GLOBAL ELECTRONICS

Issue No. 117 December, 1992

IT'S OFFICIAL: CHIP WORK IS UNSAFE

In early December, the Semiconductor Industry Association (SIA) released the results of a three-year, $3.8 million epidemiological study of 18,000 wafer fabrication workers at 15 companies. The study, conducted by researchers at the University of California at Davis School of Medicine, confirmed that chip production workers suffer a high rate of miscarriage and a host of other ailments associated with on-the-job exposure to toxic chemicals. The UC Davis team singled out glycol ethers, a class of chemicals used in wafer production, as the likely cause of reproductive disorders.

Some observers are surprised that an industry-organized study would admit such a poor health record. However, in Silicon Valley and other high-tech centers, activists who have been attacking the industry's safety record for fifteen years wonder why it took so long for employers just to recognize that problems exist. In 1981, the Santa Clara Center for Occupational Safety and Health published a report documenting that glycol ethers caused reproductive disorders in animals, citing a government study. In 1989, the Silicon Valley Toxics Coalition again documented the link, and in a state-sponsored report it urged the substitution of safer chemicals in the production process.

The SIA organized its study in 1987, after Digital Equipment Corporation released a study showing a high miscarriage rate among production workers at its Hudson, Massachusetts fab plant. Community and worker groups asked to participate in the oversight of the SIA study. Although SIA ignored the activists, it knew it was being watched and contracted with a reputable research team.

This October, the results of a similar study at IBM's chipmaking plant leaked out, showing an extremely high miscarriage rate among workers expose to glycol ethers.

Spokesmen for the chip industry have promised to phase out glycol ethers, but they warn that change will not come instantly. Instead, employers are informing their workers about the study results. One of the firms, Hewlett-Packard, announced, "women employees working in fab areas who are either pregnant or trying to conceive have been advised to consult with their manager to discuss any health concerns. If a transfer is requested, HP will reassign a woman worker to an appropriate alternative job if one is available outside the fab area, according to company management."

While it's good that industry is finally moving in the right direction, its slow pace fails to recognize the human toll of its health and safety practices. The chip industry is known for its flexibility and speed of product innovation, but it appears unwilling to set firm, prompt deadlines for the elimination glycol ethers.

To speed the phase-out of glycol ethers, health and safety activists—some of whom have been criticizing the semiconductor industry's use of toxic chemicals for 15 years—established the Campaign to End the Miscarriage of Justice, announcing a six-point program one day after the SIA study became public:

1. By January 1, 1993 the semiconductor companies should commit to aggressive goals and timetables for the phase-out of glycol ethers and other reproductive toxins. Campaign members believe that six months to one year is a reasonable time frame to phase in safer alternatives.
2. The findings of this study must be communicated honestly and completely to the affected workers in easily understood language, including translation into all appropriate primary languages.
3. Workers who choose to transfer away from dangerous chemicals must be guaranteed no loss in pay, seniority or other benefits, including the right to return to the previous job.
4. The semiconductor industry must establish democratically elected health and safety committees at each semiconductor plant to ensure that those people most directly affected are involved in the design and implementation of the health and safety solutions.
5. Semiconductor companies must support SEMATECH as the major research center to develop safer manufacturing processes for the semiconductor industry. SEMATECH member companies must match the federal govern

(continued on page 2)

STRIKE AT VERSATRONEX!
see page 3

ment's earmarked funds for environmental manufacturing.

6. The semiconductor industry must adopt the principle that it will no longer use chemicals which have not been adequately tested for reproductive, cancer and other adverse health affects.

For more information, contact the Silicon Valley Toxics Coalition or the Santa Clara Center for Occupational Safety and Health, both of which are located at 760 N. First Street, San Jose, CA 95112. Phone numbers: SVTC—408/287-6707; SCCOSH—408/998-4050.

MILITARY SHARE OF FEDERAL R & D REMAINS HIGH

For fiscal year 1993, the Bush Administration proposed a total federal budget authority of $72.9 billion for research and development. National defense remained the largest budget function, slated to receive $42,410 million, or 58.2% of the total. Of that, $39,686 million was part of the Defense Department budget. The remaining $2,724 million was built into the Energy Department's Atomic Energy Defense Activities.

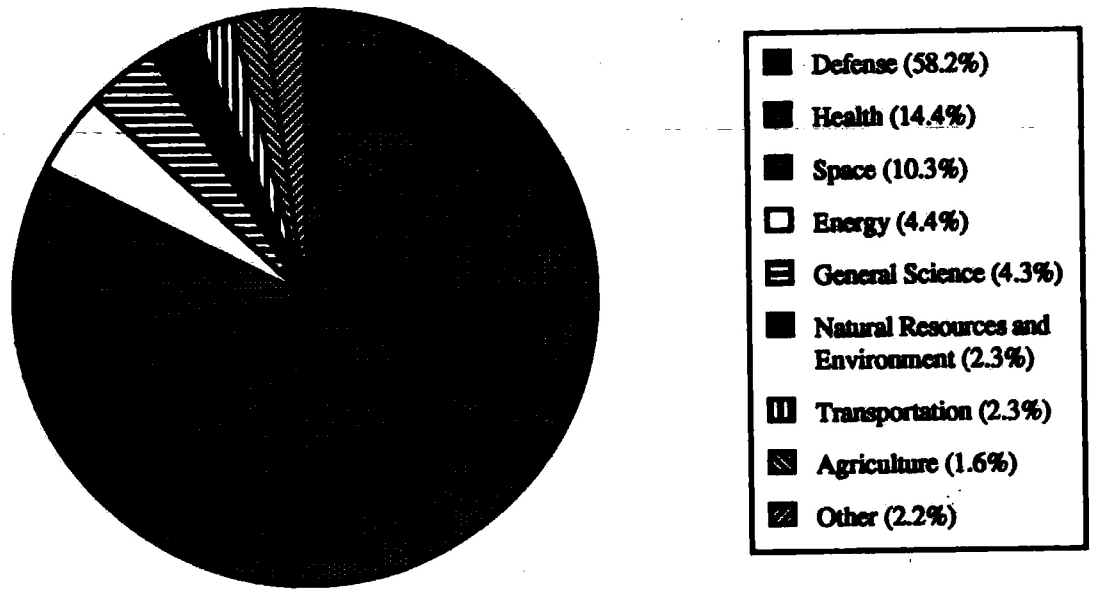
Big ticket National Defense programs, such as "Star Wars" development and nuclear weapons testing, soak up a lot of cash without significantly advancing basic science. Basic research on defense—at the Energy Department as well as the Defense Department—accounts for just $1.2 billion, or 9% of federally supported basic research. Only 3% of all defense R & D is basic research, compared to 39% of non-defense R & D programs.

The military share of federal R & D spending is declining, but much more slowly that one might expect given the wrenching downsizing of aerospace production now underway. In 1991, national defense accounted for 59.7% of the R & D budget authority, and it barely dropped to an estimated 59.4% in 1992. In 1993 it is supposed to fall by 1.2%, to 58.2%.

Note: Despite the allocation of programs by function, these categories are still linked to agency missions. Thus, the $180 million on research and development into environmental restoration and waste management by the Energy Department's defense programs is considered defense, not environmental R & D.

Source: "Federal R&D Funding by Budget Function: Fiscal Years 1991-1993," National Science Foundation Division of Science Resource Studies, Science and Engineering Indicators Program (NSF 92-318), June, 1992.

FEDERAL R & D BUDGET BY FUNCTION—FISCAL YEAR 1993



VERSATRONEX STRIKE

In October, 55 workers at Versatronex, a Sunnyvale contract assembly plant, made history by organizing the first electronics workers strike in Silicon Valley. Though the workers asked the United Electrical Workers (UE) union to represent them, the action grew spontaneously out of in-plant grievances. The strike was triggered when Versatronex fired a worker, Joselito Muñoz, who complained about company practices at an official company meeting.

Versatronex assembles printed circuit boards for a variety of Silicon Valley-area hardware producers, including Digital Microwave, Bio-Rad Laboratories, IBM, Mountain Computer, Silicon Valley Group, and Spectra-Physics.

Entry level pay is a meager $4.25 per hour. The highest wage, for a worker with 14 years experience, is reportedly $7.25. There is no medical insurance. The company reports releasing 3,400 pounds a year in ethylene dichloride, but there are no vents. This means that workers are directly exposed to significant quantities of a known carcinogen daily. Most of the employees are Latinas, primarily immigrants from Mexico.

On November 30, after the National Labor Relations Board (NLRB) filed a complaint against Versatronex for firing Muñoz, the striking workers returned to work. The company refused to rehire twelve, however, claiming it didn't need them. A majority of the workers filed a petition with the NLRB for a representation election.

Taking a page from the janitors' union (SEIU #1877), the UE has taken its workers' case directly to the companies that send jobs to Versatronex, demanding that they insist that Versatronex respond to workers' grievances. Before returning to work, the strikers staged a hunger strike at Digital Microwave.

If the Versatronex workers, like the janitors at Apple and Hewlett-Packard, win a contract that improves their pay, benefits, and conditions, it will set a watershed precedent for Silicon Valley. By sending out a signal that high-tech production workers can organize, they may entice more organizers into the area to initiate the type of Valley-wide drive necessary to unionize the industry.

On the negative side, the obvious militancy of the Latina workers could reinforce the prejudicial preferences of employers for Asian workers.

For more information or to offer support, contact UE at 510/534-0232 or write Box 21062, Oakland, CA, 94620.

FARMING OUT DIRTY WORK

In a phenomenon known as "vertical disaggregation of production" or "deconstruction," because "disintegration" is confusing, major computer makers are moving out of the hardware assembly business. Many are sending production work out to small job shops like Versatronex, but there are a handful of large modern, assembly outfits such as SCI Systems and Solectron, ranked one and two in the industry, respectively.

There are two key reasons why computer firms prefer to contract out assembly: First, they pass on the uncertainty of production levels to outsiders, which must cope either by laying off workers or by finding other customers. Second, the contract firms take over responsibility for setting wages, benefits, and working conditions, often at levels that would prove embarrassing to brand-name firms.

In August, Tandem Computers, known for its better than average treatment of its production workers, agreed to sell its Watsonville, California—south of Silicon Valley—assembly plant to SCI. Huntsville, Alabama-based SCI has promised to assemble circuit boards for Tandem for at least five years, but it expects eventually to lay off about 50 of the 200 employees. *(Bloomberg Business News* as cited in the *San Jose Mercury News,* August 4, 1992)

Meanwhile, Silicon Valley-based Solectron announced that it is purchasing two IBM plants, in Charlotte, North Carolina and Bordeaux, France for $55 million. IBM will lease back half of the Bordeaux facility for three years, and it is acquiring ten percent of Solectron's new French subsidiary. The two firms expect to negotiate manufacturing agreements as well. *(San Jose Mercury News,* August 19, 1992)

GLOBAL ELECTRONICS

edited by Lenny Siegel

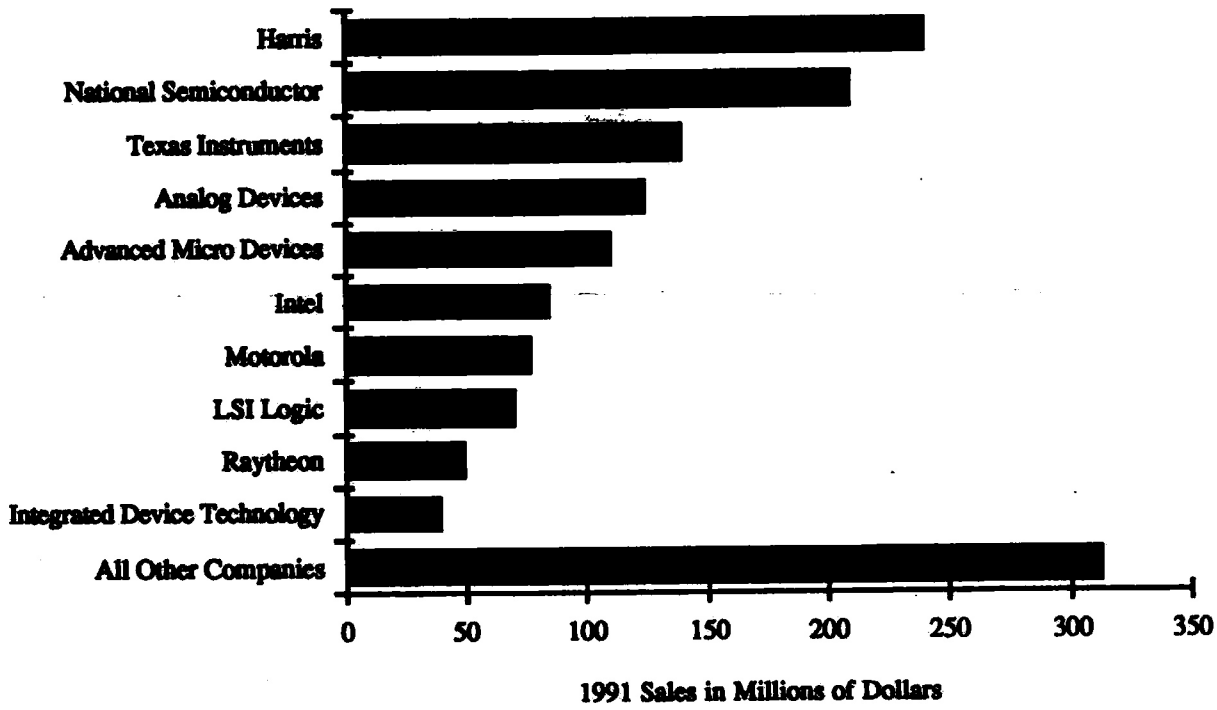
Issue No. 117

published by the Pacific Studies Center
222B View Street
Mountain View, CA 94041 - USA
Phone: 415/969-1545—Fax: 415/968-1126
US ISSN 0739-0416

subscription rates (12 issues)
United States: $12.00
Canada and Mexico: US$14.00
Overseas: US$18.00

all back issues are available

TOP TEN DIRECT SUPPLIERS OF INTEGRATED CIRCUITS TO THE U.S. DEPARTMENT OF DEFENSE, 1991



Source: Integrated Circuit Engineering, as cited in US General Accounting Office, "SEMATECH'S Technological Progress," (GAO/RCED-92-223BR).