

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 employees 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.

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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 employees' 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 employees 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.

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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.

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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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The following statement, prepared by BFG Canada and issued by John Brooks, manager, BFG Chemical, Shawinigan, Quebec, appeared Feb. 25 in the NOUVELLISTE, a Shawinigan publication.

February 25, 1974

Statement Produced by BFG Canada, PR Department for use by John Brooks, Manager, BFG Chemical Plant, Shawinigan

According to officials of the U.S. National Institute of safety and health, which is conducting investigations, and scientists and medical professionals of THE B.F. Goodrich Company, the cancer deaths reported by the Company may be connected only with processes used at the Louisville, Ky., plant. A search of available medical records of employees at all other B.F. Goodrich plants have turned up no similar cases.

B.F. Goodrich Canada Limited has two polyvinyl chloride producing plants in Canada, one in Niagara, Ont., and the second in Shawinigan. Combined total employment is about 300. PVC resins and compounds made at these plants are to make vinyl house siding, wire insulation, pipe, phonograph records and many other products.

As a result of the Louisville investigation, BFG Canada has increased precautionary measures at both Canadian plants. This includes the installation of new, highly sophisticated monitoring equipment which can detect levels of vinyl chloride down to very minute levels.

An international research effort has been launched by health agencies, officials and the National Institute of Occupational Safety and Health into the use and effects of vinyl chloride and BFG is co-operating fully with these investigations, Peter Mason, president of BFG Canada, said.

He said BFG Canada has been working with polyvinyl chloride (PVC) resins for 25 years and "we know of no detrimental health effects or medical problems among workers connected with the materials during that time."

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Vinyl chloride is a suspected cause of the disease, angiosarcoma, which has only been reported at BFG's Louisville plant.

All BFG Canada employees in PVC production have been advised of the Louisville cases. The company will shortly begin medical tests on all PVC plant employees when the correct medical procedures have been established.

Inspections have shown that the Canadian plants are operating at exposures well below government prescribed levels. BFG Canada officials have been in direct contact with provincial health authorities in Ontario and Quebec. BFG Canada is also working with industry representatives through the facilities of the Canadian Chemical Producers Association. The subject is of industry concern and information and data will be exchanged through the CCPA on an immediate basis. This is in addition to the ongoing Manufacturing Chemists Association and health/environmental programs in the United States.

BFG Canada is currently implementing programs to reduce levels of vinyl chloride exposure to the lowest levels possible. Our engineers are conferring with their counterparts in the industry on safety procedures and on recommendations of occupational health authorities.

Some of these measures include reducing exposure levels to about one-tenth that now recommended by health authorities. Air-fed respirator masks are available to employees if, because of some rare abnormality, the recommended exposure level could be exceeded.

While we have no evidence of occupational illness among our Canadian PVC workers, every effort is being made to keep our plants well within the best safety standards available. BFG has continued to make improvements in the plant safety procedures, technology and equipment since the purchase of the Shawinigan facilities in May 1972.

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CHEMICAL WEEK NEWSLETTER

ITEM 2087--VINYL SAFETY ACTION

BASEL, FEB. 25--INTERNATIONAL FEDERATION OF CHEMICAL
AND GENERAL WORKERS IS SPARKING A WORLD-WIDE MOVE TO ALERT
PRODUCERS OF VINYL CHLORIDE MONOMER AND PVC TO POSSIBLE HEALTH
HAZARDS IN WORKERS EXPOSURE TO THE PRODUCTS AND TO ESTABLISH
ADEQUATE SAFETY STANDARDS. MOVES, OF COURSE, FOLLOW RECENT
VOLUNTARY DISCLOSURE BY U.S. S B. F. GOODRICH THAT FOUR WORKERS
AT ITS PVC PLANT DIED FROM RARE FORM OF LIVER CANCER. THE IFC IS
ASKING ITS AFFILIATES IN MAJOR COUNTRIES TO INVESTIGATE
INSTANCES OF ILLNESSES THAT MAY BE CONNECTED WITH PVC PRODUCTION,
AND SEND FINDINGS TO HEADQUARTERS. UNION IS ALSO SEEKING
COOPERATION FROM WORLD HEALTH ORGANIZATION.

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