Table A-20.C. Technical implementation cons

Data	Site-specific data for	Soil type(s)/lithology
requirements	technology evaluation	D. d. d. I.NIA.DI
		Depth to LNAPL
		Depth to water
		Hydraulic gradient
		Site access
	Bench-scale testing	Soil column testing
		Treatability testing
	Pilot-scale testing	N/A
	Full-scale design	Soil type(s)/lithology
	uli-scale design	Depth to LNAPL
		Depth to water
		Hydraulic gradient
	Performance metrics	LNAPL thickness
	renormance metrics	LIVAF L UIICKIIESS
		Depth to water
		Downgradient
		concentrations
Modeling tools/applicable models		MODFLOW
Further information		USACE. 1994. Enginee
		http://www.publications
		EPA. n.d. "Technology and Application of Zero in.org/techfocus/default ent_Zones,_and_Applic
		EPA. 1998. Permeable EPA/600/R-98/125. http
		EPA. 1998. Evaluation 005. http://clu-in.org/do

iderations for physical or hydraulic containment

nuerations for physical of hydraulic containment
Soil type should be taken into account for physical or hydraulic
design to ensure it meets performance metrics.
Range of seasonal water level change needs to be defined.
Changes in flow direction may reduce or negate effect of barrier
system.
Presence and locations of subsurface utilities and foundations.
To test permeability of barrier wall mixes. For cement mixtures, there
is a need to check chemical compatibility with groundwater
chemistry. Saline waters adversely affect cement, but also inhibit
bentonite slurry set up in certain conditions.
Monitoring wells downgradient of barrier to verify no occurrence of
LNAPL.
For hydraulic interception barriers (wells or trenches), maintain
reversal of hydraulic gradient.
LNAPL constituent meets standard at point of compliance.
Other groundwater flow models may be applicable.
ring and Design: Design of Sheet Pile Walls. EM 1110-2-2504.
usace.army.mil/Portals/76/Publications/EngineerManuals/EM_1110-2
Focus: Permeable Reactive Barriers, Permeable Treatment Zones,
-Valent Iron." http://clu-
.focus/sec/Permeable Reactive Barriers, Permeable Treatm
ation_of_Zero-Vale

Reactive Barrier Technologies for Contaminant Remediation.
://clu-in.org/download/rtdf/prb/reactbar.pdf

of Subsurface Engineered Barriers at Waste Sites. EPA 542-R-98wnload/remed/subsurf.pdf