Bioventing Encyclopedia Article

Bioventing

The following sections of this BookRags Literature Study Guide is offprint from Gale's For Students Series: Presenting Analysis, Context, and Criticism on Commonly Studied Works: Introduction, Author Biography, Plot Summary, Characters, Themes, Style, Historical Context, Critical Overview, Criticism and Critical Essays, Media Adaptations, Topics for Further Study, Compare & Contrast, What Do I Read Next?, For Further Study, and Sources.

(c)1998-2002; (c)2002 by Gale. Gale is an imprint of The Gale Group, Inc., a division of Thomson Learning, Inc. Gale and Design and Thomson Learning are trademarks used herein under license.

The following sections, if they exist, are offprint from Beacham's Encyclopedia of Popular Fiction: "Social Concerns", "Thematic Overview", "Techniques", "Literary Precedents", "Key Questions", "Related Titles", "Adaptations", "Related Web Sites". (c)1994-2005, by Walton Beacham.

The following sections, if they exist, are offprint from Beacham's Guide to Literature for Young Adults: "About the Author", "Overview", "Setting", "Literary Qualities", "Social Sensitivity", "Topics for Discussion", "Ideas for Reports and Papers". (c)1994-2005, by Walton Beacham.

All other sections in this Literature Study Guide are owned and copyrighted by BookRags, Inc.

Contents

Bioventing Encyclopedia Article.....1

Contents.....2

Bioventing.....3

Bioventing

The process for treating environmental contaminants in the soils located between the ground surface and the **water table** by inducing **aerobic** biodegradation. Air is introduced into the contaminated soils, providing oxygen for native **soil** bacteria to use in the biodegradation of organic compounds. The process is typically accomplished by extracting and/or injecting air from trenches or shallow **wells** which are screened within the unsaturated soils. The systems are similar to those used in vapor extraction. The main difference is that air extraction rates are low to minimize physical removal (stripping) of volatile organic compounds (VOCs) reducing the need for expensive treatment of the off-gases. The process may include the addition of nutrients such as common fertilizers, to provide **nitrogen** and phosphate for the bacteria. Bioventing is particularly attractive around buildings and actively used areas because it is relatively nonintrusive and results in minimal disturbance during installation and operation. The process is most suitable for **petroleum** hydrocarbon blends such as **gasoline**, jet fuel, and diesel oil, for petroleum distillates such as **toluene**, and for nonchlorinated solvents.

See Also

Biodegradable; Bioremediation; Vapor Recovery System