

Incinerator Pollution

Landfills in the sky

The Facts

Montenay Charleston Resource Recovery, Inc. operates a mass burn incinerator in Charleston, South Carolina. In 2001 the South Carolina Department of Health and Environmental Control issued a permit for the incinerator which burns household solid waste. The Blue Ridge Environmental Defense League obtained the DHEC operating permit and calculated the toxic pollution allowed to be emitted into the air. The table at right lists what we found.

The Conclusion

Even with the most modern equipment and control devices, incinerators pollute the air, soil and water. Trash burners, whether they use gasification, plasma arc, waste-to-energy, or any other thermal process, emit huge amounts of toxic pollution including carbon monoxide, cadmium, sulfur dioxide, mercury, hydrochloric acid, nitrogen oxides, lead, dioxins and furans. On the back of this fact sheet is information about some of these toxic air pollutants and their negative health impacts.

Air Pollutant	Emissions* pounds per year
Sulfur dioxide (SO₂)	700,800
Particulates (PM-10)	73,671
Carbon monoxide	937,320
Nitrogen oxides	1,155,444
Lead	4,642
Hydrogen fluoride	5,256
Mercury	1,051
Sulfuric acid (H₂SO₄)	14,016
Hydrochloric acid (HCl)	273,312
Volatile organic compounds (VOC)	93,732

* DHEC Permit No. TV-0560-0196, issued April 10, 2001

August 18, 2008

Blue Ridge Environmental Defense League

www.BREDL.org (336) 982-2691 PO Box 88 Glendale Springs, NC 28629 BREDL@skybest.com
Founded in 1984 and serving Virginia, North Carolina, South Carolina, Georgia and Tennessee

Volatile Organic Compounds (VOC)

VOC's include many dangerous chemicals including vinyl chloride, benzene, methylene chloride, and many more. **Vinyl Chloride** – Confirmed potent human carcinogen. Causes liver damage, immune system damage, nerve damage, reproductive effects, and even mutation.

Benzene – Causes cancer, leukemia, anemia, Hodgkin's disease and lymphoma, and immune system damage increasing the chance for infections, allergies, asthma, and other auto-immune diseases. **Methylene chloride** – Causes cancer. Inhalation can cause convulsions and change cardiac rate. Reported to cause mutation.

“Domestic exposure to VOCs at levels below currently accepted recommendations may increase the risk of childhood asthma. Measurement of total VOCs may underestimate the risks associated with individual compounds.”
Thorax 2004;59:746-751, 2004 BMJ

Sulfuric Acid

In the air, even a small amount of this acid gas causes damage to the lungs similar to that caused by cigarette smoke and may lead to chronic bronchitis.

Environmental Health Perspectives, Vol 81, pp 109-113 (1989)

Lead

Effects include neurotoxicity, developmental delays, hypertension, impaired hearing acuity, impaired hemoglobin synthesis, and male reproductive impairment. Importantly, many of lead's health effects may occur without overt signs of toxicity. Lead has particularly significant effects in children.

Centers for Disease Control, Roper et al, (1991)

NEGATIVE HEALTH IMPACTS ON CHILDREN LIVING NEAR INCINERATORS

A 27-year medical study found cancer rates higher in children living near incinerators.

The child cancer/leukemia risks within 3 miles of these sites were doubled.

Childhood cancers, birthplaces, incinerators and landfill sites. Int J Epidemiol 29 (3): 391-7 June 2000

Another study found that thyroid hormones are reduced in children exposed to toxic waste incineration in their environment.

*Thyroid hormone level in children in the area of a toxic waste incinerator in South Essen [Germany]
Gesundheitswesen 60(2):107-12 Feb 1998*

A third study of children living near 72 incinerators found a statistically significant increase in risk from incinerators for all cancers of the stomach, colorectal, liver and lungs.

Cancer incidence near municipal solid waste incinerators in Great Britain. Br J Cancer 73(5):702-710 Mar1996

Blue Ridge Environmental Defense League

www.BREDL.org (336) 982-2691 PO Box 88 Glendale Springs, NC 28629 BREDL@best.com
Founded in 1984 and serving Virginia, North Carolina, South Carolina, Georgia and Tennessee