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Edison

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50-341

June 19, 1982
EF2-58744

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

Subject: Final Report of 10CFR50.55(e) Item on Failure of Core Spray
System Bellows (#53)

Dear Mr. Keppler:

This is Detroit Edison's final report on failure of core spray system bellows problem. This problem was originally reported to Mr. J.E. Konklin of NRC Region III by Detroit Edison's Mr. H.A. Walker, Supervisor-Construction Quality Assurance, on February 2, 1982.

Expansion joint E210D003 failed when the Division I core spray pump suction piping was flooded to commence flushing. The failure was determined to have been a result of the following:

- a) The 300 psig internal pressure exerted on the expansion joint during the flushing operation exceeded the test pressure of 187 psig.
- b) The expansion joints were not designed to restrict axial movement which was the intent of the piping analysis.

Examination of the damaged expansion joint showed that two of the three shipping bars broke loose and punctured the stainless steel flowliner. In order to continue flushing the core spray piping, the damaged expansion joint was removed and replaced with a temporary coupling. Expansion joint E210D004 in Division II of the core spray pump suction piping was also removed to avoid a possible similar failure.

The failure of expansion joint E210D003 was not due to a generic problem associated with the use of such joints. The failure resulted from exceeding the expansion joints test pressure and by failure to specify the use of tie bars when purchasing the joints. Replacing the expansion joints with properly designed and installed joints will not lead to similar failure, provided the test pressures and temperatures are not exceeded.

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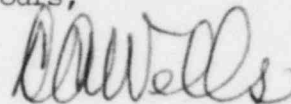
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New (properly designed) expansion joints will be installed in the core spray pump suction piping. The expansion joints have been ordered for this application.

If you have questions concerning this matter, please contact Mr. H.A. Walker, Supervisor-Construction Quality Assurance.

Very truly yours,



HAW/DAW/cp

cc: Mr. Richard DeYoung, Director
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