austenitic stainless steel piping that is 4 inches or larger in nominal diameter and that contains reactor coolant at a temperature above 200°F

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during power operation, regardless of American Society for Mechanical Engineers (ASME) Code classification. The intent of the language of "regardless of ASME Code classification" is to indicate that GL 88-01 applies to all piping classifications including piping with non-ASME Code classifications such as the subject piping. The staff concludes that the subject welds are within the scope of GL 88-01 because the piping contains reactor coolant and has a nominal diameter of 20 inches to 24 inches with a service temperature above 200°F. These welds may be susceptible to IGSCC. Therefore, the 24 welds should not be removed from the Fermi-2 ISI-NDE program.

However, as stated in your request, under normal conditions of operation the oxygen level and conductivity in the subject piping are very low and the likelihood of IGSCC is reduced. The subject welds are not immune to IGSCC; however, since a crevice condition may be present in those welds which have backing rings. The crevice condition is known to accelerate IGSCC, particularly in Inconel material. The staff notes that some of those welds were buttered or clad with Inconel materials. In view of the above, the staff has determined that the same staff position delineated in GL 88-01, Supplement 1 addressing the inspection of reactor water cleanup (RWCU) piping outboard of the containment isolation valves should be applied to those 24 welds. An inspection of the subject piping welds on a sampling basis of at least 10 percent of the weld population should be performed during each refueling outage.

If you have any questions, please contact me at (301)504-1341.

/S/
Sincerely,

Timothy G. Colburn, Sr. Project Manager
Project Directorate III-1
Division of Reactor Projects - III/IV/V
Office of Nuclear Reactor Projects

Enclosure:
As stated

cc: See next page
SEE PREVIOUS CONCURRENCE*

OFFICE	LA:PDIII-1*	PM:PDIII-1 <i>ka</i>	PD:PDIII-1 <i>me</i>
NAME	MShuttleworth	TColburn:vsb	LMarsh
DATE	12/16/92	12/18/92	12/18/92

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Mr. William Orser
Detroit Edison Company

FERMI-2

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