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Chip makers slow to address worker safety

SIX YEARS after chip makers were given strong reason to believe that working in wafer-fabrication facilities can cause miscarriages, they're going to do something about it.

You can bet they wouldn't take that long if part of the manufacturing process were harming one of their key products.

But most companies — not just chip makers — take customer complaints about their products far more seriously than employee complaints about health hazards in the workplace.

Product problems can hurt a company's profits almost immediately, as customers stop buying. In these cases, the loss is very visible.

The cost of not dealing with health hazards is much less perceptible, especially in the short run. While morale may suffer, its impact on the bottom line is concealed. That's also the case with higher hiring and training costs. Fixing a hazard, however, can be quite expensive, immediately. So executives have every incentive to look the other way.

It's also usually much easier for companies to fix their products than to find and eliminate their health hazards.

THAT'S certainly true in the chip industry. Semiconductor makers use many toxic chemicals to produce chips, and since at least the 1970s a few of their employees have complained that these chemicals harmed their health.

Partly because most employees didn't seem to be affected, chip makers didn't take these concerns seriously until 1986, when a University of Massachusetts study found that female production workers at a Digital Equipment Corp. semiconductor plant suffered nearly twice the miscarriage rate of other women there. The study also reported a higher rate of headaches, nausea and dizziness among chip-production workers compared with other Digital employees.

While many were alarmed by these results, experts inside and outside the industry didn't consider that study definitive because it involved relatively few workers and only one site. So two years later, the Semiconductor Industry Association launched the \$3.8 million study whose results were revealed Thursday.

Although some of those results paralleled those of the DEC study, there were also important differences.

The SIA study did not confirm the DEC study finding indicating that wafer-fabrication workers are more likely to experience headaches or nausea, and it found that the rate of miscarriages caused by working in fabs was half that of the DEC study. The SIA study also found increased breathing problems among fab workers.

EVEN THIS mammoth effort didn't identify all the chemicals that are causing the problems. One it did single out is ethylene-based glycol ethers, and the SIA has urged its members to eliminate its use. That will take time, however. And it's not certain that the replacement chemical will be less dangerous.

The study has, at least, warned women of the health hazards of working in a chip-making fab. And it should spur the industry to develop better procedures and technologies to protect its workers.

But the study won't do the job by itself. Once glycol ethers are eliminated and a few preventive steps are taken, chip makers could become complacent once again.

The industry needs continuous monitoring by outside parties.

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