

Rachel's Environment & Health News

#363 - Taking The Handle Off The Chlorine Pump

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The American Public Health Association (APHA) on October 27, 1993, unanimously passed a resolution urging American industry to stop using the chemical chlorine.[1] APHA is a professional society founded in 1872 representing all disciplines and specialties in public health. Passage of the "chlorine resolution" by APHA is a heavy blow to the Chlorine Institute (a trade association for chlorine makers) and to major users of chlorine, such as the paper industry, the pesticide industry, and the makers of chlorinated organic chemicals.

APHA members had discussed and argued the merits of the "chlorine resolution" for the past year, with industrial representatives working behind the scenes to derail the resolution, and environmental health advocates urging its passage.

Here, with footnote references deleted, is the resolution: **RECOGNIZING AND ADDRESSING THE ENVIRONMENTAL AND OCCUPATIONAL HEALTH PROBLEMS POSED BY CHLORINATED ORGANIC CHEMICALS**

The American Public Health Association,

** Recalling APHA's long standing commitment to primary prevention in the reduction of environmental pollution, expressed recently in Resolution 8912: Public Health Control of Hazardous Pollutants, which states that the APHA: "will actively support legislation which establishes prevention as the primary promise for controlling and managing hazardous air emissions, and expeditiously reduces emissions, for existing and new sources, of all substances which are reasonably anticipated to pose hazards to human health and the environment;"

** Remembering APHA's understanding that often classes of compounds must be considered as a group for preventive/public health purposes, recently expressed in Resolution 8709: Depletion of Stratospheric Ozone Layer, which supported "a global policy that calls for a ban on CFC (chlorofluorocarbon) aerosol propellents, and a timely phase-out of known ozone depleting substances within 10 years:"

** Noting that chlorinated organic chemicals--including PCBs, pesticides, dibenzodioxins and dibenzofurans, and many other products or by-products of chlorine based industrial processes--compromise the majority of identified persistent xenobiotic substances, whose half lives or those of their toxic by-products are 8 weeks or more, in the environment and human tissues and fluids and are also the primary cause of stratospheric ozone depletion;

** Noting that virtually all chlorinated organic compounds that have been studied exhibit at least one of a wide range of serious toxic effects such as endocrine dysfunction, developmental impairment, birth defects, reproductive dysfunction and infertility, immunosuppression, and cancer, often at extremely low doses and that many chlorinated organic compounds, such as methylene chloride and trichloroethylene, are recognized as significant workplace hazards;

** Understanding that stratospheric ozone depletion caused by a relatively wide range of halogenated compounds including chlorinated compounds is expected to cause millions of additional cases of human skin cancer, cataracts and immune suppression, as well as major effects on aquatic and terrestrial food chains;

** Understanding that in the Great Lakes, a vast well-studied ecosystem which provides an early warning sentinel for xenobiotic-induced health effects, contamination by a broad spectrum of chlorinated organic chemicals has caused a wide range of reproductive, developmental, and behavioral dysfunction effects in 14 species at the top of the food chain--including humans;

** Recognizing the subtle and widespread effects on human and

wildlife health attributed to exposure to chlorinated organic chemicals and our current inability to identify, predict or control the release of these compounds from manufacturing processes, the bi-national Science Advisory Board of the International Joint Commission on the Great Lakes concluded by the weight of scientific evidence that exposure to all organochlorines should be presumed to pose a health problem and that policies to protect public health should be directed toward eventually achieving no exposure to chlorinated organic chemicals as a class rather than continuing to focus on a series of isolated, individual chemicals;

** Understanding, as has the International Joint Commission on the Great Lakes (IJC), that the only feasible and prudent approach to eliminating the release and discharge of chlorinated organic chemicals and consequent exposure is to avoid the use of chlorine and its compounds in manufacturing processes;

** Clearly realizing that implementation of such a goal, in general, should proceed initially via an investigation of the feasibility of phasing out chlorine and chlorinated organic chemicals by industry category;

** Yet recognizing that specific deadlines for phase outs are appropriate in industrial categories where alternative processes have already been developed, such as, for bleaching in the pulp and paper industry or degreasing in manufacturing as has been adopted by IBM, GE, and others;

** But recognizing as well, that some uses of chlorine, in particular its use in residual disinfection of drinking water and in pharmaceuticals, have no currently available alternatives;

** Further, being aware that the phase out of ozone depleting chlorinated chemicals in feed stock has been a major reason for the closure of 5 chlorine plants during the past two years resulting in substantial layoffs;

** Projecting that further restrictions on the use of chlorine, or the production of chlorinated compounds, will result in additional job loss;

** Recognizing that unemployment leads to increases in physical and mental illness, death, and crime, requires environmental protection policies that contain provisions for a transition which insures that displaced workers do not bear unfair societal costs through the loss of income, benefits, or jobs as has been the case in the past;

** Understanding that the Job Training Partnership Act serves only 4% of all eligible workers and that these workers, on average, are eligible for jobs paying near or below the family poverty level, and that The Oil Chemical and Atomic Workers Union proposal for a policy based on the GI Bill of 1944 would allow workers to maintain their families' standard of living while retaining and securing jobs in non polluting industries;

1. Recognizes that chlorine-containing organic compounds are found to pose public health risks involving the workplace, consumer products and the general environment;

2. Recognizes that the elimination of chlorine and/or chlorinated organic compounds from certain manufacturing processes, products and uses may be the most cost-effective and health protective way to reduce health and environmental exposures to chlorinated organic compounds;

3. Recognizes that industry has the capacity and creativity to undertake a technological transformation of chemical manufacturing processes, products, and uses to reduce or eliminate these risks;

4. Concludes that there should be a rebuttable presumption [a presumption that may be rebutted by other evidence] that chlorine-

containing organic chemicals pose a significant risk, therefore, before introducing new chemicals into commerce, using existing chemicals in new applications or continuing to use these chemicals in manufacturing processes or products beyond some future date, industry should either:

- a. Demonstrate that the risk is not significant for a particular compound, use or manufacturing process, or
- b. Demonstrate that there are no substitutions, product reformulations or changes in manufacturing processes that will result in a lower risk,
- c. Further, industry should ensure that substitutes for existing products or changes in manufacturing processes will result in a lower risk,

5. Supports legislation that will assist workers who are displaced by resulting technological changes in the chlorine industry; and

6. Finally, asks for measurable and progressive reduction toward the elimination of the use of chlorine-based bleaches in the pulp and paper industry and ozone-depleting chlorinated organic chemicals. [END.]

Editorial Commentary from Rachel

In 1848-49, long before people knew that bacteria caused disease, an epidemic of cholera broke out in London. Cholera causes vomiting and severe diarrhea leading quickly to dehydration, shock, and death.

A young physician, John Snow, made a map of the city and, on it, he plotted cases of cholera. Snow's crude epidemiological study revealed that 500 cases of cholera were clustered near a public water pump at the corner of Broad and Cambridge streets. Snow removed the handle from the Broad Street pump, and the cholera epidemic in that neighborhood subsided.[2] The bacteria that causes cholera wasn't identified until 1884.

The APHA's "chlorine resolution" of 1993 urges us to remove the handle from the chlorine pump. We don't understand all the mechanisms by which chlorine is harming ecosystems, wildlife, and humans. From what is known, it seems clear that, if we wait for conclusive scientific proof, the destruction, which is already vast, may well become irreversible.

Thus the APHA has defined two principles for a truly modern approach to chemical contamination: (a) regard chemicals as harmful until proven safe; (b) don't try to control chemicals one-by-one using risk assessment; instead, avoid irreversible harm by taking precautionary action to ban or phase out whole classes of chemicals as soon as there is evidence of harm, not waiting for conclusive scientific proof.

--Peter Montague

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[1] For a copy of the full resolution with footnotes, contact the American Public Health Association, 1015 Fifteenth St., N.W., Washington, D.C. 20005; phone (202) 789-5600.

[2] Richard Gallagher, DISEASES THAT PLAGUE MODERN MAN (Dobbs Ferry, N.Y.: Oceana Publications, 1969), pg. 23.

Descriptor terms: american public health association; chlorine; prevention; preventive medicine; precautionary action; chlorine institute; skin cancer; cataracts; immune suppression; ozone depletion; atmosphere; cfcs; pcbs; pesticides; dioxin; pcdfs;

toxicity; chlorinated hydrocarbons; methylene chloride; trichloroethylene; great lakes; wildlife; ijc; pulp and paper industry; bleaches; degreasing; ibm; ge; drinking water; pharmaceuticals; jobs; job loss; workers; economics; economy; job training partnership act; ocaw; regulation; burden of proof; precautionary principle;