

Apr. 21-76
Gazette



Virgil Christian

Rite Friday For Liver Cancer Victim

Service will be at 2 p.m. Friday for a third vinyl chloride worker at the South Charleston Carbide plant who died of a rare liver cancer attributed to vinyl chloride exposure.

The rite for Virgil Marvin Christian, 61, of 714 Chestnut St., Spring Hill, will be held in Snodgrass Funeral Home in South Charleston by the Rev. Norbert Fisher. Burial will be in Glendale Cemetery in South Charleston.

Mr. Christian died Tuesday in the National Institutes of Health at Bethesda, Md. He was being treated for angiosarcoma, which is believed caused by inhalation of vinyl chloride gas that is used to produce polyvinyl chloride plastics.

He worked from 1943 to 1968 in the vinyl chloride unit of the Carbide plant, during a time when emission levels of the gas were much higher than they are today.

Two other workers from the unit previously died of the same liver cancer—Charles T. Smart in 1968 and Richard E. Clendenin in 1974.

Mr. Christian learned last summer he had angiosarcoma, and retired from Carbide Jan. 1. Last summer he said in a Daily Mail interview that he felt "no grudge against the company." He said that, 30 years ago, workers ignored the smell of vinyl chloride, "although you didn't breathe it too long or you would get high."

He was a member of the machinists union at the plant.

Surviving are his wife, Marguerite; son, Marvin; daughters, Wanda-at-home, Mrs. Louise Racer and Mrs. Selma Walker, both of Dunbar; brothers Orin of St. Albans and Donald of South Charleston; sisters, Mrs. Elsie Vance, Mrs. Mildred Lottshaw, Mrs. Erma Fross and Mrs. Vera Daoust, all of South Charleston; Mrs. Opal Marsh of Miami, Fla.; Mrs. Aubrey Sutphin of Winfield and Mrs. Thelma Forth of Hurricane.

UCC 104931

Rare Cancer Claims Ex-Carbide Worker

By RICHARD HAAS
Daily Mail Business Editor

Virgil Marvin Christian, 61, the third former employe of Union Carbide's South Charleston plant to be afflicted with a rare form of liver cancer, died Tuesday in Bethesda, Md.

At the time of his death, he was a patient at the National Institutes of Health, where he was being treated for angiosarcoma. Scientists believe there is a link between the liver disease and exposure to high concentrations of vinyl chloride gas.

A 40-year veteran of Union Carbide, Christian worked in a section of the plant producing vinyl chloride between 1943 and 1968. At the time of Christian's employment in the unit, vinyl chloride emission levels were far higher than they have been since concern over the angiosarcoma link developed in 1974, Carbide officials said.

Early in that year B. F. Goodrich Co. reported to federal health officials that several employes at its Louisville, Ky., plant were afflicted with angiosarcoma. Following this incident, Union Carbide reviewed its employe health records and found that one former worker — Charles T. Smart — died of the disease in 1968, and a second victim — Richard E. Clendenin — was seriously ill. Clendenin died in July, 1974.

Carbide has not produced vinyl chloride at the South Charleston plant for several years, but continues to use the gas to produce polyvinyl chloride plastic. Part of the latter operation, however, is scheduled to be phased out by the end of the year.

A plant spokesman said Carbide is in compliance with new federal emission standards which went into effect April 1.



VIRGIL CHRISTIAN
Worked With Vinyl Chloride

Christian, who resided at 714 Chestnut St., South Charleston, discovered he had angiosarcoma last June, following a routine blood test. He officially retired from Carbide on Jan. 1.

Interviewed by the Daily Mail last summer, Christian expressed confidence that the disease had been detected in time for effective treatment.

"Sometimes I've had my ups and downs," he said at the time. "A person always thinks, 'It can't happen to me.'"

"I started at Carbide in 1935. I have no grudge against the company. Thirty years ago, this (the gas) was no more than steam would be. That's all we thought about vinyl chloride, although you didn't breathe it too long or you would get high."

During his stay at the National Institutes of Health, Carbide encouraged Christian's co-workers to call him on company telephones. "I shook everybody up when I got it (angiosarcoma)," Christian said last summer, but he added that he appreciated the phone calls.

Surviving: wife, Mrs. Virgil (Peggy) Christian; son, Marvin of St. Albans; daughters, Miss Wanda Christian of South Charleston, Mrs. Louise Racer of Dunbar, Mrs. Selma Walker of Dunbar; brothers, Orin of St. Albans, Donald (Sam) of South Charleston; sisters, Mrs. Elsie Vance of South Charleston, Mrs. Mildred Lotshaw and Mrs. Erma Froas of South Charleston, Mrs. Thelma Forth of Hurricane, Mrs. Vera Daoust of South Charleston, Mrs. Aubrey Sulphin of Winfield, Mrs. Opal Marsh of Miami, Fla.

Friends may call Thursday from 2 to 4 p.m. and 7 to 9 p.m. at Snodgrass Funeral Home, South Charleston.

"people are more important than computers."

He also said an NBC analysis showing strong labor support for Carter, although Udall had endorsements from union leaders, showed that "what really counts is the vote of workers, not the endorsement of the leadership."

Both Carter and Jackson said their victories gave them a psychological advantage. Carter said the Wisconsin contest also was "a psychological disadvantage to Mr. Udall" since he has not yet won a primary.

Jackson said, "The real significance of New York is that New York is the epitome of the political effort and ... winning in New York carries with it a tremendous psychological impact ... This is what we planned. We can argue one or two delegates, it doesn't matter. We were on target in this state."

Pollster Louis Harris, in an interview on the ABC show, "Good Morning America," said the results showed that "Mo Udall ... is still a bridesmaid."

He also said the outcome might help Humphrey. "By not getting into the fray, he seems to be doing magnificently," Harris said "there were a lot of survivors and no winners" in Tuesday's elections. "There is no front-runner in the Democratic party."

'You (C) Man-On-Th

By ROBERT KELLY
Of The Daily Mail Staff

Party lines define sentiment about yesterday's State Supreme Court ruling which denies a third consecutive term to Gov. Moore.

Hours after the announcement of the court decision, an informal survey conducted by the Daily Mail in downtown Charleston showed 75 per cent of those queried in agreement with the ruling. This group included 10 Democrats, one Republican and one Independent.

General disagreement was expressed by four persons (two Republican, two Democrats).

Sixteen persons—the first 16 willing to voice their opinions—responded to: "What do you think of the decision?"

"It's proper. You've got to live by the rules," said Lee Porter, 32, of 4815 Washington Ave., a construction worker and Democrat.

"Moore's got a Napoleonic complex. He thinks he's bigger than life itself. It's about time someone brought him down," Porter added.

With few exceptions, respondents brushed aside legal arguments and directed their comments to Moore, rather than the court decision, and the result was a popularity contest.

"It didn't matter to me. I don't think he could have been re-elected anyway. Jay



UCC 104932

DEMONSTRATING his style, Eddie Keeling flings a tightly rolled Gazette while sitting as-

tride Star, his pony.
(Gazette Photo by Lawrence
Pierce)

On 2-Mile Route

Gazette Delivery Depends on Pony

The Gazette is being delivered in Dunbar by a pony express of sorts.

The pony is a 16-year-old Shetland named Star. The rider is 12-year-old Eddie Keeling, son of Mr. and Mrs. Edward L. Keeling of 222 Midway Dr.

Eddie's route covers two miles. It would take him about three hours to travel that distance, he said, if he were walking. But he doesn't walk.

At 6 a.m. every morning, he delivers his papers astride ol' Star. "It only takes me an hour or an hour and a half that way," he explained.

Eddie has a small route, only 15 customers. But before he became interested in being a Gazette carrier, there wasn't a route in his neighborhood at all.

Last summer, he called the Gazette circulation office and received the authorization to start a route. He's been at it since then.

A seventh grader at Dunbar Junior High, Eddie makes good grades even though he's up and working bright and early each day. On the latest report card, he got three A's and three B's.

On weekdays, he rides bareback. But on Sundays, the heavier papers which he carries in a bag around his neck, tend to throw him off balance. So he uses a saddle on Sundays.

"I'd like to build up the route," he said, "and have even more customers."

Pay Raises For County Workers Eyed

Kanawha County employees appear to be in line for a 5 per cent pay raise in fiscal 1974-75.

Court President Dewey E.S. Kuhns said Thursday that he and other county commissioners are obligated to give serious consideration to across the board pay raises.

"I don't see how we can avoid it," he said.

...
KUHNS POINTED out that the county court legally can't dictate raises to county employees. Instead, he said, the court only can increase allocations to other county officials who in turn decide on which employees receive raises and how much they receive.

Commissioners will begin next month weeding through budget requests from county officials. Kuhns said that as of Thursday, only a few requests have been filed. Generally, they are requesting 5 per cent increases, he said.

"We can't penalize county employees because they work in government," he said. "They have to meet inflation just like everyone else."

Rare Cancer Affects One At Carbide

Carbide has reviewed the records of 725 employees and former employees who have worked with vinyl chloride monomer and found only one employee who had angiosarcoma, a rare type of cancer that affects the blood vessels of the liver, the company said Thursday.

This employee died in 1968 and had worked in poly vinyl chloride production in South Charleston from 1944 to 1962, the company told the National Institute of Occupational Safety and Health in Washington, D.C.

Carbide made the study after B.F. Goodrich said a number of employees who worked in the polymerization of vinyl chloride had died of the disease.

Carbide will continue to review the records of employees to see if there are any other indications of a connection between exposure to vinyl chloride polymers at South Charleston and Texas City, Tex., plants, the company said.

jects meet the requirements for 75 per cent funding from EPA.

Mayor Hutchinson commented that the bad part was that about \$2.5 million in local funds would still be necessary.

Jerry Thompson, treasurer for the board, said the board will have to decide whether to spend the expected \$422,000 reimbursement from EPA on additional sewer lines or plant improvements.

Belle Bank's Assets Hiked

The First National Bank of Belle increased its assets by 44 per cent in 1973 and operating earnings by 78 per cent after taxes, said President William H. Moore.

Deposits during the year grew by 43 per cent while the bank's investment portfolio rose to \$4.1 million, Moore explained. Earnings per share rose to \$9.04 in 1973, up from \$5.08 in 1972.

State's Aid Topic of Meeting

By Edward Pe
Business/Labor E.

Gov. Moore and other public officials will hold an all-day meeting today with 10 federal regional directors here on revenue sharing in the new federal budget.

Moore will be joined by 60 other elected officials, including mayors from the state's largest cities and county court members, to discuss federal money expected in July for job training, housing and other state programs.

Federal regional directors represent the major U. S. departments and will talk about programs and money overseered by these departments under what the Nixon administration calls "new federalism." It seeks to decentralize federal aid and put it at the disposal of state and local communities for them to decide how best to use it.

...
WEST VIRGINIA and the rest of the states will share \$1.67 billion earmarked in the 1975 national budget for job training and economic development under the new Comprehensive Employment and Training Act (CETA), J. B. Archer, regional director of the U. S. Labor Department, explained Thursday.

This employment program replaces various job and manpower programs funded by the federal government during the war against poverty in the 1960s. "What we are trying to do is to be more effective and efficient," Archer said. "We have no more categorical programs, but we suggest that

Post Office Resumed

dered the Postal Service to follow its own rules in future actions.

The Postal Service announced that its program of closings resumed Friday evening, but a spokesman said he knew of no immediate closing announcements.

POSTAL OFFICIALS had argued that not being allowed to close the offices will cost them \$5,500 a day.

The ruling means that in order to close a post office the Postal Service will have to conduct a survey of mail users affected and provide a 90-day notice of the closing.

Two associations of postmasters and a group of congressmen had argued that the law prohibited the closing of small post offices.

When a rural post office is closed, rural delivery routes are extended or a local citizen is given a contract to operate a community post office.

Since last July 1 the Postal Service has closed 186 post offices for an annual saving of nearly \$2 million. Some 600 other offices are being studied.

Opponents of the closings had argued that the law prohibits the closing of unprofitable offices merely for economic reasons. "Congress wanted service in this area rather than efficiency," said Isaac N. Groner, a lawyer for the opponents.

But John K. Villa, attorney for the Postal Service, said the agency uses other criteria besides economics in deciding whether to close small post offices.

For example, the Postal Service is more likely to close a small post office if there is another office in the area, he said.



NOT TOO THRILLED with the appearance of a presidential candidate is 10-month-old Renee Rosen of Miami Beach, Fla.—and Pennsylvania Gov. Milton Shapp finds he's not having too

much luck with the voters either. Shapp, campaigning for Tuesday's Florida primary, ran last in his previous primary fling.

(AP Wirephoto)

Vinyl Chloride-Birth Defects

Area Subject of Health Probe

By Jane E. Brody
(c) New York Times Service

NEW YORK—The National Center for Disease Control is studying a second region of the country where exposure to vinyl chloride from a chemical plant may be related to a higher than expected rate of birth defects among children born in the area.

The region is Charleston, W. Va., where during the four years from 1970 through 1973, 53 children were born with defects affecting the central nervous system. Thirty-one such cases were expected for the region during that time period, accord-

ing to the normal national incidence of these defects.

Just south of Charleston is the home, since 1938, of a Union Carbide plant where the gas vinyl chloride is converted into the plastics polymer, polyvinyl chloride. Vinyl chloride was found two years ago to cause a fatal liver cancer among exposed workers in the chemical plants. Since then, it has also been linked to an increased risk of cancers of the brain and lungs.

A YEAR AGO, Dr. Peter F. Infante,

then with the Ohio Department of Health, uncovered an unusually high rate of birth defects generally, and central nervous system defects in particular, among children born in three Ohio communities where polyvinyl chloride polymerization plants are located. The finding suggested, but did not prove, a causal link between vinyl chloride and the defects, since large amounts of the chemical can enter the air around plants.

The Center for Disease Control in Atlanta, a part of the United States Public Health Service did its own study in one of

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the relief to the income tax... only slight, and a "mere pittance." Rollins said a family of two with annual income of \$5,040—the minimum wage Gov. Moore recommended for state employees—would save only 41 cents a week. A family of two with an \$10,000 income, he said, would save 31 cents a week, or 35 cents a week if the income was \$15,000. If the income was \$15,000, he said the savings would be 89 cents a week, or \$46.28 a year.

Del. Charles Polan, D-Cabell, also opposed the bill, because he said, revenue collections this year would be about "dead even" with expenditures, and next year, the expenditures would be higher than the income. The problem, he said, in West Virginia, in addition to inflation, is "we're trying to make up for 50 years of neglect." Polan cited bad roads that needed money for repairs. He said it would be a fraud on the taxpayers to give relief this year, and have to raise taxes next year.

Voting against the bill were: Allen, D-Wyoming; Arnold D-Lewis; Bailouz, D-Wetzel; Brenda, D-Hancock; Brown, D-Preston; Bryan, D-Barbour; Burke, Chafin, D-Mingo; Christian, D-Mercer; Crabtree, D-Wayne; Dalton, D-Lincoln; Dinsmore, D-Monongalia; Fitzgerald, D-Jackson; Hagedorn, D-Monongalia; Johnson, D-Kanawha; Long, D-Braxton; Mathis, D-Logan; Miller, D-Roane; Milleson.

From Page One

Area

the three suspected Ohio communities and found no evidence to support the link.

However, Infante, a specialist in epidemiology, said there were several methodological errors in the center's study that could account for its negative findings. Larry D. Edmonds, the center epidemiologist who did the study, said in an interview that his findings did not rule out the possibility that exposure to vinyl chloride in the general environment might cause birth defects.

"The question has not been resolved—that's why we're doing this second study in Charleston," Edmonds said.

IN THE CHARLESTON study, Edmonds and his colleagues will try to interview the parents of all the children born with central nervous system defects to learn where they worked and how far they lived from the vinyl chloride plant, particularly during early pregnancy.

Infante, who now works for the National Institute for Occupational Safety and Health, said, "We are extremely concerned about the public health consequences of vinyl chloride."

In addition to birth defects among the general population living near vinyl chloride plants, Infante has studied the results of pregnancies among the wives of vinyl chloride workers. In a report to be published in the British journal, *The Lancet*, Infante states that he found a two-to three-fold increase in the rate of stillbirths and miscarriages among the wives of vinyl chloride workers when compared to a

cause of sex, or religious... lending of money.

Senate Rejects \$15 Million Malpractice Amendments Promised M.U. Med School

The State Senate voted down a mass of amendments to a medical malpractice bill Friday night and prepared to pass it today.

Senators rejected major amendments that would have cut premiums in half and held lawyers' fees to one third of the net claims awarded.

The main thrust of the bill, as it will come up for a vote today, puts West Virginia in the business of providing the insurance.

The legislation would establish a nine-member medical malpractice insurance corporation. All doctors and hospitals in the state would be required to participate in an insurance plan prepared by the corporation.

Doctors would be divided into three classes for premium purposes. Those who perform no surgery would pay an annual premium of \$1,200 a year. Doctors engaged in minor surgery would pay \$2,400. Surgery specialists would pay \$6,000.

Hospitals would participate at the rate of \$300 a bed. Other health care professionals could participate on a voluntary basis.

From Page One

Senate

Roy Rogerson, said the main reason for any failure of the EEE has been the failure of the legislature to appropriate adequate funds.

Activity in the Senate Friday ranged from the big electric power bill to bow and arrow legislation.

A bill passed 31-2 and sent to the House would require delivery of any deer killed by a bow and arrow to a conservation officer for checking purposes.

MODERN HUNTERS have been known to kill a deer with a gun, then insert an arrow in its carcass.

Other bills passed and sent to the House would create a state fire commission and the office of emergency medical services. Both new units of government would be coordinating agencies in keeping with their titles.

Action was delayed on a bill that, tentatively, would provide for distribution of about \$2.3 million in coal severance tax collections to the state's 224 municipalities. It's understood that a move will be made today to divide this money among cities and counties.

Albertassie Speaks

West Virginia Department of Commerce Commissioner Ralph D. Albertassie will speak at an informal luncheon program beginning 12:30 p.m. March 11 at a meeting of the Pairs and Spares Retired People's Club in the Baptist Temple, Morris and Quarrier streets.

HUNTINGTON — Marshall University will be getting \$15 million from the Veterans Administration to develop a medical school.

The funds will be paid over a seven-year period, beginning July 1. That initial amount is expected to be \$2.8 million and will be used to begin employing the faculty and installing equipment.

The funding came about because Marshall received a reasonable assurance accreditation by a joint committee of American Medical Assn. and the Association of American Medical Colleges. The initial money the school hopes to provisional accreditation that will allow the school to accept students for the term of 1977.

The Marshall Medical School will be affiliated with the Huntington V.A. Hospital.

The Charleston Gazette

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AT SOUTH CHARLESTON

Dispersion Resins Shutting Down

Carbide announced this week that we are shutting down our vinyl dispersion resins unit at the South Charleston plant by the end of the year. The facility is located in Building 190 on the Island. About 60 employees are involved and they will be reassigned to other operations when the shut-down is completed.

The decision to discontinue vinyl dispersion resin production is based solely on an analysis of our commercial position which indicates that to remain in this business is not justifiable. The unit has a capacity of 40 million pounds a year which is less than 10 per cent of the domestic industry capacity.

Instead, Carbide has decided to concentrate its support efforts on solution and suspension vinyl resins in which we have a strong market position. Additional capital will be expended for these operations.

Carbide is an industry leader in solution vinyl resins which are produced by a unique solvent polymerization process at both South Charleston and Texas City. These are widely used for solution coatings in cans, house siding, paper, cloth, and high performance maintenance paints.

We also produce a broad line of suspension vinyl resins in a modern production unit at Texas City. These are used in such applications as piping, floor tile, and extruded cellular moldings.

Carbide pioneered and built the first commercial unit for the production of vinyl resins at South Charleston in 1930.



MORE PRODUCTIVE TIMES.....This night shot, with lights reflecting in the Kanawha River, shows our Vinyl Dispersion Resin Unit (Bldg. 190) on Blaine Island at the South Charleston Plant. Carbide announced we will be phasing out our Dispersion Resins business by the end of the year.

New Shift Supervisors

Our Distribution Fleet Operations Group has announced the promotion of three employees to Shift Supervisors at their new Private Trucking Operations located West of the Institute Plant.

Ladies' Fitness Class

Has Room For You

Ladies.....It won't be long before

People You Know

The American Cancer Society offering another of their "STOP SMOKING" Clinics at Spring Hill Junior High beginning at 7 pm on January 15th. If you are interested contact the Society at 343-3409.....R and D's HUGH DAVIS will be teaching a course on "Energy Resource Planning and Management Problems" at the Graduate School here this Semester.....It will meet on Tuesdays from 7-10 pm.....Employment's WILMA RUDOLPH leaving Carbide to take a job with the United States Olympic Committee. She will be helping promote the 1976 Olympics.....Distribution's RON TEUFEL transferring to our Dallas Field Office as Customer Service Manager.....Oldest retiree passes away...TOM GOODRICH, aged 90, died in St. Petersburg, Florida, on November 26th. An Architectural Engineer, he joined the Peoples Light Gas and Coke Company in 1911. Officials of this Company were the prime organizers of Union Carbide. At the time of his retirement in 1952, he was Manager of Real Estate for Chemicals. His son, DONALD GOODRICH, is a Product Distribution Coordinator with our Distribution Department here.....Engineering's BOB PROFFITT off to Samia as Assistant Construction Manager for the Polyethylene Project there.....WEST VIRGINIA dropping out of the Top Ten. Recent figures released by the Treasury Department showed that The Mountain State wasn't even ranked in the "Moonshine Stills Raided" Category during the past year. What is going to happen to our image in New York?.....Our Home and Auto Products Division announcing that Carbide is phasing out Synthetic Motorcycle Oil products.....Talk about inflation! In Canada, estimated cost of the PETROSAR Petrochemical complex has risen \$128 million since last May. The total is now \$570 million. Work is on schedule and the olefins units are due onstream by March, 1977. Partners in the project include UNION CARBIDE CANADA, DUPONT OF CANADA and POLYSAR.....Excitement in the New York Office. Our big City correspondents report that a streaker hit the 42nd Floor this week.....R and D's PAULA GUERRANT taking a Leave of Absence to work on a Secretarial Science degree at West Virginia Tech.....Want to find out what's going on in the Legislature when it convenes next week? Call 348-8905. For those out of the Charleston area a toll free number...1-800-642-8650...has been set up.....SALLY GOECKE of our C and P Communications Department one of several women honored by the New York YWCA in their "Salute to Women Business Luncheon" recently.....L. F. COOPER and E. E. GRINSTED of Tech Center Services off to Seadrift for 12-24 month assignments as inspectors on the expansion projects there.....

Bill Starr Promoted

Bill Starr has been promoted to Engineering Assistant with the NERP Group (Northeast Regional Project Group). He reports to Paul Bama in this assignment. Bill joined

— Computer Moves

(Continued from Page 1)

After these moves are completed, the Computer Center's Aids Support Group will move down to Institute from Building

UCC 104936

60 Carbide Workers Affected By Unit Shutdown

About 60 workers will be affected when the Carbide South Charleston plant phases out its vinyl dispersion resin unit by the end of the year.

Earlier reports this week indicated that as many as 300 workers might be affected. The estimate was based on the number of workers who were examined last year at the plant for angiosarcoma, a rare cancer of the liver.

Doctors attribute this disease to vinyl chloride, a raw material used in the vinyl dispersion resin unit.

The company said, however, studies showed that continued operation of the unit could no longer be justified from a business standpoint.

Employees affected by the shutdown will be given other job assignments, a spokesman said.

UCC 104937

12A Charleston Daily Mail TUES. EVE., JAN. 6, 1976 •

Environmental Regulations Spell Doom For Carbide's Polyvinyl Unit

By ROBERT KELLY
Of The Daily Mail Staff

Federal environmental regulations apparently sealed the fate of a 33-year-old polyvinyl chloride (PVC) production unit at Union Carbide's South Charleston plant.

Company officials announced this week that the vinyl dispersions resin unit will be closed by Dec. 31, 1976, because it could no longer be justified economically.

About 60 employees will be affected. They will be transferred to other parts of the plant, a spokesman said.

Two other PVC production processes will not be affected. PVC, used for a variety of products from phonograph records to floor tile, is made from vinyl chloride, which doctors say may cause angiosar-

coma, a rare form of liver cancer.

There have been three cases of angiosarcoma among vinyl chloride workers at South Charleston. The link shown there and at other PVC plants prompted federal agencies to impose emission regulations on PVC production.

As early as last May, plant officials at South Charleston said the federal regulations might spell doom for the dispersions resin unit, which began operation in 1942.

In a speech delivered repeatedly to concerned Union Carbide customers following establishment of the angiosarcoma-vinyl chloride link, Nick Wheeler, a company official, said "The (dispersion resin) process has major regulatory problems."

"The batch reactors must be cleaned frequently. Because of the foamy nature of the latex, residual monomer is removed

with great difficulty in the stripping operation," Wheeler said last year on numerous occasions.

The residual monomer, raw vinyl chloride, is the substance which is believed to cause angiosarcoma. In the dispersion resin process, in all PVC production — only trace amounts of vinyl chloride remain in the final product.

"The Environmental Protection Agency, fortunately, has relaxed its position on emissions slightly in providing a separate standard for dispersion resins," Wheeler told customers.

"Prior to this change, I would forecast complete disappearance of the industry. Now, there is a good possibility that this resin will survive EPA," Wheeler said. His original prophecy for South Charleston has come true.

UCC 104938

4176

Carbide Plans To Shut Down Vinyl Facility

The Carbide South Charleston plant will shut down its vinyl dispersion resin unit by the end of the year, a company spokesman confirmed Monday.

Reports have been circulating that the unit will be phased out. It uses vinyl chloride, an agent that doctors say causes angiosarcoma, a rare cancer of the liver.

But the company said the decision to close the operation is based on a study that indicated the operation could no longer be justified from a business standpoint.

Workers affected will be reassigned to other employment when the shutdown is complete, the spokesman said, adding that the total number hasn't been fully determined.

...
EARLIER FIGURES, however, indicated that the number was more than 300 on the basis of vinyl chloride workers examined last year at the plant for angiosarcoma.

-The South-Charleston vinyl-dispersion resin facilities have an annual production capacity of 40 million pounds, less than 10 per cent of the total industry capacity in this country, the spokesman explained.

Products are primarily used for plastics and organics in coatings, adhesives, plastic films and sealing compounds for food containers.

Carbide will continue the solvent vinyl, suspension and nonsolvent resin businesses, the spokesman said. The company is investing substantial amounts of capital in them.

UCC 104939

UCC 104940

Have Not Come True

From Page One

"We were frankly surprised by some of the results" of the cleanup effort, said R.N. Wheeler, Jr., a vinyl technical superintendent of Union Carbide Corp. Vinyl chloride first became an issue in

January, 1974, when the B.F. Goodrich Chemical Co., a subsidiary of the big tire maker and the largest of the polyvinyl chloride producers, announced it had discovered that the 1968 death of an employee owed to angiosarcoma, a very rare cancer of the liver.

Similar discoveries followed, with 17 deaths in all in the industry, and health enforcement officials moved in.

OSHA initially settled on a vinyl chloride concentration limit of 50 parts per million in plant atmospheres, which the industry considered fair.

In April, after laboratory tests, OSHA moved to a standard of "no detectable" concentration as measured in the air.

The chemical companies argued that the "no detectable" standard would close the industry and bring on national economic disaster. They even offered a study warning that a shutdown would put 2.2 million people out of work and cost the economy \$65 billion to \$90 billion.

By October, they had convinced OSHA to change to a 1 part per million average, with brief exposures to higher levels permitted.

Emissions could go to 25 parts per million if workers wore respirators, but the respirator requirement was delayed by one year, to April 1, 1976.

OSHA officials now say the effects of those changes were minimal and claims by the industry that they made all the difference were "a little face-saving semantics."

But by spring, 1974, most companies had realized the final standard would be tough and that the time had come to try to comply.

Goodrich developed a new process to reduce the necessity of cleaning reactors—thought to have been a major exposure point.

It then moved ahead and developed a new "stripping" process that reduces the residual vinyl chloride left in the resin to the "no detectable" level.

This makes it unnecessary for the fabricators to regulate emission levels in their own plants.

Curbing the emissions, Goodrich says, was the largest research and development program in its history.

It involved 130 scientists and engineers, 425,000 man-hours of work and \$34 million in capital costs.

The Society of the Plastics Industry costs could run up to \$300 million.

Industry spokesmen say the regulations lower productivity, and will add 10 to 15 per cent to PVC manufacturing costs.

Goodrich, however, notes it can lease its new cleanup technology to others, and that the new equipment cuts labor costs.

And the cost increase complaints aren't so impressive when compared to the natural price swings.

Right now PVC makers believe their biggest problem may be public relations. The Federal Drug Administration is preparing to ban some types of PVC food packaging on the ground that residual vinyl chloride enters the food.

THE CLIPPING FROM:
THE CHARLESTON GAZETTE

DATE _____ PAGE _____

From Page One

Vinyl

He is reluctant to talk about his battle for life, perhaps because he is now and preparing to retire. "But I haven't got my first retirement check," he says.

Also, the medical bills are paid through Workmen's Compensation, company insurance and various programs. Mrs. Christian said the firm even reimburses her whenever she has out-of-pocket expenses related to treatment of her husband.

Jim Copenhaver, business representative for Local 598 of the International Association of Machinists and Aerospace Workers, said Christian's attitude is not unusual.

"Nobody ever worried about vinyl chloride before," he said. "They thought you could take a bath in it and it wouldn't hurt. And they assumed that the company shouldn't be any smarter in this regard, that the company couldn't have known."

COPENHAVER SAID periodic meetings are held and safeguards have been established, and all employees were involved in a screening program to determine whether they had cancer.

With a few exceptions, the plant record in recent months has been good, Copenhaver said.

Following the screening process and extensive testing during July by Dr. Irving Selikoff of the Mount Sinai School of Medicine, Copenhaver encouraged employees to inform both the company and the union of any detection of cancer.

"But following the tests with the Mount Sinai people, we heard very little about it," he said, suggesting that the three reported cases might be the only victims.

Two are dead, he noted, one dying in 1968 and the other succumbing last July. That leaves only Virgil Christian, who is still fighting for his life in the clinics at Bethesda and banking on a miracle.

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UCC 104941

On Vinyl Chloride

Carbide Uncertain Of Ruling Impact

Carbide South Charleston plant manager Arthur Ryrholm said Wednesday he couldn't comment specifically on how a new vinyl chloride regulation might affect the plant, but added that the cost of meeting safety regulations "are not generally a major factor to staying in business."

The U.S. Environmental Protection Agency issued new regulations Tuesday designed to nearly eliminate vinyl chloride from the air at dozens of chemical plants around the country.

Vinyl chloride is a raw material used at the South Charleston plant in the production of plastics.

...

A WORLDWIDE ALARM developed over vinyl chloride in 1974 as the result of research that indicated workers exposed to the gas for long periods may develop a rare liver cancer called angiosarcoma. Two vinyl chloride workers at the South Charleston plant have died of the disease.

An EPA report issued in 1974 listed a vinyl chloride emissions rate of between 17 and 115 pounds per hour at the South Charleston plant, except during disc failure when emissions were 24,000 pounds per hour for five minutes. The EPA calculated that 4.8 million pounds were released at the South Charleston plant in 1974.

Ryrholm pointed out the plant has made considerable progress in reducing worker exposure to vinyl chloride, and that process improvements have reduced emissions over-all. He described this as a multimillion dollar effort.

During the past year, Ryrholm pointed out, Carbide made 200 tests for vinyl chloride at the plant fence, and that in 90 per cent of the tests, none could be found. In the other 10 per cent of the tests, concentrations were less than one-half part per million.

"In my opinion," added Ryrholm, "these results say Kanawha Valley citizens are not endangered by vinyl chloride emissions."

Baptist Temple Choirs To Present Program

The Baptist Temple choirs, directed by M. Wayne Eich, will present a "Feast of Carols and Lessons" at 5:30 p.m. Sunday in the church sanctuary.

A brass quartet, two pianists and a percussion ensemble will accompany choirs ranging in age from the 5-year-old beginners to adult chancel singers. The evening will conclude with congregational candle lighting in a "Festival of Lights."



Arthur Ryrholm
'Not Endangered'

The 1974 EPA report said some workers who were found to have angiosarcoma had worked in areas where vinyl chloride concentrations were generally less than 12 parts per million.

EPA reported that two people living near a Connecticut polyvinyl chloride fabrication plant contracted the disease.

...

EPA CONCLUDED THAT "it would be wrong to consider vinyl chloride as an isolated situation, but rather it should be viewed as an example of just one of many potential chemical carcinogens which may be present but as yet unidentified as carcinogens."

The regulations announced Tuesday by EPA would require the plastics industry to install \$196 million in new equipment to reduce the chemical by 90 per cent of currently estimated emissions.

EPA administrator Russell Train said four plants, one owned by Occidental Petroleum Co. and three owned by the Janet Corp., have indicated they will close as a result of EPA's plans.

However, Ryrholm said Union Carbide headquarters in New York stated Wednesday that closing the Janet plants is "in no way being considered." Janet is a wholly owned subsidiary of Carbide.

Ed Light of West Virginia-Citizen Action Group said Wednesday he believes vinyl chloride "is only the tip of the iceberg as far as dangerous chemicals going into the air are concerned." Light said he is working on a report on this matter to be released in January.

UCC 104942

Please deliver to E.W. VanDer Aarde,
Public Relations, 4th Floor, NYO

Daily Mail 12/17/75

one exception Prosecutor Danny Cline.

No Reaction From Carbide Officials On New Vinyl Chloride Regulations

Local Union Carbide officials had no immediate reaction today to new Environmental Protection Administration (EPA) standards requiring chemical plants to reduce vinyl chloride emissions by 90 per cent.

The regulations issued Tuesday take effect this month.

At one time Carbide's South Charleston plant, which used vinyl chloride gas produced in Texas to make polyvinyl chloride (PVC) plastic, was one of the largest vinyl chloride plants in the country. Last year, however, the company discontinued its Dynel fiber line, a major PVC user, and use of vinyl chloride at the plant has been reduced.

The only other plant in West Virginia to be affected by the new standards is the Panasote Co. facility in Point Pleasant.

South Charleston manager Arthur Ryrholm said local Carbide officials had not yet seen the new regulations and could not comment upon their impact until the EPA statement was reviewed.

He did say, however, that during the past year Carbide has made 200 tests for vinyl chloride at the plant fence. In 90 per cent of the tests, no vinyl chloride could be detected and in the other 10 per cent the concentrations were less than the one-half part per million considered safe by the Occupational Safety and Health Administration.

Ryrholm also said safety considerations are rarely a factor in Carbide's closing of a particular production unit.

In a statement issued after the EPA's announcement, the president of the Society of the Plastics Industry agreed that "rigorous emissions controls are in the public interest." Ralph L. Harding Jr. disputed, however, the EPA's assertion that vinyl chloride emissions pose a health problem to those living near chemical plants.

Vinyl chloride's link to cancer has been a subject of controversy during the past few years. Researchers have found that workers exposed to the chemical over a long period of time have an unusually high incident of liver cancer. At least three former South Charleston plant employees are known to have contracted the disease.

EPA Administrator said some of the 58 plants affected by the regulations may close rather than attempt compliance. His

agency said \$198 million in new pollution control equipment would be needed.

In his statement, Harding listed plants owned by Occidental Petroleum and a Carbide subsidiary, Janet Corp., as facilities which would be closed by the new regulations. The Janet plants, he said, are located in Torrance, Calif., Tucker, Ga., and Somerset, N.J.

According to the Associated Press, no Carbide plants are scheduled to close.

Ed Light, president of the Citizens Action Group, said today his organization is preparing a study to be released in January that will show vinyl chloride emissions pose a local health problem. CAG also believe that vinyl chloride is only the first of many chemical substances that eventually will be linked to cancer.

UCC 104943

SUBJECT: New EPA Ruling on Vinyl Chloride Emissions

INTRODUCTION: Roy Brassfield

"A chemical called Vinyl Chloride is making the news all over the country. It should be of special interest to Kanawha Valley residents because it is used by Union Carbide at its South Charleston Plant. Bill Wolfson has the story."

WOLFSON: "...What do you intend to do about this problem?"

RYRHOLM: "We don't know what the regulations say. We don't know specifically how they will affect the South Charleston Plant. As soon as I have seen the regulations I will make a judgement as to what we will do."

WOLFSON: "You've told me that Union Carbide has done some listing emissions that come out of the vinyl chloride operations. Tell me about this testing in detail."

RYRHOLM: "We have made something like 200 or more tests - air sample tests - out in the community. The result of the tests indicate to me that the community has no concern about vinyl chloride exposure. For example, 90% of these tests came through with no detectable vinyl chloride. The other 10%, the maximum reading we had was 0.2 ppm and all the other tests were less than that. This 0.2 ppm is well below the present safe level for worker exposure."

WOLFSON: "That brings up an interesting question. What about workers in plants? We've heard from EPA that the most serious hazard in vinyl chloride preparation is to workers inside the plant itself. Do you give physicals to your workers, or how do you handle that problem?"

RYRHOLM: "Six months to a year ago, new regulations came out on exposure to workers in vinyl chloride. They set it up for a period of two years. Effective April 1, 1975, a regulation went into effect that the worker exposure should not be over 1 ppm and at the worker's choice he could expose himself to up to 25 ppm without respiratory equipment. On April 1, 1976, he will then be required to wear respiratory equipment on any exposure above 1 ppm."

CLOSE OF INTERVIEW: WOLFSON

"EPA administrators emphasize that there is no solid proof at this time that people living near plants like this actually developed cancer. But, they say there is such a long period before cancer causing agents can result in the disease - up to 20 years in some cases - that steps must be taken to reduce exposure."

'Hell-Holes' Probe So

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UCC 104945

27 Pct. Of Vinyl Chloride Workers At SC Carbide Plant Show Liver Damage

By THE ASSOCIATED PRESS

A researcher who studied 423 vinyl chloride workers at Union Carbide's South Charleston plant says 27 per cent have apparent liver damage, double the control group.

However, that doesn't necessarily mean the workers will develop cancer, he added.

Dr. Henry Anderson, a research associate at the Environmental Sciences Laboratory of Mount Sinai Medical School in New York, Thursday released the results of tests performed last summer.

The workers were tested after announcements that several workers in chemical plants using the gas have died of a rare type of liver cancer.

Anderson said the 27 per cent figure compares to about 13 per cent abnormalities in a control group. About 16.6 per cent of the vinyl chloride workers had abnormal results in the liver enzyme test and 7 per cent had enlarged livers, both above the national averages, he said.

The liver damage could have resulted from heavy drinking or other things besides the vinyl chloride, he said

UCC 104946

S C. Vinyl Crews' Liver Ills Double Control Groups

By James A. Haught
Investigative Reporter

About 27 per cent of the vinyl chloride workers at the South Charleston Carbide plant have apparent liver damage and 7 per cent have enlarged livers, a national researcher reported Thursday.

But the findings don't necessarily signify ill health, he said, and the cause of the liver conditions can't be attributed entirely to vinyl chloride.

Dr. Henry Anderson, a research associate in the Environmental Sciences Laboratory of Mount Sinai Medical School in New York City, announced the results of tests which were performed last summer on 423 vinyl chloride workers at the South Charleston plant.

THE SCREENING was done as part of

the worldwide precautions that followed discovery of a link between vinyl chloride gas and a rare type of liver cancer. Two South Charleston workers have died of the disease since the late 1960s, and more deaths have been reported in other chemical plants that use the gas to make polyvinyl plastics.

Dr. Anderson said data from the South Charleston tests finally was processed by computer this week and released to the plant and the union. Formal papers will be issued to medical journals and societies later this year, he said.

The researcher listed these findings for the 423 vinyl chloride workers:

- A total of 26.9 per cent had abnormal results on the basic liver function test, compared to about 13 per cent abnormal readings for a "control group" of unexposed persons who were tested.

- A total of 16.6 per cent had abnormal results in a liver enzyme test, which is about double the ratio of abnormal readings for that test usually found in unexposed persons.

- A total of 7 per cent had enlarged livers, which is far above the national average.

Dr. Anderson told the Gazette by telephone from New York that the abnormal findings indicate liver damage or malfunction of some sort, but they don't necessarily mean the workers will develop liver cancer or other ailments. Also, the abnormalities can be the result of heavy drinking, or other factors besides vinyl chloride, he said.

THE MOUNT SINAI research team previously tested vinyl chloride workers at two other plants at Niagra Falls, N.Y., and Midland, Mich. Dr. Anderson said the

South Charleston workers had a lower ratio of enlarged livers than employees of the other plants, but had a slightly higher ratio of abnormal readings on the basic liver function test.

The researcher said a "control group" originally picked in the Charleston area also showed high readings on the tests — but the Mount Sinai team decided the group was poorly chosen and picked another sample of unexposed persons in New York.

Dr. Anderson said Union Carbide Corp. and other chemical firms are working vigorously to reduce the levels of vinyl chloride gas in the breathing area of plant workers, and the health menace is believed to be less severe now. Many of the liver cancer deaths probably stemmed from exposure suffered years ago when contamination levels were much higher, he said.

Of Liver Cancer Screening

Workers Getting Test Results

By James A. Haught
Investigative Reporter

More than 300 vinyl chloride workers at the South Charleston Carbide plant are receiving results of medical tests they underwent last summer in a screening for liver cancer.

National researchers who conducted the tests told the Gazette Friday the findings haven't been consolidated in accurate form, but the Carbide situation appears "about the same, perhaps a little better," than at other vinyl chloride units around the U.S.

THE TESTS were made as part of the worldwide alarm over vinyl chloride, a gas used to make polyvinyl chloride plastic that is utilized in thousands of products. New research last year indicated that workers exposed to the gas for long periods may develop a rare liver cancer called angiosarcoma. Two vinyl chloride workers at the South Charleston plant have died of the disease, and a greater number of deaths have been reported in other plastics plants.

A research team from Mount Sinai Medical School in New York City, led by Dr. Irving Selikoff, came to South Charleston last June and gave a battery of tests to more than 300 workers who had been exposed to vinyl chloride. About 100 others never exposed to the gas also were tested as a "control group."

In August, Dr. Selikoff told the Gazette that preliminary reports on a key liver function test showed irregular findings for about 25 per cent of the exposed workers. But the medical significance of the abnormal readings isn't yet known, he said, and it doesn't mean that all such workers are in danger of developing angiosarcoma.

Friday, Dr. Henry Anderson, an associate of Dr. Selikoff at Mount Sinai, told the Gazette by telephone that personal, individual reports have

been completed and mailed to all the tested workers at their homes. Next, the data from each test will be fed into a computer so a consolidated report on the entire Carbide unit can be obtained. That step will be finished in February, he said.

Dr. Anderson said that, off-hand, an "eyeball estimate" of the South Charleston results he noticed during the processing showed the plant to be "about the same, perhaps a little better," than other vinyl chloride units examined by the Mount Sinai team.

GENERALLY, in other plants, he said, the researchers found about 25 per cent of vinyl chloride workers to have abnormal readings in liver tests, while only about 5 per

cent of the U.S. population tends to register such abnormalities.

Dr. Anderson emphasized that the meaning of the abnormal results is unknown, and many factors including liquor consumption can cause liver irregularities.

The researcher added that no actual tumors were found among the South Charleston workers, whereas some had been discovered during screening at other plants.

Meanwhile, another study at the South Charleston plant has been shelved. Last summer, the Cincinnati office of the National Institute for Occupational Safety and Health (NIOSH) sent a team here to microfilm personnel records so the medical histories of all vinyl chloride workers, past

and present, could be traced.

Thursday, Richard Lemen, chief of medical data at the Cincinnati NIOSH office, said by telephone that the microfilming was halted, pending the outcome of Dr. Selikoff's tests.

Lemen said his staff instead screened personnel at smaller plants in Louisville, Ky., and Pottstown, Pa. Among findings in those two groups of workers was an incidence of brain and lung tumors slightly above the national average.

UCC 104948

Bendix Develops Chloride Tester

RONCEVERTE — The Bendix Corp. Process Instruments Division here has developed a system that can measure individual worker exposure to vinyl chloride at levels as low as 50 parts per billion, well below federal standards of 1 part per million.

The system consists of a small sample collector column, a connecting sample pump, a flasher assembly and a gas chromatograph, explained Dr. D.N. Campbell, division general manager.

A worker wears only the first two items — the collector column on his collar and the

sample pump on his belt. The flasher assembly, which is connected to the gas chromatograph, is used by an analyst to test samples.

"A major drawback of existing personnel monitoring methods is that samples are collected in charcoal packed glass tubes that have to be broken for the desorption process," Campbell said. "Often volatile and highly toxic carbon disulfide is applied to the charcoal to isolate the sample for injection into the chromatograph."

The Bendix system avoids these drawbacks with the use of a corrosion resistant steel tube packed with modified charcoal that doesn't require any diluting reagent for desorption, he said.

The Personnel Monitoring System is the latest in a family of health and safety systems developed by Bendix to measure vinyl chloride and other organic vapors in the workplace.

The company's address is P.O. Drawer 477, Roncerverte 24970.

Chloride Law Called Impossible

Union Carbide said Wednesday that it is technologically impossible to keep vinyl chloride emissions in the one to five parts per million (ppm) range required by new federal standards.

Carbide has joined other major plastics producers in asking the U.S. Second Circuit Court of Appeals in New York to review standards promulgated last week by the Occupational Safety and Health Administration (OSHA).

The South Charleston plant has three production units affected by the new regulations, officials explained. The units convert vinyl chloride gas into polyvinyl chloride plastic and it employs about 150 workers.

Another 200 jobs in support maintenance are at stake, they said. The regulations affect other Carbide units in Texas City, Tex., Bound Brook, N.Y., and Ottawa, Ill.

Officials said the corporation doesn't think it's necessary for employees to wear respirators as required by the new standards. Respirators tend to affect the vision of workers and create hazards in the workplace.

Temporary standards limiting emissions to 50 ppm have been found safe, Carbide said. The rare cancer of the liver attributed to vinyl chloride occurred years ago under less protective standards.

UCC 104950

Vinyl Chloride Rule Suit Filed

Union Carbide has joined forces with other major plastics producers to seek a court review of the Occupational Safety and Health Administration's new standard on vinyl chloride emissions.

The company has filed suit asking the U. S. Second Circuit Court of Appeals in New York to review the new standard scheduled for implementation Jan. 1.

In a statement released today, the company termed the vinyl chloride standard promulgated last week "highly restrictive." It is "technologically impossible" to keep vinyl chloride emissions in the one to five parts per million range required by the new regulation, Carbide said.

The South Charleston plant is one of two Carbide facilities affected by the new standard. Locally 150 workers are employed in the three production units which convert vinyl chloride gas into polyvinyl chloride (PVC) plastic. If these three units are forced to close, however, more than 200 additional jobs would be lost in support and maintenance units and in departments which utilize the PVC output, Carbide officials said.

If the court review of the OSHA standard extends beyond Jan. 1, Carbide and the other plastics companies

which have brought suit are expected to ask the court for an injunction that would prevent enforcement of the regulation.

Since April the industry has been operating under a temporary standard limiting emissions to 50 part per million. Carbide will continue to regard that level as normative, officials said, since there is no evidence that vinyl chloride's cancer causing properties are operative at such low concentrations.

If companies continue production in plants which do not meet the new standard they are required to equip all employees with respirators. Carbide officials said the widespread use of respirators would prove unworkable.

UCC 104951

Carbide Withholds Reaction On Vinyl Chloride Standards

Union Carbide wants to see the whole set of standards on vinyl chloride made permanent by the Occupation Safety and Health Administration (OSHA) before commenting on the matter, a spokesman for the South Charleston plant said Wednesday.

But in other reaction to the standards, the Society of Plastics Industry (SPI) has taken the question to court and has been joined in the suit by at least two other

chemical companies.

...
OSHA MADE PERMANENT Tuesday standards that go into effect Jan. 1 requiring exposure levels of vinyl chloride to average no more than one part per million (ppm) over an eight-hour period. But short-term variances will be allowed so long as the exposure levels average no more than five ppm during any 15 minute period.

Vinyl chloride is blamed for the rare liver cancer of angiosarcoma, which has held

responsible for the death of two Carbide employees who worked in the vinyl chloride unit at the South Charleston plant.

The plant spokesman said the new standards cover 80 to 80 pages and Carbide officials want to examine them thoroughly to determine what effect they will have on operations.

Previous reports indicated that about 400 jobs are at stake in the South Charleston operation. In addition, other jobs are affected by operations at B. F. Goodrich Co. and several smaller plants in the state.

...
THE NEW STANDARDS reduce vinyl chloride exposure levels from 50 ppm to 1 ppm.

The osha ruling is inconsistent with recorded facts about the matter, SPI contends in the suit filed in the Second Circuit Court of Appeals in New York. Firestone and Hooker Chemical are parties to the suit against OSHA.

"Evidence presented at OSHA hearings in late June clearly showed the employee deaths from angiosarcoma were a result of conditions existing decades ago and not at today's levels," said Ralph L. Harding, SPI president.

...
"OSHA APPARENTLY relied heavily on animal studies in setting its standards," he added. "This is quite incomprehensible, especially when more relevant human mortality data is available."

Peter Bormann, Carbide's chief of Rubber Works Division, said he was "informed" of the OSHA ruling.

Earlier, he testified during the hearings: "This country survived for nearly two centuries without vinyl chloride and we can survive without it in the future."

VINYL CHLORIDE POLICY STRICT

Job Losses Seen

By RICHARD HAAS
Daily Mail Business Editor

The director of the U.S. Occupational Safety and Health Administration's West Virginia operations said he will have no alternative except strict enforcement of a new vinyl chloride standard even though that policy could produce substantial job loss at several plants in the Mountain State.

Assistant U.S. Labor Secretary John H. Stender announced Tuesday that when

OSHA's permanent vinyl chloride standard goes into effect Jan. 1, exposure levels must average no more than one part per million (ppm) over an eight-hour period. Short-term variances will be allowed under the new standard as long as the exposure levels do not average more than five ppm during any 15-minute period.

Byron Chadwick, director of OSHA operations in West Virginia, said several plants in the state — including Union

Carbide's South Charleston plant — would be affected by the new standard.

Despite a sincere effort on the part of most local industries, he said, they are having difficulty meeting the temporary standard of 50 ppm.

The temporary standard was promulgated in April after medical evidence suggested a strong link between exposure to vinyl chloride and angiosarcoma, a rare form of liver cancer. Two Carbide employees who worked in the

South Charleston plant's vinyl chloride unit are known to have died of the disease.

OSHA officials originally proposed a permanent standard of "no detectable" exposures, and held extensive hearings on this proposal before promulgating the new permanent standard yesterday.

"I've been very impressed with Union Carbide's operation," Chadwick said. "They have real professionals working on this problem. But the fact that we had to cite them for a serious violation of the present standard is evidence of the difficulty they are having controlling this gas."

Chadwick said the continuous gas chromatograph monitoring operation at the South Charleston plant was the most sophisticated he had observed anywhere in the nation.

In addition to the South Charleston plant, where approximately 400 workers are employed in vinyl chloride polymerization, the other major vinyl chloride plant in the state is operated by B. F. Goodrich Co. Several smaller companies also are involved in converting polyvinyl chloride to a variety of plastic objects.

The new OSHA standard calls for fines of up to \$10,000 or six-month prison sentences for those corporate officials who willingly violate the standard.

Officials at Carbide's South Charleston plant said they could not comment on the impact of the new standard until they had an opportunity to review the full text of Stender's remarks.

Other chemicals and plastics industry officials were not so reticent. Todd C. Walker, president of the plastics division of Firestone Tire & Rubber Co., said the new standard "puts the vinyl plastics industry on a collision course with economic disas-

UCC 104953

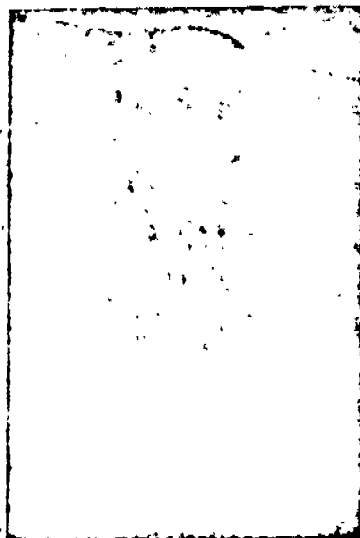
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Harley Richards Gets Pacemaker

United Steelworkers of
America District 23, Sub-
district 2 Director Harley
Richards was taken ill last
month while attending the
USWA international conven-
tion at Atlantic City, N. J.

According to District 23
Assistant Director Summers
Dean, Richards was hospi-
talized for "heart difficul-
ties" after becoming ill Sep-
tember 26.

Physicians recommended
surgery and the installation
of a permanent pacemaker
to regulate his heart
rhythm.

The subsequent operation
was believed to have been
completely successful, and

OSHA Issues New Standards For Vinyl Chloride Emissions

The government has issued a new federal job health
standard sharply limiting worker exposure to deadly vinyl
chloride, which causes liver cancer, that is close to the lim-
itation sought by unions in the basic plastics industry.

International Association of Machinists Local Lodge 598
at the Union Carbide plant in South Charleston has some
400 members who come into
direct contact with the
chemical.

Effective next Jan. 1, em-
ployers will be required to
reduce the exposure level to
no more than one part vinyl
chloride to 1 million parts of
air over an eight-hour peri-
od. The level may not aver-
age more than 5 parts per
million in any 15-minute
period.

Local Lodge 598 Business
Agent James C. Copenhagen
said that two members of his
local had died of angiosar-
coma (a rare type of liver
cancer) since 1968.

The Department of Labor
has certified 19 workers in
the industry have died of
this disease.

The Labor Department
said that although the pre-
cise level of "safe" exposure
to man is unknown, "we can-
not wait until indisputable
answers . . . are available;
because lives of employees
are at stake."

Union Carbide has joined

Appalachian Council Gets DHEW Grant

A grant totaling \$239,740
has been awarded to the
AFL-CIO Appalachian
Council by the Department
of Health, Education and
Welfare to develop a nation-
ally applicable model for
manpower education and
training in the rural areas
of Marion, Monongalia and
Wetzel counties.

Homer Kincaid, director
of the Human Resources De-
velopment Foundation, Inc.,
in Morgantown, said the
project, officially titled the
Rural Manpower Education
and Training Delivery Sys-
tem, will involve the train-
ing of some 25 men and wo-
men from all segments of
the population.

Kincaid said the grant
will be administered in its
Manpower Skill Training

Vinyl Chloride Rule Go-Ahead Given EPA

WASHINGTON — (AP) — The Environmental Protection Agency was given the go ahead Monday to develop an air pollution emission standard for vinyl chloride, recently linked to 25 cases worldwide of a rare liver cancer in workers.

EPA administrator Russell E. Train said the standard applying to 52 vinyl chloride and polyvinyl chloride plants may not be ready for nine months to a year. But he said there is no cause for alarm among the 20,000 to 30,000 persons living close to the plants who are at the highest risk of exposure.

"There is no scientific evidence to indicate that vinyl chloride emissions into the atmosphere pose an imminent hazard to people living near the plants," Train told a news conference.

"It is clear, however," he added, "that some hazard does exist and that our population deserves the protection afforded by regulatory action."

Train said that current technology should be able to eliminate the bulk of the vinyl chloride leaked into the surrounding air and water during the manufacturing process.

He said initial estimates indicate that leakage could be reduced about 75 per cent from the 37 polyvinyl chloride resin plants which discharge more than 50 million pounds, and about 90 per cent from the nation's 15 vinyl chloride plants which now leak in excess of 200 million pounds annually.

The EPA said the emission control procedures could increase the cost of polyvinyl chloride about 4 per cent.

Development of an air pollution control standard was among 19 recommendations made to the EPA by a vinyl chloride task force.

In its report, the task force also recommended that drinking water supplies be monitored for possible vinyl chloride contamination.

Glenn E. Schweitzer, chairman of the task force, said: "We have no reason to believe there is a hazard in the drinking water."

In a spot check of waste water from several vinyl chloride manufacturing plants, the EPA task force found levels generally of two to three parts per million of the toxic chemical but, in one instance, found the level as high as 20 ppm.

Vinyl chloride levels in the air within a half mile of the plants generally averaged less than one ppm, but, in one case, went as high as 33 ppm.

Chloride Hazards Known in '71

(C) *The Washington Post*
WASHINGTON — Evidence collected as early as 1971 that low doses of vinyl chloride caused cancer in laboratory animals, according to an internal technical report by the World Health Organization's International Agency for Research on Cancer.

The researcher isn't identified, but several prominent U.S. cancer scientists believe he is Dr. L.P. Viola, the Italian researcher whose earlier work first alerted the chemical industry to the possible carcinogenic (cancer-causing) effects of high doses of vinyl chloride.

So far, 14 deaths from a rare liver cancer called angiosarcoma have been reported among U.S. chemical workers exposed to vinyl chloride gas, which is the base ingredient for one of the most common plastics, polyvinyl chloride.

The disclosure last Jan. 22 by B.F. Goodrich that three

workers in its Louisville, Ky., plant died of Angiosarcoma led to a crash research program by several federal agencies, including National Institute of Occupational Safety and Health and the Labor Department's Occupational Safety and Health Administration (OSHA).

Consequently, OSHA adopted an emergency standard lowering exposure limits to vinyl chloride, workers from 500 parts per million to 50 parts per million, and NIOSH has recommended a permanent permissible level of zero.

In the wake of these findings, the chemical industry has been sharply criticized by cancer scientists for failing to fully inform either the government or its own plant physicians about the results of European studies showing links to cancer as early as 1971.

"If the latest report means what it seems to mean," said Dr. Irving Selikoff, director of

the Environmental Sciences Laboratory at Mt. Sinai School of Medicine in New York, "then we're nearly four years behind where we should be."

"You don't automatically assume that animal studies are conclusive, but the industry should have at least notified their own doctors," he added.

"It's inexcusable that they didn't tell the government," said Dr. Sidney Wolfe, director of the Nader-sponsored Health Research Group.

"It would have been appropriate for them to tell us about the European studies as soon as they knew," added a NIOSH scientist.

ACCORDING TO the Manufacturing Chemists Assn., the principal industry trade association, the MCA invited Dr. Viola to discuss his study with U.S. industry representatives in May 1971. The preliminary

studies showed vinyl chloride was carcinogenic at levels of 30,000 parts per million.

By November 1971, the MCA was aware that concentrations of 5,000 parts per million "and perhaps less" also could cause tumors in laboratory animals.

According to the latest World Health Organization (WHO) report, which summarizes a meeting held last June, a laboratory in Italy during that period — presumably Dr. Viola's — was also finding that concentrations as low as 500 parts per million could cause tumors, including an-

giosarcomas of the liver. Those results have not yet been published.

Subsequently, the European chemical industry sponsored another series of experiments by a second Italian scientist, Dr. Cesare Maltoni. The U.S. Manufacturing Chemists Assn. learned of Dr. Maltoni's studies in late 1972. Those studies showed that animal tumors could be produced at concentrations as low as 250 parts per million, or half the permissible exposure levels for workers in the United States.

Only after B.F. Goodrich reported that its Louisville plant physician, Dr. John Creech, independently discovered three cases of angiosarcoma

Thurs., Sept. 5, 1974 The

did the trade association fully reveal the Maltoni findings to NIOSH officials. Even at that point, according to NIOSH sources, the MCA asked NIOSH to keep the findings secret.

Dr. Maurice Johnson, Goodrich's medical director, confirms that he knew about the

Maltoni study, but said that he saw no need to notify the company's plant physicians. "It was by no means a finished study," he said.

When Goodrich's Dr. Creech found the third case of angiosarcoma among plant workers, Dr. Johnson said, "that was the clincher."

THIS CLIPPING FROM:
THE CHARLESTON GAZETTE

DATE 9-5-74 PAGE 3/3

THE CLIPPING FROM:

THE CHARLESTON DAILY MAIL

DATE 8-24-74 PAGE 2A

Union Considers Goodrich Lawsuit On Vinyl Chloride

LOUISVILLE, Ky. (AP) — Members of the Synthetic Rubber Workers union at the B. F. Goodrich Chemical Co. here are considering legal action against the firm to protect some workers from exposure to vinyl chloride.

Members of Synthetic Rubber Workers Local 72, representing about 800 of Goodrich's 1,100 workers, voted this week to direct their union leadership to pursue the action.

The union is seeking furloughs with full pay for about 20 workers until it is determined that continued exposure is not harmful to the men's livers.

Six former Goodrich workers in Louisville have died of angiosarcoma, a rare cancer liver, believed to be linked to exposure to vinyl chloride.

UCC 104957

DATE 8-24-74 PAGE 6A

Louisville Goodrich Plant

Union Eyes Suit On Vinyl Chloride

LOUISVILLE, Ky. (AP) — The largest union at the B. F. Goodrich Chemical Co. is considering seeking legal action against the firm to protect some workers from exposure to vinyl chloride.

Members of Synthetic Rubber Workers Local 72, representing about 800 of Goodrich's 1,100 workers, voted this week to direct their union leadership to pursue the action.

The union is seeking furloughs for about 20 workers until it is determined that continued exposure is not harmful to the men's livers.

The 20 have been transferred from their regular jobs because of exposure to the chemical and have been placed at other work sites at the plant. Tests showed the

men had some sort of liver disorder, although the disorders may be unrelated to exposure to the chemical.

Union President Rudolph Kaelin Sr. said he has talked with an attorney about the matter of furloughs for the men.

The company declined immediate comment.

Goodrich already has furloughed eight workers who it said showed signs of "liver changes." Those furloughs will be effective until it is determined whether exposure to vinyl chloride is harmful to their conditions.

Six former Goodrich workers in Louisville have died of angiosarcoma, a rare cancer liver, believed to be linked to exposure to vinyl chloride.

UCC 104958

Plant Found Air Safe

Carbide Confirms Citation

A federal citation has been issued against the South Charleston Carbide plant in the vinyl chloride alarm, the plant manager confirmed Tuesday — but he said Carbide is prepared to contradict the government findings.

Manager Arthur Ryrholm said the Charleston office of the U.S. Occupational Safety and Health Administration (OSHA) informed him Tuesday that a violation notice has been mailed to the plant.

Other sources say the notice alleges that OSHA measured vinyl chloride gas in the breathing area of some Carbide workers and found readings above 50 parts per million. The government has set an emergency limit of 50 ppm for vinyl chloride contamination of air in plastics plants, because new research indicates the gas may cause a rare liver cancer.

...

RYRHOLM SAID Carbide's own medical technicians took air samples alongside the OSHA examiners during the test period and found the air safe. Of seven samples, the manager said, Carbide found six readings below the 50 ppm. The seventh reading, which exceeded 50 ppm, was in

the work area of employees who wear special breathing masks and are safe from surrounding air, he added.

Ryrholm said federal agencies have approved Carbide's testing equipment and methods as among the finest available. Plant executives intend to meet with OSHA officials, "discuss testing methods" and hopefully resolve the disputed figures, he said.

The manager was asked whether, if OSHA doesn't withdraw the violation citation, the plant will appeal it. Ryrholm said Carbide will "take steps" to prove the validity of the company's tests.

A Gazette report Tuesday quoted Dr. Irving Selikoff, a national research leader, as saying "significant abnormalities" were found in liver test results for about one-fourth of a group of South Charleston Carbide workers examined in June.

Plant manager Ryrholm said his staff called Dr. Selikoff in New York Tuesday to discuss the preliminary findings. Ryrholm quoted the researcher as saying he "doesn't know the significance, if any," of the test results.

...

THE MANAGER said Carbide's own liv-

er tests found no more irregularities among South Charleston vinyl chloride workers than among a sample group of unexposed persons.

Ryrholm said Carbide is awaiting Dr. Selikoff's formal report, and will do everything possible to meet any medical safeguards indicated by the report.

U.S. Citation Appeal Eyed By Carbide

Corporate policy may conflict with the desire for vindication, Union Carbide officials said today in explaining the possible reactions to a safety citation.

The U.S. Occupational Safety and Health Administration has accused the company of violating the vinyl chloride standards of 50 parts per million at its South Charleston plant.

Carbide's normal corporate policy is not to contest OSHA citations, a plant spokesman said, but in this case the company's own measurements indicate it has not violated the standard.

The company took its samples at the same time as the OSHA inspector, the official said.

The new concern over vinyl chloride which has been sparked by the medical findings of a possible link between exposure to the gas and a rare form of liver cancer has produced refinements in detection methods, the Carbide official said. Recently the company was informed that the National Institute of Occupational Safety and Health was attempting to make Carbide's detection methods normative for the industry, he said.

If the company feels that an appeal may lead to standardized vinyl chloride detection techniques it may decide to contest the citation, he said.

UCC 104960

ON VINYL CHLORIDE

Carbide Unable To Verify Study

Union Carbide has been unable to verify the preliminary findings of a medical inspection of employes at the South Charleston plant, a company spokesman said today.

Dr. Irving Selikoff of the Mount Sinai Medical School in New York headed the team making that investigation to determine whether employes exposed to vinyl chloride gas showed signs of developing a rare form of liver cancer.

The Charleston Gazette quoted Dr. Selikoff today as saying one-quarter of the workers exposed to the gas showed signs of liver abnormalities.

The plant officials said the company had understood that Dr. Selikoff would not make public any of his findings until Carbide and the International Assn. of Machinists and Aerospace Workers, which represents the plant employes, had been advised of

the conclusions.

Company officials were unable to verify the Gazette's reports today with Dr. Selikoff, he said.

Carbide's own medical tests conducted at the same time as the Mount Sinai study in June also revealed some abnormalities, he said. But the level of abnormalities for the control group which had not been exposed to the gas was the same as that for the vinyl chloride workers, the official said.

The same Charleston Gazette story said the South Charleston plant would be cited by a government agency for failure to observe the vinyl chloride standard of 50 parts per million. Byron Chadwick, West Virginia Director of the U.S. Occupational Safety and Health Administration, who would be responsible for issuing such a citation, said discussion of his agency's findings during a recent plant inspection was "premature."

UCC 104961

...plant, it many oth-
...ent up in a worldwide alarm ver
...chloride, a gaseous chemical used to
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...Several vinyl chloride workers around
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...plant, Dr. Selikoff said his team here in June
...more than 300 Carbide workers
...including a key liver function test.
...It looks as if they're going to be
...very much the same as other companies
...we've tested - no better, no worse," he
...said. "About the same as we found at
...the Dow plant at Midland, Mich., and the
...Goodyear plant at Niagara Falls."

There are "significant liver abnormali-
...ties" in about 25 per cent of workers test-
...ed, Dr. Selikoff said. Unexposed persons
...sometimes have such abnormalities, no
...doubt, but only rarely.

...Dr. Selikoff said his team's official re-
...port on South Charleston won't be finished
...for several weeks. Copies will be sent to
...agencies, and to the plant union, to federal
...said. Also, each tested worker will receive
...a personal report on his own results.
...After Dr. Selikoff's earlier examination
...of the Goodyear plant at Niagara Falls,
...among newspaper articles related disease, high
...long periods. The articles indicated inten-
...sive study is being made to learn if some
...vinyl chloride deaths in the past were mis-
...takenly attributed to other causes.

...Dr. Selikoff added that his team also
...found "deviations from normal in brea-
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...sults.
...The lung findings have no apparent con-
...nection to the liver findings, he added.

THIS CLIPPING FROM:
THE CHARLESTON GAZETTE
DATE 8-13-74 PAGE 1A

UCC 104962

25% of S. C. Vinyl Workers Affected

By James A. Haught
Investigative Reporter

About one-fifth of workers exposed to vinyl chloride gas at the South Charleston Carbide plant appear to have "significant abnormalities" in liver tests, according to a national research leader who examined the men.

Irving J. Selikoff of Mount Sinai Medical School in New York City told the Gazette Monday the Carbide situation is "no better, no worse" than in other plastics plants his research team has visited.

Meanwhile, a federal agency reportedly has measured vinyl chloride in the South Charleston plant and found it stronger than the level of 50 parts per million allowed by government health regulations.

A knowledgeable source said Monday a violation notice is being prepared against the plant.

The Carbide plant, like many other plastics plants around the U.S., have been caught up in a worldwide alarm over vinyl chloride, a gaseous chemical used to make polyvinyl chloride, a plastic utilized in thousands of products. New research this year indicates that prolonged exposure to the gas may cause a rare type of liver cancer called angiosarcoma.

Several vinyl chloride workers around

the plant have died of angiosarcoma. A South Charleston Carbide employee succumbed to it July 4. Another died in the plant.

The U.S. Labor Department has imposed an emergency limit of 50 parts per million on fumes breathed by plant workers, and has caused an uproar in the industry by proposing a zero limit.

Two federal agencies have been analyzing the South Charleston plant, Dr. Selikoff brought a research team here in June and tested more than 300 Carbide workers.

Telephoned in New York Monday, Dr. Selikoff said his staff has received preliminary results from some of the lab tests, including a key liver function test.

It looks as if they're going to be very much the same as other companies we've tested — no better, no worse," he said. "About the same as we found at the Dow plant at Midland, Mich., and the Goodyear plant at Niagara Falls."

There are "significant liver abnormalities" in about 25 per cent of workers tested, Dr. Selikoff said. Unexposed persons sometimes have such abnormalities, no noted, but only rarely.

The researcher said the significance of the "variations" in the liver results still isn't fully understood, so clearcut answers can't be known yet.

Dr. Selikoff added that his team also found "deviations from normal in breathing tests" on the South Charleston workers. None of the men complained of breathing problems, he said, but "changes in lung function" showed up in the test results.

The lung findings have no apparent connection to the liver findings, he added.

Dr. Selikoff said his team's official report on South Charleston won't be finished for several weeks. Copies will be sent to Carbide, to the plant union, to federal agencies, and to scientific journals he said. Also, each tested worker will receive a personal report on his own results.

After Dr. Selikoff's earlier examination of the Goodyear plant at Niagara Falls, newspaper articles said his team found "vinyl chloride related disease" high among workers who had been exposed for long periods. The articles indicated intensive study is being made to learn if some vinyl chloride deaths in the past were mistakenly attributed to other causes.

THIS CLIPPING FROM:
THE CHARLESTON GAZETTE

DATE 8-13-74 PAGE 1A

UCC 104963

Vinyl Chloride Plans Disputed

By Daniel F. West
Gazette Correspondent

WASHINGTON — The Union Carbide Corp. has issued a formal statement disputing proposed government standards for handling vinyl chloride, an industrial gas which has been linked to two deaths at the South Charleston Carbide plant.

Labor Department occupational safety authorities this spring proposed a ruling which would bar chemical firms from exposing workers to any "detectable" amount of the substance.

Industry representatives were invited to testify on the ruling in late June. Carbide officials did not appear at the hearings, but submitted their written testimony one day before the July 31 deadline.

Carbide followed the lead of numerous other firms, contending there is no medical evidence to justify the proposed standards.

Vinyl chloride, a raw material used in the manufacture of a wide variety of plastic products, is thought to be responsible for 21 worldwide cases of a rare, invariably fatal liver cancer, angiosarcoma.

FEDERAL health officials have scaled down permissible levels of vinyl chloride twice this year, both times in response to new medical evidence supporting the cancer link.

An emergency standard of 50 parts per million (ppm) is currently in effect. But U.S. and European researchers consistently have detected liver cancer in test animals exposed to less than 50 ppm.

The Carbide statement suggests that medical studies on rats and mice "must be far from conclusive." The testimony concluded that the disease has resulted "only from long exposure at concentrations significantly higher than existing in plant operations."

In fact, the two South Charleston workers who recently died were exposed to "medium-high" concentrations for an average of 21 years.

However, doctors at the National Cancer Institute have said that angiosarcoma often has a latency period of 15 years and that by the time it is detected the patient is in

terminal stages of the disease.

These findings have led some members of the cancer research community to conclude that hundreds, possibly thousands of plastics industry workers are infected and don't know it.

While accepting the emergency regulation, Carbide officials contend that the "no detectable level" standard cannot possibly be met through the application of any technology known today, regardless of cost.

A Labor Department environmental impact study released days before the hearings opened stated flatly that "promulgation of the proposed standard will not stop vinyl chloride production and use."

The study conceded that production would be curtailed in some plants, but that federal loans would be made available to companies needing new equipment to meet the standards.

Dow Chemical Corp. bolstered the government position during the month-long hear-

ings. A spokesman for the chemical giant said that Dow had dealt with vinyl chloride effectively for 20 years and that they would offer conversion assistance to any firm that asked.

Another industry leader, Tenneco, took the opposite position. Tenneco vice president Joseph Fath predicted that — if at all possible — the conversions to reach safety levels five times that proposed would take two to three years and \$10 million per plant.

...

OFFICIALS for Union Carbide said they subscribe to the majority position in the indus-

try: by 1976 levels can be lowered to 25 ppm, and further reductions to 10 ppm can be reached by 1977.

Their 100-page statement apparently caused some divisiveness among corporate executives. One source told the Gazette: "It's not a time when 'stonewalling' is looked upon favorably... and some thought we could have taken a more conciliatory line."

By law, the Labor Department must decide on a permanent standard by this September. Officials there have told newsmen that the Dow testimony would have great bearing on their decision.

UCC 104964

General Hospital, Ru-

Miller — Service will 10 a.m. in Parsons with the Rev. Ron- g Burial will be in ends may call today funeral home. Mrs. Wednesday in Jackson long illness.

— Service will be n Packville Free- the Rev. Kenma d will be in Wil- Friends may call y Funeral Home, aggests memorials fr. Richmond, 90, day in Charleston short illness.

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Engineer Says Carbide Can Meet Standards By EPA

A Union Carbide engineer said the company should have no problems meeting stiffened Environmental Protection Agency standards for vinyl chloride emissions.

The federal agency changed the allowable emissions from 10 parts per million to five as a settlement of a lawsuit against EPA filed by the citizen group Environmental Defense Fund.

The chemical is suspected of causing cancer and birth defects.

"Based on our current plans for abatement of emissions, assuming EPA approves our compliance plan, we should have no trouble meeting 5 parts per million well before it becomes required," said Nick Wheeler of Carbide.

The settlement awaits the approval of the U.S. Court of Appeals.

When that comes through polluters will have three years to cut emissions to five million, and the EPA indicated it has agreed to aim toward eventual zero emissions.

Japan Fire Kills 4

KITAKYUSHU, Japan (AP) — A fire to burn dead weeds on a scenic hill to prepare for the spring tourist season got out of control Friday, killing four firemen and seriously injuring two others, police reported. Police said the tragedy occurred during the seasonal weed-burning on Higaodai Hill in the Kitakyushu national park in southern Japan.

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Fined \$100 was: Marvin R. Davis, 706 Morris Street in Charleston, stealing two packs of cigarettes from Kroger on Smith Street.

Bond was forfeited for: Roberta Anne Endicott from Cannelton W. Va., stealing merchandise valued at \$2.78 from K Mart in Kanawha City; and Katherine Cremeans, 316 Gap View Drive in Charleston, stealing candy valued at 87 cents from K Mart on MacCorkle Avenue.

A 30-day sentence was set for Deborah Knapp, address unknown, stealing \$9.91 worth of merchandise from Kroger on Smith Street, second offense.

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Cleanderin	548-5664	Hurricane	562-9487	Richwood	
Crab Orchard	253-1893	Oak Hill			

UCC 104965

GAZETTE
7/24/74
PAGE 1

S. C. Worker's Cancer Death Fuels Vinyl Chloride Probe

By James A. Haught
Investigative Reporter

Another worker of the South Charleston Union Carbide plant has died of a rare type of liver cancer, and a massive federal study of possible vinyl chloride danger at the plant is proceeding.

Records of 42,000 persons who have worked at the plant since the 1930s are being traced in a search for cases of angiosarcoma, the unusual cancer believed caused by vinyl chloride fumes, a federal official said Tuesday.

Richard Lemen, chief of medical data at

the Cincinnati office of the National Institute for Occupational Safety and Health (NIOSH), told the Gazette the research is "a monumental task" and "the projected date for completion is December — although we may have to extend it."

The South Charleston study is only part of an intensive investigation being made at several vinyl plastics plants around the nation in the wake of a worldwide angiosarcoma alarm. Lemen indicated.

HE SAID HIS entire staff of 15 was assigned to microfilm personnel records of the South Charleston plant, back to the time in the 1930s when the plant began working with vinyl plastics. Of 42,000 employees involved, Lemen said, his staff will sort out those who worked in areas exposed to vinyl chloride, then trace the medical histories of all, living and dead.

Lemen said his staff temporarily shelved the South Charleston research and began working on records of smaller vinyl plants at Louisville, Ky., Ashtabula, Ohio, and Pottstown, Pa. Only about 1,500 workers are involved in the three smaller plants, he said, so the researchers hope to find "quick answers." Work on the South

Charleston research will resume in September, he said.

The angiosarcoma alarm centers upon plants which convert vinyl chloride monomer into polyvinyl chloride, a common plastic used in phonograph records, garden hoses, electrical wire coatings, Dynel fabric, floor tile and the like.

Fumes created in the conversion process and breathed by plant workers are suspected of causing the rare liver cancer as late as 15 to 20 years after exposure.

(Please Turn to Page 3A, Col. 6)

S. C. Worker's Death Fuels Chloride Probe

Also, other workers such as floor tile installers, who apply heat or pressure to finished polyvinyl chloride products, are believed to encounter

From Page One

was proposed. Congressional hearings were held in Washington this month on the suggested zero level.

Executives of the South

DAILY MAIL 7/24/74

PAGE 1-C

Liver Cancer Death Spurs Vinyl Chloride Checkups

An autopsy has confirmed that a second worker at Union Carbide's South Charleston plant suspected of having angiosarcoma died of the disease, company officials said today.

Earlier this year federal health officials launched an extensive investigation into the link between vinyl chloride and angiosarcoma, a rare form of liver cancer, after

Carbide and other plastics producers reported that some of their workers who had been exposed to the chemical had contracted the disease.

Previously officials at the South Charleston plant said that one vinyl chloride worker died of angiosarcoma in the late 60's and that another worker was suspected of having the disease. Today a plant spokesman said an autopsy performed on Richard Clendenin, 52, of Dunbar who died July 4, revealed that he had the disease. Clendenin was employed in vinyl chloride production from 1944 to 1969, but had worked for the past five years in specialty resins, the official said.

At the request of the company and the International Association of Machinists and Aerospace Workers, the union representing South Charleston plant workers, Dr. Irving Selikoff of Mount Sinai Medical School in New York examined 400 plant employees in June. Analysis of the tests made is expected to be completed next month.

UCC 104967

Tougher Vinyl Chloride Rules Are Goal By Fall as Labor Agency Ends Hearings

By a WALL STREET JOURNAL Staff Reporter

WASHINGTON—Labor Department officials said they hope to issue new, tougher standards for handling vinyl chloride by Oct. 5, when the current temporary standard expires.

The department yesterday completed nine days of hearings on the proposed standard barring exposing workers to any "detectable" amount of the chemical. The hearings consisted mainly of plastics industry testimony asserting the proposed standard would be impossible to meet and would lose down much of the industry.

But the hearings ended on a surprising note when an official of Merck & Co.'s Calgon Corp. described laboratory work showing that vinyl chloride gas can be totally removed from air by filtering it through activated carbon, which Calgon makes. It can be recovered and reused.

However, other industry officials at the hearing insisted that the findings didn't nec-

essarily show how the technique could be used in an industrial plant, or how expensive it would be to install.

The Labor Department in April issued a temporary standard cutting vinyl chloride exposure to 50 parts per million in the air, responding to evidence that exposure can cause cancer.

Daniel P. Boyd, director of the Office of Standards Development for the department's Occupational Safety and Health Administration, said the evidence at the hearings indicates a standard of 25 parts per million can be met "across the industry." He said the actual standard would be "somewhere between zero and 25." A "no detectable" level would be about one part per million.

"There isn't any likelihood in my mind," he added, "that we're going to put the industry out of business."

Forty-four groups of witnesses from industry and labor appeared at the hearings.

Senate Votes to End 'No-Knock' Raids On Suspects by Federal Narcotics Agents

By a WALL STREET JOURNAL Staff Reporter

WASHINGTON—Some of the Nixon administration's early law-and-order legislative victories are showing signs of erosion in Congress.

By a heavy margin of 84 to 31, the Senate yesterday voted to end "no-knock" raids on suspects by federal narcotics agents. After sharp debate in 1970, Congress had agreed letting agents get special no-knock search warrants allowing them to break into dwelling without first identifying themselves.

Repeal of that provision was added by Senate as an amendment to a drug-prevention bill. If the House concurs, authority for no-knock warrants would be repealed immediately.

Wednesday, the Senate Judiciary

Committee unanimously approved a "speedy trial" bill aimed at cutting down delays in the federal court system. Sponsored by Sen. Sam Ervin (D., N.C.) the bill ultimately would require a defendant's federal court trial to start within three months after his arrest. Currently, trial delays run more than a year in some federal court districts. The Justice Department had resisted Sen. Ervin's schedule of prosecution deadlines, but its opposition has faded.

Sen. Ervin regards his speedy trial bill as a preferred alternative to preventive detention, or jailing without bond, of suspects who might commit violent crimes before their original trials begin. In his first term, President Nixon pushed for a national preventive detention law for all federal jurisdictions. Sen. Ervin has blocked that, but in 1971 Congress authorized preventive detention for suspects in the District of Columbia alone.

Both no-knock drug searches and preventive detention in Washington have been little used in actual practice, but they were symbols of the administration's early promises to get tough with criminals. Since 1970 there have been several highly publicized incidents of drug agents and policemen, with or without no-knock warrants, breaking into the wrong houses and terrorizing the occupants.

One lawmaker who supported the original 1970 bill, Sen. Robert Taft (R. Ohio), explained his switch yesterday by complaining that no-knock searches have "increased the chances that the officer or someone inside the dwelling entered had a greater probability of being killed or wounded if officers burst into a home of an accused without prior notice."

Week's Auto Output Trail '73 by 21%, for Holiday Period

By a WALL STREET JOURNAL Staff Reporter

DETROIT — U.S. auto makers plan to make 227 cars in their domestic plants this week, about 21% below year-ago production but almost 20% above last week, which was shortened by the Fourth of July holiday.

Total production last week totaled 114,000, down from the year-ago week's output at 140,000.

General Motors Corp. said it reached a tentative agreement Wednesday night with workers at its Kansas City assembly plant.

Who's News New York Magazine Changes Top Posts At The Village Voice

By a WALL STREET JOURNAL Staff Reporter

NEW YORK — New York Magazine Co. has changed the top editorial and business posts at its newly acquired publication, The Village Voice.

The company, which also publishes New York Magazine, said Ross Wetzsteon, who has changed the top editorial and business posts at its newly acquired publication, The Village Voice, would assume day-to-day responsibility for the editorial direction of the paper. He will take over these responsibilities from Daniel Wolf who had been editor. New York Magazine Co. said Mr. Wolf has been asked to serve as a consultant, but it didn't say whether he had agreed to do so.

The company also said Bartie Bull, president of The Village Voice Inc., the operating company that produces the paper, would be responsible for the paper's business affairs. Edwin Fancher, who had been publisher, also has been asked to serve as a consultant. Mr. Fancher, who is a practicing psychologist, didn't indicate whether he would do so.

Some staff members of the Voice said they saw Mr. Wolf's replacement as editor as an indication that Clay S. Felker, president of New York Magazine Co. and editor and publisher of New York, was moving to consolidate his control over the Voice. At the time of its acquisition last month, the Voice was promised continued editorial independence.

But staff members said they felt such independence could be guaranteed only in a statement of support for Mr. Wolf by Mr. Felker. Mr. Wolf's contract as editor was due to expire Dec. 31, one staff member said. Voice staff members, with one exception, passed a resolution last month asking that Mr. Wolf be guaranteed his job as editor.

Staff members declined, however, to cast Mr. Wetzsteon as a "bad guy." Mr. Wetzsteon, said one, was admired for his fairness.

U.S. Banknote Appoints Edward B. Ory President

NEW YORK—U.S. Banknote Corp. said Edward B. Ory was elected president and a director. As president he will succeed Fred R. Esty, who remains chairman and chief executive.

Mr. Ory, 48 years old, joined the company about four months ago as executive vice president. He previously owned his own investment advisory concern, Edward B. Ory & Co. U.S. Banknote, which had a net loss last year of \$4.1 million on sales of \$21.2 million, produces stock and bond certificates and is engaged in financial printing.

Commerce and Industry J. P. Stevens & Co. (New York)—Thomas B. Price was named a corporate group vice president of this diversified textile concern with operations in

Arctic Sees Little Return

By a WALL STREET JOURNAL Staff Reporter

Enterprises Inc. in 1975, ending, to return to pre-C. Penn, pre-C. Penn didn't exist.

In fiscal 1977 had losses from \$3.2 million an operations of \$1.2 million of \$8.2 million operations of \$8.2 million.

Mr. Penn said in fiscal 1975 is short-term debt production, sale: 1976. The company, but still snowmobiles du season as it did t

"It appears to be stabilized through territories," Mr.

UCC 104968

Daily Mail Business

OSHA HEARINGS

Dow Details Chloride Fight

By DANIEL F. WEST
For The Daily Mail

WASHINGTON — Swamped by a flood of undigested testimony, lawyers for the Occupational Safety and Health Administration (OSHA) have called a recess in their hearings into safe job site levels of vinyl chloride, a substance widely used in the plastics industry which is now thought to be cancer-causing.

OSHA has proposed that the gas (it is used at the South Charleston Union Carbide plant) not be present in detectable amounts. The chemical industry has sought to underline the flimsiness of the cancer connection and stated that reducing the levels would be technically impossible.

The hearings progressed leisurely throughout most of last week — nearly 90 witnesses were scheduled to speak, but by the time recess was ordered only the top 12 on the list had been heard.

Respective arguments were unfolding as expected and until late Friday afternoon few eyebrows had been raised. Then the Dow Chemical Co.

took the stand. To the surprise of many of their industry peers, spokesmen for Dow detailed how they had fought the vinyl chloride emission problem and won.

Physicians for Dow, admitting that exposure to the gas at levels of half the former federal minimum "definitely increases the risk of malignancy", said that none of their workers had contracted the rare form of liver cancer associated with the chemical.

In four hours of testimony, the firm's officials went a long way in destroying the carefully orchestrated arguments of those who had preceded them. In the words of one smiling OSHA official, "The week seems to have ended on an up note."

Labor Department lawyers later said the Dow statement, which cited specific safety steps in their manufacturing process, gave evidence to those who claim that a majority of the plastics industry had been exaggerating the difficulties of reducing leaks.

Before April 5, the government had allowed 500 parts per million (ppm) in factories. Following the release of

European studies which linked the gas to cancer, the level was scaled down to 250 ppm. And when U.S. researchers collaborated the earlier studies, federal authorities further reduced the allowable level of 50 ppm.

Only a week prior to the beginning of the hearings, the Environmental Protection Agency (EPA) made public the first cases of people who developed the liver cancer because they lived near plants which used vinyl chloride.

Although this study pointed to only two deaths — both occurring occurring neighborhoods near two Connecticut plastics plants — the revelation was a setback to those who had maintained that relatively insignificant levels of the gas were not harmful.

In addition, the EPA study listed two more chemical workers who lived and worked in the same area and who have recently died of the disease. The two most recent deaths are noteworthy because they are the first not involving plants where the raw chemical was being produced.

Health officials have said that approximately 6 per cent of the total U.S. output of vinyl chloride escapes into the atmosphere each year, most through smokestacks. The EPA has issued a stern warning to the industry that it should take immediate steps to reduce neighborhood exposure to the lowest possible levels.

The industry, during the first round of testimony, offered a counter proposal. Instead of barring any detectable levels, they suggest a gradual decrease of the noxious gas — starting with 40 ppm this year and decreasing to 25 ppm by 1976.

UCC 104969

Nader Group Asks Ban On Aerosol Chemical

WASHINGTON (AP) — Ralph Nader's Health Research Group asked the federal government Thursday to ban the use of vinyl chloride in aerosolized cosmetics, pesticides and other household products.

Several cases of a rare liver cancer have been found among vinyl chloride workers in a B. F. Goodrich Co. chemical plant in Louisville, Ky., and in a plant operated by the Goodyear Tire & Rubber Co.

in Niagara Falls.

Vinyl chloride is a basic chemical in the plastics industry and the foundation for hundreds of consumer products.

Dr. Sidney M. Wolfe, director of the research group, said a significant amount of vinyl chloride is used as a propellant in aerosol containers.

Wolfe told a Senate Health subcommittee that a source in the cosmetic industry in-

formed him that vinyl chloride is going into such cosmetic aerosols as hairsprays.

"Beauty parlor operators and consumers are using the vinyl cloud," he said. "This chemical may represent another thalidomide."

He did not identify any product brand names.

The Nader petitions to ban the chemicals in aerosols were sent to the Food and Drug Administration, the Consumer Product Safety Commission and the Environmental Protection Agency.

In letters to the three agency heads, the Nader group asked them to make public the brand names of all aerosol consumer products and cosmetics which contain vinyl chloride as a propellant.



Moore



Hill



Dyer

Employee Changes Told by McJunkin

McJunkin Corp. has made three major personnel changes. President H. B. Wehrle Jr. said Thursday.

Wendell S. Moore, former assistant production manager for Cities Service Oil Co. in Denver, Colo., has been appointed director of marketing of the McJunkin oil and gas division.

Richard Hill, who joined McJunkin in 1968, has been promoted to director of management information systems, and Jack Dyer, a company employee since 1964, has been promoted to manager of sales and the oil and gas division.

Moore, a former Charleston resident, is a graduate of West Virginia University. For the past 33 years, he has been with the Columbia Carbon Co. and Cities Service Oil. He and his wife, the former Mary Lou Bullard, plan to move to Charleston May 1.

Hill, a graduate of Morris Harvey College, lives with his family in Dunbar.

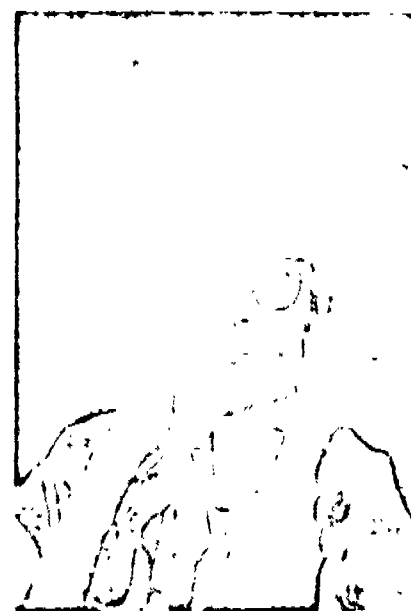
Dyer, a native of Wayne, was an oil and gas drilling contractor and operator before joining McJunkin. Since 1964, he has been top producer several times among the company's 60 salesmen. Wehrle said.

Youth Service Aimed At Expanded Outlets

By Martha Smith
Staff Writer

activities are carried out in the city proper and many who live in outlying neighborhoods

handle at least half the cases now filtered through juvenile courts



EX-CHAMPS Jim Seals left and are chart champs now with a string including "Hummingbird," a "Never Pass This Way Again." They formerly performed in an instrument called "The Champs." Seals and appear at 8 p.m. Monday in the

State Senate Debate UCC 104970

Battle of Sexes Rages Over ERA

Equal Rights Amendment, to be or not to be, that is the question. Women descended on the State Senate in large numbers Thursday to express their opinions and to observe the action.

They came to a hearing on a resolution that would withdraw and annul West Virginia's ratification of the amendment last year.

The amendment is designed to give equal status to women under the U. S. Constitution. Congress has approved it, and 33 states have ratified it. Five more must ratify before the

amendment can go into effect.

At least one state, Nebraska, has rescinded its ratification, but that action is under a cloud of legal doubt. A movement is under way for other states, including West Virginia, to take similar action.

During the hearing, one of the opponents of the West Virginia resolution quoted a telegram from U. S. Sen. Sam Ervin Jr. of North Carolina, saying: "There is no question but that the states have a right to rescind."

The telegram was read by Mrs. Charles Beaver of Huntington, representing a national organization called Happiness of Womanhood.

But Sen. Louise Leonard, R-Jefferson, quoting Rep. Martha Griffiths of Michigan, a champion of women's rights in Congress for 20 years, said there is abundant evidence that withdrawal of ratification by a state is illegal.

Mrs. Leonard cited decisions by Congress and in high courts to the effect that withdrawal of ratification is illegal.

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quarters, Washington, D.C.

17-22, Staff orientation for
reps and general chairmen,
quarters, Washington, D.C.

1-12, Education methods for
staff and local education
members, University of
Birmingham, Ala.

1-26, Arbitration training in-
full-time staff who handle
n, University of California,
Calif.

8-May 3, Collective bargain-
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general chairmen, Cornell
Ithaca, N.Y.

4-May 3, Specialized collec-
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of Machinists rkers

Secretary-Treasurer

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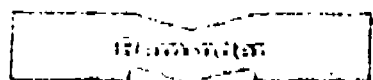
Samuels

Angiosarcoma, a rare liver
cancer, has claimed its fifth
victim at the B. F. Goodrich
Chemical plant in Louisville, Ky.
Revelation of the latest fatality
came in Louisville as the U.S.
Occupational Safety and Health
Administration (OSHA) was con-
ducting public hearings in Wash-
ington, D.C., investigating the
deaths of the first four workers.
All five workers were exposed to
polyvinyl chloride and its vapors
inside the plant.

The disclosure of the fifth
death was accompanied by a re-
port of an angiosarcoma diag-
nosis during recent surgery on a
sixth Goodrich worker. His
chances for survival are reported
slim.

The cases of liver cancer
among Goodrich workers en-
gaged in the production of poly-
vinyl chloride brought more than
25 witnesses to testify at public
hearings in Washington. The
lead-off witness at the day-long
hearing was John O'Neil, chief
of OSHA's health standards divi-
sion. He told the packed confer-
ence, "We are faced with a new
occupational disease. There is no
sense denying it."

A trade union panel of experts
was led by Sheldon Samuels,
health, safety and environmental
affairs director of the AFL-CIO
Industrial Union Department. He
was joined by Dr. Henry Ander-
son, Mount Sinai School of Med-
icine, New York City; Louis
Beliczky, industrial hygienist for
the Rubber Workers; and Dr.



—When you have finished read-
ing your copy of THE MACHINIST,
pass it on to a friend or neighbor.

Five Goodrich plant deaths

OSHA hearing probes occupational cancer

Thomas Mancuso, University of
Pittsburgh's Graduate School of
Public Health. Dr. Mancuso has
been working with IAM mem-
bers in tracing links of certain
forms of cancer to specific jobs.

Samuels acknowledged that the
exposure limits at the Goodrich
plant in Louisville were far more
stringent than the Federal safety
standards. But he pointed out
that even those limits, as well as
the entire monitoring process,
needed tightening. Samuels asked
the Department of Health, Edu-
cation and Welfare and the Labor
Department for immediate action
on an emergency standard for
working with polyvinyl chlorides.

Dr. Mancuso warned of other
industrial diseases among poly-
vinyl chloride workers, some of
which have already been uncov-
ered in Louisville. He listed cir-
rhosis of the liver and other types
of cancer such as skin, bone and
lung.

Dr. Mancuso's warnings were
upheld by testimony from Pro-
fessor Cesare Maltoni of Insti-
tuto Di Oncologia, Bologna, Italy.
Italian researchers, like Dr. Mal-
toni, have found a variety of
cancers occurred in rats exposed
to high levels of vinyl and poly-
vinyl chlorides.

Dr. Mancuso called for a
three-pronged program to investi-
gate links between polyvinyl
chloride and cancer. His recom-
mendations included:

✓ An immediate Government
study, through the National In-
stitute of Occupational Safety
and Health (NIOSH) of the can-
cer potential and other health
risks of working with polyvinyl
chlorides.

✓ An International Research
Committee on Vinyl Chloride
and Cancer be formed to log, in-

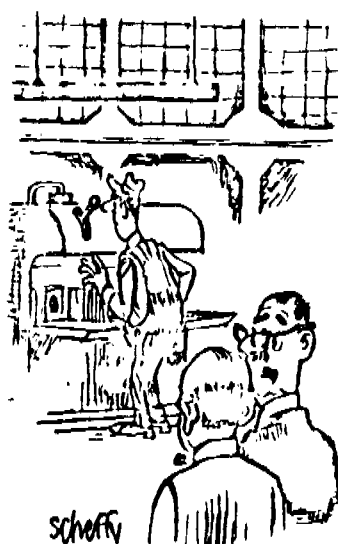
vestigate and inform workers
around the world of potential
hazards. European countries pro-
duce nearly 75% of the world's
vinyl chlorides.

✓ That international trade
unions join with universities and
medical centers to study the can-
cers occurring among union
members and examine the rela-
tionships to their jobs.

Dr. Mancuso told the OSHA
investigators in Washington:

"This situation, the chance re-
cognition of an occupational can-
cer by a unique combination of
circumstances, clearly demon-
strates what is not known about
the carcinogenic potential of
thousands of industrial chemicals
that have been in use for decades
and further focuses attention on
the total absence of a national
concerted study of occupational
cancer in this country."

Needles



"If we give him a raise now,
he'll figure we've been cheating
him."

Eugene Glover, Secretary-Treasurer, International Association of Machinists and Aerospace Workers, 1300 Connecticut Ave., N.W., Wash., D.C. 20036.
Independence Day, Thanksgiving and Christmas. Second-class postage paid at Washington, D.C. Subscription \$4 yearly to non-members.

UCC 104971

Focusing on fabricators

Fear that angiosarcoma, a rare liver cancer, may be an occupational hazard in the polyvinyl chloride fabricating industry was raised this month by two more workers' deaths that were attributed to the disease.

Previously, investigators suspected that the alleged carcinogenicity of vinyl chloride monomer was a danger only to the estimated 6,500 workers employed in VCM or PVC production plants. But word from the Connecticut Health Dept. of the death of a man who worked with PVC insulation for wiring at General Electric's Bridgeport plant and of a clerk in Ross & Roberts' Stratford PVC-coated fabrics plant seemed to indicate that the danger of exposure may also be a problem for hundreds of thousands of employees in the PVC processing industry.

The expanded scope of the carcinogenicity inquiry is likely to be a factor in the Occupational Safety and Health Administration's attempts to set a safe worker exposure level for VCM. OSHA has proposed a "no detectable level" of exposure, reduced from the 50 parts/million standard now in effect.

This week, OSHA is holding hearings in Washington to get reaction to that proposal. Several companies already have said they don't believe such a level can be achieved.

The Society of the Plastics Industry (SPI) last week issued a report, prepared by Arthur D. Little, stating that at least 1.6 million U.S. workers would be out of jobs "if an unrealistic occupational health regulation, limiting worker exposure to vinyl chloride, forces a shutdown of the industry." The cost, in terms of lost sales and production, would eventually amount to at least \$65 billion, according to Little.

Ralph L. Harding, Jr., SPI president, says that technology needed to enable manufacturers to meet the "no detectable level" standard is not feasible. He adds that if such a standard were adopted, "the vinyl chloride and polyvinyl chloride resin producing industries will be forced to close down immediately."

As for using substitute materials for VCM and PVC, Harding adds that many materials that might be considered as PVC substitutes are now in very short supply.

SPI reports that Little is looking into the possibility of using substitute materials on a short-term basis to replace PVC in some applications. Little's analysis will be presented at the OSHA hearings.

Charleston Daily Mail WED. JUNE 26, 1974

STUDY OF VINYL WORKERS SHOWS

Rare Cancer Death Incidence High

WASHINGTON (AP) — A medical study has produced new evidence suggesting a high incidence of death from rare liver cancer among factory employees working with vinyl chloride, a chemical widely used in the plastics industry.

A study of vinyl chloride workers at the Goodyear plant in Niagara Falls, N.Y., found that three of 24 deaths were due to the cancer, angiosarcoma.

Dr. Irving J. Selikoff, director of the Environmental Sciences Laboratory of the Mount Sinai School of Medicine, cited the study. He emphasized the critical importance of reducing the amount of vinyl chloride workers are exposed to, to a "no detectable level" as proposed by the Labor Department.

Selikoff was among dozens of witnesses Tuesday at a hearing on the Labor Department's proposed standards for regulating vinyl chloride use.

Representatives of the Society of the Plastics Industry, a trade association, argued that the medical evidence was too inconclusive to require banning worker exposure to the chemical. They said the proposed regulations are impossible to achieve and would force the industry to close scores of plants with a loss of as many as 2.2 million jobs.

The proposed permanent standard is not technological-feasible and, if adopted, would shut down the industry, warned Anton Vittone,

president of the B. F. Goodrich Chemical Co.

Vittone, representing the plastic industry trade association, proposed a different standard in prepared testimony. His proposal would reduce worker exposure to vinyl chloride from 50 parts per million of air now in force to 10 parts per million, effective October 1977.

But Selikoff argued that "the only prudent course for the prevention of angiosarcoma ... is to provide a work environment with no detectable levels of vinyl chloride."

Dr. Marcus M. Key, director of the National Institute for Occupational Safety and Health, said the finding of 19 cases of angiosarcoma — 13 of them in the United States — among vinyl chloride workers between January and May "indicates that we are observing a newly recognized occupational disease associated with exposure" to vinyl chloride.

He said that previously about 20 to 30 cases of the disease had been reported annually in the United States.

Key also disclosed that within the past two weeks scientists have documented two more liver cancer deaths in men employed at plants using polyvinyl chloride to fabricate other products.

Vinyl chloride, a gas, is used to produce polyvinyl chloride, a white sugary-like material used in the manufacture of most plastics.

100 Charleston Daily Mail WED., JUNE 26, 1974

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HEARINGS ON VINYL CHLORIDE

Restrictions May Cost Jobs

By ROBERT A. DOBKIN
Associated Press Writer
WASHINGTON (AP) — The plastics industry warns that proposed government rules to drastically reduce workers' exposure to a cancer-causing chemical could mean the loss of 1.6 million jobs.

This was one of the points to be made by the industry during a week-long public hearing opening today at the Labor Department.

The department's Occupational Safety and Health Administration has proposed permanent restrictions that would limit air levels of vinyl chloride in plants to less than one part per million, or too small to be detected. The current emergency standard is 50 parts per million.

Vinyl chloride, the foundation for much of the modern plastics industry, is the center of a growing worldwide controversy over its potential health hazard to workers and possibly consumers.

The government imposed the temporary emergency standard after the discovery

earlier this year that exposure to vinyl chloride may be a cause of a rare form of liver cancer known as angiosarcoma.

(Earlier this month Union Carbide officials said enforcement of the proposed OSHA standards would produce a loss of 400 jobs at the South Charleston plant where vinyl chloride monomer is converted into polyvinyl chloride. The resulting plastic also serves as the raw material in the production of Dynel fiber at the plant. One South Charleston plant worker died of angiosarcoma in the late 60s and another worker is in critical condition with the disease.

The B. F. Goodrich Co. disclosed in January that four workers at its vinyl chloride conversion plant in Louisville, Ky., died from the disease. Since then, 20 cases worldwide have been linked to workers at plants where the vinyl chloride gas is produced or converted into polyvinyl chloride.

About 6,500 U.S. workers are involved in making vinyl

chloride and turning it into polyvinyl chloride, a solid plastic used in countless products including paints, pipes, floor tiles, toys, food packaging, phonograph records and clothing.

At first it was thought the danger involved only the workers at the first stage of the manufacturing process but scientists have now turned up evidence indicating that as many as 700,000 workers could be exposed to the danger.

A total of 95 witnesses, representing government, the medical community and the big plastics and chemical manufacturers, have asked to testify at the hearings.

The Society of the Plastics Industry Inc. contends that if the government's proposed "no detectable level" is adopted, scores of plants will be forced to close immediately, resulting in the loss of 1.6 million jobs at a cost to the economy of \$65 billion.

Labor Secretary Peter J. Brennan, in a statement is-

ssued before the hearing, did not comment on the industry's claim of lost jobs.

"The purpose of this hearing this week is to elicit additional information from those in the industry — employers and employees — and others concerning the hazards from exposure to vinyl chloride, the best means of protection and the impact of the proposed standard," Brennan said.

The industry argues that while it favors reducing workers' exposure "to as low a level as possible," the proposed standard is impossible to achieve with today's engineering technology.

Industry sources indicated that the industry will propose an exposure level below the current temporary level of 50 parts per million, but somewhat above the government's proposed zero level.

Chloride Results Private

No public report is planned on the round of tests taken over the weekend by Carbide employes for any effects of vinyl chloride, a chemical associated with a rare cancer of the liver.

Instead, reports on the examinations will be made to the individual employes, a company spokesman said Monday. It will require several weeks to coordinate test results by Carbide physicians and a medical team from Mount Sinai School of Medicine in New York under Dr. Irving J. Selikoff.

About 420 employes were examined, including a number of retired workers and 100 others who had never worked in vinyl chloride but who served as a control group.

The New York team was invited jointly to South Charleston by the company and Local 598 of the International Association of Machinists and Aerospace Workers.

UCC 104976

Examiner Hopeful Industry Can Solve Chloride Problem

By RICHARD HAAS
Daily Mail Business Editor

If the chemical industry cannot reduce the cancer risk to its employees, it should be shut down, the director of a medical team studying workers at Union Carbide's South Charleston plant said Monday.

Dr. Irving Selikoff, director of the Mount Sinai School of Medicine unit which conducted four days of medical tests at the plant, added, however, that he was impressed with the industry efforts being made to reduce worker exposure to vinyl chloride.

Dr. Selikoff's team is one of the leading research groups studying the possible link between exposure to vinyl chloride and angiosarcoma, a rare form of liver cancer. Carbide and the Local 598, International Assn. of Machinists and Aerospace Workers invited the New York group to the plant after concern developed earlier this year over the possible dangers of the chemical. A review of plant medical records revealed that one South Charleston worker died of angiosarcoma in 1968 and one other former employee is seriously ill of a liver disease which has not been definitively diagnosed.

Following a tour of the production units at the plant where vinyl chloride monomer is converted to polyvinyl chloride, Dr. Selikoff said the technical progress made in reducing levels of vinyl chloride in the workplace and the goodwill shown by Carbide were hopeful signs that the problem could be solved.

The South Charleston plant is the fourth major U.S. chemical facility visited by the Mount Sinai team this year, but the clinical data on the effect of vinyl chloride under actual working conditions is very limited. Dr. Selikoff said. Researchers working with laboratory animals have found they can produce the liver tumors associated with angiosarcoma in rats by exposing them to very limited quantities of vinyl chloride, he said.

The problem, he noted, comes in transferring the animal findings to the human situation. "If you ask me what is a safe level of vinyl chloride, I can't answer that," Dr. Selikoff said. "No one can. I can tell you what an unsafe level is, and I can tell you that if you want to be absolutely certain you should eliminate exposure completely, but I can't say whether there is an in-be-

tween level that is safe."

The goal of industry and its government regulators should be to reduce the cancer risk of chemical workers to the same risk level of the population in general. Eliminating the risk completely would be impossible, Dr. Selikoff said, since some cases of angiosarcoma are not linked to vinyl chloride.

Since the adoption of the Occupational Safety and Health Act of 1970 the law of the land has been that industry must

'If you ask me what is a safe level of vinyl chloride, I can't answer that. No one can.'

—Dr. Irving Selikoff

offer its employees a workplace that is free from exposure to accidents and disease, Dr. Selikoff said. If the chemical industry cannot reduce the risk from vinyl chloride, government would be forced to close the affected operations, he said.

Dr. Selikoff rejected the contentions of some chemical industry officials that the cancer risk involved in exposure to vinyl chloride is less than

that associated with cigarette smoking and thus does not warrant strong government action. "The correlation is strong in both cases," he said, "but cigarette smoking is strictly voluntary."

Because widespread use of various chemicals is a fairly recent phenomenon, Dr. Selikoff said he expects other problems similar to the vinyl chloride situation to develop. "Those of us involved in cancer research are asking ourselves: How many other vinyl chlorides should we be looking for?"

If any of the tests conducted on the Carbide workers produce suspicious findings, he said, the workers and their physicians will be encouraged to arrange further testing.

A statistical report which does not reveal names will be sent to both the union and the company, Dr. Selikoff said. If any of the workers tested give their approval more detailed findings will be disclosed to Carbide medical officials, he said.

Editorials

In Emissions Issue, Better Safe Than Sorry

If Union Carbide had been recalcitrant all along on the environmental questions of the day, we would be inclined toward skepticism on the statement of company officials regarding vinyl chloride production.

But however grudgingly the chemicals firm first confronted demands of environmentalists, Union Carbide quickly adjusted to what it recognized as a new way of industrial life.

Compliance with environmental standards soon became the rule rather than the exception, and Union Carbide today is among the most cooperative of industrial concerns on the matter of environmental quality.

We know the Union Carbide plants in the Kanawha Valley have made the most strenuous efforts to comply and we know that on some days, with certain weather conditions prevailing, Union Carbide pro-

duction units have been voluntarily closed down as the alternative to risking emissions of high-level toxicity.

On the other hand, we can well understand the concern with the apparent effects of vinyl chloride. The Occupational Safety and Health Administration, in the belief that exposure to vinyl chloride can cause cancer, has proposed stringent regulations to be effective Aug. 4.

To this, Union Carbide officials say they cannot meet the deadline. At present vinyl chloride is released into the atmosphere only when reactors are cleared and when finished products are drying. This technique permits compliance with the temporary 50-parts-per-million emission standard that has been in effect since April.

The new regulations will require a reduction to a "no detectable level" of emissions. If the requirement cannot be met it will mean a shutdown of vinyl chloride production in the Kanawha Valley and the elimination of many jobs. About 400 persons are employed in the production of the substance, which is converted to a common plastic used in containers, garden hose, and coating for electric wiring.

Thus we have another collision of industrial and environmental concerns, and it is impossible to declare one or the other to be "wrong." The connection between vinyl chloride and cancer is still subject to debate, although the evidence suggests a link. The amount of exposure sufficient to cause the fatal illness hasn't been established. It is possible that massive amounts are necessary.

Under the circumstances, however, the safe course is better than the sorry one. Giving due consideration to the good intentions of both sides, one can only conclude the job layoffs are more desirable than exposure to cancer. We are confident that Union Carbide scientists eventually will find a way to reduce the danger to a negligible level.

UCC 104978

How To Buy

Vinyl Chlorine Risks Known, But Hushed

By Sidney Margolin
Consumer Expert for
Sunday Gazette-Mail

One of the most disturbing aspects of the controversy over the industrial uses of vinyl chloride, a cancer causing gas recently implicated in the deaths of several workers, is that some U.S. and European corporations and the Manufacturing Chemists Association (MCA), know of the dangers but withheld these facts for at least a year.

This information was made public by one of the country's leading professional associations, the American Chemical Society, in the May 20 issue of its Chemical and Engineering News.

In August, 1972, an Italian scientist, Cesare Maltoni, found his first angiosarcoma (a rare form of cancer) in the liver of rats he was testing, the article relates. In January, 1973, a team of three U.S. chemical industry scientists visited Professor Maltoni to learn of his result.

HOWEVER, U.S. chemical industry sources say they were bound by an agreement under which four European firms controlled release of the animal test data, the report reveals. The first public disclosure of the findings came on Feb. 15, 1974, in the U.S., after B. F. Goodrich's announcement of three deaths due to angiosarcoma of the liver since 1971 among workers at its Louisville, Ky., plant.

Subsequently, the total number of confirmed liver angiosarcoma cases at other plants in the U.S. and abroad has risen to 19, including 13 in the U.S.

Based largely on Professor Maltoni's findings, the Occupational Safety and Health Administration (OSHA) has lowered the permissible work-exposure level of vinyl chloride to 5 parts per million from the previous ceiling of 50 ppm. But the AFL-CIO Industrial Union Department

has criticized this standard, and the U.S. Labor Department has proposed a complete ban on worker exposure to vinyl chloride.

Vinyl chloride also has been widely used as a propellant for many aerosol spray products used by consumers. It now has been banned for this purpose even though the risk involved in this use was said to be relatively small.

IN GENERAL, despite their admitted convenience, aerosol spray products have come under increasing attack for their hazards. Vinyl chloride spray had been used in many hair sprays; some brand of medicated vaporizers; athlete's foot sprays; some anti-perspirants and deodorants; wig sprays and cleaners, and even antiseptic room sprays.

Previously, the Food and Drug Administration had banned aerosol spray cough remedies, usually labeled "decongestant sprays," containing trichloroethane. This solvent is an anesthetic when inhaled and disrupts normal heart beat more readily even than chloroform.

Another frequent problem is flammability of such sprays and, in some products, the danger of fumes. The Consumer Product Safety Commission reported the case of a woman who used a spray varnish in a small room. While the vapors were still in the air, she lit a cigaret and was nearly consumed in flames.

Nowadays aerosol cans are labeled "flammable" and it can be argued that this woman should have known better than to light a cigaret. But Commissioner Barbara Franklin points out that while the can was labeled "flammable," the woman "had no way of knowing the vapors were also flammable."

Without doubt, aerosol hazards are multiplied by inadequate labels. None of the products I have examined say

what the propellant is, for example, whether the product contains vinyl chloride. Despite the recalls, many such products may still be in consumers' homes and some may even be on store shelves.

SOME CANS display prominent warnings about flammability, fumes and dangers even of high heat. Others provide only obscure statements in small print sometimes buried in the instructions.

Obviously, the quickest action the government agency can take is to require that labels state the kind of propellant and set standards for the prominence of warnings.

There are additional dangers in the use of aerosol cans to which consumers need to be alert. One is that the can will explode if dropped into a trash fire or incinerator, or if the can is punctured. Significantly, vent release devices which will reduce this danger have been available for at least four years at the cost of a couple of pennies. But most manufacturers, judging from products on the market, have chosen not to undertake this additional expense.

But even more prominent warnings may not be enough. Some products with hidden dangers such as the spray varnish perhaps shouldn't be on the market at all. At least some manufacturers use alternative packaging. One is pump-type hair spray. They are probably as convenient, and may cost no more or even less since they waste less of the product. Moreover, some manufacturers, who make both kinds, say that the pump type also provides better holding power for hair than aerosol spray products.

Pump-type sprays also are available as an alternative in many household cleaning products. Creams and roll-on alternatives also are available in many toiletries such as deodorants.

WORKERS TESTED

Team Starts Cancer Exam

By RICHARD HAAS

Daily Mail Business Editor

The medical director of Union Carbide's chemicals and plastics division said Friday he would be "very surprised"

the four-day testing program which opened yesterday at the South Charleston plant revealed further signs of liver cancer among the workers.

In the wake of growing evidence that exposure to vinyl chloride is linked to angiosarcoma, cancerous tumors of the liver, Carbide and Local 8 International Assn. of Manufacturers and Aerospace Workers invited a 16-member team from Mount Sinai Hospital in New York to conduct medical examinations of plant employees. Yesterday, the group began detailed testing of 420 present, and former plant employees — 320 workers who are regularly exposed to vinyl chloride and a 100-member control group.

Dr. Quentin Hull, who was the South Charleston plant physician before being transferred to the Technical Center where he directs the medical programs of several plants, said the plant's workers are subjected to medical screening on a routine basis.

With the exception of some x-ray tests being performed by the Mount Sinai team, most of the tests this weekend duplicate Carbide's previous medical efforts, he said.

The medical history of Carbide's employees neither confirms nor denies the link between vinyl chloride and angiosarcoma, which some experts suspect. Dr. Hull said. One South Charleston worker died of the disease in

1968 and another is suffering from an illness which may or may not be angiosarcoma.

At Carbide's Texas City plant, however, Dr. Hull said workers have been exposed to vinyl chloride since 1947 and medical checks have failed to reveal a single case of the disease.

His personal medical opinion, he said, is that the correlation between vinyl chloride exposure and angiosarcoma is strong only when high concentrations of the chemical are involved. Dr. Hull noted that until a few years ago the permissible level of vinyl chloride concentration was 500 parts per million — 10 times the current allowable level. He said he has also heard persistent rumors that years ago some chemical workers deliberately inhaled large quantities of the chemical because of its intoxicating effect.

Researchers have produced liver tumors in rats by exposing them to vinyl chloride concentrations of 250 parts per million. Tests at lower concentrations have failed to produce significant results, he said.

Because there is no solid evidence about the safety threshold of vinyl chloride exposures, Dr. Hull said he can understand why the federal government has proposed a "zero detectable" standard. He added, however, that he believes future evidence will show this standard to be unreasonably cautious.

Carbide officials have said several production units at the South Charleston plant will have to be shut down if the proposed standard is adopted.



CANCER CHECK—A 16-member medical team from the Mount Sinai Hospital in New York began checking workers at Union Carbide's South Charleston plant for a rare form of liver cancer Friday. In the top photo Richard Janney, right, a plant foreman, is checked for any breathing impairment. With him is Raphael Warshaw, center, the chief pulmonary technician of the team, and Dr. Quentin Hull, a Carbide medical official. In the photo below, workers fill out detailed questionnaires while waiting to be checked. Daily Mail Photos by Earl Benton.

UCC 104980

Top of the news

Good news for VCM

The Environmental Protection Agency had encouraging news for representatives of 29 vinyl chloride monomer and polyvinyl chloride producers who met with EPA officials in Washington last week. The discussions concerned the possibility of VCM contamination of ambient air near the producers' plants.

EPA Administrator Russell E. Train reported that the agency's monitoring of air and water close to VCM and PVC operations indicates that the pollutant level is not serious enough to threaten public health. EPA had tested air and water samples in the vicinities of 10 PVC plants and two VCM units located in different parts of the country to gather data to help it decide whether VCM ambient air standards may be necessary (*CW*, June 12, p. 14).

In the air measurements, more than 95% of the samples collected within a half-mile of plant property lines contained less than one part per million VCM concentration, according to EPA. In one instance, 3.4 ppm. was recorded three miles away, but several other readings at the same location averaged only 0.5 ppm.

Train emphasized that the findings were only preliminary and that EPA expected to conduct more testing.

He also said that at the present time "there is no basis for considering that the levels of vinyl chloride in water discharges or sludge, if handled properly, are hazardous to human health or aquatic life."

Several VCM and PVC producers, the EPA chief asserted, reported making substantial efforts to reduce VCM emissions and promised to aid EPA in its continuing study.

Waste stirs controversy

The Environmental Protection Agency this month granted Du Pont a one-year permit to dump wastes from its Belle, W. Va., chemical plant into the Gulf of Mexico about 200 miles southeast of New Orleans. But a federal judge last week barred the company from discharging industrial wastes into the Gulf off the coast of Florida.

Du Pont's earlier EPA-authorized dumping of wastes from the Belle plant came under fire from the state of Louisiana, which claimed that the disposal site, 50 miles off the coast of Louisiana, was too close to fisheries. As a result, Du Pont agreed to move its dumping site

UCC 104981

Carbide Units Chloride Rule As Impossible

The Associated Press

Union Carbide officials say they cannot possibly run their vinyl chloride plant here in compliance with federal chemical controls now in effect.

Following a report that exposure to vinyl chloride led to a rise in liver cancer, the National Study and Health Administration has proposed stringent regulations that would go into effect Aug. 4 unless the chemical industry can obtain modifications.

CARBIDE officials said they are complying with the 100 parts per million emission standard that has been in effect since early April. But the proposed OSHA standard would require "no detectable" level of emission.

Under present production techniques, vinyl chloride is released into the air when reactors are cleaned and when finished products are drying, because both operations are required, officials said. It would be impossible to produce the chemicals without some emission.

(Please Turn to Page 3A, Col. 1)

Directly affected by the OSHA standard are the polymerization units at the plant. Union Carbide complex here which converts vinyl chloride monomer into polyvinyl chloride (PVC), a common plastic used in containers, garden hose, and electrical wiring coatings.

BECAUSE PVC is the raw material for Carma-Dyne fiber, the plant's Dynel production units would also be affected, officials said.

U.S. Gov. John D. Dingell said officials in his agency that have a list of workers with liver ailments and Carbide announced later that it was aware of a former worker at the plant died of the liver disease — a hepatocellular carcinoma — in the late 1960s. Another former plant employee is now critical ill with a liver ailment which may be a hepatocarcinoma, the company said.

Daily Mail
6/6/74**CANCER EVIDENCE 'CASTS A LONG SHADOW'****Chloride Products Linked**

EDITOR'S NOTE: The possible link between exposure to vinyl chloride and a rare form of liver cancer is one of the most troublesome problems facing the chemical industry today. This article examines the status of research into this question.

By **DANIEL F. WEST**

For The Daily Mail

WASHINGTON—Clinical research into what is described as "the entirely probable" fact that vinyl chloride is responsible for a form of liver cancer was begun in Europe. Rightly so, for the domestic plastic industry was built on British, French and German pre-war technology.

However, within the past several months much of the significant inquiry has shifted to American laboratories. The upturn in U.S. interest was spawned by early 1974 reports that the cancer (angiosarcoma) had begun to turn up with alarming frequency among the nation's plastics and chemicals workers.

In the words of one New York researcher, the mounting evidence "casts a long shadow" over the lives of thousands, possibly millions of workers in the plastics-using industry.

Within this context alone the numerical possibilities are eerie enough. But now new findings are being brought to the front which may implicate vinyl chloride and polyvinyl chloride finished products — and the geometric possibilities here are staggering.

At present, seven federal agencies, a host of independent laboratories, many state and municipal research organizations and teams from the impacted industry are engaged in "an unprecedentedly massive" attack on the problem.

In the forefront of domestic medical research has been Dr. Irvin Selikoff of the Mount Sinai Medical School in New York City. Selikoff and a team of investigators is scheduled to visit the South Charleston Union Carbide plant June 10.

Selikoff has called vinyl chloride (used at the local facility in the production of unfinished plastic products) a "very potent cancer-causing chemical long in the spotlight at the center of our great chemi-

cal process industry.

Interviewed by newsmen recently, Selikoff said "I don't think there is any doubt of a firm, strong association between angiosarcoma (the liver cancer which has killed one local worker and laid critically ill another) and vinyl chloride."

Three months ago Selikoff and his team visited a Goodyear plant in Niagra Falls, N.Y. After conducting an investigation similar to the one which is expected locally, they reported to have "found vinyl chloride associated disease" in fully 98 per cent of the employees who had been exposed to the gas for twelve years or more.

The Goodyear inquiry turned up a number of misdiagnosed deaths. Angiosarcoma is difficult to detect, experts claim, even in its terminal stages. Some workers whose death certificates listed "heart attack" as a cause of death are reportedly being unearthed for more intensive pathological scrutiny.

Doctors familiar with the disease indicate the "latency period", or time from first contact to recognizable symptoms, could be as long as 15-to-20 years. Given this, only chemical workers who have been working with vinyl chloride for a decade or more would now begin to show signs of the cancer.

Length of exposure is one consideration, but the concentrations of the gas to which workers are exposed has so far received the most attention. Originally, federal standards permitted twice the amount found to induce cancer. Standards have been reduced twice since and now are held at an "emergency limit" of 50 parts per million (ppm).

"I don't think 50 ppm is adequate," Selikoff has said. "It would be foolhardy to say the lower level is safe. If cancer occurs at higher levels, it will occur at lower levels, though less frequently."

Admittedly huge, the federal effort seems at times left wondering what the other hand is doing. There are overlapping areas of responsibility and each agency adjusts to the mountain of incoming raw data with greatly varying responsiveness. To date, for instance, each of the agencies involved

has a different idea of what the ppm minimum should be.

Field researchers are facing their own problems. Misdiagnosis of worker deaths is placed at 33 per cent by officials of the National Institute of Occupational Safety and Health (NIOSH). "It's beginning to look like a full fledged FBI investigation, running down the causes of these deaths," one NIOSH worker told us.

Another hitch has been bucking the conventional wisdom of researchers as to the cause of cancer. There is apparently a reluctance on the part of some doctors at the National Cancer Institute (prominent in the investigation) to pursue any but the virus-as-cause lead.

Working against peer group pressure and with slender funding, two Cancer Institute physicians have been exploring the possibilities of environment-induced cancer. And plastics are, they have told their colleagues, the prime suspect.

Vinyl chloride products, when properly finished and aged, are not thought to give off toxic fumes. There are suspicions nonetheless that certain substances in the environment can have a "leaching effect" which may set off release of the gas.

West German researchers have documented six cases of what they call "vinyl chloride disease" among workers who install floor tiles which are made from polyvinyl chloride. And other evidence of angiosarcoma resulting from vinyl chloride by-products is beginning to surface, according to NIOSH experts.

For the present, researchers want to determine if workers can be exposed to any safe levels of the gas. Then they want to isolate those already infected. After that, they must ascertain if only the liver is susceptible. And finally, they will turn to the potential threat vinyl chloride poses to the nation's consumer.

"I'm afraid," said one National Cancer Institute doctor recently interviewed, "I'm afraid we may find that millions of people are infected to a lesser extent than those who have already died."

UCC 104983

Daily Mail
6/6/74

CANCER EVIDENCE 'CASTS A LONG SHADOW'

Chloride Products Linked

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UCC 104984

Vinyl Chloride Ruling May Cost 400 Jobs at Carbide

By PDC
Editor
The Charleston plant of Carbide Corp. cannot operate under the new vinyl chloride emission standard until the regulation is enacted. Jobs at the plant will be eliminated. The move is being made by the Occupational Safety and Health Administration (OSHA) to dramatically reduce the acceptable level of vinyl chloride emissions in the face of mounting evidence that exposure to the chemical is linked to a rare form of liver cancer.

Last month OSHA proposed that vinyl chloride be held to the "no detectable level." The standard will go into effect

unless the chemical industry succeeds in obtaining exemptions to the regulation. Hearings on this question are scheduled to be held in Washington later this month.

Carbide officials say they are now complying with the industry 50 parts per million emission standard which has been in effect since early 1971. During recent weeks levels of vinyl chloride have averaged approximately 20 parts per million, they said.

Directly affected by the new standard are the polymerization units at the plant which convert vinyl chloride monomer into polyvinyl chloride (PVC), a common plastic used in such items as phono-graph records, garden hose, medical wiring, coatings.

Because PVC is the raw material for products such as Dynel fishing line, Carbide is now in a position to produce

tion techniques, vinyl chloride is released into the air during the clearance of reactors and during the drying of the finished product, the Carbide officials said. Since both of these operations are required it would be impossible to produce PVC without emitting some levels of the chemical.

In a related move Carbide and Local 598, International Assn. of Machinists and Aerospace Workers, issued a

joint statement saying a medical team from Mount Sinai School of Medicine in New York will visit the plant this weekend to conduct medical examinations on 300 past and present workers who have been exposed to vinyl chloride and a 100-member control group.

The team is headed by Dr. Irving J. Selikoff, a recognized leader in the detection (Turn to Pg. 7A, Col. 1)

CARBIDE

Continued From Page One
of angiosarcoma, the disease which has been associated with vinyl chloride exposure.

James Copenhaver, business agent for Local 598, said his members are concerned about the vinyl chloride, "but I wouldn't say anyone is panicky." None of the workers have requested a transfer out of the PVC production unit and there is a general feeling that efforts being made at the plant to reduce vinyl chloride emissions offer the necessary protection, he said.

The company has been working since 1967 to reduce the amount of vinyl chloride absorbed into the air, Carbide officials said. At that time the accepted industry standard was 500 parts per million, although the standard was lowered to 200 parts per million in 1970.

Research into the cancer causing properties of vinyl chloride has been conducted for several years, but it was not until earlier this year that concern about the possible hazards of the chemical became pronounced.

B. F. Goodrich told federal officials in February that four of its workers died of angiosarcoma, and Carbide announced later that month that a former worker at the South Charleston plant died of the disease in the late 60's. A second former plant employee is now critically ill with a liver ailment which may or may not be angiosarcoma, the company said.

Examination of medical records from all major vinyl chloride producers in the U.S. indicate that 13 workers exposed to the chemical have died of angiosarcoma since 1960.

UCC 104985

Rare Cancer Affects One At Carbide

Carbide has reviewed the records of 725 employees and former employees who have worked with vinyl chloride monomer and found only one employee who had angiosarcoma, a rare type of cancer that affects the blood vessels of the liver, the company said Thursday.

This employee died in 1968 and had worked in poly vinyl chloride production in South Charleston from 1944 to 1962, the company told the National Institute of Occupational Safety and Health in Washington, D.C.

Carbide made the study after B.F. Goodrich said a number of employees who worked in the polymerization of vinyl chloride had died of the disease.

Carbide will continue to review the records of employees to see if there are any other indications of a connection between exposure to vinyl chloride polymers at South Charleston and Texas City, Tex., plants, the company said.

Nader Group Asks Ban On Aerosol Chemical

WASHINGTON — Ralph Nader's Health, Safety and Environment Group asked the federal government Thursday to ban the use of vinyl chloride in aerosolized cosmetics, pesticides and other household products.

Several cases of a rare liver cancer have been found among vinyl chloride workers in a B. F. Goodrich Co. chemical plant in Louisville, Ky., and in a plant operated by the Goodyear Tire & Rubber Co.

in Niagara Falls.

Vinyl chloride is a basic chemical in the plastics industry and the foundation for a large number of consumer products.

Dr. Stanley N. Wolfe, director of the research group, said a significant amount of vinyl chloride is used as a propellant in aerosol containers.

Wolfe told a Senate Health subcommittee that a source in the cosmetic industry in-

formed him that vinyl chloride is going into such cosmetic aerosols as hairsprays.

"Beauty parlor operators and consumers are using the vinyl cloud," he said. "This chemical may represent another thalidomide."

He did not identify any product brand names.

The Nader petitions to ban the chemicals in aerosols were sent to the Food and Drug Administration, the Consumer Product Safety Commission and the Environmental Protection Agency.

In letters to the three agency heads, the Nader group asked them to make public the brand names of all aerosol consumer products and cosmetics which contain vinyl chloride as a propellant.

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Per the investigation of 2-20-74
2-24

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Sally M. 2-19-74

Six In Same Plant Contact Rare Cancer

LOUISVILLE, Ky. (AP) — A sixth victim of a rare kind of liver cancer has been discovered among workers at the B. F. Goodrich plant here.

The worker is still living and has not been identified. The other five died from the rare disease, called angiosarcoma, which medical experts believe is caused by prolonged exposure to vinyl chloride. The chemical is used in the manufacture of plastics at the Goodrich plant.

Dr. J. Bradford Block, head of the state Occupational Safety and Health Administration's medical program, confirmed the sixth case Monday after Goodrich officials refused to do so.

An international research effort has been launched by the National Cancer Institute and other occupational disease agencies to trace the use and effects of the chemical on workers. More than 6,000 American employees are believed to be exposed to vinyl chloride in their work, and thousands more in Europe are believed affected.

However, the cases at the Goodrich plant here are the

only ones to be directly linked to working conditions.

Goodrich began investigating the possible link between employee deaths and vinyl chloride last month. Dr. Block said Monday that most workers who developed the cancer had worked with the chemical about 19 years. He said he thinks investigation will show that the only workers who may develop the disease are those who were exposed many years ago, before there were any safeguards.

The Louisville Courier-Journal has reported that the polyvinyl manufacturing process has caused health problems of a less serious nature in the past.

In the late 1950s and 1960s, the paper said, some workers who cleaned the large vessels in which the plastic is made experienced severe damage to bones in their fingertips.

Altogether, 31 employees who cleaned the vessels reported some damage to their hands, according to a company report which appeared in the Journal of the American Medical Association in 1967.

UCC 104987

JOHN CHAMBERLAIN

Clear Thinking On Vinyl Chloride

We live in the midst of many fears. The trouble is that we have no means of knowing in advance just how many of these fears are misplaced.

Yesterday it was cyclamates that were going to do us in. But today cyclamates have been given a reasonably clean bill of health. So it has been with cranberries. But other presumed perils arise.

The sudden publication by the B. F. Goodrich Co. of news that four workers at its Louisville, Ky., vinyl chloride conversion plant had died from a rare form of liver cancer called angiosarcoma now has workers in other chemical plants around the country lining up for diagnostic tests. The question is, will the new fear pass with the assurance that the chemical industry will accept a standard of 50 parts per million exposure level to the gas that is used to make solid polyvinyl chloride? (Such is the standard accepted in Britain.) Or will the Naderites, who don't believe that the industry ever has a case, insist on killing the entire polyvinyl chloride business by demanding a "zero exposure" safety standard, which cannot in the nature of

things be guaranteed?

Whatever one may say, the industry itself cannot be accused of cover-up practices. The B. F. Goodrich Chemical Company has led the way in making investigations designed to establish tolerable exposure limits. In the early days of vinyl chloride conversion to the polyvinyl plastic solid that is used in a myriad of industrial products, nobody worried about the sweet-smelling gas that lingered in the plants. Since it takes 15 years and more for an angiosarcoma tumor to develop, it is important to know whether the 20 or so cases of liver cancer that have been identified as originating from vinyl chloride exposure date back to a dark age of the plastics industry that has already passed away.

The trouble is that adversary proceedings in which the advocates of extreme positions face each other in Washington will not necessarily lead to a scientific settlement. In Europe, accredited technicians set standards without indulging in passionate arguments and incriminations. But in the U.S., opposing value systems clash, and the scare

headlines make it seem that heroes are contending with villains, with industry invariably getting the worst of it.

Despite the Naderites, however, the general public has a special interest in a scientific determination of tolerable safety margins. Some 6,500 U.S. workers now work in plants that turn vinyl chloride gas into a solid plastic. Economically speaking, if 6,500 workers were forced to seek other employment it would cause no great crisis. But 700,000 workers are needed to make finished plastic products out of the raw polyvinyl material. And a grand total of 2.2 million workers throughout the U.S. economy have jobs that can be traced to the use of polyvinyl products.

Ticking these products off is an almost endless job. The pipe now in most frequent use for plumbing is a polyvinyl pipe. The tile in your shower bath, the cover on your automobile seat, the tubing used for electric milking machines that give you relatively cheap dairy products, the clear wrapping in which bacon and other meats are sold, the phonograph records that bring you music, and the safe insu-

lation around copper wiring that enables you to electrify your house at a minimum of expense, are all fashioned out of polyvinyl chloride. Even the respiratory equipment used by doctors comes from polyvinyl plastic; the medical supplies made out of the stuff have surely saved more lives than have been lost by exposure to the raw vinyl chloride gas.

If polyvinyl plastic were to be replaced by a natural product, the whole of continental Europe would have to be turned over to sheep raising for industrial fabrics. The paper industry, even now suffering from shortages, would be unable to cope with the demands for wrapping derived from forest products.

Nevertheless, even though 2.2 million jobs are dependent on polyvinyl plastic, it is crass to use economics to make a case for the industry. The safe limit of vinyl gas control must be found. August 25 is the cut-off date for the submission of evidence in Washington. October 5 is the date set for the final decision about the safety margin. What we need is a lot of light and no heat when the ultimate judgment is made.

UCC 104988

Carbide Plans Tumor Check At SC Plant

An investigation to determine whether there is an unusual incidence of brain tumors among employees of its South Charleston plant will be conducted by Union Carbide.

Frank Stowers, spokesman for the plant, said records of more than 50,000 persons who have worked at the plant since it opened will be examined.

The investigation comes on the heels of the discovery by federal health officials that a high number of workers at the company's Texas City plant have died of a type of brain tumor linked to vinyl chloride.

South Charleston employees were told about the move in a letter signed by plant manager J.E. Beckman.

The letter said that preliminary investigation in Texas doesn't provide any evidence that the brain tumors resulted from on-the-job exposure.

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