

The Courier-Journal

THURSDAY, SEPTEMBER 12, 1974

SECTION C

Goodrich temporarily allowed more vinyl chloride emissions

By EDWARD FINEGAN

Courier-Journal Staff Writer

As much as 2.5 per cent more vinyl chloride gas will be sent into the air by the S.F. Goodrich Chemical Co.'s Louisville plant for several months beginning next summer.

The temporary increase was approved yesterday by the Louisville-Jefferson County Air Pollution Control Board as part of a voluntary agreement with the company on controlling emissions of the chemical.

Goodrich has announced plans to expand the plant on Bell's Lane. At least six former workers there are known to have died from a liver cancer traced to very heavy vinyl chloride exposure years ago.

The chemical is used in the making of plastic.

The pollution board's secretary-treasurer, Robert T. Offutt, said there is "not one case" of vinyl chloride in the air

causing a health problem outside of a plant.

The temporarily increased amount, he said, would still be less than one-hundredth of the maximum now allowed by the federal government in workplaces.

And after the company installs pollution controls by the spring of 1975, Offutt said, Goodrich will be better, but the vinyl chloride levels will be about what they are now.

"It's a reasonable risk," Offutt said, "especially since it's for less than a year."

Goodrich will install vinyl chloride air pollution controls at the plant no later than March 1975, about nine months after it begins the plant expansion.

The agreement by Goodrich is entirely voluntary, since vinyl chloride does not yet appear on any list of air pollutants requiring regulation.

But Goodrich says it will ease "within a reasonable time" any that are passed — as long as it has "input" when they are written.

The firm also has agreed to start a "vinyl chloride monitoring network" in Jefferson County with the board and the federal Environmental Protection Agency (EPA).

Vinyl chloride only recently has been found to be harmful. Controversy now settles on what level of exposure to it is dangerous.

Neither the board nor the EPA has yet decided on safe levels of the chemical in the atmosphere.

In the meantime, the federal Occupational Safety and Health Administration (OSHA) has lowered the legal indoor level to 50 parts per million.

OSHA's research wing, however, has argued that until questions about the chemical are answered the level should be dropped to virtually zero.

An EPA study released in June turned up an average of about half a part per million of vinyl chloride in the air around Bell's Lane, although one reading showed a level of 23 parts per million.

Goodrich will open the first part of a

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two-step expansion of its plant next summer, before new emission controls are installed.

Until controls take effect the following March, the Board's staff concluded, the plant will give off up to 8.5 per cent more vinyl chloride than now.

While he noted that there is no way to predict exactly how much of the increase will show up in outside air measurements, Offutt guessed that it would mean an increase of from half a part per million to only .35 of a part per million.

Offutt said that the actual amount — measured in tons — emitted by the plant cannot be revealed because the information would be of value to Goodrich's competitors.

In other action yesterday, the board voted to throw its weight more forcefully behind Louisville Gas & Electric Co.'s (LG&E) plan to install "scrubbers" on several of its generating plants in Jefferson County.

LG&E is a leader in developing the

devices, which remove most sulfur dioxide pollution from the emissions of coal-burning electrical generating plants.

The board has the power to close the plants eventually if LG&E does not move to cut pollution, as it wants to do by using scrubbers.

But the company must obtain permission from the state Public Service Commission (PSC), which has not yet made its decision.

Offutt said there is "tremendous pressure" on the PSC to deny permission from other Kentucky utility companies and the Tennessee Valley Authority (TVA).

Offutt said the PSC had been given enough data by the board and LG&E to make a decision.

The board voted to urge the PSC to act at its meeting in Frankfort next week and, if that fails, to ask for a meeting with Gov. Wendell H. Ford, County Judge Todd Hollenbach and Louisville Mayor Harvey Sloane.

"I ain't got that big a club," joked

board chairman Dr. James B. Sharp, "but I'd like to swing it."

Offutt said that either a long delay or a denial of the LG&E plan by the PSC probably would force the board to take the utility to court, despite its efforts to cooperate.

The commission also went on record yesterday in support of mass transit for the Louisville metropolitan area at a time when voters are about to consider a tax increase to pay for transit improvements.

And the board voted to start an experimental program in the county to enforce anti-smoking regulations on trucks owned by county residents.

Under the new system, in effect for from 90 to 120 days, an owner can be taken to court if his truck is cited and then after 20 days found not to have been repaired.

The owner can also be taken to court if the same truck is picked up again within a year.

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A-4 *Wednesday, Aug. 14, 1974* THE WASHINGTON POST

FDA Plans New Rules on Vinyl Plastic

United Press International

The Food and Drug Administration will soon publish a regulation designed to keep vinyl chloride—the suspected cancer-causing chemical—from seeping out of packages and into food or drugs they contain.

The regulation will specify that no food or drug may contain vinyl chloride at more than the smallest level at which present methods are able to detect it. FDA Commissioner Alexander M. Schmidt said yesterday.

The widely used plastic has already been banned by the EPA and Environmental Protection Agency in aerosols, such as hair sprays and pesticides. The Labor Department is considering a proposal to cut workplace exposure down to zero.

Many food and drug packages are made of vinyl chloride-based plastics but to date there has been no level at which the chemical would be outlawed as a food additive if it "leakages" into what's inside the packaging. "In effect, we've already removed it from wherever it was spreading (as in the aerosols) except as it might be migrating into foods, drugs or foods. We have found out wherever it is being used and will be setting a tolerance for it shortly," said Schmidt.

In another development the Consumer Product Safety Commission has received a staff report on its proposal to ban vinyl chloride gas in aerosol products under its jurisdiction—mainly spray paints, household cleaners and some degreasing agents.

The report sets several alternative emission conditions but most commission scientists appear to favor both an outright ban on vinyl chloride in aerosols, plus a program to buy back from consumers the millions of cans of paint and other unused products in homes around the country.

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A2 Thursday, Sept. 8, 1974 THE WASHINGTON POST

Vinyl Chloride Link to Cancer

By Bob Kuttner

Washington Post Staff Writer

Evidence existed 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. P. L. 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 Jan. 22 by the B. F. Goodrich Co. that three workers in its Louisville, Ky., plant died of angiosarcoma led to a crash research program by several federal agencies, including the 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 500 parts per million for vinyl chloride workers from Laboratory at 311. Since 500 parts per million, and NIOSH

has recommended a permanent permissible level of zero.

In addition, dozens of consumer aerosol products containing vinyl chloride gas as a propellant have been withdrawn from the market.

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 infuriating 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 Association, the principal industry trade association, the MCA invited Dr. Viola to discuss his study with U.S. industry representatives in May, 1971. The preliminary

Known in 1971, Report Says

inary studies showed vinyl chloride was carcinogenic at levels of 39,000 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 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 angiosarcomas of the liver. Those results have not yet been published.

Subsequently, the European studies in the United States

chemical industry sponsored another series of experiments by a second Italian scientist, Dr. Cesare Maltoni. The U.S. Manufacturing Chemists Association 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.

However, the MCA did not share the information with government agencies, having promised its European counterparts to keep the findings secret.

Instead, the MCA and several of its member companies contracted for new animal studies in the United States.

It also arranged for an epidemiological survey, to study the health records of workers exposed to vinyl chloride.

In June, 1973, at a meeting with NIOSH officials, industry representatives are said to have downplayed the significance of the European findings.

Although the 1973 Maltoni research indicated that liver cancer could be caused at concentrations as low as 250 parts per million, NIOSH director Dr. Marcus Key told an Aug. 21 Senate hearing on vinyl chloride that at the meeting "no mention was made to us about liver cancer and no mention was made to us about the name of the Italian scientist."

Only after B. F. Goodrich reported that its Louisville plant physician, Dr. John Creech, independently discovered three cases of angiosarcoma 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, concurred that he knew about the concentrations as low as 250 parts per million, NIOSH 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."

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THE WASHINGTON POST Wednesday, Sept. 25, 1974 A 3

EPA Plans to Cut Vinyl Chloride Emissions

United Press International
The Environmental Protection Agency plans to cut drastically the 200 million pounds of vinyl chloride escaping into the air from industrial plants and to determine whether any of the cancer-causing chemical threatens the nation's drinking water supplies.

The agency announced the actions Monday in releasing a report on the vinyl chloride problem. The report was prepared by a task force set up earlier this year following disclosure of several deaths among workers exposed to the chemical at vinyl chloride plants.

The report concluded there is no scientific evidence to indicate air pollution from vinyl chloride plants poses an "imminent hazard to people living near these plants."

But, EPA Administrator Russell E. Train told a news conference, "It is clear that some hazard does exist, and that our population deserves the protection afforded by regulatory action."

Train said it would take from nine months to a year to draw up rules designed to cut vinyl chloride emissions. The report estimates that vinyl chloride plants around the country are releasing by product of vinyl chloride

reduction in the 37 plants. The EPA said it is still in cases around the world of rare but fatal form of liver cancer been established. The report said drinking water supplies should be studied in addition to vinyl chloride. In addition there are several reports of deaths of persons who lived in the vicinity of vinyl chloride plants are contaminated.

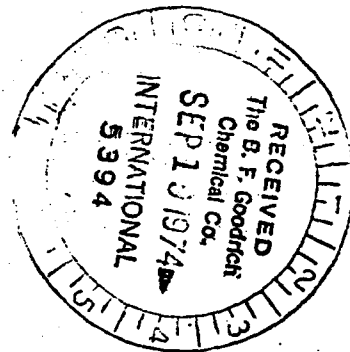
To date there have been 25 of the plants, though a di-

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EPA Has Goal on Vinyl Gas

By Judith Randal
Los Angeles Staff Writer

The Environmental Protection Agency has been working on an air-pollution emission standard for vinyl chloride for the past three months and hopes to complete the job within a year, EPA Administrator Russell E. Train, has announced.

Vinyl chloride in the form of a gas or pressurized liquid is used in the manufacture of the plastic polyvinyl chloride, which in turn is fabricated into products ranging from baby pants and plastic credit cards to garden hoses, sporting and auto goods and medical supplies. Its link in the past year to 25 cases among industrial workers of angiosarcoma of the liver — a rare and invariably fatal form of cancer — have made it the target of international concern.

In his announcement yesterday, Train told a press conference that the new standard, when completed, will apply under the Clean Air Act to the emissions from the nation's 52 plants which either make vinyl chloride gas or polyvinyl chloride itself.

An EPA task force which made the recommendation has determined, he said, that these plants account for more than 95 percent of vinyl chloride emissions. In so doing, he reported, they probably release more than 200 million pounds of vinyl chloride and 50 million pounds of polyvinyl chloride into the atmosphere each year.

THE TASK FORCE estimates, he reported that it will be possible to reduce vinyl chloride emissions by about 50 percent and those from polyvinyl chloride about 75 percent with a consequent increase of about 4 percent in the cost of the plastics. Indications are, he added, that existing technology can do the job and, indeed, he praised some manufacturers for voluntarily having taken steps to bring the danger under control. There is at present, he added, no evidence that there is much leakage of vinyl chloride into water or that it is even potentially dangerous if it occurs. Nevertheless, said Train, in accordance with task force recommendations, waters downstream from vinyl chloride and polyvinyl chloride plants will be monitored. In addition to the 52 plants which are the primary suppliers of the plastic, some 8,000 others utilize the synthetic material for the manufacture of a wide variety of products. EPA officials said yesterday that exposure from these sources is at lower levels than that of the primary plants and is therefore presumably less hazardous. They conceded, however, that complete safety cannot be assumed and that the situation must be monitored and watched. Besides advising EPA to devise standards for the 52 primary plants where vinyl chloride air pollution is the greatest, the task force has made 18 other recommendations designed to develop data about the apparent hazards of the plastic and reduce them where possible.

Meanwhile, as the EPA deals with the outdoor environmental problems posed by vinyl chloride, the Labor Department's Occupational Safety and Health Administration is considering standards which would better protect employees exposed within the walls of their places of work.

B. F. Goodrich to upgrade vinyl-chloride monitoring

By DENNIS POLITE

Louisville Times Staff Writer

The B. F. Goodrich Co. plant on Bell Street says it will upgrade its monitoring standards for workers who are exposed to vinyl chloride.

The federal Occupational Safety and Health Administration (OSHA) cited the plant last month for failure to properly monitor worker exposure to vinyl chloride.

The citation was issued after an earlier visit to the plant by a federal occupational hygienist.

Goodrich has decided not to contest the citation, and will bring its monitoring procedure for workers into line with the federal standard, according to Frank Flanagan, area OSHA director. He said the company was very cooperative.

Company cooperative

Technically, the citation charged that the company failed "to monitor a sufficient number of employees so that a representative sample of exposure to vinyl chloride may be determined."

Flanagan's office emphasized, as did the company, that it did not find exposure levels above the government standard when it visited the plant. The standard is no more than 50 parts of vinyl chloride per million parts of air.

Vinyl chloride is a gas. It is used in the production of polyvinyl chloride, a building block for many plastics.

Exposure to vinyl chloride is thought to cause the rare liver cancer, angiosarcoma. There have been six deaths of former Goodrich workers from that cancer since 1955.

The latest death was uncovered recently. Two other workers, both living, also have the cancer.

Sparks company's action

When Goodrich announced in January that it suspected that exposure to vinyl chloride caused the cancer, it sparked a number of actions by government and the industry.

One of the government's actions was to call a temporary standard on the

amount of exposure to workers, and conditions for monitoring exposure. The standard was 500 parts per million; it was changed to 50.

It was a portion of this temporary standard of which Goodrich was found in violation.

The standard requires in part that workers wear a monitoring device on their uniforms to record the amount of vinyl chloride in the air.

Goodrich had monitoring devices, but none of the type called for in the standard.

A statement by the company said, "The company pointed out to OSHA that in addition to personnel monitoring, B. F. Goodrich has been doing extensive monitoring even beyond that required in the temporary standard."

The company said it is installing the procedures as called for in the standard. It said it did not contest the OSHA citation "in order to settle the matter promptly."

Flanagan said the visit to Goodrich by the hygienist was prompted by the company's involvement with vinyl chloride.

Says chemical 'target health hazard'

He said the chemical is a "target health hazard" and as such gets special attention from health and safety officials.

It was added to a list which contains such things as asbestos and lead, after it was determined that exposure to vinyl chloride possibly caused cancer, Flanagan said.

Although Kentucky has its own occupational health and safety standards, Flanagan said, the temporary standard on vinyl chloride is not among the state regulations.

Since the federal standard is more stringent, it applies to Goodrich rather than a state rule, he said.

Under the federal rule, Goodrich must sample exposure no less frequently than weekly, until it gets results showing the level below 50 parts per million parts of air for three consecutive weeks. Then the monitoring can be done monthly, as long as no readings are above 50.

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THE LOUISVILLE TIMES

BUSINESS

Agency wants to ban vinyl-chloride aerosols

Associated Press

WASHINGTON — The staff of the U.S. Consumer Product Safety Commission is recommending banning all aerosol sprays containing under the agency's jurisdiction that contain vinyl chloride.

In an internal briefing paper due to be distributed today to the five commissioners, the staff noted that vinyl chloride "has been rather conclusively identified" as the cause of a rare liver cancer in 24 industrial workers.

The staff also recommended full refunds to get the chemical out of American homes.

Vinyl-chloride workers run a 10,000-times greater risk of contracting angiosarcoma, a form of cancer, than the general population, federal scientists estimated.

"No safe level of exposure to vinyl chloride has been established," the staff said. "On the other hand, there is no specific evidence that the concentrations and frequencies of exposure to vinyl chloride from aerosolized consumer products is causally related to development of angiosarcoma of the liver in humans."

The commission on May 23 proposed designating sprays containing vinyl chloride under its jurisdiction as banned hazardous substances.

Two spray-paint companies and a trade association suggested that refunds be limited to products marketed after the effective date of the proposed ban.

However, the staff suggested that refunds be unrestricted in order to "facilitate the removal of products" containing the chemical as part of their propellant.

Tests with laboratory animals have produced liver cancer in mice, rats and hamsters at all levels tested down to 50 parts per million, medical personnel reported.

A typical household aerosol sprayer would produce concentrations of 350 parts per million, they said.

The commission has jurisdiction over paints, degreasers, lubricants and adhesives containing vinyl chloride in aerosol form.

The Food and Drug Administration and Environmental Protection Agency have already acted to ban and recall all aerosol drugs, cosmetics, pesticides and other products containing vinyl chloride.

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24710008

J. L. Nelson — This was read to Dennis Polite of the Louisville Times yesterday in response to a query about the number of employees currently at home and their compensation.

August 14, 1974

W. T. Duke
8/15/74

STATEMENT FOR USE IN REPLY TO QUERY FROM DENNIS POLITE

It is our practice to remove employees with liver abnormalities from their jobs when our plant physician feels it is warranted. In some cases, these employees are moved to other work. In other cases they are sent home until further diagnostic study can be completed or the abnormality is corrected. The number of such employees has been small. None of these employees sent home have been laid off. They are receiving full benefits under our programs.

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24710009

Workers furloughed

'Liver changes' found in 8 at Goodrich plant

By DENNIS POLITE
Louisville Times Staff Writer

The B. F. Goodrich Chemical Co. here has found "changes in the livers" of eight workers who have been exposed to vinyl chloride and has furloughed them until it can be determined if additional exposure would be harmful.

The workers, all of whom will continue to receive their full pay "for the time being," were removed from the plant on Bells Lane on the advice of medical officials.

"We just know that there are changes in their livers; we suspect it is due to vinyl-chloride exposure," one person connected with the company said. He asked not to be identified.

The corporate headquarters in Akron, Ohio, issued a statement on the practice after a reporter inquired about the matter.

"It has been our practice to remove employees with liver abnormalities from their jobs when the plant (doctor) feels it is warranted. In some cases they are sent home until further diagnostic study can be completed or the abnormality can be corrected. The number of such employees has been small."

1,100 employed here

The Louisville plant employs about 1,100 persons. One company official told The Times that the practice of sending men home was begun only about three weeks ago.

Another said, however, that it has been going on since February, when the first living victim was found.

One worker who knew of fellow employees being sent home said workers believe more furloughs may come.

Six former workers at the Bells Lane Goodrich plant have died of a rare liver cancer thought to be caused by exposure to vinyl chloride. Two other workers still living have the cancer but are being treated.

Worldwide, about 25 cases of the cancer, called angiosarcoma, have been uncovered since January, when Goodrich

announced that it suspected exposure to the chemical, a gas, caused the cancer.

State and federal occupational health officials have taken actions to lower the exposure level of workers to vinyl chloride.

Vinyl chloride is used in the production of polyvinyl chloride, a major building block in most plastics. It is also used as a propellant in some aerosols. The government has compelled some users of the gas as a propellant to recall their products because of possible danger to humans.

This latest action by Goodrich will continue whenever men are found with liver changes possibly caused by exposure to vinyl chloride, a company official said. A company testing program begun in the fall of 1973 turned up the men sent home.

The official said there is no evidence that further exposure will aggravate the liver conditions found in the men, but they were sent home as a precautionary action.

He said no evidence exists that the present level of exposure inside the plant—said to be in the range of less than 15 parts of vinyl chloride per million parts of air—will harm anyone.

Until the Goodrich situation developed, the government standard on vinyl chloride allowed workers to be exposed to up to 500 parts per million parts of air. It was changed to lower the exposure

See 'LIVER CHANGES'

Back page, col. 5, this section

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K. Briggs
Date: 8-15-74

From: E. W. Harrington

24710000

Workers furloughed

'Liver changes' found in 8 at Goodrich plant

Continued From Page One

level to no more than 50 parts per million.

Zero level urged

The National Institute of Occupational Safety and Health has recommended that the U.S. Labor Department set the exposure level at zero. A decision is expected next month.

The men who were sent home had worked at Goodrich for varying periods of time, a spokesman said. One had been there for as little as 12 months. Most of the men who died of the cancer had worked at the plant an average of 12 years.

That was the average for the first five deaths discovered, but in the most recent death linked to the cancer, the man had worked at the plant only four years. He worked there almost 20 years ago.

Some health officials had said that it would take longer for workers who had been exposed for short periods to develop signs of possible liver damage.

At least one of the workers sent home was a man who had earlier been diagnosed as having the cancer. According to a company official, the man's family believed he was responding to treatment.

The man's private physician thought he was able to return to work, a company official said.

Low exposure level

The man was working in an area where the exposure level was measured at only one part per billion parts of air, a company official said. But he was sent home too because "we just don't have the evidence it won't hurt," the official said.

All of the men sent home "had definite proof of liver damage," a company official said. But none of the men felt ill, he added.

Another man sent home told The Times he was told by company officials to "keep in contact."

The man said he had been at the company less than three years. His job, he said, was to clean out the vats where polyvinyl chloride is made.

This involved going into the vats and scraping the sides. Earlier reports have said this is where some workers have gotten high exposure to vinyl chloride.

Safety regulations now require workers to wear certain equipment when they clean vats. Previously, however, the man said they wore only air masks.

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Low Times, "Final Home" Edn. 8-23-74
Seeks furloughs for 20

Largest union at Goodrich wants more workers shielded

By DENNIS POLITE
Louisville Times Staff Writer

Members of the largest union at B. F. Goodrich Chemical Co. here have directed their union leadership to seek legal action against the company to protect some workers from exposure to vinyl chloride.

The men want about 20 workers furloughed with full pay until it can be determined that continued exposure is not harmful to the men's livers.

The company had no immediate comment.

The vote to seek the action was taken Tuesday at a meeting of Synthetic Rubber Workers Local 72, which represents about 800 of the 1,100 Goodrich workers at the Bells Lane plant. About 50 workers were at the meeting.

Union president Rudolph Kaelin Sr., in a telephone interview yesterday, confirmed the action and said he has talked with an attorney about the matter.

Goodrich has furloughed eight workers who it says have significant "liver changes" until it can be decided if exposure to vinyl chloride is not harmful to the men's conditions. Company spokesmen said such a determination has not been made.

Vinyl chloride is a chemical used mainly in the production of plastics. Exposure to the gas is thought to cause angiosarcoma, a rare cancer, of the liver.

Six former Goodrich workers in Louisville died of the cancer; two other workers have it.

The men whom the union wants furloughed have been transferred from their regular jobs because of the exposure to the chemical and have been placed at other work sites in the facility. Tests showed the men had some sort of liver disorders, maybe not connected to chloride exposure.

at the meeting Tuesday, the feeling of the men there was that if the men have liver problems that warrant transfer, they ought to be out of exposure range altogether.

Kaelin said attendance at the meeting was among the best in recent union activity. He termed the mood of the meeting "rowdy."

He said worker concern over this and

other issues at the plant has caused him such harassment that he threatened at the meeting to resign.

Kaelin said he does not know how many workers have been moved from their regular jobs. He estimates that about 20 or so persons, whom fellow workers refer to as "displaced persons," have been shifted.

One of 8 men on furlough had liver surgery last March

Among the eight furloughed workers at the B. F. Goodrich Chemical plant is a 27-year employee who returned to his job this week but had to leave again after feeling weak.

Roy M. Sanders, who is 53 years old, said in a telephone interview yesterday that he had worked in the mill room before his furlough.

He said exhaust fans in the mill room sucked in fumes from the vinyl-chloride processing area next door.

His wife said her husband had been furloughed for about four weeks, but went

back to work Monday. She said he came home for lunch and was weak.

Mrs. Sanders said her husband underwent liver surgery in March, and has lost about 45 pounds since then.

She said a doctor at the National Institutes of Health in Bethesda, Md., who has seen some of her husband's records, said his condition is related to exposure to vinyl chloride.

A spokesman at the agency said today that Sanders' liver has "minimal" damage that is of the kind that could be consistent with exposure to vinyl chloride.

But the damage is not severe enough to conclusively link it to vinyl-chloride exposure, the spokesman said.

Mrs. Sanders said she wants her husband to go Bethesda to be examined by the doctors there. The agency is studying the vinyl-chloride problem nationwide.

A spokesman said Sanders would be accepted if he is recommended to do so by his private doctor or the Goodrich doctor.

Mrs. Sanders said she called the U.S. agency "because I wanted to have some

We were wrong

Because of a reporting error, a Crime and the Courts item in yesterday's Times incorrectly said Dale J. White's address is 10400 La Plaza Drive. It should have listed White's address as the 10400 block

24710012

Labor roundup

Furloughs sought for 20 at Goodrich

By DAN KAUFFMAN
Courier-Journal Staff Writer

About 50 members of Distillery Workers (Synthetic Rubber Workers) Local 72 have unanimously approved a motion demanding that about 20 workers at the B. F. Goodrich plant be furloughed with full pay.

Tests on the workers in question showed that they have liver disorders. The company transferred them from their regular jobs to other jobs at the plant because of exposure to vinyl chloride. Six former employees of the plant have died of liver cancer that scientists say was caused by vinyl chloride.

The company has furloughed eight other workers with pay because of "liver changes."

Rudy Kaelin, president of Local 72, said he has turned the matter over to the union's attorney for study. He said he has told the company that possible court action is coming but he said the attorney must study the matter first.

Kaelin said the motion is valid, but that he isn't pleased by it.

"I'm disgusted with the whole thing," he said. "I wish it would have been posted so a larger portion of the membership could have considered it. The majority of the guys affected weren't even at the meeting."

The union represents about 800 workers.

24710013

More workers on furlough than Goodrich has announced

By DENNIS POINTE

The number of B. F. Goodrich Co. employees furloughed here because of the plant on Bells Lane have been moved from their normal work locations and 11 others have not been moved.

Partington announced last month that when it was announced last month that eight workers had been furloughed, Pointer said some furloughed workers were already at home.

None will be allowed to return, he said, until the question of the health hazard is resolved.

It said some of the men on sick leave also have liver conditions, but medical officials have told the company that the liver conditions are not caused by exposure to chemicals.

Furloughed men are on full salary; workers on sick leave get 50¢ a week. Full pay for some workers means a gross of about \$225 a week, according to the company.

Six former Goodrich employees from the plant on Bells Lane have died of liver problems. The list itself does not indicate this.

Permer said such a list could exist, but the list itself does not indicate this.

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The cancer is thought to be caused by continued exposure to vinyl chloride over a period of time. Some of the plant as long as 20 years and at least one for a period as short as four years.

Union files suit

The largest worker union at the plant, Synthele Rubber Workers Local 72, has filed suit to see if it can require the company to furlough all workers with health problems related to their occupation.

The matter is pending in Delaware County Court, where it was filed last month.

About 50 members of the union, which represents about 200 of Goodrich's 1,100 Louisville plant employees, discussed the issue last night with officials from the state Labor Department.

The meeting, held at a Knights of Columbus Hall in Shively, was closed to the press. Afterward, state officials declined comment at the request of the union.

George Wagoner, deputy commissioner of Health for A. Bradburn Block, Labor Department medical consultant, an industrial hygienist and an attorney from the workers' compensation board met with the men for about two hours in a question-and-answer format.

Union president Rudolph Kaskin said the men had questions about certain aspects of the disease and about safety matters related to vinyl chloride.

Copies to:

- A. Viltone
- R. D. Scott
- J. L. Nelson
- E. W. Harrington
- H. Waltemate
- B. M. G. Zwicker
- G. Pow
- W. J. Wilcox
- P. I. Weaver
- M. F. Downey
- E. B. Osborne
- A. J. Kennedy
- A. I. Kallfeldt
- C. R. Flynn

2471001A

UP-097

(VINYL CHLORIDE)

WASHINGTON (UPI) -- THE CONSUMER PRODUCT SAFETY COMMISSION TODAY BANNED THE USE OF VINYL CHLORIDE IN AEROSOL SPRAYS UNDER ITS JURISDICTION. IT SAID CONSUMERS WILL BE ABLE TO RETURN AND GET A REFUND FOR SPRAY PAINTS AND OTHER AEROSOL PRODUCTS INVOLVED.

COVERED BY THE BAN ARE PAINTS AND FINISHERS, PROTECTIVE AND DECORATIVE COATINGS, PAINT REMOVERS, ADHESIVES AND SOLVENTS IN AEROSOL FORM WHICH USED THE SUSPECTED CANCER CAUSING GAS AS A PROPELLANT BEFORE THE INDUSTRY DROPPED IT EARLIER THIS YEAR.

VINYL CHLORIDE HAS BEEN LINKED TO A FORM OF LIVER CANCER IN WORKERS EXPOSED TO IT AT THE FACTORY LEVEL, AND HAS COME UNDER INCREASING SUSPICION FOR ITS POTENTIALLY ADVERSE HEALTH EFFECTS THROUGHOUT THE ENVIRONMENT.

THE ENVIRONMENTAL PROTECTION AGENCY AND THE FOOD AND DRUG ADMINISTRATION HAVE ALREADY BANNED AND RECALLED COSMETICS, PESTICIDES AND OTHER PRODUCTS UNDER THEIR JURISDICTION WHICH CONTAINED VINYL CHLORIDE.

IN ADDITION TO BANNING THE CHEMICAL IN ANY NEWLY MANUFACTURED AEROSOLS, ALL MANUFACTURERS, DISTRIBUTORS AND RETAILERS WHO PREVIOUSLY MARKETING SPRAYS WITH VINYL CHLORIDE WILL BE REQUIRED TO POST LISTS TELLING EXACTLY WHAT PRODUCTS WERE INVOLVED. CONSUMERS WILL THEN BE ABLE TO RETURN THOSE PRODUCTS FOR REFUNDS.

THE BAN WILL TAKE EFFECT IN 45 DAYS UNLESS THE COMMISSION RECEIVES "LEGALLY SUFFICIENT" OBJECTIONS WHICH WOULD TRIGGER A PUBLIC HEARING.

"THE COMMISSION HAS DETERMINED THAT THE DEGREE AND NATURE OF THE HAZARD PRESENTED BY AEROSOL PRODUCTS-CONTAINING VINYL CHLORIDE IS SUCH THAT THE PUBLIC HEALTH AND SAFETY CAN BE ADEQUATELY SERVED ONLY BY KEEPING THESE PRODUCTS OUT OF THE MARKET PLACE," THE AGENCY SAID. IT ADDED THAT TO THE BEST OF ITS KNOWLEDGE NO VINYL CHLORIDE IS BEING USED IN NEW PRODUCTS.

UPI 03-15 01:57 PED

Copies to:

A. Vittone
R. D. Scott
J. L. Nelson
E. W. Harrington
H. Waltemate
B. M. G. Zwicker
G. Pow
W. J. Wilcox
P. J. Weaver
R. B. Downey
E. B. Osborne
~~R. P. Kenney~~

8-16-74
2:30pm

~~A. L. Hatfield~~ - C. R. Flynn ✓

K. Greene
J. F. Malone

24710015

INTERVIEW WITH B.F. GOODRICH WORKERS

'You Know Something's Got To Be Wrong'

LOUISVILLE, Ky.—In January, 1974, with the death of a third Goodrich worker in three years from angiosarcoma, a fatal form of liver cancer, B.F. Goodrich announced the possibility that vinyl chloride might be a carcinogen — a cancer producing agent. Investigations have now shown that five workers at Goodrich have died from angiosarcoma since 1964 and 55 workers out of 271 tested have abnormal liver functions.

During the interviews the workers didn't want to limit their remarks to only the news-making vinyl chloride but to speak generally about occupational diseases and safety in the plant, a plastic producing chemical complex employing 1200 workers.

At the time of the interviews, the men, members of the International Association of Machinists (IAM AFL-CIO), a majority white union, were walking the picket line over wages and the threatened loss of health benefits. The 60 men, the Maintenance Department at the plant, did equipment repair, maintenance, and electrical work. Their 5 month old strike, which began a month before the angiosarcoma announcements, ended in May with small wage gains and the loss of health benefits after retirement — a major blow.

—Eileen Whalen

Bernard Skaggs first noticed something was happening to his hands in 1955 after cleaning poly, the vats where the polyvinyl plastic is made, for a year. His wife repeatedly asked him to see a doctor but not until 1959 when his condition had gotten so bad, "the ends of my fingers were so sore that I couldn't button my clothes or dial a telephone," did Skaggs go back to his hometown and see his country doctor.

It turned out that his fingertip bones were severely damaged. Skaggs said, "The company doctor told me this is something rare but it's nothing you're working in."

"Of course that didn't convince me; I always felt it was something to do with work. But I couldn't get the doctors even interested in checking it out."

Skaggs eventually got together with other employees suffering the same malady and they filed for workmen's compensation. The company paid the claims without contest.

(Information from an interview in the Louisville Courier-Journal)

I was there in '64 when fellows had problems with their hands. When we went to the company they would say, 'We have a good safety department and it's none of your business and we're handling it and don't bother yourself.' We've been told time and time again that there's nothing around here that's going to hurt you. But I'm sure since '64 they've known vinyl chloride is dangerous because these fellows got this finger disease.

We're trying to get a union safety committee set up to where we could get it out in the open — to find out why your buddy works over here in the mill room all of a sudden ups and dies. And when you work with somebody and they just drop over then you know something's got to be wrong.

We have an operator that has been there at least 20 years plus. Now the man has such a bad case of — well, they may call it acne — when my friend had it they called it cancer. It looks like the man's nose is falling off. It's hard to say what's in that man's mind. He's probably sending his kids to college, he probably needs the money. He knows that his case is terminal in his own heart. He's just going from day to day, one foot right after the other. He must have pain. I don't ask him. It's one of the things you don't do.

Most of the older guys go right on, never say anything, that's where their money comes from. They just walk around a little slower. No one wants to face a horrible reality, of the fact that you walk into a place for work you're shortening your life a little more.

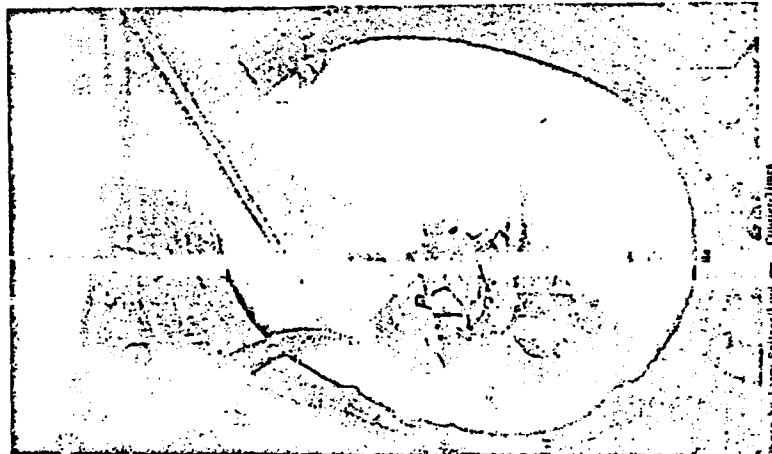
But it pays well and the working conditions are nice. I mean they do not push you — it's not like a assembly line.

The workers speak of conditions in the plant as they knew them before the strike.

The man goes through the manhole and goes down into the poly. Now we have to have a safety permit to enter these tanks and before a guard will give you a safety permit he has to put a monitoring device in there from the top to see

if the gas content is low enough.

This hose with the monitoring device has never been over 3 feet long — the poly from the very top to the very bottom is 10 feet. The explosive content can't be measured from the top of the poly because the gas and vinyl chloride is heavier than air. The man having to work in the bottom here around the bearing and around



A maintenance worker cleaning a vinyl chloride vat (poly), where polyvinyl chloride is produced.

the drive shaft area is working in the last 24 inches of this poly and cleaning out where all the polyvinyl fumes are laying.

See, we're worried about it exploding and also about what we're inhaling.

Now we've seen on TV that now they have air masks since all this has come up. And I haven't been inside the plant for some four months now and we understand that anytime anybody goes into one of these vessels now that he must have a harness on that is capable of lifting him out and he must have a standby at all times.

Another problem, they have these silos. They store the final product there — like your resins and your cubes. At one time they required two people — one to be a standby when you go into these units. They even cut this out, because of its maintenance cost. We still feel it's necessary to have 2 people when a man goes in there in case something would happen, in case a man would have a heart attack, or a man become asphyxiated. This is why a union safety committee would be important — to bring these things up. They could force an issue like this. The company don't want to face the fact that these people are concerned and you have to spend a couple of more bucks to have two people on.

'Hold Your Hand' Tours

The Louisville Courier-Times and local and national television covered the polyvinyl chloride news in detail. Journalists, TV crews, government officials, and industry management toured the plant frequently. The men walking the picket line watched the visitors come and go.

They company takes visitors places that have been shut down the day before, and cleaned up. They take them on a "hold your hand" tour. They showed on TV a guy cleaning a vat. The vat was clean already.

They're not gonna take them to these areas where the contamination is. They're not gonna take them into the areas where this dust has been blowing in the air — things of that nature.

"Six Inches Thick On Everything You Touch"

The dust that we are speaking of is actually a product that they are making — the finer the dust, the better the product. It starts out in liquid form then it drops into big dryers and the dust is so fine that if you try to sweep some of it on the floor which sometimes are in piles two feet high it is so heavy and so fine that if you sweep it with a broom it'll hit the wall and wave back just like water.

You have to work in this type of thing where the dust is 6 inches thick on everything you

touch. Now then you come out of a job like that at dinner time and this is hanging on you all over — it's in the pores of your skin — it's so fine it's in your eyes.

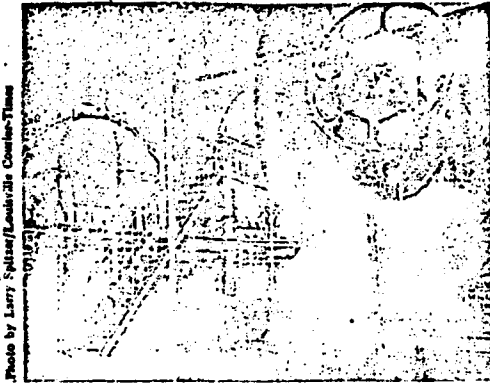
A shower does not really get it out of your skin and you're not allowed to use any type of vacuum system or compressed air to blow the stuff off your clothes. In other words you've got to eat your dinner with it. You can have it on your hands — if you don't wear gloves — you can wash your hands and dry them off and they'll look as pretty as anything you ever saw in your life and about five minutes later you look at them and they're snow white again.

'Dust and 130 Degrees Fahrenheit'

I do know on one occasion one of the fellows made a statement to a foreman 'there's gonna have to be something done about this dust cause it's choking me to death.' The foreman told him 'Well, if you can't stand the dust you might just as well go up to the personnel office and quit.' Now that's a pretty pitiful attitude for a management person to take when a man is trying to tell a man that his breathing is being cut off by the dust in the air. Now add to this the picture that we have painted for you — working conditions in 130 degrees Fahrenheit on top of that — have your air taken away from you. There's no way that my describing the situation like that can force home to you the real thing.

We didn't have any place to eat off of. It took continuous sessions with the foreman and finally a downright demand that we needed a place to eat. These guys got on these benches, all this

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dirt, chemicals, and stuff settles around them. They eat right there on the bench — they're bound to absorb some of these chemicals in their food.

Of course, they said they didn't have the space, didn't have the money, didn't have the time. When all this come out — about cancer — they set up a couple of trailers for us to eat in.

I've read where the finer the particles of dust, the further down in your lungs they travel and it chokes you sooner. You know your breathing is cut off much sooner than if they were larger pieces because the fine stuff travels further down.

A Longtime Worker Speaks

This being a free society everyone is supposed to have the right to make a free choice. Now if we had been given the facts upon employment of the hazards of this plant, but we were not given the facts. This is the fact that you have to bring before the public — that people don't knowingly rush in to kill themselves. They find themselves in the situation too late.

You're up the creek without a paddle and if you're here five or ten years that's the case. I'm 51. I've been here 19 years. Nobody wants to

hire me. My lungs are messed up from being here. They won't admit it. In 19 years they never gave me a physical until this happened.

The Need For Safety Committees

When it first broke about the cancer, they were interested in getting a safety committee. But then when they thought it over, and they had said they'd done some research on the thing. There was Dow Chemical and Dupont, two of the biggest companies in the world — they said they'd had bad experiences with labor management as far as safety aspects go.

They tell at first they need a committee and then they come back in another meeting and tell you they've looked the situation over and 'We don't feel it's necessary.'

We felt like a safety committee would be advantageous to the company as well as ourselves. Because up until now, if we had a problem come up in the plant — we'd go to our general foreman or somebody like that and we would say, 'Well, this condition exists over here.'

Well, he might go over there and take a look at it the next day or a week later or maybe the next time we'd have a meeting we'd say something about it and he'd say, 'By gosh, I forgot that — it completely slipped my mind.'

We want to set up a committee where we as individuals — back in the shop — one maybe two people in each shop would write these things up and then follow them up and see that they were done. We felt like it would be a life saving thing and helpful to them.

The Community's Petition

The IAM strike started December 10, and a copy of a petition signed by residents of the mostly black community surrounding the plant and by striking workers was sent to the Kentucky Occupational Safety and Health Administration (OSHA) later in December.

We went on strike the 10th day of December and we was on strike for some ten days and one of the blacks that works in our shop said he had been talking to the neighbors around here and

the neighbors said — what chance is there of this place getting out of hand and explosions and things of that nature. Like Dupont did several years ago. So he came down and he and some of his neighbors and friends, they wrote the petition up and we took it down to our hall and we had it typed up. We made copies of it and it was circulated through the whole neighborhood. It was posted in shopping centers everywhere.

The petition was asking that the company would at least negotiate with us so we could get back in there and minimize the danger of an explosion like what took place here the other night.

Since this is more or less the black area down here we circulated the petition and got some 400 names. The state OSHA was notified of this petition — a copy of it was forwarded to them in Frankfort and then they came down here and made an inspection. And their inspection, along with National Institute for Occupational Safety and Health (NIOSH) out of Meadville, Maryland — between the two of them together, they actually opened this thing up to the news media and that's when this came about.

I think it was kind of simultaneous that Dr. Crech made the cancer thing public. They knew since we were out that people were going to be talking to us and if people were going to be talking to us we were going to be talking about the plant. So I think the whole thing came about, you know — more or less simultaneous.

The Explosion At Goodrich

In April an explosion occurred in one of the dryers. The local media reported the structure had been hit by lightning. The workers tell what happened.

We would like to mention that the people that are involved in electrical work are pretty well sure that lightning didn't cause this.

Now see here these dryers — we have one where they had a fire some time back and immediately after that fire they put a sensing system in all these dryers and when they get to a certain temperature, then all the heat will shut off. Well, the feeling over here is that these sensing systems — this dryer had been running without bag changes since we went out on the 5th day of December. There are 560 bags in this particular dryer and since those bags had never been changed we felt like everything was plugged up in there and maybe the sensing system had rubber built up over it and it wasn't doing the proper job. It just got so hot, the dangone thing ignited and it went right on out of the roof. But the company immediately blamed it on lightning. Of course the company did that primarily for one reason because if it is an act of nature — the insurance company looks on it a lot different than if it's an act of neglect.

A Chemical Plant is a Lightning Arrestor

A chemical plant is constructed in such a manner that it is nothing more than a lightning arrestor in itself. The construction of the building in which the explosion occurred is such that you have steel I-beams that are driven deep into the ground on at least all four corners — extending to the roof which in itself makes the building grounded. Even the electrical cables are using the building as a neutral ground as well as the lightning arrestor. There should never be a carbon arc or anything regardless of how many times the thing may be struck by several bolts of lightning.

Our contention is that the explosion was caused by either monitoring equipment failure because of the lack of maintenance or neglect.

No Way Of Knowing

Something the workers repeatedly spoke of was their having no way of knowing what was happening to their bodies. Their family doctors had little knowledge of industrial disease and

they didn't trust the company doctor, Dr. John Crech. Crech had told one man who had gotten skin cancer where a piece of his equipment rubbed against his skin that the sun had caused the cancer.

The men expressed anger because in the heavily industrialized town of Louisville, the medical school at the University of Louisville had no department of industrial health nor community health. No courses are offered to enable private doctors to recognize and treat work related diseases and no testing services are offered workers at reasonable fees.

I think you'd find a good number of people here have bad lungs. They used to come out here with a chest x-ray machine. They did that until about 3-4 years ago and then they knocked that off. The TB society didn't have any facility down here where they could set up their machines any more. The company had put the credit union in that room.

The TB Society was paying for it. See, of course the TB Society got a lot of money out of this plant. They have a plan in here where they take so much out of your check and this money is distributed to agencies. They call it the United Charities and quite a bit of money went to the TB Society.

One of our proposals in our negotiations is to have multiple testing. We took a tour at the sheetmetal hall where they do 105 tests on a person in 30-35 minutes. Part of it is where they do 19 tests from one vial of blood. And it only costs \$45 a year.

In this company the only time they give a test is when there's a problem. Like when they had the finger disease they gave the men in maintenance an x-ray test — but only for one year. And some people were effected by it later on.

We feel that if they're really interested in doing something, they should furnish uniforms for the people, they should furnish places for them to eat and they should also give us the right to say when something's unsafe, they

what they're working with could give them cancer. And give them a test once a year so they could feel they're cleared each year.

Minorities Hit Hardest

Increasing evidence shows that black and minority people, forced by racism to have the lowest paying, dirtiest, and most dangerous jobs, are the part of the population most adversely affected by occupational diseases and unsafe conditions. A few examples follow:

The National Institute for Occupational Safety and Health has released a study showing that coke oven workers in steel plants are far more likely to die of lung cancer than other steel workers. These jobs are the worst in the steel industry and are almost always given to black workers. Of workers whose jobs are on top of the coke batteries, 15 out of every 132 will die of lung cancer, the study reports.

Workers in foundries and blast furnaces, where molten metal is handled at high temperatures and injuries are common, are mostly black. Women and men working in dry cleaning establishments are effected by the heat and solvent fumes.

In the most labor-intensive agricultural parts of the country — the South and the Southwest — pesticides kill more than 800 people a year. Black and Chicano adults and children cultivating fruit and vegetables are forced back into the fields while sprayed pesticides are still heavy in the air. The average life expectancy of a farm worker is 49 years.

Minority workers and their families are forced to live in the oldest sections of most large cities. These are generally the neighborhoods which industry pollutes the worst.

Accidents kill a much higher proportion of black workers than whites, and the situation is getting worse. In 1950, the rate of deaths due to accidents was 25 percent higher for blacks. By 1969, the black rate was 43 percent higher.

Cancer, on the increase as an industrial disease, is another example. In 1950 there was virtually no difference in the black and white rates. But by 1969, blacks were dying of cancer at a rate 25 percent higher than whites.

24710017

RESIDUAL VCI CONTENT OF FINISHED PVC PRODUCTS

Data Expressed in PPM VCI

RESIN	AVON LAKE				HENRY				LONG BEACH				LOUISVILLE				PEDRICKTOWN			
	8/23	8/30	9/6	9/13	8/23	8/30	9/6	9/13	8/23	8/30	9/6	9/13	8/23	8/30	9/6	9/13	8/23	8/30	9/6	9/13
TYPE																				
Week Ending	8/30	9/6	9/13		8/30	9/6	9/13		8/30	9/6	9/13		8/30	9/6	9/13		8/30	9/6	9/13	
80X5																				
80X6																				
G-92	7000																			
G-99																				
101 F-4																				
102EP F-5	897				61	3			20/67											
103EP									149/127											
103EP F-76	N11				55/153	42/101	118		295/248	105/212	331/	45					60	9	140	
105																				
110X233																				
110X236																				
110X333																				
120X241																				
120X251																				
120X271																				
120X283																				
121	N11/N11																			
124 F-1	N11/N11																			
126																				
128																				
128 F-1																				
130X17	N11																			
130X24																				
35																				
40X30																				
40X31																				

SEE ATTACHED DATA

CHROMATOGRAPH USED FOR OTHER PURPOSES THIS WEEK

45

331/

20/67

118

42/101

61

3

20/67

149/127

295/248

105/212

331/

45

NO REPORT DUE TO MALFUNCTION IN THE PERKIN-ELMER HEAD SPACE ANALYZER

SEE ATTACHED DATA

.35

88

133/40

36/23

24711501

NOTE: SLASHES INDICATE SEPARATE SAMPLE READINGS

G. D. Schaaf / cls

5

17

74

47

24

98

Data Expressed in PPM VCI

RESIN	AVON LAKE			HENRY			LONG BEACH			LOUISVILLE			PEDRICKTOWN		
	8/23	8/30	9/6	8/23	8/30	9/6	8/23	8/30	9/6	8/23	8/30	9/6	8/23	8/30	9/6
TYPE	8/23	8/30	9/6	8/23	8/30	9/6	8/23	8/30	9/6	8/23	8/30	9/6	8/23	8/30	9/6
Week Ending	8/30	9/6	9/13	8/30	9/6	9/13	8/30	9/6	9/13	8/30	9/6	9/13	8/30	9/6	9/13
202															
222															
300X6															
421															
427															
430X20															
430X30															
430X40															
440X30		29													
443															
605X560															
OFF GRADE															
80X24B													128		
80X8													1007		
80D													27		
128B						6									

24711002

24711003

RESIDUAL VC1 CONTENT OF FINISHED PVC PRODUCTS

Data Expressed in PPM VC1

PLANT: Avon LakeWEEK ENDING: 9-13-74

<u>Resin Type</u>	<u>No. Data Points</u>	<u>Average</u>	<u>High</u>	<u>Low</u>
103EP F-76	27	75.0	248.3	4.5
121	19	5.7	27.1	0.9
102EP F-5	15	50.7	151.8	0.4
G-92	14	18.1	123.7	0.4
130X17	3	3.0	3.5	2.2
124 F-1	5	9.4	38.6	0.5
110X333	1	0.3	0.3	0.3
430X30	4	172.3	200.2	132.0
110X233	1	0.3	0.3	0.3

* All of the above data was obtained using the headspace method

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RESIDUAL VC1 CONTENT OF FINISHED PVC PRODUCTS

Data Expressed in PPM VC1

PLANT: LouisvilleWEEK ENDING: 9-13-74

<u>Resin Type</u>	<u>No. Data Points</u>	<u>Average</u>	<u>High</u>	<u>Low</u>
G-92	11	0.7	2.0	0.0
103EP	9	147.6	619.0	59.0
103EP F-76	4	135.0	250.0	18.0
121	3	5.7	10.0	1.0
300X6	3	112.7	193.0	49.0
440X24	1	286.0	286.0	286.0
443	1	751.0	751.0	751.0
603X560	1	0.0	0.0	0.0

RESIDUAL VCI CONTENT OF FINISHED PVC PRODUCTS

Data Expressed in PPM VCI

RESIN	AVON LAKE				HENRY				LONG BEACH				LOUISVILLE				PEDRICKTOWN				
TYPE	8/2	8/9	8/16	8/23	8/2	8/9	8/16	8/23	8/2	8/9	8/16	8/23	8/2	8/9	8/16	8/23	8/2	8/9	8/16	8/23	
Week Ending	8/9	8/16	8/23	8/9	8/16	8/23	8/9	8/16	8/23	8/9	8/16	8/23	8/9	8/16	8/23	8/9	8/16	8/23	8/9	8/16	8/23
80X5																					
80X6																					
G-92																					
G-99																					
101 F-4																					
102EP F-5																					
103EP																					
103EP F-76																					
105																					
110X233																					
110X236																					
110X333																					
20X241																					
20X251																					
20X271																					
20X283																					
21																					
24 F-1																					
26																					
28																					
28 F-1																					
30X17																					
30X24																					
35																					
40X30																					
40X31																					
OTE: SLA																					
INDICATE SEPARATE SAMPLE READINGS																					
SN01/1442																					

50011112

INDICATE SEPARATE SAMPLE READINGS

G. D. chnaf /

c1s

NO SAMPLES OBTAINED THIS WEEK. NIOSH VISITING PLANT

21

13

83

63/48

34/22

Data processed by PIM VCI

[illegible]

WEEKLY SUMMARY

VCI Ambient Vapor Concentrations

AVON LAKE GENERAL CHEMICAL

Week Ending	AVERAGE					% READING < 10 PPM					% READING > 25 PPM					% READING > 50 PPM				
	Prev. Month	8/30 9/6	9/6 9/13	9/13 9/20	9/20 9/27	Prev. Month	8/30 9/6	9/6 9/13	9/13 9/20	9/20 9/27	Prev. Month	8/30 9/6	9/6 9/13	9/13 9/20	9/20 9/27	Prev. Month	8/30 9/6	9/6 9/13	9/13 9/20	9/20 9/27
451-1	6.2	8.0	6.0	12.0		89.6	83.7	89.6	81.5		1.1	6.3	3.1	4.9		0.1	1.8	0.9	3.0	
-2	8.0	10.0	11.0	14.0		76.8	72.8	78.7	60.7		6.8	7.8	10.0	12.8		1.4	3.0	3.1	6.7	
-3	13.2	15.0	17.0	17.0		60.3	56.6	51.5	50.6		13.0	15.0	17.8	19.6		4.6	4.2	6.5	8.5	
Avg.	9.1	11.0	11.3	14.3		75.5	71.0	73.2	64.2		6.9	9.7	10.3	12.4		2.0	3.0	3.5	6.0	
461-1	13.5	11.0	13.0	13.0		52.5	69.6	65.2	70.9		11.4	7.7	8.5	11.6		3.7	2.3	4.8	5.8	
-2	14.5	10.0	17.0	14.0		55.0	72.6	48.7	61.9		14.1	4.7	16.4	11.6		5.9	1.7	6.7	6.1	
-3	25.2	16.0	23.0	18.0		22.7	44.0	21.3	45.8		31.3	11.9	26.2	19.3		11.7	5.3	6.0	5.8	
Avg.	17.7	12.3	17.6	15.0		43.4	62.0	45.0	59.5		18.9	8.1	17.0	14.1		7.1	3.1	5.8	5.9	
464-1	4.0	4.0	3.0	9.0		90.7	95.1	97.9	85.7		4.3	4.8	2.0	10.7		1.1	2.4	0.0	7.1	
-2	8.7	5.0	4.0	10.0		80.7	89.0	94.7	80.3		7.6	2.4	3.1	12.5		4.2	1.2	0.0	7.1	
-3	15.0	13.0	8.0	8.0		67.2	73.1	76.3	75.0		14.6	13.0	5.5	13.0		8.0	7.3	3.4	5.9	
Avg.	9.2	7.3	5.0	9.0		79.5	85.7	89.6	80.3		8.8	6.7	3.5	12.0		4.4	3.6	1.1	6.7	
463-1	4.5	7.0	8.0	6.0		93.4	86.8	86.9	93.5		2.3	3.1	5.5	1.6		1.0	1.0	1.8	0.9	
-2	6.7	13.0	15.0	8.0		86.2	65.2	64.1	84.8		3.4	12.0	11.5	1.9		1.0	4.2	6.7	0.3	
Avg.	5.6	10.0	11.5	7.0		89.8	76.0	75.5	89.1		2.8	7.5	8.5	1.7		1.0	2.6	4.2	0.6	
PLANT AVG.	10.4	10.1	11.3	11.3		72.0	73.6	70.8	73.2		9.3	8.0	9.8	10.0		3.6	3.0	3.6	4.8	

1011472

WEEKLY SUMMARY

VCl Ambient Vapor Concentrations

HENRY AND LONG BEACH

Week ending	AVERAGE					READING < 10 PPM					% READING > 25 PPM					% READING > 50 PPM				
	Prev. Month	8/30 9/6	9/6 9/13	9/13 9/20	9/20 9/27	Prev. Month	8/30 9/6	9/6 9/13	9/13 9/20	9/20 9/27	Prev. Month	8/30 9/6	9/6 9/13	9/13 9/20	9/20 9/27	Prev. Month	8/30 9/6	9/6 9/13	9/13 9/20	9/20 9/27
HENRY																				
Pzn-1	7.7	6.0	4.0	7.0		85.6	88.9	94.4	88.9		5.5	3.9	0.3	4.8		2.9	2.4	0.0	3.3	
-2	8.0	7.0	5.0	5.0		84.7	88.4	91.9	90.9		4.5	4.5	1.9	3.0		1.7	2.4	0.6	0.6	
-3	7.7	9.0	6.0	5.0		79.5	78.3	87.6	94.9		4.9	7.1	4.3	1.8		1.3	3.0	0.6	1.5	
PLANT AVG.	7.8	7.3	5.0	5.6		83.4	85.2	91.3	91.5		4.9	5.1	2.1	3.2		1.9	2.6	0.4	1.8	
LONG BEACH																				
Pzn-1	10.3	6.6	9.5	5.1		74.7	85.1	81.1	90.4		8.1	2.6	8.9	2.9		2.9	1.1	4.4	1.4	
-2	6.9	5.9	6.6	6.0		84.9	89.2	82.6	85.3		3.7	2.9	3.9	3.7		1.5	1.3	1.4	1.5	
Roof	4.7	5.9	6.1	4.1		90.4	87.5	83.2	88.6		2.1	2.9	1.2	0.6		0.6	1.1	0.6	0.6	
PLANT AVG.	7.3	6.1	7.4	5.0		83.3	87.3	82.3	88.1		4.6	2.8	4.6	2.4		1.6	1.2	2.1	1.1	

247110-3

WEEKLY SUMMARY

VCl Ambient Vapor Concentrations

LOUISVILLE

Week ending	AVERAGE					% READING < 10 PPM					% READING > 25 PPM					% READING > 50 PPM				
	Prev. Month	8/30 9/6	9/6 9/13	9/13 9/20	9/20 9/27	Prev. Month	8/30 9/6	9/6 9/13	9/13 9/20	9/20 9/27	Prev. Month	8/30 9/6	9/6 9/13	9/13 9/20	9/20 9/27	Prev. Month	8/30 9/6	9/6 9/13	9/13 9/20	9/20 9/27
1-1	3.2	4.0	4.0	4.0		94.4	93.5	95.5	95.2		1.9	1.5	0.6	0.6		0.9	0.6	0.0	0.3	
-2	4.2	5.0	2.0	1.0		91.0	88.6	97.9	98.8		3.0	3.0	0.6	0.0		1.8	1.2	0.0	0.0	
-3	5.0	4.0	4.0	4.0		89.3	91.7	93.5	91.6		3.2	2.5	1.8	2.4		1.2	0.6	0.0	1.2	
Avg.	4.1	4.3	3.3	3.0		91.5	91.2	95.6	95.2		2.7	2.3	1.0	1.0		1.3	0.8	0.0	0.5	
15-1	5.0	1.0	2.0	4.0		88.1	98.2	97.0	95.8		4.0	0.0	1.2	3.6		1.0	0.0	0.6	3.0	
-2	10.5	4.0	5.0	7.0		71.0	92.9	86.9	83.3		8.6	2.4	2.7	6.0		2.3	0.6	1.5	1.8	
-3	7.2	6.0	5.0	6.0		80.8	88.9	88.5	89.5		4.0	4.0	2.2	2.8		1.5	1.8	1.4	1.8	
Avg.	7.5	3.6	4.0	5.6		79.9	93.3	90.8	89.5		5.5	2.1	2.0	4.1		1.6	0.8	1.1	2.2	
111-1	3.5	2.0	3.0	4.0		95.7	91.1	96.4	90.9		2.7	0.0	0.6	1.8		2.1	0.0	0.0	0.6	
-2	3.0	3.0	4.0	3.0		94.4	92.2	93.5	95.4		0.9	3.3	2.1	1.5		0.5	0.0	0.9	0.9	
-3	6.0	7.0	8.0	8.0		85.8	85.9	81.5	78.2		4.2	4.4	6.3	6.5		1.5	2.2	1.8	2.2	
Avg.	4.1	4.0	5.0	5.0		91.9	89.7	90.4	88.1		2.6	2.5	3.0	3.2		1.3	0.7	0.9	1.2	
115-2	25.2	24.0	20.0	19.0		18.1	10.3	18.1	35.0		32.7	36.4	15.8	12.3		6.7	2.1	4.2	4.5	
Avg.	25.2	24.0	20.0	19.0		18.1	10.3	18.1	35.0		32.7	36.4	15.8	12.3		6.7	2.1	4.2	4.5	
121-1	3.5	6.0	4.0	5.0		93.6	86.5	95.5	90.7		2.2	6.2	2.1	5.2		0.7	2.7	1.8	1.9	
-2	3.5	4.0	4.0	6.0		92.4	92.6	91.4	85.8		2.1	2.7	3.0	6.5		0.8	1.5	1.2	2.5	
-3	7.0	8.0	6.0	7.0		81.2	80.1	86.6	84.3		3.7	3.3	2.4	4.4		0.5	1.5	1.2	2.2	
Avg.	4.6	6.0	4.6	6.0		89.0	86.4	91.1	86.9		2.6	4.0	2.5	5.3		0.6	1.9	1.4	2.2	
PLANT AVG.	9.1	8.3	7.3	7.7		74.0	74.1	77.2	78.9		9.2	9.4	4.8	5.1		2.3	1.2	1.5	2.1	

24711009

WEEKLY SUMMARY

VCI Ambient Vapor Concentrations

PEDRICKTOWN

Peak Avg.	AVERAGE					% READING < 10 PPM					% READING > 25 PPM					% READING > 50 PPM				
	Prev. Month	8/30 9/6	9/6 9/13	9/13 9/20	9/20 9/27	Prev. Month	8/30 9/6	9/6 9/13	9/13 9/20	9/20 9/27	Prev. Month	8/30 9/6	9/6 9/13	9/13 9/20	9/20 9/27	Prev. Month	8/30 9/6	9/6 9/13	9/13 9/20	9/20 9/27
3-2	6.4	5.6	4.9	4.7		92.0	90.7	92.9	91.9		5.2	2.5	2.4	2.6		2.0	1.0	0.8	1.2	
-3	10.3	7.9	6.5	9.5		81.3	81.8	86.8	76.6		12.1	4.0	2.4	10.3		5.3	0.7	0.8	2.3	
avg.	8.3	6.7	5.7	7.1		86.6	86.2	89.8	84.2		8.6	3.2	2.4	6.4		3.6	0.8	0.8	1.7	
2-1	8.0	3.4	3.8	5.5		86.8	94.7	94.2	90.0		7.4	1.6	0.3	2.2		2.5	0.8	0.0	1.2	
-2	14.6	6.3	5.3	5.6		71.1	86.8	87.5	87.6		16.5	4.2	0.7	1.8		5.9	2.1	0.1	0.5	
avg.	11.3	4.8	4.5	5.5		78.9	90.7	90.8	88.8		11.9	2.9	0.5	2.0		4.2	1.4	0.05	0.8	
ANT avg.	9.8	5.7	5.1	6.3		82.7	88.4	90.3	86.5		10.2	3.0	1.4	4.2		3.9	1.1	0.4	1.2	

0 11/15/2

WEEKLY SUMMARY

VCI Ambient Vapor Concentrations

AVON LAKE TECHNICAL CENTER

Week ending	AVERAGE					% READING < 10 PPM					% READING > 25 PPM					% READING > 50 PPM				
	Prev. Month	8/30 9/6	9/6 9/13	9/13 9/20	9/20 9/27	Prev. Month	8/30 9/6	9/6 9/13	9/13 9/20	9/20 9/27	Prev. Month	8/30 9/6	9/6 9/13	9/13 9/20	9/20 9/27	Prev. Month	8/30 9/6	9/6 9/13	9/13 9/20	9/20 9/27
414-1	8.8	7.1	8.1	7.4		81.1	98.0	97.1	100.0		1.5	0.0	0.0	0.0		0.8	0.0	0.0	0.0	
-2	8.9	7.6	7.8	7.8		81.9	99.0	99.0	93.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
-3	11.3	8.3	8.5	8.6		58.1	83.6	95.9	94.0		3.1	0.0	0.0	0.0		1.6	0.0	0.0	0.0	
AVG.	9.6	7.6	8.1	7.9		73.7	93.5	97.3	95.6		1.5	0.0	0.0	0.0		0.8	0.0	0.0	0.0	
414-1	8.0	6.9	8.3	8.3		76.3	100.0	64.2	95.0		0.0	0.0	1.4	0.0		0.0	0.0	0.0	0.0	
-2	8.9	6.7	8.8	9.0		69.5	100.0	83.0	77.8		3.2	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
-3	10.2	7.9	8.7	13.1		51.5	89.4	75.9	65.6		0.9	0.0	0.0	9.2		0.0	0.0	0.0	0.0	
AVG.	9.0	7.1	8.6	10.1		65.7	96.4	74.3	79.4		1.3	0.0	0.4	3.0		0.0	0.0	0.0	0.0	
413	8.0	7.1	8.0	7.4		79.8	99.0	99.3	96.3		0.2	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
AVG.	8.0	7.1	8.0	7.4		79.8	99.0	99.3	96.3		0.2	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
PLANT																				
AVG.	8.8	7.2	8.2	8.4		73.0	96.3	90.3	90.4		1.0	0.0	0.1	1.0		0.2	0.0	0.0	0.0	
HYDRIN																				
417-1	10.9	9.4	9.4	11.4		60.9	75.0	76.9	53.0		3.0	0.0	14.1	0.0		0.0	0.0	0.0	0.0	
-2	19.2	10.5	10.2	14.4		49.9	25.1	66.0	39.5		14.6	0.0	0.0	4.2		8.1	0.0	0.0	0.0	
-3	21.2	17.5	14.5	20.1		44.6	29.1	24.3	19.3		12.1	13.0	5.5	18.5		1.1	0.5	0.0	0.0	
AVG.	17.1	12.4	11.3	15.3		51.8	43.0	55.7	37.2		9.9	4.3	6.5	7.5		3.0	0.1	1.0	0.0	

11/11/52

COMPANY CONFIDENTIAL

WEEKLY SUMMARY

Ambient Organic Vapor Concentrations

CALVERT CITY	AVERAGE					% READING <1> PPM					% READING > 25 PPM					% READING > 50 PPM				
	Prev. Month	8/26-9/2	9/3-9/8	9/9-9/15		Prev. Month	8/26-9/2	9/3-9/8	9/9-9/15		Prev. Month	8/26-9/2	9/3-9/8	9/9-9/15		Prev. Month	8/26-9/2	9/3-9/8	9/9-9/15	
Week Ending																				
Control Rooms	2	1	1	1			96	100	96		1	0	0	0			0	0	0	
Chromatograph Houses	6	2	3	2			88	98	88		4	0	2	2			0	2	0	
Caustic Scrubber Area	10	3	14	2			84	86	90		6	2	6	2			0	6	0	
Quench Areas	1	3	2	2			88	94	92		2	4	2	2			0	0	0	
VCM Column Areas	16	2	3	2			91	96	90		5	0	2	2			0	2	0	
Refrigeration Machine	7	6	2	2			84	96	92		2	2	0	2			2	0	0	
Tank Farm Areas	3	1	4	23			100	94	87		2	0	3	7			0	3	5	
Loading Rack Areas	1	1	1	1			100	100	99		1	0	0	0			0	0	0	

cc: GLWoods
JJSchonaerts
GEEvens
RASpurlock
GDSchaeff
HWaltenate

NOTE:

Week Ending 9/15 -- The high tank farm readings were due to a bleed valve being open between leaking double block valve, for two days.

2471101

WEEKLY SUMMARY

VCI Ambient Vapor Concentrations

AVON LAKE GENERAL CHEMICAL

Week ending	AVERAGE					% READING < 10 PPM					% READING > 25 PPM					% READING > 50 PPM				
	Prev. Month	8/2 8/9	8/9 8/16	8/16 8/23	8/23 8/30	Prev. Month	8/2 8/9	8/9 8/16	8/16 8/23	8/23 8/30	Prev. Month	8/2 8/9	8/9 8/16	8/16 8/23	8/23 8/30	Prev. Month	8/2 8/9	8/9 8/16	8/16 8/23	8/23 8/30
451-1	3.8	8.0	6.0	6.0	5.0		85.0	91.0	90.3	92.1		1.3	0.3	1.8	1.2	0.9	0.0	0.3	0.3	0.0
-2	8.9	9.0	7.0	6.0	10.0		73.6	80.7	84.3	66.7		6.2	5.7	3.7	11.8	2.0	1.3	1.4	1.2	1.8
-3	10.2	13.0	15.0	16.0	9.0		67.7	52.8	46.8	74.0		12.5	13.9	17.8	8.1	1.9	5.5	3.5	7.8	1.8
Avg.	7.6	10.0	9.3	9.3	8.0		75.4	74.8	73.8	78.2		6.6	6.6	7.7	7.0	1.6	2.2	1.7	3.1	1.2
461-1	9.5	14.0	18.0	12.0	10.0		48.4	36.0	52.8	73.1		11.5	17.0	9.4	8.0	1.7	3.0	8.1	1.8	2.0
-2	12.6	15.0	16.0	17.0	10.0		54.8	53.0	38.6	73.8		13.6	18.0	16.9	8.0	4.3	4.8	8.8	6.2	4.0
-3	18.8	28.0	29.0	28.0	16.0		18.1	16.3	17.9	38.5		20.1	37.0	40.2	12.7	6.7	15.4	15.9	12.5	3.3
Avg.	13.6	19.0	21.0	19.0	12.0		40.4	35.1	36.4	61.8		5.5	24.0	22.1	9.5	4.3	7.7	10.9	6.8	3.1
464-1	7.5	3.0	5.0	4.0	4.0		80.5	78.5	95.1	95.2		6.9	2.3	0.0	4.7	4.2	0.0	2.3	0.0	2.3
-2	9.7	8.0	14.0	4.0	9.0		67.5	68.2	72.3	80.9		9.2	16.6	14.6	21.4	4.5	4.1	9.5	8.9	3.5
-3	10.7	9.0	14.0	16.0	21.0		80.6	72.7	85.8	79.0		7.2	13.4	6.4	11.0	3.5	1.8	7.1	2.9	14.2
Avg.	9.3	6.6	11.0	8.0	11.3		87.5	97.0	93.6	95.8		3.8	10.8	3.3	1.2	4.0	1.9	6.3	2.9	6.6
463-1	6.0	5.0	3.0	5.0	5.0		77.6	91.0	88.5	87.8		6.8	0.9	2.1	3.8	0.9	1.1	0.3	1.8	0.9
-2	13.9	10.0	4.0	6.0	7.0		82.5	94.0	91.0	91.8		5.3	1.1	2.7	2.5	2.6	1.4	0.0	1.5	1.2
Avg.	9.9	7.5	3.5	5.5	6.0															0.7
PLANT AVG.	10.1	10.7	11.2	10.4	9.3		69.7	69.2	71.7	77.7		9.8	10.6	9.7	7.5	3.1	3.3	4.8	3.5	2.9

3 211672

WEEKLY SUMMARY

VCI Ambient Vapor Concentrations

HENRY AND LONG BEACH

Week ending	AVERAGE					% READING < 10 PPM					% READING > 25 PPM					% READING > 50 PPM				
	Prev. Month	8/2 8/9	8/9 8/16	8/16 8/23	8/23 8/30	Prev. Month	8/2 8/9	8/9 8/16	8/16 8/23	8/23 8/30	Prev. Month	8/2 8/9	8/9 8/16	8/16 8/23	8/23 8/30	Prev. Month	8/2 8/9	8/9 8/16	8/16 8/23	8/23 8/30
HENRY																				
Pzn-1	11.4	8.0	9.0	8.0	6.0		86.6	84.2	83.9	87.8		4.2	7.1	7.7	3.1	4.1	2.5	3.3	5.6	0.3
-2	9.0	9.0	7.0	10.0	6.0		82.6	82.4	83.3	90.6		5.9	3.6	4.8	4.0	2.2	1.7	0.6	3.3	1.2
-3	8.9	9.0	7.0	8.0	7.0		77.9	83.0	75.6	83.4		4.2	3.9	7.4	4.3	1.2	0.8	0.3	3.6	0.6
PLANT																				
AVG.	9.7	8.6	8.0	9.3	6.3		82.3	83.2	80.9	87.2		4.7	4.9	6.6	3.8	2.5	1.6	1.4	4.1	0.7
LONG BEACH																				
Pzn-1	7.2	7.2	7.5	13.0	13.5		89.2	86.8	66.0	57.1		2.7	3.5	12.5	13.8	0.7	1.2	2.0	4.6	4.1
-2	8.1	8.0	5.6	6.4	7.9		85.7	88.6	83.7	81.7		4.4	2.3	3.5	4.7	1.7	2.0	1.1	1.1	1.9
Roof	7.1	6.1	3.3	4.3	5.3		89.2	94.9	89.2	88.6		1.5	1.1	2.7	3.4	0.8	0.7	.5	0.6	0.9
PLANT																				
AVG.	7.5	7.1	5.5	7.9	8.9		88.0	90.1	79.6	75.8		2.9	2.5	6.2	7.3	1.0	1.3	1.3	2.1	2.3

/9-8/16 Ambient Air = 7 ppm Avg.

V. 11152

WEEKLY SUMMARY

VCL Ambient Vapor Concentrations

LOUISVILLE

Week Ending	AVERAGE					% READING < 10 PPM					% READING > 25 PPM					% READING > 50 PPM				
	Prev. Month	8/2 8/9	8/9 8/16	8/16 8/23	8/23 8/30	Prev. Month	8/2 8/9	8/9 8/16	8/16 8/23	8/23 8/30	Prev. Month	8/2 8/9	8/9 8/16	8/16 8/23	8/23 8/30	Prev. Month	8/2 8/9	8/9 8/16	8/16 8/23	8/23 8/30
1-1	3.6	4.0	3.0	4.0	2.0	93.7	92.7	93.2	98.2	2.4	1.9	2.7	0.6	1.0	1.2	0.0	1.8	0.9	0.6	0.6
-2	5.9	6.0	4.0	5.0	2.0	90.4	92.7	85.4	95.5	4.8	2.5	3.0	1.8	2.4	3.9	1.3	0.9	1.2	0.6	1.2
-3	6.2	6.0	7.0	4.0	3.0	88.0	83.9	91.4	94.0	4.5	4.7	2.1	1.5	1.9	1.5	1.9	0.9	0.9	0.6	0.6
AVG.	5.2	5.3	4.7	4.3	2.3	90.7	89.8	90.0	95.9	3.9	3.0	2.6	1.3	1.8	2.2	1.1	1.2	1.2	0.8	1.2
15-1	2.2	6.0	7.0	3.0	4.0	85.7	84.0	92.5	90.5	4.2	6.0	3.7	2.4	0.5	1.8	1.3	0.0	0.0	1.2	1.2
-2	10.9	14.0	11.0	8.0	9.0	53.3	73.3	81.7	75.9	15.5	6.3	5.4	7.4	2.5	2.1	1.3	2.2	0.0	3.6	3.6
-3	9.6	9.0	8.0	6.0	6.0	74.2	76.7	98.6	83.7	6.5	4.4	2.7	2.4	1.9	2.6	1.9	0.8	0.8	0.6	0.6
AVG.	7.6	9.6	8.7	5.6	6.3	71.0	78.0	87.6	83.3	8.7	5.6	3.9	4.0	1.7	2.1	1.5	1.0	1.8	1.8	1.8
11-1	2.5	1.0	2.0	3.0	8.0	99.4	97.5	95.2	90.8	0.6	0.6	2.4	7.4	0.3	0.0	0.0	0.0	0.6	0.3	0.3
-2	4.1	2.0	3.0	4.0	3.0	95.8	94.7	92.6	94.8	0.3	1.2	0.9	1.5	1.2	1.4	0.9	2.0	2.0	1.4	1.4
-3	8.3	6.0	6.0	7.0	5.0	88.9	83.0	82.3	89.0	3.8	4.3	5.8	2.9	2.4	0.5	1.2	0.6	2.0	1.4	2.8
AVG.	5.0	3.0	3.7	4.6	5.3	94.7	91.7	90.0	91.5	1.5	2.0	3.0	3.9	1.3	0.8	0.7	1.4	0.0	12.0	12.0
115-2	26.3	29.0	23.0	14.0	35.0	15.9	15.9	36.9	4.0	37.1	26.2	6.9	60.8	7.6	8.8	6.2	0.0	0.0	12.0	12.0
AVG.	26.3	29.0	23.0	14.0	35.0	15.9	15.9	36.9	4.0	37.1	26.2	6.9	60.8	7.6	8.8	6.2	0.0	0.0	12.0	12.0
121-1	6.2	3.0	4.0	3.0	4.0	94.6	92.2	96.6	91.1	2.1	2.7	0.6	3.6	1.9	0.3	0.9	0.3	0.3	1.5	1.5
-2	6.2	4.0	4.0	3.0	3.0	91.9	89.5	93.8	94.6	2.7	2.1	1.5	2.1	1.9	1.8	0.6	0.6	0.6	0.3	0.3
-3	8.3	6.0	9.0	5.0	8.0	86.7	71.3	86.4	80.4	1.2	7.8	1.9	3.9	1.4	0.9	0.9	0.0	0.0	0.3	0.3
AVG.	6.9	4.3	5.7	3.6	5.0	91.0	84.3	92.2	88.7	2.0	4.2	1.3	3.2	1.7	1.0	0.8	0.3	0.3	0.7	0.7
PLANT AVG.	10.2	10.2	9.2	6.4	10.7	72.6	71.9	79.3	72.6	10.6	8.2	3.5	14.6	2.8	2.9	2.1	0.7	3.6	3.6	3.6

2-0116162

WEEKLY SUMMARY

VCI Ambient Vapor Concentrations

PEDRICKTOWN

Week ending	AVERAGE					% READING < 10 PPM					% READING > 25 PPM					% READING > 50 PPM				
	Prev. Month	8/2 8/9	8/9 8/16	8/16 8/23	8/23 8/30	Prev. Month	8/2 8/9	8/9 8/16	8/16 8/23	8/23 8/30	Prev. Month	8/2 8/9	8/9 8/16	8/16 8/23	8/23 8/30	Prev. Month	8/2 8/9	8/9 8/16	8/16 8/23	8/23 8/30
13-2 -3 AVE.	7.2 12.7 10.0	8.9 13.7 11.3	-- NO DATA AVAILABLE --				92.0 81.3 86.6	8.8 18.2 13.5	4.8 11.2 8.0	2.0 6.9 4.4	3.2 7.8 5.5	2.9 11.6 7.2	2.3 3.4 0.9	0.8 1.0 0.9						
12-1 -2 AVE.	3.1 4.9 4.0	7.1 15.1 11.1	-- NO DATA AVAILABLE --				86.8 71.1 78.9	6.9 17.1 12.0	10.7 19.6 15.1	4.7 12.9 8.8	0.2 0.4 0.3	0.2 0.6 0.4	-- NO DATA AVAILABLE --						5.3 9.3 7.3	2.1 7.8 4.9
11-1 -1 AVE.	7.0	11.2	-- NO DATA AVAILABLE --				82.8	12.7	11.5	6.6	2.9	3.8	-- NO DATA AVAILABLE --						5.0	2.9

20111752

WEEKLY SUMMARY

VCL Ambient Vapor Concentrations

AVON LAKE TECHNICAL CENTER

Week ending	AVERAGE					% READING < 10 PPM					% READING > 25 PPM					% READING > 50 PPM				
	Prev. Month	8/2 8/9	8/9 8/16	8/16 8/23	8/23 8/30	Prev. Month	8/2 8/9	8/9 8/16	8/16 8/23	8/23 8/30	Prev. Month	8/2 8/9	8/9 8/16	8/16 8/23	8/23 8/30	Prev. Month	8/2 8/9	8/9 8/16	8/16 8/23	8/23 8/30
414-1	6.2	7.0	7.7	10.3	10.5		88.0	91.2	66.0	79.3		0.0	0.0	2.9	3.3	0.0	0.0	0.0	1.6	1.7
-2	6.8	8.2	10.2	9.6	7.9		80.0	93.3	59.5	95.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-3	8.7	8.4	9.6	13.5	13.7		60.6	74.1	33.0	64.7		0.0	4.1	3.5	5.1	0.0	0.0	0.7	3.5	2.4
AVG.	7.2	7.8	9.2	11.1	10.7		76.2	86.2	52.8	79.6		0.0	1.4	2.1	2.8	0.0	0.0	0.2	1.7	1.3
414-1	6.4	6.8	7.7	10.5	7.0		91.0	90.0	24.9	99.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-2	6.8	7.1	10.2	10.8	7.7		93.4	76.1	11.5	97.1		0.0	13.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
-3	9.2	7.8	9.6	12.8	10.7		82.5	56.6	7.4	59.7		0.0	0.0	3.7	0.0	0.5	0.0	0.0	0.0	0.0
AVG.	7.4	7.2	9.2	11.3	8.4		89.0	74.2	14.6	85.4		0.0	4.3	1.2	0.0	0.2	0.0	0.0	0.0	0.0
413	6.6	7.2	8.0	9.9	7.1		82.0	88.2	49.0	100.0		0.0	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0
AVG.	6.6	7.2	8.0	9.9	7.1		82.0	88.2	49.0	100.0		0.0	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0
PLANT																				
AVG.	7.0	7.4	8.8	10.7	8.7		82.4	82.8	38.8	88.3		0.0	2.1	1.1	0.9	0.1	0.0	0.1	0.5	0.4
YDRIN																				
417-1	8.1	7.2	10.4	15.7	10.6		97.0	58.0	17.3	71.3		0.0	1.7	9.3	1.0	1.4	0.0	0.0	0.0	0.0
-2	8.9	7.1	21.0	25.3	23.4		93.7	41.0	0.0	65.0		0.0	4.2	44.0	10.2	0.3	0.0	6.2	22.0	4.2
-3	9.2	7.3	19.6	45.6	12.4		94.1	30.7	0.0	53.7		0.0	6.9	35.4	6.1	0.4	0.0	4.7	0.0	0.0
AVG.	8.7	7.2	17.0	28.8	15.4		94.9	43.2	5.7	63.3		0.0	4.3	29.5	5.7	0.7	0.0	3.6	7.3	1.4

2101147

COMPANY CONFIDENTIAL

WEEKLY SUMMARY

Ambient Organic Vapor Concentrations

CALVERT CITY	AVERAGE				% READING < 10 PPM				% READING				2.5 PPM				% READING > 50 PPM			
	Prev. Month	7/29-8/4	8/5-8/11	8/12-8/18	8/19-8/25	Prev. Month				8/19-8/25	Prev. Month	7/29-8/4	8/5-8/11	8/12-8/18	8/19-8/25	Prev. Month				8/19-8/25
Week Ending																				
Control Rooms	2	1	1	1	1					100	1	0	0	0	0					0
Chromatograph Houses	6	3	2	2	1					100	4	2	0	0	0					0
Caustic Scrubber Area	10	3	3	11	14					94	6	2	2	4	4					4
Quench Areas	3	3	8	3	3					96	2	0	8	0	0					0
VCH Column Areas	16	7	12	5	4					92	5	6	6	4	2					2
Refrigeration Machine	7	2	2	2	1					100	2	0	0	0	0					0
Tank Farm Areas	3	2	1	2	1					99	2	0	0	0	0					0
Loading Rack Areas	1	1	1	1	1					100	1	0	0	0	0					0

cc: C. Woods
 J. Schoneaerts
 G. Evans
 R. Spurlin
 G. Schaefer
 L. Waltemate

247110

24711019

TO	FIELD POINT OR AKRON DEPARTMENT & BLDG. NO.	DATE YOUR LETTER
Distribution	See Distribution	
FROM	FIELD POINT OR AKRON DEPARTMENT & BLDG. NO.	DATE THIS LETTER
G. D. Schaaf	Cleveland	August 30, 1974
SUBJECT		

VCl Ambient Vapor Concentrations

The averages on the attached graphs represent those for the five PVC plants, not including Calvert City or the Avon Lake Technical Center.

This data brings the graphs up to date through August 23, 1974.

A new format for reporting ambient vinyl chloride data began on August 9, 1974. This format includes the averages equal to or less than 10 ppm and greater than 25 ppm, in addition to the average reading and the percent greater than 50 ppm.

When suitable data has been obtained, these values can also be included in the graphical presentation.


G. D. Schaaf

GDS/clb
Att. 2

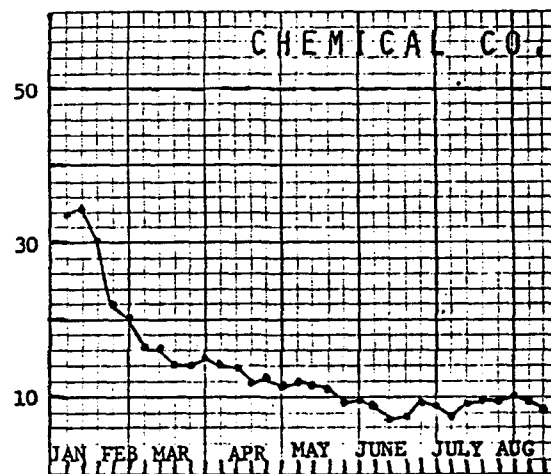
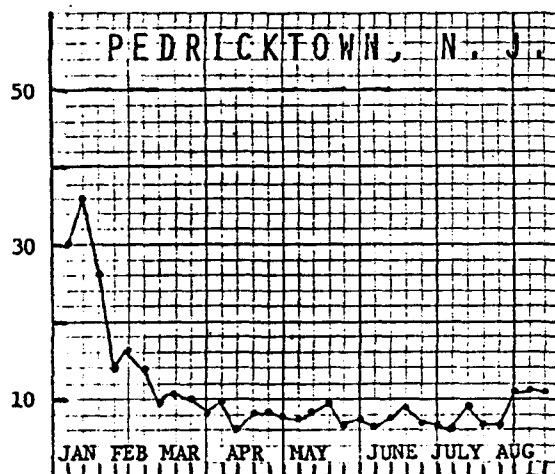
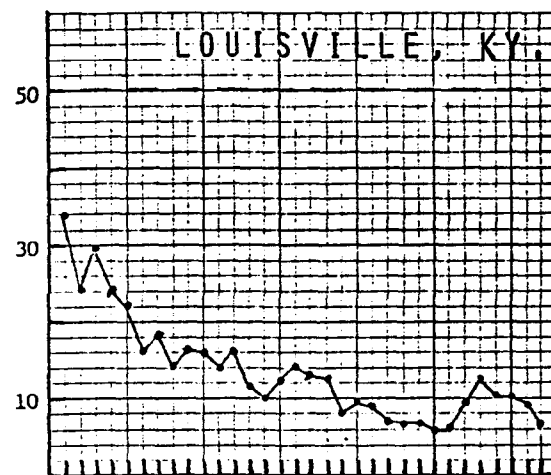
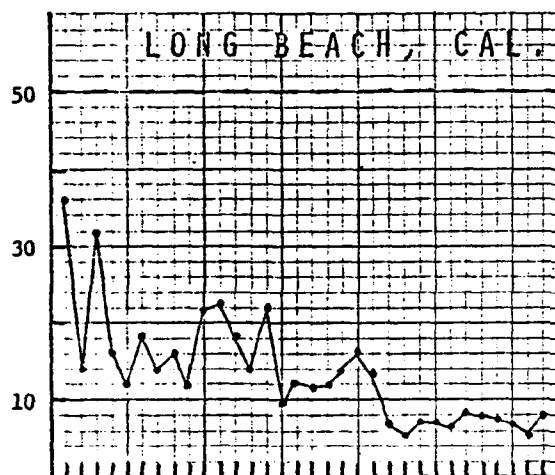
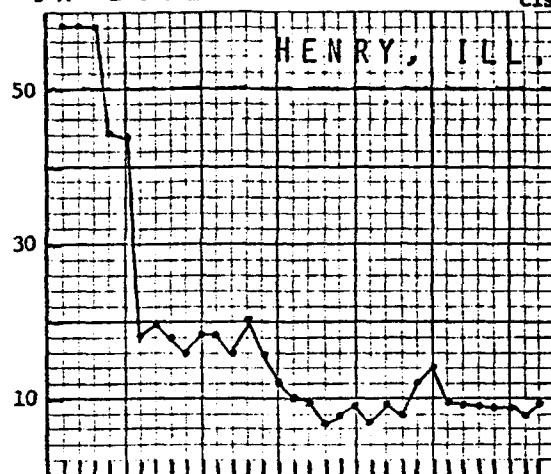
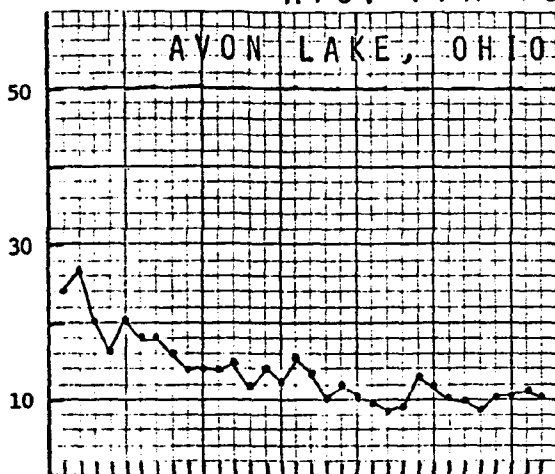
24711020

AVG. PPM VCL IN BUILDING

8/27/74

cls

AVERAGE PPM VINYL CHLORIDE CONCENTRATION



WEEK ENDING

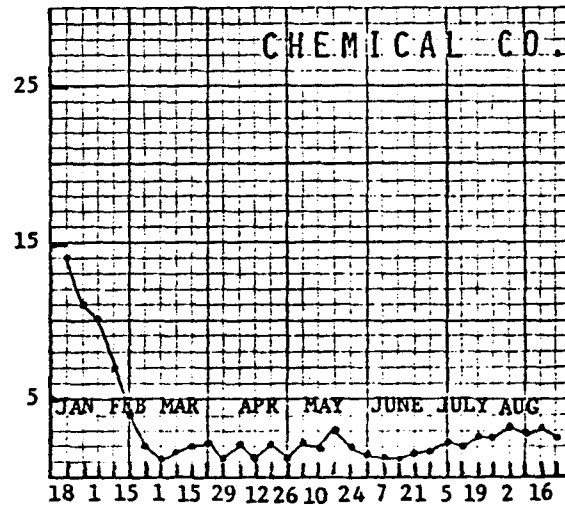
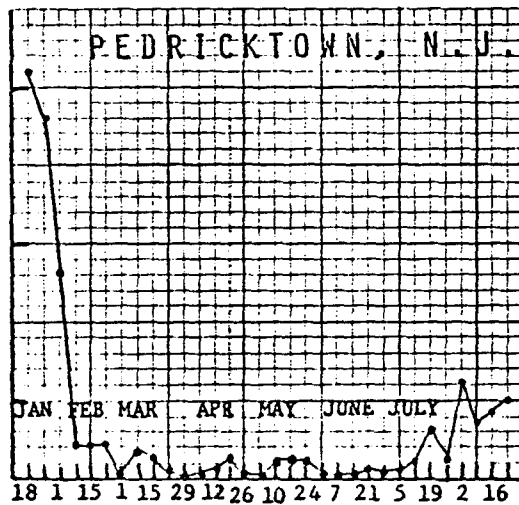
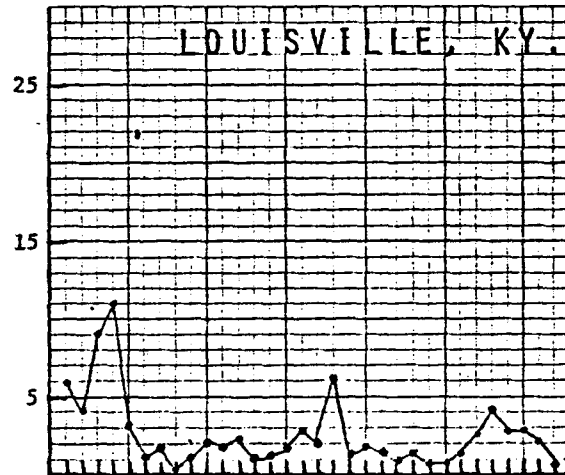
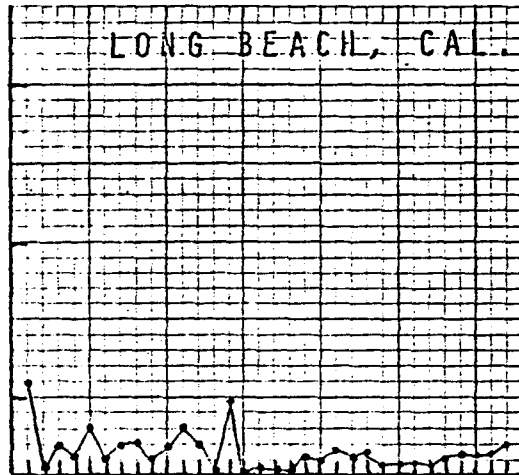
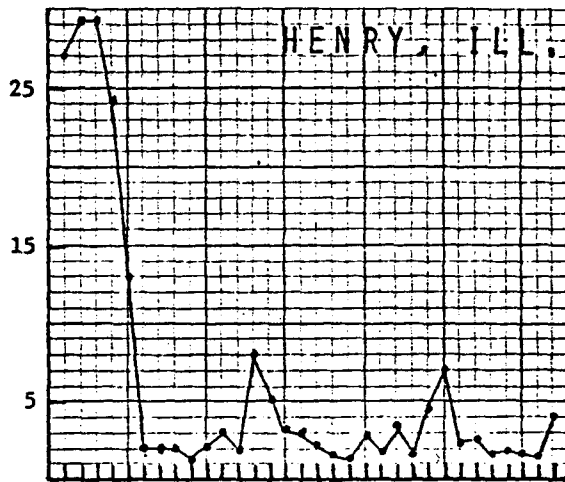
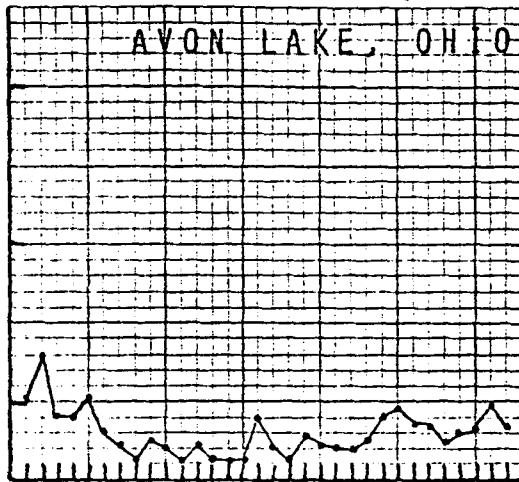
WEEK ENDING

247110

% READINGS EXCEEDING 50 PPM

8/27/74
cls

PERCENT READINGS EXCEEDING 50 PPM VINYL CHLORIDE



WEEK ENDING

WEEK ENDING

PERSONNEL MONITORING DATA

PLANT	BUILDING	SAMPLING DATE	OPERATION	SAMPLING TIME (Minutes)	PPM VCL	AVERAGE PPM VCL
AVON	463, Latex	6-13-74	Charge Polys, Clean Strainers, Transfer Materials	245	2.1	
LAKE						
GENERAL	463, Latex	6-13-74	Set Up Poly, Clean Poly 5	252	126.0 ¹	
CHEMICAL	463, Latex	6-13-74	Change Strainers, Clean Around Blend Tank, Replace One Entire Strainer	255	5.8	
	463, Latex	6-13-74	Foreman; Supervise Operations in Bldg.	230	3.2	
	451, Paste Polymerization - 2nd & 3rd Floors	6-17-74	Make Up Soap Solution, Charge Polys	240	18.0	
	451, Paste Polymerization - 2nd & 3rd Floors	6-17-74	Worked on Leak, HRC'd Polys, Opened Polys	238	40.0 ²	
	451, Paste Polymerization - 2nd & 3rd Floors	6-17-74	HRC'd Polys, Was Near Leak, Opened Polys, Was Inside a Poly	240	42.0 ²	
	451, Paste Polymerization - All 3 Floors	6-17-74	Recovered Polys, Dropped Polys, and Worked On Recovery Pumps and Foam Traps	230	15.0	
						31.51
HENRY	Polymerization	5-30-74	HRC & General Cleaner	200	2.8	
	Polymerization	5-30-74	L.S. Operator	205	2.4	
	Polymerization	5-31-74	Poly Helper	205	2.3	

24711072

PERSONNEL MONITORING - Page 2

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>PPM VCL</u>	<u>AVERAGE PPM VCL</u>
HENRY	Polymerization	5-31-74	Pearl Helper	180	2.3	
(Cont.)	Polymerization	5-31-74	Charge Operator	240	13.0	
	Polymerization	6-03-74	Charge Operator Pearl	175	4.3	
	Polymerization	6-03-74	HRC & General Cleaner	220	2.7	
	Polymerization	6-03-74	Recovery Operator	235	9.4	
	Polymerization	6-04-74	Helper	180	5.7	
	Polymerization	6-04-74	Pearl Charge Operator	220	2.7	
	Polymerization	6-11-74	Lo-Sope & Paste Helper	220	26.0 ¹	
	Polymerization	6-11-74	Helper	120	7.4	
	Polymerization	6-12-74	Pearl Charge Operator	180	11.0	
	Polymerization	6-12-74	Pearl Helper	220	6.0	
	Polymerization	6-12-74	Pearl Charge Operator	240	3.2	
	Polymerization	6-13-74	Lo-Sope & Paste Charge Operator	240	3.6	
	Polymerization	6-13-74	Lo-Sope & Paste Charge Operator	245	7.9	
	Polymerization	6-13-74	Pearl Recovery Operator	230	8.0	
	Polymerization	6-14-74	Pearl Recovery Operator	220	3.8	
						6.55

24711023

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME</u> <u>(Minutes)</u>	<u>PPM VCL</u>	<u>AVERAGE</u> <u>PPM VCL</u>
LANSING	Extrusion Plant	6-04-74	Extruder Operator	255	0.069	0.082
	Extrusion Plant	6-04-74	Extruder Operator	255	0.069	
	Extrusion Plant	6-05-74	Extruder Operator	246	0.060	
	Extrusion Plant	6-05-74	Extruder Operator	246	0.076	
	Extrusion Plant	6-06-74	Extruder Operator	240	0.073	
	Extrusion Plant	6-06-74	Extruder Operator	240	0.073	
	Extrusion Plant	6-10-74	Grinder Operator	240	0.140	
	Warehouse	6-10-74	Warehouse Clerk	240	0.100	
LONG	Poly Building	6-04-74	Recovery Operator	240	1.9	3.31
BEACH	Poly Building	6-04-74	Charge Operator	240	1.9	
	Poly Building	6-05-74	Charge Operator	240	5.8	
	Poly Building	6-05-74		240	1.8	
	Poly Building	6-05-74	Helper	240	4.3	
	Poly Building	6-06-74	Recovery Operator	240	4.2	
LOUISVILLE	121 - 3rd Floor	6-03-74	Paste Charging, Relief Operator	240	4.1	24711024
	121 - 3rd Floor	6-03-74	HRC Operator	240	2.3	
	121 - 3rd Floor	6-03-74	Charging Operator (East)	240	6.5	

PERSONNEL MONITORING - Page 4

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>PPM VCL</u>	<u>AVERAGE PPM VCL</u>
LOUISVILLE	111 - 3rd Floor	6-03-74	HRC Operator (East)	240	2.5	
(Cont.)	15 - 3rd Floor	6-04-74	Solution Resin Charging Operator	240	1.7	
	15 - 3rd Floor	6-04-74	Charge Operator, 101 F-4, and 427	240	4.0	
	1 and 15	6-04-74	Resident Pipe Fitter	240	14.0	
	15 - 3rd Floor	6-04-74	HRC Operator	240	11.0 ²	
	15 - 1st Floor	6-05-74	Bagger: 101 F-4, 427, and 110X236	240	9.7	
	15 - 1st Floor	6-05-74	Relief Operator, Drumming 443	240	1.6	
	15 - 1st Floor	6-05-74	Bagging 101 F-4 and 427	240	6.5	
	130, SW Corner	6-12-74	Ditch-digging, Jack- Hammering Into Sewer	240	4.0	
	101, Locker Room	6-12-74	Dispense Coveralls, Wash Cars	242	0.27	
	105, Tank Farm	6-12-74	Paint Shop (1 hr.) Buta- diene Tank Farm	210	0.55	
	Stockroom	6-12-74	Make Deliveries	180	0.32	
	-----	6-13-74	Spraying Fences for Weeds	240	0.29	
	-----	6-13-74	Cleaning Up Sand At Buta- diene Tank Farm	240	0.78	
	Stockroom	6-13-74	Receiving Clerk	180	0.46	
108		6-13-74	Clerk For W. Cundiff	240	0.71	

24711025

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME</u> (Minutes)	<u>PPM VCL</u>	<u>AVERAGE</u> <u>PPM VCL</u>
LOUISVILLE (Cont.)	Mid-South Coating, Outside Office Door, 5' From Ground, Mounted Horizontally	6-14-74	Static Sample	240	1.0	
	112, Mainly 2nd Floor	6-14-74	Drying 103, 300X6	240	1.3	
	112, 1st Floor	6-14-74	Packing 126	240	1.2	
	Mid-South Coating, (South Office Door)	6-17-74	Area Sample	240	0.19	
	Bldg. 112, 1st Floor	6-17-74	Packer	243	0.38	
	Boiler House	6-17-74	Laborer	240	0.21	
	Mid-South Coating (South Office Door)	6-18-74	Area Sample	240	0.20	
	L.D.C.	6-18-74	Warehouseman	245	0.44	
	Bldg. 26, Mill Room	6-18-74	Chemical Helper	240	13.0	
						3.18

PEDRICKTOWN	Mass	6-04-74	Lead Tech.	260	2.1	
	Mass 80X6	6-04-74	Tech.	250	7.3	
	Mass 80X6	6-04-74	Utility Man	250	11.0	1-3
	Tank Farm	6-06-74	Tech.	240	0.19	
	Poly 103EP, 120X251	6-06-74	Pearl Tech.	240	10.0	
	Poly 103EP, 120X251	6-06-74	Paste Tech.	240	12.0	

9207120X251

PLANT	BUILDING	SAMPLING DATE	OPERATION	SAMPLING TIME (Minutes)	PPM VCL	AVERAGE PPM VCL
PEDRICKTOWN	Tank Farm	6-10-74	Tank Farm Operator	240	0.67	
(Cont.)	Mass #512 80X5	6-10-74	Operator	240	3.5	
	Mass #512 80X5	6-10-74	Utility Tech.	240	10.0 ¹	
	Mass #512 80X5	6-10-74	Utility Tech.	235	2.1	
	Poly #513 103EP, 120X251	6-11-74	Pearl Tech.	245	19.0 ²	
	Poly #513 103EP, 120X251	6-11-74	Paste Tech.	245	4.0	
	Poly #513 103EP, 120X251	6-11-74	Rover Tech.	250	7.8	
						6.89

1. Operators wear air line respirators while inside polys.
2. Operators wear respirators when opening polys.
3. Masks are worn when changing filters.

G. D. Schaaf / cls
7/2/74

24711027

PERSONNEL MONITORING DATA

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>PPM VCL</u>	<u>AVERAGE PPM VCL</u>
AVON LAKE	Bldg. 461, 2nd and 3rd Floors	6-18-74	Relief Operator	245	8.3	
GENERAL	Bldg. 461, 2nd and 3rd Floors	6-18-74	Blowdown Operator	245	6.3	
CHEMICAL	Bldg. 461, 1st, 2nd, and 3rd Floors	6-18-74	Helper	245	12.0 ¹	
	Bldg. 461, 1st and 2nd Floors	6-18-74	Blowdown Operator	245	12.0 ¹	
	Bldg. 464, 2nd and 3rd Floors	6-19-74	HRC Operator	260	23.0 ¹	
	Bldg. 464, 2nd and 3rd Floors	6-19-74	Blowdown Operator	245	28.0 ¹	
	Bldg. 464, 2nd and 3rd Floors	6-19-74	Charge Operator	240	6.7	
	Bldg. 464, 1st, 2nd, and 3rd Floors	6-19-74	Recovery Operator	240	15.0 ¹	
	Bldg. 463	6-20-74	Latex Operator	240	23.4	
	Bldg. 463	6-20-74	Warehouseman	250	3.4	
	Bldg. 463	6-20-74	Helper	240	4.3	
	Bldg. 463	6-20-74	Latex Operator	243	6.2	
	Bldg. 451	6-21-74	Charge Operator	245	4.0	
	Bldg. 451	6-21-74	Relief Operator	240	8.7	

2471102

PERSONNEL MONITORING - Page 2

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>3</u>	
					<u>PPM VCL</u>	<u>AVERAGE PPM VCL</u>
AVON LAKE	Bldg. 451	6-21-74	Helper	240	9.0	
(Continued)	Bldg. 451	6-21-74	Charge Operator	240	3.8	
	Bldg. 461	6-24-74	Helper	240	18.1 ¹	
	Bldg. 461	6-24-74	Helper	183	14.2 ¹	
	Bldg. 461	6-24-74	Blowdown Operator	240	25.9 ¹	
	Bldg. 461	6-24-74	Foreman	240	11.7	
	Bldg. 464	6-25-74	Charge Operator	240	18.6 ¹	
	Bldg. 464	6-25-74	HRC Operator	255	20.3 ¹	
	Bldg. 464	6-25-74	Charge Operator	240	22.9 ¹	
	Bldg. 464	6-25-74	Blowdown Operator	240	31.3 ¹	
	Bldg. 451, 2nd Floor	6-26-74	Charge Operator	20	7.8	
	Bldg. 451, 3rd Floor	6-26-74	Helper	20	11.0 ¹	
	Bldg. 451, 2nd Floor	6-26-74	Helper	20	10.0 ¹	
	Bldg. 451, 2nd and 3rd Floors	6-26-74	Blowdown Operator	20	2.2	
	Bldg. 461	6-26-74	Charge Operator	21	22.0 ¹	
	Bldg. 461, 2nd and 3rd Floors	6-26-74	Blowdown Operator	21	25.0 ¹	
	Bldg. 461	6-26-74	Helper	20	80.0 ¹	

24711029

PERSONNEL MONITORING - Page 3

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME</u> <u>(Minutes)</u>	<u>PPM VCL</u>	<u>AVERAGE</u> <u>PPM VCL</u>
AVON LAKE	Bldg. 461	6-26-74	Relief Operator	20	28.0 ¹	
(Continued)	Bldg. 463	6-26-74	Transfer From BDT to BT	21	154.0 ²	
	Bldg. 463, 1st and 2nd Floors	6-26-74	Geon Latex Operator	21	21.0 ¹	
	Bldg. 463, 1st and 2nd Floors	6-26-74	Helper	20	9.3	
	Warehouse	6-26-74	Warehouseman, 2nd Class	20	2.0	
	Bldg. 464, 2nd and 3rd Floors	6-26-74	BD Operator	20	2.7	
	Bldg. 464	6-26-74	Charge Operator	20	0.47	
	Bldg. 464	6-26-74	Relief Operator	20	1.0	
	Bldg. 464	6-26-74	HRC Operator	21	3.7	
	Bldg. 452	6-26-74	Chemical Helper, Bagger	20	0.72	
	Bldg. 452	6-26-74	Spray Drier Operator, 1st Class	20	1.6	
	Bldg. 452	6-26-74	Chemical Helper, Bagger	20	0.75	
	Bldg. 452	6-26-74	Vent Operator, 1st Class	20	1.0	
						16.39

24711030

PERSONNEL MONITORING - Page 4

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>PPM VCL</u>	<u>AVERAGE PPM VCL</u>
CALVERT	N&S Cracking	6-04-74	Furnace Operator	240	0.2	
CITY	S Cracking	6-04-74	Purification Operator	240	0.2	
	N Cracking	6-04-74	Purification Operator	240	0.2	
	N&S Cracking	6-04-74	Spare Chem. Operator	240	1.1	
	S Cracking	6-06-74	Purification Operations	240	1.0	
	N Cracking	6-06-74	Purification Operations	240	0.8	
	N&S Furnace Oper.	6-06-74	Furnace Operator	240	0.9	
	S Cracking	6-06-74	Removing Head From #1 HCl Reboiler	120	0.7	
	E Cracking	6-10-74	Cracking Furnace and Purification Operations	240	2.4	
	E Cracking	6-10-74	EDC Synthesis Operations	240	0.4	
	E Cracking	6-10-74	Cracking Furnace and Purification Operations	240	5.0	
	E Cracking	6-10-74	EDC Synthesis Operations	240	0.3	
	VCL Tank Farm	6-11-74	Loading VCL Tank Cars	240	2.3	
	VCL Tank Farm	6-11-74	Loading VCL Tank Cars	240	1.9	
	N&S Cracking	6-11-74	EDC Cracking Furnace Operations	240	0.1	
	N Cracking	6-11-74	VCL Purification	240	1.1	
	S Cracking	6-11-74	VCL Purification	240	4.0	
	N&S Cracking	6-11-74	Furnace and Purification As Needed	240	0.1	

24711031
N&S Cracking

PERSONNEL MONITORING - Page 5

PLANT	BUILDING	SAMPLING DATE	OPERATION	SAMPLING TIME (Minutes)	PPM VCL	AVERAGE PPM VCL
CALVERT	VCL Tank Farm	6-12-74	Heavy Loading Activities	240	11.5	
CITY	VCL Tank Farm	6-12-74	Heavy Loading Activities	240	9.9	
(Continued)	N&S Cracking	6-18-74	Furnace Operator	240	0.03	
	N&S Cracking	6-18-74	Purification Operator	240	0.04	
	N&S Cracking	6-18-74	Purification Operator	240	0.02	
	N&S Cracking	6-18-74	Spare Relief Operator	240	0.04	
	E Cracking	6-19-74	Furnace and Purification Operator	240	1.60	
	E Cracking	6-19-74	Spare Operator	240	3.1	
	E Cracking	6-19-74	EDC Synthesis Operator	240	0.01	
	E Cracking	6-19-74	East Furnace & Purification Operator	240	5.3	
	E Cracking	6-19-74	Spare Operator	240	0.17	
	E Cracking	6-19-74	East EDC Synthesis Operator	240	0.015	
	E, N&S Cracking	6-19-74	Foreman (all 3 plants)	240	0.18	
	Laboratory	6-20-74	Lab Operator	240	0.25	
	VCL Tank Farm	6-20-74	Tank Farm Operator	240	0.85	
	VCL Tank Farm	6-20-74	Operator	240	2.5	
	N&S Cracking	6-20-74	Furnace Operator	240	0.12	
	N Cracking	6-20-74	Purification Operator	240	0.084	

24711032

PERSONNEL MONITORING - Page 6

PLANT	BUILDING	SAMPLING DATE	OPERATION	SAMPLING TIME (Minutes)	PPM VCL	AVERAGE PPM VCL
CALVERT	S Cracking	6-20-74	Purification Operator	240	0.20	
CITY	N&S Cracking	6-20-74	Spare Operator	240	0.092	
(Continued)						1.54
GLoucester	Pap. Area (Papenmeier Mixer)	5-31-74	Mixing Operator	180	0.28	
	East	5-31-74	Extruder Operator, 1st Class	180	0.39	
	Pap. Area	6-03-74	Mixing Operator	240	2.0	
	Pap. Area	6-03-74	Mixing Operator	235	1.2	
	Henschel Area	6-05-74	Mixing Operator	240	0.18	
	Line F	6-05-74	Extruder Operator	240	0.18	
	Line C	6-06-74	Line Operator	240	0.037	
	Line E	6-06-74	Polishing Stack Rolls	240	0.47	
	Lodice Mixer	6-07-74	Henschel Operator	240	0.13	
	Upstairs Office	6-07-74	Manager	235	0.059	
						0.49
LOUISVILLE	Mid-South Coating (South Door)	6-19-74	-----	240	0.13	
	Bldgs. 115 and 127	6-19-74	Cold Room Operator	253	3.5	
	Bldg. 2	6-19-74	A-Line Cuber Operator	240	3.3	

24711033

PERSONNEL MONITORING -- Page 7

PLANT	BUILDING	SAMPLING DATE	OPERATION	SAMPLING TIME (Minutes)	PPM VCL	AVERAGE PPM VCL
LOUISVILLE (Continued)	Bldg. 2, 2nd and 3rd Floors	6-19-74	A-Line Helper	240	4.0	
	Bldg. 1, Floor B	6-19-74	Recovery Operator & South Drier Operator	240	2.0	
	Bldg. 15, Floor C	6-19-74	Helper	240	5.8	
	Bldg. 1, Floor C	6-19-74	South Charging Operator	240	2.4	
	Bldg. 121, Floors A, B, and C	6-20-74	Resident Pipe Fitter	250	4.3	
	Bldg. 121, Floor B	6-20-74	Latex Recovery Operator	240	6.4	
	Bldg. 121, Floor C	6-20-74	Latex Charging Operator	250	4.7	
	Mid-South Coating (South Door)	6-20-74	-----	240	0.087	
	Bldg. 121 A, B, C	6-20-74	Paste Recovery Operator	239	1.3	
	Bldg. 121 A, B, C	6-20-74	Plastic Latex Operator	245	3.4	
	Bldg. 111 B, C	6-20-74	WEST HRC Operator	238	1.5	
	Bldg. 111, 112, 115, and 121	6-20-74	OVA Monitor	240	4.2	
	Mid-South Coating at South Door	6-21-74	-----	240	0.13	
	Bldg. 8, 1st Floor	6-21-74	Packer	125	21.0	
	Bldg. 111C	6-21-74	Charging Operator, 300X6	245	19.0 ¹	
	Bldg. 111B	6-21-74	Recovery Operator	235	2.6	

24711034

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>PPM VCL</u>	<u>AVERAGE PPM VCL</u>
LOUISVILLE (Continued)	Bldg. 129, 3rd Floor	6-24-74	Northeast Corner on Out- side Stairwell, directly across from Fourdriner ducts	180	0.53	
	Bldg. 122, 1st Floor, East End	6-24-74	Behind Fourdriner line at Feed Tank, at right side of the opening	73	5.6	
	Bldg. 122, 1st Floor	6-24-74	Behind Operators Desk, Approximately 15 feet from Fourdriner wire end	183	2.6	
	Construction Area (140)	6-25-74	Was Utility Operator in Bldg. 111	245	0.12	4.28

NOTES

1. Respiratory equipment worn during critical operations where VCL levels are high
2. Value high because man was cleaning filter in Latex
3. All Avon Lake 20 and 21 minute samples were taken simultaneously with OSHA samples

24711035

G. D. Schaaf / cla
7/12/74

PERSONNEL MONITORING DATA

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>PPM VCI</u>	<u>AVERAGE PPM VCI</u>
AVON LAKE	Bldg. 463	6-28-74	Helper	250	29	
	Bldg. 463	6-28-74	Latex Operator	240	60	
	Bldg. 463	6-28-74	Helper	240	9	
	Bldg. 463	6-28-74	Warehouseman	235	6	
GENERAL	Bldg. 451	7-01-74	Relief Operator	240	11	
	Bldg. 451	7-01-74	Relief Operator	240	12	
	Bldg. 451	7-01-74	Charge Operator	240	9	
	Bldg. 451	7-01-74	Recovery Operator	235	6	
	Bldg. 461	7-02-74	Blowdown Operator	240	8	
	Bldg. 461	7-02-74	Charge Operator	240	11	
	Bldg. 461	7-02-74	Helper	250	20	
	Bldg. 461	7-02-74	Relief Operator	240	8	
	Bldg. 463	7-03-74	Latex Operator	240	5	
	Bldg. 463	7-03-74	Helper	245	16	
CHEMICAL	Bldg. 463	7-03-74	Helper	245	3	
	Bldg. 463	7-03-74	Foreman	240	18	
	Bldg. 464	7-05-74	HRC Operator	250	8	
	Bldg. 464	7-05-75	Relief Operator	240	6	
	Bldg. 464	7-05-74	Relief Operator	250	10	
	Bldg. 464	7-05-74	Recovery Operator	240	7	
	Bldg. 451	7-08-74	Refrigerator Operator	240	7	
	Bldg. 451	7-08-74	Recovery Operator	240	26	
	Bldg. 451	7-08-74	Helper (Trainee)	240	17	
	Bldg. 451	7-08-74	Helper	216	16	
	Bldg. 461	7-09-74	Relief Operator	240	24	
	Bldg. 461	7-09-74	Relief Operator	177	15	
	Bldg. 461	7-09-74	Charge Operator	240	19	
	Bldg. 461	7-09-74	Blowdown Operator	240	22	
24711036	Bldg. 463	7-10-74	Latex Operator	240	5	
	Bldg. 463	7-10-74	Latex Operator	240	4	
	Bldg. 463	7-10-74	Helper	214	9	
	Bldg. 463	7-10-74	Helper	214	6	
	Bldg. 463	7-11-74	Helper	240	8	

PERSONNEL MONITORING DATA

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>PPM VCI</u>	<u>AVERAGE PPM VCI</u>
AVON LAKE	Bldg. 463	7-11-74	Foreman	240	16	
	Bldg. 463	7-11-74	Warehouseman	240	6	
	Bldg. 463	7-11-74	Warehouseman	178	5	
	Bldg. 463	7-11-74	Foreman	18	10	
GENERAL	Bldg. 463	7-11-74	Foreman	20	25	
	Bldg. 464	7-12-74	Charge Operator	245	28	
	Bldg. 464	7-12-74	Recovery Operator	240	12	
	Bldg. 464	7-12-74	HRC Operator	240	101	
CHEMICAL	Bldg. 464	7-12-74	HRC Operator	174	9	
	Bldg. 457	7-15-74	Blowdown Operator	245	19	
	Bldg. 457	7-15-74	Helper	240	30	
	Bldg. 457	7-15-74	Helper	240	14	
(Continued)	Bldg. 452	7-17-74	(Bulk loading a truck of G-92)	10.1	11	
	Bldg. 463	7-17-74	Latex Transfer Operator	10.6	22	
	Bldg. 463	7-17-74	Latex Transfer Operator	10.6	21	
	Bldg. 461	7-17-74	Helper	12.6	15	
	Bldg. 461	7-17-74	Helper	10.7	17	
	Bldg. 438	7-18-74	CML Mill Operator	250	2	
	Bldg. 438	7-18-74	Weighman	250	1	
	Bldg. 438	7-18-74	Henschel Operator	250	1	
	Bldg. 438	7-18-74	Dumper	243	1	
	Bldg. 441	7-19-74	CML Mill Operator	256	<.5	
	Bldg. 441	7-19-74	Weighman	249	<.5	
	Bldg. 441	7-19-74	Henschel Operator	253	<.5	
	Bldg. 441	7-19-74	Henschel Operator	241	<.5	
	Bldg. 452	7-22-74	Warehouseman	245	1	
	Bldg. 452	7-22-74	Warehouseman	249	1	
	Bldg. 452	7-22-74	Warehouseman	240	1	
	Bldg. 452	7-22-74	Warehouseman	243	1	
	Bldg. 452	7-23-74	Bagger	245	4	
	Bldg. 452	7-23-74	Vent. Trans. Operator	242	4	
	Bldg. 452	7-23-74	Spray Drier Operator	240	4	
	Bldg. 452	7-23-74	Bagger	240	3	

2471037

PERSONNEL MONITORING DATA

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>PPM VCI</u>	<u>AVERAGE PPM VCI</u>
AVON LAKE	Bldg. 463	7-24-74	Latex Operator	247	6	
	Bldg. 463	7-24-74	Latex Operator	236	7	
	Bldg. 463	7-24-74	Latex Operator	247	5	
	Bldg. 463	7-24-74	Helper	239	6	
GENERAL	Bldg. 438	7-25-74	Weighman	245	1	
	Bldg. 438	7-25-74	Banbury Operator	247	1	
	Bldg. 438	7-25-74	Banbury Mill Operator	239	1	
	Bldg. 438	7-25-74	CML Bagger	240	1	
(Continued)	Bldg. 441	7-26-74	Weighman	240	1	
	Bldg. 441	7-26-74	CML Mill Op.	240	1	
	Bldg. 441	7-26-74	Dumper Relief Op.	243	1	
	Bldg. 441	7-26-74	Powder Henschel Op.	238	1	11.01
AVON LAKE	Laboratory 223	7-11-74	Sample Testing	20.0	<.5	
	Bldg. 426 Ext.	7-11-74	Extrusion Run PVC	20.0	<.5	
	Bldg. 414, 3rd Floor	7-11-74	Small Poly TS Smpg.	20.0	4	
	Bldg. 416, 1st Floor	7-12-74	Physical Test Lab	20.0	1	
TECHNICAL	Bldg. 416, 1st Floor	7-12-74	Banbury/#4 Mill Op.	20.0	1	
	Bldg. 413, 1st Floor	7-17-74	Chgng VCI to Chg. Cyc.	10.0	12	
	Bldg. 413, 1st Floor	7-17-74	VCI to 3 liter Poly	10.5	1	
	Bldg. 413, 1st Floor	7-17-74	Blowdown of VCI	10.0	3	
CENTER	Bldg. 412, 1st Floor	7-17-74	Filtering Operation	10.0	1	

24711038

PERSONNEL MONITORING DATA

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>PPM VCI</u>	<u>AVERAGE PPM VCI</u>
AVON LAKE	Bldg. GCP, 1st Floor	7-24-74	Baffle Transporting	20	8	
TECHNICAL	Bldg. 414, All Floors	7-24-74	Supervision	20	1	
CENTER	Bldg. 416, 1st Floor	7-24-74	Compounding Room Op.	20	<.5	
(Continued)	Warehouse, 1st Floor	7-22-74	Filling Latex Smpls.	20	1	
	Warehouse, 1st Floor	7-22-74	Warehouse Office	20	<.5	
	Warehouse, 1st Floor	7-22-74	Warehouse Pkg. Area	20	1	
	Bldg. 414, 3rd Floor	7-22-74	Bowen Drier Operation	20	<.5	
	Bldg. 413, 1st Floor	7-22-74	Operations in Lab #11	20	<.5	
	Bldg. 416, 1st Floor	7-22-74	Color Lab Operation	20	<.5	
	Bldg. 416, 1st Floor	7-22-74	Paste Group Lab	20	<.5	2.00
CALVERT	North Cracking	6-26-74	Operator	240	2	
CITY	North Cracking	6-26-74	Operator	240	1	
	N, S, & E Cracking	6-26-74	Foreman	240	1	
	VCI Tank Farm	6-26-74	Tank Farm Operator	240	2	
	VCI Tank Farm	6-26-74	Tank Farm Operator	240	2	
	VCI Tank Farm	6-26-74	Bulk Handler	240	1	
	East Cracking	6-27-74	Operator	240	3	

24711039

PERSONNEL MONITORING DATA

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME</u> (Minutes)	<u>PPM VCl</u>	<u>AVERAGE</u> <u>PPM VCl</u>
CALVERT	East Cracking	6-27-74	Spare Relief	240	<.5	
CITY	East Synthesis	6-27-74	Operator	240	<.5	
(Continued)	VCl Tank Farm	7-01-74	Tank Farm Operator	240	6	
	VCl Tank Farm	7-01-74	Tank Farm Operator	240	5	
	N&S Cracking	7-02-74	Operator	240	<.5	
	South Cracking	7-02-74	Operator	240	<.5	
	North Cracking	7-02-74	Operator	240	2	
	East Cracking	7-03-74	Spare Relief	240	4	
	East Cracking	7-03-74	Operator	240	1	
	East Synthesis	7-03-74	Operator	240	<.5	
	East Cracking	7-03-74	Operator	240	12	
	East Synthesis	7-03-74	Operator	240	<.5	
	East Cracking	7-03-74	Spare Relief	240	3	
	N&S Cracking	7-08-74	Spare Relief	240	7	
	N Cracking Plant	7-08-74	Operator	240	<.5	
	N&S Cracking	7-08-74	Operator	240	<.5	
	S Cracking Plant	7-08-74	Operator	240	2	
	VCl Tank Farm	7-08-74	Operator	240	17	

24711040

PERSONNEL MONITORING DATA

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>PPM VCI</u>	<u>AVERAGE PPM VCI</u>
CALVERT	VCI Tank Farm	7-08-74	Operator	240	33	
CITY	East	7-10-74	Operator	240	12	
(Continued)	East	7-10-74	Operator	240	1	
	East	7-10-74	Spare	240	1	4.20
CHICAGO	Production Plant	7-02-74	Extruder Operator	246	<.5	
HEIGHTS	Production Plant	7-02-74	Extruder Operator	246	<.5	
	Production Plant	7-04-74	Extruder Operator	240	<.5	
	Production Plant	7-11-74	Slitter Operator	252	<.5	
	Production Plant	7-11-74	Slitter Operator	240	<.5	
	Production Plant	7-16-74	Sheeter Operator	240	<.5	
	Warehouse	7-16-74	-----	210	<.5	
	Production Plant	7-23-74	Extruder Operator	240	<.5	
	Production Plant	7-23-74	Utility Man	240	<.5	
	Extrusion Plant	7-24-74	Utility Man	90	3	
	Extrusion Plant	7-24-74	Mike Casalin	120	3	
						0.95

24711041

PERSONNEL MONITORING DATA

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>PPM VCL</u>	<u>AVERAGE PPM VCL</u>
GLOUCESTER	#4 Papenmeier	6-14-74	--	10	2	
	Line C Die	6-14-74	--	10	1	
	#3 Papenmeier	6-14-74	--	10	6	
	Henschel Platform	6-14-74	--	10	2	
	Line N Die	6-25-74	--	10	1	
	Line E Filter Area	7-01-74	--	10	1	
	Line F Filter Area	7-01-74	--	10	2	
	Liffelord Mixer	7-01-74	--	10	2	
	Line A Enclosed Grinder	7-01-74	--	10	1	
	Line E Enclosed Grinder	7-01-74	--	10	<.5	
	Line N Filter Area	7-01-74	--	10	<.5	
	Line C Feed Hopper	7-01-74	--	10	1	
	Roof-Main Building Exhaust Vent	7-03-74	--	10	<.5	
	Roof-Papenmeier	7-03-74	--	10	1	
	Room Exhaust Vent					
	Line Q Die	7-03-74	--	10	2	
	Line Q Hopper	7-03-74	--	10	1	
	Breaker Plate Cleaning Oven	7-03-74	--	10	1	
	Line F Die	7-03-74	--	10	1	
	Hi-Temp Tower Exhaust Fan	7-03-74	--	10	1	
	Cube Gaylord at Line D	7-03-74	--	10	<.5	
						1.40

24714042

PERSONNEL MONITORING DATA

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>PPM VCI</u>	<u>AVERAGE PPM VCI</u>
HENRY	Polymerization	6-18-74	"B" Shift Foreman, PVC	173	7	
	Polymerization	6-19-74	"A" Shift Foreman	225	2	
	Polymerization	6-19-74	Recovery Operator (Downstairs)	230	2	
	Polymerization	6-20-74	Helper (Pearl)	225	4	
	Polymerization	6-20-74	"C" Shift Foreman	213	2	
	Polymerization	6-21-74	Second Class Operator	180	3	
	Polymerization	6-21-74	Helper (Pearl)	200	5	
	Polymerization	6-24-74	Charge Operator, Lo-Sope and Paste	230	7	
	Polymerization	6-24-74	Helper (Pearl)	235	12	
	Polymerization	6-26-74	Second Class Operator	215	11	
	Polymerization	6-26-74	Foreman, D Shift	240	7	
	Downstairs	6-27-74	Recovery Operator	225	11	
	Lo-Sope Paste	6-27-74	Charge Operator	225	12	
	Pearl	6-28-74	Helper	215	44	
PEARL	Pearl	7-01-74	Charge Operator	215	5	
	Lo-Sope Paste	7-02-74	Charge Operator	260	5	
	Pearl	7-08-74	Helper	225	9	
	Pearl	7-02-74	Charge Operator	240	4	
	Pearl	7-02-74	Charge Operator	240	4	

24712043

PERSONNEL MONITORING DATA

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>PPM VCI</u>	<u>AVERAGE PPM VCI</u>
HENRY	(J. Bernardi)	7-05-74	Associate Chemist	210	2	
(Continued)	Pearl	7-08-74	Helper	180	4	
	Henry	7-12-74	Floyd Dunbar	230	8	
	Henry	7-15-74	Dick Cusac	220	21	
	Henry	7-15-74	Rod Martin	230	38	
	Henry	7-16-74	Jim Brown	180	38	
	Henry	7-16-74	Bob Webber	240	8	
	Henry	7-17-74	Duane Englebrecht	215	10	
	Henry	7-17-74	Bill Duke	230	13	
	Henry	7-18-74	John Purtscher	220	16	
	Henry	7-19-74	Chuck Odell	220	6	
	Henry	7-22-74	Bruce Sivers	270	1	10.56

NIAGARA

Process

6-28-74

Paste Charge Operator

222

7

FALLS

Process

6-28-74

Charge Operator

240

10

Process 2&3

7-02-74

Suspension BD Operator

238

2

Process 2&3

7-02-74

Paste BD Operator

233

1

Process 2&3

7-03-74

Paste Cleaner

240

38

24711044

PERSONNEL MONITORING DATA

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>PPM VC1</u>	<u>AVERAGE PPM VC1</u>
NIAGARA	Process 2&3	7-03-74	HRC Operator	240	5	
FALLS	Drier Bldg., 1st Floor	7-04-74	Paste Bagger	240	1	
(Continued)	Drier Bldg., 1, 2 & 3 Floors; and Process Bldg., 1st Floor	7-04-74	Paste Operator	240	2	
	Drier Bldg., 1, 2, & 3	7-05-74	Suspension Drier Operator	240	4	
	Process, Drier, & Service Bldgs.	7-05-74	Shift Foreman	240	30	
	Process Bldg.	7-08-74	No. 1 Operator	240	5	
	Process Bldg.	7-08-74	No. 1 Operator	245	4	
	Fence Southeast of Plant	7-09-74	Property Line Boundary	288	<.5	
	Fence Northeast of Plant	7-09-74	Property Line Boundary	305	<.5	
	East Side of Fence South of Plant	7-10-74	---	340	<.5	
	West Side of Fence South of Plant	7-10-74	---	340	<.5	
						6.93

24711045

PERSONNEL MONITORING DATA

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>PPM VCI</u>	<u>AVERAGE PPM VCI</u>
SHAWINIGAN	Process Building	June/74	OVA Man	240	18	
	Process Building	June/74	OVA Man	240	13	
	Process Building	June/74	OVA Man	240	6	
	Process Building	6-18-74	Charge Operator	240	2	
	Process Building	6-19-74	Auxiliary Operator	240	1	
	Process Building	6-20-74	Auxiliary Operator	240	8	
	Process Building	6-20-74	Charge Operator	240	4	
	Process Building	6-21-74	Charge Operator	240	8	
	Process Building	6-21-74	Auxiliary Operator	240	9	
	Process Building	6-25-74	Poly Cleaner	240	8	
	Process Building	6-25-74	Charge Operator	240	4	
	Process Building	6-27-74	Poly Cleaner	240	13	
	Process Building	6-27-74	Auxiliary Operator	240	10	
	Process Building	6-28-74	Charge Operator	240	5	
	Process Building	6-28-74	VCI Recovery Man	240	15	
	Process Building	7-02-74	VCI Recovery Man	240	16	
	Process Building	7-02-74	Auxiliary Operator	210	2	
	Process Building	7-03-74	Feed Operator	240	45	
	Process Building	7-04-74	Feed Operator	240	42	
	Process Building	7-04-74	Resin Bagger	240	18	
	Process Bldg.	7-05-74	Resin Bagger	240	28	
	Process Bldg.	7-05-74	Feed Operator	240	30	
	Process Bldg.	7-08-74	Poly Cleaner	230	7	
	Process Bldg.	7-08-74	Poly Cleaner	240	115	
	Process Bldg.	7-10-74	Auxiliary Operator	240	7	
	Process Bldg.	7-10-74	VCI Recovery Man	240	11	
	Process Bldg.					
	Process Bldg.					
	Process Bldg.					
	Process Bldg.					

940711042

PERSONNEL MONITORING DATA

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>PPM VCI</u>	<u>AVERAGE PPM VCI</u>
SHAWINIGAN	Process Bldg.	7-11-74	Flash Operator	240	8	
(Continued)	Process Bldg.	7-11-74	Flash Operator	240	8	
	Process Bldg.	7-17-74	Flash Operator	240	8	
	Process Bldg.	7-16-74	VCI Recovery Man	240	52	
						17.36

LOUISVILLE	Construction Area	6-25-74	Was Utility Operator in Bldg. 111	245	<.5	
	Mid-South Coating Ground at South Door	6-25-74		185	<.5	
	Bldg. 112	6-25-74	Drier Operator	240	1	
	Bldg. 111	6-26-74	Utility Operator	245	4	
	Bldgs. 115 & 127	6-26-74	Cold Room Operator	245	22	
	Bldg. 121	6-26-74	Day Helper	230	2	
	Bldg. 26, Box Making	6-26-74	Center Aisle, South of Crossing	250	<.5	
	Bldg. 15 A & B	6-27-74	Drier Operator	262	1	
	Bldg. 1 C, South	6-27-74	South Helper	258	3	
	Bldg. 1B, South	6-27-74	South Operator, Drier & Recovery	252	2	
	Bldg. 15 C, South	6-27-74	Solution Resin, Charge Operator	220	2	
	Bldgs. 111, 112, & 115	6-27-74	Foreman	235	1	

24707162

PERSONNEL MONITORING DATA

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>PPM VCl</u>	<u>AVERAGE PPM VCl</u>
LOUISVILLE	Bldg. 111 C	6-27-74	West Charging Operator	240	7	
(Continued)	Bldg. 121 A, B, & C	6-27-74	Paste Recovery Operator	237	5	
	Bldg. 121 A, B, & C	6-27-74	Paste Charging Operator	240	5	
	Mid-South Coating, 5 Feet from Ground at South Door	7-01-74		248	<.5	
	Bldgs. 121 & 129	7-01-74	Foreman	240	1	
	Bldgs. 109, 121, & the Pipe Shop	7-01-74	Resident Pipe-Fitter	283	1	
	Bldg. 111, Third Floor	7-01-74	West Helper	240	3	
	Bldg. 1 B	7-02-74	North Drier & Recovery Operator	240	<.5	
	Bldg. 1 C	7-02-74	South HRC Operator	240	1	
	All of Bldgs. 1 & 15	7-02-74	Foreman	240	2	
	Bldg. 15 B	7-02-74	Solution Resin Drier & Recovery Operator	240	1	
	Bldgs. 1 & 15 A, B, & C	7-03-74	Resident Pipe-Fitter	250	64	
	Bldgs. 15 & 112 C	7-03-74	Bagger	246	3	
	Bldg. 15 A, B, & C	7-03-74	Solution Resin Drier Operator	235	<.5	
	Bldgs. 15 & 1 A, B, & C	7-03-74	Foreman	230	3	
	Bldg. 15 C	7-03-74	West Charge Operator	180	11	

24711048

PERSONNEL MONITORING DATA

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>PPM VC1</u>	<u>AVERAGE PPM VC1</u>
LOUISVILLE	Bldg. 15C	7-03-74	HRC Helper	180	13	
(Continued)	Bldg. 15 B	7-03-74	Solution Resin Drier & Recovery Operator	180	4	
	Bldg. 121-B	7-08-74	Paste Recovery Operator	240	18	
	Bldg. 121-B&C	7-08-74	Latex Helper	240	16	
	Bldg. 111-C	7-08-74	East Charge Operator	225	5	
	Bldg. 111-B	7-08-74	Recovery Operator	222	3	
	Bldg. 1-C	7-08-74	G-92 Charge Operator	240	8	
	Bldg. 1-C	7-08-74	North Helper	240	48	
	Bldg. 15-B	7-08-74	North Drier Operator	240	10	
	Bldg. 15-C	7-08-74	East Charge Operator	240	4	
	Bldg. 1-B	7-09-74	South Drier Recovery Operator	240	1	
	Bldg. 15-C	7-09-74	HRC Operator	240	5	
	Bldg. 1-C	7-09-74	South Charge Operator	240	2	
	Bldg. 1-C	7-09-74	South Helper	240	2	
	Bldg. 1 C	7-03-74	North HRC Operator	180	7	
	Bldg. 111 C	7-04-74	Utility Operator	150	8	
	Bldg. 111 C	7-04-74	East Charge Operator	145	15	
	Bldg. 121 B	7-04-74	Latex Recovery Operator	120	3	
	Bldgs. 111, 115, & 121	7-04-74	OVA Monitor	120	4	
	Bldg. 111 B&C	7-04-74	West-Charge Operator, 300 X 6	248	2	
	Bldg. 111 A, B, & C	7-04-74	East Helper	232	5	
	Bldgs. 121 & 129 A, B, & C	7-04-74	Foreman	232	4	
	Bldg. 121 A & B	7-04-74	PasteCharge Operator	253	8	

64071782

PERSONNEL MONITORING DATA

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>PPM VCI</u>	<u>AVERAGE PPM VCI</u>
LOUISVILLE	Bldg. 111 C	7-05-74	East HRC Operator	240	9	
(Continued)	Bldg. 111 A, B, & C	7-05-74	Resident Pipe-Fitter	240	6	
	Bldg. 121 C	7-05-74	Plastic Latex Operator	240	3	
	Bldg. 121 C	7-05-74	HRC Operator	240	6	
	Bldg. 121 A, B, & C	7-05-74	Latex Charge Operator	240	5	
	Bldg. 121 B & C	7-05-74	HRC Helper	238	6	
	Bldg. 111 B & C	7-05-74	West HRC Helper	238	16	
	Bldg. 111 A, B, & C	7-05-74	Recovery Operator	232	3	
	Bldg. 15-A	7-10-74	Bagger	295	8	
	Bldg. 15-A	7-10-74	Bagger	290	3	
	Bldg. 111-C	7-10-74	West Charge Operator	240	2	
	Bldg. 121-A, B, & C	7-10-74	Foreman	240	1	
	Bldg. 1-B	7-11-74	North Drier Recovery Operator	260	7	
	Bldg. 1-C	7-11-74	North HRC Operator	255	2	
	Bldg. 121-C	7-11-74	Latex Recovery Operator	240	8	
	Bldg. 121-B	7-11-74	Latex Charge Operator	245	4	

24711050

PERSONNEL MONITORING DATA

PLANT	BUILDING	SAMPLING DATE	OPERATION	SAMPLING TIME (Minutes)	PPM VCI	AVERAGE PPM VCI
LOUISVILLE						
(continued)	111-C By 33 poly	7-12-74	Static sample	240	17	
	111-C	7-17-74	Chg operator	240	6	
	1-B North	7-23-74	North Dryer Recovery	230	24	
	111-B, C	7-22-74	East Helper	240	9	
	15-C	7-22-74	West Chg operator	240	9	
	15-C	7-22-74	HRC Helper	180	44	
	1-C North	7-23-74	HRC operator	240	13	
	111-C	7-23-74	Utility operator	230	13	
	111-C	7-23-74	West HRC Operator	240	7	
	1-A, B, C, 15-A, B, C	7-23-74	Foreman	245	3	
	121-C	7-23-74	Latex Chg operator	245	6	
	121-B	7-24-74	Latex Recovery operator	210	7	
	121-C	7-24-74	Paste Chg operator	195	9	
	121-C	7-24-74	Paste Chg operator	185	2	
	Bldg 117 Stockroom	7-24-74	office	30	1	
	1st floor Boiler House	7-24-74	Logger	30	1	
	Bldg 117 Stockroom	7-24-74	Office 15' Stockroom 15'	31	<.5	
	1-C	7-24-74	North helper	240	5	
	111, 112, 115	7-24-74	Foreman	240	4	
	111-C	7-24-74	HRC Helper, East	240	43	
	1-B	7-24-74	North helper	240	26	
	15-B, A	7-25-74	Drier, recovery operator	275	4	
	15-C	7-25-74	East Chg operator	265	12	
	1-C	7-25-74	South Helper	250	13	
	101 (outside 10')	7-25-74		30	1	
	Trailers 112 & 17	7-25-74	Bldg 15, Bldg 135	34.5	<.5	
	1-C	7-25-74	Chg operator	245	10	
	15-C	7-25-74	HRC operator	245	12	
	111-C	7-25-74	HRC operator East	230	19	
	111-C	7-25-74	Chg operator	240	13	
						7.89

247120501

PERSONNEL MONITORING DATA

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>PPM VCI</u>	<u>AVERAGE PPM VCI</u>
PEDRICKTOWN.	Bldg. 515	6-17-74	Paste Drier Technician	250	3	
	Compound	6-17-74	Rover Technician	240	1	
	Bldg. 512	6-17-74	Utility Technician	25	14	
	Bldg. 513	6-18-74	Lead Technician	245	1	
	Bldg. 513	6-18-74	Paste Technician	250	14	
	Bldg. 513	6-18-74	Rover Technician	240	26	
	Bldg. 512	6-18-74	Utility Technician	24	29	
	Bldg. 512	6-21-74	Utility Technician	220	5	
	Bldg. 512	6-21-74	Operator	220	1	
	Bldg. 513	6-24-74	Paste Technician	245	8	
	Bldg. 513	6-24-74	Pearl Technician	230	8	
	Bldg. 513	6-24-74	Rover Technician	240	8	
	Bldg. 513	6-25-74	Pearl Technician	240	13	
	Bldg. 513	6-28-74	Paste Technician	240	18	
	Bldg. 513	6-28-74	Rover Technician	240	6	
	Bldg. 512	6-28-74	Operator	235	10	
	Bldg. 512	7-01-74	Utility Technician	235	15	
	Bldg. 512	7-01-74	Utility Technician	235	67	
	Bldg. 513	7-01-74	Rover Technician	245	4	
	Bldg. 513	7-02-74	Pearl Technician	240	4	
	Bldg. 513	7-02-74	Paste Technician	240	5	
	Bldg. 512	7-02-74	Utility Technician	30	43	
	Bldg. 512	7-09-74	Lead Technician	235	2	
	Bldg. 512	7-09-74	Utility Technician	240	5	
	Bldg. 512	7-09-74	Operator Technician	240	8	
	Bldg. 512	7-11-74	Utility Technician	230	5	
	Bldg. 512	7-11-74	Operator Technician	270	8	

24711052

PERSONNEL MONITORING DATA

<u>PLANT</u>	<u>BUILDING</u>	<u>SAMPLING DATE</u>	<u>OPERATION</u>	<u>SAMPLING TIME (Minutes)</u>	<u>PPM VC1</u>	<u>AVERAGE PPM VC1</u>
PEDRICKTOWN	Bldg. 512	7-11-74	Utility Technician	230	8	
(Continued)	Bldg. 513	7-12-74	Lead Technician	235	11	
	Bldg. 513	7-12-74	Utility Technician	240	14	
	Bldg. 513	7-12-74	Pearl Technician	240	43	
	Dryer #515 103 EPX241	7-18-74	Pearl Dryer Tech.	235	1	
	Dryer #515 103 EPX241	7-18-74	Paste Dryer Tech.	245	1	
	Dryer #515 103 EPX241	7-18-74	Paste Bagger	235	2	
	Lab	7-17-74	Chemist	15	24	
	Compound 8730-Blk. 288	7-23-74	Rover Tech.	245	1	
	Compound 8730-Blk. 288	7-23-74	Mill Operator	255	<.5	
	Compound 8730-Blk. 288	7-23-74	Mixing Tech.	250	2	
						11.53

24711053

G. D. Schaaf / cls
9-11-74

IMPLEMENTATION OF NIOSH RECOMMENDATIONS

AUGUST PROGRESS REPORT

AVON LAKE TECHNICAL CENTER

To give everyone an idea as to what we are doing, I have attached our General Safety and Housekeeping Procedure for VCl and PVC Laboratories and Buildings. This policy covers the temporary standards issued by OSHA.

It covers general housekeeping procedures, protective clothing, showering and respiratory protection. Our people are following this procedure to the letter.

As far as monitoring is concerned, we are monitoring with three methods--the OVA, carbon tubes and glass flasks. The first method determines hydrocarbon exposure, the latter two determine VCl exposure.

We are monitoring as follows:

- A. Reaction: OVA readings must be below 50 ppm before entering. Readings are recorded on the vessel entry permit. Very dirty reactions are monitored while being cleaned since additional VCM may be released when buildup is cut into.
- B. Established fixed points: Fixed points readings are taken daily at 14:00 and in addition at 6:00 and 22:00 on Tuesdays and Thursdays. All areas where VCl is used are covered. These readings are taken with an OVA so we know our hydrocarbon exposures above 10 ppm. These readings are normally in the 6-20 ppm ranges. We are also taking carbon tube samples in these areas to get a history of our VCl exposure. Highest of these readings has been 2.27 ppm of VCl.
- C. Personal monitoring: Each operation is being monitored weekly with an OVA. If the operation is <25 ppm of hydrocarbon for three weeks, it is then monitored only once a month. Once out of spec (> 25 ppm), the operation must be monitored until in specification and then weekly as above until it is <25 ppm for three consecutive weeks. Most of our operations are within specifications. However, we do have some periodically out of spec. Equipment and procedures being changed to bring these operations into specification.

We are also checking some of our worst operations with carbon tubes. Our highest reading to date is 12 ppm of VCl which was obtained while charging VCl to a charging cylinder. An OSHA inspector also sampled this operation. We don't have his result.

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D. Perimeter Monitoring: We are working with the ALGCP in monitoring the Avon Lake site (ALTC & ALGCP). The glass flask technique is used for sampling. Results have been in the ppb range. One reading was slightly above 1 ppm.

Lee Bennett
Lee Bennett

LAB:sw

Distribution:

E. W. Harrington	J. L. Nelson	D. J. Barnicki
J. J. Bell	G. Pow	M. Batiuk
A. W. Clements	R. N. Rylands	L. Bennett
C. B. Cooper	G. D. Schaaf	S. Alten
B. A. DiLiddo	R. D. Scott	V. Carson
R. J. Fawcett	R. W. Strassburg	J. DiSalvo
C. R. Flynn	A. Vittone	F. Zieber
M. N. Johnson	H. Waltemate	M. Zelesky
E. G. Schwaegerle	P. J. Weaver	H. Gough
E. B. Katzenmeyer, Jr.	A. R. Webber	D. Popovich
F. E. Krause	W. J. Wilcox	H. Marty
R. M. Kreager	C. L. Woods	E. Webber
P. H. Lawrence	B. M. G. Zwicker	M. Forsythe
J. F. Malone	P. DeChant	C. Orben

24711055

B.F. GOODRICH CHEMICAL COMPANY
AVON LAKE TECHNICAL CENTER

Operations Council
Supervisors

GENERAL NOTICE: SAF-37

TO: _____

ISSUED: June 21, 1974

REVISED:

SUBJECT: GENERAL SAFETY AND HOUSEKEEPING PROCEDURE FOR VCI AND PVC
LABORATORIES AND BUILDINGS

Safety and housekeeping in the VCI - PVC laboratories and buildings* should be such that the exposure of our people to VCI or VCI containing materials is held to a minimum. The following rules may seem too restrictive, but they are necessary if we are to maintain a safe workplace. Your cooperation in implementing them is appreciated.

1. Spillage Control

Spills of PVC must be cleaned up immediately and placed in closed containers impervious to VCI (steel drums). Waste PVC must be handled in the same manner. Loose polymer must not be put in the dumpsters.

2. Eating Facilities

Eating and drinking or storage of food or beverages is not permitted in the listed laboratories or buildings. They are permitted in totally enclosed offices in laboratory areas, if the pressure in the adjacent laboratory or room is less than that in the office and if chemicals are not stored there. Eating is not permitted anywhere in buildings 414 (West Process), 426 (Extruder Building), or 424 (Warehouse). Employees should wash their faces and hands before eating.

3. Protective Clothing

A. Pants and shirts, coveralls, etc.

1. All personnel spending over 4 hours per day in the VCI or the PVC laboratories or buildings must have a daily change of pants and shirts, or coveralls, etc.

Those spending less than four hours per day in these areas need not change daily.

It is requested that those wearing street clothes wear lab coats whenever they enter West Process. This is not necessary in other buildings or laboratories.

* Building 413, Laboratories 11, 12, & 13

Building 414

Extruder Building - 426

Mill Room

Warehouse

Building 423 where VCI and PVC and Geon Latex are handled.

All other buildings or laboratories where VCI and PVC and Geon Latex are handled.

24711057

2. Long sleeved coveralls or shirts are preferred. However, if short sleeved ones are currently being used, they should be replaced with long sleeved ones as they wear out.

B. Protective Gloves, Footwear, or Head Covers

1. Protective gloves must be worn when handling VCl or VCl containing material. Rubber gloves are worn when handling VCl or wet cakes. Canvas gloves are to be worn when handling dry resin.
2. Protective footwear must be worn where exposure to VCl or VCl containing material is likely; rubber footwear for VCl and wet cake; shoe covers for dry resin.
3. Protective head covers are to be worn in areas visually dusty with PVC resin or when entering a PVC reactor. Impervious head covers should be used for high VCl areas (in vessels); Cloth head covers for areas dusty with dry resin.

4. Daily Shower

- A. All persons working more than 4 hours a day in VCl - PVC buildings or laboratories must shower daily and wash hands and face before eating.
- B. If a person is exposed to excessive amounts of VCl, especially liquid VCl, or his clothing is wet from wet cakes, he must shower and change clothes immediately.
- C. If a person's exposure to VCl is limited (hands only, for example), he should immediately wash the affected part. Washing hands and face prior to eating is recommended even if exposure is minimal.

5. Respiratory Protection

- A. All persons (visitors included) entering building 414 must carry or have readily available a cartridge respirator.
- B. Cartridge masks should be used for breathing in operations and in areas where exposure may be above 25 ppm; for example, when opening reactors, fastening and unfastening VCl cylinders to and from supply and change lines, filtering resin, removing pumps, breaking pipe lines and instrument lines, and blowing out lines that might contain VCl.
- C. Work which may reasonably be expected to release VCl in concentrations in excess of 50 ppm, such as repair, maintenance, cleaning of reactors and other equipment containing vinyl chloride, shall be accomplished by

24711058

employees wearing air supplied respirators or self-contained breathing apparatus. Air line masks must not be removed for verbal communication when in 50 ppm areas. Be sure straps are tightened.

- D. In case of spills or leaks where exposure is above 50 ppm of VCl, a cartridge mask should be used until an air mask can be obtained. Area should be immediately evacuated by those not wearing air supplied masks.
 - E. Dust respirators must be used in visually dusty areas. If concentration of VCl is 25-50 ppm, a canister respirator equipped with a dust filter must be used.
 - F. Persons taking OVA readings must wear cartridge masks around their necks ready for instant use when they find themselves exposed to above 25 ppm of Vinyl Chloride. If above 50 ppm, they must immediately leave the area until the condition is corrected.
 - G. Spot ventilation must be used where it is likely that VCl might escape into the atmosphere.
6. Changing Cartridges
- A. Cartridges for respiratory masks should be changed after breathing through for 60 minutes in an atmosphere of 25-50 ppm VCl.
 - B. Men in B/414 West (VCl side) and laboratories 12 and 13 of building 413 should change their cartridges at least weekly, more often if necessary.
 - C. Those persons working less than 4 hours per day in these areas and whose exposure to VCl is minimal can extend this time. It is their responsibility to estimate their exposure and decide when to change cartridges.

7. Vessel Entry

- A. Air supplied respirators, impervious head covers and suits, rubbers and rubber gloves must be worn when entering a vessel.
- B. OVA reading must be below 50 ppm before entering. Readings must be recorded on the vessel entry permits. Very dirty reactors should be monitored while being cleaned since additional VCM may be released when buildup is cut into.
- C. Persons sticking their heads in a reactor to examine the buildup, etc., must wear a cartridge mask.

24711059

8. Corrective Action

Any time there is an excursion above 50 ppm, corrective action must be taken. The process must be changed, leaks stopped, or exhaust hoods installed to eliminate VCl in the atmosphere. If this cannot be done immediately, an air supplied mask must be worn while performing this operation. All other persons must leave the area.

9. Shutting down an Operation

J. S. Alten or F. Zieber have the authority to shut down any process operation where people are consistently exposed to > 25 ppm VCM until precautions have been taken to reduce the exposure to < 25 ppm. In addition, J. S. Alten and the manager in charge have the authority to shut down other areas or laboratories, if similar conditions as above persist.

10. Employee Notification

OVA or other readings taken to monitor the various operations and buildings are to be posted where those concerned can see them. Employees exposed to over 50 ppm of VCl must be informed of corrective action being taken.

24711060