

Industry study declares chlorine use safe

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A new industry-sponsored review of 3,000-plus chlorine studies acknowledges past problems, but concludes that society can use most chlorine chemicals without adverse health effects.

PVC, the largest single chlorine consumer, along with its precursor, vinyl chloride monomer, also is deemed safe.

"Today, residual concentrations of VCM in PVC products are extremely low and present no hazard to the general population," according to the review.

A Greenpeace spokesman compared the report to tobacco industry studies that show smoking is safe.

"The report was scheduled to be completed two years ago. I guess this shows how long it took them to buy, pay for, or bully the people they work with to come up with the right answers," said Jack Weinberg, Great Lakes Toxics Coordinator for Greenpeace in Chicago.

The massive, 1,056-page report

appears in the August issue of *Regulatory Toxicology and Pharmacology*, a bimonthly scientific journal. The interpretive review was coordinated by CanTox Inc., a consulting firm in Mississauga, Ontario. An independent panel of six scientists studied decades of research into chlorine, through 1992. They followed a set of scientific principles, including a key one disputed by some environmentalists: that exposure thresholds exist for chemicals, below which adverse health effects do not occur.

The report was funded by a grant from the Washington-based Chlorine Chemistry Council, with support from the Euro-Chlor Federation, the European Council of Vinyl Manufacturers, the Chlorine Institute, the Vinyl Institute and the Halogenated Solvents Industry Alliance.

Industry officials hope the exhaustive report will give a scientific grounding to the plastics industry's defense of PVC, which uses about one-third of all chlorine produced in the United States. Environmentalists have

assailed chlorine, convincing some industries such as paper manufacturers to move toward alternative chemicals. But PVC has no alternative — it cannot be made without chlorine.

Potential effects of past, present and future ambient concentrations of chlorine on the health of humans and animals are eval-

uated in the report, titled *Interpretive Review of the Potential Adverse Effects of Chlorinated Organic Chemicals on Human Health and the Environment*.

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Separate chapters cover chlorine, PVC/VCM, pesticides, polychlorinated biphenyls, pulp and paper, drinking water and wastewater, incineration and solvents.

Among other conclusions:

• **Chlorine** — "Ambient concentrations of chlorine and its usual, ultimate product in the environment, hydrochloric acid, are severalfold less than concen-

trations associated with adverse effects on human health and the environment, except under emergency conditions during accidental releases."

• **PVC/VCM** — VCM exposures at manufacturing facilities before the 1970s caused health problems in some workers. "Through improved technology and manufacturing practices, the concentrations of VCM in the workplace are now below those that cause adverse effects. At no time were ambient environmental concentrations of VCM sufficiently high to cause adverse effects on humans or wildlife."

Weinberg complained that he had not seen the report before it was released.

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Greenpeace has lobbied for a ban on chlorine compounds.

News editor Don Loepp contributed to this story.