

N45. THE EFFECT OF DISSOLVED ZINC ON THE TRANSPORT OF CORROSION PRODUCTS IN PWRs

In an out-reactor loop operating under simulated PWR conditions with coordinated lithium/boron chemistry control, dissolved zinc significantly reduced pickup of cobalt-60 (Co-60) by both Inconel 600 and Type 304 stainless steel. Moreover, oxide films that formed with zinc present were thinner than those formed without zinc, suggesting that radiation fields in operating PWRs could be reduced by adding approximately 10 ppb zinc to the primary coolant.

For more, see Ocken, H., "The Effect of Dissolved Zinc on the Transport of Corrosion Products in PWRs," EPRI Report NP-6975, Final Report, September 1990, 72 pages. Available from Research Reports Center, P.O. Box 50490, Palo Alto Also, CA 94303.