

# High-Tech Health Concerns

Lawsuit claims chemicals used to make computer chips cause cancer.

by Candace Goforth

In a computer chip manufacturing plant, there are few large machines with moving parts to cause injuries and the rooms are clean to the point of sterility.

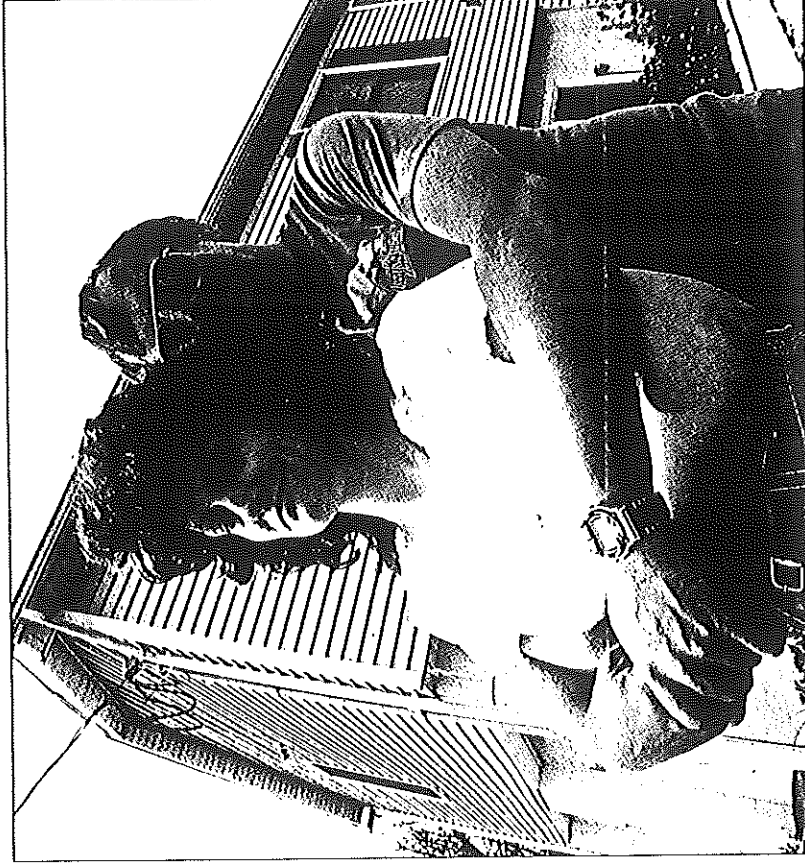
These factors give the semiconductor industry one of the lowest injury and illness rates in manufacturing, but a lawsuit linking chemicals used in the chip-making process to cancer has reopened debate about the safety of high tech.

The \$188 million lawsuit, filed in New York State Supreme Court in March, accuses Union Carbide Corp., Eastman Kodak Co., KTI Chemical Corp. and J. T. Baker Chemical Co. of negligently producing and distributing carcinogenic chemicals to be used at International Business Machines Corp.

Spokesmen for Eastman Kodak and Union Carbide said the companies would defend against the suit. J. T. Baker Chemical Co. did not comment. KTI Chemical Corp., a subsidiary of Union Carbide, is now defunct.

IBM is not named in the suit because New York State law prohibits workers from pursuing cases against employers outside the workers' compensation system.

The suit names 11 plaintiffs — IBM employees and the families of deceased employees. But their attorney, William L. DeProspo, said his firm has signed on about 40 additional complainants since the suit was filed. The workers, most nonsmokers diagnosed at ages be-



Chris Ramirez

**Bob and Evelyn Kelleher, of Newburgh, N.Y., two plaintiffs in a lawsuit against four chemical manufacturers, say the chemicals they were exposed to in their work at IBM caused his testicular cancer and her brain tumors.**

tween 25 and 35, blame the chemicals for varying types of cancer, including colon cancer, testicular cancer, non-Hodgkin's lymphoma and cancer of the female reproductive organs.

No studies exist to support or refute the charges, a point both sides use in their arguments.

"I think it's a question of putting people's health at risk without knowing the answers," DeProspo said. "Of course, they say they didn't know, but they didn't make an attempt to know."

The lawsuit calls into question a number of chemicals used in the chip production, but at the center of the controversy are substances called "photo resist," which are used to create precise patterns on the chips. There is no regulatory program for the chemicals, said John Martonik, OSHA's deputy director for health standards programs. Martonik said while that could change through the agency's process to identify underregulated materials, "there is nothing that we have in front of us at this time that would result in actions on these chemicals in the near future." NIOSH reports no plans to study the photo resists.

The lawsuit's implications stretch beyond the plant in upstate New York to California's Silicon Valley and throughout the semiconductor industry.

Jeff Weir, spokesman for the Semiconductor Industry Association (SIA) in San Jose, Calif., said the industry would respond if there were reason to believe the process posed risks, but he emphasized that there has been no research to indicate a problem.

"They are saying, 'Why don't you do the study [to determine if the chemicals are carcinogenic],'" Weir said. "That's an easy point to raise, but we put the question back to them,

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*Tom Baermann, IBM*

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it to be studied?"

any of the chemicals at issue in the including the photo resists, have phased out of semiconductor factories. But DeProspo and workers' advisers say that isn't enough; they want chemical replacements to be tested proven noncarcinogenic - before make it through the plant door. History has taught us that they have one adequate testing biologically hemically before they put these (chemicals) on the assembly line," Deo said. "I'm quite certain that what have done is come up with something else and they haven't studied it."

### Reproductive Risks

The IBM dilemma revisits issues and nearly a decade ago, when a of women working on silicon fabrication lines compared notes and that they had something in common - miscarriages. Studies by both industry and NIOSH found that ethylated glycol ethers, compounds used in the production of wafers, posed reproductive risks to women.

Joseph LaDou, director of occupational medicine at the University of California, San Francisco, said he sees a connection between the reproductive issue and an emerging cancer question.

"We've been calling for cancer epidemiology in this industry for many years," said LaDou, a specialist in issues related to the semiconductor industry. "I think the industry should at the reproductive question be it was forced to by the study eight ago. Now, litigation over a cancer case may make them look at cancer." Whether or not the cases at IBM constitute a "cancer cluster" is a point of contention.

Eva Glazier, with the State of California Department of Health Services Surveillance Section, said cancer cases usually involve several individuals afflicted with the same type of cancer. IBM employees suffer from a list of different forms of the disease. They have a variety of different types of ailments allegedly caused by a variety of chemicals," SIA's Weir said. "There is something they have there that fits the typical cancer cluster profile." For Bob and Evelyn Kelleher, cancer and the situation at the IBM plant was too much to accept as coincidence. Bob Kelleher was

35 when he was diagnosed with testicular cancer in 1991. Three years earlier, Evelyn, his then-fiancee, was told she had brain tumors. She was 24. Both had been working at IBM for about a year when their illnesses were discovered. She worked in the pre-production room, using solvents to clean and prepare the foundation for what would become semiconductor wafers. He operated a chemical on the chips.

"When I returned from chemotherapy, one of the engineers said to me, 'Bob, I just came back from Nicole's [Sanders] funeral and [another worker] is out with cancer, too,'" said Bob Kelleher, whose cancer has been in remission for five years. "It was like, 'Oh, my God, we all worked on the same machine.'"

At IBM, workers are not permitted in the work areas until they've completed extensive training, said Tom Beermann, director of communications for IBM's microelectronics division. Among the safety procedures in place are varying levels of protective gear and specialized air handling systems in particular areas. Beermann could not say what the exact handling procedures were in the clean rooms, where photo resists were used.

Kelleher said during the time he worked in the clean room of IBM's building 322, workers were in close proximity to the chemicals - their duties included filling the tool with photo resist and emptying the excess. He said they were not provided with respiratory protection, a measure OSHA does not require. The workers did wear cotton "bunny suits," latex gloves and face shields, DeProspo said.

But Beermann and Weir defended their industry as safety conscious to an extreme, and they emphasized that every concern is taken seriously.

"All these companies compete head-to-head, tooth-and-nail for a lot of things," Beermann said. "But I don't think you'll find another industry where safety procedures are shared as widely and openly as in the semiconductor industry." **ENR**

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