

Mr. William Hance, Chair
Board Of Health
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April 8, 2005

Regarding the use of Anvil 2+2 in Nashville. The information presented below (and attached) is taken from the most recent release of data from the Surveillance, Epidemiology, and End Results (SEER) Program of the National Cancer Institute and from peer reviewed published research on pyrethroids and the synergant, piperonyl butoxide (the components of Anvil 2+2). I believe that if the general public knew this information, they would choose not to expose themselves or their children to a risk that likely exceeds that from mosquito-borne illness. The basic information enumerated below is highly relevant to the fundamental issue of public health in the Nashville community and to the upcoming decision regarding pesticide use.

1. 95-98% of all cancers are caused by mutations in somatic cells as we pass through life and not by the inheritance of defective parental genes (the evidence for this statement is presented in four review articles appended as Appendix 5). The general public does not know this fact.
2. Today 46%, essentially half of all white males, and 39.5% of all white females will be diagnosed with cancer in their lifetime (see Appendix 1). This incidence exceeds all known plagues and was predicted by scientists over 50 years ago. The general public does not know this fact.
3. Mutations are cumulative throughout our lifetimes. A mutation suffered at age 7 in a particular liver cell will be present in the progeny of that cell at age 70. This is why cancer is referred to as a disease of the elderly. Regretfully, it is a misconception. Rather, cancer incidence and onset correlates most directly with the "rate" and "magnitude" of DNA damage and is not strictly coupled to age. Additionally, it must be stated here that there is simply no "safe" dose of mutagen (see review articles).
4. **Tissues that show the maximum rate of increased cancer in recent years are precisely the same tissues that are most in harms way from mutagens in the environment** (please see Appendix I). Briefly stated here:
 - a. **Liver** and bile duct show the highest annual percent increase (4.8%) since 1992 alone. This is expected because everything that is absorbed in the gut goes first to the liver via the hepatic portal system. Toxins absorbed through the lungs or skin also are metabolized mostly in the liver.
 - b. Melanoma of the **skin** directly correlates with increased sun exposure and thinning of the ozone layer.
 - c. The **thyroid gland** is the only tissue that can add and effectively remove halogens from organic substrates.
 - d. The **kidney** is somewhat like the liver in that it concentrates toxins prior to elimination.

- e. The truly shocking increases in cancer of the **testis, prostate, and breast** correlate with the ever increasing number and type of fat soluble endocrine disruptors and mutagens in the environment (see Appendix I and III).
5. It should be remembered that "life expectancy" is an "average value" for a population group and does not reflect an increased life potential for a given individual. In that regard we are no different from humans hundreds of years ago. The improvement in this statistic over the past 50 years is due to antibiotics, vaccines, improved diagnostic techniques and treatment procedures and to new data handling methods. It is simply untrue that pesticides have been a positive contributor to life expectancy in the United States. It is regretful that the general public does not understand this concept because it contributes to a false sense confidence and indifference regarding ever increasing pollutants and public health issues.

Several data sets from the National Cancer Institute are presented in this document. In addition, the abstracts from numerous new studies on the genotoxicity and endocrine disruption activities of piperonyl butoxide and Sumithrin (phenothrin) are also included.

Given these published facts and direct correlations, it is strongly contraindicated to contaminate the Nashville community further with known carcinogen and known endocrine disruptor. This becomes a more compelling argument in the absence of evidence that spraying with Anvil 2+2 has, or will, do anything to reduce the risk of disease. Any statement by the manufacturers of Anvil to the extent that the product has not been shown to be a mutagen and endocrine disruptor must rely on industry-funded research and is profoundly untrue and usury of the public (an example is included in this packed of information).

Most African countries have been spraying with ever increasing amounts of DDT and Malathion over the past 50 years and last year was the worst year on record for the global malaria problem. Spraying pesticide may be of limited value in extreme high risk environments but it is not the solution to the problem. The sumithrin/piperonyl butoxide formulation in Anvil is extremely toxic to fish (especially small fish, see last page of Appendix III). For every minnow killed by Anvil, hundreds of mosquito larva will mature. It would be far less expensive and far more healthy to add a few minnows to pools of water in neighborhoods than contribute to sumithrin resistance by long term use of the pesticide.

I hope that the members of the Board of Health will take one hour to study this information before making a decision to add even more endocrine disruptor and genotoxic compounds to our air, water, and land. The data is simply too compelling to trust the false and misleading information from the pesticide industry.

Sincerely,



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