

APPENDIX B

MATERIALS AND COMPONENTS OF HLW STORAGE SYSTEMS

Function	Component	Safety Class*	Codes, Standards	Material	Strength (Ksi)	Surface Finish/Coat.	Contact Mat. [if Dissimilar]	Residuals on Surface	Welding Process	Weld Filler Metal
Containment	Drain port plugs									
	Inner cask bottom head									
	Inner cask lid									
	Inner cask lid seals									
	Inner cask shell									
	Inner cask shell upper hd.									
	Leak check port plug									
	Lid closure hardware									
	Outer cask inner shell									
	Outer cask lid									
	Outer cask lid seals									
	Outer cask shell bot. hd.									
	Outer cask shell upper hd.									
	Pressure relief device									
	Vent, drain, press. seals									
Vent port plug										
Criticality Control	Basket assembly									
	Neutron absorbers									
Shielding	Gamma shielding									
	Inner cask top shield plug									
	Neutron shielding									
Heat transfer	Temp. contrl. components									
Structural Integrity	Cask hardware									
	Conc. base unit, roof slab									
	Conc. struct. access bolts									
	Concrete support pad									
	Inner cask support struct.									
Outer cask outer shell										
Oper. supp.	Access door lifting lugs									
	Lift.lugs/trunnions/grapples									
	Lift. lug/trunnion bolts									
	Protective cover									
	Roof slab lifting eyes									
	Security lockwire, seals									
	Shielded access door									
	Shielding shell									
Transfer cask										

- The safety classification for the various functions and components should be based on terminology of NUREG/CR-6407, "Classification of Transportation Packaging and Dry Spent Fuel Storage System Components According to Importance to Safety," February, 1996. INEL Report 95/0551

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(Cont.)

Function	Component	Stress		Temp. [Storage]			Temp. [Loading]	Temp. [Unloading]	Pressure			
		Norm. (Ksi)	Max. (Ksi)	Norm. (F)	Min. (F)	Max. (F)	Max. (F/hr)	Max. (F/hr)	Min. (psig)	Max. (psig)	Gas (type)	
Containment	Drain port plugs											
	Inner cask bottom head											
	Inner cask lid											
	Inner cask lid seals											
	Inner cask shell											
	Inner cask shell upper hd.											
	Leak check port plug											
	Lid closure hardware											
	Outer cask inner shell											
	Outer cask lid											
	Outer cask lid seals											
	Outer cask shell bot. hd.											
	Outer cask shell upper hd.											
	Pressure relief device											
	Vent, drain, press. seals											
Vent port plug												
Criticality Control	Basket assembly											
	Neutron absorbers											
Shielding	Gamma shielding											
	Inner cask top shield plug											
	Neutron shielding											
Heat transfer	Temp. contrl. components											
Structural Integrity	Cask hardware											
	Conc. base unit, roof slab											
	Conc. struct. access bolts											
	Concrete support pad											
	Inner cask support struct.											
Outer cask outer shell												
Oper. supp.	Access door lifting lugs											
	Lift.lugs/trunnions/grapples											
	Lift. lug/trunnion bolts											
	Protective cover											
	Roof slab lifting eyes											
	Security lockwire, seals											
	Shielded access door											
	Shielding shell											
Transfer cask												