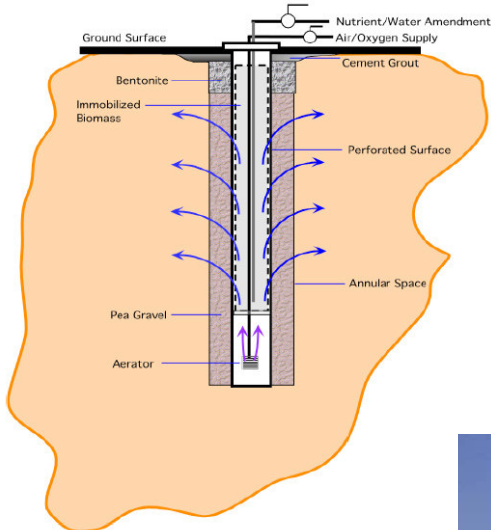


Biological soil remediation

We are an engineered biological systems company which, specialize in fieldvalidated bioremediation solutions for contaminated soil and groundwater, industrial effluents and solids and volatile and semi-volatile compounds. The company provides turn key bioreactor systems, engineering support, logistics design and operational oversight for emediation of contaminants such as **chlorinated aliphatics, pesticides, petroleum hydrocarbons, PCBs, wood treating compounds, starch, PVA, and adsorbable organic halides (AOX).**



Technology Profile

- Immobilized microbe bioreactor systems consisting of attached and immobilized biomass coupled to microaeration systems tailored for specific effluent or groundwater chemical speciation. These "biocatalysts" are small, modular systems designed to treat high concentration feed streams while occupying a small footprint within an existing facility.
- Aeration systems designed to provide 0.5 μ diameter air bubbles for gas aphon, reactor aeration, volatiles venting/stripping or soil remediation activities.
- In situ bioreactors are designed to remediate soils in place with minimal excavation.

Applicability

Biological Plugs are used to treat both saturated and unsaturated soil systems. They are especially useful in situations where existing buildings or equipment limit or prohibit excavation of the contaminants. Biological have also proven useful in situations where the contaminants are spread over a large area such as oil or gas pipelines.



Advantages

- In situ treatment (no excavation other than boreholes)
- Rapid biodegradation rates
- Effective in both the saturated and unsaturated zones
- Flexibility to treat materials underneath buildings and equipment
- Large surface areas can be effectively and economically remediated
- Both free (aqueous) and particulate sorbed contaminants are degraded

Microbial consortia on immobilized bed can be adapted to degrade traditionally recalcitrant (difficult to degrade) waste fraction.

