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A Division of Southwest Research Institute  
6220 Culebra Road • San Antonio, Texas, U.S.A. 78228-5166  
(210) 522-5160 • Fax (210) 522-5155

September 23, 1999  
Contract No. NRC-02-97-009  
Account No. 20-1402-571

U.S. Nuclear Regulatory Commission  
ATTN: B. Jennifer Davis  
Office of Nuclear Material Safety and Safeguards  
TWFN, Mail Stop T7C-6  
Washington, DC 20555

Subject: Submission of Intermediate Milestone Report 20-1402-571-930 "Effects of Environmental Factors on the Aqueous Corrosion of High-Level Radioactive Waste Containers—Experimental Results and Models"

Dear Ms. Davis:

Enclosed please find the report entitled "Effects of Environmental Factors on the Aqueous Corrosion of High-Level Radioactive Waste Containers—Experimental Results and Models." This report is focused on the performance of Alloy 22 as a high-level waste container material. Experimental results on passive corrosion, localized corrosion, and stress corrosion cracking in a range of simulated near-field repository environments are presented. The results of the laboratory investigations are discussed in the context of improving the ability of the Total-system Performance Assessment code to estimate the time for the onset of different corrosion modes and the container penetration rates and updating the CLST IRSR. Please contact Darrell Dunn at (210) 522-6090 or myself at (210) 522-5538 if you have any questions regarding this report.

Sincerely yours,



Narasi Sridhar  
Element Manager  
Corrosion Science & Process Engineering

NS:DD:jg

Enclosures

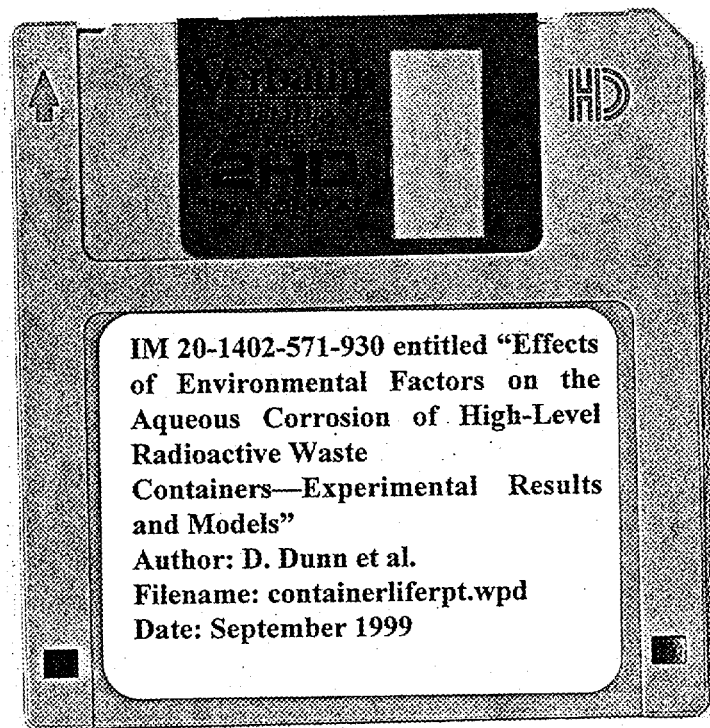
cc: J. Linehan T. Ahn W. Patrick T. Nagy (contracts)  
D. DeMarco D. Dancer CNWRA Dirs.  
B. Stiltenpole B.J. Davis (3) CNWRA EMs  
B. Meehan J. Contardi G. Cragnolino  
K. Stablein C. Greene D. Dunn  
J. Greeves J. Holonich Y.M. Pan



Washington Office • Twinbrook Metro Plaza #210  
12300 Twinbrook Parkway • Rockville, Maryland 20852-1606

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IM 20-1402-571-930 entitled "Effects  
of Environmental Factors on the  
Aqueous Corrosion of High-Level  
Radioactive Waste  
Containers—Experimental Results  
and Models"

Author: D. Dunn et al.

Filename: containerliferpt.wpd

Date: September 1999