opinion

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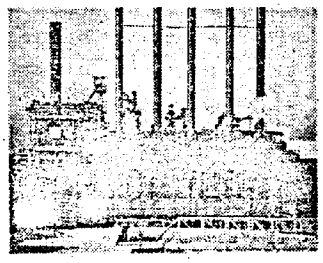
Detecting an occupational disease

As officials of the B. F. Goodrich Co. plant in Louisville have said repeatedly, it is easy to point out, in hindsight, the failure of the chemical industry to fully recognize the danger of exposing workers to large amounts of vinyl chloride gas. The record of the past should be examined carefully, however. For the lesson to be learned from the discovery of a probable link between vinyl chloride and several diseases, including a rare and deadly liver cancer known as angiosarcoma, is that industrial managers and labor union leaders have a responsibility to be much more alert to the early warning signals of occupational health hazards.

Five former Goodrich workers are known to have died of angiosarcoma since 1964 and a sixth is ill with the disease. Blood tests have indicated that a number of employes may have liver problems. So far there is no proof that vinyl chloride is the culprit, but there is no lack of grounds for suspicion. Could it have been a mere coincidence that angiosarcoma, which ordinarily kills only about 20 Americans every year, claimed so many victims in a very small group of Louisvillians? The U.S. Occupational Safety and Health Administration apparently doesn't think so. It has classified angiosarcoma as a new occupational disease, and is considering adding vinyl chloride to its list of cancer-causing agents, as Kentucky's occupational health agency has already done.



It is true that a company doctor did report back in the spring of 1973 that there appeared to be a high incidence of liver disorders in the Goodrich work force. After the discovery of three angiosarcoma deaths, the company did, as it is required to do by law, inform federal and state occupational health and safety agencies of its suspicions. Since then Goodrich and other firms have begun searching their employes' medical records for evidence that might shed additional light on the link between vinyl chloride and various health problems. The National Institute of Occupational Safety and Health has begun its own investigations.

But why did it take the industry, and the company, so long to recognize the danger signals? Dr. Irving Selikoff of Mt. Sinai School of Medicine in New York, the man whose research helped prove that asbestos is a leading industrial cause of cancer, has testified that there were indications of vinyl chloride's toxicity at least 25 years ago. Workmen's compensation records show that liver disorders came to light at the Goodrich plant about 10 years ago. Company employes claim that workers have passed out or vomited while cleaning the vats in which vinyl chloride is combined with other chemicals to make polyvinyl chloride. Stomach problems, according to other reports, were common at one time. In the mid-1960s, workers at Goodrich and at plants in Europe contracted a strange bone disease. Three years ago, an Italian researcher produced a cancer in rats by exposing them to vinyl chloride.

Taken singly, any one of these occurrences might have been overlooked. In combination, they should have alerted the chemical industry to a potentially serious health problem. Only since vinyl chloride was identified as a possible carcinogen, however, has there been an upsurge of interest in lowering the level of exposure in factories and in providing workers with adequate protective equipment and clothing. The labor unions involved, notably the United Rubber Workers, the Oil, Chemical and Atomic Workers and the AFL-CIO Industrial Union Department, have been even more belated in their expressions of concern about the apparently unhealthy working environment in vinyl chloride plants.

Unfortunately, this has all too often been the story of industry's attitude toward health and safety problems.

Goodrich has performed an invaluable public service by uncovering and reporting the apparently lethal impact of vinyl chloride on the human liver. Since no one is certain what level of exposure, if any, is safe, the company and other companies that use the gas in the manufacture of plastics should now do everything possible to make their operations clean. The long-term goal should be a zero level of exposure, which has very nearly been achieved in modern chemical plants.

The Kentucky Occupational Safety and Health Standard Board, meanwhile, has acted with commendable speed in reducing the permissible concentration of vinyl chloride fumes in places of employment from 500 parts per million parts of air to 50. That standard must now be strictly enforced.

The most important result of the vinyl chloride saga, however, should be a change in the attitude still prevalent in some segments of American industry. The first hint of an occupational disease should be taken seriously, and the suspected cause should be regarded as guilty until proved innocent.

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Vinyl chloride issue study is requested

The Courier-Journal Bureau

FRANKFORT, Ky. — Sen. Kelsey Friend, D-Pikeville, yesterday told the Senate he is seeking an investigation of whether workmen's compensation adequately covers employes who have illnesses stemming from work with vinyl chloride.

Friend introduced Senate Resolution 84, which would direct the Legislative Research Commission to study the subject. Friend told the Senate his interest was sparked by recent news stories in The Courier-Journal about employes who contracted a rare form of cancer after working with vinyl chloride.

Possible synthetic rubber hazards at Goodrich probed

By DAN KAUFFMAN
Courier-Journal Staff Writer

The B. F. Goodrich Co. confirmed yesterday that it is investigating a possible worker health problem in an area other than the plastics-making department where vinyl chloride gas is suspected of having caused at least five deaths.

A spokesman said some blood abnormalities had been found in tests of workers in synthetic rubber at the Goodrich plant on Bells Lane in Louisville. He said the test results are being reviewed.

In at least some areas of the synthetic rubber manufacturing process some polyvinyl chloride — a plastic — is used. Health officials think vinyl chloride gas, which is a primary ingredient in making the polyvinyl plastics, is to blame for a rare liver cancer that has killed at least five plastic workers at the plant. The finished plastic contains only trace amounts of vinyl chloride.

A company spokesman also announced yesterday the transfer of 15 workers from the plastics division to areas where no polyvinyl chloride is used.

All 15 continued to show blood abnormalities through two series of blood tests. The test can indicate a number of health problems, including liver damage.

Philip Lawrence, manager of the Bells Lane plant, said the transfer was a "precautionary measure" taken "on recommendation of medical authorities."

All 15 are to undergo further tests. The company first tested all of its 271 vinyl chloride production workers and found 55 had some blood abnormalities. A retest of these men showed that 15 of them needed immediate further testing. The remaining 40 men will be tested later.

The company spokesman said the new abnormalities in the synthetic rubber division may or may not mean anything.

"In any group of people you're going to have some people who show up off the norm who aren't necessarily abnormal. We can't tell the degree (of abnormality) until the results have been reviewed by proper medical people."

The irregularities in the synthetic rubber division were apparently most pronounced in the drying area, a place where at least some polyvinyl chloride is used, according to the workers.

Workers said the problems for the most part had nothing to do with liver damage, although he said several men did report liver problems.

A total of 205 people work in the synthetic rubber area.

Until now the only known problems have been in the polyvinyl chloride manufacturing area.

In another development, officials of the National Institute for Occupational Safety and Health (NIOSH) said they would review all Goodrich employes' health records.

Vernon Rose, director of the Office of Research and Standard Development for NIOSH, said the study would focus on past employes.

"We have certain working arrangements with Social Security and so forth to go back and track people down. They often appear in company records as 'lost follow-up.' We have access to better sources of information as a federal agency."

Dr. Joseph Wagoner, another NIOSH official, also said the agency would look at the health records of employes of five other plants that have been in operation more than 20 years.

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The B.F. Goodrich
Chemical Co.
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In West Virginia, England

2 more deaths tied to polyvinyl chloride

By KEITH RUNYON
Courier-Journal Staff Writer

Angiosarcoma, the rare liver cancer that caused the deaths of at least five employes of the polyvinyl chloride manufacturing unit of the B.F. Goodrich Co. in Louisville, reportedly killed a worker in West Virginia six years ago and another more recently in Great Britain.

A spokesman for the Union Carbide Corp. in South Charleston, W. Va., said last night that an employe of the plant's polyvinyl chloride division who died in 1968 had angiosarcoma.

And the medical consultant to the Kentucky Department of Labor, conferring with cancer researchers in Cincinnati yesterday, learned of the death of an employe of England's Imperial Chemical Ltd. Another polyvinyl chloride worker in West Germany also is said to have died of angiosarcoma.

The Union Carbide spokesman reported that medical records of 723 present and past employes were screened to determine whether any had suffered from angiosarcoma. The persons screened worked in the polyvinyl chloride units in South Charleston and in Texas City, Tex.

Of those reviewed, the records indicated that only one man — who worked in the South Charleston plant from 1944 to 1962 — was a victim of the rare disease, the spokesman said.

Meanwhile, Dr. J. Bradford Block, consultant to the state labor department which is investigating the Goodrich employes' deaths, yesterday visited the Kettering Institute of the University of Cincinnati, where research involving monkeys may shed light on the cause and treatment possibilities for angiosarcoma.

The Kettering Institute, which conducts epidemiologic studies (involving diseases in groups of animals), initiated a study in 1959 to determine the relationship, if any, between acroosteolysis, a bone disease, and polyvinyl chloride, according to Block.

B.F. Goodrich financed that study, said Block, but the official observations ended 18 months ago when the funding stopped.

Vinyl chloride, the gas from which polyvinyl chloride is derived, was injected into the monkeys' paws. Since those injections in 1959, they have languished in their cages while the scientists wait to see if disease sets in.

Recent tests indicate that the monkeys developed not only bone problems, but also abnormalities of the liver.

The Courier-Journal

Around Kentucky

However, the tests conducted so far have not proved that the monkeys have angiosarcoma.

Their condition, according to Block, will be closely watched to see if, and how fast, the angiosarcoma develops. It may be possible to relate the time the disease develops in the monkeys to its rate of progression in humans.

Block said that he, Kentucky's Labor Commissioner James Yocom, and other officials of that department who visited the Cincinnati facility hope that the University of Louisville Medical School's cancer researchers can participate in the study. He said a meeting between officials of the two schools is in the offing.

Goodrich has announced that five of its employes died between 1954 and last December of angiosarcoma. Another man who worked in the polyvinyl chloride division has developed the cancer, but is still living.

The firm is investigating the link between angiosarcoma and the men's working environment. All of the men who died of the disease worked at some point in the polyvinyl chloride production unit.

Polyvinyl chloride has been manufactured commercially for more than 35 years. It is used to produce items such as phonograph records, some food containers, wire insulation and floor tile.