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Ozone-depleting TCA booted from IBM's local unit; a first?

By **MARCIA A. LUDWIG**

IBM Corp. executives said that as of this month, the firm's Cottle Road facility has virtually eliminated all of its use and emissions of a widely used industrial chemical that depletes the earth's protective ozone shield.

With this announcement, IBM's South San Jose facility may be the first major computer manufacturer in the United States, or at least Silicon Valley, to have virtually eliminated its use of the toxic chemical, known as TCA.

TCA, formally 1,1,1-trichloroethane, is used by many electronics companies to clean and degrease metal components. It is especially prevalent among firms that make disk drives, which is IBM's primary business in San Jose, and in other businesses that use silicon wafers, such as the semiconductor industry.

Many companies use this chemical as a substitute for chlorofluorocarbons and toxic chemicals, such as Freon and TCE, which have even greater ozone-depleting characteristics than TCA.

Environmentalists and industry observers view IBM's elimination of TCA as a big step in the protection of the earth's outer ozone layer, which shields the planet from harmful radiation from the sun.

"This is the next step in the whole ozone protection battle," said Ted Smith, director of the Silicon Valley Toxics Coalition.

"I would call it (IBM's TCA elimina-

tion) amazing," said Tom English, director of environmental programs at the Santa Clara County Manufacturing Group and an expert who has studied air-quality issues for more than 20 years.

In 1988, IBM's Cottle Road plant reported 10,700 pounds of TCA emissions. That number increased in 1989 to 23,500 pounds, largely due to IBM's efforts to reduce CFC emissions, which required a switch in some processes to TCA. In 1990, IBM reported 17,300 pounds of emissions.

Now, instead of using TCA, IBM uses aqueous cleaning and a new photo-resistant development process. The new water-based system actually will save IBM money, with the new process costing about 20 percent less than the TCA process, said June Anderson, manager of environmental programs.

IBM has only perfected its aqueous cleaning system in recent months, but as of this month the firm has reported 99 percent elimination of TCA use and emissions.

Many other companies are researching the issue or running tests on processes that will eliminate TCA.

Intel Corp., for example, currently is testing aqueous cleaning at its Santa Clara facilities and has developed a new process that does not use TCA in wafer fabrication.

Hewlett-Packard Co. is "in the tail end of the research phase" of its TCA use said spokeswoman Joan Tharp.

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