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VitrificationSulfate Retention During Waste Glass Melting; The Characterization and Dissolution of High Level Waste Calcine in Alkali Borosilicate Glass; Summary of Results from 786-A Minimelter Run with Marcobatch 3 (Sludge Batch 2) Baseline Feed Using Frit 320; Numerical Models of Waste Glass Melters Part I - Lumped Parameter Analyses of DWPF; Numerical Models of Waste Glass Melters Part II - Computational Modeling of DWPF
Tailored Electrical Driving as a Means of Controlling Heat Distribution and Convection Patterns in Joule-Heated Waste Glass MeltersEffects of Poly(Acrylic Acid) on the Rheological Properties of Aqueous Melter Feed Slurries for Nuclear Waste Vitrification; Frequency Modulated Continuous Wave Monitoring of Refractory Walls; Combustion Control Experimentations at a Pilot Scale Glass Furnace; Waste Vitrification Programs; Completion of the Vitrification Campaign at the West Valley Demonstration Project; Review of the French Vitrification Program Examination of DWPF Melter Materials After 8 Years of ServiceTesting to Demonstrate Regulatory Compliance of Glass Waste Forms for Immobilization of Radioactive Wastes at the Hanford Site; Cold Crucible Induction-Heated MelterTest Results with Surrogate DOE High-Level Wastes; Crucible-Scale Vitrification Studies with Hanford Tank AZ-102 High Sulfate-Containing Low Activity Waste; Glass Formulation and Property Models; Preliminary Glass Development and Testing for In-Container Vitrification of Hanford Low-Activity Waste; Evaluation of Melt Rate Through Higher Waste Loading
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Sommario/riassunto

In today's world of increasingly stringent environmental regulations, it is critical to identify and adequately address environmental issues in the ceramic industry to ensure success. In addition, ceramics and glasses play a critical role in the nuclear industry. Nuclear fuels and waste forms for low-level and high-level radioactive, mixed, and hazardous wastes are primarily either ceramic of glass. Effective and responsible environmental stewardship is becoming increasingly more important in the world. These proceedings detail the results of the ongoing effort in these areas.