

PROPOSED 66 ACRE/7 MILLION TON LANDFILL WILL EXPOSE RESIDENTS TO MERCURY

In a frequently cited article titled, Summary of Research on Mercury Emissions from Municipal Landfills, the information is alarming. Mercury is poisonous to the brain, nerves, liver, kidneys, developing fetuses and causes developmental disorders in children.

Mercury is found in many products that are dumped into landfills. Researchers are just beginning to learn how mercury evaporates into the air and how exposure of nearby populations to mercury can be toxic. Mercury is released into the air in different phases of a landfill. The working face is the area where trucks are dumping the garbage and bulldozers are moving, crushing and compacting the garbage. This breaks up products that contain mercury like batteries, fluorescent bulbs and electrical switches. This can lead to the release of mercury into the soil and the air. For the proposed CSWD landfill, the direction of the wind will determine whether it blows air-borne mercury over Williston or Essex Junction and the Winooski River.

Landfills are the source of a highly toxic form of mercury called organic mercury or dimethyl mercury. When exposed to bacteria, inorganic (or solid) mercury compounds in the landfill are converted to the highly toxic organic form and emitted into the air. This is the type of mercury compound that killed Karen Wetterhahn, a Cancer Researcher at Dartmouth College. She was exposed to the vapors from no more than a few drops of dimethyl mercury, lapsed into a coma in three weeks, and died a few months later. You may go to <http://www.pp.okstate.edu/ehs/news/KAREN.HTM> to read the full story.

Thus, another method of mercury emission is through venting such volatile organic mercury compounds from leaks in the capped part of the landfill. The CSWD plans to recycle the landfill leachate (toxic fluid that collects in the landfill) back into the landfill to accelerate decomposition of the garbage. This could provide ideal conditions for the production of highly toxic organic mercury compounds.

The article Summary of Research on Mercury Emissions from Municipal Landfills also states: "Researchers have measured dimethyl mercury from gas destined for landfill venting at 1,000 times higher than what has been measured in air. Organic mercury is a local pollution concern because it probably deposits quickly after being emitted. Once deposited it can bio-concentrate up the food chain." The CSWD may argue that flaring the gas emissions would resolve this problem but flaring does not occur at the active part of the landfill where garbage is being moved and crushed. It also is important to note that flaring does not affect emissions of organic mercury through leaks in the landfill cover or stop inorganic forms of mercury from being released into the air.

I have discussed this landfill proposal with two chemists and a physician. In light of the threat from mercury and myriad of other toxins, they are alarmed that the CSWD would place a landfill so close to Williston and Essex Junction neighborhoods, and the Winooski River. Since the 1992 Williston Host Town Agreement with the CSWD was signed, there has been increasing evidence of the significant health risks associated with putting landfills near neighborhoods. This 66 acre/7 million ton landfill will also pose a real environmental risk to Lake Champlain due to its close proximity to the Winooski River.

Last week the CSWD announced that the initial construction of the landfill would be 94 million dollars which is a significant increase from last years projection of 20 to 25 million dollars. It is now crystal clear that from a health, environmental and economical perspective this landfill should not be built.

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