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**Detroit
Edison**

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December 22, 1983
EF2-66490

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

Subject: Report on 10CFR50.55(e) Item on Additional Problems with
RHR Pumps (#107)

Dear Mr. Keppler:

On November 21, 1983, Detroit Edison's Mr. T.A. Alessi, Director -
Project Quality Assurance telephoned Mr. P. Pelke of NRC Region III
to report on additional problems with RHR pumps at the Fermi II
site.

Detroit Edison had been informed by Byron-Jackson, manufacturer of
the RHR pumps, that the amount of wear found on the pump bearings
is excessive considering the length of time they have operated in
tests. This is significant since it represents a potential for a
premature failure.

Project Quality is separating those items that specifically relate
to the RHR pumps from 10CFR50.55(e) No. 101, and including them as
part of 10CFR50.55(e) No. 107. These items include the lost set
screws, linear indications on two of the impellers, and excessive
wear of the wear rings. 10CFR50.55(e) No. 101 will cover the
problems of foreign materials in the RHR piping.

Both RHR pumps "B" and "D" had impellers with linear indications,
set screws for the wear rings in the pump bowls missing (2 of 3 in
each case) and excessive wear on the wear rings and hydrostatic
bearing wear rings.

If the set screws, whose physical dimensions are larger than the
clearance dimensions of the impeller, pass through the impeller,
they may cause a temporary imbalance in the rotation of the
impeller with subsequent galling or binding which could lead to a
variety of immediate or delayed failure mechanisms. The set screw
could also lodge in an isolation valve seat or hinge (in the case
of a check valve) resulting in the failure of the valve to fully
close. General Electric has done a loose parts analysis and deter-
mined that there are no safety implications should these parts
enter into the vessel.

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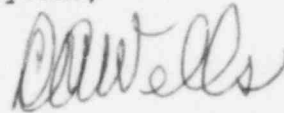
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The corrective action has been to reweld any significant linear indications, to replat the impeller wear rings and pump bowl wear rings with a harder material, and to remove the labyrinth seal from the impeller and pump bowl wear rings. These activities are expected to give the pumps improved longevity.

Another report on this item, either interim or final, will be sent when further information is available. If you have questions concerning this matter, please contact Mr. G.M. Trahey, Assistant Director - Project Quality Assurance.

Very truly yours,



DAW/EHN/pn

cc: Mr. Richard DeYoung, Director
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