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Casualties Of The Workplace

By
Paul Brodeur

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DAVID JOE SMITH, M.D.
ASSISTANT MEDICAL DIRECTOR
UNITED STATES STEEL CORPORATION
600 GRANT STREET
PITTSBURGH, PA. 15230

ANNALS OF INDUSTRY

CASUALTIES OF THE WORKPLACE

II—THAT DUST HAS ATE US UP

IN the summer of 1971, a young doctor named William M. Johnson, who had just joined the Division of Field Studies and Clinical Investigations of the Department of Health, Education, and Welfare's National Institute for Occupational Safety and Health, discovered data in the files of his predecessors which showed that grossly excessive and dangerous asbestos-dust levels had existed for years in an amosite-asbestos-insulation plant in Tyler, Texas, owned by the Pittsburgh Corning Corporation. Realizing that men working at the plant were in danger of developing asbestosis—scarring of the lungs resulting from the inhalation of asbestos fibres—as well as lung cancer, mesothelioma, and other malignant asbestos-induced tumors, Dr. Johnson and the newly appointed director of his division, Dr. Joseph K. Wagner, took the unprecedented step of sending the information to Anthony Mazzocchi, the director of the Legislative Department of the Oil, Chemical, and Atomic Workers International Union, which represented the sixty-three workers at the factory. At Mazzocchi's request, Dr. Johnson and several of his associates from the division conducted a survey of the Tyler plant in October of 1971 which showed that dust levels there were far in excess of the federal standard (twelve asbestos fibres per cubic centimetre of air); that asbestosis was already afflicting seven of the workers there; and that since 1954, when the factory opened, a total of eight hundred and ninety-five men had been employed there in conditions that posed grave danger to their health. In the meantime, Mazzocchi and other trade-union leaders, supported by Dr. Irving J. Selikoff, who is the director of the Mount Sinai School of Medicine's Environmental Sciences Laboratory and a pioneer in the field of modern asbestos epidemiology, had been urging Secretary of Labor James D. Hodgson to declare an emergency standard for occupational exposure to asbestos of two fibres per cubic centimetre of air. However, in spite of the fact that Dr. Selikoff and Dr. E. Cuyler Hammond, who is vice-president for epidemiology and statistics of the American Cancer Society, had provided incontrovertible evidence that one out of five asbestos-insulation workers was dying of lung cancer, and that almost half of these men were dying of some form of as-

bestos disease, Secretary Hodgson, apparently searching for some middle ground that he hoped would satisfy both industry and labor, declared a temporary emergency standard of five fibres per cubic centimetre in December of 1971. Another indication that the government was seeking a compromise between the well-being of workers and the interests of industry came when the Department of Labor's Occupational Safety and Health Administration, which has the responsibility for enforcing the provisions of the Occupational Safety and Health Act of 1970, inspected the Tyler plant late in November of 1971, as a result of Dr. Johnson's report that a critical occupational-health situation existed there. Although major deficiencies in the factory's ventilation system constituted serious violations of the Act—those likely to result in disability or death—the Administration chose to consider them as nonserious, and fined Pittsburgh Corning just two hundred and ten dollars.

There has since been considerable speculation in government circles, among trade unions, and within the independent medical and scientific community about the lenient attitude adopted by the Occupational Safety and Health Administration toward Pittsburgh Corning after the November survey. Apologists for the Administration claim that because the Secretary of Labor announced the emergency standard for asbestos after the survey was conducted harsher penalties might have been interpreted as unfair harassment of the company. Some people say that, with the Administration in the process of redefining safety and health standards for workers, the regional inspectors in Dallas had received no clear guidelines from Washington about over-all policy and, fearful of exceeding their authority, were simply trying to muddle through an administrative vacuum. Other observers feel that the Administration was reluctant to invoke the letter of the law in the case of the Occupational Safety and Health Act,

because to have done so would have opened a Pandora's box of health violations in other industries, which the Administration was ill-equipped to handle, since it had only forty industrial hygienists to enforce standards in some four million workplaces. And still others, including Mazzocchi, believe that the Administration's people were highly embarrassed by the National Institute of Occupational Safety and Health report on the Tyler plant, which pointed up the Department of Labor's failure to enforce the standards of the Walsh-Healey Act at the factory after a department inspection on February 13, 1969. Indeed, Mazzocchi believed that the Administration's people were hoping that if they slapped Pittsburgh Corning lightly on the wrist with some nonserious violations the whole affair would blow over.

Whether the truth lies in any one of these theories or, as seems more likely, in a combination of them, it became apparent in December of 1971 that the Tyler affair was not going to blow over. That it did not, as so many other occupational-health scandals had, was largely the result of the efforts of Mazzocchi, who was determined to make it a *cause célèbre*. For several years, he and his associates in the union's Legislative Department, aided by Dr. Glenn Johnson, a young scientist working under Professor René Dubos, at the Rockefeller University, had been holding conferences for factory workers around the country to point out the hazards existing in the industrial environment and to give the workers guidance in how to deal with them. It was a considerable undertaking, for the hundred and eighty thousand members of the union were being exposed to thousands of potentially toxic substances. Indeed, in certain factories men were working with more than five thousand different chemicals, yet federal standards existed for fewer than four hundred and fifty of them. Since Mazzocchi found that the lack of government standards was accompanied by lax government enforcement of existing health regulations and an attitude of almost total callousness on the part of industry, he became convinced that industrial workers were victims of a conspiracy designed to suppress knowledge of occupational health hazards and to delay the passage and enforcement of laws to cope with them. A blunt-spoken man in his middle forties, with a fiery temperament, piercing eyes, and an unruly mane of black hair, he had begun to brood over what he considered the gross immorality that at-

tended the plight of men who were either dying or being disabled early in life as a result of exposure to substances such as asbestos, whose adverse health effects had long been known to and ignored by a medical-industrial complex consisting of company doctors, industry consultants, and key occupational-health officials at various levels of the state and federal governments. Consequently, when the situation at Tyler was brought to his attention by Dr. Johnson in September of 1971, Mazzocchi saw it as, in his words, "the epitome of what was wrong with the way our country was dealing with the problem of industrial disease." However, he decided against making any public disclosure of conditions at the Tyler plant until the National Institute for Occupational Safety and Health survey had been conducted and written up. "I wanted to marshal all the facts and then choose the forum that would enable me to use the example of the Tyler plant to best effect, and to bring help to the unfortunate men who were working there," he has said. "I wanted the whole country to know in detail what had happened at that factory, and to understand that what had gone on there—the fruitless Bureau for Occupational Safety and Health inspections, the lack of enforcement by the Department of Labor, the company's disregard for the men, the whole long, lousy history of neglect, deceit, and stupidity—was happening in dozens of other ways, in hundreds of other factories, to thousands of other men across the land. I wanted people to know that thousands upon thousands of their fellow-citizens were being assaulted daily, and that the police—in this case, the federal government—had done nothing to remedy the situation. In short, I wanted them to know that murder was being committed in the workplace, and that no one was bothering about it."

The forum Mazzocchi chose was the annual meeting of the American Association for the Advancement of Science, which was held at the Sheraton Hotel in Philadelphia on December 26th, and was attended by some fifty thousand scientists from all over the country. Along with Ralph Nader and Dr. Sidney Wolfe, the director of Nader's Health Research Group, Mazzocchi addressed eleven hundred of the delegates at a symposium entitled "Workers and the Environment," which was moderated by Professor George Wald, the Nobel Prize-winning biologist from Harvard. Nader and Dr. Wolfe spoke about occupational-health problems in general, and

Mazzocchi zeroed in on Tyler as the quintessential example of the ignorance, neglect, and subterfuge that characterized government policy toward industrial hygiene. The complete and final report of the survey made by the National Institute for Occupational Safety and Health (known as NIOSH) had been sent out on December 21st, and he was thus able to document his charges with devastating effect. Mazzocchi was hoping that his disclosures about conditions at the Tyler plant would be picked up by newsmen covering the meeting and relayed to the nation. As things worked out, however, press coverage of the symposium tended to emphasize the more general aspects of occupational health that had been discussed by Nader.

In the meantime, notwithstanding the mildness of the penalties that accompanied them, the Administration citations had caused considerable consternation to the management of Pittsburgh Corning by setting March 31, 1972, as the date for completing extensive improvements in the ventilation- and dust-control systems of the Tyler plant. Combined with the failure of a company plan to use mineral wool as a substitute for asbestos in the manufacture of high-temperature pipe insulation, and the union's insistence that there be strict compliance with the recommendations of the NIOSH report, the deadline meant that the company would at long last be forced to clean up the plant or close it. Faced with this choice, Pittsburgh Corning's board of directors met in the middle of December and decided to shut the factory within a few months—after using up as much raw-asbestos stock as possible—in order to avoid further penalties.

The decision to close the Tyler plant rather than to spend the necessary time and money to make it safe obviously appealed to the managers of the company as the best way out of their difficulties. However, it did not solve the problem faced by Dr. Lee B. Grant, the medical director of one of Pittsburgh Corning's parent corporations, PPG Industries, and medical consultant to Pittsburgh Corning. Dr. Grant appears to have felt that his professional reputation had been called into question by the findings of the NIOSH survey. On December 13th—five months to the day after he had told Dr. Johnson that the health situation at Tyler wasn't serious—Dr. Grant visited Dr. Johnson at the Division of Field Studies and Clinical Investigations to discuss the medical condition of the seven Tyler workers who showed signs

and symptoms of asbestosis and, as Dr. Grant put it, "to avoid further misunderstanding" between NIOSH and Pittsburgh Corning. According to Dr. Johnson, the meeting was somewhat strained, for Dr. Grant was attempting to minimize the asbestos problem at the factory. "He tried to imply that our medical findings on the seven men were based more on epidemiological data than on clinical examination," Dr. Johnson recalls. "I replied that rales, finger clubbing, dyspnea, and reduced pulmonary function were well-recognized clinical evidence of asbestosis. Furthermore, I told him that back in October Dr. Richard M. Spiegel, of our division, was given to understand that some of the X-rays taken by Dr. George A. Hurst—the superintendent of the East Texas Chest Hospital, in Tyler—showed evidence of pulmonary fibrosis. I also reminded Dr. Grant that in 1970 a manager of the plant had died of mesothelioma. Dr. Grant then informed me that the company was willing to release Dr. Hurst's X-rays to us—they had been made at Dr. Grant's request—but only on the condition that we come back to Tyler early in January, so that we could sit down and review them together. I got the distinct impression that he was trying to make it appear that NIOSH and Pittsburgh Corning had been working jointly on the problem from the very beginning. However, we wanted to get our hands on those X-rays, so I agreed to the meeting, even though I saw little reason for it."

ON January 5, 1972, Dr. Spiegel and Richard A. Lemen, an epidemiologist who had also been a member of the original NIOSH survey team, returned to Tyler, and the following morning they met with Dr. Grant, Dr. Hurst, and William Farkos, Pittsburgh Corning's director of personnel and industrial relations, in a conference room at the East Texas Chest Hospital. The five men reviewed the medical reports on all of the employees—results of X-rays and pulmonary-function tests done by Dr. Hurst, and results of examinations for rales, finger clubbing, and dyspnea done by the NIOSH team—and concluded that seven of the employees had asbestosis. Then Dr. Hurst announced that his superiors at the Texas State Health Department would release the chest films to NIOSH. But Dr. Grant said that the release would be acceptable to Pittsburgh Corning, and it was decided that he and Dr. Spiegel would fly to Austin to try to get permission from the Texas State Health Commissioner.

By arrangement with Pittsburgh Corning, Steven Wodka, of the Oil, Chemical, and Atomic Workers Legislative Department, arrived in Tyler on the afternoon of that day to tour the plant and to meet with members of the local union committee. Wodka was accompanied on his tour by Herman Yandle, the chairman of the local committee; by Farkos; and by Charles E. Van Horne, the plant manager; he found conditions in the factory to be much as they had been described in the NIOSH report. Huge piles of loose asbestos fibre lay on the floor of the plant, and visible clouds of dust were erupting from several operations. After the tour, Wodka—who had learned only the previous day that men from the Occupational Safety and Health Administration had inspected the plant in November—asked to see the citations they had issued, pointing out that the company was required to post them publicly for the information of the workers. When Van Horne and Farkos produced them, they professed to be ignorant of this requirement, although each citation sheet states that "a copy of the enclosed citation(s) shall be prominently posted in a conspicuous place at or near each place a violation referred to in the citation occurred." They also assured Wodka that the items marked for immediate compliance had been taken care of. Then they told him that Pittsburgh Corning planned no extensive changes in the ventilation- and dust-control systems by the March 31st deadline, and that the factory would be shut down sometime in the middle of February. At the same time, they rejected a request by Wodka that in the meantime the company provide in-plant facilities for storing respirators and for changing work clothes, so that the employees would not continue to contaminate their cars and homes with asbestos dust and thus expose members of their families to the risk of incurring asbestos diseases.

That evening, Wodka held a meeting with several members of the local union committee to discuss the health situation at the plant. At the outset, he informed them of the results of a mortality study Dr. Selikoff and Dr. Hammond had made of men who had worked at an amosite-asbestos-insulation plant owned by the Union Asbestos & Rubber Company, in Paterson, New Jersey, between 1941 and 1954. (When the company closed the Paterson plant in 1954, it transferred its asbestos operations there to the Tyler factory, which was later purchased by Pittsburgh Corning.) As it happened, Dr. Selikoff and Dr. Hammond had

found a gross number of excess deaths resulting from asbestosis, lung cancer, and mesothelioma among the Paterson workers, and since the two plants had been operated in a similar manner, the doctors' findings obviously had frightening implications for the men who were employed at Tyler. "It was a sombre moment, for it was the first time that they had been told how serious their situation was, and how precarious it would remain in the future," Wodka recalls. "However, they accepted the news stoically. They even seemed relieved to know the facts. You see, they had been living in doubt ever since the NIOSH survey, and still hadn't been informed that any of them had been diagnosed as having asbestosis."

The next morning, a final meeting was held at the East Texas Chest Hospital. In addition to Dr. Grant and Dr. Hurst, those present were Farkos and Van Horne, of Pittsburgh Corning; Dr. Spiegel and Mr. Lemen, of NIOSH; and Wodka and Yandle, of the union. Dr. Grant began by saying that when he first visited the Tyler plant, in 1965, he had realized that a potential health problem existed there, and had done everything in his power to have the situation corrected. He took credit for instituting a number of surveys and studies of the plant's ventilation equipment, and blamed the Bureau of Occupational Safety and Health and Dr. Lewis J. Cralley, who had been in charge of field studies and epidemiology for the bureau, for not following through on a proposed medical study of the workers. Dr. Grant also insisted at the meeting that asbestos-dust levels at the Tyler plant were always within the legally specified limits, and he claimed that respiratory protection was made mandatory for all workers in the factory as early as May of 1969—a contention that was disputed on the spot by Yandle—who had worked in the plant for more than ten years, and who declared that, with a few exceptions, the wearing of respirators was not required until the summer of 1971. For his part, Dr. Spiegel listened to Dr. Grant's assessment of the history of the plant in silence. "I was not there to argue with him about what had or had not happened, or why," he recalls. "I was there to reiterate NIOSH's medical conclusions about the workers we had examined during our survey, and to bring back the X-rays taken by Dr. Hurst in August. In my opinion, however, Dr. Grant was trying to absolve himself and the Pittsburgh Corning Corporation of all responsibility for the conditions that had existed in

for the lack of attention paid to the health of the workers. His speech sounded like a legal brief more than anything else. As I sat listening, I kept wondering why on earth he had not kept calling Dr. Cralley to insist that bureau undertake its proposed medical studies, or, failing that, why he didn't get back to Dr. Hurst sooner than he did. Surely, in all the years since 1965 he could have found *someone* to examine the workers."

After Dr. Grant's opening summary, he and Dr. Spiegel formally announced their joint conclusion that at least seven of the eighteen workers with more than ten years of employment in the Tyler plant had symptoms and signs consistent with asbestosis. Dr. Grant and Farkus then said that Pittsburgh Corning would pay for the treatment of any disease that was occupationally related, provided that the treatment was performed at the East Texas Chest Hospital, but they were vague about whether the company would pay for any long-term medical followup of the sixty-three workers then employed at the plant. (In his December meeting with Dr. Johnson, Dr. Grant had suggested that such a program should be undertaken and financed by NIOSH.) There was also no discussion whatever of any medical followup of the eight

dred and thirty-two men who had previously been employed at the Tyler plant, and who would carry the asbestos they had inhaled in their lungs for the rest of their days, presumably because no one could be held legally responsible for what might happen to them.

After the meeting, Dr. Spiegel and Dr. Grant flew to Austin to obtain permission for the release of the X-rays. The chest films had been an item of dispute between NIOSH and Pittsburgh Corning from the beginning; now the Texas State Department of Health people were apparently concerned about being in the middle of such a dispute, and they may well have begun to entertain second thoughts about the propriety of Dr. Hurst's having accepted a contract from Pittsburgh Corning to examine workers for occupational illness at one of the department's hospitals, when the department itself had never seen fit to conduct a health inspection of the Tyler plant during the

it's entire seventeen years of existence. By that time, practically everyone had been involved in the Tyler case, and it seemed to be trying to cover

Spiegel and Dr. Grant to Austin, Wodka and NIOSH epidemiologist,

stayed behind to conduct a thorough investigation of Pittsburgh Corning's practices of dumping asbestos waste in the vicinity of the plant and of selling burlap bags contaminated with asbestos dust to local nurserymen. (Both practices had been mentioned in the NIOSH report, which informed Pittsburgh Corning and the Texas State Department of Health that they presented a serious health hazard, and recommended that all asbestos waste and used burlap bags be buried.) That afternoon, Wodka, Lemen, and Yandle drove out to a group of dumps in an inhabited area near a sewage-treatment plant, about a mile north of the factory. One of the dumps was the size of half a football field, and was covered to the depth of at least two feet with asbestos scrap. Thick vegetation sprouting through a covering of asbestos in surrounding gullies showed that the dump had been in use for many years. Yandle told Wodka and Lemen that asbestos scrap was still being trucked there daily, and his statement was substantiated by the presence of wads of asbestos fibre covering the access roadway. Since the company had undertaken to put soil over two dumps adjacent to the factory which had been seen by the NIOSH investigators during their October survey, its continued use of this third, more remote dump site could be construed only as an act of blatant disregard and deception. However, for sheer brazenness the Pittsburgh Corning people outdid themselves a few weeks later, when they learned that the third dump had been discovered. At that point, they simply posted an armed guard at the site, with instructions to turn all unauthorized persons away.

After taking photographs of the dump, Yandle, Wodka, and Lemen drove to the Eikner Nurseries, a huge outfit on the west side of Tyler, where they interviewed Elbert Fenton, the man in charge of sales and distribution. Fenton told them that a shipment of thirty thousand burlap bags, costing twelve hundred dollars, had been received from Pittsburgh Corning some months before, and he took his visitors out to a barn where some fifteen hundred of the bags were stacked in piles. The bags were visibly contaminated with asbestos, and even as Lemen and Wodka were telling Fenton about the hazard of using them, a woman worker entered the barn, picked up a bag, and, after shaking it vigorously to remove the dust, slung it over one shoulder and walked out. With Fenton's

permission, Wodka and Lemen took two sample bags away with them in sealed containers for laboratory analysis; then, bidding Yandle goodbye, they drove back to Dallas and flew home. Meanwhile, Dr. Grant and Dr. Spiegel had met with the State Health Commissioner, who gave permission for the X-rays of the Tyler workers to be mailed to NIOSH headquarters in Cincinnati.

AT the beginning of 1972, the Tyler affair was like one of those simmering quarrels between small nations that threaten to disrupt the balance of power in a sensitive geopolitical area where a number of larger nations have interests. The Oil, Chemical, and Atomic Workers saw it as an outright test of the Occupational Safety and Health Administration's willingness to enforce the provisions of the Occupational Safety and Health Act; the NIOSH people, who had exposed the situation at the factory to begin with, were waiting to see how the Occupational Safety and Health people would dispose of the recommendations that had been made to correct it, in order to gauge the effectiveness of the advisory role they themselves had been given under the Act; and the Occupational Safety and Health people, who had not seen fit to tell the union about the minor nature of the penalties they had imposed upon Pittsburgh Corning, could not have failed to view the affair as a potentially embarrassing scandal, coming at a most inopportune moment. Under the provisions of the Occupational Safety and Health Act, the emergency standard for asbestos that had been declared by the Secretary of Labor on December 7th had to be replaced by a permanent standard within six months.



The law also required the Department of Labor to hold public hearings before it promulgated a new standard, and notice that hearings on the asbestos standard would begin in March was to be published in the *Federal Register* on January 12th. Since the permanent standard on asbestos was the first ruling the Occupational Safety and Health Administration would make under its mandate to redefine occupational-safety-and-health regulations, industry and labor were prepared to look upon the ruling as an indication of how determined or easygoing the Administration would be when it came time to set new standards for other hazards, such as lead, beryllium, carbon monoxide, mercury, silica, ultraviolet light,

and cotton fibres. The public hearings on asbestos, then, formed as a crucial test of strength between the independent medical and scientific community and the medical-industrial complex. On the one hand, the NIOSH people were preparing to send the Administration a document recommending that the permanent standard for occupational exposure to asbestos be set at two fibres per cubic centimetre, which was the standard that the British Inspectorate of Factories—the Administration's English counterpart—had set in 1968, the one that Dr. Selikoff had advocated in 1969, and the one that the A.F.L.-C.I.O.'s Industrial Union Department's ad-hoc Committee on the Asbestos Hazard had urged upon the Secretary of Labor in November of 1971. On the other hand, the major asbestos companies, led by the giant Johns-Manville Corporation, were preparing testimony to show that the five-fibre standard would prevent disease from occurring among asbestos workers, and economic statistics to demonstrate that a two-fibre standard would drive them out of business. In order to weigh all the evidence and decide upon a safe level of exposure to asbestos, the Occupational Safety and Health Administration would obviously have to conduct itself in a completely impartial manner, for, even under the best of circumstances, its decision was bound to be controversial. As things stood, however, its claim to impartiality was in question, because of its failure to enforce even the standards for asbestos that it was now compelled to consider obsolete. And since its failure had nowhere been more recently and nakedly apparent than in its handling of the critical situation that existed in the Tyler plant, and the Administration was unhappy about the possibility that the citations and penalties it had sent Pittsburgh Corning in December might become public knowledge, the fact that under the provisions of the Occupational Safety and Health Act such information was public property seems to have been forgotten.

Already stung by the disclosures Mazzocchi had made at the science meeting, and eager to avoid future embarrassment, the Occupational Safety and Health Administration now sought to place itself above reproach by publicly revising its attitude toward occupational exposure to asbestos. On January 4th, George Guenther, who was the Assistant Secretary of Labor and the director of the Occupational Safety and Health Administration, held a press conference in Washington to

announce the start of a target health-hazards program designed to control five toxic substances that were in widespread use in American industry—silica, lead, carbon monoxide, cotton dust, and asbestos. At this time, a special health-hazard fact sheet on asbestos was distributed to newsmen (and, presumably, to the Administration's regional administrators and inspectors), informing them that more than two hundred thousand workers across the nation risked serious disease from direct occupational exposure to asbestos and that asbestos fibres were being found in the lungs of people who had had no industrial exposure to the mineral at all. The fact sheet reminded everyone that the emergency standard for asbestos was an eight-hour average of five fibres greater than five microns in length per cubic centimetre of air, and it stated unequivocally that any exposure exceeding this level would henceforth be considered a serious violation of the Occupational Safety and Health Act.

It soon became apparent, however, that it was one thing for the director of the Occupational Safety and Health Administration to announce a new policy on asbestos in Washington and quite another for that policy to be put into effect by his subordinates in the field. On January 13th, a week after Farkis and Van Horne had assured Wodka that all conditions on which the Administration had called for immediate compliance had been corrected, the Tyler plant was reinspected by Clarence R. Holder, an assistant administrator in the Dallas office of the Occupational Safety and Health Administration, and John P. Boyle, an industrial hygienist, who together had conducted a similar inspection at Tyler nearly two months before. Holder and Boyle found on their second inspection of the plant that, contrary to recommendations made after their first visit, the workers had not been examined to determine whether they were physically able to wear respirators, that required improvements on a block saw and on feeding-machine enclosures had not been made, and that cleanup procedures in the feeding and building areas of the plant remained inadequate. The two men reviewed the situation with Van Horne, but when they stressed the necessity of cleaning up asbestos waste around the feeding machines and the builder units, the plant manager asked them whether this meant that the factory would have to be kept as clean as a dairy.

In spite of the company's reluctance to take this inspection seriously, Holder and Boyle issued no new citations but

simply sent Pittsburgh Corning a notification of failure to correct three of the original violations and a list of proposed additional penalties. Moreover, in spite of the new policy on asbestos that had been announced by Assistant Secretary Guenther ten days earlier, they still chose to consider the violations at the Tyler plant nonserious. Therefore, the proposed additional penalties were based upon a schedule of a hundred dollars for each day of noncompliance, plus fifty per cent of the original fine. The period of noncompliance ran from December 21, 1971, to January 13, 1972, and the total additional assessment amounted to six thousand nine hundred and ninety dollars.

The notification of failure to correct violations and the list of new penalties were mailed to E. W. Holman, Pittsburgh Corning's vice-president in charge of manufacturing and technology, on January 17th. It is not known whether Holman received them prior to his telephone interview with the Tyler *Courier-Times* on January 19th, nor is it known whether he had read the citations that were mailed to him on December 16th; whether he had been informed of two NIOSH reports—one describing the critical occupational-health situation at the Tyler plant and the other the symptoms of asbestosis in seven of the workers there—that were sent to Dr. Grant, in November and December; whether he had been told by Dr. Grant of the death of Van Horne's predecessor from mesothelioma; or whether he was aware of the admissions about the incidence of asbestosis among the Tyler workers which Dr. Grant had made in Dr. Hurst's office, on January 7th. If Holman did not know of these things, he must surely have been one of the most ill-informed vice-presidents in corporate history. Whatever the case, on January 19th he told the *Courier-Times* that he knew of no Pittsburgh Corning employee suffering any significant illness as a result of working with amosite-asbestos insulation.

By that time, with the Tyler affair not just bubbling but about to boil over, practically everyone involved in the situation was maneuvering for position. The Texas State Department of Health had already put some distance between itself and the stove; Pittsburgh Corning was backing toward the door; the Occupational Safety and Health Administration had little choice but to sit on the lid; and the union and NIOSH were separately gathering fuel for the fire. On the very day that Holman talked to the *Courier-Times*, Lamont

sent Wodka a report containing the results of tests performed by Roy M. Fleming, an engineer in the Environmental Investigations branch of NIOSH's Division of Field Studies and Clinical Investigations, on one of the burlap bags that had been taken from the nursery in Tyler on January 7th. The bag, still in its sealed container, was placed in front of a chair in a room that was free of asbestos. A man wearing a respirator and two dust samplers entered the room and sat on the chair. Taking the burlap bag out of the plastic container, he turned it inside out; then, standing, he shook the bag for sixty seconds. Next he sat down, spread the bag on his lap, and wrapped it around the base of a small tree. After tying the corners of the bag with wire, he placed the tree on the floor, stood up to brush off his clothes, and left the room. During the four minutes this operation required, the average concentration of asbestos fibres longer than five microns around the worker was four hundred and ninety fibres per cubic centimetre of air—ninety-eight times the emergency five-fibre standard and more than forty times the old twelve-fibre one. (Indeed, had he not been wearing a respirator, the man would have inhaled four million fibres during the four-minute period.) In a covering letter that was sent with a copy of the report to the Texas State Department of Health on January 17th, Lemen and Fleming described the use of burlap bags that had contained asbestos as a potentially serious health problem, and, by way of documenting this charge, pointed out that a recent report in the *British Medical Bulletin* referred to cases of mesothelioma in women who had been engaged in cleaning such bags.

In the meantime, Wodka had been trying without success to get information from John K. Barto, the regional administrator of the Occupational Safety and Health Administration, in Dallas, on the Administration's actions about Tyler. Finally, on January 28th, Barto told Wodka that he was under orders from his superiors in Washington "not to disclose anything on the Tyler case to anybody." He did, however, tell Wodka about the followup inspection made by Holder and Boyle on January 13th, and about the additional proposed penalties levied against Pittsburgh Corning as a result of it. Barto refused to release the report of the Department of Labor's 1969 inspection of the Tyler factory or of the dust counts that Holder and Boyle had

taken there in November, claiming that he felt obligated to withhold them because of the possibility that Pittsburgh Corning might contest the fines and send the Tyler case into litigation. Since Wodka and Mazzocchi considered this a lame excuse designed to cover up the Department of Labor's failure to implement the provisions of the Walsh-Healey Act in 1969, and the regulations of the Occupational Safety and Health Act in 1971, they now determined to make a fresh attempt, as they put it, to "blow the lid off the Tyler affair and focus national attention upon it."

The two union officials were well aware that their decision amounted to a declaration of open war upon the Occupational Safety and Health Administration and Pittsburgh Corning. Indeed, for several weeks Wodka had been compiling a history of the Tyler plant for a confidential report entitled "Occupational Health Tragedy," which amounted to a battle plan for the approaching hostilities. In the concluding section of the report, Wodka urged that a press conference be held in Washington to provoke the Environmental Protection Agency into taking action on the open-air dumps and contaminated bags, to force the Occupational Safety and Health Administration to declare an imminent-danger situation at the Tyler factory under the provisions of the Occupational Safety and Health Act, and to denounce Pittsburgh Corning for its callous disregard of the health of the Tyler workers. Realizing that much of the opprobrium for what had gone on in the Tyler plant was bound to be offset by Pittsburgh Corning's decision to close the plant, Wodka concluded his report by saying:

We have a responsibility to point out what protection Pittsburgh Corning failed to provide for the workers at Tyler and, instead, what utter contempt this company displayed for the lives of those workers, their families, and that community. The Tyler case is unique in that this company was aware as early as 1963 that something was wrong in Tyler. Pittsburgh Corning was not ignorant, but was fully aware of what was going to happen to those men in that plant. The company would very much like to see the plant shut down, the men quietly fade away, and the Tyler pin removed from their corporate map. The last place the company wants to be is on page 1.

The press conference that Wodka had requested was held on February 10th at the National Press Building in Washington, and was conducted by Mazzocchi, who opened the proceedings by reading telegrams that had been

sent on February 8th by A. F. Grispiron, the president of the union, to William Ruckelshaus, the Administrator of the Environmental Protection Agency, and to Assistant Secretary Guenther. The telegram to Ruckelshaus urged him to take immediate action regarding the open asbestos dumps in Tyler and the tens of thousands of contaminated bags that had been sold to nurseries in the Tyler area, and to place Pittsburgh Corning under surveillance to prevent the repetition of such practices in other places. The telegram to Guenther pointed out the Department of Labor's laxity in not having enforced asbestos regulations at the Tyler plant in the past, and urged him to investigate Pittsburgh Corning's operations in other places.

Mazzocchi next reviewed the chronology and the findings of the various inspections of the Tyler factory over the years, and then he launched into an angry denunciation of the callousness and ignorance that had allowed the conditions there to go uncorrected. "Industry doctors and government officials who cover up vital life-and-death information about worker health are guilty of the My Lai syndrome," he declared, and he went on to note that what had happened at Tyler was probably happening in hundreds of other plants in America, and was symptomatic of the occupational-disease problem in this country. He concluded by describing Pittsburgh Corning's reaction to the NIOSH survey and the Administration citations. "This company was receiving a subsidy in terms of years of men's lives," he said. "When that subsidy was terminated by belated government intervention, the company decided to quit the asbestos business altogether." Neither Guenther nor Ruckelshaus responded to the telegrams sent by Grispiron, and only two major newspapers ran articles on Mazzocchi's charges.

Down in Tyler, however, the Pittsburgh Corning plant got back into the news by way of a dispatch from United Press International that was based upon a press release issued by union headquarters, in Denver, on February 9th. The release was concerned chiefly with the contaminated burlap bags. As a result, when the story appeared in the Tyler papers, the *Comet-Times* and the *Morning Telegraph*, on February 17th, there was no mention whatsoever of the NIOSH report, of the Administration citations and fines, or of the fact that serious illness had already manifested itself among the sixty-three-man work force at the Tyler factory. The

report in the *Morning Telegraph* was carried beneath a banner headline that read "Threat of Cancer Alleged," the article in the *Courier-Times* appeared beneath the caption "Company Denies Claims by Union," and both pieces

isted mostly of charges levelled by a union official about the contaminated burlap bags and denials of the charges by Gerald J. Vorus, a public-relations spokesman for Pittsburgh Corning. According to both accounts, however, Vorus admitted that "workers at the plant had been given physical examinations to determine if any of them exhibited contamination symptoms," and that "those whom the examinations revealed had been affected were referred to their personal physicians." He was quoted as saying, when asked by the *Telegraph* what the company would do if any of these afflictions could be attributed to asbestos dust, "I don't know. We'll just have to wait and see." Vorus was, of course, being non-committal only about Pittsburgh Corning's responsibility to the sixty-three workers who were employed at the Tyler plant when it was shut down, on February 3rd, since neither Pittsburgh Corning nor the Union Asbestos & Rubber Company, the factory's previous owner, can be held legally accountable for what may happen to the hundred and thirty-two other men who toiled in the factory at one time or another during the seventeen years it was in operation.

Thus, in the middle of February, Pittsburgh Corning found itself compelled for the first time to issue public denials of wrongdoing in connection with its Tyler plant, even as it took steps to deny public access to the factory and its adjacent dumps, and to bury as much of the equipment and machinery from the place as possible. That the company should be placed on the defensive over some dumps and burlap bags, and not because of the awful jeopardy in which it had put the health of hundreds of its workers and their families, seems ironic. It should not, however, come as any surprise. Much of industry in the United States has long operated on the assumption that it could endanger the lives of its employees with relative impunity—and without embarrassing publicity and possibly damaging repercussions—as long as it did not overtly threaten the health and safety of the community at large.

Underlying this assumption is the further assumption that workers are not so much a part of the community as part of the equipment and machinery of production. As such, upon being

proved defective they become expendable. They can be replaced or transferred, or, if worst comes to worst, given workmen's compensation (which in most states is minimal) and retired. At that point, they cease to be anyone's responsibility. Like the eight hundred and ninety-five men who worked in the Tyler plant over the years, they are out of sight and out of mind. In a sense, therefore, like much of the factory itself, they are buried.

I FIRST heard about the Tyler plant when I attended the press conference that Mazzocchi held in Washington on February 10, 1972. Later, at my request, he provided me with copies of all the inspection reports, surveys, and studies that had been made of the factory over the years, and after studying them I decided to go to Texas and talk with some of the people who had been involved in the whole sad affair. On Monday, March 6th, I flew to Dallas, where I paid a call on Barto, the regional administrator for the Occupational Safety and Health Administration. Barto is a heavyset, bejeweled man in his early fifties. I was ushered into his office shortly after noon, and when we had shaken hands I took a seat at a conference table in front of the desk and explained why I had come to see him.

"Look," he said. "NIOSH referred the Tyler situation to us, and we confirmed what NIOSH had discovered. It's as simple as that."

I told him that I was familiar with the contents of the NIOSH report and with the results of the Occupational Safety and Health Administration's subsequent inspections, and that I was particularly interested in knowing more about the inspection of the factory that the Dallas office of the Department of Labor had conducted on February 13, 1969.

Barto replied that he had not arrived at the Dallas office until July of 1970, so we would have to discuss the matter with Holder, the assistant regional administrator, who had been there since 1961, and he buzzed Holder on an intercom and asked him to bring a copy of the 1969 inspection report. While we waited, Barto told me that when he took over as regional administrator there had been no industrial hygienist in the office and there had been only three inspectors for the region, a five-state area comprising Texas, Louisiana, Oklahoma, Arkansas, and New Mexico. "A plant as small as Tyler simply couldn't be checked under those conditions," he

said. "Believe me, that was a minuscule problem compared to others we had."

Holder came in and took a seat opposite me at the conference table. He struck me as being an archetypal Texan—a tall, lean, tanned man in his late forties, with wavy blond hair and a rugged, seamy face. After Barto had explained the purpose of my visit, I asked Holder if the Department of Labor had ever inspected the Tyler plant before February 13, 1969. He shook his head. I then asked him if he knew of any previous inspections that had been conducted by agencies with enforcement power, such as the Texas State Department of Health. He replied that he did not. When I told him that I was particularly interested in learning more about the 1969 inspection conducted by the Dallas office, he replied tersely that on that date the Tyler plant had been found to be unsatisfactory according to the provisions of the Walsh-Healey Act. (This was an Act, still effective in 1969, that established occupational-safety-and-health standards for employees of companies holding contracts of ten thousand dollars or more with the federal government.) I then asked Holder on what specific grounds the factory had proved to be unsatisfactory, and he answered that the exhaust systems were deficient in terms of airflow, and that there was excessive dust.

At that point, I inquired what steps had been taken to determine whether the Pittsburgh Corning people had corrected the unsatisfactory conditions in the Tyler plant. Holder replied that the company had agreed that it would initiate a research-and-development program to improve the ventilation system, that it would study the possibility of replacing asbestos with a substitute material, and that it would provide respirators in the meantime, to protect the workers in the particularly dusty areas of the plant. He went on to say that the Walsh-Healey Act allowed the company to exceed the asbestos-dust standard if respirators were issued and worn, and that the issuance of respirators had therefore satisfied him as far as any violations of the Act were concerned.

I asked Holder how he knew that the employees in the Tyler plant had received respirators.

"Because the company had to issue them in order to come into compliance with the Walsh-Healey Act," he replied.

Rephrasing the question, I asked him if he had any first-hand knowledge that the company had complied.

For a moment, Holder remained

silent. Then, quietly, he asked me if, by any chance, I was hard of hearing.

I replied that I didn't think so but that perhaps I had not understood.

"Well, I think you must be hard of hearing, fella," he continued, "because didn't I just explain all that to you?"

I repeated that perhaps I had not understood him, and, rephrasing the question once more, asked him how he could be certain that Pittsburgh Corning had issued respirators to its employees following the 1969 inspection. After glancing at Barto, Holder said that the company had assured him at that time that it would undertake a study to improve the ventilation system and that it would issue respirators. He had no reason to believe that Pittsburgh Corning had not kept its word, he added.

I asked Holder if it was normal procedure to accept a company's statement of intention as evidence of compliance with occupational-health regulations, and he replied that he felt it was.

I then asked him if he, or anyone else from the Dallas office had ever reinspected the Tyler plant to determine whether the company had come into compliance.

At that, Barto held up his hand. "No sense beating around the bush with this," he said. "What Holder's saying is that we did not reinspect. Let's leave it at that."

Since this seemed the only sensible course to take, I got to my feet, thanked both men for their time, and left the room. Holder followed me out, and engaged me in conversation as I was putting on my coat. "You know, the trouble with respirators out there is some of those boys really like their chewing tobacco," he told me in a confidential tone. "Why, you can't get them to wear a mask no way."

I asked Holder if he knew that asbestos inhalation could cause not only pulmonary scarring but lung cancer, mesothelioma, and other malignancies. He replied that he had never heard of mesothelioma and that he doubted if there was any real proof that asbestos could cause cancer.

"If such proof existed, would you still characterize the violations at Tyler as serious?" I asked.

"You know, this health business is always being exaggerated, in my view," Holder said. "I didn't see any serious danger in the Tyler situation, and I still don't. How can there be a serious danger if it doesn't hurt you right now? I mean, how can it be called

serious if you can go right on working with it?"

HALF an hour later, I was driving a rented car east on Interstate 20, toward Tyler, about a hundred miles away. For the first fifty or sixty miles, the country was flat and dotted with grazing cattle; then it became hilly and wooded. Here and there, a pale-green wash of buds on bushes growing in wet draws signalled the approach of spring, but the hint seemed lost against a larger background of brown fields, skeletal trees, red clay soil, and a vast sky filled with circling buzzards. At about four-thirty in the afternoon, I turned off Interstate 20 and drove south on U.S. Highway 69 to a motel on the outskirts of Tyler, where I had made a reservation. At the turnoff, there was a large billboard, erected by the Peoples National Bank of Tyler, that read "Life Is a Bed of Roses."

When I got to the motel, I telephoned Dr. Hurst, at the East Texas Chest Hospital, and made an appointment to see him the next afternoon. Then I got in touch with Yandle, the local union chairman, who lives in Hawkins, a small town eighteen miles north of Tyler. Yandle has no telephone, but his wife's grandmother's house is next door, and she went over to get him. I had called him from New York and told him I wanted to talk with him, and when he came to the phone a few minutes later he said he would be along within an hour. While I waited for him, I drew up a list of questions for Van Horne, Pittsburgh Corning's plant manager, whom I planned to see the following day.

Yandle, who arrived shortly before six o'clock, proved to be a tall, heavyset man with an engaging grin and an easygoing manner. He came into the room, stuck out a hand, and plopped down in an easy chair. I asked him to tell me something about himself and his work history, and he said that he was thirty-six years old and had gone to work at the Tyler plant in the autumn of 1961. He had spent three and a half years in the production department, he went on, working on the feeder and scrap machines, and for the past seven years he had been in the shipping department. The first time he had ever worn a respirator was in July of 1971, he told me, and it was also the first time he had ever seen any of his co-workers wearing respirators except for a short period in 1969.

or three men working in very dusty areas had requested them. "It was more or less voluntary in 1969," he explained. "And after a few weeks the guys stopped wearing them."

I asked Yandle when he had first been told that asbestos was hazardous to work with, and he said it was in August of 1971, when Dr. Grant came down to give the men a talk. "We were real mad about the masks," he said. "Heck, I'd been working there ten years without one, and they were a pain in the neck to wear, especially in the summer, when it got so hot in there you'd sweat and couldn't get enough air through to breathe. So when Dr. Grant called my shift into the shipping supervisor's office, the first thing we asked him was how long we were going to have to wear the respirators. He said no longer than a year, because the company was going to shift over from asbestos to mineral wool. He had a blackboard set up in there with a lot of complicated words and numbers on it that none of us could make head or tail of. I remember he said that the company could make the whole plant dust-free but they couldn't make the finished product safe for the insulators to use. When somebody asked him about better dust collectors, he said that profits wouldn't allow them now. He said that the amosite mines in South Africa were running out and that the rates were getting too high for the company to bear the cost. He also said it had been known since 1963 that asbestos could hurt us. At

the same time, he said that amosite asbestos didn't cause trouble if you didn't smoke—that it wasn't proved medically that it could cause trouble. He had it written on the blackboard that seventeen per cent of the people who work with asbestos have lung cancer, but he told us that was another kind of asbestos. He claimed that if you didn't smoke you didn't have any more chance of catching cancer in the plant than you

did walking out in the street. He also wrote a word I can't pronounce—meso-something."

"Mesothelioma?" I asked.

"That's it," Yandle replied. "Dr. Grant said for us not to worry about that, either. Especially if we didn't smoke. Cigarettes and asbestos don't go together is what he told us. Next thing we knew, they were sending us over to Dr. Hurst at the East Texas Chest Hospital for X-rays, lung-function tests, and blood tests."



X-rayed before then, and he said he had, on two occasions. "Both times, it was at the Medical and Surgical Clinic in Tyler," he told me. "They're the ones who handled all the accident work and medical stuff for Pittsburgh Corning. The first time I got X-rayed was in 1961, when I went to work there, and the next time was in the spring of 1969, not long after the Department of Labor people inspected the plant. According to Van Horne, all the X-rays they took of us in the spring of 1969 were good. We never saw them, of course, and wouldn't have known what to make of them if we had. I came across them, just by accident, last October, though, when the NIOSH boys were down here making their big inspection. I was taking them through the plant as the union representative, and I spotted a whole stack of something on a shelf high up in the men's room. So I climbed up there and took a look. It turned out to be our 1969 X-rays, but they were so old and cracked and covered with dust and dirt you couldn't have made out a thing."

I asked Yandle what he and his fellow-workers were told about the X-rays and tests that Dr. Hurst had performed the previous August, and he said they were not told anything until a few weeks before the NIOSH inspection in October. "Early in October, two of us went over to the hospital to ask Dr. Hurst for our medical reports," he went on. "Dr. Hurst said that he had sent them to Van Horne and Dr. Grant. He explained that he was obligated to Pittsburgh Corning, because he had done the tests for them, but that, as a medical doctor, he was also obligated to us. He said we had no asbestosis on our diagnosis, and that if there were shadows on the X-rays they were probably not related to asbestosis. He said that as far as he could tell there were no health problems that were related to our work, but there were people who had emphysema and bronchitis, which he said was on account of smoking. When a NIOSH doctor examined me a few weeks later, though, he said he was sure I had a good dose of asbestosis. Also, I'd begun to think back on things and to wise up on my own. I remembered when Willie Hurtt had to quit a few years ago because he was spitting up blood. And Robert Thomas, a neighbor of mine up in Hawkins, who hasn't been able to breathe good for a long time now. And Ed Land, with the same trouble. And Bill Morris, who was spitting up blood, too, and took himself over to the Gladewater Munic-

pal Hospital in 1969, where they found spots on his lungs and made a biopsy. And a whole bunch of others I could name. So when Steve Wodka and I went over to the East Texas Chest Hospital in January to meet with Hurst, Grant, Farinos, Spiegel, and Lemen, and I heard that seven of us who'd worked in the plant for ten years had symptoms of asbestosis, I wasn't surprised. Wodka and I asked for a thorough medical reading on the health problems of each and every man in the plant, and after that we began to hear a different tune. Early in February, Van Horne put up a notice on the factory bulletin board scheduling appointments with Dr. Hurst for twenty-three of us, who, it turned out, had something wrong on our medical tests. I went over there on the ninth with Arthur Bearden, who'd worked in the plant for about sixteen years. I went in first, and Dr. Hurst read off a lot of numbers and said that after a recheck of my tests they'd made a new diagnosis. He told me that I had symptoms of early asbestosis but that my condition wasn't so bad as some of the others'. He said that a few more weeks in the plant wouldn't hurt but that after it shut down I shouldn't try to find work in a foundry or a welding shop, or anyplace where it's dusty, and he advised me to look for a truck-driving job. He told the exact same thing to Arthur Bearden. Naturally, one of the things I asked Dr. Hurst was what I could do for myself. And that's when it dawned on me that I was in real bad trouble, because he said that there was no medicine or cure for asbestosis, and that I had to keep coming back every two years for another examination to see if it was getting worse."

I asked Yandle how he felt these days, and he said not bad. "It's kind of hard to explain," he went on. "But if I exert myself real fast, I kind of just give out." Yandle added that in addition to Bearden and himself, Robert Thomas, Mitchell Walker, Tom Belcher, and Harold Spencer had been told by Dr. Hurst that they had symptoms of early asbestosis, and had been advised not to work in dusty places. "There's a seventh guy with the same trouble, but he's a supervisor and he won't talk about it," Yandle said. "We hear that the company settled six months' pay on all the supervisors. These other fellows I told you about, though—they'll talk, and if you want I can introduce you to some of them."

I told Yandle I would like to meet them, and anyone else he could think

of who could help to give me a clear picture of what had gone on in the Tyler plant.

"Well, then, you ought to talk to Frank Spencer," he said. "He's Harold's father, and the interesting thing about him is that he used to work at the old Union Asbestos & Rubber Company plant in McGregor, down by Waco. Old Frank's got an awful problem breathing these days, so he's almost always at home. Why don't I call him up now? I might as well call Ray Barron, too. Ray lives right close, and he's part of the maintenance crew they've kept on to clean up the plant."

Yandle telephoned Spencer and arranged for us to visit him at his house later in the evening. Then he called Barron and invited him to come to the motel. When he had hung up, I asked him to tell me what he knew about the burlap bags that asbestos was shipped to Tyler in and that were later sold to nurseries in the Dallas-Tyler area.

"That's a real laugh," he said. "I mean about them recalling thirty-five thousand of those bags from the local nurseries. You see, the amosite came in hundred-pound bags from South Africa to New Orleans and Houston, and then it was freighted over here on the Cotton Belt Route. Now, I happen to know that from 1963 to 1967 Pittsburgh Corning sold those bags to the Coastal Bag & Bagging Corporation, of Houston. Then, after 1967, they started selling them locally—mostly to the nurseries. Anyway, what I'm getting at is that the thirty-five thousand bags are just a drop in the bucket. Look at it this way. We used two hundred sacks of amosite a day in production, and we worked a five-day week. That makes a thousand bags a week, or fifty-two thousand bags a year. Is that right?"

"Right," I said.

"O.K.," Yandle went on. "Fifty-two thousand bags a year for ten years gives you how much?"

"More than half a million," I replied.

"More than half a million," Yandle said quietly. "And you know what? They leaked like crazy—all of them. I know, because I used to help unload them from the freight cars. They leaked like crazy, and they were dusty as could be."

I was nearly seven when Ray Barron arrived—a handsome, strapping, dark-haired man of thirty-four, with a soft-spoken manner. He told me that he had worked at the Tyler plant for six years, first as a bag feeder, then

in the building department, and now as a maintenance man. "I was a bag feeder for about six months," he said. "It was my job to empty the amosite out of the burlap sacks and into the feeding machines. I fed about seventy hundred-pound bags of asbestos on every eight-hour shift I worked. Trouble was, the asbestos wouldn't just pour out. It was packed in so tight we had to dig it out with our bare hands."

I asked Barron if he had ever worn a respirator when he was a bag feeder, and he shook his head. He had never worn one until August of 1971, he said, when the company suddenly made it mandatory for the entire work force to wear respirators. "Some of us were issued respirators a few years ago, but it was voluntary if we wanted to wear them, and since no one told us until last August that asbestos was dangerous to work with, we didn't," he said. "All of us in the maintenance crew are wearing 'em now, though. Except for Van Horne, who keeps saying that asbestos won't hurt you. He also claims that none of our medical problems are caused by asbestos. My own X-ray is supposed to be clear, and my other tests are O.K., and I don't have finger clubbing, so they told me I was probably all right. What worries me is that word 'probably,' and whether I'll be all right five or ten years from now. When I think back, all I can remember is the dust. Why, most of the time I worked there you couldn't see from one end of the place to the other—especially when there was any sunlight coming through the windows."

Barron then said that for the past several weeks he and three other maintenance men had been dismantling machinery and equipment with acetylene torches and burying most of it in a dump next to the plant. "The little that's left is either being shipped up to Pittsburgh or being sold for scrap," he went on. "When we get through, the place'll be empty except for the surplus fibre that's still in the warehouse."

"How much of that is there?" I inquired.

"There must be about ten thousand bags," Barron answered. "I hear they've already sold it to some outfit up in Canada."

"Do you know who they are or where in Canada they are?"

"No," Barron said. "It's supposed to be a secret. But we'll be busy full time down there for at least six more weeks, so I might hear something. We've only just begun to bury the ventilation pipe, and we still have to finish cutting up

the conveyor belts, carriages, ovens, and cyclone machines."

Barron left shortly after eight o'clock, and then Yandle and I drove out the loop highway—one of a series of roads that girdle Tyler—to the east side of town, where Frank Spencer and his wife live. We climbed the porch steps, and Yandle knocked on a screen door that opened into a small living room. Mr. and Mrs. Spencer were inside, sitting in rocking chairs and watching a quiz show on a large color TV set. Spencer, a white-haired, ruddy-faced man, was wearing blue-and-white striped overalls. His wife, also white-haired, was wearing a plain calico dress. After Yandle had introduced us, I sat down on a small couch and asked Spencer to tell me about his experiences working with asbestos.

"Well, I worked with asbestos for twenty years or so," he said. "I started in 1948 or 1949 in the old plant down in McGregor, where we used to live. The factory was in the Bluebonnet Ordnance Plant area, where they'd made bombs for the Air Force during the Second World War, and the government began reactivating the place in 1952, so Union Asbestos & Rubber moved out and came up here in '54. There was about sixty of us on the work force at McGregor, but there was a big turnover. Most of us were farmers, and there was a lot of young farm boys who came and went. Harold, my own son, worked there, too. In fact, I signed a paper saying he was eighteen, but he was really only seventeen. That's so he could get the job."

I asked Spencer if he had ever worn a respirator at McGregor, and he gave me a look of amazement. "Wore a respirator!" he exclaimed. "Why, I wore one all the time down there. They never said a word to us about asbestos being dangerous, but they made us wear our respirators. Actually, it wasn't the company that did that. It was the insurance underwriters who said we had to wear 'em. I guess they must have known that that dust couldn't be doing us much good, eh? But, goodness' sakes, insurance underwriters or not, you would have had to wear a respirator down there—you couldn't have breathed otherwise. Most of the time, I couldn't hardly see the man working next to me!"

"Do you ever get back there?" I inquired.

"We used to go back all the time to see our friends and relatives," Spencer replied. "But, one by one, just about all the men who worked with me at that

place have died. Mostly, they just seemed to stop breathing."

"Some of them died of cancer, too," Mrs. Spencer added, without taking her eyes from the TV set. "Chest cancer, the womenfolk told me."

"I'll be sixty-six years old in May," Spencer said. "And I swear I'm just about the unluckiest one I know that's left alive from that McGregor plant. Except for my son, of course, and he's already got trouble with his lungs. I've had trouble with mine for years. I finally had to quit the Tyler plant in 1968. They disabled me. Just couldn't hardly breathe no more. Now I'm out of breath all the time. Can't do nothing. Can't walk any distance at all. When I quit, they started giving me some retirement payments—eighteen dollars a month. I should've done what Ed Land did. He quit around about 1962. He couldn't breathe, either, because a lung collapsed on him. I heard he was going to sue, but they settled with him."

I asked Spencer if he was receiving any medical attention, and he smiled for the first time. "I've been going to these local doctors for my lungs for years," he said. "I spit up an awful lot, and I'm always out of breath, and I've got a funny-sounding cough. I guess I've been to just about every last doctor in that Medical and Surgical Clinic. All of 'em have told me I had something wrong on my X-rays. Some of 'em have told me I got emphysema, and some of 'em say it's asthma, and at one time they even thought I had cancer, but not one of 'em ever said it was on account of asbestos. Well, they're a bunch of quacks. I know what I got now. I got what Ed Land got. I got what Harold's got. And all the others. I got that dust disease. That dust has ate us up."

As Yandle and I left a few minutes later, Spencer rose from his rocking chair, saw us out the door, and stood on the porch and bid us goodbye. As we went down the steps, I turned to thank him, and saw him leaning forward, hands on his knees, rocking his head up and down. He was gasping for air.

AT eight o'clock the next morning Yandle came by the motel in his battered blue pickup. We had a cup of coffee in the dining room and then drove out to Arthur Bearden's house, on the east side of town. Bearden's place was a faded-green frame dwelling that sat on cinder blocks, like most of the houses in the area, and in the front yard there was a twenty-five-

foot-high, symmetrically rounded, and wonderfully festive holly tree, so full of shiny green leaves and bright-red berries it looked as if it had been hung by hand.

Bearden came to the door, ushered inside, and immediately offered to brew us some coffee. He is a grave-faced, soft-spoken man in his middle forties, and when Yandle told me he was famous for making strong coffee he responded with a broad grin of delight. Then, seating me at a table in the dining room, he disappeared into the kitchen. Yandle went to get Harold Spencer, who lived in a trailer next door.

When Bearden returned from the kitchen, he sat down across from me and told me that he had gone to work at the Tyler plant in March of 1955, a few months after it began operating. "I worked there until 1960," he said. "Then I was laid off for a year, but I went back in April of 1961 and stayed until the plant closed down last month. So, all in all, I figure I worked with asbestos about sixteen years. During that time, I guess I worked in most areas of the production department. I never wore a respirator until last August, and I never saw anyone else wearing one except for a few fellows on the feeder machines and in the saw room back in 1969. Those were probably the dustiest areas in the plant, but the whole place was so dusty it's hard to tell for sure. Most days, you couldn't see from the middle of the building to either end."

At this point, Yandle returned with Harold Spencer, a man in his late thirties, who wears a grin that masks a diffident manner and an air of fatalism. When I told him I had met his father and mother the night before, he simply nodded and grinned a little wider, and sat down at the table. I asked Spencer how long he had worked with asbestos, and he thought for a few moments and said he guessed for about seventeen years. "I worked at the Union Asbestos & Rubber plant in McGregor from '51 to '53," he said. "Then I worked at Tyler from '55 to '57, and then I came back in 1960 and worked steady from then on until the plant closed down last month. Nobody ever told me the stuff would hurt us, and I never wore a respirator until last August, when everybody had to start wearing them. Back around last Thanksgiving time, I got called over to the East Texas Chest Hospital by a Dr. Seaman, who told me I had a spot on my left lung. He didn't say what it was, but he offered to treat me as an

outpatient. He said I could keep on working at the plant that way. I went to him for about two months. During December and January, I went once a week, on Tuesday morning. They took X-ray pictures of me every time. Most mornings, they just took a couple, but one morning they took eleven—one standing up and ten flat on my back. Another time, they swabbed out my mouth with anesthetic, put in some kind of a coating, and looked down into my chest with some kind of a tube. Afterward, Dr. Seaman told me my left lung wasn't functioning properly. I asked him if it was on account of the asbestos, but he said he couldn't say. All he could say was that there wasn't any surgery for it. Then, on February 9th, I got sent over there to see Dr. Hurst. He said I had what looked to him like asbestos scar tissue in my lungs. He told me not to work in dusty conditions anymore, and he said to come back and see him in two years. By that time, I was real worried and didn't know what to think. What worried me most of all was what a doctor from NIOSH told me back in October. He had listened to me breathe, and he had looked real careful at my fingers, and he had told me I had a case of asbestosis."

"That's what we all got," said Bearden, looking around the table at his friends and then at me. "We just better hope we don't get cancer. You know, some people have already died of cancer who worked there. Mr. McMillan—he was plant manager before Van Horne—he died about a year and a half ago of some kind of cancer in the chest. And Marvin King, one of the supervisors—he took sick back in 1958, I think it was, and died of lung cancer. And Chester Hickman, who'd been night watchman since the place opened—he died of cancer in June of 1971."

Bearden went out to the kitchen and brought back coffee for everyone. It turned out to be as strong as any I had ever tasted, and when I told him so he grinned with delight again. "Spencer here was the only one of us that got treated as an outpatient," he said. "Back in October, Dr. Spiegel told me I had a bad sound in my lungs, but I didn't see Dr. Hurst until I went over to the East Texas Chest Hospital with Herman here in February. Dr. Hurst told me I had early stages of asbestosis with scales in my lungs, and that I shouldn't try to find a job anyplace there was dust. The thing that bothers me is I should've realized something was wrong back in 1968. I was off

from work then with a bladder infection and got sent over by the company to see Dr. Smyth, at the Medical and Surgical Clinic. He gave me a physical examination and listened to my chest and took some X-rays. A few hours later, he called me back and listened to my chest again, but he didn't tell me anything."

"Funny thing," Spencer murmured. "Back in 1969, I got my first X-ray at the Medical and Surgical Clinic, and a Dr. Marshall over there told me I had a spot on my lung. He said he'd be in touch with me, but after I waited six months without hearing from him I got worried and went back and saw a Dr. Whetsell there. Dr. Whetsell gave me a checkup, and when he was through I told him I thought that maybe I ought to change jobs, but he said he couldn't guarantee I'd be hired anywhere else, because I might not be able to pass a physical."

While Spencer was talking, we were joined by Willie Hurtt, whom Yandle had invited over. Hurtt is a gaunt man in his late fifties, with sunken cheeks and a shy manner. He told me that he had started work at the Tyler plant in January of 1956, and had stayed until November of 1969, when he quit. "I worked mostly on the feeding machines and the ovens, and I hardly ever wore a respirator the whole time," he said. "I remember, though, that around the end of May of 1969 some fellows from the union committee went in and asked Van Horne how come a few of the boys were suddenly wearing masks. Van Horne told them it was on account of the dust levels were high in the saw room and the feeding-machine area. So they asked him if the dust would hurt us, and Van Horne just said that even if it did there wasn't any way anybody could be sure of it. Of course, by that time I was beginning to get some idea of my own that the stuff wasn't good to breathe. I'd been coughing bad for nearly three years, and I'd been to a lot of doctors. I went to see Dr. Thomas and Dr. Smyth at the Medical and Surgical Clinic, and I went to Dr. Knight at the Glenwood General Hospital, in Tyler. Dr. Smyth told me I ought not to work in dust, but he never said I'd be disabled. Dr. Knight said I had emphysema in both lungs. He kept me at the Glenwood General Hospital for a week after I quit the plant. He took a lot of X-rays and asked me where I worked, but he didn't tell me anything about the X-rays and he didn't say anything about asbestos. Now I'm not worth a hoot to do anything. If I walk just

a little piece, I can't even breathe."

"Same with me," said Bearden. "I loved a row in the garden the other day and I was out of breath entirely."

"The worst thing of all is we can't even go to a physical to get another job," Bearden said.

Bearden nodded soberly. "I got an application in at a plant that manufactures air-conditioners," he told me. "But I'm a-scared to death of the physical. I'll take it, but I'm afraid of it, 'cause I know I won't pass it if they take an X-ray or listen to my lungs." For a moment, Bearden was silent, looking around the table at his friends. "You know," he said reflectively, "not everybody was as dumb as we were. I remember a new man walking in a few years ago. It was in 1970, I think. They had told me to explain the feeders to him, and it was nighttime and the lights were on and the dust was so thick it was fogging the lights. This fellow—I'll never forget him. He took a look at the feeders, and he walked partway down the plant floor. Then he turned and walked back past me and gave his head a shake. And then he went right on out the door, without a word to anybody, and he never came back."

It was about eleven o'clock when Yandle and I returned to the motel. I had an appointment to see Van Horne in an hour, and Yandle had to do some work around his house. We arranged to meet there late in the afternoon. Half an hour later, I drove east to U.S. Highway 271, where I turned north at a huge foundry that was belching smoke into the sky. About eight miles down the road, I passed a large, modern brick building surrounded by expansive lawns. A sign identified it as "East Texas Chest Hospital." A few hundred yards past the hospital, I turned west onto State Highway 155, where there was a sign pointing the way to the Owentown Industrial District. At the bottom of a hill, about a mile northwest of the hospital, I came to a flat valley filled with sheds, prefabricated buildings, and some wooden warehouses that had once been part of Camp Fannin, a Second World War training center and P.O.W. camp. The whole place was crisscrossed by spurs of the St. Louis Southwestern Railway. After winding through the area for five or six minutes, I came upon a pair of long, low sheds with peeling wooden facades and corrugated roofs, and saw a sign affixed to the side of one of them which read "All Persons Entering This Area Must Wear Approved Respirator

Protection." It was a new white sign with bright-red lettering, and against the shabby background it stood like a beacon. At one end of the sheds was a green cinder-block office building with a sign reading "Pittsburgh Corning Corporation."

I parked the car out front, went inside, and gave my name to a receptionist in an anteroom, who announced my arrival on an intercom. A minute later, Van Horne came out, shook my hand, and ushered me into his office, where we sat down near his desk. He was a gray-haired, self-assured man in his middle forties, and he was wearing horn-rimmed glasses and a mustard-colored sports jacket. When I told him that I wanted to talk with him about the plant, he said he had been in touch with the Pittsburgh office an hour before and had received certain orders. "I have been instructed to read a statement to you," Van Horne continued. "It is an authorized statement, and after I am done reading it I will have no further comment." Having said this, he got to his feet, picked up a sheet of paper from the top of his desk, adjusted his glasses, and, in the firm, measured tone of a schoolmaster explaining the rules to a new and possibly recalcitrant student, began reading. "Pittsburgh Corning, on its own initiative, has closed the Tyler, Texas, plant and has ceased asbestos production entirely," the statement said. "We have no plans for further use of the Tyler plant and are making every effort to insure safe disposal of any remaining waste material. We sincerely regret the adverse economic impact that the plant closing might have on our employees and their families. Since 1967, we have made efforts and investments to reduce dust levels at the plant and have kept government agencies advised. It has become economically impossible to reach the increasing rigid dust levels established by the federal government. Each of the employees at the plant have been given complete physical examinations and, in cooperation with local officers of the Oil, Chemical, and Atomic Workers Union, we have established a job-counseling service to aid men in locating other work. There is no substantiation for the claim that burlap bags from the plant are a health hazard. Despite this, we have recently bought from nurserymen in the Dallas-Tyler area some thirty-six thousand bags, which may have come from our plant."

When Van Horne finished reading, there was a moment of constrained silence; then I got to my feet, thanked him for giving me his time, and asked

him if I could have a copy of his statement. He rang for the receptionist, who came in, took the statement, went out, and returned with a Xerox copy. Van Horne handed me the Xerox, shook my hand, accompanied me to the front door, and wished me a pleasant trip back to New York City. I told him I was planning to stick around town for a while. Then I got into the car and drove away.

WHEN I got back to the motel, I went to my room to make a few phone calls. While I was looking up some numbers in the local directory, I happened upon a description of the town, and learned that it had been established in the early eighteen-forties and named for President John Tyler, who had advocated the annexation of Texas to the United States. According to the phone book, Tyler had been "a small agricultural town with an aristocratic background" until 1930, when the great East Texas oil field was discovered. At that point, the phone directory said, "Tyler became the office headquarters for two hundred and sixty-seven independent and major oil producers, operators, and refiners working in the fields surrounding the city." Beneath the description was a box with the heading "Some Interesting Facts About Tyler." One of the interesting facts was that Tyler has a twenty-eight-acre municipal garden containing twenty-five thousand rosebushes in three hundred and fifty varieties. Another interesting fact was that "more than half of the field-grown rosebushes supplied to the entire nation come from within a fifty-mile radius of Tyler." The most interesting fact about Tyler I saw, however, was that it is the medical center of East Texas, with an expanding complex that includes the Medical Center Hospital, the Mother Frances Hospital, two other general hospitals, four private clinics, and, on the outskirts, the East Texas Chest Hospital, which has eight hundred and twenty-five beds.

After lunch, I drove out to the East Texas Chest Hospital to keep my appointment with Dr. Hurst. It was windy afternoon, with clouds scudding across the sky, and on a flagpole in front of the main entrance to the hospital the American and Lone Star flags were flapping to the accompaniment of rattling grommets. A lot of Texas red-bud trees on the grounds were just beginning to bloom, and they cast a sheen of purple against the well-trimmed green lawns. Some distance off, ramshackle wooden barracks with sagging

roofs, peeling clapboard walls, and verandas evolving into debris indicated that, like the nearby Owentown Industrial District, the site had once been part of Camp Fannin.

After spending a few minutes in a waiting room, I was directed to the office of Dr. Hurst, whom I found to be a tall, thin man in his late thirties, with dark hair, an earnest manner, and a mild way of speaking. Born in Minas Gerais, in Brazil, where his father was a missionary, Dr. Hurst received his training at the University of Texas Southwestern Medical School, in Dallas; he then became a specialist in pulmonary disease, and for several years was a member of the staff of the Chest Division of Woodlawn Hospital, in Dallas. In 1964, he was appointed clinical director of the East Texas Chest Hospital, and in the autumn of 1970 he became superintendent of the institution. He told me that the hospital had been founded in 1949 as a tuberculosis hospital, and that its major work had always been in the field of tuberculosis treatment. "Since 1967, however, we've been treating patients afflicted with other kinds of pulmonary disease," he said. "The fact is that when Dr. Grant, as medical consultant to Pittsburgh Corning, approached me late in 1966 about conducting a medical survey of the workers in the asbestos factory here, it promised to be a real departure for us."

"What reasons did Dr. Grant give you for wanting the study performed?" I asked.

"He told me that the men were working with amosite asbestos, and that the company wanted to know if they were encountering any medical problems as a result of their exposure."

I remarked on the irony of the factory's proximity to a hospital specializing in pulmonary disease, and asked Dr. Hurst if he had known of the plant's existence before Dr. Grant's visit.

Dr. Hurst shook his head sombrely. "No," he said. "I'd never heard of the place."

"Did Dr. Grant give you any indication that he suspected the men might be getting sick because of their exposure to asbestos?"

"No, he did not," Dr. Hurst replied. "Obviously, he knew that exposure to asbestos could cause pulmonary disease. He simply told me that the company had been using the Medical and Surgical Clinic, and that it now wanted us to undertake a comprehensive medical survey of its workers."

I asked Dr. Hurst if he had ever

been consulted by any doctor at the Medical and Surgical Clinic about any worker at the Pittsburgh Corning plant who had had to stop work because of pulmonary insufficiency.

"No," he said. "Never. I only examined men sent me by the company, who were working and were apparently well."

I told Dr. Hurst that several of the asbestos workers I had talked with had said that doctors at the clinic had told them they were afflicted with emphysema or bronchitis, and that I had not yet met anyone who had been told by any doctor at the clinic that he was afflicted with asbestosis. I asked Dr. Hurst if this seemed strange to him.

For a moment, he was silent. Then he said, "You know, there's an awful lot of ignorance about occupational disease. The average doctor tends to minimize the danger of it. Some doctors tend to blame everything on cigarettes."

I asked Dr. Hurst if he had learned at any time that Dr. Cralley, of the Bureau of Occupational Safety and Health, in Cincinnati, had not performed the medical survey of the Tyler workers he had agreed to back in 1967.

"No, I did not," he answered. "I assumed that the study had been conducted, as Dr. Grant had indicated it would be."

"What reasons did Dr. Grant give when he called you last August and once again proposed that you examine and test the workers?" I inquired.

"The same reasons he gave nearly five years before," Dr. Hurst replied.

"Did he tell you that Pittsburgh Corning had filed a request with the Department of Labor for a variance from occupational-health regulations, and that the request for a variance stated that the company had already expanded its medical-examination program?"

"No," said Dr. Hurst.

When I asked Dr. Hurst to describe the tests that were performed on the Tyler workers at the East Texas Chest Hospital in August of 1971, he told me that they included ventilatory studies, to determine how fast air goes into and out of the lungs; lung-volume studies, to show how much air the lungs can hold; blood-gas studies, to indicate how efficiently oxygen is getting into the bloodstream; diffusion studies, to indicate what happens to oxygen and carbon dioxide in the lungs; and chest X-rays.

I then asked Dr. Hurst when he first suspected that some of the workers were afflicted with asbestosis. "Well,

that took a while, because we weren't able to pull all our data together until November," he said. "By then, we knew there was evidence of fibrosis, or scarring of the lungs, on some of the X-rays. Some of the men also had dyspnea, or shortness of breath, and there were decreases in diffusion capacity as well. In fact, all but one of the seven men in real trouble had low diffusion. The trouble was, we had made a mistake in our formula for the diffusion studies, and didn't discover it until December. That's why it took us so long to come up with a positive diagnosis of asbestosis."

I then asked Dr. Hurst if he or anyone else was planning to perform followup medical studies of the Tyler workers or their families, or of former workers or their families.

"I've talked about that with Dr. Johnson, at NIOSH, with Dr. Norman Dyer, of the Environmental Protection Agency, in Dallas, and with my superiors in the Texas State Department of Health," he said. "I really can't say what's going to happen, however. I suppose it's a question of where the money will come from."

Next, I asked Dr. Hurst if the East Texas Chest Hospital had ever before examined workers on a consultant basis with a company.

"Not to my knowledge," he replied.

"Would you do it again?"

"I don't know," Dr. Hurst said slowly. "The studies we performed for Pittsburgh Corning were good studies, and once we rectified the error in our diffusion tests they were thorough. But whether we should have got involved with the company in the first place is something I'm not sure about."

IT was about three-thirty when I left the hospital; so I took the shortest route to Yandle's house, driving north on State Highway 155, past the Owentown Industrial District. I continued, through Winona, to the town of Big Sandy, where I turned west on U.S. Highway 80, toward Hawkins. At one point, I crossed a bridge over a muddy, meandering stream, and then the road passed through mile after mile of pecan groves, where snow-white earth grazed among thousands of frail black trees, whose delicate branches formed an intricate tracery against the sky. The center of Hawkins consists of four corners, where U.S. Highway 80 is bisected by State Highway 14. A sign there says that the town has a population of nine-hundred and seventy-seven. I turned north on State Highway 14, and, within a mile or so, arrived at

Yandle's place—a small white frame house—and found Yandle standing in the driveway.

Yandle and I spent the rest of the afternoon hunting up men who had worked in the Tyler plant. A mile on the road, we paid our first call, on Dale Peek, a lean, good-looking fellow in his late twenties, whom we found in the yard behind his house, bending over the engine of a car. Peek was wearing a navy-blue wool watch cap, a shirt with the sleeves cut out, and Levi's. After we shook hands, he stuffed his hands into the hip pockets of his Levi's, sat down on a fender of his car, and told me that he had worked at the Tyler plant for five years. "Like most of the other boys, I had a whole bunch of jobs," he said. "I was a feeder, a builder, a saw-room laborer, and a scale man. Scale men are the ones who weigh the boxes carrying the finished product. I finally quit the place in July of 1969, on account of the respirators they had started making some of us wear. I couldn't breathe through the damn thing. I just couldn't get any air into me, so I quit. Now I work making corrugated boxes at the Continental Can plant. That's in the Owentown Industrial District, too. The spring before I quit, I'd been elected chairman of the union committee, and I went in to Van Horne to ask him about some articles that some of the fellows were reading that said asbestos was bad for you. Van Horne passed it off with a shrug. He said that as far as he knew the doctors had no way in the world of knowing for sure that the stuff caused you to get sick."

With Peek accompanying us, Yandle and I drove west about fifteen miles to the town of Mineola, to see Tom Belcher, one of the seven men whose symptoms had been diagnosed as those of asbestosis, and who had been advised by Dr. Hurst not to work in a dusty environment. On the way, Yandle told me that Belcher had worked in the plant for sixteen years, and that he had started as a feeder operator.

"Him and Willie Hurst," Peek said. "They're real old-timers at that place. I used to see them shaking down the dust collectors. Why, the stuff was so thick on them you couldn't hardly make out their hair or faces. I remember Tom sometimes wore a mask. It wasn't a real mask, though. It was one of those gauze ones, like you see them wearing in hospitals on the TV."

Belcher was a florid, heavy-set man in his late forties, and as Yandle, Peek, and I stood talking with him in the front yard it was obvious that he

was having difficulty breathing. "No one ever told me the damn stuff was dangerous," he said bitterly. "About two years ago, though, I started to feel different in my chest. It felt tired all the time, and it hurt a lot. It's been that way ever since, and these days I cough so much in the morning I can't hardly stand it."

A few moments later, Belcher's wife called me into the house and showed me a copy of Dr. Hurst's diagnostic report. According to the report, Belcher had a reduction of forced vital capacity, which is the maximum amount of air he can take into his lungs; a twenty-five-per-cent reduction in total lung capacity, which is the amount of air his lungs can hold; and a slight reduction in the amount of oxygen that gets into his bloodstream. In addition, his X-ray films showed an increase in bronchovascular markings on the lower left-lung field. Mrs. Belcher said that her husband's chest was giving him a great deal of pain, that he was worried about it, and that she was worried about his worrying, because in addition to his pulmonary problems he had high blood pressure.

When we left the Belchers, Yandle, Peek, and I drove to a place about seven miles north of Hawkins, where J. C. Yandle, Herman's brother, lived, with his wife and family, and worked as a tenant rancher. He had a typical small Texas spread, with a long blacktop drive leading up to a native-rock farmhouse that was surrounded by pastures separated by well-kept fences. We found J. C. Yandle in a field adjacent to the house, fixing a cultivator rig. He was a tall, thin, lean-faced man in his middle forties; he was wearing Levi's and a denim jacket, and he looked as if he had stepped right out of a scene in "The Last Picture Show." After Herman introduced us, J. C. leaned against a corral fence and, speaking very deliberately, told me that he had gone to work at the Tyler plant in November of 1961. "I worked there steady until the place shut down last month," he said. "During that whole time, no one ever told me or anyone else I know that asbestos could harm you. Why, I can remember some of our supervisors saying it not only wouldn't hurt you but was good for you! They even used to tell us you could eat it. They were saying that right up till August, when all of a sudden we have to wear respirators. First thing I heard about my X-rays was on the ninth of February, when Dr. Hurst called me in and said they didn't show up anything wrong. He

told me I was breathing in better than I was breathing out, though. I asked him why. He said some people do that. He said maybe I was smoking too much. Funny thing is, I roll my own and I don't smoke an awful lot. About half a pack a day, maybe. But I am sure awful short-winded, and for the last few years it's been getting worse and worse. I been coughing up a terrible storm in the mornings, too."

After we said goodbye to J. C. Yandle, his brother and Peek and I drove toward Hawkins on State Highway 14 and, about a mile before Herman Yandle's place, stopped at a frame house with brown asbestos siding where Ray Hicks, a former Tyler worker, lived, with his mother. Hicks wasn't at home, so we drove a little farther along the road, to a house where Hubert Thomas, another of the Tyler workers, was visiting some friends. As we were getting out of the car, Hubert's brother Robert drove up, with his wife, and parked just in front of us. Robert Thomas was fifty years old, he had worked at the Tyler plant for ten years and three months, and he was one of the seven men whose symptoms had been diagnosed as those of asbestosis. "At the end, just before they closed the place down, I was working in the finishing department," he told me. "It was my job to push cartons of finished insulation down along the factory floor. Trouble was, I just couldn't push the damn things without stopping every hundred feet to get my breath. My chest's been hurting something awful lately, and I've been short of wind for the past five or six years. I also cough a lot these days. When I got called in by Dr. Hurst last month, he told me that he and the other doctors at the hospital had decided I probably had emphysema or bronchitis. He also said I could have symptoms of a disease caused by all the dust I'd breathed over at the factory. He advised me not to accept any work near dust, like at one of the local pipe or foundry outfits, and he told me to quit smoking. He said that I should have another X-ray soon and that the ones they'd already taken showed something wrong. I think he said it was some enlarged tissues down there. When he told me that, I remembered something funny that happened back in the last part of 1970. I'd hurt my back, and the company had sent me to the Medical and Surgical Clinic, which shipped me over to the Mother Frances Hospital for some X-rays. After they took the X-rays, I was lying in my bed when a nurse came into the

... with a clipboard. She looked at the clipboard for a minute, and then she asked me if I was there for my tick or for my lungs. I told her I was here for my back, and she shook her head and said that that was odd, because there sure was something wrong with my lungs."

At that point, I said goodbye to Robert Thomas, and walked up a driveway toward the house. The driveway crossed a deep culvert by the roadside, and on the other side of the culvert was a large tank full of channel catfish, which are a delicacy in that part of Texas. Two children, armed with long-handled dip nets, were trying to catch a pair of them for a customer who had stopped off to buy his supper. The catfish were surprisingly agile, and the children were having a lot of fun but not much luck. When Hubert Thomas strolled over to see if they needed a hand, I introduced myself to him, and we stood talking for some time beside the tank. He told me that he had gone to work at the Tyler plant in October of 1961, and he had stayed on until the factory was shut down. "We're all kind of worried about what's going to happen to us," he said quietly. "Especially those of us that's got a lot of years in that place. Nobody's told me anything about a medical examination yet, which might be a good sign, but I can tell you something for sure. I'm so short-winded these days it's ridiculous. I can't even walk from the tank here to my house without getting out of breath. Why, I not only have to stop a couple of times to get it back but sometimes I have to sit right down on the ground!"

I asked Thomas if he had ever worn a respirator and if anyone had ever told him before Dr. Grant's visit that asbestos was dangerous to work with.

He shook his head. "I never wore a respirator until last summer," he replied. "And nobody ever said to me that the stuff could hurt you. No—come to think of it, that ain't right. There was a man who told me asbestos was dangerous. That was Mr. McMillan, who was plant manager before Van Horne. Way back, when I first went to work there, he told me the stuff could be harmful. He never said to wear a mask; though, so I didn't. I got to respect that man, because nobody else from Pittsburgh Corning was that honest with me. But it's funny, ain't it? I mean, Mr. McMillan knew it was dangerous, and he died of cancer himself not long ago, but he never said to wear a mask. So I didn't. None of us did."

It was growing dark, and when

Yandle, Peek, and I left, we drove south on State Highway 14 and stopped again at Ray Hicks's place. His mother came to the door and told Yandle that Ray had come and gone since we were there before but that she was pretty sure we could find him at the service station down by the four corners in Hawkins. A few minutes later, Yandle spotted Hicks's car at the service station, and when I drew up beside it he climbed out to get him. Hicks, a tall, thin, handsome, pale man in his early thirties, got into the back seat with Peek and Yandle got in front with me, and we spent a few minutes chatting. Hicks told me that he had gone to work at the Tyler plant on April 30, 1962, and had worked there until the factory was shut down. "That makes nine years and ten months, and I never wore a respirator except for the last six months I was on the job," he said. "I never knew it was dangerous to work with asbestos until last summer, when Dr. Grant came down. He told us it was hazardous, but he said you didn't get any symptoms in less than ten or fifteen years."

I asked Hicks how he felt, and he said that he felt pretty good—that, unlike a lot of his friends from the plant, he wasn't experiencing any short-windedness. "Dr. Hurst took X-rays of me in August of 1971, but I never heard from him, so I guess that means I'm O.K.," he added.

"Hey, why don't you tell us what Van Horne told you when he called you in last month," Yandle said, with a smile.

"Oh, that," Hicks said with a sheepish grin. "Why don't you guys lay off that?" Hicks then shook his head and smiled ruefully at me. "Well, Van Horne called me into his office just before the place shut down," he said. "He told me a report on my X-rays indicated that there was a little spot on the lower lobe of my left lung, and he said I'd better stop smoking. I told him I'd never smoked in my life—except cigars. So he asked me if I drank a lot of milk."

When Hicks said this, Yandle began to chuckle. Then, joined by Peek, who had broken into a guffaw, both men leaned back in their seats and gave way to gales of laughter.

"And what did you tell him?" asked Yandle, making a vain attempt to stifle his laughter.

"I told him I drank a little milk now and then," Hicks said. "That's the truth, too. I don't drink all that much milk."

"A little bit?" said Peek, who was

suddenly overtaken by another paroxysm of mirth. "Just a little bit?"

"And what did Van Horne say when you told him that?" Yandle cried, still laughing.

Hicks glanced at me, but he had begun laughing himself now, and suddenly he doubled over as the mirth bubbled out of him. "Van Horne told me I had a calcium deposit in my lungs, and said I must be drinking too much milk."

At this point, Hicks broke down completely, and I began to laugh myself. For some moments, the four of us sat rocking with laughter, unable to speak; then Hicks straightened up and managed to get partial control of himself.

"I walked out of there real mad," he said. "But when I told my friends back on the floor, all they did was laugh, and they've been ribbing me ever since."

"But, Ray, we was worried about you!" Yandle protested. "We was worried about you on account of all that milk you've been drinking."

This comment started everybody laughing again, and we were still laughing when we climbed out of the car, a few minutes later. I thanked Yandle for all his help, shook hands with each of them, and bade them farewell and good luck. Then I got back into the car and started for Tyler. As I drove away, I caught a glimpse of Yandle, Peek, and Hicks in the rear-view mirror. There they were, in front of the filling station, with their arms around each other's shoulders and their heads thrown back—three Texans standing beneath the stars of the immense night sky and laughing to beat the band.

IN the morning, I ate breakfast, paid my bill, and checked out of the motel. I was planning to drop by the Medical and Surgical Clinic to ask the doctors there why none of the men who had come to them with pulmonary problems had been told that the trouble might be the result of the place they were working and what they were inhaling on the job. Some of the men I had spoken with had been told they had bronchitis, and others had been told they had emphysema, but none of the doctors at the clinic, as far as I could make out, had ever told them they were suffering from asbestosis, which is, of course, what was afflicting many of them, and was the reason they were experiencing such difficulty in breathing. However, after sitting behind the wheel of my car for a few moments I