

Asking the Right Questions About Toxic Air Pollution

Sometimes state and federal environmental standards seem not to protect us and we must ask why. In the case of two local companies applying for air pollution permits, it may be that the wrong questions are being asked.

CertainTeed Corporation, maker of fiberglass insulation, is seeking an expansion that would increase by more than two and a half times releases of its most toxic air pollutants. Nakanishi Manufacturing, maker of ball bearings, is seeking to continue its current air pollution permit.

The two companies are located a mile and a half apart and about three miles northeast of downtown Athens. Together they are responsible for 94% of our toxic industrial air pollution, as reported on the 2003 federal Toxic Release Inventory for Clarke County. CertainTeed releases large quantities of cancer-causing formaldehyde, as well as hundreds of tons of needle-shaped fiberglass particles. Their stacks are the number one industrial source of the irritant ammonia in the state of Georgia. Nakanishi is the number one industrial dumper of cancer-causing TCE in the state of Georgia, accounting for almost half of all reported industrial releases. CertainTeed sits near a day care facility and Nakanishi next to Coile Middle School. Athens-Clarke County offered its second largest industrial tax exemption ever, which will result in \$10 million less local property tax revenues, for CertainTeed's expansion.

Some of our leaders say, "What they are doing is legal so it is out of my hands. Besides, the State Environmental Protection Division (EPD) says it is safe, based on scientific Risk Assessment." **Risk Assessment** measures poisons released, one at a time, and sets "acceptable" levels of harm. It asks the question, "How *much* harm is *acceptable*?" Numerical limits are set to allow precisely that amount of harm, like 1 in 100,000 people will die from cancer. The burden of proof is on victims to show harm. There are few grounds for action until people and other creatures become sick or die (examples: tobacco, lead in gasoline, DDT). And often – as is the case here – only computer models are run, with no sampling for toxic chemicals beyond the plant, where people are breathing the polluted air.

Risk Assessment may sound scientific, but close examination reveals how much guesswork and untestable assumptions go into these calculations. Since World War II, more than 80,000 synthetic chemicals have been introduced into commerce worldwide, yet fewer than seven percent have been evaluated fully for their impacts on human health and the environment, and almost none in combination. Very little is known about effects of these chemicals on developing organisms (like fetuses and children) or weakened organisms (like the elderly). "Safe limits" and "safety factors" are guesses that turn out again and again to be wrong and are revised downward, as is happening now with TCE. Yet we hear probabilities of death and disease bandied about as if they were scientific fact. We are not convinced.

On the other hand, ample evidence suggests that exposure to toxic industrial chemicals is already affecting our health and the health of our children. A report from the National Cancer Institute and the National Institute of Environmental Health Sciences finds that cancers linked to lifestyle choices and environmental causes comprise at least 80 percent of cases (the others have genetic origins). In 1950 it was predicted that about 25% of all Americans would be diagnosed with cancer during their lifetimes; by 1997 that figure had risen to 40%. Asthma's prevalence is now doubling every 20 years. Rates of autism and attention deficit disorder also appear to be rising rapidly in children.

How should we respond to uncertainty about how much harm specific chemicals cause? An alternative approach to environmental decision-making is gaining acceptance in international law, in Europe and other industrialized countries, and in cities and school districts in the United States. It's called the **Precautionary Principle**. Derived from the German concept of "fore-caring," it's a guiding principle for government officials, companies and citizens to use in making decisions about potentially hazardous activities.

The Precautionary Principle asks a different question: "How *little* harm is *possible*?" It says, "When an activity raises threats of harm to the environment or human health, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically." Other features of the precautionary approach include: Place the burden of proving safety on proponents of an activity rather than the burden of proving harm on victims. Conduct rigorous and transparent analyses of alternatives. Set and work towards community goals that protect health. Exercise democracy by involving all stakeholders, including those likely to be most affected, in decisions and goal-setting affecting health and the environment.

In the cases of CertainTeed and Nakanishi, healthier alternatives are available, and sometimes cheaper, for the worst cancer-causing chemicals released by these industries. TCE is being replaced by safer degreasing alternatives that are "at least as effective and almost always cheaper," according to the head of a leading public laboratory. Some companies make fiberglass insulation without cancer-causing formaldehyde, and other companies make insulation from recycled newsprint.

In the long run a healthy community will attract more jobs than a sick one. Athens-Clarke County has been proactive with some common sense precautionary measures, the most recent being the indoor smoking ban. Systematic development and application of the Precautionary Principle could improve our quality of life. Asking how little harm is possible, rather than how much risk is acceptable, will make our community healthier and more attractive to clean industries.

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