

For Further Information on



Please Call


ATTIC System Operator/Hotline  
**(301) 670-6294**

ATTIC Online Computer Access  
**(301) 670-3808**  
**(301) 670-3813 (9600 baud)**

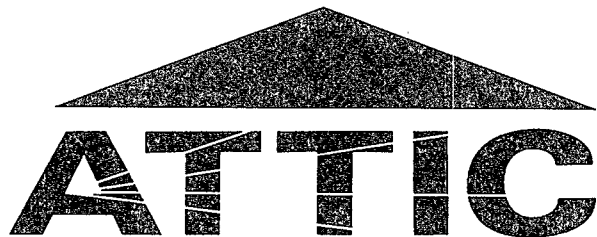
or

Joyce Perdek  
U.S. Environmental Protection Agency  
Risk Reduction Engineering Laboratory  
2890 Woodbridge Avenue (MS-106)  
Edison, NJ 08837-3679  
**(908) 321-4380**

ATTIC Technical Support  
4 Research Place, Suite 210  
Rockville, MD 20850  
**(301) 670-4990**

 **EPA Alternative  
Treatment  
Technology  
Information  
Center**





## What Is ATTIC?

The **ALTERNATIVE TREATMENT TECHNOLOGY INFORMATION CENTER** is the most comprehensive information network providing up-to-date information on innovative treatment technologies.

**ATTIC** provides the information you need to make effective decisions on hazardous waste clean-up alternatives. It can be accessed with a PC and modem 24 hours a day, and there are no user fees.

## What Can ATTIC Do For You?

**ATTIC** helps you:

- Find **innovative** solutions for **permanent** remedies at hazardous waste sites.
- Save time and resources by providing "one stop shopping" for information on alternative treatment options.
- Streamline your search for information by providing searchable abstracts that allow you to quickly screen hundreds of source documents.
- Communicate with your peers and learn from their experiences in applying innovative technologies.
- Keep up to date with the latest information on upcoming conferences and other events.
- Identify technical experts who can assist you in selecting appropriate technologies, and vendors who can help you implement the remediation.

## How Do You Get Into the ATTIC?

You can access **ATTIC** using either an IBM (or compatible) PC, Apple, or a dumb terminal equipped with a modem (1200, 2400, or 9600 baud), and appropriate communications software (e.g., CrossTalk™ or PROCOMM™).

Note: If you do not have access to a PC with a modem, you can still access the information in **ATTIC** by calling the system operator.

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Parity	N
Data Bits	8
Stop Bits	1
Terminal Emulation	VT-100
Duplex	Full

Once you have accessed **ATTIC** all functions are easily performed using abbreviated commands. **ATTIC** is also equipped with a built-in help function; anytime you need help, type **H** for an easy guide to the menu.

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**ATTIC** is demonstrated at numerous conferences and workshops across the country. If you would like to see the system demonstrated or would like training or technical assistance on how to use the system, please contact the **ATTIC** system operator at (301) 670-6294.

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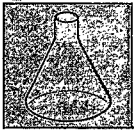
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# What Is In the ATTIC?

ATTIC contains information on:

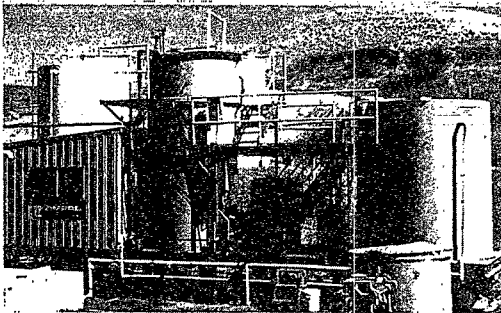


**Biological Treatment**—processes use microorganisms and the enzymes they produce to transform or degrade hazardous contaminants found in groundwater, surface water, soil, sediment, and sludges. Biological treatment processes include bioreactors, biofilters, ponds and lagoons, land treatment, composting, and subsurface aerobic/anaerobic treatment.



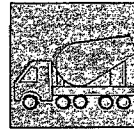
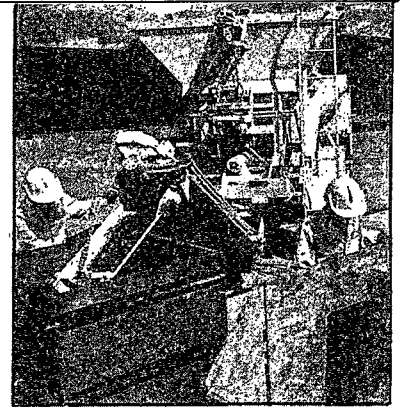
**Chemical Treatment**—processes involve chemical reactions which alter or destroy a hazardous waste component. Chemical treatment can be applied to both organic and inorganic wastes, and may be formulated to address specific target compounds in a mixed waste. Typical chemical treatment processes include oxidation-reduction reactions such as ozonation, photolysis, dehalogenation, and chemical precipitation.

This modified activated sludge process has been used to treat groundwater contaminated with organic solvents.

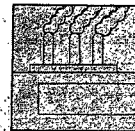


**Physical Treatment**—processes separate the waste stream by either applying physical force or changing the physical form of the waste. Physical treatment can be applied to a wide variety of liquid and solid wastes, but further treatment is often required. Physical treatment processes include adsorption, filtration, distillation, air stripping, evaporation, and freeze crystallization.

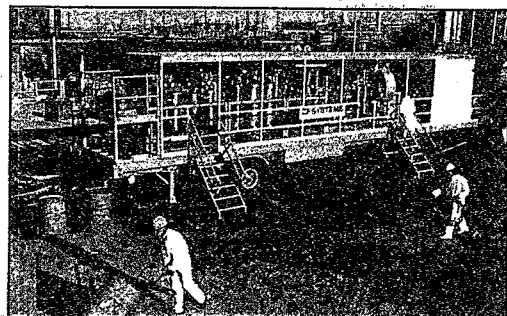
Cement-based solidification can be used to treat waste contaminated with organics.



**Solidification/Stabilization**—processes immobilize hazardous constituents in waste by converting them into their least soluble, mobile, or toxic form; by binding them in an immobile, insoluble matrix; and/or by binding them in a matrix which minimizes the material surface exposed to weathering and leaching. Solidification/stabilization processes include cement-based fixation, encapsulation, pozzolanic-based fixation, and vitrification.



**Thermal Treatment**—processes use energy to destroy or detoxify hazardous liquids, sludges, and solids. These technologies include low and high energy thermal processes. Typical thermal treatment processes include flame combustion, fluidized bed combustion, infrared incineration, rotary kiln, pyrolysis, and plasma heat systems.



Solvent extraction has successfully been used to remove organics from soil and sediment.

# What Can You Get From the ATTIC?

ATTIC provides you access to:

- Databases
- An Electronic Bulletin Board
- A Hotline
- A Repository



## Databases

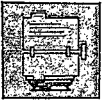
**The ATTIC Database**—The most up-to-date information on alternative treatment technologies that you can search using standard keywords or free text. It includes hundreds of abstracts that highlight:

- Treatment technology
- Media
- Contaminant concentration
- Performance and cost data
- Quality assurance
- Contact name and phone number.

**The Risk Reduction Engineering Laboratory Treatability Database**—A comprehensive source of treatability data for the removal or destruction of chemicals in water, soil, debris, sludge, and sediment. Each file contains information on:

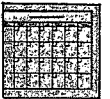
- Physical/chemical properties
- Environmental data
- Treatment technology
- Contaminant concentration
- Media/matrix
- Performance
- Quality assurance

**The Technical Assistance Directory**—A database of government, academic, and consulting experts you may contact to answer your technical or policy questions. The directory:

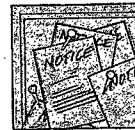


- Provides the name, affiliation, address, and phone number for each expert, as well as the areas of expertise.
- Can be searched by area of expertise and by name.

**A Calendar of Events**—A comprehensive list of national and international conferences, training seminars, and workshops. The calendar provides:

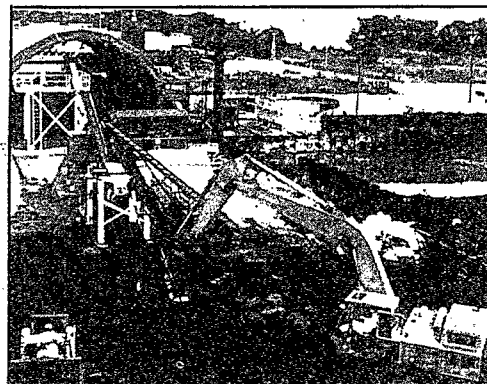


- Date and time of the event
- A summary of its purpose and scope
- The cost to attend
- A contact name and phone number.



## Electronic Bulletin Board

**A Message Center**—An online message system that lets you ask and answer questions, or leave information and system updates.



Infrared thermal destruction has been used to remove organics from soil.

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**Bulletins**—The latest news on alternative treatment technologies, such as recent engineering and technology demonstration bulletins.

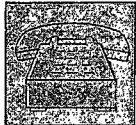


### Special Interest Groups (SIGs)

Specialized forums within **ATTIC** dedicated to discrete topic areas. These groups are mini-bulletin boards that allow you to enter and receive messages and view bulletins dedicated to a single topic area. **ATTIC** has SIGs for:



- Bioremediation—which focuses on biological treatment technologies and the latest developments in the field.
- The Federal Remediation Roundtable—an inter-agency group focusing on the remediation of federal hazardous waste sites.



### Hotline

**A Hotline**—**ATTIC** can be accessed by phone during regular business hours. Through the hotline you can request:

- Searches to be run for you.
- Assistance in designing a search strategy or "walking" you through a search.

By contacting the **ATTIC** system operator, you can also request searches of the Robert S. Kerr Environmental Research Laboratory Soil Transport and Fate Database and EPA's Hazardous Waste Collection Database.

The system operator is always available to respond to your questions concerning **ATTIC** and resolve any problems you may have in accessing the system.



### Repository

**A Repository**—Full-text copies of the source documents abstracted in the **ATTIC** Database are available. You can order documents from:

- The National Technical Information Service (the NTIS number is provided as part of each abstract).
- EPA's Center for Environmental Research Information.
- **ATTIC**—you can have the documents FAXed to you, or sent by express or regular mail. Documents are free to federal, state, and local governments.

## Why Should You Use ATTIC?

**ATTIC** accommodates your busy schedule with:

- Quick searches of hundreds of abstracts on alternative treatment technologies.
- Accessible 24 hours a day, 7 days a week, at no charge.
- Optional delayed retrieval—conduct a search, **then call back later** to retrieve the search report.

**ATTIC** includes information from a broad range of sources, such as:

- Superfund Innovative Technology Evaluation (SITE) Program
- Records of Decision (RODs)
- RCRA Delisting Actions
- Removal Actions
- Treatability Studies
- NATO/International Studies
- U.S. Air Force
- U.S. Army Toxic and Hazardous Materials Agency (USATHAMA)
- State Agencies
- Industry Field Studies/Remedial Projects
- Conferences and Symposia
- Technical Journals and Bulletins

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