



To the Editor:

This is an article from a series of monthly columns by Environmental Law Specialist Dianne Saxe, one of the top 25 environmental lawyers in the world. These articles are available for publishing at no charge, provided Dr. Saxe is cited as the author. She can be contacted at (416) 962 5882 or admin@envirolaw.com. For more information, visit <http://envirolaw.com>.

New law on toxics

Does Canada do enough to regulate toxic chemicals?

Nearly half a century after Rachel Carson's exposé of the lethal potential of pesticides in "Silent Spring", controversy still rages about the toxic cocktails we eat, breathe, drink and bathe in. In the recently released consumer classic, *Slow Death by Rubber Duck*, Rick Smith and Bruce Lourie show that people rapidly absorb toxic chemicals from even two days' exposure to typical consumer products. Heating food in "microwave safe" containers; using air fresheners or scented shampoos; preheating a nonstick pan; eating seven meals of tuna – all of these resulted in immediate and dramatic increases in their body burden of toxics. And many soft plastic toys, such as the eponymous rubber duck, release phthalates, chemicals associated with genital abnormalities in males. People absorb these chemicals with frightening ease, through our lungs, skin and food.

Does it matter? It's not clear. Environmental Defense and other activist groups have repeatedly proven that volunteers across Canada have many different chemical pollutants in their bloodstreams, including lead, arsenic, mercury, PCBs, PBDEs (a flame retardant banned in Europe and eight U.S. states but still in use in Canada), plus an array of other chemicals. For details, see <http://www.toxicnation.ca/>.

Toxicologists aren't certain what to make of all this information. Many note that modern technology can detect incredibly tiny quantities of pollutants, sometimes in parts per trillion or quadrillion. "One part per trillion is one second in 32,000 years," noted Dr. Joe Schwartz, a chemist at McGill University's science and society department. "That you

can detect things in that concentration is far better than finding a needle in a haystack. It's like finding a needle in a world full of haystacks."

Our ability to measure data, however, has outstripped our ability to interpret the data, he said. The ultimate goal has to be to find out what, if any, detrimental health or environmental effects exist. We rarely know this even for individual chemicals; we are even more ignorant about complex mixtures, the chemical soups that we are exposed to in modern daily life. Some estimate that up to 100,000 different chemicals have been introduced into the global marketplace in the last century, with about 1,500 new ones introduced yearly in products ranging from new energy drinks and pharmaceuticals to baby bottles and shower curtains.

In March 2007, Health Canada began a methodical investigation of body burdens, testing 5,000 Canadians for the chemical pollution in their bodies. Tests are being done on blood, urine, hair, saliva and breast milk. Eventually, Health Canada hopes to be able to compare medical records with the level of chemical exposure to find a possible relationship between the two. Preliminary results for heavy metals such as cadmium, lead and mercury are scheduled to be made public in November. Final results for all 5,000 volunteers are scheduled for release in January 2010. But it may take much longer to know what the data means.

"The value of bio-monitoring is going to be long term," Schwartz said. "If we have a good baseline data now, we get good data and then we check 10, 20 years down the road to see if there is any alteration in disease patterns for those people and then you look back to see if there is any link."

Canada does have substantial legal tools for the regulation of toxic substances, but are we doing enough with them? Traditionally, this has been primarily the job of the federal government. Environment Canada has a program to evaluate the toxicity of new substances, that were first manufactured or sold in Canada since 1984. Its Chemical Management Program is partway through a decade-long process of evaluating the toxicity of 23,000 older substances. The federal government also regulates pesticides and drugs and has a small program to regulate products under the Hazardous Products Act. We also cooperate with other countries, as part of the International Strategic Approach to International Chemical Management agreement signed in Dubai in 2006.

But is the federal government doing enough with the powers that it has, even on indisputably toxic substances like mercury? Municipal and provincial governments across the country don't think so. We are therefore seeing local rules springing up, to the anger and despair of many industries already struggling to survive in Canada's small market.

The most recent example is a new law, the Toxics Reduction Act (Bill 167) which passed the Ontario legislature on June 3. This law will require industries in the mineral processing and manufacturing sectors to publish materials accounting, toxic reduction planning and reporting on how they will reduce their use and release of designated

toxic substances. Ministry of the Environment will set up reporting systems to inform Ontarians about how, where and in what quantities toxic substances are being used and released by facilities.

Now that the bill has been passed, the regulations process will begin developing guidelines that actually specify what substances are considered toxic, what amounts are safe thresholds, what the minimum number of people that can be employed, and which industry sectors are targeted for compliance. The provincial government has pledged C\$24 million to help businesses develop green alternatives, plan for toxics reduction and develop transparent information about their products' ingredients.

Many manufacturers are furious that Canada's governments can't get their act together on toxics. A single set of federal rules would be much easier to comply with than a patchwork of local laws. One of the things that drives businesses crazy is that Ontario's list of toxic substances will overlap, but not be identical to, the federal List of Toxic Substances, and Toronto's new list of toxics under its environmental reporting and disclosure by law. List of toxics aren't very credible when each government has a different list, and it makes it very difficult for businesses to plan ahead and decide which things to avoid. A second problem is that while Ontario businesses may be unable to make products using toxic substances, the same substances are made into products elsewhere then imported into Ontario. This adds to the already substantial burden of making anything here, on top of "Buy American" and the high dollar.

But it seems likely that, in the end, we will find that there is no such thing as a free lunch. Modern chemicals have given us untold convenience and prosperity, and perhaps contributed to our record-breaking lifespans. But I expect there will be consequences, sooner or later, to loading our bodies (and environment) with powerful artificial chemicals, and that government won't have done a good job of protecting us. So I read *Slow Death by Rubber Duck*, and threw out our non-stick frying pans. Good thing we don't have a rubber duck.