INFORMATION ON POLYCHLORINATED DIBENZO-*P*-DIOXINS AND POLYCHLORINATED DIBENZO-FURANS — ALSO KNOWN AS "DIOXINS"

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1. Dioxins are a group of potentially toxic chemicals.
    a. These chemicals have been extensively studied by toxicologists and other health scientists.
    b. Such studies have shown that various levels of exposure to dioxin harm health in several ways, but, importantly, that very low-level exposures do not.
    c. Based on these studies, toxicologists at the World Health Organization have determined that dioxin-doses that are 2 picograms per kilogram of a person's body weight *per* day (2 pg/kg-day) and smaller are neither known nor expected to be harmful to people, including children and other potentially sensitive individuals.

2. Some dioxins are created when various materials are burned.
    a. The largest emission-sources of dioxins in the U.S. today are forest fires.
    b. Wood stoves are also emission-sources of dioxin.
    c. In the 1970's and 80's, power plants that burned municipal solid waste (that is, trash) were relatively large sources of dioxin-emissions.
    d. Recognition of this problem led to environmental regulations and controls, such that these facilities are now very minor dioxin-emission-sources.
    e. Uncontrolled combustion of trash — such as in "backyard burn-barrels" — is also a source of dioxin, and is more difficult to control.

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f. Incineration of wastes from hospitals was also a relatively large source of dioxins in decades past (because of the chlorinated plastics present in such waste), but more recently, environmental regulations and controls have reduced these sources substantially.

3. Combustion of landfill gas is also a source of dioxins.
    a. Measured concentrations of dioxins in combusted landfill gas are vanishingly small, however, and well within limits established by environmental regulators for other sources.
    b. Using quantitative air dispersion modeling — and focusing on the nearest house (actual or future) to the Landfill — we have analyzed the potential impacts from dioxin emissions from both the flare and the proposed engine at the Alpha Ridge Landfill.
    c. Our analysis indicated that impacts at the nearest residence could result in a dioxin-dose of approximately 0.0003 pg/kg-day. Because this dose is much smaller than 2 pg/kg-day, it would be harmless.
    d. Thus, dioxins emitted from combustion at the Landfill would not harm the Landfill's nearest neighbors — nor would they harm people living, working, or going to school farther afield, where exposure-levels would be smaller still.