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Confirmation of Failure Causes of PWR Defective Fuels

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Abstract

PWR fuels relevant to the failure mechanism have been subjected to post-irradiation examination. Two fuel rods were identified as defective fuel rods during on-site inspection and transported to the PIE facility of KAERI to investigate the root causes of the fuel failure. A series of nondestructive and destructive hot cell examination have been performed for the fuel rods. The results show that the failure of R-rod was oriented from the debris induced fretting mechanism, and K-rod failure could be made by the random hydride.