MUNICIPAL WASTE INCINERATION

Incineration is promoted by incinerator companies as a clean alternative to landfills. But incineration is by no means as clean as its advocates claim. Incinerators do not make waste disappear; they simply reduce it to ash and to atmospheric emissions, both of which are potentially hazardous.

Toxic air emissions:

Dioxin and Furans are among the most toxic man-made compounds. Furans are a family of chemicals that closely resemble dioxin, and can cause health damage similar to dioxin. Dioxin is an extremely potent toxic substance that produces a remarkable variety of adverse effects in humans and animals at extremely low doses. Dioxin is persistent in the environment and accumulates in magnified concentrations as it moves up the food chain, concentrating in fat, notable in breast milk. Dioxin can cause cancer and acts as an endocrine disruptor with adverse effects on reproduction, development and the immune system. In the U.S., incinerators are responsible for 84 percent of all airborne dioxin emissions.

Heavy Metals are present in many waste streams and cannot be destroyed by incineration. They end up in ash or are released as air emissions. Typical heavy metals emitted by incinerators include mercury, which causes birth defects, immune system damage and nervous disorders; lead, which is known to cause nervous disorders; and cadmium, which causes kidney failure, hypertension and genetic damage. Other heavy metals include cyanide, arsenic, selenium, and nickel. Even at low concentrations, heavy metals pose a health hazard because of the high toxicity of certain metals like mercury, lead and cadmium.

Products of Incomplete Combustion (PICs) are chemicals that are not found in the original waste stream but are formed during combustion. They include many harmful chemicals such as benzene, chloroform and carbon tetrachloride.

The Problem with Ash

The ash produced from incinerators can be toxic. About 90 percent of it, the so-called bottom ash, remains in the furnace and is collected from grates. The remaining 10 percent, known as fly ash, is drawn up in the flue gases and is collected in air pollution control equipment. Not only are most of the toxic metals captured in the fly ash, but a number of toxic compounds, including dioxin and furans, are actually created on the fly ash particles in a process called post-combustion formation. Ironically, this means that the better the air pollution control, the more toxic the ash. And since metals are not destroyed during combustion, toxic metals in means toxic metals out. Moreover, disposal of toxic ash can be problematic and expensive. If this ash is disposed of in a landfill, the toxics in the ash will leach out and contaminate groundwater.

(Excerpted from Solid Waste Incineration: The Rush to Burn, Center For Health, Environment and Justice, and Municipal Waste Incineration: Wrong Question, Wrong Answer, by Paul and Ellen Connett)

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RESOURCES ON MUNICIPAL SOLID WASTE INCINERATION

ORGANIZATIONS AND JOURNALS

Center For Health, Environment and Justice
P.O. Box 6806
Falls Church, VA 22040 USA
E-mail: cchw@essential.org
www.essential.org/cchw
Publishes bimonthly: EVERYONE'S BACKYARD

Greenpeace
1436 U Street, NW
Washington, DC 20009 USA
www.greenpeace.org

Southwest Research and Information Center
P.O. Box 4524
Albuquerque, NM 87106 USA
www.sric.org
Publishes quarterly: THE WORKBOOK

Work on Waste
82 Judson Street
Canton, New York 13617 USA
www.workonwaste.org
Publishes 48 times a year: WASTE NOT

Environmental Research Foundation
P.O. Box 5036
Annapolis, MD 21403 USA
Email: erf@rachel.clark.net
www.rachel.org
Publishes: Rachel's Environment & Health Weekly

SUGGESTED READING

WASTE MANAGEMENT: AS IF THE FUTURE MATTERED, 1988.
Paul Connett
Work on Waste

IF THE ANSWER IS INCINERATION, SOMEONE ASKED THE WRONG QUESTION, 1993
Paul and Ellen Connett
Work on Waste

SOLID WASTE INCINERATION: THE RUSH TO BURN, 1988.
Stephen Lester and Brian Lipsett.
Center For Health, Environment and Justice

RECYCLING VERSUS INCINERATION: AN ENERGY CONSERVATION ANALYSIS, 1992
Sound Resource Management Group
119 Pine Street-Suite 203, Seattle, Washington 98101 USA
Fax: (206) 622-9569

VIDEOS

THE RUSH TO BURN (35 minute video).
Greenpeace, 1989.

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