

The Springfield Plant (Indian Orchard) has been part of Monsanto's chemical operations since 1938. During the past 44 years, the Springfield Plant has been a major manufacturing location for the company's plastics operations. Recently, the Springfield Plant has become the subject of several newspaper articles alleging cancer epidemics, product health hazards, cover-ups and irresponsible hazardous waste disposal practices.

This backgrounder has been prepared to set the record straight. Its sections cover Springfield's products, health studies, employee communications and hazardous waste practices. However, the following are brief summaries of the major issues:

HEALTH STUDIES

Over the last several years, there have been a number of health studies at the Springfield Plant. In 1978, independent studies by the National Institute for Occupational Safety and Health (NIOSH) and Monsanto showed no significant increase in cancer when compared to the Hampden County population, however, a possible excess of digestive and genito-urinary cancers was indicated. Due to several limitations of study design, interpretations of the results may have been biased. Therefore, in 1979, Monsanto commissioned a series of studies by the University of Pittsburgh to determine if these excesses were in fact real and if they were related to work exposure.

The university identified and followed about 2500 past hourly employees and confirmed that overall there was no unusual mortality associated with Springfield Plant employees although slight excesses from digestive and genito-urinary cancers were noted. In a later study, completed in October 1981, the university examined, in detail, the past exposures of those who had died from these cancers. It concluded that no occupational relationship could be found but recommended that the study be repeated at a later date.

The results have been shared with Springfield employees, their union representatives and the appropriate government agencies. The latest University of Pittsburgh study will be submitted for publication in a scientific journal.

At about the same time that the above study was completed, Monsanto received a report of a study by graduate students at the University of Massachusetts under the direction of Dr. Kenneth Rosenman. The study alleged that former workers in vinyl chloride and polyvinyl chloride at the Springfield Plant had excess cancers, most particularly digestive cancer.

Monsanto was not approached for any of the data used. The study methodology has several limitations, the most serious of which is the way in which the exposed population was identified. The findings are not confirmed by the University of Pittsburgh study, which found no association between digestive cancer and exposure to these two chemicals.

Also, recently, Monsanto became aware of study done as a thesis for a master's degree in epidemiology at the University of Massachusetts attributing increases in several causes of death to various workplace exposures at the Springfield Plant. The study is still under review. However, it is based on 211 workers who died, the same limitation that impelled Monsanto to commission the more complete studies described above. This study identified deaths by using a variety of ill-defined sources, and determined "exposure" in some cases from the memory of other employees.

Some of the causes identified (digestive cancers) have already been studied in detail by Monsanto. Others have simply not been confirmed. On the other hand, the excess prostatic cancers that were studied in detail by Monsanto were not detected in the Massachusetts study. These facts cast doubt on the validity of the study.

PRODUCT HEALTH HAZARDS

Monsanto is proud of its health and safety record and believes it is doing as much as any company can to protect its employees from workplace hazards. An analysis by the National Safety Council on "Occupational Injuries and Illnesses," for the years 1975 through 1979, shows that the chemical industry is about twice as safe as all U.S. manufacturing. The NSC ranks the chemical industry as the safest of 43 basic industries with the lowest number of incidents, illnesses and accidents.

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However, controversies have arisen over several products that are now used or have been used at the Springfield Plant as to their health effects.

- Polyvinyl Chloride (PVC)/Vinyl Chloride Monomer (VCM):

There is no known link between cancer and PVC. Though VCM, a raw material used in the manufacture of PVC is a human carcinogen, epidemiological studies have not shown a relationship between cancer and exposure to PVC or VCM at Springfield except for the Rosenman study. In fact, a University of Pittsburgh study shows the opposite to the Rosenman study ... that those who died of digestive cancer were less likely to have worked for long periods in areas where VCM or PVC was present.

- Formaldehyde: It has been demonstrated to be an animal carcinogen at extremely high exposure levels. However, epidemiological studies to date have not shown it to be a human carcinogen. Human beings can smell formaldehyde at very low levels, 1 part per million (ppm), are sensitive to it, and therefore cannot tolerate the exposures which have been shown to cause cancer in laboratory animals. Monsanto manufacturing procedures limit an employee's exposure to formaldehyde well below that which is mandated by OSHA ... the Occupational Safety and Health Administration, 3 ppm.

- o Acrylonitrile (AN): It is a suspected human carcinogen. However, the majority of epidemiological health studies have not shown it to cause cancer in humans. Monsanto is well within the workplace exposure levels mandated by OSHA.
- o Asbestos: Is a known human carcinogen. It was used in the manufacture of phenolic molding resin for a number of years and discontinued in 1959. In late 1978, cases of asbestosis were discovered among Springfield Plant employees by the plant physician. This initiated an intensive program to follow-up and survey all current and ex-employees who had worked in the Resinox Department and to communicate to them the implications of their exposure to asbestos. Those with positive tests are being monitored on an annual basis.

COVER-UPS:

It has been alleged in a few newspaper articles that Monsanto employees are not fully informed about the chemicals they work with and that company policies are designed to thwart attempts to gain access to medical and health information.

This allegation could not be further from the truth. For a number of years, Monsanto has conducted medical evaluations of past and current Springfield Plant employees as part of its continuing program to ensure their health and safety. It is

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Monsanto's practice to inform our employees, union officials and government agencies of the results of those various studies. As an example, the results of both the University of Massachusetts and University of Pittsburgh studies were compared and the findings reported to our employees last October when the studies were published.

HAZARDOUS WASTE DISPOSAL PRACTICES:

It has been alleged that Monsanto had contaminated the local groundwater and the Connecticut River by not properly handling chemical waste materials.

This has not happened -- we have monitored our waste sites and have found no problem to date. We will continue our monitoring program and are currently reviewing it with the Massachusetts Department of Environmental Quality Engineering. Landfilling at the Springfield Plant was stopped in 1968, five years before the state adopted regulations. The methods previously used for landfilling were legal and acceptable, utilizing good technology of the time.

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