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Shane Simpson, M.L.A.
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New Democrat Environmental Critic
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Dear Mr. Simpson,

The purpose of this letter is to bring to your attention the possibility that a serious case of environmental contamination may exist in the Abbotsford region of the Lower Mainland of British Columbia that is adversely affecting human and animal health.

About six months ago Kathy O'Lane of 33454 Lynn Ave., Abbotsford, B.C. V2S-1E3 (Tel: 604-217-0276) contacted me in my capacity as a senior Environmental Consultant at the Pacific Institute. I have many years of experience in contaminated site assessment, environmental toxicology, risk assessment and epidemiology. Ms. O'Lane organized a meeting between me and at least 30 of her neighbours from Abbotsford, Mission, Cedar Valley, Chilliwack and neighbouring areas. All of these individuals claimed to be suffering from a wide variety of physical ailments. At least one of the attendees was unable to walk and had to be carried into the meeting on a stretcher. Each person in the room filled out a comprehensive survey sheet, indicating that the most common symptoms suffered by the individuals in this group included:

- Nervous system problems including tremors and lack of coordination
- Cutaneous problems including rashes, non-healing sores and ulcers, tingling, itching and burning sensations, skin sloughing
- Oral problems including metallic taste, thrush, gingivitis and teeth pain
- Vision problems including blurring, soreness and photosensitization
- Chronic fatigue

The majority of the attendees indicated that many of their family members and acquaintances also suffered from similar symptoms. Some individuals even said that they had observed various symptoms in their domestic pets. In total, I estimated that more than 100 individuals living the Abbotsford area were reporting suspicious symptoms and/or suffering from a variety of serious medical conditions.

Many of these individuals also stated that they had observed what they believed to be thick colonies of black and brightly coloured moulds growing in their houses and on their properties. Moulds were also observed to be growing in the drainage channels near their houses.

From my own consulting experience, the symptoms suffered by the residents of this community appear to be consistent with exposure to a systemic toxin. One possible candidate that is known to produce all of the observed symptoms is some type of mycotoxin.

Mycotoxins are non-volatile, relatively low-molecular weight secondary metabolic products produced by toxigenic fungi that may adversely affect exposed persons in a variety of ways. These compounds are considered secondary metabolites because they are not necessary for fungal growth but are simply a product of the primary metabolic processes. The amount of toxins needed to produce adverse health effects varies widely among toxins, as well as each person's immune system.

Mycotoxins are produced by toxigenic fungi. The most frequently studied mycotoxins are produced by species of *Aspergillus*, *Fusarium*, *Penicillium*, *Stachybotrys*, *Myrothecium* and a number of other fungi under certain growth conditions. The kinds and amounts of toxin produced depend on the fungal strain, the growing conditions, as well as the presence or absence of other organisms. Mycotoxins can accumulate on fungal spores, cell fragments and substrates (nutrient sources).

Fungi that produce potent mycotoxins are seldom abundant in outdoor ambient air. Most toxic exposures occur from indoor growth of fungi in areas where excessive moisture is present. Mycotoxins can also contaminate outdoor soils, water supplies and human food sources such as grains. Some mycotoxins are carcinogenic, some are vasoactive and some can cause central nervous system damage. Often, a single mycotoxin can cause more than one type of toxic effect.

An example of a well documented historic contamination of a population by mycotoxins occurred in the western Siberian portion of the Soviet Union in the 1920's. The political chaos prevalent in the area at that time meant that various grains were not harvested until late in the season when the fall rains had already begun and they were not properly dried before being placed into winter storage. The large amount of moisture present in the grain meant that conditions in the storage bins were ideal for the growth of mycotoxin producing moulds. After consuming bread and other baked goods made from the contaminated grain, patients reported a wide variety of symptoms including tingling and numbness of the lips, mouth and extremities, skin rashes, oral sores and ulcers, tremors and lack of coordination, blurred vision and photosensitization, and in some cases where there was long-term, chronic exposure, eventually death.

It can be seen that the symptoms experienced by the inhabitants of Abbotsford are similar to those reported by the populations of Siberia more than 80 years ago. However, there are numerous conditions that can produce the observed symptoms in the inhabitants of Abbotsford including exposure to bacteria, yeasts, streptomycetes, viruses, chemical contaminants and heavy metals. Only a proper comprehensive epidemiological study can determine exactly what is causing the symptoms reported by these individuals.

Consequently, it is my professional opinion that sufficient evidence has been presented to me to warrant that I issue a recommendation that a formal environmental and toxicological investigation be launched by the appropriate government authorities, such as, for example, the *BC Centre for Disease Control*, to properly determine if in fact a

portion of the population of the Abbotsford area is suffering from the effects of exposure to an environmental toxin. If this is found to be the case, then it is also imperative to determine, as soon as possible, the identity of this toxin, its source, and the means by which people are being exposed to it.

Should you have any questions, I am at your disposal at any time to discuss the contents of this letter.

Sincerely,

Paul D. Tinari

Dr. Paul D. Tinari Ph.D.,
Environmental Consultant

PDT/ner