CLEVELAND ELECTRIC ILLUMINATING CO.
PERRY NUCLEAR POWER PLANT
10 CENTER ROAD
PERRY, OHIO 44081
TELECOPY NO. (216) 259-2010

DATE 5/22/92

NOTIFICATIONS
1755

RESIDENT NOTIFIED.

TELECOPY REQUEST

TO: NRC OPERATIONS CENTER

FROM: CEI/ ROD D. GASTON (216) 259-3737 ext 5002/
Compliance Engineer

TELECOPY NO. 301 - 492-8187

COMMENTS: Initial Part 21 Notification
per 10CFR21.21(c)(3)(i)

NUMBER OF PAGES 2 (INCLUDING THIS COVER SHEET)

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Perry Nuclear Power Plant
10 Center Road
Perry, OH 44081
Docket No. 50-440

Fax No. (216) 259-2010
Licensee Contact:
Henry Hegrat, Compliance Supervisor
(216) 259-3737 Extension 5185

PRELIMINARY 10CFR21 NOTIFICATION TO
REPORT DEFECTS IN MAIN STEAM ISOLATION
VALVE POPPETS SUPPLIED BY ATWOOD & MORRILL

This notification is being submitted pursuant to the requirements of 10CFR21.21(c)(3)(i) to report a defect in Main Steam Isolation Valve (MSIV) poppets supplied to the Perry Nuclear Power Plant (PNPP) by Atwood and Morrill Company, Incorporated.

A total of eleven (11) poppets were ordered from Atwood & Morrill (A&M) as part of a design improvement for the PNPP MSIVs. At the time of discovery of the defect, 9 of the 11 poppets had been received and receipt inspected. The poppets were received during the period September 5 to December 3, 1991. On April 1, 1992 a linear indication was observed in the Stellite 21 hardfaced seating surface of a poppet identified as serial number (S/N) 5. This poppet was returned to the vendor for repair. The remaining 8 poppets were visually inspected by April 5, 1992 and revealed no signs of cracking.

On April 8, 1992, a crack was discovered on the seating surface of poppet S/N 4. Subsequent visual and liquid penetrant testing of the other poppets revealed additional cracks in poppets S/N 6 and S/N 12. All poppets with identified cracking were returned to A&M for repair and a hold was placed on the shipment of the 2 poppets (S/N 2 and S/N 9) which had not been received. A&M was also requested to provide a root cause analysis to identify the source of the cracking and to provide justification to support the use of the 5 poppets which did not experience cracking.

The evaluation performed by A&M concluded that the cracking in the hardfacing material was caused by the excessive build-up of residual stresses due to multiple repair welds in the poppet nose/seating area and a substantial increase in the overall thickness of the hardfacing. These factors were common to all of the poppets, for which the cracking was observed an did not exist for the poppets evaluated as acceptable for service (S/Ns 3, 7, 8, and 10).

Poppet S/N 11 did not exhibit cracking, but had experienced one major repair in the nose/seating area. Post weld heat treatment was prescribed and performed for this poppet to alleviate concerns regarding residual stresses which may have been present. A successful PT examination was subsequently completed and poppet S/N 11 was determined to be acceptable for service. Poppets identified as S/Ns 3, 7, 8, 9, 10, and 11 are currently installed in the plant.

A written report which includes additional details concerning the subject defects will be submitted within 30 days as required by 10CFR21.21(C)(3)(ii). Should you require additional information prior to that time, please contact Henry Hegrat, Compliance Supervisor, at (216) 259-3737, extension 5185.

RWG:ss