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"SOLID WASTE IN BINS""LIQUID WASTE IN TANKS"; "OTHER HLW: SPENT NUCLEAR FUEL INVENTORIES"; "OTHER INVENTORIES OF RADIOACTIVE WASTE"; "FUTURE PLANS AND CONTEXT FOR THIS STUDY"; "PROCESS OPTIONS"; "ORGANIZATION OF THIS REPORT"; "2 Calcine Characterization, Retrieval, and Dissolution"; "CALCINE CHARACTERIZATION"; "RETRIEVAL, HANDLING, AND BLENDING OF CALCINE FROM BINS"; "Retrieval Operations"; "Calcine Handling and Blending"; "CALCINE DISSOLUTION"; "Characteristics of UDS"; "Derivation of Dissolution Specifications"; "ADEQUACY OF EXISTING INFORMATION"

"CRITICAL TESTING NEEDS""3 Physical and Chemical Separations"; "THE SEPARATIONS APPROACH"; "SOLID-LIQUID SEPARATIONS"; "Current Status"; "CESIUM ION EXCHANGE SEPARATION"; "Experimental Basis"; "Current Status"; "STRONTIUM SEPARATION"; "Adequacy of Existing Information"; "Critical Testing Needs"; "Alternatives"; "TRUEX SEPARATIONS PROCESS"; "Technical Problems"; "Current Laboratory Experimentation"; "Questionable Experimental Process Modifications"; "Required Technical Demonstration of Proposed Process"

"SEPARATIONS PROCESSING CHALLENGES ASSOCIATED WITH THE COMBINATION OF INDIVIDUAL STEPS""SUMMARY"; "4 Treatment of Sodium-Bearing Liquid Waste"; "PRESENT STATUS AND PROGRAM PLANS"; "PROCESSING METHODS"; "REPOSITORY AND TREATMENT OPTIONS FOR NON-HLW"; "Other Department of Energy Office of Environmental Management Plans for Disposal of Low-Level TRU Waste in WIPP or NTS"; "5 Vitrification"; "NONSEPARATION OPTION"; "Waste Compositions and Characteristics"; "Zirconia-Based Calcine"; "Alumina-Based Calcine"; "SBW to be Calcined or Directly Immobilized"

"Mixtures of Alumina Calcine and SBW""Vitrification Facility and Processing"; "SEPARATION OPTION"; "Waste Compositions and Characteristics"; "Vitrification Facility and Processing"; "POTENTIAL PROBLEMS"; "Blending to Achieve Uniform Waste Composition"; "Waste Loading in Borosilicate Glass"; "High Phosphate Content"; "Zirconia-Related Problems"; "Tolerance of Glass to the Content of Calcium Fluoride"; "Testing Needs"; "6 Cementation"; "PROCESS DESCRIPTIONS"; "Direct Cementation: Mixed HLW Hydroceramic with Feed of Clay, Slag, Soda, and Water"

"Direct Cementation: Mixed HLW Hydroceramic with Feed of Sucrose, Clay, NaOH, and Water"
