



A Citizen's Guide to Incineration

The Citizen's Guide Series

EPA uses many methods to clean up pollution at Superfund and other sites. If you live, work, or go to school near a Superfund site, you may want to learn more about these methods. Perhaps they are being used or are proposed for use at your site. How do they work? Are they safe? This Citizen's Guide is one in a series to help answer your questions.

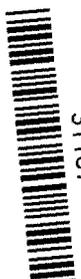
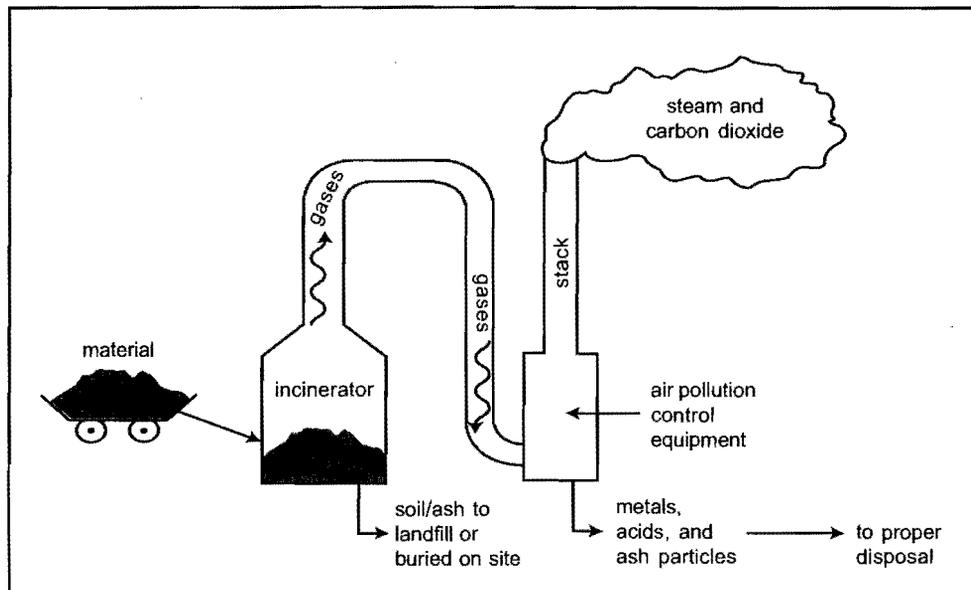
What is Incineration?

Incineration is the process of burning hazardous materials to destroy harmful chemicals. Incineration also reduces the amount of material that must be disposed of in a landfill. Although it destroys a range of chemicals, such as PCBs, solvents, and pesticides, incineration does not destroy metals.

How does it work?

An *incinerator* is a type of furnace. It burns material, such as polluted soil, at a controlled temperature, which is high enough to destroy the harmful chemicals. An incinerator can be brought to the site for cleanup or the material can be trucked from the site to an incinerator.

The material is placed in the incinerator where it is heated. To increase the amount of harmful chemicals destroyed, workers control the amount of heat and air in the incinerator. As the chemicals heat up, they change into gases, which pass through a flame to be heated



further. The gases become so hot they break down into smaller components that combine with oxygen to form less harmful gases and steam.

The gases produced in the incinerator pass through air pollution control equipment to remove any remaining metals, acids, and particles of ash. These wastes are harmful and must be properly disposed of in a licensed landfill. The other cleaner gases, like steam and carbon dioxide, are released outside through a stack.

The soil or ash remaining in the incinerator after the burning may be disposed of in a landfill or buried on site. The amount of material that requires disposal is much less than the initial amount of waste that was burned.

Is Incineration safe?

An incinerator that is properly designed and operated can safely destroy harmful chemicals. It can also run without producing odors or smoke. EPA tests the incinerator before and during operation to make sure that gases are not released in harmful amounts.

How long will it take?

The time it takes for incineration to clean up a site depends on several factors:

- size and depth of the polluted area
- types and amounts of chemicals present
- whether or not the waste must be trucked to the incinerator

Larger incinerators can clean up several hundred tons of waste each day.



For more information

write the Technology Innovation Office at:

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or call them at
(703) 603-9910.

Further information also can be obtained at www.cluin.org or www.epa.gov/superfund/sites.

Why use Incineration?

Incineration can destroy some types of chemicals that other methods can't. It is also quicker than many other methods. This is important when a site must be cleaned up quickly to prevent harm to people or the environment. On-site incineration can reduce the amount of material that must be moved to a landfill. Incinerators have been used to clean up 136 Superfund sites across the country.

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