

Rachel's Environment & Health News

#107 - What We Must Do -- Part 11 Reducing The Use Of Toxics

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The use of toxic chemicals is more common and more unnecessary than most people think. The names are familiar: carbon tetrachloride, trichloroethylene, perchloroethylene, benzene, and so forth. These chemicals are useful and relatively cheap. Unfortunately, they are also hard to contain and, when they escape, dangerous. Many of these chemicals cause cancer, but they also cause deterioration of the central nervous system, headaches, lethargy, seizures, and a wide range of other nonlethal but serious effects.

A startling array of American industries are now using such chemicals. We recently compiled a 288-page book entitled **WHAT CHEMICALS EACH INDUSTRY USES**, which lists, industry by industry, what toxic chemicals each type of industry has reported using. (The reporting occurred under the New Jersey right to know law, but NJ industries are no different from industries elsewhere, so the NJ reveal something about industry everywhere.) Industries are designated by "standard industrial classification" (SIC) codes. The most benign-sounding industries now use toxic chemicals. For example, the manufacture of dolls and stuffed toys (SIC 3942) uses substantial quantities of 1,1,1-trichloroethane, dichloromethane, trichloroethylene, toluene, and tetrachloroethylene. The "chocolate and cocoa products" industry (SIC 2066) uses carbon tetrachloride, diethyl ether, acetone, chloroform, 1,1,1-trichloroethane, xylenes, toluene, lead acetate, and a long list of other toxics. And so it goes, industry by industry. These lists do not even include the use of plastics because plastics themselves are not reportable under right to know laws; they are not considered particularly dangerous to humans. The impression that one gets from these lists is that American industry is saturated with toxics. One wonders, did we have stuffed toys and chocolate bars before we had toxic chemicals to make them with? Of course we did.

Barry Commoner has argued that, with few exceptions, the entire petrochemical industry, at least on its present scale, is largely unnecessary. The consumer products created with petrochemicals have replaced earlier items made with naturally occurring materials. Products made from cotton, wood, leather, paper, glass and metal have now been replaced by synthetic materials made from petroleum. We could still return to these earlier kinds of products with little or no loss in "quality of life."

Industry may argue that we do not need to reduce the use of toxic materials, we simply need to manage them better and discharge a smaller fraction of them to the environment. This is what "waste reduction" is all about--use the same amount of toxics but dump less of them into the environment.

Unfortunately, waste reduction will not suffice. The production of synthetic organic chemicals is increasing by a factor of 10 every 35 years; American industry produced 50 billion pounds in 1950 and 500 billion pounds in 1985. There is no sign of a letup in this steady rate of growth. At this growth rate, the use of synthetic organics will grow by a factor of 100 within one human lifetime (70 years). It must be obvious to everyone that the earth cannot sustain such an increase.

Even aggressive waste reduction will not do the job. In an eye-opening move, the Monsanto Chemical Corporation recently announced that they plan to reduce their toxic discharges to the environment by 90% in the early 1990s. (NY TIMES Nov. 13, pg. F3). Monsanto is saying that, by the mid-'90s, its waste production will be only 10% of what it was in 1987. This a laudable waste reduction goal. Unfortunately, even if all industries could achieve Monsanto's goal quickly, which is very unlikely, within 35 years we would be right back where we are today because total output will have grown by a factor of 10. Thirty-five years later our situation would be 10 times worse than it is today, which would clearly be intolerable. Therefore, we can see that simply restricting discharges, even by drastic cuts like 90%, will not solve our problems. We will have to reduce the total use of toxic materials, not just their discharge into the environment at manufacturing sites. Thus we can

see that waste reduction is the wrong goal. We must aim to reduce the use of toxics.

Reducing the use of toxics is going to require new approaches. We have already discussed two. In RHWN #102 we advocated a tax on toxics; in #105 we advocated zero discharge, or "no dumping allowed" (an idea already embodied in the Clean Water Act of 1972 [33 U.S.C. 1371(b)] which stated the goal as, "discharge of pollutants into the [nation's] navigable waters will be eliminated by 1985").

If industry wants to argue that zero discharge is not achievable, that some fraction of all toxics will always be released into the environment, then our only remaining option is to reduce the use of toxics.

How can we reduce the use of toxics?

The use of certain chemicals will have to be banned. As Barry Commoner has pointed out (RHWN #30), the only time we have seen significant reductions in environmental contamination by individual chemicals is when they have been banned. An international treaty banned atmospheric dumping of strontium-90 through weapons tests; DDT use has been banned in the U.S.; PCB production has been banned. Now the levels of these toxins in air, water and human tissue are decreasing markedly. Banning chemicals is effective. Furthermore, the legal authority for banning chemicals already exists in federal law: the Toxic Substances Control Act (TSCA; 15 USC 2601; P.L. 94-469), Sections 6 and 7.

We can offer industry a wide range of carrots and sticks to force reduction in the use of toxics. However, no matter what approach we take, we will have to measure the production and use of toxics. No matter what we do, we will have to measure success or failure. Furthermore, it is essential to measure toxics in relation to a plant's overall production. If we don't measure toxics in relation to overall production, we won't know whether a measured reduction in toxics is due to efficiency (fewer toxics used per pound of useful product), or whether the plant simply had a bad year and produced less useful product. Measuring chemical production and use is the most fundamental step for learning whether any toxics use reduction program is achieving its goals. Such measurement could be required by local, state, or federal law.

Our new report, **WHAT CHEMICALS EACH INDUSTRY USES** (Princeton, Nj: Environmental Research Foundation, Dec., 1988), is available for \$25.00; among its 288 pages is a section on how to find the SIC code that covers your local industry; then, for each SIC code operating in the state of New Jersey (which is most all of them), a list of toxic chemicals they reported using, including the quantities reported. For each chemical, we give the name, and we give the Chemical Abstract Services (CAS) number so you can learn more about the characteristics of each chemical through standard sources such as the **REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES** (rtecs). Rtecs is sold by the U.S. Government Printing Office, Washington, Dc 20460; phone (202) 783-3238. Ask for USGPO No. 017-033-00431-5. Rtecs is 7 paperback volumes: a \$68.00 bargain.

--Peter Montague

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Descriptor terms: sic codes; waste reduction; toxics use reduction; pollution prevention; waste avoidance; waste minimization; zero discharge; agendas;