

TABLE 1 Innovative Treatment Technologies

TECHNOLOGY	APPLICABLE CONTAMINANTS	LEVEL OF AGGRESSIVENESS	TIME REQUIRED TO IMPLEMENT	LAND REUSE TIMEFRAME
Zero Valent Iron and Clay and/or Thermal delivered via soil mixing	Halogenated VOCs, Metals	High	Weeks to Months	Land reuse can not begin until remediation is complete and equipment is removed from the site. Geotechnical issues should be considered.
Thermal Treatment	VOCs, Hologenated VOCs	High	Weeks to Months	Land reuse can not begin until remediation is complete and equipment is removed from the site.
In situ Chemical Oxidation	VOCs, Hologenated VOCs	Medium or High	Weeks to Months	Typically, land reuse begins after completion of the remediation process. However, the chemical delivery system may be designed to work within the new property use constraints.
Bioremediation with direct injection or groundwater recirculation	VOCs, Hologenated VOCs, SVOCs, Metals	Medium	Months to Years	Land reuse can be initiated during thr remediation phase if the bioremediation system is designed to operate within the new property use constraints.
Vapor Barriers and/or mitigation systems	VOCs, Hologenated VOCs	Low	Years	Land reuse can begin in conjunction with the installation of the vapor barriers, mitigation systems, and/or establishment of Land Use Controls.
Permeable Reactive Barriers	VOCs, Hologenated VOCs, SVOCs, Metals (Arsenic)	Low	Years	Land reuse can begin following installation of the wall.
Monitored Natural Attenuation	VOCs, Hologenated VOCs, Metals	Low	Years	Land reuse can begin while natural attenuation monitoring is performed.