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EPA fighting cancer with war on toxic substances

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WASHINGTON—Without much fanfare or money, the Environmental Protection Agency has launched a war on cancer.

It has ordered chemical manufacturers to supply information about any chemical that poses a "substantial risk" to human health or the environment.

The action was the agency's first step in implementing the Toxic Substances Control Act, a statute that went into effect this month after a prolonged battle in Congress.

ENVOYING to ban hazardous chemicals before they are marketed for commercial use, EPA has taken steps to:

— Draw up an inventory of the estimated 20,000 chemicals being manufactured in the United States.

— Form an interagency government committee to compile a priority list of 30 suspected chemical carcinogens for intensive laboratory research. To market any chemical on this list, manufacturers must provide research data showing the substance is relatively safe.

— Establish testing procedures for chemicals—both new and old—to assess the cancer-causing potential of pesticides, industrial solvents, food contaminants, toxic metals and air and water pollutants.

Using today's standard tests, no level below which a chemical substance is "safe" has been found for a carcinogen. Since the risk of cancer cannot be eliminated, EPA must determine at what point the probability of getting cancer becomes unacceptable.

In evaluating each chemical, EPA is required by the toxic substances act to consider its economic benefits as well as the financial loss manufacturers might incur if the substance were banned.

Even before passage of the new law, EPA and the National Cancer Institute drafted federal guidelines for defining carcinogens. In assessing the cancer risk, they used evidence provided by industry showing human cancer rates in addition to animal studies on rats and mice.

MEDICAL researchers estimate that approximately 80 per cent of cancer cases are caused by environmental factors, a substantial portion of which are chemicals. But methods for detecting a chemical's carcinogenic potential are considered primitive at best.

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To obtain statistically significant data from any series of chemical tests on laboratory animals, cancer rates of 5 to 10 per cent must be found. This requires large doses of the suspected carcinogen to large numbers of rats and mice, a procedure that usually takes several years.

Although the chemical industry generally supports the new law, environmentalists view it as hardly more than a stop-gap measure. They are concerned with a provision of the law that places the burden of proof for safety on the government, not industry.

With its primary focus on newly developed chemicals, the law emphasizes programs to prevent the introduction of new carcinogens rather than the control of carcinogens after they have entered the environment. The law does relatively little about the legacy of more than 35 years of chemicals marketed commercially with almost no prior testing—a cancer time bomb waiting to be triggered.

Most of the laboratory testing under the new law will be done by the National Institute of Environmental Health Sciences. The vast majority of chemicals—new and old—will be studied through a new procedure involving the use of simple bacterial tests. Only a dozen or so chemicals will be tested on laboratory animals each year.

Under the toxic substances act, EPA is required to publish by November a complete list of chemicals now being manufactured. Any substance not included on the list will then be considered a new chemical. Manufacturers will be required to notify EPA at least 90 days before they produce a new chemical. EPA can halt production of a new chemical if it believes testing is necessary to ensure safety.

EPA MUST promulgate rules that require the testing of chemicals likely to be hazardous—that is, only chemicals presenting a "risk of injury to health and the environment." If EPA finds that test results are inconclusive, it can block the chemical's manufacture for another 90 days. And if after that period EPA still believes there is insufficient data on which to make an assessment of safety, it can seek a court injunction.

EPA is expected to focus its attention on chemicals like Kepone that pose an immediate threat to industrial workers. Federal officials say that such hazards take a staggering toll in human life and health: 100,000 workers killed every year and another 390,000 new cases of job-related diseases discovered annually.

With thousands of mostly untested or inadequately tested chemicals reaching workers, the workplace has become an early warning system for illnesses that may affect the general public.

Rubber workers have almost double the national death rates for stomach and lymphatic cancers. Dentists have abnormally high rates of leukemia and Hodgkin's disease; their chronic exposure to X rays, mercury and anesthetics are thought to be contributing factors. Beauticians, exposed to aerosol hair sprays, suffer from chronic respiratory disorders and abnormalities of the fetus that may be early indicators of lung cancer.

POLYCHLORINATED biphenyls (PCBs), once widely used as heat-transfer agents in electrical equipment, cause deadly skin cancer and pancreas cancer.

Slow, sometimes unsteady progress is being made to uncover the hazards so that corrective measures can be made. The sole manufacturer of PCBs, the Monsanto Co., plans to stop manufacturing and distributing the chemical by Oct. 31. Monsanto now is testing possible chemical substitutes.