

The Concept of Risk

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I attended the March 2 session on incineration held in Courtice. I believe that the implications of incineration will be even more nightmarish than those outlined that evening. In this paper, I will attempt to clarify the issue of "Risk".

There are those who believe that there is a "safe" level. This is not so when dealing with contaminants for which the human body has NO intrinsic defense mechanisms. In such instances, even a healthy immune system cannot cope with the invasive trauma. In addition, there are synergetic effects resulting from compound interactions with those from existing industrial emissions. In order to assess the risk, one has to look at the "Big Picture".

Risk should be assessed on the basis of worst-case scenarios, including the probability for such occurrences and expected duration. The incinerator proponents do the opposite – they assume that the system is always operating under optimal conditions. In this case, exposures were NOT estimated in instances of degraded operations where systems are NOT 100% functional 100% of the time. At best, this can grossly underestimate actual exposure levels. Moreover, the possibilities of operator errors or system over-rides were NOT considered.

The incinerator has no redundancies in its emission control systems. In cases of emission control system failure(s), it will NOT be possible to use alternates. Given that an incinerator CANNOT be turned off, the plant will have, under such conditions, reduced emission control capabilities; the extreme case being the release of untreated emissions. This will result in exposures that are higher than what was originally estimated under a best-case scenario. Given that all systems eventually fail, redundancies should have been an essential component, like in a mission-critical system.

We have to ask: "what type of risk are we talking about?" These could be from a host of medical issues, ranging from respiratory ones, compounded risks, life expectancy, added body chemical burden, genetic risk, fetal risk, risk on children and the elderly, diabetes patients, chronic heart or lung disease sufferers, hormonal-related matters, etc, etc. In addition, there is the issue of bio-concentration and epidemiological data that were ignored.

People should realize that ALL of them will undergo increases in body chemical burden and nano-particulate intakes through breathing, drinking or eating. For many of these pollutants, there are no "Safe" threshold levels and the only safe level is actually "Zero".

Another illustration of the lack of redundancy in the system is the fact that there is no secondary waste storage to provide a buffer function whenever the incinerator has to be shut down, as it unavoidably will.

Optimistic projections are analogous to the claims made in the post-WW-II period about the "Wonder Materials for a Better Tomorrow". These included asbestos, DDT, PCB and a host of others. These were then said to be perfectly "Safe" and met the legal requirements then in force; reality was altogether different. It is tragic that this was realized at the expense of personal suffering and early death of many people exposed to these products.

Do we want the same thing to happen with incineration? This outcome would be doubly tragic as the adverse implications of incineration are already well documented, particularly from epidemiological data. It is hoped that rationality will prevail and that this incineration project will be abandoned for good.