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MEMORANDUM FOR: Dr. S. Salvatore Zungoli, Chief  
Policy and Publications Management Branch  
Division of Technical Information and  
Document Control

FROM: John T. Greeves, Chief  
Engineering Branch  
Division of Waste Management

SUBJECT: NUREG/CR-4735, Vol. 1, "EVALUATION AND COMPILATION OF DOE  
WASTE PACKAGE TEST DATA," FIN A-4171

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Engineering Branch  
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<b>NRC FORM 335</b> (11-81)		<b>U.S. NUCLEAR REGULATORY COMMISSION</b> <b>BIBLIOGRAPHIC DATA SHEET</b>		<b>REPORT NUMBER (Assigned by DDC)</b> <b>NUREG/CR-4735</b> <b>Volume 1</b>	
<b>4. TITLE AND SUBTITLE (Add Volume No., if appropriate)</b> Evaluation and Compilation of DOE Waste Package Test Data - Volume 1 covering the period December 1985 to July 1986				<b>2. (Leave blank)</b>	
<b>7. AUTHOR(S)</b> C. Interrante, Escalante, A. Fraker, M. Kaufman, W. Liggett, and R. Shull				<b>3. RECIPIENT'S ACCESSION NO.</b>	
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<b>16. ABSTRACT (200 words or less)</b> This report summarizes results to date of NBS evaluations of Department of Energy (DOE) activities in waste packages designed for containment of radioactive high-level nuclear waste (HLW). The waste packages is a proposed engineered barrier that is part of a permanent repository for HLW. Candidate repository sites include three different media: tuff, basalt, and salt. Metal alloys are the principal barriers for the proposed canisters and overpacks. In addition, borosilicate glass and various packing materials have been proposed as components of this engineered system. Thus, the associated technical problems involve corrosion, leaching, dissolution and transport within the waste packages. This report gives status reports on waste package activities related to each of the three host media. Appended to the report are NBS reviews of selected DOE technical reports and NBS trip reports of pertinent meetings, seminars, and workshops attended. Also presented in the report is background information on the Materials Characterization Center (MCC) as well as discussion on statistical considerations in fitting leaching and corrosion models to measurements. The MCC was established to assess and characterize waste package materials for reliable performance for DOE's nuclear waste needs.				<b>11. FIN NO.</b> A-4171	
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