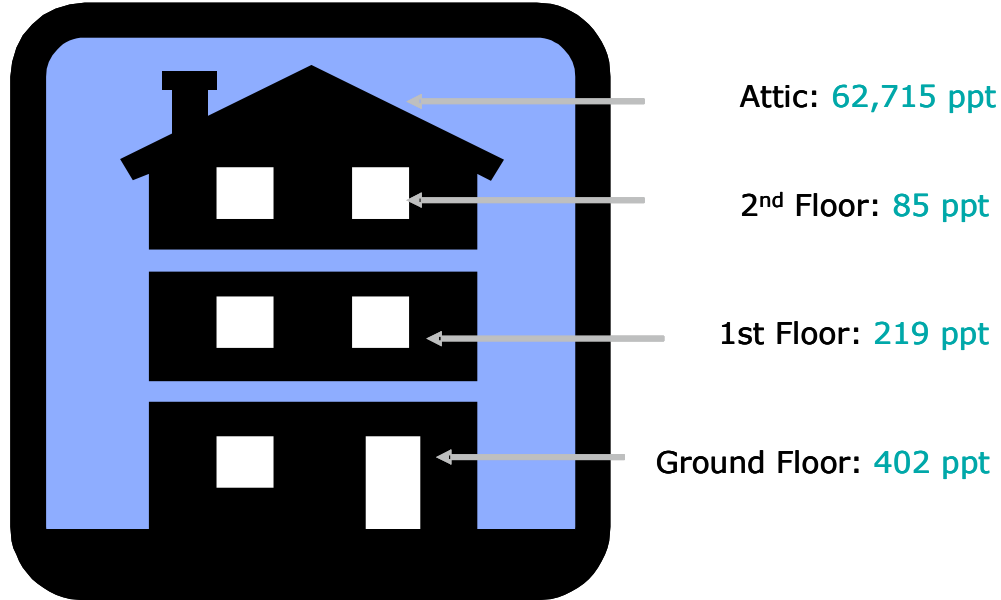


Attic Dust Data Should Not Be Used To Make Decisions About Exposure And Risk To People

All of the allegations reported recently in the press about supposedly high levels of contaminants in the Somerville area are based on samples of attic dust taken from some homes and schools in Somerville. As you can imagine, unused attics accumulate dust over the years. Dust accumulates from airborne particles blown into the attic, however a very dusty attic does not necessarily mean that there was at any time a particularly high level of windborne dust in the outdoor air. Normal levels of outside dust and indoor emissions will cause dust build-up in an attic if it is not removed by cleaning. Once indoors, dust is protected from the rain and the sun, and so degrades very slowly. In a similar way, any airborne particles that contain chemicals can also accumulate since the particles are not removed by routine cleaning and are protected from degradation by normal processes. Therefore, the concentration of some chemicals may occur over time, even in the absence of high levels of environmental contamination.

Common sense tells us that people don't spend very much time in dusty attics. If the attic is used regularly as a living space then it is cleaned regularly in the same way other living spaces are maintained. Studies have shown that regularly cleaned living spaces have much lower levels of dioxins than are present in the attic (Figure 1). For all of these reasons, attic dust is not helpful in estimating a person's past or present exposure to chemicals.

Figure 1



The amount of dioxin in dust from different floors of a building in Germany

[Hansen, D. Examination of the transfer of dust contaminated with polychlorodibenzo-[dioxins and polychlorodibenzofurans from the loft into the apartments below. *Otto Graf Journal: Annual Journal on Research and Testing of Materials*. 1996; 7:53-67.]

This is why regulatory agencies don't typically use attic dust data for the purposes of setting cleanup levels or predicting exposure. For instance, the Agency for Toxic Substances and Disease Registry (ATSDR) states,

"Therefore, possible patterns of attic surface dust levels may provide information on relative air dioxin deposition in the past. It cannot be used to estimate the resident's exposure to dioxin (past or present), or to make health risk calculation, or predict potential health effect." (emphasis added)

In spite of this clear direction, alarming and false information about the city of Somerville based exclusively on tests from some attics have been provided to and reported in the press. They have completely ignored the testing results from testing of soil in the same homes' yards and interior living space dust from areas where people actually live.

