

## NEWS

# A New Wave of Chemical Regulations Just Ahead?

The United States's aging flagship law for controlling toxic compounds is ripe for overhaul, and chemical companies—or some of them—want to play a major role in shaping what comes next

IN 1976, SHORTLY AFTER CONGRESS PASSED A law designed to regulate toxic chemicals, Russell Train, then the administrator of the U.S. Environmental Protection Agency (EPA), called the new law “one of the most important pieces of ‘preventive-medicine’ legislation” ever passed by Congress. The Toxic Substances Control Act (TSCA), Train said, would help regulators identify chemicals hazardous to human health and phase them out.

TSCA led to restrictions on a handful of chemicals, including a ban on polychlorinated biphenyls and limits on certain uses of metalworking fluids. But then came asbestos. In 1989, EPA used TSCA to ban the persistent ultrafine fibers that numerous studies had linked to lung diseases. But TSCA stipulates that chemicals should be restricted using the least burdensome regulations available. And because EPA couldn't convince a U.S. appeals court that banning asbestos was the least burdensome way to regulate it, in 1991 the court overturned the ban. In the 18 years since, EPA has not banned a single chemical.

“TSCA has essentially failed,” says Richard Denison, a senior scientist with the Environmental Defense Fund in Washington, D.C. The way TSCA has been interpreted has raised the bar for restricting a chemical so high that it has effectively gutted the law, Denison and others say. It's a sentiment that has spread far beyond environmental organizations, prompting widespread calls—even within the U.S. chemical industry—for the law's reform.

“There is general agreement that some change is needed in TSCA,” says J. Clarence

Davies, a senior fellow with Resources for the Future in Washington, D.C., who also helped craft the original TSCA legislation. “But there is a big difference of opinion on how much.” Just how that question gets answered could have a major effect not just on chemical manufacturers and consumers but also on a broad range of scientists who could be called on to revamp the way chemicals are tested and gauge their risk.

TSCA was designed to regulate chemicals and chemical mixtures, with the exception of food, drugs, cosmetics, and pesticides. It gives EPA the authority to require reporting and testing, and then to restrict substances that present an unreasonable health risk. But the law is widely viewed as having major loopholes. When TSCA was written, Davis notes, it allowed tens of thousands of existing compounds to be grandfathered in without comprehensive health and safety testing. Companies still had to report health and safety data for new chemicals. But they were able to claim much of their submissions as confidential to protect proprietary chemical recipes for their products. The provision made it nearly impossible for scientists and environmentalists to challenge the release of new chemicals.

Even when EPA does have the authority under TSCA to collect data on chemicals of potential concern, it rarely does so. To ask manufacturers to submit health data, EPA must first verify that the chemical poses a health risk to the public. “It is the epitome of a Catch-22,” Davies says. The result, according to a 2006 report by the Government Accountability Office (GAO), is that of the 62,000

chemicals in use when TSCA went into effect in 1976, EPA has required testing of fewer than 200 and has either banned or limited production of only five. In a follow-up report earlier this year, GAO concluded: “Without greater attention to EPA's efforts to assess toxic chemicals, the nation lacks assurance that human health and the environment are adequately protected.”

That ineffectiveness isn't for lack of concern. Consumers have become increasingly anxious about several classes of compounds on the market. They include phthalates, commonly found in children's toys; flame retardants; and bisphenol A, an organic compound used in the plastic coatings that line food cans and other items, which has been found to have estrogenic effects. Numerous studies have raised red flags about all of these compounds. Biomonitoring studies have revealed that most people have trace amounts of many industrial compounds in their blood. For example, a 2004 study by the Washington, D.C.-based Environmental Working Group, which fights children's exposure to toxic chemicals, found a total of 287 industrial chemicals in the umbilical cord blood of 10 newborn babies. They included chemicals used in fast-food packaging, stain repellents in textiles, flame retardants, and pesticides.

No one is sure whether those compounds are harmful in such small doses, but it is clear that toxics create a significant personal and financial burden. Last year, for example, a study by researchers at the University of California, Berkeley, and UC Los Angeles found that preventable chemical- and pollution-



**Second glance.** Rising concerns about compounds in many products are prompting calls for an overhaul of the law regulating toxic chemicals.

related diseases in California alone (not including air pollution) cost the state's insurers, businesses, and families \$2.6 billion a year in direct and indirect expenses.

The effects are far-reaching. According to Maureen Gorsen, the former head of California's Department of Toxic Substances Control, 57% of landfills in California are leaking hazardous waste into groundwater. TSCA reform wouldn't stop all such leaks, as landfills contain many substances, such as used oil, that are unlikely to be restricted. Nevertheless, Gorsen notes that the problem is prompting expensive cleanups that must be paid for out of the cash-strapped state's general fund. "It's a losing battle," Gorsen said at a recent meeting at UC Berkeley. "We can't keep going on the way we have been for the past 40 years."

TSCA's perceived ineffectiveness, combined with growing public concerns about chemical exposures, has spurred government agencies in the European Union and several U.S. states to launch their own alternatives. By far the most comprehensive is the European Union's effort, abbreviated REACH (for "Registration, Evaluation, Authorisation, and Restriction of Chemical substances"). It requires chemical manufacturers and importers in Europe to submit health and safety data on all compounds they sell in the European Union in excess of 1 million metric tons per year. Most notably, the act shifts the burden of carrying out health and safety screens from government regulators to companies themselves.

States are also jumping into the fray. California, Washington, Maine, Massachusetts, and Michigan have all recently passed laws increasing their control over toxics. These initiatives largely fall into two camps: one set banning chemicals such as phthalates, cadmium, and lead from children's products; the other promoting "green chemistry" to find safer alternatives to toxic compounds used in manufacturing processes and consumer products. "The states are way ahead of the federal government at this point," says Joel Tickner, a chemical regulations policy expert at the University of Massachusetts, Lowell. Some industry representatives agree. "We look at [the state initiatives] in large part as a lack of public confidence in the safety of these materials that can be attributed to a lack of confidence in the regulatory process," says Calvin Dooley, president and CEO of the American

Chemistry Council (ACC), a trade group in Arlington, Virginia.

According to Dooley, Tickner, and Denison, the combination of the new state laws, REACH, and declining consumer confidence in the safety of household products has prompted many large chemical manufacturers (such as the multinationals that make up most of ACC's membership) to embrace TSCA reforms. The current patchwork of regulations that have arisen is becoming an increasing burden for companies doing business across U.S. state lines and national borders. And many are hoping that new TSCA reforms would preempt state laws. Smaller companies, however, have been less pleased with the idea of reforms. The Society of Chemical Manufacturers and Affiliates (SOCMA)—

Congress thanks to a promised veto threat from President George W. Bush. But Lautenberg and Waxman have said they plan to reintroduce the bill this term, possibly as early as this fall.

In April, SOCMA President Joseph Acker said, "The Kid-Safe Chemicals Act would bring an unproven REACH-like system to the U.S." that would be overly burdensome to chemical manufacturers. But Dooley argues that the law doesn't go far enough. "Let's not take a piecemeal approach," he says. "Consumers would be much better served with a more-comprehensive reform of TSCA rather than focusing on one section: children." Dooley says his organization is comfortable with shifting the burden of providing safety data on chemicals from EPA to companies and with other major changes such as allowing

### STATE TOXIC CHEMICALS INITIATIVES

State	Year Passed/ Proposed	Title	Goal
California	2007	California Green Chemistry Initiative	Identify chemicals of concern and propose alternatives
Maine	2008	Act to Protect Children's Health	Reduce toxic chemicals in toys
Massachusetts	1989	Toxics Use Reduction Act	Reduce hazardous chemical use
Michigan	2006	Michigan Green Chemistry Directive	Support R&D for nontoxic chemicals
Washington	2008	Children's Safe Products Act	Eliminate phthalates, lead, and cadmium in toys

**Stepping in.** With the Toxic Substances Control Act seen increasingly as ineffective, several states have begun passing their own laws to control chemical exposures.

which is made up of small to midsize chemical companies—reflected the split in a position paper it issued in March: "Sweeping revisions of TSCA ... could be highly detrimental to innovation and quality of life, yet paradoxically not produce major changes in our ability to protect health or the environment."

Just how sweeping any change would be isn't yet clear. But at least one potential revision is on the table. In 2008, Senator Frank Lautenberg (D-NJ) and Representative Henry Waxman (D-CA) sponsored the Kid-Safe Chemicals Act, which is aimed at reducing children's exposure to toxic compounds. The proposed act would not initially evaluate all chemicals, but it would shift the onus to companies to demonstrate that chemicals they sell are safe rather than have the government prove they are harmful. The bill would also make safety data available to consumers through an Internet database in hopes of encouraging public oversight of the process. Last year, the Kid-Safe Chemicals Act made little progress in

businesses to make fewer secrecy claims. SOCMA favors more cautious changes.

Both ACC and SOCMA argue that REACH goes too far in requiring complete health and safety data for all chemicals sold in the European Union. Instead, the groups say, chemicals should be ranked for review by a formula that considers both potential hazard and potential exposure. Tickner agrees that any federal TSCA reforms are likely to incorporate that type of risk-based approach.

So far, the Obama Administration's position on the specifics of toxics reform remains unclear. Lisa Jackson, the Administration's newly appointed EPA director, has listed reform of chemical regulation as one of her five top priorities. In a January memo to EPA employees, she wrote: "It is now time to revise and strengthen EPA's chemical management and risk assessment programs." With such clear signals coming from a high level, there's a good chance TSCA in its current form will soon find itself phased out.

—ROBERT F. SERVICE