

ASBESTOS-COVERED MACHINERY AT TYLER, TEXAS FACTORY

MEDICINE

Death from Dust

When the Pittsburgh Corning Corporation closed its asbestos insulation plant in Tyler, Texas, two years ago, it did an unusually thorough job of cleaning up after itself. Some 60 workers spent a week scraping asbestos waste from machinery and depositing it in a nearby dump. Then another crew took over. Ceilings and walls were steam cleaned. Every piece of equipment in sight was scrubbed down; some machinery was disassembled and shipped to P.C.C.'s home office in Pittsburgh. What was left was cut up and buried. When the crew finished, all that remained of the plant were two dilapidated wooden buildings that had once seen service as Army barracks during World War II.

P.C.C.'s scorched-earth policy has left few visible reminders of the factory's 17 years in Tyler. But the scars from the plant's presence will not soon disappear. While producing insulation for the boilers and pipes of naval ships, workers in the plant were exposed to enormous quantities of asbestos dust, which, once inhaled, never leaves the lungs. Now, based on previous experience with asbestos-caused diseases, medical experts estimate that as many as 300 of the 869 employed at the plant since 1954 will die of asbestosis (a permanent and often progressive scarring of lung tissue from inhaled asbestos fibers), lung cancer or cancers of the colon, rectum or stomach.

Their deaths should come as no surprise to either company or Government officials. Doctors have long suspected that asbestos dust is hazardous; there has been ample documentation of increased incidence of lung disease and cancers among people exposed to the mineral. As early as 1961, Dr. Irving Selikoff, 59, of New York's Mount Sinai Hospital, and Dr. E. Cuyler Hammond, 61, of the American Cancer Society, confirmed the deadly relationship in studies of workers at a Paterson, N.J., asbestos plant. They documented their work in scientific papers and meetings. They also showed that even small quantities of asbestos fiber could be lethal. Selikoff studied a woman who died of mesothelioma, a cancer of the membrane that covers the lungs and lines the chest and abdomen. The woman's only contact with asbestos came when she washed the clothing of her husband, who worked in an asbestos plant.

After the work by Selikoff and others, P.C.C. officials ordered a study of the asbestos-dust hazard at Tyler in 1963. The report seriously underestimated the hazard. A 1966 dust survey found asbestos levels above recommended thresholds in many areas of the plant, and a 1967 survey by the U.S. Public Health Service's Division of Occupational Health confirmed that the levels were high, but did not warn of the health hazard. After a Labor Department study two years later reported the same conditions, respirators were issued to workers in the plant's dustiest areas. But, according to workers, at no time did P.C.C. officials tell them that they were exposed to a health hazard. "I even had one tell me that stuff, asbestos, is good for you," says J.C. Yandle, 48, a former employee. "He said you could eat it."

Silent Violence. It was not until a 1970 law created the National Institute for Occupational Safety and Health (NIOSH)—and gave the Labor Department's Occupational Safety and Health Administration (OSHA) the authority to enforce compliance with asbestos standards—that things began to happen. In 1971 a NIOSH team visited Tyler, confirmed the danger of the dust levels, and emphasized the extraordinary hazard. The team pointed out many examples of poor hygiene practices: the company lunchroom was close to the production area and workers were using compressed-air hoses to blow dust off each other (and thus spreading it about), and the company was selling burlap bags contaminated with asbestos. NIOSH promptly notified OSHA, which inspected the plant, fined P.C.C. $210, and gave it four months to come up to standards. When a reinspection showed that the company still had not installed necessary dust-control equipment, OSHA fined it $7,990 and promised further action. Forced to make a decision, P.C.C. opted to close the plant. It cited economic as well as environmental reasons.

The closing should help protect citizens of Tyler from any further risk of contracting asbestosis. But it will do little to help those already exposed to the asbestos dust. Asbestosis and related cancers may not develop until 30 years after exposure to the particles, but once they do, they are painful and often fatal. "He hurt with every breath he took, because his lungs were torn and scarred on the inside from breathing asbestos fibers," said Mrs. Robert Thomas of her husband, who died five months ago.

Steve Wodka, 24, of the Oil, Chemical and Atomic Workers Union, which represented the Tyler plant's labor force, charges P.C.C. with negligence, a form of "silent violence." One group of former employees is suing P.C.C. for $100 million in damages; some individuals are also bringing $1 million suits against the Government for failing to protect them. But neither the suits nor any belated medical care that the workers may now receive are likely to alter the odds against their survival. Now that they have been exposed to asbestos, the deck is stacked.

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Prescription By Computer

Properly programmed, the computer can plot the trajectory of a rocket, keep track of a store's inventory, correlate census data and help predict weather more accurately. But can it be trusted to make the kinds of life-and-death decisions that doctors do? The answer may be yes, according to a team of scientists from Massachusetts Institute of Technology and Tufts–New England Medical Center in Boston. The researchers report in the *American Journal of Medicine* that they have taught a computer to exercise virtually the same clinical judgment that a physician must use in choosing a form of treatment. In the process, they have learned more about how doctors make such decisions.

When the researchers began trying to write a decision-making computer program three years ago, says Dr. William Schwartz, chairman of the department of medicine at Tufts University