

HYDE PARK BOMB

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Love Canal overshadowed by even deadlier chemical dump

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Standard Staff

Three years ago, when the Love Canal disaster was starting to make international headlines, evidence was already beginning to emerge about another, much larger chemical-waste dump on the opposite end of the city.

Love Canal residents, as caught up as they were in their battle for compensation for ruined homes and health, knew the other dump was potentially more lethal than the Love Canal could ever be.

Evidence was unfolding that the dump, known as the Hyde Park landfill in Niagara County N.Y., contained about four times the volume of toxic chemicals believed to be buried at the Love Canal and that high concentrations of chemicals were contaminating a creek flowing from the dump to the Niagara River — a source of drinking water for millions of Canadians and Americans downstream.

Nevertheless, the media continued to focus most of its attention on the Love Canal through 1979 and 1980. The Hyde Park site barely went noticed.

This was somewhat disconcerting to a small, quiet-spoken man named Fred Armagost, whose home borders the chemical-laced creek.

As he watched the filthy, off-color water flowing northward from the dump before swinging west, disappearing in a storm-drainage system and, finally, splashing down the face of the Niagara Gorge to the river below, he wondered why there wasn't an uproar from the hundreds of communities lining the Lower Niagara and Lake Ontario.

By 1979, he was convinced there was every reason in the world for Americans and Canadians to be screaming about the Hyde Park dump.

Tests, forwarded to the U.S. Environmental Protection Agency (EPA) by the Hooker Chemical Company that year, revealed the presence of high concentrations of 2,3,7,8-TCDD (dioxin) — considered by experts to be one of the most dangerous chemicals ever produced — in the bed of the creek known as the Bloody Run.

Mr. Armagost wasn't surprised dioxin was mixed in with the filthy muck he had noticed floating in the Bloody Run Creek since about the mid-1960s.

A list, compiled by Hooker and released by an inter-departmental task force on toxic waste the year before, showed Hooker had disposed of about 80,000 tons of highly-toxic chemicals at the Hyde Park dump from about 1953 to 1975.

Among the 26 separate items listed, was 3,300 tons of trichlorophenol of which dioxin, an unwelcome byproduct in the manufacture of the herbicide, makes up an estimated 2,000 pounds — about 15 times more than is believed to be buried in the Love Canal, making the Hyde Park site possibly the largest single depository of the deadly chemical in the world.

Other toxic chemicals, some of which have been plaguing the Great Lakes for a number of years, include mirex, chlorobenzenes, chlorotoluenes and C-56.

Hooker began using the Hyde Park site, located on a 15-acre tract of land about five-eighths of a mile from the bank

of the Niagara River, after curtailing disposal activities at the Love Canal in about 1952.

A Hooker spokesman told The Standard the company chose Hyde Park for waste disposal because it was situated in an established, industrialized area bounded immediately by the Niagara Steel Finishing Co., TAM Ceramics, Inc. (formerly the National Lead Company) and Greif Bros., Inc., and, because of the presence of a layer of impermeable clay which, the company supposed, would prevent the migration of toxic chemicals in to the surrounding groundwater.

Hooker's intention to use the site for disposal of its wastes received the blessing of local government officials.

The claim a layer of clay seals the bottom of the dump is viewed with strong skepticism by some close observers.

Anne Wordsworth, a Pollution Probe researcher who has been gathering volumes of data in preparation of a case against what she considers an inadequate proposal to clean up the dump and prevent any future migration of chemicals, says if Hooker has proof the dump is lined with clay, she would like to see it.

In fact, Miss Wordsworth said she has secured a report by a Canadian hydrogeological firm hired by Hooker which indicates at least some of the waste in the Hyde Park dump comes into direct contact with a layer of Lockport dolomite bedrock — a type of bedrock prone to cracks and fractures which are readily infiltrated by groundwater.

If Hooker felt its waste-dumping practices were compatible with surrounding industrial activities, some of the people employed in the adjacent factories didn't think so.

Ernie Lewis, who worked at the National Lead Co. until he retired at the age of 48 with a variety of health problems, told The Standard he remembers being in the plant while the dumping was in progress.

When the wind was blowing from the direction of the dump, he said, clouds of dust and fumes would enter his department.

"People would start crying, bleeding from the nose and gagging. You'd go running into the health supervisor and say, 'you better do something about that stuff. The men are dropping like flies.' He'd say to me, 'My God Ernie, you can't challenge Hooker'."

More recently, workers in the plants next to the Hyde Park dump are expressing concern their health may be imperiled if they continue to work while the proposed cleanup of the dump is in progress — particularly if the buried chemicals are disturbed.

Last summer, Greif Bros. had to close down for two weeks while dust containing mirex, PCBs and lindane was removed from the building. Scientists for the National Institute for Occupational Safety and Health said the dust probably came from the Hyde Park dump.

The manner in which chemicals were disposed of at Hyde Park, according to some accounts, was somewhat sloppy.

"The chemicals were brought in by trucks to a so-called pit," recalls Mr. Lewis. "They must have been afraid to get too close for fear their trucks would fall in. Crash, boom would go the barrels. They'd split open and chemicals would go running all over the place."

While the dumping was going on, Fred Armagost, who has lived near the Hyde Park site since 1955, began to notice some peculiar things happening at Bloody Run Creek.

By the mid-1960s, he said, frogs, toads and snakes — once inhabiting the creek in great numbers — started to disappear.

"I never saw a dog or cat get into that creek that didn't start to lose its hair," he said.

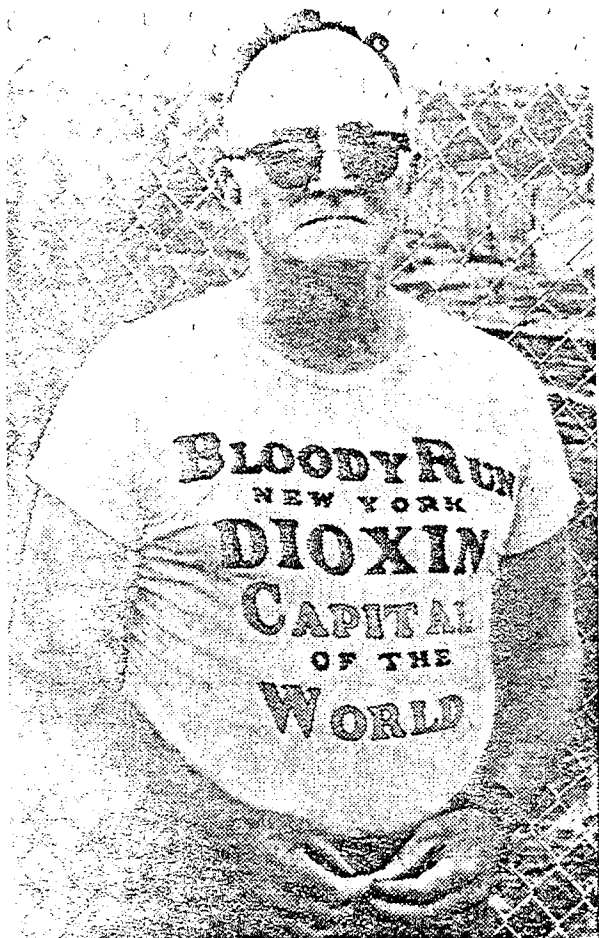
One day Mr. Armagost said a family cat began to lose its hair and teeth. A few days later, it curled up and died.

Every once in a while one of Mr. Armagost's seven grandchildren, living in the home along with his wife son and daughter-in-law, would get into the creek.

"The kids would come home. You'd wash them and burn their clothes."

Meanwhile, a chemical odor would sometimes waft over the Armagost property, he said, making it difficult to breathe.

As time went on, members of the Armagost household began experiencing respiratory problems to the point where their family pediatrician, Dr. James Dunlop, wrote a letter to the Niagara County health commissioner, Dr. Francis Clifford



FRED ARMAGOST NOTED CHANGES IN CREEK
— Staff photo

The letter, dated December, 1978, states "After exhaustively evaluating the Armagost children and two of the adults (Fred, Sr. and Wayne), I cannot find any medical reason why this family suffers so much from respiratory illness.

"I would have to strongly suspect that chemicals in the Bloody Run Creek are a big factor here."

By the spring of 1979, Dr. Clifford ordered a chain-link fence put around the Bloody Run Creek to keep people out.

"There is no question that a hazard does exist and we hope that you agree that this action is a necessary interim step for the protection of all persons in the vicinity," said Dr. Clifford in serving the order.

But, fence or no fence, the Bloody Run continues to meander its way from the dump to the Niagara River.

The 1979 test results (the latest data made public) show levels of dioxin in the creek bed as high as 220 parts-per-billion and high concentrations of chlorinated toluene, benzene and a number of other chemicals.

Meanwhile, as the creek flowed by Mr. Armagost's home before swinging west and washing down the Niagara Gorge to the rapid waters below, he continued to wonder — sometimes in amazement — why Canadians and Americans aren't in an uproar.

Over the past two years, he has crossed the Niagara River on a few occasions to talk to Canadians who cared to hear about the potential threat the Hyde Park dump poses to the river and Lake Ontario.

Earlier this year, Hooker offered to buy the Armagost home, and eight others near the perimeter of the dump, for a fair-market price. The deal won't go through until the proposed plan to clean the area up is approved by a U.S. court.

Hooker needs access to the properties to carry out the massive clean-up operation.

A fence will be erected around the contaminated area and security guards will patrol the area on a 24-hour basis to keep unauthorized persons out.

All this fuss . . . all this security and precaution . . . at the same place the Armagost family has lived for the last 26 years!

Invisible quantity can kill

The Hyde Park dump has sometimes been called the "dioxin capital of the world."

About 2,000 pounds of dioxin is believed buried here compared to an estimated 130 pounds at the infamous Love Canal site.

To give the figure a little more scope, it is estimated 130 pounds of dioxin was used during the entire Vietnam War in a defoliant called Agent Orange which, some allege, caused cancer in hundreds of Vietnam veterans.

In 1976, a plant manufacturing trichlorophenol (a herbicide which contains dioxin) exploded in Seveso, Italy, sending clouds of the chemical over the village. Many villagers became seriously ill. And within hours, hundreds of dead animals lay in the streets and a large area had to be

evacuated. According to a number of estimates between two and 10 pounds of dioxin was involved.

Doug Hallett, Environment Canada's dioxin expert, estimates there is less than one pound of dioxin in all of Lake Ontario. Yet, enough of the chemical has been detected in herring gull eggs collected from the lake to cause public concern.

Experts believe very small traces of dioxin, considered about 500 times more lethal than strychnine and 1,000 times more lethal than cyanide, can go along way.

About four micrograms of dioxin, a quantity invisible to the naked eye, can kill an adult. Smaller doses have caused damage to livers, hearts, spleens, central nervous systems, brains and lungs and can also cause birth defects.

WHAT'S BURIED?

A list of the types and volumes of waste believed buried at the Hyde Park dump.

TYPE OF WASTE	QUANTITY (in tons)
Calcium fluoride	400
Mercury brine sludge	100
C-55 derivatives	4,500
Organic phosphates	4,400
Inorganic phosphates	100
Aspo mud (contains thiosulfate)	1,000
Misc. acid chlorides	1,200
Chloroacetic acid	2,100
Decchlorane (mirex) residues	200
Misc. chlorinations (still bottoms)	1,600
Benzotrifluoride derivatives	2,900
Dodecylmercaptans (DDM)	4,500
Trichlorophenols (still bottoms)	3,300 (inc. 2,000 lbs. dioxin)
L i q u i d	
disulfides/monochlorotoluene	900
Benzotrifluorides	5,600
Benzoyl chloride	6,200
Metal chlorides	100
C-55	1,100
Benzene hexachloride (lin- nane derivatives)	2,000
Thiobenzene	16,500
Chlorotoluenes	1,700
Benzotrifluorides	1,700
Benzyl chlorides	3,400
Thiodan (endosulfan) 1,000	
Aliphides	6,600
Misc. of above	7,300
TOTAL	80,400 TONS

Lethal dioxin escapes

Possibly the world's largest collection of the deadly chemical dioxin sits near the brink of the Lower Niagara River Gorge a few miles downstream from the Falls.

The lethal chemical is buried in an abandoned dump in Niagara County, N.Y. and many fear high levels of dioxin are escaping from the site and polluting the Niagara River and Lake Ontario.

One member of the dioxin family, TCDD — considered one of the most toxic compounds ever produced — has already been detected in herring gull eggs collected from Lake Ontario.

More recently, the Ontario environment ministry has discovered TCDD in Lake Ontario fish.

Records show Hooker Chemical Company buried about 3,300 tons of trichlorophenol (TCP), a herbicide which contains dioxin, at the dump, called the Hyde Park landfill, between about 1953 and 1975.

Quantity of dioxin isn't known

A Hooker spokesman told The Standard the company doesn't know how much dioxin is in the TCP because detailed analysis of the waste wasn't required at the time the Hyde Park dump was in use.

But some dioxin experts estimate there is 2,000 pounds — making the Hyde Park site possibly the largest burial ground for the chemical in the world.

Tests have already shown high concentrations of dioxin escaping from the Hyde Park dump located about half a mile inland from the Niagara River.

In a creek, which flows from the dump to the river, TCDD has been detected at levels as high as 220 parts-per-billion and, although the discovery was made in the late-1970s, the creek, known as Bloody Run, has not been sealed off.

A multi-million dollar federal lawsuit filed against Hooker in December, 1979, charges the company deposited wastes in the Hyde Park landfill "at a grade level where no impermeable material was present."

Creek carries chemicals to river

"These wastes mix with sub-surface water, migrate into Bloody Run and, eventually, enter the Niagara River."

Canadian environmentalists are preparing to go to a U.S. court in Buffalo later this month to argue Hooker should be forced to remove all chemicals from the site and destroy them through high-temperature incineration.

One of the participants in the court action, Anne Wordsworth of Pollution Probe in Toronto, says the Hyde Park dump is "the single greatest threat to the safety of the Niagara River, Lake Ontario and everyone who takes their drinking water from these two sources."

"No other dump," she adds, "is as large, as leaky and as lethal as this particular site."

Operation Clean, a Niagara-on-the-Lake-based environmental group which has been fighting pollution problems

related to the Niagara River for two years, is also participating in the court action.

Both groups say the proposed plan, devised by Hooker, state and federal officials to clean up the Bloody Run Creek and secure the landfill against future migration of chemicals, is inadequate.

Miss Wordsworth says ground water in the Hyde Park area generally flows toward the Niagara River and migration of toxic chemicals from the dump will continue to be a serious problem for decades even if Bloody Run Creek is capped.

Peter Buechi, a hazardous-waste expert with the New York State department of environmental conservation, told The Standard Bloody Run may not be the sole carrier of dioxin and other toxic chemicals to the river and acknowledged chemicals could be seeping through ground water and surface water channels no one is aware of yet.

This possibility worries Environment Canada's dioxin expert Doug Hallett.

"One of my serious concerns is where exactly the dump is now."

Any amount of migration of dioxin from the dump to the river could have serious consequences for Lake Ontario, he said.

Seeping chemicals worry expert

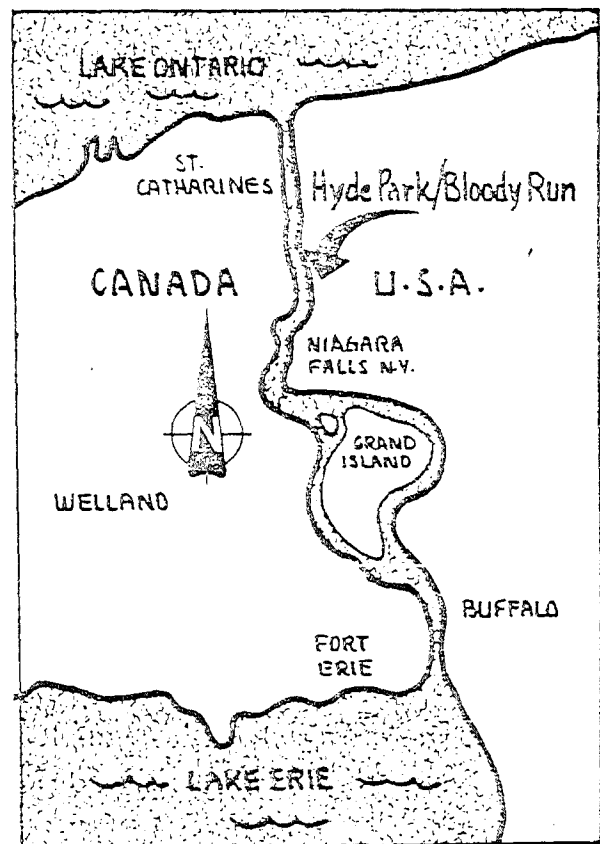
Dr. Hallett calculates there is less than a pound of dioxin in Lake Ontario. Yet, even that amount has created widespread public concern.

"If one pound of dioxin from the Hyde Park dump gets into the river over the period of a year," said Dr. Hallett, "it would seriously elevate the levels of dioxin in the lake."

The herring gull studies show levels of dioxin in Lake Ontario have declined since 1971 — a trend Canadian scientists believe is partially because many companies have stopped manufacturing trichlorophenol.

Hooker, listed in a U.S. government report as the only manufacturer of the chemical along the Niagara River, stopped making it in 1974.

While government scientists hope levels of dioxin in the lake will continue to decline, Dr. Hallett says if less than two ounces of dioxin a year bleed into the river from the Hyde Park site "it would be enough to keep levels in the lake where they are now."



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