TABLE IV-11

High-Level Nuclear Waste Immobilization Forms — Properties Comparison

Waste Form	Devel. Status	Process Complexity	Process Flexibility	Waste Loading	Dispersion Impact Resis.	Long-Term Stability	Fire Resistance	Leachability 100°C	Leachability 350°C
Calcine	Available	Low	Excellent	High	Very Low	High	Poor	Poor	Poor
Rich Clay	Available	Low	Excellent	Low	Low	?	Poor	Medium	Poor
Normal Concrete	Available	Medium	Excellent	Medium	Medium	Medium	Poor	Medium	Poor
Hot, Pressed Concrete	5 years	High	Excellent	Medium	High	Medium	Medium	Good	Poor
Pelletized Calcine	5 years	High	Excellent	Medium	Medium	Medium	Medium	Good	Poor
Glass	Available	High	Excellent	Medium	High	High	Excellent	Excellent	Poor
Clay Ceramic	5 years	High	Poor	Medium	High	Medium	Medium	Good	Poor
Supercalcine	15 years	Very High	Poor	High	Very High	High ?	Best	Best	Poor
Synroc	15 years	High	Poor	Very Low	Very High	High ?	Best	Best	Good
Glass Ceramic	15 years	Very High	Poor	Medium	High	High	Excellent	Excellent	Poor
Pellet in Metal Matrix	5 years	Very High	Good	Low	Very High	High	Poor	Excellent	Poor
Coated Supercalcine in Metal Matrix	15 years	Highest	Poor	Medium	Very High	High ?	Excellent	Best	Poor
Cermet	10 years	Highest	Poor	Medium	High	High	Excellent	Excellent	Poor

Most Attractive — Intermediate — Least Attractive