

December 21, 2010

MEMORANDUM TO: Mirela Gavrilas, Chief  
Corrosion and Metallurgy Branch  
Division of Engineering  
Office of Nuclear Regulatory Research

FROM: Charles R. Harris */RA/*  
Corrosion and Metallurgy Branch  
Division of Engineering  
Office of Nuclear Regulatory Research

SUBJECT: ARGONNE NATIONAL LABORATORY TECHNICAL LETTER  
REPORT ON EVALUATION OF TIME DEPENDENT LEAK  
RATES IN ALLOY 600 STEAM GENERATOR TUBE  
SPECIMENS

Argonne National Laboratory (ANL) has been conducting research on Steam Generator Tube integrity for the U.S. Nuclear Regulatory Commission, including leak testing and modeling of cracks. The enclosed document, "Technical Letter Report on Evaluation of Time Dependent Leak Rates in Alloy 600 Tube Specimens," provides the ANL evaluation of the time dependency of primary to secondary leak rates in steam generator tubes.

The present study was initiated to validate the conservatism of historical assumptions that leak rates remain constant under a specific set of loading conditions. The results presented here show that time dependent leak rates can not be attributed to a single mechanism.

This letter report, which is located in the NRC agency-wide documents access and management system main library under accession number ML100950385, should be made available to the public.

Enclosure: As stated

CONTACT: Charles Harris, RES/DE/CMB  
(301) 251-7637

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