New chemical exposure threats aired

Hexachlorophene's connection with human birth defects, possible new routes of exposure to toxic dioxins, and asbestos diseases among persons who do not work directly with the material – those were among the controversial topics explored at a New York Academy of Sciences conference in New York last week. The conference, called The Scientific Basis for the Public Control of Environmental Health Hazards, brought together noted occupational health researchers, physicians and industry representatives to discuss health effects and control of asbestos and halogenated aromatic hydrocarbons.

Hildegard Halling, a physician with the Södertalje Hospital in Stockholm, reported that her study of medical personnel at six Swedish hospitals showed an increase in the number of malformed infants born to women who used soaps and lotions containing hexachlorophene, compared with hospital workers not exposed to hexachlorophene. Of 460 pregnancies among nurses using hexachlorophene, Halling said, 25 resulted in severe malformations and 46 resulted in minor deformities. A control group of nurses who used no hexachlorophene products during their pregnancies gave birth to no severely malformed infants and to eight babies with minor deformities.

Halling said that hexachlorophene was detected in the serum of medical personnel exposed to it, and that the compound can penetrate the placental barrier. She further noted that there has been evidence of hexachlorophene's teratogenic effects on laboratory animals for several years. Products used by the Swedish hospital staff included pHisoHex hand detergent, made by Winthrop Laboratories (New York), which contains 3% hexachlorophene.

While Winthrop had no comment on Halling's report at *CW*'s press time, the company referred to comments made by Swedish government scientists, some of whom reportedly criticized the study for use of misleading data.

New Dioxin Threats? Swedish and Swiss researchers reporting on the presence of dioxins and other toxic polyhalogenated aromatics warned of new avenues of exposure to these compounds. Christoffer Rappe of the University of Umea (Umea, Sweden) and Hans Rudolf Buser and Hans Paul Bosshardt of the Swiss Federal Research Station (Wadenswil, Switzerland) cited recent studies that they and others have conducted showing the presence of "highly toxic" polyhalogenated dibenzodioxins (PCDDs) and dibenzofurans (PCDFs) in fly ash and flue gases of municipal incinerators in European cities (*CW, May 10, p. 24*). In addition to reporting new data, the researchers also said that workers or residents near sawmills may be exposed to "various PCDDs, including the most toxic isomers" from burned wood shavings.

Another report on persons hitherto unsuspected of exposure to environmental disease came from Ruth Lilis and Irving Selikoff of the Mt. Sinai School of Medicine (New York), who reported on their study of asbestos-related disease among maintenance workers at American Cyanamid's Bound Brook, N.J., plant.

While lung abnormalities were seen in 48% of workers who had been at the plant over 20 years and in 16% of those who had worked there less than 20 years, the researchers found that 24.2% of those with lung aberrations did not handle asbestos. These "bystanders" included mechanics, metalworkes, repairmen and other laborers.

Selikoff explained that the source of the lung disease is the "25 million tons" of asbestos used in ships, chemical plants and other facilities to insulate pipes and boilers. Asbestos linings are frequently removed, demolished and repaired, he said, exposing "up to half" of plant workers. "This is a smoldering problem for the future that may be of immense proportions," Selikoff warned.

Hotspots on the Hudson: New York State officials told conferees of their plans for a partial dredging of the Hudson River to remove up to 75% of the PCBs in the upper portion that resulted from discharges of the compounds by General Electric. State Environmental Conservation Commissioner Peter A.A. Berle said he is seeking $25 million in federal funds (augmenting $7 million in state and GE funds) to dredge 30-40 "hotspots" in the upper Hudson, or areas of high PCB concentration.

Noting that fishing is prohibited in the upper river and that many communities using Hudson water are worried about ingesting PCBs, Berle said the "real future of the river lies in the removal of . . . the hotspots."

The commissioner stated that the dredging would remove half of the total PCBs imbedded in the river sediments (340,000 lbs.) and 75% of the compounds in one heavily polluted area of the upper Hudson. The three-year operation would cause little environmental disruption, he said, adding that the project would serve as a "national model."

Industry on the Defense. One hotspot that flared up at the conference was the issue of industry suppression of data on health effects of their chemical compounds. Several researchers accused companies and testing laboratories of suppressing test results that indicate a chemical product or intermediate is harmful. Samuel Epstein of the University of Illinois School of Public Health charged there is "toxicological and epidemiological information available to industry that is not available to the public," and he and others contended that the alleged distortions impose massive constraints on the federal government's decision-making process.

Industry defense came from Norbert J. Roberts of Exxon, who, while noting that "it's naive to deny there have been serious problems," said that "the vast majority of industry management is enlightened enough today not to want to buy distorted work." Roberts asserted that inferior work is produced in government and academic labs as well as industry labs, adding that all parties have to work together to solve such problems.



MT. SINAI'S SELIKOFF: Asbestos threat in 'bystanders' is 'smoldering problem'

MONS 202538