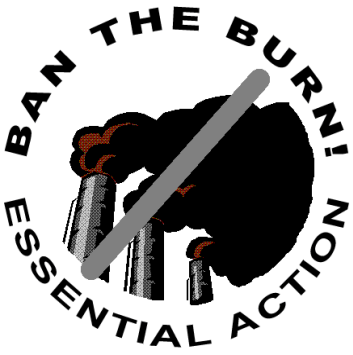
CEMENT KILNS
THAT BURN HAZARDOUS WASTE



Cement kilns seem ready-made for destroying hazardous wastes. They have to be heated to high temperatures with fuel, so why not substitute hazardous wastes for part of the fuel and burn up the wastes while making aggregate or cement? It saves on fuel and destroys wastes what could be better?

There are about a dozen good reasons for preventing wastes from entering kilns. Here are some of them:

- ☑ Hazardous waste frequently contains chlorinated organic compounds, and when it is burned dioxin will appear in the emission. Dioxins are emitted from cement kiln stacks, whether the kiln is fired with conventional fuels or with hazardous waste. However, according to the U.S. Environmental Protection Agency, cement kilns that burn hazardous waste emit dioxins in their stack gases at rates more than 80 times higher than those of cement kilns that burn conventional fuels.

- ☑ Typical wastes burned in kilns include paint, ink, solvents, petroleum industry wastes and waste oils including crankcase oil, transmission fluid and coolants. Some of these types of waste can contain toxic heavy metals such as lead, arsenic, cadmium and mercury. Metals make trouble in incinerators they are not destroyed but instead pass through the furnace into the outside environment, often in forms that make them more dangerous than when they first entered the kiln (e.g., attached to extremely small particles that can readily penetrate human lungs or can leach into groundwater).

- ☑ The fly ash from kilns burning hazardous waste is loaded with metals. Based on EPA data, 18.6 million pounds of metals enter the U.S. environment in fly ash from kilns each year. These metals are in a particularly leachable form, and are thus able to enter water and living things. The high alkalinity (high pH) of kiln ash makes kiln ash even more leachable than ash from normal hazardous waste incinerators.

- ☑ Kilns burning hazardous wastes emit 66% more particles (soot, smoke, haze) than kilns burning normal fuel.

- ☑ Advocates of hazardous waste incineration in kilns often claim that kilns destroy 100% of the wastes entering the furnace. Unfortunately, available data reveal this is patently false. Kilns do operate at high temperatures (2000 to 3000 degrees Fahrenheit), but metals are not destroyed at any temperature.

- ☑ Kilns create a class of chemicals called PICs (products of incomplete combustion), including dioxins, furans and a broad range of other organic chemicals. These PICs are enhanced by "upsets," which occur in kilns several times each month, when something goes wrong with the machine. During these periods, puffs of hazardous chemicals are emitted into the local environment.

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RESOURCES ON CEMENT KILN INCINERATION

ORGANIZATIONS:

National Citizen Alliance Inc.
10702 Lake Ave.
Ossineke, Michigan 49766, USA
E-mail: info@cementkiln.com
www.cementkiln.com

Work on Waste
82 Judson Street
Canton, New York 13617, USA
www.workonwaste.org

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

SUGGESTED READING:

FACT PACK: BURNING HAZARDOUS WASTE IN CEMENT KILNS
Center For Health, Environment and Justice
P.O. Box 6806
Falls Church, VA 22040 USA
E-mail: cchw@essential.org
www.essential.org/cchw

SHAM RECYCLERS: HAZARDOUS WASTE INCINERATION IN CEMENT AND AGGREGATE KILNS, 1989
Greenpeace
1436 U Street, NW
Washington, DC 20009 USA

RECYCLING OR DISPOSAL? HAZARDOUS WASTE COMBUSTION IN CEMENT KILNS, 1995
A Report from the American Lung Association
www.lungusa.org/air/recycle/index.htm

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