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BUSINESS
CORPORATE SNAPSHOT; THE GEON CO.
HAROLD SWISHER

The Courier-Journal Louisville, KY
5/29/94, p4E

Nature of business: Producer of vinyl (PVC) resins and compounds.

Corporate headquarters:

6100 Oak Tree Blvd., Cleveland, Ohio 44131.

Employees: 1,930 worldwide (as a result of a previously announced personnel reduction, that total is expected to decline to 1,850 by the end of 1994).

Revenue: \$972.5 million in calendar 1993; \$261.3 million in first quarter ended March 31.

Profits: \$1.1 million in 1993 (after \$1.1 million non-recurring charge for cumulative effect of change in method of accounting for post-employment benefits); \$7 million in first quarter.

STRENGTHS:

Recent cost-reduction programs and a stronger economy are producing significantly improved earnings. First-quarter shipments exceeded those of any quarter last year and were up 19 percent over first-quarter 1993 shipments. Geon, with PVC capacity of about 2.1 billion pounds annually, has about 16.7 percent of total U.S. and Canadian PVC capacity. And Geon plans to expand production of vinyl chloride monomer, used in the manufacture of PVC, at its LaPorte, Texas, facility, replacing outside purchases with internal supply.

WEAKNESSES:

Geon has been notified by the Environmental Protection Agency, by a state environmental agency or by a private party that it is a potentially responsible party for the cleanup of 11 non-company owned sites. The company believes it may have continuing liability for only four of those sites and expects to spend \$24 million over the next five years for environmental remediation, including \$16 million attributable to future remediation expenditures at the Calvert City, Ky., facilities. There is also a lawsuit pending, brought by Westlake Monomers Corp., alleging that its right of first refusal agreement with B. F. Goodrich regarding the Calvert City facilities were violated. B. F. Goodrich has agreed to defend this lawsuit and indemnify Geon for any liabilities and expenses.

LOCAL INFLUENCE:

Employs 150 at its polyvinyl chloride resin and compound manufacturing plant at 4200 Bells Lane, Louisville.

TOP COMPETITORS:

Occidental Chemical Corp., Shintech Inc., Formosa Plastics Corp. U.S.A., Vista Chemical Co., Georgia Gulf Corp. and many smaller independent custom compounders.

STOCK:

Symbol, GON; traded on the New York Stock Exchange.

Friday's closing price: \$29.63.

52-week price range: \$17.75-\$30.88.

Dividend yield: 1.7 percent.

Earnings per share: 4 cents in 1993 (after 4-cent non-recurring

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charge for cumulative effect of change in method of accounting for post-employment benefits); 25 cents in first quarter.

TOP OFFICERS, COMPENSATION:

William F. Patient, chairman, president and chief executive officer, \$335,615 in salary, \$175,000 in bonus, \$35,700 in other annual compensation, \$450,000 in restricted stock awards and \$26,137 in all other compensation. Received options/stock appreciation rights for 11,516 shares of stock at \$19.10 a share and 175,000 shares at \$18 a share.

Edward C. Martinelli, senior vice president, operations, \$213,745 in salary, \$50,000 in bonus, \$7,465 in other annual compensation, \$144,000 in restricted stock awards and \$16,240 in all other compensation. Received options/

SARs for 9,723 shares of stock at \$19.10 a share and 60,000 shares at \$18 a share.

Donald P. Knechtges, senior vice president, commercial, \$171,367 in salary, \$35,100 in bonus, \$6,978 in other annual compensation, \$144,000 in restricted stock awards and \$11,871 in all other compensation. Received options/

SARs for 7,037 shares of stock at \$19.10 a share and 60,000 shares at \$18 a share.

Thomas A. Waltermire, senior vice president, human resources and chief financial officer, \$167,752 in salary, \$35,000 in bonus, \$11,807 in other annual compensation, \$144,000 in restricted stock awards and \$10,846 in all other compensation. Received options/SARs for 7,677 shares of stock at \$19.10 a share and 60,000 shares at \$18 a share. Exercised options with a net value of \$49,933.

Gregory L. Rutman, vice president, general counsel and secretary, \$164,573 in salary, \$30,600 in bonus, \$3,445 in other annual compensation, \$144,000 in restricted stock awards and \$11,306 in all other compensation. Received options/SARs for 6,397 shares of stock at \$19.10 a share and 60,000 shares at \$18 a share.

Louis M. Maresca, vice president, research and development, \$160,723 in salary, \$33,000 in bonus, \$3,815 in other annual compensation, \$144,000 in restricted stock awards and \$11,230 in all other compensation. Received options/

SARs for 6,397 shares of stock at \$19.10 a share and 60,000 shares at \$18 a share.

RECENT DEVELOPMENTS:

B.F. Goodrich Co. on March 1, 1993, transferred substantially all of the operating assets and liabilities of its Geon Vinyl Division (except for the chlor-alkali, ethylene and utility operations located at Calvert City) to the Geon Co., then on April 29, 1993, sold approximately 51 percent of Geon's outstanding common stock to the public, and on Nov. 23, 1993, sold the balance of the company's outstanding common stock to the public. Geon has 13 manufacturing plants in the United States, Canada and Australia.

ANALYSTS' COMMENTS:

Paul K. Raman, of S.G. Warburg & Co., New York, rates Geon a buy. He said the stock is extraordinarily popular with shareholders because of its "pure PVC focus." All other major PVC producers are diversified. Raman views the PVC market as "very good," with 70 percent of the market coming from the construction industry. He thinks this market can grow about 4 percent to 5 percent annually.

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Also, Geon is operating at about 93 percent capacity, and with heavy demand prices have risen about 5 cents a pound from a year ago. He expects this trend to continue. Geon also embarked on a cost-cutting program as soon as it became an independent company. Raman said he expects that "earnings will improve about 50 cents a share in both 1994 and 1995 from the cost-cutting." Earnings are also expected to grow about 50 cents a share each year from increased volume, he said. Raman is forecasting 1994 earnings per share of \$1.30. But he said that this may be too conservative and that it could go as high as \$1.50 to \$1.70. For 1995 he is looking for \$2.50 a share, possibly as high as \$3.

Leslie C. Ravitz, of Morgan Stanley, New York, thinks the "short-term outlook for Geon is favorable" given that interest rates are pretty low and the housing market strong, which is the major market for a large portion of the company's PVC resins and compounds. The company's business should be good over the next several years, Ravitz said. However, he noted, "there is a lot of new capacity coming into the industry," and the supply-and-demand factor in the marketplace is expected to put a squeeze on prices. Ravitz is looking for earnings per share this year to be very strong, about \$1.50 or a little more, but he expects 1995 earnings to be flat to down, due to the new industry capacity. However, Ravitz said that the consensus of analysts is that 1995 earnings will be up over 1994's.

REGULAR BOARD MEETINGS:

Meets second month of each quarter and in December.

BOARD OF DIRECTORS, NUMBER OF SHARES OWNED:

(Share totals include shares subject to acquisition through exercise of options and shares in which individuals have only sole voting power and sole investment power.)

William F. Patient, 59, chairman, president and chief executive officer of the company (136,262).

James K. Baker, 61, chairman of Arvin Industries Inc. (800).

John A. Brothers, 52, senior vice president and group operating officer of Ashland Oil Inc. (1,000).

J. Douglas Campbell, 52, president and chief executive officer of Arcadian Corp. (500).

Harry A. Hammerly, 59, executive vice president of international operations and corporate services of 3M Co. (0).

D. Larry Moore, 57, president and chief operating officer of Honeywell Inc. (0).

John D. Ong, 60, chairman and chief executive officer of B. F. Goodrich Co. (1,000).

R. Geoffrey P. Styles, 63, retired vice chairman of the Royal Bank of Canada and now chairman of Drivers Jonas (Canada) Ltd. and chairman of Grosvenor International Holdings Ltd. (1,000).

RUBBERTOWN; NEIGHBORS LIVE UNDER CHEMICAL PLANTS' CLOUD
ANDREW MELNYKOVYCH

The Courier-Journal Louisville, KY
1/28/94, p1A

As people in southeast Jefferson County found out this week, when their neighborhoods were blanketed by a foul, fishy odor, life near a chemical plant can be harrowing.

That is especially true for people who live across the county, near Rubbertown.

About once a week, the wail of sirens signals residents that another spill, leak or fire has occurred at one of the nine major plants in Rubbertown. Then there are the millions of pounds of chemicals, some of them known or suspected to cause cancer, that the plants emit into the air each year.

"I'd love to move away from here. It's dangerous," said Joyce Hannold. But her family can't afford to move from their Ralph Avenue home of 22 years, so "you get used to it. You just get used to it."

Just how dangerous is it to live near Rubbertown?

The vast majority of the leaks and spills are minor -- some no more serious than a gallon or two of antifreeze. But the bad ones can be terrifying events that injure plant workers and force residents to stay indoors or evacuate their homes.

Emissions from the plants have dropped in recent years, largely because of stricter federal standards and a 1986 federal law that requires polluters to disclose the amounts of toxic chemicals they belch into the air. And 1990 amendments to the Clean Air Act require even deeper cuts -- 90 percent or more -- in toxic air emissions in the next 15 years.

But, despite reassurances from public-health officials, many people who live near Rubbertown worry that the chemicals are causing illness and death. "There doesn't seem to be any scientific evidence that the emissions have had any adverse effect in terms of higher incidence of chronic disease," said Jefferson County environmental-health chief Clark Bledsoe. "That's not to say that the concerns of (Rubbertown-area residents) are totally off the wall." The Rev. Louis Coleman and other civil-rights and neighborhood leaders pushed the federal government to look for links between air pollution and health problems in areas downwind of Rubbertown.

The Agency for Toxic Substances and Disease Registry is conducting a preliminary study.

Dr. Carlo Tamburro, a University of Louisville researcher, has been studying the health of Rubbertown workers for 20 years. His research helped link vinyl-chloride exposure to a rare form of liver cancer in B. F. Goodrich employees and led to stricter controls on vinyl chloride.

Tamburro said he has found no evidence that other chemicals are causing specific diseases. And vinyl chloride has never been linked to cancer in plant neighbors.

Tamburro wants to study the health of people who live near Rubbertown.

"The public needs some reassurance," he said.

For their part, the Rubbertown plants say they are trying hard to make their operations cleaner and safer.

American Synthetic Rubber Corp., the largest emitter of toxic chemicals in Rubbertown, has made changes it hopes will lower solvent emissions this year by 80 percent of 1992 levels.

Ara Hacetoglu, the new manager at the Carbide/Graphite Group Inc. plant on Bells Lane, is trying to end dust problems. Not only will the effort make the plant look better, but it also will make money, since the dust can be sold, he said.

The E. I. du Pont de Nemours Co., also moving to make dollars and environmental sense, late last year ended the practice of pumping waste hydrochloric acid into limestone formations deep beneath its plant on Camp Ground Road. Now, much of the acid is being sold.

Next door, at Rohm and Haas Kentucky Inc., storage tanks are being modified to cut emissions of methyl methacrylate by one-third, spokesman Dan Hicks said.

Neighbors have noticed the pollution-cutting efforts and appreciate them. "In the beginning, when we moved here, we had such terrible, terrible air," said Edeltraud Lanning, who has lived on Ralph Avenue for 25 years. "I would say it's 100 percent better than it was."

But residents also complain that most of the Rubbertown companies have kept neighborhood residents in the dark about what goes on at the plants, both good and bad. The lone exception is Rohm and Haas.

It formed a citizens advisory council in 1986 and sends a quarterly newsletter to 10,000 of its neighbors. They in turn trust the company to be "honest and up-front" when something goes wrong, Hicks said.

Chemical plants generally have tried to keep a low profile in their neighborhoods, he said. "That had always been by design," since the industry believed its neighbors were too unsophisticated to understand what went on behind the gates.

"Well, that was wrong. It's not too complex. People need to know and they have a right to know."

When a Rohm and Haas waste-treatment pond began giving off foul odors last spring, company officials went door-to-door in the neighborhood, apologizing to residents and giving out vouchers for meals at an area restaurant.

"They are wonderful; they really are," said Barbara Williams, who has lived across Camp Ground Road from Rohm and Haas for three years. "They have been fantastic."

Mike Miller, principal of Cane Run Elementary School and a five-year member of the Rohm and Haas community group, said the company "is setting the standard for the chemical business." Only one other Rubbertown company, B. F. Goodrich on Bells Lane, has ever even contacted the school, he said.

"The other companies in Rubbertown certainly could learn a lot from that example," Miller said.

That message has begun to seep in. In 1992, the companies formed the Rubbertown Community Advisory Committee, which is modeled on the Rohm and Haas group. Companies now recognize "that if you're going to exist in the chemical business, you've got to be a good

neighbor," said George Lynch, manager of the B. F. Goodrich plant.

Officials at DuPont, which has been the focus of many complaints from community and environmental activists, acknowledge that their company needs to spruce up its image in the community. The company plans to survey residents to identify their concerns.

"We plan to address those issues," said DuPont's Rob Banerjee. "We need to be much more open."

HAZARDS OF BUSINESS

History of Rubbertown

Early 1940s - Easy access to railroads and waterways, as well as the availability of electric power and raw materials, leads the government to select Louisville as the site for several plants to produce synthetic rubber during World War II. Construction begins on several plants to produce synthetic rubber during World War II. The government either builds the plants or acquires them from their original owners,

including E.I. du Pont de Nemours & Co. The plant complex produces both rubber itself and the chemicals needed for its manufacture.

Late 1940s - Du Pont and several other companies buy the plants from the government.

Dec. 16, 1955 - A worker is killed in an explosion at the B.F. Goodrich Co. plant on Bells Lane.

1960 - Rohm and Haas purchases an abandoned government-owned plant in Rubbertown and converts it to make other products.

Feb. 25, 1963 - Seventy-five acres on Bells Lane are covered by the collapse of a carbide slag pile at what is now the Carbide/Graphite Group, Inc. plant. Amazingly, only one person is injured in the slide, which causes millions of dollars of property damage.

Aug. 25, 1965 - A day-long series of explosions and fires, triggered by acetylene gas, kills 12 workers at the Du Pont plant and wrecks much of the facility. At least 37 people are injured in the accident, including several firefighters and police officers hurt while searching for victims.

July 18, 1985 - Two workers are killed and a third injured when a welding torch triggers the explosion of a storage tank at the Borden Inc. plant on Camp Ground Road.

June, 1989 - Sirens installed to warn nearby residents of dangerous leaks, spills or other accidents in the Rubbertown area.

Sept. 18, 1991 - A chemical spill at Rohm and Haas prompts the evacuation of 500 students from Cane Run Elementary School. Seven school employees and a student are treated after being exposed to the chemical, ethyl acrylate, but none suffers lasting ill effects.

TRACKING SPILLS

Hazardous material incidents reported to Metropolitan Sewer District			
Company	1991	1992	1993 (11 months)
American Synthetic Rubber	1	1	6
BASF	1	2	2
BF Goodrich/Geon	11	6	8
Borden	2	1	0
Carbon/Graphite	0	0	0
Du Pont	19	30	12
Rohm and Haas	10	14	13
Zeon	2	8	4

TOTAL

46

62

45

RUBBERTOWN: A CLOSER LOOK

The Rubbertown plants emit millions of pounds of chemicals into the air each year. But the toxic nature of the chemicals doesn't appear to be the main reason they are a public health hazard.

Instead, it's the fact that they are a major contributor to Louisville's summer smog problem. Most of the emissions react in the atmosphere to form ozone, the main ingredient in summer smog. Ozone irritates the eyes, nose and throat and causes breathing difficulties, especially in people with heart or respiratory diseases.

Because ozone formation often occurs miles away from the source of the emissions, the people most affected by Rubbertown emissions aren't always those living near the plants.

COMPANY: Carbide/Graphite Group, Inc.

ADDRESS: 4400 Bells Lane

EMPLOYEES: 200

PRINCIPAL PRODUCTS: Calcium carbide used for steelmaking and acetylene gas production; acetylene gas used to make synthetic rubber; slaked carbide used for controlling emissions from coal-fired power plants.

COMPANY: B.F. Goodrich Co.

ADDRESS: 4200 Bells Lane

EMPLOYEES: 150

PRINCIPAL PRODUCTS: Specialty plastic and latex products, including plastics used in plumbing products; latex used as adhesive or binder in automotive parts and textiles.

MAIN AIR POLLUTANTS: hydrochloric acid (84,250 pounds in 1991, from coal burned in steam plant)

COMPANY: Geon Vinyl (split from Goodrich in 1993)

ADDRESS: 4200 Bells Lane

EMPLOYEES: 150

PRINCIPAL PRODUCTS: Polyvinyl chloride (PVC) plastic resin used in products such as plumbing supplies.

COMPANY: Zeon Chemicals Kentucky, Inc. (formerly part of Goodrich, sold in 1989)

ADDRESS: 4100 Bells Lane

EMPLOYEES: 190 in plant, additional 60 in corporate office and research & development operation on Bells Lane

PRINCIPAL PRODUCTS: Specialty synthetic rubber products used to make parts for autos and other manufactured goods.

COMPANY: BASF

ADDRESS: 2148 S. 41st St.

EMPLOYEES: 68

PRINCIPAL PRODUCTS: printing inks

COMPANY: E.I. du Pont de Nemours & Co.

ADDRESS: 4200 Camp Ground Road

EMPLOYEES: 610

PRINCIPAL PRODUCTS: neoprene, a synthetic rubber; and refrigerants.

COMPANY: Rohm and Haas Kentucky, Inc.

ADDRESS: 4300 Camp Ground Road

EMPLOYEES: 745

PRINCIPAL PRODUCTS: Additives used in many plastics; acrylic coatings used in paints and other applications; Plexiglas resin;

emulsions for paints, polishes and paper coatings.

COMPANY: American Synthetic Rubber Corp.

ADDRESS: 4500 Camp Ground Road

EMPLOYEES: 340

PRINCIPAL PRODUCTS: Synthetic rubber for tires; liquid rubber used as binder in solid rocket motors such as those on the space shuttle.

COMPANY: Borden Inc. - Chemical Division

ADDRESS: 6200 Camp Ground Road

EMPLOYEES: 200, including 50 contractor employees

PRINCIPAL PRODUCTS: formaldehyde; powder and liquid resins used as binding material in products ranging from brake shoes to electronic circuit boards.

Caption: PHOTO BY BUD KRAFT, TOP; PHOTO COURTESY CARBIDE/GRAPHITE

GROUP INC. E. I. du Pont de Nemours & Co. in Rubbertown glowed in a night scene. Above, a Carbide/Graphite Group Inc. worker prepared a furnace for tapping molten calcium carbide.;

Caption: STAFF PHOTO BY KEITH WILLIAMS

Residences in foreground are close neighbors to industrial plants in this view of Louisville's Rubbertown neighborhood from the air.;

Caption: The Goodrich power plant in Rubbertown, 1944.;

Caption: The DuPont explosion, of 1965.

SOME RESIDENTS TELL HOW THEY FEEL;

Caption: "I think . . . (the plants) have been used as a scapegoat."

Frieda Stoner, whose husband works at DuPont, 16 years, Winnrose Way;

Caption: The chemical emissions "concern me, yes, but we haven't moved out." Edeltraud Lanning, 25 years, Ralph Avenue.;

Caption: "Whatever there's chemicals, there's always a hazard."

Irietta Hardin, 23 years, South 41st Street.;

Caption: "I'd love to pick up my house and move it...I don't like living here."

Joyce Hannold, 22 years, Ralph Avenue;

**Articles from
The New Orleans Times Picayune since 1989**

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LA. PLANT SUED OVER TOXIC DUMPING

New Orleans Times Picayune (NO) - FRIDAY, October 28, 1994

By: BRUCE ALPERT Washington bureau

Edition: THIRD Section: NATIONAL Page: A17

Word Count: 468

TEXT:

WASHINGTON - The Environmental Protection Agency formally accused Borden Chemicals and Plastics of releasing cancer-causing contaminants into groundwater near its Geismar plant and of illegally shipping hazardous waste to South Africa.

In a federal lawsuit brought in the Baton Rouge Middle District, the EPA seeks millions of dollars in penalties to compel Borden to clean up the site.

Borden officials called the EPA allegations a bum rap. Borden said it's complying with state environmental regulations and has been conducting a \$20 million program to clean up contaminants since 1985.

Borden filed its own suit earlier this year in the same court, asking a judge to uphold what it said was state Department of Environmental Quality approval of its operations.

Borden said the DEQ abruptly dropped its approval when the company filed its suit.

The EPA action comes as the federal agency promises aggressive enforcement of environmental regulations in neighborhoods with large numbers of minority residents. The Geismar plant is along the Mississippi River, in a highly industrialized area with a predominantly African-American population.

"The Clinton administration is committed to making sure that no company will realize unfair profits from polluting anywhere in the U.S., but particularly in minority and low-income communities that already face disproportionate risks," EPA Administrator Carol Browner said.

The agency said Borden released contaminants such as vinyl chloride, a known carcinogen, into the ground and that the company operated a hazardous waste incinerator and other hazardous waste units without proper federal permits.

The suit also says Borden shipped more than 300,000 pounds of hazardous waste to a Thor Chemicals company in South Africa without notifying the EPA as required by federal law.

Wayne Leonard, vice president and general manager of Borden Chemicals and Plastics, said the EPA suit "constitutes a retroactive change in regulations that violates basic concepts of fairness and due process." Leonard said his company, which employs 700 people, looks forward to a fair

resolution of the issues in court.

"We are being sued after complying with reasonable interpretations of all applicable regulations and spending more than \$20 million on environmental cleanup programs," he said.

"And management is not aware of evidence that the groundwater or hazardous waste issues addressed by EPA in its lawsuit have resulted in contamination or injury in the neighboring community."

Leonard denied the company shipped mercury compounds or any potentially toxic wastes to South Africa to save money on environmental treatment in the United States.

"When BCP began shipping catalyst back to the manufacturer (in South Africa) for processing, it was costing us four times as much as it would have to bury it in a landfill," he said. "We didn't ship the material to be processed because it was cheaper. We did it because we felt it was the proper thing to do for the environment."

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BOOK PROVES CHEMICALS HAVE AN IMAGE PROBLEM
New Orleans Times Picayune (NO) - MONDAY, September 12, 1994
Edition: THIRD Section: LIVING Page: C5
Word Count: 663

MEMO:
COLUMN: The People Helper

TEXT:
Its title - "The Consumer's Good Chemical Guide" - seems like an oxymoron.

Chemicals, good?

But that's what British science professor John Emsley sets out to prove in his recently published book.

"Most of this book is about chemicals that are commonly regarded as threatening," he begins. "I hope I will be able to persuade you that some of them are not - that they are good rather than bad."

Emsley, who has lectured at the University of London for more than 25 years, defends chemicals that many environmentalists say should be banned. He begins his presentation rather gently with a product generally not looked upon as threatening: perfume.

In years past, perfumes were derived from plants, flowers and animals, but today most comprise all synthetic chemicals; and Emsley says the trend is just beginning.

Research in chemistry "will continue to turn up yet more wonderful smells," he writes.

Hmmm. What's that you're wearing? Hydrocinnamaldehyde?

He says chemicals used this way have come to the rescue of animals, such as the male musk deer, the civet cat and the sperm whale, which once were killed for the raw materials used in perfumes.

"Some day synthetic fragrances will replace all those derived from animals, and to all intents and purposes that is already the case in the developed world, thanks to the skill of chemists," Emsley says.

The sweet smell of chemistry is harder to accept in Emsley's next topic: Chemical additives in our foods.

"When people speak of something as 'chemical' they often mean it as a criticism of something unnatural, originating as it does in a chemical laboratory," he writes. "Sometimes this approval of things natural and condemnation of things chemical is turned on its head."

A good example, he says, is artificial sweeteners or - as the industry

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calls them - "non-nutritive sweeteners." He gives high marks to the sweet taste of aspartame (known commonly by its brand name of NutraSweet), which he describes as a real benefit for nearly everyone.

Emsley says since the patent for aspartame now has expired, other companies will be able to reproduce it, which means prices should fall dramatically since it is "a relatively cheap chemical."

Emsley takes one of his boldest stands when he praises PVC plastics. He admits that PVC, short for poly(vinyl chloride) "is made from a liquid that causes cancer; when it is used as packaging it contaminates our food; and when it burns it forms dioxins," chemicals that many environmentalists view as deadly.

"All these things are true, yet the risks they pose to our health are so minuscule that they can be ignored," he says.

"Which is why PVC is still used to make bottles of mineral waters and containers for blood. It may come as a surprise to learn that PVC is the plastic chosen for catheters, the very fine tubes that are inserted by doctors and surgeons into the human body, even into premature babies."

At the book's conclusion, Emsley concedes that the public's perception of chemicals was not helped by a sequence of terrible chemical disasters in the 1970s and 1980s, such as the "mass poisoning of the people of Bhopal, India, in 1984 or the killing of all the fish in the river Rhine in 1986."

What's a chemist to do?

On every page, Emsley promotes the idea of better living through chemistry. Despite this slant, his book is filled with interesting consumer facts about controversial consumer and environmental issues that will be debated for years to come.

If you have a question or problem, write to The People Helper at The Times-Picayune, 3800 Howard Ave., New Orleans, La. 70140, or call 821-1727. Consumer complaints about mail-order companies or local businesses must be in writing and should include copies, not originals, of the necessary documentation. Every question received will be considered but only the most interesting and helpful ones will be published. Requests not answered in the column cannot be answered or otherwise acknowledged.

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MANAGING POLLUTION: THE BUSINESS OF BREAKING RULES
New Orleans Times Picayune (NO) - MONDAY February 18, 1991
By: JAMES O'BYRNE and MARK SCHLEIFSTEIN, Staff Writers
Edition: FOURTH Section: NATIONAL Page: A9
Word Count: 330

MEMO:

LOUISIANA IN PERIL: THE CHEMICAL INDUSTRY'S TOXIC TOLL, part 2 of 4

TEXT:

Despite the myriad regulations to protect Louisiana's environment from the chemical industry, the state's air, water and land remain largely at the mercy of individual plant managers.

For example, at Ciba-Geigy's St. Gabriel plant, managers have instituted a policy in which the company will shut down its plant, an expensive proposition, rather than risk violating its water discharge permit. The company has maintained a nearly spotless water compliance record in recent years.

But the story is different at Borden Chemicals and Plastics, a large plant in Geismar that is part of Elsie the Cow's empire.

Borden has coined a phrase for the company practice of violating state and federal environmental laws during the normal course of business: "routine exceedances".

"We certainly haven't written of perfection," plant manager Wayne Leonard said. "We've just had some difficulty in reaching it."

For example:

BORDEN PAID:

A \$300,000 fine in 1985 to settle 15 violations assessed by the state department of Environmental Quality.

PLANT MANAGER SAID:

"Although we felt we were in a position to take this to court and challenge the magnitude of the fine, we had certain business considerations at the time...we elected basically to make a business decision and go ahead and pay the \$ 300,000."

BORDEN PAID:

A \$14,000 fine in 1986 for starting to build a manufacturing unit without a permit.

PLANT MANAGER SAID:

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"There was no problem. It was a regulatory paperwork problem."

BORDEN PAID:

A \$1.25 million fine to the federal government in 1988 and a \$ 130,000 fine to the state in 1987 for 12 years of illegal discharges of vinyl chloride, one of only a handful of chemicals scientists are certain cause cancer in humans.

PLANT MANAGER SAID:

"There were some business considerations in how we approached these settlements. The amounts...were miniscule copared with our business objectives...We still do not feel the (vinyl chloride) relief valves are really fineable."

CAPTION:

CHART

STAFF GRAPHIC

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WINE SNOBS AGREE: N.O. WATER IS AMONG THE BEST IN THE SOUTH
New Orleans Times Picayune (NO) - THURSDAY April 26, 1990
By: JAMES O'BYRNE Staff writer
Edition: THIRD Section: AA Page: A1
Word Count: 464

TEXT:

Internationally acclaimed wine connoisseur Yves Durand took a sip of clear, slightly chilled New Orleans tap water and waxed eloquent.

"For its neutrality, this is the Swiss of waters," he said.

Was he really talking about the stuff pumped from the Mississippi River by the Sewerage & Water Board?

"It looked good, it had no odor, no bad taste on the palate," Durand said. "It was clear, neutral, even refreshing."

OK. But it's the chemicals that make it taste so good, right?
Wrong, according to a study of drinking water in 10 Southern cities that ranks New Orleans tap water among the best tasting - and the purest - in the South.

The study, in the May issue of Southpoint, an Atlanta-based monthly magazine, found that only Memphis, Tenn., and Richmond, Va., have better tasting water than New Orleans, and only Memphis and Orlando, Fla., have purer water.

Ranking below New Orleans in both categories are Birmingham, Ala., Atlanta, Miami, Dallas, Houston and Charlotte, N.C.

Southpoint collected samples of each city's water for analysis by a New Hampshire laboratory approved by the Environmental Protection Agency. The lab looked for 86 chemicals and minerals as well as trihalomethanes, which are cancer-causing chemicals formed when water is heavily chlorinated.

New Orleans water ranked third in chemical purity, and had the lowest trihalomethane levels of any city tested.

Then, Southpoint asked five Atlanta-area oenophiles (that's wine snobs to most folks) to sample the 10 waters in a blind taste test and rank them.

Of the 10 cities, only Memphis, Richmond and New Orleans earned at least a "like" ranking from the judges. Again, New Orleans was third, in a virtual tie with Richmond.

That's a far cry from the early 1970s, when the city's water was so visibly polluted that it helped spark passage of the federal Clean Water Act.

"We were warned that New Orleans would probably have terrible water, because of its reputation," said Mary Bounds, who wrote the Southpoint article. "But the tests really looked great. It was surprising, especially when you consider what New Orleans starts out with."

Worst on the list for purity is Miami, where at least one sample exceeded federal standards for cancer-causing vinyl chloride.

And the worst-tasting, according to the study, is Orlando's water. Upon tasting it, one judge complained, "This is the reason most people do not drink water."

CAPTION:

CHART

Testing the water

Ranking of water in ten Southern cities

Taste

1. Memphis
2. Richmond
3. New Orleans
4. Birmingham
5. Miami
6. Dallas
7. Houston
8. Atlanta
9. Charlotte
10. Orlando

Chemical purity

1. Memphis
2. Orlando
3. New Orleans
4. Birmingham
5. Dallas
6. Richmond
7. Charlotte

8. Atlanta
9. Houston

10. Miami

Source: Southpoint magazine, May 1990

STAFF GRAPHIC BY JAMES ZISK

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N.O. HAS 'THE SWISS OF WATERS'

New Orleans Times Picayune (NO) - THURSDAY April 26, 1990

By: JAMES O'BYRNE Staff writer

Edition: ST. TAMMANY Section: AA Page: A1

Word Count: 396

TEXT:

Internationally acclaimed wine connoisseur Yves Durand took a sip of clear, slightly chilled New Orleans tap water and waxed eloquent.

"For its neutrality, this is the Swiss of waters," he said.

Was he really talking about the stuff taken from the Mississippi River over on South Claiborne?

"It looked good, it had no odor, no bad taste on the palate," Durand said. "It was clear, neutral, even refreshing."

OK. But it's the chemicals that make it taste so good, right?

Wrong, according to a study of drinking water in 10 Southern cities that ranks New Orleans tap water among the best tasting - and the purest - in the South.

The study, in the May issue of Southpoint, an Atlanta-based monthly magazine, found that only Memphis, Tenn., and Richmond, Va., have better tasting water than New Orleans, and only Memphis and Orlando, Fla., have purer water.

Ranking below New Orleans in both categories are Birmingham, Ala., Atlanta, Miami, Dallas, Houston and Charlotte, N.C.

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BIG LOUISIANA WATER HEARING

New Orleans Times Picayune (NO) - THURSDAY August 31, 1989

Edition: THIRD Section: BB Page: B10

Word Count: 477

TEXT:

A legislative subcommittee will play a key role tomorrow in Baton Rouge in determining whether Louisiana will have much tougher regulations governing the discharge of toxic chemicals into the state's water bodies.

The subcommittee on oversight of the Joint Committee on Natural Resources will hold a hearing on new water quality regulations proposed by the state Department of Environmental Quality. Sen. Hank Lauricella of Harahan and Rep. Bruce Bolin of Minden are co-chairmen of the subcommittee.

Louisiana is obligated under the federal Clean Water Act to produce new regulations for the discharge of toxic chemicals into the state's surface waters or the Environmental Protection Agency will do it for the state.

The state's regulations must be at least as strict as those of the EPA. They can be stricter, if the state is so inclined, and DEQ is so inclined.

Louisiana is one of the leading chemical producers in the nation. Recent EPA reports have highlighted the fact that Louisiana is at or near the top in the amount of toxic chemicals discharged into the air and water. In addition, Louisiana is a net importer of hazardous wastes from other states.

For these reasons, Louisiana should have stiffer regulations for the discharge of toxic chemicals than most other states, say DEQ officials.

The proposed new DEQ regulations will cover 25 toxic, or volatile organic chemicals, such as vinyl chloride and benzene, not previously regulated. Some are carcinogens, meaning they are known to cause cancer in scientifically determined amounts.

Stricter regulations will be proposed for other toxic chemicals already covered.

DEQ officials say they are mainly concerned about the effects of toxic chemicals on public health, especially the cancer risk to humans. They are also concerned about the effects of toxic chemicals on the state's fisheries. Toxic chemicals can build up in fish eaten by people.

Last spring, DEQ and state health officials warned the public that fish taken from the Calcasieu River were contaminated and could be dangerous for public consumption.

DEQ officials say they are particularly concerned about the effects of

AP00056210

toxic chemicals in smaller rivers and bayous because smaller streams cannot dilute the chemicals to the high degree that the Mississippi River can.

The degree of "acceptable" or "permissible" cancer risk will be a key factor in determining the strictness of the new regulations.

The Louisiana Chemical Association insists that the proposed DEQ regulations are unnecessarily strict. The regulations would cause some companies to spend large sums of money without comparable benefit, say LCA representatives.

The Louisiana Association of Business and Industry has also spoken out against the proposed state regulations, contending they would restrict future growth.

Not all industries that discharge toxic chemicals are opposed to the proposed regulations, say DEQ officials. In fact, some along the Mississippi River already would meet the new standards if they were in effect today, they say.

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PESTICIDE PLANT CLEANUP HAS NEIGHBORS WORRIED

New Orleans Times Picayune (NO) - WEDNESDAY May 10, 1989

By: JAMES O'BYRNE Staff writer

Edition: THIRD Section: AA Page: A1

Word Count: 1,119

TEXT:

Ira Lee Jamison remembers the days in the 1960s and '70s when they used to crank up the "cookers" at the chemical plant across the street from his house and blend together poisons to make pesticides.

"They used to put out quite a stench, and some of the kids along the street would get pretty sick when they'd get to cooking," Jamison said Tuesday from his house on Colapissa Street in New Orleans' Gert Town section. "Things have been better since they shut down."

But Jamison and his neighbors had new cause for concern this week when workers began putting up smokestack-like silver towers on the corners of the property and barbed-wire fences along the borders.

The activity is in preparation for a state-ordered cleanup of the Thompson-Hayward Chemical Co. plant at 7700 Earhart Blvd. The cleanup is to begin next week.

Harcros Chemicals, which bought the site in 1981, and TH Agriculture and Nutrition, which sold the plant to Harcros, will spend about \$4 million and four months in the first phase of the cleanup, according to state officials and documents. Cleaning up the shallow groundwater that lies about 5 feet below the surface could take months or years longer.

State officials said residents can expect some minor chemical odors during the cleanup phase, but they stressed that the long-term benefits to the neighborhood will be substantial, because a continuing source of toxic pollution will be removed.

The Thompson-Hayward plant hasn't blended pesticides since the early 1970s. But the chemicals the plant mixed and manufactured for four decades beginning in the 1930s have so contaminated the site that workers will have to tear down most of the buildings, scrape away the first 4 feet of soil and haul away the entire mess to a hazardous waste dump.

"This is a very extensive and difficult cleanup," said Tom Killeen, an enforcement officer with the state Department of Environmental Quality. "This has been a serious problem for a long time."

Indeed, the Thompson-Hayward site is a classic example of a hazardous waste threat that has existed for years, but only recently has been fully understood.

Industry standards of hygiene and spill prevention 20 or 30 years ago

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would be considered cause for immediate closing of a plant today. And in addition to past sloppy housekeeping practices at the plant, Thompson-Hayward also manufactured several pesticides that are now banned.

As a result, contamination at the site is extensive.

The dust on rafters is so toxic in some places that it is considered by law to be a hazardous material.

The cancer-causing chemicals benzene and vinyl chloride have been detected on the grounds.

The bricks in some of the buildings are laden with DDT, a toxic pesticide banned years ago by the federal government.

The recently banned pesticide Chlordane has seeped into the concrete. The banned pesticide Heptachlor has seeped into the groundwater that lies 4 or 5 feet below the surface.

Tests show that contaminated groundwater is leaking into the city drainage system, which is flushed into the 17th Street Canal and ultimately into Lake Pontchartrain.

At least one of three underground storage tanks on the site is believed to be leaking toxic trichloroethene, a dry-cleaning fluid.

Some of the buildings slated for demolition contain asbestos, a fibrous material widely used for decades as an insulator before researchers discovered it was harmful.

Asbestos particles in the air can be inhaled into the lungs, where they can spark a degenerative and usually fatal lung disease known as asbestosis. Demolition of asbestos-laden buildings on the site will involve complete containment of the area and piece-by-piece dismantling of asbestos-contaminated walls and pipes.

In all, at least 75,000 gallons of toxic liquids and 52 million pounds of contaminated soil and concrete will have to be hauled off for disposal.

"It's basically an example of very bad housekeeping," said Gordon Austin, supervisor of environmental affairs for the New Orleans Sewerage & Water Board. The S&WB discovered the contamination at Thompson-Hayward almost by chance in 1987 when workers in a storm sewer were assaulted by noxious chemical odors they tracked to the site.

Harcros Chemicals, based in Kansas City, Mo., has not made any plans for the site after cleanup, said Willis Hart, the company's vice president for engineering and environment.

The small company makes one or two minor chemicals as well as a vitamin supplement for livestock, and also distributes a few types of dry-cleaning solvents. It bought the New Orleans site for a warehouse.

Now, in addition to a multi-million-dollar cleanup, Harcros faces a \$40,000 fine from the Department of Environmental Quality for allowing

chemicals to seep into the city drainage system, and the public relations nightmare that comes from owning a toxic waste site in the middle of a major city.

"If we had known then what we know now, we wouldn't have gotten within miles of this site," Hart said. "It's turned out to be impossible to operate a business out of there."

While state officials say removal of the contamination will eliminate a potential future threat to health, they are reluctant to discuss the health threat posed by the site over the past four decades.

But neighbors around the site worry.

They see the lot where they used to park their cars is now fenced in as part of the cleanup site.

They talk about the many times rainwater has covered not only the entire chemical plant site, but also streets and sidewalks where their children play.

And while engineering studies show the migration of chemicals off the site has been relatively limited, one study noted that any contact with wet underground soil near the site is potentially harmful.

"An example of potential exposure would be handling saturated soils from a fence post hole across Colapissa Street while installing a fence," said a report completed last year by the engineering company supervising the cleanup.

However, neighbors said no one has ever told them to be careful about digging holes on their property.

"It bothers me a lot," said Dorothy Leonard, who has lived on Colapissa Street across from the plant for 26 years. "We've been sitting here looking at this plant all this time, and no one has told us what's going on. As long as we've lived here, you'd think they'd have told us something. It's the least they could do."

CAPTION:
PHOTO, MAP

Chemical barrels sit at the Thompson-Hayward Chemical Co., where preparations are under way for a state-ordered cleanup of the Uptown site next week. STAFF PHOTO BY G. ANDREW BOYD Clean up site. Thompson-Hayward Chemical Co. STAFF MAP.

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**Articles from
The Houston Chronicle, since 2/1/85**

AP00056215

Possible carcinogen found around plant

Houston Chronicle 6/17/94, p1 34

POINT COMFORT -- State regulators said they will ask Formosa Plastics Corp. to begin air quality tests after trace amounts of a possible carcinogen were detected in the air along the plant's fence line.

The Texas Natural Resource Conservation Commission monitored the air from Jan. 29 to Feb. 1 and found unacceptable levels of ethylene dichloride, a chemical used to make vinyl chloride, commission spokesman Steve Davis said Thursday.

The commission will meet Monday with a Formosa representative to "discuss possible things we'd like to see them do," Davis said.

Commission toxicologist Alberto G. Tohme said the emissions pose no immediate health threat and might become harmful only through repeated exposures over a long period of time.

There is no conclusive evidence that ethylene dichloride is a carcinogen in humans, Tohme said. However, the Environmental Protection Agency has classified it as a possible carcinogen because it has caused cancer in certain animals.

Formosa officials believe that the emissions could have been caused by the malfunction of a new tank vent control system, which was replaced during an annual maintenance overhaul for the vinyl chloride plant southeast of Victoria.

Later it was discovered that the system was not functioning properly, a Formosa spokesman said Thursday.

Subsequent testing by an independent environmental contractor did not show an impact from ethylene dichloride emissions on the city of Point Comfort, the spokesman said.

The test data was shared with the Sierra Club and a member of the Concerned Citizens Group in Point Comfort, he said.

Cancer Peril in Plastic Food Containers Cited

WASHINGTON (UPI)—Some plastic packaging used for mouthwash, meats, salad oils and other food products should be banned because it may be allowing cancer-causing vinyl chloride to enter the foods, Ralph Nader's Health Research Group said Tuesday.

The same ban should also apply to pitchers, jugs, canisters and other

food containers made of polyvinyl chloride, the group told the Food and Drug Administration.

The group said that the FDA's own research showed vinyl chloride was seeping from packages into the foods they contain, but the agency had not acted on the matter for the last 18 months.

Vinyl chloride is the gas used to

make the widely used plastic polyvinyl chloride. The gas has been linked to at least 19 cancer deaths among workers exposed to it in factories, and it has been banned as a propellant in aerosol sprays.

A spokesman for the Society of the Plastics Industries said that the FDA was preparing to issue a proposed regulation that "will most certainly assure the public that no vinyl chloride is getting into foods."

He said that the proposed rule would require that there be no detectable level of vinyl chloride, and that the industry was already meeting that "by far."

The FDA had no immediate comment.

Three years ago, the Treasury Department banned the use of polyvinyl chloride bottles for alcoholic beverages after it was discovered that the alcohol was "leaching" or absorbing, vinyl chloride from the container.

The Nader group said that also appeared to be happening with a wide variety of other polyvinyl chloride food packages used for such things as salad oil, vinegar, bacon, mouthwashes and meat.

In its petition to the FDA, the Nader group said the FDA's own analysis found vinyl chloride in vegetable oil

at up to 9,000 parts per billion.

"PVC food wrapping contains from 0.5 to over 4,000 ppb (parts per billion) vinyl chloride, according to the American Meat Institute, the producer trade association," the group said.

"Semi-rigid packages used for lunch meats and bacon leach out from 4 to 20 ppb of this vinyl chloride, and rigid packages used for lunch meat leach out from 2 to 357 ppb when contacted with the test solvent."

"The only way to prevent vinyl chloride in foodstuff is to prohibit use of PVC packages. This ban should continue until such time as PVC packaging can be manufactured with

Los Angeles Times 9
Wed., July 2, 1975—Part 1

zero leaching of the vinyl chloride and detention technology has advanced so that the fact that there is zero leaching can be proved," the Nader group's petition said.

Seat Belts Mandated

From Re:
TEL AVIV—compulsory passenger rael travel about

summer



VINYL CHLORIDE

Cigarettes Contain New Cancer Agent

BY GEORGE GETZE
Times Science Writer

The chemical vinyl chloride, known to cause cancer in animals and humans, has been reported for the first time in cigarette smoke.

According to the report, published in the current issue of Analytical Chemistry, a publication of the American Chemical Society, the vinyl chloride is formed in minute amounts during the burning of cigarettes. It comes from inorganic chloride in the tobacco.

This is the first record of vinyl chloride being formed in any way other than its direct and deliberate manufacture in the production of plastics.

Authors of the report are Dietrich Hoffmann of the American Health Foundation and G.B. Gori of the National Cancer Institute.

According to Analytical Chemistry, the two men's research raises the possibility that vinyl chloride and related substances, possibly also cancer-causing, may be formed not only in burning cigarettes but in the burning of other plant materials too. The report said charcoal filters are effective in removing much of the vinyl chloride from the cigarette smoke.

The highest vinyl chloride concentration found in the study was about 30 parts per billion, more than 1,000 times less than the 50 parts per million that have been found to cause tumors when the substance was inhaled by test animals.

The amount of vinyl chloride measured in cigarette smoke is probably too small to be a significant addition to the already known cancer-causing tendencies of tobacco smoke according to Hoffmann. But he said it does add to public exposure to the chemical, and that it conceivably could interact with other carcinogens to increase tobacco smoke's "tumor potency."

The vinyl chloride content of the commercial cigarettes tested varied a great deal. Smoke from plain-tipped cigarettes contained from 5.8 to 15.8 billionths of a gram of vinyl chloride for each cigarette. Ordinary filters had no effect on the amount of the chemical in the smoke. Charcoal filters reduced it by two-thirds. Marijuana cigarettes have much less vinyl chloride than tobacco cigarettes.

Hoffman and Gori said vinyl chloride has been found in plant and other natural material before, and they concluded that its presence in cigarette smoke is not due to contamination of the tobacco. It is formed by interaction of hydrocarbons and chlorine, a normal constituent of plants. It forms in the 1,500 degree F. heat of the burning cigarette end.

They said tobacco smoke may contain other unsaturated chlorinated hydrocarbons that can cause cancer, among them the suspected human carcinogen "2-chlorobutadiene," or chloroprene.

It is possibly more serious that the research indicates that chlorinated hydrocarbons may be formed in the burning of other plant materials, such as ordinary wood, and in the burning of trash, especially trash contained in polyvinyl plastic bags, the researchers said.

Plant May Be Exposing Pupils to Carcinogenic Gas

BY GRAHAME L. JONES
Times Staff Writer

JAN 27 1976

Elementary school children in Saugus possibly are being exposed to unsafe levels of cancer-causing vinyl chloride gas emitted from a nearby industrial plant, state officials announced Wednesday.

According to a staff report presented at a hearing before the state Air Resources Board at the Ambassador children at Saugus Elementary School could be facing a health hazard from emissions from the Keyser-Century Corp. plant a quarter mile from the campus.

The report said dangerous levels of vinyl chloride gas were found on at least one instance as the result of monitoring done at the plant by the ARB and the federal Environmental Protection Agency.

Concentrations of the gas found at the plant, which manufactures polyvinyl chloride and phonograph rec-

ords, were "twice as high as the standards set by the federal government for the safety of workers inside plants," Tom Quinn, ARB chairman, said.

"Clearly, this is a dangerous situation for the schoolchildren and has to be corrected as soon as possible."

In a telephone interview Wednesday evening, however, Quinn emphasized that there was "no cause for alarm, but there certainly is reason to be concerned and to pursue the issue vigorously."

As a result of the staff report, as well as the testimony of two doctors who appeared before the board, Quinn said, officials at the Saugus Union School District had been notified of the situation and added that monitoring will begin at the school in question next week to determine if

Please Turn to Page 29, Col. 3

VINYL CHLORIDE GAS LEVELS

Continued from Third Page

pupils and staff actually are being exposed to unsafe levels of the gas.

Meanwhile, a spokesman for Keyser-Century Corp., which has been in business more than 25 years and has been located in Saugus since 1957, challenged the ARB's staff findings.

According to Howard Hill, Keyser-Century vice president in charge of chemical operations, the ARB staff's conclusions were based on "data that had not been verified."

Hill said the company's own monitoring did not show the high level of vinyl chloride concentrations found by the ARB in November and earlier by the EPA.

"If, in fact, the levels had existed," Hill said, "they were at times when there were no children in school, such as late at night, so the kids would not have been exposed."

Hill said the ARB had again monitored the plant in December, "and that data showed no significant levels at all in the adjacent community."

Similarly, Saugus Union School District Supt. Dr. James M. Foster said it was his understanding from speaking with both ARB and company officials that there was no cause for alarm.

"We've received no indication that there was any problem," Foster said.

"I asked (ARB officials) this afternoon if there was any safety problem

present and they said no. I asked about curtailment of physical activity by the pupils and they said it may be of some value but was not a necessity."

This latter remark referred to a recommendation made at Wednesday morning's hearing by Dr. Dwight Culver of UC Irvine. Culver said children at the school, which has 397 pupils, should restrict their physical activity.

When youngsters run and jump, they breathe deeply, Culver said, "and the danger of inhaling vinyl chloride fumes is magnified tenfold."

Another physician who testified at the hearing, Dr. John Goldsmith of the state Department of Health, warned that "the exposure of the Saugus school children will possibly increase their incidence of cancer and birth defects in their children."

Quinn said studies of people exposed to large quantities of the gas show the chemical is causing a wide range of ailments, including angiosarcoma of the liver, a form of cancer.

There also is evidence, he said, that workers exposed to large amounts of the gas show a higher frequency of chromosome abnormalities in blood cells; that wives of the workers experience a greater frequency of miscarriages than normal and that women exposed to the gas may risk bearing children with defects.

The ARB chairman said work is continuing toward the formulation of strict health standards for vinyl chloride in California and that these standards could be completed by March or April.

Keyser-Century's Hill, meanwhile, said the company's 200 workers "are well informed on how to handle the products which we manufacture" and said he was certain workers "feel comfortable" with the safety standards employed by the company.

Hill said Keyser-Century has "a very extensive health monitoring program" that so far has shown no evidence of health hazards among its employees.

He added that the company is spending \$3 million in the area of emission control to ensure the safety of its workers and the surrounding community.

Carcinogen Tests 'Interesting,' but Study Imperiled

By MARTHA L. WILLMAN, Times Staff Writer

A study on the possible effects of exposure 20 years ago to cancer-causing vinyl chloride by students at Saugus Elementary School has produced "interesting results" which officials say merit further investigation. The Times has learned.

An official of the U.S. Environmental Protection Agency (EPA) said results of a two-year pilot study on health defects in students who attended the school "are not very conclusive" but indicated that some latent health problems found in the study group may be traced to exposure to the carcinogen.

EPA officials said far more comprehensive studies are needed to determine how critical exposure to vinyl chloride gas is to the community, and particularly children, but they fear newly adopted federal spending limitations may curtail the necessary funding to conduct the studies.

An estimated 5,000 students who attended Saugus Elementary School reportedly were exposed to vinyl chloride emissions from the nearby Keycor-Century Corp. plant which used the compound to manufacture photomicrograph records.

Students Moved in 1978

Saugus Elementary was closed in February, 1978, and its almost 400 students transferred to other campuses after the state Air Resources Board (ARB) warned that high levels of the gas had been recorded at the school.

School district officials, who already had sold the aging building to a shopping center developer and had planned to close it in June, 1978, took the action as a "prudent precaution."

The study targeted on an estimated 1,000 students who attended the elementary school between 1958, when the plant opened, to 1962.

It is believed the first such study to determine the health effects of vinyl chloride on children, who are believed to be the most susceptible to health problems from the carcinogen.

John Acquavella, staff epidemiologist at EPA's health research laboratory in North Carolina, said the study, which has been made public, provides "bits and pieces" of information that students who attended the school might be manifesting vinyl chloride-associated phenomena.

Further Investigations Urged

He called the preliminary report "interesting enough to pursue with further investigation." However, he said funding has not been allocated for additional research, and newly adopted spending controls may shelve the project. "We're trying to get some money out there to improve the effort to determine the severity of vinyl chloride exposure, but the budget has been very volatile," he said. "We hope we can get some money, but you never know."

Medical studies have determined that vinyl chloride can cause liver cancer, lung cancer, brain damage, miscarriages, birth defects and disorders of the central nervous system.

See page C-1, Page 3

CARCINOGEN: Study of Former Saugus Students Ended, Future Work Imperiled

Continued from First Page

Acquavella said tests on animals indicated that younger animals might be more susceptible to the carcinogen, but there is no conclusive evidence of a similar susceptibility in human youths. Experts have not determined at what level exposure to the gas becomes dangerous.

The \$112,000 study was undertaken in 1968 by Science Applications Inc., a West Los Angeles firm which specializes in air pollution research. It was jointly sponsored by the EPA and the National Cancer Research Institute.

The final report in the pilot study was submitted to the EPA in January, and proposals now call for additional studies. Dr. Robert Zarkin, who conducted the study for Science Applications, said he expects to learn what further details EPA wants within a week.

As an example, he said the report dealt only with illnesses reported within the study group and not mortality. Since the closing of the school, Keycor-Century officials have completed a \$2.2 million ventilation project that reduced emissions at the factory to comply with regulations set by the Air Resources Board.

Officials in the plastics industry have long argued that there is no danger in low levels of exposure. However, both EPA and the ARB have set stringent standards for emissions control. Many argue that any level of exposure may be unsafe.

40 years after exposure. EPA officials refused to reveal the specific health defects that were found in the study of Saugus students because they said the information might jeopardize further investigation of the medical history of adults who attended the school.

Acquavella said, "There is no consistent theme, no common thread, no report only that we looked at that, and we found different segments that we looked at that are interesting."

He said the study group utilized in the pilot report is too small to form any conclusions. About 450 students from the school and another 250 spouses of former students were interviewed in the pilot study.

According to Acquavella, the major obstacle in determining the health effects of vinyl chloride emissions on humans is the lack of a "responsible research" program. He said a "responsible research" program would require up to four times the funding of the pilot project, but that the outlook for obtaining the funding is bleak.

"It is unfortunate that research has to be done on a budget," he said. "And every year we wait it gets more expensive."

Burbank Orchestra, Choral Club to Join for Performance on Saturday

The Burbank Symphony Orchestra and the Burbank Choral Club will combine to perform "Toward the Unknown Region" at 8:15 p.m. Saturday at the Hall of Memory at Forest Lawn Memorial Park, 6200 Forest Lawn Drive, Los Angeles. The 80-member orchestra will present the overture to "The Bartered Bride." Soprano Merry Franke and other works.

Admission is free.

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CLASSES

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Officials Seek to Close Two Chemical Plants for Emitting Cancer-Causing Gas

By MARK GLADSTONE, Times Staff Writer

Authorities are seeking the shutdown of two chemical plants in Carson, citing a potential threat to public health due to emissions of cancer-causing vinyl chloride.

The South Coast Air Quality Management District "has found that there are significant levels of vinyl chloride in the area surrounding" the Stauffer Chemical Co. and B.F. Goodrich Co. plants, which are side by side on 223rd Street near the San Diego Freeway, Executive Officer J. E. Stuart said.

In October, the district's staff denied operating permits for the plants. Both companies appealed and are operating with temporary permission of the district's hearing board, which will consider Stauffer's case Tuesday and Goodrich's on Jan. 20.

Health Problems Denied (MON DEC 14 1981)
Spokesmen for both companies say they are complying with regulations and deny that their plants might cause health problems.

The controversy can be traced to 1975, when the district was empowered to enforce federal vinyl chloride emission regulations.

Since then the state Air Resources Board has imposed an even tougher standard for the air in areas near the plants, leaving enforcement to the regional body.

Those regulations took full effect in April. They set a limit for the chemical in any 24-hour period to 10 parts per billion parts of air. That level was chosen because it is the lowest at which vinyl chloride can reliably be detected.

California imposed the first limit in the nation on a

A limit of 10 parts per billion of air per 24 hours was set for the gas.

known carcinogen in the outside air, according to the Air Resources Board.

Medical studies have shown that vinyl chloride exposure can cause some forms of liver and brain cancer, miscarriages, birth defects and blood cell damage. But officials of the two companies say it would require massive exposures many times the level emitted at their plants to cause health problems.

"Can't Wait 20 Years"

"We obviously can't wait until 20 or 30 years to see if people develop angiosarcoma (a type of liver cancer associated with vinyl chloride exposure)," said Susan Durbin, a deputy attorney general who represents the air board, explaining why the stringent standard was passed.

The state determined that no exposure to vinyl chloride could be presumed safe, so it selected the lowest detectable level for the standard. Barbara Franta, assistant counsel with the air quality district, said.

Vinyl chloride, a gas, is used to make polyvinyl chloride, a plastic material used in a variety of products including pipes, auto seats, wire and insulation. Stauffer is the only company that manufactures vinyl chloride in California. Goodrich brings vinyl chloride to its plant, where it is turned into polyvinyl chloride.

Franta said the South Coast district has determined that between April and August, its two monitoring stations close to the plants showed average readings of 40 ppb—four times the standard—and one reading of more than 10 times the accepted level.

If the district's rules are violated, Franta said, the public health can be threatened. She added that individual effects from exposure can differ.

(A 1981 Environmental Protection Agency study of exposure by Sausalito elementary school students to vinyl chloride 20 years ago indicated that some latent health problems may be traced to exposure to the gas emitted by the Keycor-Century Corp. plant. The district said the plant now conforms with its regulations.)

(In February, a federal court in New Jersey ordered Goodrich to pay \$391,000 in compensatory damages to a woman whose family lived near its plant and whose husband's death was linked to emissions of vinyl chloride gas from it.)

Both companies say they have received no complaints about the plants. They are in an industrial and commercial zone near the Carson-Long Beach boundary but within blocks of homes.

Air quality officials say residents could not readily determine if they have been exposed to vinyl chloride, because it is invisible and odorless.

Violations Issued

Franta said the district has recently issued 18 violations against Stauffer and one against Goodrich for emissions. The plants could receive \$500-a-day fines if found in violation by a court.

Stauffer has sued to invalidate the state standards. Jack Swafford, Stauffer's attorney, said the company believes that evidence presented to the Air Resources Board failed to establish a relationship between a given concentration of vinyl chloride for a specific time and adverse health reaction, as required by state law. Although the suit is pending, Stauffer is not pressing the action and is attempting to live within the rules, he said.

Swafford said the district has no proof that Stauffer has violated the standard, only that there are concentrations in the air above the allowable limit. Both companies say it is not possible for the district to determine from which plant the chemical is emanating.

Swafford said the plant is allowed certain emissions from stacks and equipment. He said vinyl chloride also seeps from the plant's exhaust and incinerator systems and other machinery. He said that occupational health standards for workers are more lenient than the levels

Goodrich and Stauffer have maintained eight monitoring stations outside the plants, Swafford said. The equipment has shown excessive emissions no more than 10 times and questioned the reliability of the district's monitoring equipment.

Swafford said health issues will not be a subject of Tuesday's hearing, scheduled to begin at 9:30 a.m. at the district's headquarters in El Monte.

He said the issue before the hearing board, a five-member autonomous unit of the air district that includes a physician, a lawyer and an engineer, is the narrow question of whether the equipment installed at the plant

complies with the laws and requirements, and that is why we are appealing," said Ed Pollock, a spokesman for Goodrich in Cleveland, Ohio.

The Goodrich plant, built in 1964, employs 175 people. The Stauffer plant, which has 225 employees, was built in 1958.

Besides the Keycor plant in Sausalito, the only other vinyl chloride plant in the state is a small facility operated by Union Carbide in Torrington. It is exempt from most of the regulations because of its size, officials said.



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07839008
MILEPOSTS
Houston Post (HP) - MONDAY, December 5, 1994
By: Compiled from Post News Services
Edition: FINAL Section: National Page: A2
Word Count: 190

MEMO:
Good Morning, Houston

TEXT:
DIED: Connie Kay, 67, who joined the Modern Jazz Quartet in 1955 as Kenny Clarke's replacement, in his sleep, in New York City. Kay played or recorded with Miles Davis, Lester Young's group, Stan Getz, Coleman Hawkins, Charlie Parker, Chet Baker, Cannonball Adderley, Jimmy Heath, Paul Desmond, Tommy Flanagan, Benny Goodman and Van Morrison.

DIED: Thomas A. Turner, 55, who sued his former employer for allegedly giving him cancer and successfully fought company attempts to have an autopsy performed on him, of the disease, in Vermilion, Ohio. Turner, who died of a rare form of cancer called angiosarcoma, sued B.F. Goodrich Co. and Geon Corp., saying the companies caused him to contract the disease through prolonged exposure to liquid vinyl chloride.

DIED: Ichiro Ogimura, 62, former world table tennis champion and president of the International Table Tennis Federation, of lung cancer, Sunday in Tokyo. Ogimura was vice president of the Japan Table Tennis Association. He won both the men's singles and team titles at the World Championships in London in 1954. He led Japan to win five straight championships in the men's team competition beginning in 1954.

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07639029
BRIO - IT'S A DIRTY JOB, AND NOBODY'S ABLE TO DO IT
Houston Post (HP) - THURSDAY, May 19, 1994
By: SCOTT HARPER, POST ENVIRONMENTAL REPORTER
Edition: FINAL Section: Local Page: A1
Word Count: 761

TEXT:
After years of bitter debate, industry and community leaders have come to a breakthrough conclusion about the infamous Brio Superfund site: It can't be cleaned up safely.

This startling recognition, reached last week after two closed-door meetings, reverses years of scientific planning and erases millions of dollars of investments in cleanup technology.

It also means that government officials must now sanction a new strategy for coping with one of the worst toxic waste dumps in Texas, a former refinery located on Dixie Farm Road near Friendswood, about 16 miles south of downtown Houston.

While the U.S. Environmental Protection Agency has given the two sides until next week to present an action plan, its cornerstone already is apparent:

Instead of excavating pits filled with toxic chemicals and then burning the wastes in a giant incinerator, the new wisdom is to simply cordon off the site and control pollutants from seeping into adjacent properties and waterways.

Then, after the site is secured with a huge concrete wall, which would be built partially underground to keep buried chemicals in check, the tract would be covered with a blanket of clay and monitored indefinitely by experts, according to preliminary designs.

"This really changes the whole equation," said Marie Flickinger, a local newspaper publisher and community activist who is helping write the new strategy. "It's pretty amazing; they're finally realizing that maybe we were right after all."

Flickinger and others have argued that Brio cannot be cleaned up because of the many dangerous chemicals buried in the ground, including cancer-causing agents such as vinyl chloride.

When workers dig into waste pits, activists say, toxic air emissions are released to such a degree that they threaten anyone living or breathing nearby.

They note that even when undisturbed, the pits naturally emit fumes that at times violate national safety standards.

Because of this health concern, Flickinger said the new strategy also will call for the immediate relocation of the 63 families still living in the Southbend subdivision, a community separated from Brio only by a barbed-wire fence.

That recommendation brought cheers from Southbend residents. But it also raised questions over who would pay for relocating so many people - the EPA or the hodgepodge of companies that polluted the site for nearly three decades and now are responsible for its fate.

"We just want out," said Jackie McNeal, a mother of three who has lived in Southbend for three years. "If this helps us get out of here,

then I'm happy.''

The other major component of the new strategy, Flickinger said, is to reroute Mud Gully, a small stream crossing Brio that is a proven carrier of toxic residues to Clear Creek.

Clear Creek, a tributary of Galveston Bay, is closed to fishing because of chemical contamination. If Mud Gully is diverted, the flow of contaminants may at least be slowed, if not abated, Flickinger said.

Reaction to the radical policy shift was applauded by nearly everyone involved - even the companies that will surely pay an enormous tab for its containment. No estimates were available, but the cost is expected to reach the tens of millions of dollars.

'We need to pursue some remedy that stays away from delay, and the containment strategy seems to fit that bill,' said Norma J. Goldman, a spokeswoman for the Brio Site Task Force, a collection of companies that includes such corporate giants as Monsanto, Browning Ferris Industries and Amoco. 'If we can get something moving, I think everyone will be satisfied.'

The task force already has spent about \$25 million in preparing for a cleanup, Goldman said. That includes \$10 million for a huge incinerator, which now will likely be dismantled without ever being stoked.

Brio was nominated for the federal Superfund list in 1984. Since then, residents have fought the task force and the EPA over how to clean up the site.

After signing a court-mediated agreement in 1991, the task force moved slowly ahead with incineration, while residents warned of health risks and unverified research.

On April 1, the EPA shifted its outlook and sided with residents, pushing for additional testing and field investigation.

'It just seems the more you do, the more you find,' said EPA spokesman David Bary in Dallas. 'Given the fact we're going to have significant air releases if we excavate, containment just seems the best alternative.'

CAPTION:

PHOTO Todd Yates / Special to The Houston Post

Ten years after it was nominated for cleanup, officials say the Brio Superfund Site near Friendswood - shown in this 1989 file photo - cannot be cleaned safely.

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07628093

BRIO SITE'S REMAINING NEIGHBORS FEEL TRAPPED
Houston Post (HP) - SUNDAY, May 8, 1994
By: SCOTT HARPER, POST ENVIRONMENTAL REPORTER
Edition: FINAL Section: Local Page: A1
Word Count: 1,220

TEXT:

They live in a toxic ghost town.

And, like the nightmare in which the tortured dreamer runs and runs but gets nowhere, they want to leave Southbend but can't.

"Get us the hell out of here," says Rosa Thompson, whose home sits about 100 yards from a barbed-wire fence marking the Brio Superfund site, one of the worst toxic waste dumps in Texas. "We're scared and we want out."

The obvious question that anyone who has seen the boarded up homes, the eerily empty streets and incinerator stacks here invariably asks people like Thompson: Why not just leave?

Why not pack up and move away, like the 600 or so other families who once called this modest subdivision home in the flat prairies south of Houston?

"We've got everything sunk into our house," answers Jackie McNeal, who, along with Thompson, is among the remaining 63 residents of Southbend. "What they're offering us (to leave) - \$20,000 and signing away all our future health claims - would just ruin us. What if our kids get cancer? What if we get sick?" McNeal asks. "We're trapped here."

Thompson and McNeal moved to Southbend in 1990 and 1991, respectively, knowing they were buying into a community next door to a Superfund site. But they say they were told that Brio, a former refinery dormant for a decade, would be cleaned up and posed no health risk.

Now, no one is sure if that assessment is correct.

And given the evidence gathered by health scientists and neighborhood activists to the contrary, most remaining Southbend residents no longer trust the U.S. Environmental Protection Agency or the Brio Site Task Force, the industry group responsible for purging decades of chemicals dumped in the ground.

"No one answers our questions, everybody lies," says Sophie Wester, who no longer lets her grandchildren play basketball outside her Southbend home for fear of what they might breathe. "Everyone points fingers and says it's not their fault."

Part of the reason for the silence may be fear of legal action. The Brio debacle, since it began with Superfund nomination in 1984, has spawned a courthouse full of litigation.

There are 18 cases pending. Most are against the myriad of chemical companies that compose the Brio Site Task Force, including such corporate giants as Monsanto, Arco and Chevron.

Other claims are against Farm & Home Savings Association, which chiefly developed Southbend in conjunction with the Houston-based Ayrshire Corp. in the 1970s.

To stop this tide of litigation, Farm & Home, along with its major

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insurance carrier, Crum & Forester, is trying to buy out all remaining residents.

Lawyers have sent offers to McNeal, Thompson and Wester, but none of them has accepted. They say the proposals are a cheap, low-ball attempt to take advantage of them.

The offers typically include a lump sum for the house - usually about \$20,000 - and the promise to take care of any remaining mortgage payments. In exchange, the residents must sign a contract that they will never seek a legal or health claim against the developers.

One attorney, who represents about 450 children who went to Weber Elementary School in Southbend before it was closed for health concerns, said the offers may not even be legal.

"I doubt they'd hold up in court; the offers are being made under extreme duress," said attorney Gary DiMuzio of Houston. "They're basically asking them to sign their lives away."

Jack Fields, a lawyer for Andrews & Kurth, a Houston firm hired by Farm & Home, declined to comment on Brio.

Real estate agents and others who have watched the Brio scene caution against beating up on Farm & Home so quickly.

They note how some opportunists, seeing litigation fever take hold, bought property in Southbend, then turned around within weeks and sued for damages.

McNeal said she was told of the Superfund risk, but that she and her husband were also told by the EPA and others that health problems were remote.

"We believed them," she said. "We thought everything would be taken care of."

The remaining Southbend residents have few alternatives to Farm & Home these days. The corporation has helped form a separate company, Southbend Properties Inc., to handle all buyout matters.

As Southbend Properties Inc. acquires more and more homes, it also takes more control of community affairs. It has installed its own representative, Mark Bettencourt, to head the Southbend Homeowners Association, which sets policy and decides what to do with maintenance fees.

All other members of the homeowners board also were named by the company; none lives in the subdivision, residents say.

Bettencourt referred calls to Fields and declined comment.

Thompson, McNeal and a small group of residents are pressing the EPA to either buy them out at fair market value or relocate them to comparable housing far away from Brio.

They have gathered a petition urging the EPA to stop cleanup work at Brio until all residents are out. Their chief concern is air emissions released from pits holding such cancer-causing chemicals as vinyl chloride.

Their argument for government intervention relies on two independent studies, conducted in the late 1980s, on birth defects and health problems in Southbend. They both show alarming numbers.

One study, pulled together by neighborhood activists and the co-publisher of a local newspaper, found that 10 of 12 mothers who were pregnant at the time chemical pits were disturbed in early 1987 gave birth to children with physical defects.

That included one baby girl born without sexual organs and another child who required a heart and lung transplant.

Such work spurred an official study by the Agency for Toxic Substances and Disease Registry in Atlanta. The agency, a branch of the U.S. Department of Health and Human Services, has not completed its review after two years of research.

John Meyer, a Superfund enforcement chief for the EPA in Dallas, said his office is 'absolutely looking at' declaring Southbend residents in harm's way - a determination that could lead to relocation.

Such moves, he said, have been undertaken at Texas Superfund sites in Conroe and Texarkana. The EPA paid for these relocations because the responsible parties for creating pollution could not be identified.

Norma J. Goldman, a spokeswoman for the Brio Site Task Force, said the companies do not feel they should pay for moving residents.

The Brio cleanup is in limbo because the EPA wants new tests and safeguards performed at the site. But the task force says those requirements are too strict and go beyond what has been agreed to in an earlier legal settlement.

Indeed, the task force is asking the EPA to reduce its air toxics standards near Southbend. Goldman argues that the standards are so sensitive now that cleanup work cannot even occur without stirring chemicals beyond safety levels.

Thompson, who can see a pit site just over her backyard fence, is incensed at the notion of lowering the safety threshold for vinyl chloride emissions.

'Why don't they just go ahead and kill me?' she asks sarcastically. 'It would be a lot easier for them to be rid of us.'

CAPTION:

COLOR PHOTO Robert Seale / The Houston Post

'We're scared and we want out' Rosa Thompson poses in her 'toxic waste suit' outside her home near the Brio Superfund site. She uses the suit in protests.

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07570100
TESTS POINT TO BRIO AS SOURCE OF CHEMICALS CLEAR CREEK RESULTS INCLUDE
CARCINOGENS

Houston Post (HP) - FRIDAY, March 11, 1994
By: SCOTT HARPER, POST ENVIRONMENTAL REPORTER
Edition: FINAL Section: Local Page: A23
Word Count: 360

TEXT:

Test results released Thursday show traces of toxic chemicals, including some that cause cancer, in a long stretch of Clear Creek - all of which seem to originate from the Brio Superfund site.

Residents near the notorious waste site, about 18 miles south of downtown Houston, said the tests confirm what they suspected all along: Brio, and not some other source, is causing all the contamination.

'No longer can they say, 'Well, we don't think it's us,' ' Marie Flickinger, a property owner and activist, said of the industry coalition responsible for creating one of the worst Superfund dumps in Texas.

Norma J. Goldman, a spokeswoman for that coalition, the Brio Site Task Force, said much of the findings have been reported before by cleanup crews. And she took solace that only one suspected carcinogen, trichloroethane, appeared to violate what state health standards allow in Texas waters.

'It confirms that the strategy we have in place is working,' Goldman said.

The tests, conducted by the Texas Natural Resource Conservation Commission and costing about \$60,000, were good news to government regulators, who until now feared that contamination of Clear Creek might be seeping from other hot spots in the Friendswood area and could create a quagmire of toxic cleanups.

'The question that there might be other sources is what concerned us,' said Ashby McMullan, a Superfund project manager for the TNRCC. 'But Brio's the source. The carcinogens are a Brio problem.'

The results, coming from extensive sampling of water and sediments from Mud Gully at Dixie Farm Road and south along Clear Creek to Challenger Seven Park, also should relax some homeowners and developers in the area.

People living along small tributaries feeding Clear Creek south of Brio were anxious that dangerous pollutants might somehow have been coming from their properties.

Sediment samples, the first ever taken since Brio was declared a Superfund site in 1984, showed traces of arsenic, chromium, copper, lead and vinyl chloride all along the creek, according to results.

Levels of each were significantly higher close to Brio, a former refinery, and specifically along Mud Gully, a thin stream where stories of toxic dumping date back 30 years.

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07358046
MAGISTRATE ORDERS FIRM TO COOPERATE IN CLEANUP OF MOTCO SUPERFUND SITE
Houston Post (HP) - FRIDAY, December 24, 1993
By: MARTY GRAHAM, OF THE HOUSTON POST STAFF
Edition: FINAL Section: Local Page: A15
Word Count: 462

TEXT:

In an uncommon ruling, a federal magistrate Wednesday ordered Monsanto Co. to cooperate with another of the six companies involved in the \$60 million cleanup of the MOTCO Superfund site in northwest Galveston County.

The order and sanctions designed to force cooperation, signed by Magistrate Mary Milloy, comes on the heels of a vicious battle between the companies over paying for cleaning up the tons of toxic waste and metals dumped on the 11-acre site contaminating the soil and groundwater.

The judge's orders require the lawyers to put their personal reputations - and, potentially, their law licenses - on the line before they set off any further volleys at each other.

Cleanup of the site has stalled, but not because of the battle between the companies named by the federal Environmental Protection Agency. In order to keep polluters on course with cleanups, the EPA devised an approach in which they name all the companies and require them all to fund the cleanup without blaming any specific company. Then the agency stands by and lets the companies fight over the bill among themselves.

And down-and-dirty fighting it seems to be. With millions of pages of documents that "can no longer be assessed in numbers of pages, and can now be measured only in feet and inches," according to the magistrate's order, "the pleadings are replete with contentious arguments, personal attacks and other actions that serve only to inflame and exacerbate an already volatile situation."

Milloy also found it "particularly disturbing" that Monsanto named 53 different employees as keepers of records, instead of the usual handful - and then refused to allow other lawyers to talk to them, according to the order.

Milloy ordered sanctions against Monsanto and ordered it to produce documents in an organized fashion and to allow its employees to give depositions. She also ordered lawyers for both sides to swear they tried to solve problems in good faith before they could complain about each other again.

Lawyers for the companies did not return calls, but Monsanto spokesman Loren Wassell said the company had not yet decided how to respond to the decision. He pointed out that the magistrate did not order harsher sanctions because there is no proof Monsanto set out to be difficult.

"This is one of the countless preliminary actions in a long, drawn out, complicated lawsuit," he said. "Monsanto is doing its best to comply."

The clean-up, of contaminated soil and groundwater from PCBs, mercury, lead, styrene tars, vinyl chloride and other contaminants - many of which are known to cause cancer - was ordered when the site was named in the original EPA superfund law in September 1983.

It stalled in 1991, over a battle between the companies and the clean-up contractor, who was incinerating PCBs.

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BRIO INITIATES MORE SAFEGUARDS IN WAKE OF AUG. 25 GAS RELEASE
Houston Post (HP) - WEDNESDAY, October 27, 1993
By: GAYNELL TERRELL, POST ENVIRONMENTAL REPORTER
Edition: FINAL Section: Local Page: A17
Word Count: 359

TEXT:

The Aug. 25 release of vinyl chloride gas at the Brio Superfund site - which went unreported to federal authorities for more than a month - has prompted a number of new safeguards there, an official for the companies responsible for cleaning up the site said Tuesday.

Brio Site Task Force spokesman Mark White said the companies still don't know why the contractor, Chemical Waste Management Inc., didn't forward the results of an air sample taken the day of the release. He noted the contractor did take some appropriate action, including covering the pit with plastic where the emissions were recorded.

Readings of 35 parts per million of vinyl chloride were recorded, well-above federal safety limits. Vinyl chloride is a colorless gas known to cause liver cancer and linked with lung cancer, nervous disorders and other illnesses.

The Environmental Protection Agency ordered a work stoppage at the suspected pit Sept. 30, two days after the contractor notified the task force. White said the contractor's safety officer was suspended pending an investigation and will not return to work.

Two new managers, an industrial hygienist and quality compliance officer, have been added.

'Basically, we have a problem with data handling and data management. Even if the results would have been zero, we should have had that well within hand before Sept. 28,' White said at a news conference at the site.

He also addressed problems with notifying the community when such incidents take place, saying the task force will let community leaders know what kind of data is available. About 120 families still live in adjoining Southbend subdivision, some near the Brio fenceline.

Meanwhile, the U.S. Public Health Service's Agency for Toxic Substances and Disease Registry met Tuesday at San Jacinto College to discuss improvements with the air-monitoring system and whether it is adequate to prevent exposure to the deadly gasses underneath the Brio site. ATSDR is conducting a thorough health study of residents.

At the Brio site, the contractor is continuing testing a new air-monitoring system designed to detect leaking gasses. It is not expected to be completed for 30 days. EPA air-monitoring experts are also on hand.

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07288063
120 FAMILIES IN SUBDIVISION TOLD TO VACATE SOUTHBEND ENDANGERED BY BRIO
TOXICS

Houston Post (HP) - FRIDAY, October 15, 1993

By: GAYNELL TERRELL, POST ENVIRONMENTAL REPORTER

Post reporter Douglas Freeland contributed to this report.

Edition: FINAL Section: Local Page: A21

Word Count: 822

MEMO:
HOUTEX

TEXT:

A federal health agency official has recommended that 120 families still living in Southbend subdivision be evacuated after high levels of vinyl chloride were released at the Brio Superfund site.

Many houses in the subdivision already are boarded up. Residents said homeowners will be selling out and leaving anyway, as the result of a massive lawsuit against the builders.

Toxicologist Tina M. Forrester of the Public Health Service's Agency for Toxic Substance and Disease Registry is also recommending that all cleanup activity at the site, once a hazardous industrial waste dump, be halted until the source and concentration of the emissions is determined.

She also called for permanent air-monitoring stations in Southbend to be read on a daily basis.

Forrester said vinyl chloride readings from on-site air monitors on Aug. 25 registered 34 parts per million (ppm) at the fenceline that divides the Superfund site from the subdivision.

That's well above federally approved safety standards for vinyl chloride, a colorless gas known to cause liver cancer and linked with lung cancer, nervous disorders and other illnesses.

Work was halted for one day and more sampling was performed. But the Environmental Protection Agency didn't receive the samples until a month later.

The EPA then issued an immediate stop-work order at the pit that was the source of the emissions. About 19 pits on the property are being excavated to some degree and capped.

'Of primary concern was the significant delay in notifying EPA Region VI of the incident and of the ambient air data. During this delay residents and workers may have been exposed to elevated levels of contaminants,' Forrester said.

She recommended families living near the site be removed, 'including temporary relocation or evacuation,' until contaminants are below levels of health concern.

J.J. Goldman, representing the Brio Site Task Force, said the contractor, Chemical Waste Management Inc., did not share the results of the Aug. 25 air tests until Sept. 28. The task force is made up of the compaBRIO, A-23A-2lnies involved in dumping toxic chemicals at the site.

'We first suspected an air emission the day the event occurred. We stopped work and used hand-held monitors but the readings were mixed. We satisfied ourselves by the end of the day that there wasn't a problem,'

she said.

Goldman said new monitoring equipment is being installed and the task force has ordered an internal review to determine why test results weren't passed on.

Since then, vinyl chloride readings of 180 parts per billion (ppb) have been registered at the site. The EPA set a limit of 34 ppb exposure for workers in a 24-hour period during cleanup.

Southbend residents had no complaints about pollution late Thursday. Neat, two-story brick houses in the sprawling neighborhood were boarded up. It looked like a ghost town except for neatly manicured lawns.

Residents said about two-thirds of the homeowners already have sold their houses and moved out. The rest have made deals and plan to move, they said.

Clarrissa Roddy and Barrington Notice, who have lived there about three years, said they bought their houses after real estate people and federal officials assured them the Superfund site would be cleaned up and they could sell their houses at fair market value.

"All they're doing is paying off our mortgage. We're not getting anything on equity or improvements. We're starting all over," said Roddy, who teaches asbestos removal courses for the EPA.

"We'll be boarding up, too," said Notice, a municipal wastewater control employee with a wife and two young boys. "Every week somebody is moving out."

Brio and the adjoining Dixie Oil Processing sites had been used by Monsanto Co. of St. Louis and others between 1957 and 1982 to dispose of hazardous industrial wastes.

Dozens of heavy metals and toxins contaminate 700,000 cubic yards of soil on the site, which was nominated to the federal Superfund list in 1984.

Hundreds of homeowners later charged the toxic chemicals caused adverse health effects, triggering a chain of lawsuits. As a result of environmental studies, the Clear Creek school board in March of last year closed nearby Weber Elementary School and moved 450 students to another school 10 miles away.

In December 1992, the U.S. Justice Department and the EPA reached a \$1 million settlement with the former owner of one of the chemical companies involved with the site.

Former Friendswood Mayor Ralph Lowe of Lowe Chemical Co. agreed to pay the government \$400,000 and turn over the deeds to 30 acres near Brio valued at \$600,000.

In June 1992, the developers who built homes next to the Superfund site agreed to pay \$128 million to some residents and assume their mortgages. Monsanto and others also settled, giving residents a total of \$207 million.

The money went into annuities for subdivision children. In settling, companies maintained no admission of guilt or liability.

CAPTION:
COLOR MAP The Houston Post
SOUTHBEND

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CLEANING UP THE AIR - A MATTER OF HUMAN SURVIVAL
Houston Post (HP) - SUNDAY December 6, 1992
By: MARY LENZ, POST AUSTIN BUREAU
Edition: FINAL Section: Texas Page: A33
Word Count: 764

MEMO:
CLEAN AIR ACT: WHAT IT MEANS

PART I

TEXT:
AUSTIN - The young men and women died suddenly - victims of murder, drive-by shootings or car crashes.

But for a Los Angeles pathologist, the horrifying lesson from their autopsies is not the plague of urban violence. It's the level of lung deterioration he found in Californians under 26 years of age.

"Ozone at the level that we experience in Los Angeles is accelerating the rate of the decline of the lung. We have an inordinate depletion of lung reserve structurally and functionally," said pathologist Russell Sherwin.

Dr. David McKee of the Environmental Protection Agency puts it more simply.

"We don't want to create a generation of respiratory cripples," he said. "The reason we are cleaning up the air is so that we can protect the future for ourselves and for our children."

In Houston/Galveston, Beaumont/Port Arthur, Dallas/Fort Worth and El Paso, the 1990 amendments to the Clean Air Act could mean drastic changes, from restrictions on driving to limits on the expansion of industry.

Medical professionals, environmentalists and the American Lung Association say the issue is not economic development vs. the aesthetic value of pristine air. Rather, it's basic human survival.

The American Lung Association estimates half the U.S. population lives in areas that do not meet today's federal air quality standards, and more than 100 million Americans are exposed to dangerous levels of ozone.

The EPA estimates as many as 3,000 cancer deaths a year could be linked to exposure to the billions of pounds of toxic air pollutants emitted in the U.S. annually.

In contrast, Kinnan Golemon of the Texas Chemical Council said the charges are self-serving.

"The American Lung Association and others make a lot of money pretending we're in a crisis situation, but we're not," Golemon said. "If we are really interested in human health, we are going to focus more on consumption of alcohol, on tobacco use and drug use."

Sherwin, who teaches at the University of Southern California, studied 150 corpses of people ages 14 to 25. He said the autopsies revealed lesions, or damage, in three out of four youths and "a surprising incidence of severe lung disease in one out of four."

People to whom intense exercise and outdoor sports are not important can

adjust to diminished lung capacity as long as all goes well. But while patients with healthy lungs can fight everything from heart disease to flu, Sherwin said people with lost lung reserve are not going to survive.

"You don't want to run out of lung," Sherwin said. "You don't want to be susceptible to disease when it's avoidable."

The Texas Air Control Board's Beverly Hartsock said the United States has been cutting back successfully on sulfur dioxide, carbon monoxide and particulate matter in the air. But ozone, the photochemical soup created when sunlight reacts with car exhaust, is a different story.

Short-term effects of ozone exposure include coughing, chest pains, eye irritation and burning sensations in the nose and throat. Experts compare long-term exposure to repeated internal sunburns, making the lungs stiff and leathery.

McKee, an EPA ozone expert in Durham, N.C., said there is abundant evidence to show that "as people are exposed to ozone at higher and higher concentrations, the ability to breathe air in and out decreases."

"Children are at higher risk because they tend to exercise outdoors more in the summertime," McKee said. He said that makes them more susceptible to lung infections, asthma attacks and allergies.

The Centers for Disease Control recently reported a nearly 50 percent increase in asthma-related deaths during the 1980s. Studies also show the incidence of asthma increasing among children.

Jennifer Miller of the National Allergy and Asthma Network in Fairfax, Va., said there is a clear link between asthma and pollution.

"All the studies that we have seen indicate there is a rise in asthma due to environmental factors," she said.

HEALTH EFFECTS OF AIR POLLUTANTS

Air pollution affects our lungs and eyes, and airborne toxic substances have been linked to cancer, birth defects and other serious problems.

Ozone

Causes difficult breathing, reduced lung function, eye irritation, nasal congestion, reduced resistance to infection

Lead

Retardation and brain damage, especially in children.

Nitrogen Dioxide

Respiratory illness and lung damage.

Vinyl Chloride

Lung and liver cancer.

Benzene

Leukemia.

Beryllium

Lung disease, liver, spleen, kidneys and lymph glands.

Mercury

Affects several areas of the brain, kidneys and bowels

Sulphur Dioxide

Respiratory tract problems, permanent damage to lung tissue.

Source: The Green Encyclopedia, Prentice Hall, 1992

CAPTION:

CHART The Houston Post

HEALTH EFFECTS OF AIR POLLUTANTS

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05610035
HALF OF '88 POLLUTANTS RELEASED IN AIR TEXAS, LOUISIANA ACCOUNT FOR FOURTH
OF POLLUTION TOTALS
HOUSTON POST (HP) - FRIDAY April 20, 1990
By: ASSOCIATED PRESS
Edition: FINAL Section: National Page: A22
Word Count: 428

MEMO:
YOUR HEALTH / MEDICINE

TEXT:
WASHINGTON - The nation's factories released 4.6 billion pounds of toxic chemicals, including scores of carcinogens, in 1988, the Environmental Protection Agency reported Thursday. More than half of the pollutants went into the air.

Chemical and allied industries accounted for about half of the total releases. Texas and Louisiana - two states with a concentration of petrochemical plants - accounted for more than one-fourth of the pollution totals.

The pollution, emitted from 19,762 industrial plants nationwide, was 9 percent less than a year earlier, but the EPA said the decline may be a result of better record keeping.

EPA officials cautioned that they are unable from the raw figures, the latest available, to assess the health risks to individuals. The data do not take into account levels of toxicity, release concentrations and actual exposure.

Nevertheless, federal officials have been surprised at the high volume of releases of toxic chemicals in both 1987, when 5 billion pounds of pollution was reported, and 1988. The reporting requirement covers 332 toxic chemicals.

"The figures are absolutely shocking," declared Rep. Gerry Sikorski, D-Minn., who provided additional details about the releases.

Among the chemicals routinely emitted from industrial sources were 77 carcinogens. The most widely released cancer-causing chemical - 115 million pounds - was dichloromethane, a chemical often used as an industrial solvent and paint stripper.

Industry released a total of 281 million pounds of carcinogens, including chemicals such as arsenic, benzene and vinyl chloride.

"We've got to bring these pollution numbers down," EPA Administrator William Reilly said as he released the latest data.

Clean-air legislation that already has passed the Senate and is being considered in the House would impose stringent controls on toxic industrial chemicals and require companies to use the best available technology to curb releases.

Under current law, the EPA is required to deal with each chemical separately. In more than a decade, it has placed controls on only eight of the hundreds of toxic chemicals in use. Many of the chemicals, however, are subject to local and state regulation.

The releases reported by industry, however, are legal and within federal standards, officials said.

AP00056238

The toxic pollution figures reflect data provided the EPA by 19,762 industrial plants nationwide. It is the second year such reports have been provided under a new citizen right-to-know law.

The states with the largest volume of toxic chemical releases overall were Louisiana, 716 million pounds; Texas, 596 million pounds; Ohio, 229 million pounds; Florida, 226 million pounds; Indiana, 213 million pounds, and Tennessee, 203 million pounds, according to the EPA.

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05563241
INDUSTRY GROUP RIPS NEWSPAPER FOR ACCOUNT ON STATE OF AQUIFER
HOUSTON POST (HP) - SUNDAY March 4, 1990
By: HAROLD SCARLETT, POST ENVIRONMENT REPORTER
Edition: FINAL Section: Local Page: A33
Word Count: 501

TEXT:

A group of industries has accused a community newspaper of printing inaccurate information and "needlessly frightening" residents and a school near the Brio waste site with a report about toxic vinyl chloride in an aquifer.

The Brio Site Task Force of industries said the report in the South Belt Leader indicated the contamination was in the 400-foot-deep Chiquot aquifer, used for drinking water by the Southbend subdivision and other developments.

Actually, the task force said, the vinyl chloride contamination is in a 50-foot-deep sand, known as the "lower aquifer" of two shallow water formations.

The weekly newspaper, in a story published Thursday, quoted a report by Joel Hirschhorn, a Superfund site specialist with the congressional Office of Technology Assessment. His report summarizing the Brio problems was released by U.S. Rep. Jack Brooks.

Hirschhorn's report said the Environmental Protection Agency apparently was not told by the industry task force, headed by the Monsanto Co., that one of its tests showed 261 parts per billion of vinyl chloride in the "lower aquifer." The drinking water standard for vinyl chloride is 2 ppb.

Because of this, Hirschhorn said, the EPA underestimated the risk from drinking water in the lower aquifer at 1 in 10,000 when it should have been 1 in 1,000.

Marie Flickinger, editor of the South Belt Leader, emphatically denied trying to mislead anyone and said the Leader's story never identified the contaminated aquifer as the Chiquot.

She accused the industry task force of misleading the EPA by failing to inform it of the test showing vinyl chloride in the aquifer.

Vinyl chloride, used in manufacturing a wide range of plastics, is known to cause a rare liver cancer in workers who have had a longtime exposure.

The Brio Task Force said the story also had needlessly alarmed Weber Elementary School, which is in the Southbend subdivision adjoining the Brio site.

The Leader story at one point said: "The lower aquifer is an acknowledged source of drinking water for the Southbend subdivision including the water supply at Weber Elementary School."

Hirschhorn's report at one point described the lower aquifer as "a potential source of drinking water in the area." The aquifer is not now used for drinking water.

Contacted by telephone in Washington, Hirschhorn confirmed he was using "lower aquifer" to mean the 50-foot water sand, and not the 400-foot-deep Chiquot, widely tapped for drinking water in the Houston area.

The industry task force said a 250-foot-thick layer of dense clay separates the two aquifers. It said the Southbend well also is more than 2,000 feet upslope from the nearest Brio waste pit.

Hirschhorn said the task force report on which the EPA based its record of decision said "they had not detected vinyl chloride in the 50-foot aquifer when in fact they had detected it a number of times."

"The problem for the community now," he said, "is there's not much credibility in the data they've seen the past several years."

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05506586
FAMILY LEAVES TOXIC WASTE SITE BEHIND, BUT HEALTH FEARS LINGER EX-RESIDENTS
VOW TO CONTINUE BATTLE
HOUSTON POST (HP) - TUESDAY February 13, 1990
By: BILL HENSEL JR., OF THE HOUSTON POST STAFF
Edition: FINAL Section: LOCAL Page: A15
Word Count: 456

MEMO:
HOUTEX

TEXT:
Fearing for their lives and the lives of their two children, Herb Bateman and his wife abandoned their home in the Southbend subdivision last August.

Bateman, 44, said he and his wife, Kay, made the decision to leave the home they bought in 1974 and move to Friendswood because they felt that by living near the Brio toxic waste site they were "gambling" - and the life-and-death stakes were simply too high.

The Batemans' previous home sits boarded-up in the shadow of the toxic waste site, which is being cleaned up under the supervision of the Environmental Protection Agency.

"We are still living with the weight - not knowing if we will get cancer," said Bateman, who works in a mental health clinic. "How much of Brio did we take with us when we moved?"

Bateman was one of hundreds of homeowners who testified in the four-month trial in state District Judge Alice Trevathan's court that ended Monday. He said while there have been incidents of cancer reported by subdivision residents, they have not been able to link them to the site so they were not allowed as evidence in the trial.

The jury found that Monsanto Co., the chief user of the Brio site when it was open, was not responsible for any damages to residents, who alleged they are suffering from poor health because of the site.

Bateman showed little emotion after Monday's verdict was handed down, but indicated residents will not back down.

"To me, it (the jury verdict) says they don't have to be responsible for the chemicals," he said of Monsanto. "The fight's not over."

The main goal of residents and former residents is to find out the truth and then get the site cleaned up, he said.

Bateman said the more information that comes out about potential health hazards because of exposure to chemicals at the Brio site, the more scared he becomes. He said experts testified during the trial that it could take more than 15 years for any sign of cancer to appear.

The waste site off Dixie Farm Road, last owned by Brio Refining Inc., was used as a dump for vinyl chloride, fluorine, ethyl benzene and styrene from 1970 until December 1982 when Brio went out of business.

Bateman, one of the first residents in the subdivision, noted there are questions being raised about an unusually high rate of birth defects reported by families in the subdivision.

He also questioned the believability of much of the information residents are getting from the EPA, noting that most of that information

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comes from Monsanto and the other 34 companies involved in the cleanup.

CAPTION:

COLOR PHOTO Dan Hardy / The Houston Post

Herb and Kay Bateman and their two children, Adam and Elyssa, now live in Friendswood.

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05039382
NEW PVC WATER PIPE REPLACES ASBESTOS HERE
HOUSTON POST (HP) - SUNDAY August 27, 1989
By: HAROLD SCARLETT, POST ENVIRONMENT REPORTER
Edition: FINAL Section: LOCAL Page: A33
Word Count: 750

TEXT:

Asbestos-cement water pipe - suspected but never proven to be a potential health hazard - was used in years past for about 90 percent of the new and replacement lines in Houston's drinking water system.

Now, however, plastic PVC pipe has almost completely displaced the asbestos-cement pipe as the overwhelming favorite in Houston.

The PVC (for polyvinyl chloride) pipe eliminates any possible hazard from asbestos fibers escaping from the cement pipes into drinking water.

Officials say the plastic pipe also is much more flexible than the asbestos pipe and, in Houston's expanding and contracting soil, will be less likely to break and turn streets and homeowners' yards into small lakes.

A city public works spokesman, Jack Gillum, estimated about 90 to 95 percent of the new and replacement water pipe now being installed in Houston is PVC.

He explained that the big shift began after the city, in July 1988, revised its bidding specifications to limit the length of asbestos pipe sections to 6 feet 6 inches. The change also called for thicker asbestos-cement pipe.

"We were finding that during a drought, the longer lengths of AC (asbestos-cement) pipe were more prone to breakage," Gillum said. "Having to use the short lengths of AC pipe made it so labor-intensive that most contractors have switched to plastic pipe."

One contractor who happily made the switch is Richard Lewis, owner of RWL Construction Inc.

"Generally, AC pipe is a dinosaur compared to plastic, especially down here," Lewis said. "AC pipe is not forgiving when the ground goes to shifting. It has no plasticity and breaks very readily.

"PVC pipe, on the other hand, you can drive a truck over it and it won't hurt it."

He said the PVC pipe is "ridiculously easy" to install. Even if a contractor does a poor job and leaves a void beneath a section of pipe, he said, the PVC pipe will weather the poor workmanship in situations where the AC pipe would break.

Lewis predicted the use of PVC pipe will reduce the number of breaks in Houston's water lines by at least 50 percent and will last "a long, long time."

The city's Gillum said the Public Works Department is conducting a study of comparative breakage, with repair crews keeping records of breaks and the type of soil, weather conditions, depth and type of pipe.

While the study is still incomplete, Gillum said, the 1988 results seem to confirm the plastic pipe is less break-prone.

In earlier years, AC pipe became the favorite in Houston because the area's unstable soil was also corrosive and ate through metal pipe.

Some scientists had concerns that the tiny asbestos fibers could leach from the pipe into drinking water and perhaps cause stomach cancer. But studies showed no abnormal illness rates in cities that had long used the AC pipe.

Furthermore, although asbestos inhaled into the lungs is a proven killer, there is no evidence that asbestos swallowed in water is any hazard at all.

City water officials also noted that Houston does not have the "aggressive" or corrosive water, found in some cities, that leaches out high counts of asbestos fibers.

Contractor Lewis, however, said he has personal concerns about drinking water transported through asbestos-fortified pipe, even though the AC pipe industry insists the pipe is harmless.

"What happens when the pipe breaks and shatters?" he asked. "Where do those fibers go?"

Bruce Elms, a standards engineer with the American Water Works Association headquarters in Denver, said plastic pipe is capturing an increasing share of the market nationally. But asbestos-cement pipe plants are reported still "going flat out" on production, he said.

If the Environmental Protection Agency sticks with a plan announced last month for a general phase-out of asbestos products, AC pipe will soon be history. The EPA ruling calls for an end to producing or importing AC pipe by the end of 1996, with commercial distribution prohibited after 1997.

As with AC pipe, Elms said some questions have arisen over the health implications of using plastic pipe. Some types of plastic emit potentially harmful vapors, and one constituent of PVC pipe is vinyl chloride, which has caused a rare type of liver cancer in long-exposed production workers.

He said the PVC pipe, however, has easily passed the tests of the EPA and the National Sanitation Foundation, which sets water pipe standards.

CAPTION:

PHOTO Post photo by Dan Hardy

Houston workmen dig up old-style concrete-asbestos water pipes.

3/7/13
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05028199
AIR POLLUTION DRAWS FINESFOR 5 FIRMS
HOUSTON POST (HP) - SATURDAY June 17, 1989
By: FROM STAFF REPORTS
Edition: FINAL Section: LOCAL Page: A22
Word Count: 222

TEXT:
Five Houston area companies were fined a total of \$117,500 Friday by the Texas Air Control Board for air pollution violations.

The Union Carbide Corp. chemical plant in Texas City drew the heaviest penalty, \$97,000, for failing to monitor closed vent systems, storing volatile hydrocarbons in tanks without leak controls and modifying three tanks without a construction permit or exemption.

Board members, meeting in Victoria, also approved an \$11,000 penalty on Industrial Specialists Inc., a Brazoria County refinery and chemical plant at Old Ocean, for renovating asbestos insulation without advance notice to the air board. The company was further cited for causing visible asbestos emissions and failing to dispose of all asbestos material at an approved waste site.

The Occidental Chemical Corp. plant in Deer Park drew a \$5,000 penalty for a non-emergency discharge of vinyl chloride, a cancer agent.

Tenneco Methanol Co. at 4403 La Porte Road was fined \$1,500 for excessive leakage of volatile hydrocarbons, failure to equip valves with secondary seals, failure to monitor for fugitive emissions and failure to keep a monitoring log.

The Amoco refinery in Texas City drew a \$3,000 penalty for equipment leaks of volatile chemicals and failing to monitor liquid pumps monthly as required by a special permit condition.

All the companies agreed to the fines in enforcement conferences before the board meeting.

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05008822
NEIGHBORS BLAST RECYCLING PLANT AIR, WATER POLLUTION ALLEGED
HOUSTON POST (HP) - MONDAY February 20, 1989
By: Harold Scarlett, POST ENVIRONMENT REPORTER
Edition: FINAL Section: LOCAL Page: A3
Word Count: 1,125

TEXT:

An energy recycling plant in northeast Houston might rate an environmental merit badge - if it weren't in trouble with neighboring residents and enforcement agencies over both air and water pollution.

The GSF Energies Inc. plant at 9416 Ley Road siphons clean-burning methane, or natural gas, from the buried, decaying wastes in the big Browning-Ferris Industries landfill on McCarty Road.

This methane and a range of other associated hydrocarbon vapors, as GSF has pointed out, would otherwise seep out of the landfill into Houston's air and aggravate the city's already severe ozone pollution.

Unfortunately, nearby residents complain that the gas recovery plant also produced a sickening chemical odor after it started operating in November 1986. The residents say they already had been living for years with an occasional overripe aroma from the BFI landfill.

"They told us that when they put the gas plant in, we wouldn't have near the odor we'd been having," said Foy Henson of the 9100 block of North Green River Drive. "And they were right. Now it's worse."

A GSF spokeswoman, Kathleen Flanagan, conceded the \$10 million gas plant has had some problems. But she said the company has spent about \$310,000 to correct the problems and is doing its best to avoid any future trouble.

"I think overall we have decreased the odors from the landfill," Flanagan said. "I think the problem has come from concentrating all those odors in our processing plant."

Bonnie Martin, president of the East Houston Civic Club, said area residents are also upset because Browning-Ferris has applied for a permit to build a medical waste incinerator on the landfill next to the GSF plant.

A BFI spokesman, Pete Block, confirmed the company applied on Dec. 31 for an incinerator permit, and the request is now being reviewed by the Texas Department of Health.

Flanagan said the GSF plant uses around 50 wells to extract about 8 million cubic feet daily of methane, carbon dioxide and other gases, which it refines into 4 million cubic feet a day of pipeline-quality natural gas. The gas, enough to serve thousands of homes, is sold to Houston Pipe Line Co.

Once a Getty Oil subsidiary, GSF is now owned by Air Products and Chemicals Inc. and is based in Long Beach, Calif. It operates gas recovery plants at nine municipal garbage landfills from New York to California, Flanagan said. GSF pays BFI a royalty for the gas from the Houston landfill.

City and state enforcement officials say GSF's initial problem was the plant's emission of smelly gases directly into the atmosphere. More recently, they said, gas condensates discharged in the plant's wastewater have been smelling up the city sewage system in the neighborhood.

AP00056247

Residents said the chemical smells have been seeping out of manholes and from a sewage pump station beside a drainage ditch in the 9100 block of North Green River.

"When the air control people first came out, they thought there was something dead in the ditch," Henson said.

Sisters Doris Martin and Vivian Long, who are next-door neighbors in the 9400 block of Palo Blanco, said the gas plant's emissions cause dizziness, nausea, headaches, skin rashes and breathing problems.

Homes are scattered in the heavily wooded area, but the nearest ones are within a block or so of the gas plant. Martin, Long and Henson all say they have lived in the same homes for the past 40 to 50 years.

Citizens' complaints about the gas plant's odor resulted in late 1987 in two violation notices from city air investigators for nuisance odors.

The company said the odorous gases were sulfides escaping from a vent used to dispose of carbon dioxide recovered along with the methane. GSF officials said an "iron sponge," a vessel filled with wood chips to filter sulfur out of the waste stream, did not work properly because of a load of bad wood chips.

The city air bureau referred the case to the Texas Air Control Board. At one point, the state agency's staff proposed a \$9,000 administrative fine against GSI.

However, the penalty was later dropped in an agreement under which GSI was allowed to increase, from 4.6 to 12.62 pounds an hour, the volume of volatile organic compounds it could emit from the carbon dioxide vent.

While this might sound like an air board cave-in to a polluter, enforcement specialist Vick Newsom said the key to the no-fine decision was that GSF had satisfied the air board it was using the required "best available control technology."

Flanagan said the gas plant resolved the problem by getting a bigger iron sponge and loading it with better wood chips.

An analysis of the emissions showed small amounts of a dozen or so hydrocarbon compounds, including such cancer agents as benzene and vinyl chloride. But an air board health specialist, Marsha Willhite, said the limited data available did not permit a reliable assessment of any possible health risk.

Last summer, GSF got in hot water with the city Public Works Department over excessive oil and grease in the gas condensate it was flushing into the city's sanitary sewer system.

Joe Johnson, a public works administrative aide, said an enforcement hearing last July resulted in an order under which GSF agreed to install corrective equipment by last Dec. 31. GSF then had until March 1 to get the new equipment working properly.

Otherwise, Johnson said, GSF will be disconnected from the sewer system and must dispose of its waste elsewhere.

Flanagan said GSF has installed a carbon filtration system for the plant's wastewater and it appears to be working well. She said that because of city permit delays, however, GSF now has until the end of April to submit test results.

Johnson agreed the company is due some additional time, but he said the length of time is in dispute.

He said GSF had also paid for a barrel-sized carbon filter which the city attached to the sewage pump station on North Green River to give the neighborhood some temporary relief until the plant corrections are completed.

Johnson confirmed residents' reports that city sewage crews had objected to working on the pump station because of the foul chemical odors.

Residents said they recently got another big slug of odors - and loud noise - from a breakdown at the plant on a Sunday when it was unmanned. They said they couldn't locate anyone to correct the problem.

Flanagan acknowledged that a valve failed on one of the plant's two compressors and released raw landfill gas into the air.

CAPTION:

MAP Post map PHOTO Post photos by Mary Urech Roberts

The GSF energy plant at McCarty landfill site

Now the odor is worse, says Foy Henson, a longtime area resident.

3/7/15
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04550695
GREENPEACE WAGING WAR AGAINST MISSISSIPPI POLLUTERS GROUP FIGHTING
SKIRMISHES IN EFFORT TO CLEAN UP RIVER
HOUSTON POST (HP) - SUNDAY November 20, 1988
By: Nancy Herndon, CHRISTIAN SCIENCE MONITOR
Edition: BULLDOG Section: NATIONAL Page: A32
Word Count: 606

TEXT:

PLAQUEMINE, LA. - Beneath the churning waters of the Mississippi, divers from the international environmental organization Greenpeace are attempting an act of industrial sabotage. Their aim is to plug the discharge pipe here through which the chemical company Georgia Gulf Corp., drains toxic waste into the river.

A few feet away on shore, the acrid smell of chemicals drifts by sheriff's deputies waiting patiently to make arrests.

It is another skirmish in the six-month war of words and deeds that Greenpeace is waging against polluters of the Mississippi. The old brown river is far cleaner today than at its nadir in the early 1970s. But daily dumping of metals and toxic chemicals - including known and probable carcinogens - continues almost the entire length of the river's 2,348 miles.

At its source in Minnesota, the river is a small stream of clean water. But from the manufacturing plants of Minneapolis-St. Paul to the petrochemical plants of Louisiana, the bank is lined with drainage pipes. About 590 industrial plants legally discharge waste directly into the river, according to Greenpeace reports. More than 600 city waste-water treatment plants discharge treated - and sometimes untreated - sewage.

By the time the river reaches Louisiana, it is a toxic sewer, says Greenpeace's Mississippi project coordinator, John Liebman.

In addition to educational activities, Greenpeace has become known for protest acts like the Nov. 3 attempt to plug the Georgia Gulf pipe. That attempt was only partly successful, and no arrests were made.

Georgia Gulf was singled out for the Nov. 3 hit because of what Greenpeace called its unusually high rate of accidental spills. Last April, the company reportedly spilled 9,000 pounds of ethylene dichloride and 51,000 pounds of vinyl chloride into the Mississippi. Both chemicals are probable carcinogens. In 1981, the company (then Georgia Pacific) dumped 20 tons of phenols into the river, contaminating New Orleans drinking water without notifying authorities for days.

These discharges were accidental. But most of the toxic chemicals in the river are released legally. The United States Environmental Protection Agency issues permits to industrial plants authorizing discharges up to a specified level, even for known cancer-causing agents.

Meanwhile, some 1.5 million people in southern Louisiana get their drinking water from the Mississippi. "The water companies are drawing water out of the river and treating it, and they wouldn't be allowed to do that if it were untreatable," says Richard Kleiner, a spokesman for the Louisiana Chemical Association in Baton Rouge.

EPA officials agree. "Our latest information is that those facilities down there are in compliance with the Safe Drinking Water Act," says Kenton Kirkpatrick, deputy director of the water division of EPA's Region 6, which

covers Louisiana, Texas, Oklahoma, Arkansas, and New Mexico. "Human health is not endangered."

Fish and wildlife have not fared so well. "There have from time to time been certain levels of chemicals found in fish and wildlife that exceeded the federal Food and Drug Administration standards," Kirkpatrick says.

Eighty chemical plants are concentrated at the tip of the Mississippi, an area known as the "chemical corridor."

Thirty thousand people work in those plants, in a state that has had one of the highest unemployment rates in the nation.

But incidences of certain types of cancer are among the highest in the nation here, and there seems to be a consensus among industry, regulatory agencies, and citizens that the toxic dumping will eventually have to be further limited.

"Over the next three years we will be putting in additional regulations controlling toxic discharges. That's the highest priority of our water permit programs," says Jack Ferguson, chief of the permits branch of EPA's Region 6.

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04512255
BFI WASTE VIOLATIONS CHARGED IN LAWSUIT
HOUSTON POST (HP) - FRIDAY March 18, 1988
Edition: FINAL Section: LOCAL Page: 6E
Word Count: 249

TEXT:

Two subsidiaries of Browning-Ferris Industries of Houston were named Thursday in a federal-state suit that accused the firms of numerous violations at a hazardous waste landfill in Lake Charles, La.

The suit asked a federal judge in Lake Charles to impose penalties of up to \$25,000 a day per violation for hazardous waste violations dating back to 1983.

Filed jointly by the Environmental Protection Agency and the state of Louisiana, the complaint named Browning-Ferris Industries, Chemical Services Inc. (BFI-CSI) as one BFI subsidiary and CECOS International Inc.

The Lake Charles facility was purchased by BFI-CSI in 1972 and has been operated since 1983 by CECOS, which now manages all of BFI's hazardous waste operations, the EPA said.

Pete Block, a spokesman at BFI's Houston headquarters, said CECOS has been working with the state of Louisiana on corrective and remedial actions at the Lake Charles landfill "literally for years."

"There was a two-year gap between the EPA inspection and the filing of this suit," Block said, "and as far as CECOS is concerned, the site today is in full compliance with state and federal regulations."

Sampling has shown that shallow groundwater beneath the landfill is contaminated with a number of chemicals known or suspected of causing cancer and birth defects, the EPA said. It said the contaminants include chloroform, vinyl chloride, trichloroethylene, benzene, chromium and carbon tetrachloride.

The suit asked that the BFI subsidiaries be compelled to clean up the groundwater at the site.

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04504382
2 ARGUE HAZARDS OF TOXIC CHEMICALS
HOUSTON POST (HP) - FRIDAY January 29, 1988
By: Harold Scarlett, POST ENVIRONMENT WRITER
Edition: FINAL Section: LOCAL Page: 5A
Word Count: 413

TEXT:

Experience is showing the health hazard from long-term, low-level exposure to a number of toxic chemicals has been grossly overrated, a noted environmental health specialist said Thursday.

Dr. Vernon Houk, environmental health chief for the federal Centers for Disease Control in Atlanta, said attention would be better focused on protecting people from high concentrations of toxics, as in chemical spills.

Houk, speaking at a hazardous and solid waste conference, said many current risk assessments - predictions of the expected numbers of cancer cases from a certain chemical exposure - are proving to be highly inaccurate.

"I believe low-dose exposure to toxic substances for most populations is of very little consequence," Houk said.

However, consumer advocate Ralph Nader, in a later speech to the same meeting, castigated the Environmental Protection Agency for a reported move to revise and relax its risk assessments.

The EPA risk formulas are used to set permissible discharges of pollutants into the air and water, and a change in the risk figures could be used to permit higher releases of pollutants.

Nader said the revision was just one sign of "a further marked deterioration" in the EPA's performance as the Reagan administration enters its final year.

He charged the EPA has also weakened its pesticide controls that protect farm workers, wavered on stricter lead controls and falsely assured the nation that its drinking water is safe.

Nader and Houk spoke at a day-long symposium held at the Westin Galleria and sponsored by the Texas Water Pollution Control Association and the Texas Hazardous Waste Management Society.

Houk said all risk assessments are based on certain assumptions and that the results can vary tremendously.

The environmental specialist said he analyzed one recent risk assessment with seven basic assumptions. Differing treatment of the assumptions, Houk said, could produce results varying by 960 orders of magnitude. An order of magnitude is 10 times an initial number or value.

Houk said one risk assessment on ethylene dibromide predicted cancers in 20 percent of people exposed to modest doses of the chemical fumigant for extended periods. No such cluster of cancers has been found, he said.

He said other risk assessments predicting increased cancer cases from chronic exposures to vinyl chloride, perchloroethylene, trichloroethylene and PCBs simply haven't appeared in real life.

On the other hand, Houk said, experience has proved some substances - lead for one - are even more hazardous than earlier assessments predicted.

Toxicologists have repeatedly reduced the exposure levels considered safe for lead.

**Articles from
The Wall Street Journal, since 1984**

AP00056255

Borden Chemicals
Accused by U.S.
In Pollution Suit

By Josh Chetwynd

The Wall Street Journal, 10/28/94, p. A5

WASHINGTON -- The federal government filed a civil suit charging Borden Chemicals & Plastics Operating L.P. and two affiliates with a variety of environmental violations at a Louisiana plant.

The suit said that Borden Chemicals, Geismar, La., its management affiliate and its holding company must pay penalties for shipping 300,000 pounds of waste to a chemical facility in South Africa without notifying the Environmental Protection Agency, as required by law.

Borden Chemicals, which manufactures chemicals and plastics including vinyl chloride, ammonia and polyvinyl chloride at its Geismar site, also would be forced to pay the cost of cleaning groundwater contamination. The EPA said that it has determined that vinyl chloride, a carcinogen, and ethylene dichloride, a suspected carcinogen, were released by Borden Chemicals into the groundwater. The suit also charged the company with operating a hazardous-waste incinerator without a permit.

The suit could cost Borden Chemicals \$25,000 per day for each violation, which the Justice Department believes could result in a "multimillion dollar" penalty. The department filed the suit in federal district court in Baton Rouge, La., on behalf of the EPA.

A statement issued by Borden Chemicals said the suit "constitutes a retroactive change in regulations that violates basic concepts of fairness and due process."

Wayne Leonard, the company's vice president and general manager, said in an interview that the Louisiana Department of Environmental Quality ruled in 1993 that the hazardous waste it had been shipping wasn't a pollutant. When the department later reversed that ruling, Borden stopped the shipping.

Mr. Leonard also contended that his company had spent more than \$20 million on cleanup efforts since it became aware of groundwater contamination in the early 1980s. He also said the allegedly illegal "incinerator" is actually a processing unit for recycling and is being misclassified by the government.

Borden Chemicals has been aware of the government's complaints for some time. In May, the company filed a suit in federal court asking for a decision on the government's claims. "We just want an unbiased, unpolitical decision," Mr. Leonard said. A Justice Department official said the May suit was filed "prematurely."

Borden Chemicals' management company is Borden Chemicals & Plastics Inc., based in Columbus, Ohio. Its holding company is Borden Chemicals & Plastics L.P., also based in Geismar.

Technology & Medicine
EPA Issues Rule
To Cut Emissions
At Chemical Plants

By Timothy Noah

The Wall Street Journal, 3/2/94, p. B10

WASHINGTON -- The Environmental Protection Agency issued a long-awaited regulation that it said will require chemical plants to reduce emissions of airborne toxic wastes 88%.

The rule, which Administrator Carol Browner termed "one of the most sweeping air pollution rules EPA has ever issued," is expected to affect about 370 chemical plants, most of them in Texas, Louisiana and New Jersey. Proposed in the waning days of the Bush administration, it will reduce allowable emissions for 112 of the 189 airborne toxic chemicals -- including benzene, chloroform and vinyl chloride -- that the EPA must regulate under the 1990 Clean Air Act.

The EPA said the rule will require chemical companies to spend an estimated \$450 million for new equipment and will raise their operating costs \$230 million annually. The Chemical Manufacturers' Association put the capital costs at \$1 billion. The EPA said the rule could raise the price of individual chemicals as much as 3%.

The new requirements will be phased in over three years for existing plants. New plants must comply immediately.

The chemical industry, which has known the rule was coming since 1990, is thought to have done much to achieve the required reductions already. Joe Mayhew, assistant vice president for environment and policy analysis at the Chemical Manufacturers' Association, estimates that toxic emissions already have been reduced about 35% below 1990 levels.

The rule will allow some "emissions averaging" by chemical plants -- meaning that a given pollution source, such as a smokestack, need not reduce air emissions if offsetting reductions are achieved elsewhere in the plant. But unlike the Bush administration proposal, the final rule won't allow averaging among all pollution sources within a given plant. In a plant that has 1,000 pollution sources, for example, averaging will be limited to about 25 pollution sources. In addition, the new plan, unlike its predecessor, will allow individual states to block averaging.

Also yesterday, the EPA announced a final rule cutting annual emissions of nitrogen oxide, a key ingredient in acid rain, from 700 coal-fired electric utility plants. It also proposed rules aimed at reducing by 95% toxic air pollutants from the magnetic-tape manufacturing industry and at reducing by 99% emissions of ethylene oxide from commercial sterilization operations for medical and other equipment.

Separately, the Clinton administration proposed limiting exports of hazardous waste. Under the plan, which must be approved by Congress, the U.S. could continue to export hazardous wastes to Canada and Mexico. Such shipments now total an estimated 140,000

tons annually. The U.S. has bilateral agreements on such shipments with both countries. Shipments to other countries -- currently estimated at 5,000 tons annually, much of it discarded batteries -- would no longer be allowed.

Legal Swamp:
Superfund Site Spawns
A Spate of Litigation,
Though Not a Cleanup

Residents Cite Health Woes
And Oppose Incinerator
To Burn the Pollutants

Passing Around the Liability

By Timothy Aeppel

The Wall Street Journal, 2/9/94, p. A1

HOUSTON -- To Carol Womack, the only thing worse than the dangerous chemicals oozing underground down the street from her former home is how her neighbors reacted.

One family sued the developer of the subdivision, arguing they should have been warned about the chemicals -- but still bought another nearby house, which they later moved into, and sued again. Another couple said their house was unsafe, moved out, then rented it to another family. Still a third used settlement money to build a rambling addition.

"There've been so many lawsuits and so much craziness," says Mrs. Womack, a 39-year-old fourth-grade teacher who abandoned her home last July. "I don't think anyone has really focused on what it will take to clean it up."

Known as Brio, the dusty 58-acre patch adjacent to Mrs. Womack's old neighborhood doesn't look menacing. But the treeless expanse, ringed by a chain-link fence dotted with Day-Glo orange "Keep Out" signs, was once a fuel refinery and conceals 22 unlined, underground chemical pits. In 1984, the Environmental Protection Agency added it to its Superfund list. Buried here is a brew of volatile compounds, including benzene and vinyl chloride -- both known human carcinogens.

Getting listed under the 1980 Superfund law was supposed to indicate a cleanup was on its way. But what came soon after the EPA were hordes of lawyers.

Thousands of residents have sued the developers and builders of the subdivision, known as Southbend and situated about 20 miles south of downtown Houston. They also have sued the chemical companies, especially Monsanto Co. of St. Louis, being held responsible for the waste site. Teachers and pupils at a local school sued, residents of a neighborhood half a mile away sued, even Little Leaguers who played nearby sued; most of these suits, filed in state district court in Harris County, are still pending. The companies and their insurers have paid out hundreds of millions of dollars in settlements -- but the cleanup has yet to begin.

With Superfund up for renewal in Washington, cases such as Brio help explain why the program is lambasted by both business and environmentalists. "Just about everything that can go wrong at a Superfund site went wrong at Brio," says Linda Greer, a senior

scientist at the Natural Resources Defense Council. The Clinton administration last week proposed sweeping changes to the Superfund law that EPA Administrator Carol Browner said would make cleanups "faster, fairer and more efficient."

A major complaint about the law is its failure to address quickly many toxic dumps; over the past 14 years only about 200 have been cleaned up, while the list has swollen to more than 1,250. Some estimate that these cleanups could take 50 years. The Clinton proposals include loosening standards for some cleanups, especially on land never again to be used for housing; incentives to reduce costly legal tussles among companies responsible for waste sites; and more community involvement in decision-making.

But streamlining Superfund won't do much to avoid situations such as Brio -- where many of the things that misfired have nothing to do with the law itself. The revisions, for example, won't stop litigious residents from seeking damages for possible health problems or stem the fears and uncertainties that arise when land next to one's home is tagged a toxic dump. Similarly, businesses responsible for the cleanups may be discouraged from getting into legal wrangles between themselves, but they can't be forbidden to.

In the case of Brio, local residents have also raised a storm about the cleanup itself. They contend that the agency has overlooked evidence of a wider range of contaminants at the site than it has acknowledged exists there. Residents want a much more complete cleanup than currently envisioned.

"All the lawsuits around Brio are not the fault of Superfund," says the Natural Resources Defense Council's Ms. Greer, "and they won't be eliminated under the new law."

Not that it was clear at first that Brio would become such a legal swamp. Back in 1984, most residents blandly accepted the EPA's assurances that living in Southbend wasn't dangerous and that a cleanup would soon be under way. Families continued moving in throughout the decade, while others built pools or put up siding.

"We had no reason to doubt the EPA -- after all, they were the ones coming to fix the problem," says Nancy Webber, a 38-year-old housewife who moved into Southbend in 1981. But then she started noticing health problems in her children. Her son had 18 upper-respiratory infections before he turned two and developed a speech impediment. Her daughter kept having massive nosebleeds.

By 1989, worried residents had conducted a door-to-door survey and said they found frightening numbers of birth defects, leukemia and other health problems. The EPA's position was that if there was such a pattern, Brio wasn't at fault.

The agency says it has yet to find a "pathway" showing how chemicals got into the subdivision. Other efforts to confirm a pattern of health problems have been dismissed by the EPA and the chemical companies as inconclusive. To resolve the question, the Agency for Toxic Substances and Disease Registry, a division of the U.S. Public Health Service, is conducting a health survey on every woman who ever gave birth there.

Mrs. Webber doesn't need any more proof. She eventually had her children tested and found abnormal levels of some chemicals in their blood. No one has ever explained how the chemicals might have come from Brio; its border was three blocks from where they lived. But

the Webbers decided to flee their house to a community 50 miles to the north, and Mrs. Webber says her children's problems have subsided. The family sued, "but we got very little money," Mrs. Webber says, "because when you look at my kids, you don't see the problems." As part of the out-of-court settlement, the Webbers had to agree not to disclose terms.

By the time the Webbers left in 1990, not only the residents were worried. Their mortgage company ignored them when they stopped sending payments on their abandoned home, and they soon learned the reason: The company had torn up the note. "They said, 'You own it; you don't need to call us anymore,'" Mrs. Webber recalls.

Worried about possible liability, mortgage holders simply gave some people their houses. Similarly, the Resolution Trust Corp., which ended up with some Southbend properties when it took over failed thrift institutions, rushed to unload them -- auctioning off one house for just \$39. In another move that startled residents, the U.S. Department of Housing and Urban Development stopped putting "For Sale" signs on houses it owned, fearing that such advertising might be viewed as endorsing the neighborhood.

As some residents were fleeing, other people moved into Southbend and became eligible to sue. One family that arrived in 1990 got \$50,000 for each of two children to cover the possibility they might develop health problems in the future. With the EPA contending it was safe to live there, latecomers could say they moved in without realizing the danger, even though sellers had begun requiring buyers to sign disclosure forms stating they knew that the house was near a Superfund site.

Some families ended up in a series of lawsuits. Maria Molina says she and her husband, Noe, sued the developer over deceptive trade after discovering that the house they bought in 1983, a year before the announcement about Brio, was within view of the Superfund site. They got an out-of-court settlement.

But they bought a second house in the neighborhood -- in 1987 according to real estate records. Mrs. Molina says they wanted to help bolster the area and have an investment to help pay for their three sons' educations. "We'd heard all about the scare," she says, "but the EPA was telling us it was OK, and we loved the neighborhood, especially the school." The Molinas moved into the second house -- and now are suing again, this time on behalf of the boys, while waiting for the developer to buy the house back. The children are fine, she says, "so far."

Another litigant is Lee Anne Herbert, a Southbend resident from 1982 to 1990, who says she had four extremely difficult pregnancies and her first child was stillborn. She blames the waste site, which was two doors away. The Herberts have already sued on behalf of themselves and their children and now are considering suing over the child that didn't survive. They already have collected money in several settlements. "At times it seems like I'm getting greedy," Ms. Herbert says, "but I don't care. After what we've suffered through, we deserve something."

While residents sued, the builder of the subdivision and the companies responsible for the waste site got into a legal snarl of their own. That happened even though the businesses responsible for the site agreed early on about how to pay the cleanup bill, which is

expected to run between \$60 million and \$80 million. In many Superfund cleanups, it is precisely this question that sparks the legal wrestling.

The fight at Brio, however, erupted over who should pay the settlements to the nearby residents. In the first wave of lawsuits in the mid-1980s, residents mainly contended that they were victims of deceptive trade because nobody had warned them about the waste site. These people got relatively small payouts.

But when homeowners started claiming health problems -- and the prospect of huge jury awards loomed -- the developer, Farm & Home Savings Association of Nevada, Mo., began looking around for someone to bear the cost. In 1989, a group of residents were suing Farm & Home and Monsanto, contending that they were getting sick from living in the neighborhood. After steadfastly denying there was any problem in that case, the developer and its insurer -- Crum & Forster Inc., a Basking Ridge, N.J., subsidiary of Xerox Corp. -- decided to settle with the residents and team up with them to sue Monsanto in the state district court.

Under this arrangement, known as a Mary Carter agreement in Texas, the insurer and developer were eligible to pocket half of whatever the residents won from Monsanto. But the jury found for Monsanto. And in a bitter twist, later suits relied on the record of this case, in which the developer and insurer appeared to acknowledge problems in Southbend.

"We took the position in this case that right next door to a hazardous-waste site is probably not the best place to build a subdivision," says Thomas Bistline, a Monsanto attorney. "But there was no proof anyone was injured."

The dispute is far from over. Monsanto won a \$71 million verdict in state court in Harrison County in 1992 against Crum & Forster, which also is one of the chemical company's own insurers. Monsanto claimed Crum & Forster acted in bad faith in going together with residents to try to collect money under a Mary Carter agreement. The case is on appeal. Monsanto is also wrangling with Crum & Forster over who should pay its share of other settlements with the residents.

Meanwhile, Southbend has become almost a suburban ghost town. All but about 100 of the 567 homes are boarded up, the community pool is filled with dirt, and the elementary school is closed. To stop the hailstorm of litigation, Southbend's developer and Crum & Forster are buying back the houses -- but the two sides are fighting over who should pay for that as well. The entire area probably will be bulldozed.

Driving along a rutted path inside the fence separating the waste site from Southbend, John Meyer, the EPA project manager, gazes at the bleak, empty houses and shakes his head. "We still don't believe there's any immediate health risk over there," he says, explaining that his agency's soil and water tests never found any contamination that would explain health problems. He concedes that Superfund seems to have failed at Brio "if its purpose is to clean up sites quickly." But, he adds, "nothing would have happened here if it weren't for the law."

Pulling over near the bank of a muddy creek, he shows one of the things EPA is already doing to contain the damage from decades of

careless handling of chemicals. A white plastic pipe sticks out of the ground, linked to a pump and a nearby filtering machine, part of a network of pumps and filters that probably will be needed for the indefinite future to stop chemicals from leaching into the water from the ground below the waste pits.

"People don't realize that we're going to have to be here forever," he says.

The EPA has built an incinerator at Brio to burn what it can dig out of the ground. But as often happens at Superfund sites, locals are opposing that, too. Many fear the incinerator will spew into the air dangerous chemicals that could drift into more distant neighborhoods. The only other option would be to dig up the chemical pits and haul the soil away, but that would risk spreading the contamination and creating another hazardous-waste site somewhere else. This is one reason EPA favors dealing with heavily contaminated soil with on-site incineration.

With the agency's credibility here weakened by the Southbend debacle, it faces a tough task convincing residents the incinerator is safe. One skeptic is Marie Flickinger, editor of the local newspaper. Hunched over boxes of documents and aerial maps in her cluttered office just up the road from the Brio site, she has made stopping the incinerator a top priority.

Officials who once might have dismissed Mrs. Flickinger take her very seriously. Her crusade has helped draw attention to Brio from Texas Gov. Ann Richards, who has enlisted help from EPA Administrator Browner in re-examining the cleanup. "I guess you could say Brio is my obsession," says Mrs. Flickinger, exploding in a cackle of laughter.

If Mrs. Flickinger has a nemesis, it's Norma Goldman. As spokeswoman for the Brio Site Task Force, Ms. Goldman represents the chemical companies that drafted the Brio cleanup plan under EPA oversight. Ms. Goldman notes that Mrs. Flickinger has a financial interest in Southbend: She owns a house there in which her son once lived. Mrs. Flickinger admits owning the house, and she is seeking a nominal settlement on it -- but denies this has colored her opinion.

Of course, many of the problems at Brio might have been avoided if, as Ms. Goldman once contended, there was a 250-foot impermeable clay layer under the site. In the late 1980s, she used to tell community groups about the mass of clay -- which, in theory, would hold in chemicals and shield the groundwater below. "I wish I'd never used the term," she says, explaining that what she actually meant was that there is a "pretty good" layer of clay down below -- which actually is permeable.

One of the complaints about many Superfund cleanups, including Brio, is that the EPA lets companies responsible for the dumped chemicals have a lot of say in how they are cleaned up. The Clinton proposals wouldn't change that, however, because the cost and time involved in having EPA do all the work would make it impossible to do more than a few at a time.

The idea of easing the standards, depending on how the land will be used in the future, is also controversial at Brio. Local residents have long struggled with the notion of what it means to "clean" the site. Many initially thought that the EPA was going to cleanse the place completely. But no technology exists to do that.

Under the EPA plan, Brio would remain practically a no man's land forever. "It will be a wildlife sanctuary with a fence around it," says Mr. Meyer, adding that the EPA has selected special grasses to plant there after the incineration is finished and the land smoothed over.