GE Plant and PCBs

Before we tackle the issues of PCB contamination, it's important to mention some very basic social and economic history. Since the turn of the century, General Electric, or "the GE" as most local people referred to it, was Pittsfield, Massachusetts, and to some extent Berkshire County. It was the very linchpin of the County's economy, and Pittsfield was a company town, employing as many as 18,000 during World War Two and as many as 6,500 during the EPA's site assessment in 1988. Even so, there are still many people who hesitate worried they might endanger their GE pension. For most of the workforce, GE was the employer of choice. And few people were able or willing to confront GE on the issues of industrial contamination. Only recently as GE's gradual abandonment of the city continues, and with its sale of its defense facility to Martin Marietta, have most people become vocal about a comprehensive cleanup.

Former Pittsfield Mayor Remo Del Gallo on PCBs and the Lakewood neighborhood

Lakewood neighborhood PCB photo gallery [larger photos]
The GE facility is comprised of 250 acres with five million square feet of building space. Part of the facility lies within the 100 year flood plain of both the Housatonic River and the Unkamet Brook, a tributary of the Housatonic which flows through the GE plant. At the facility's southern border the ground surface slopes towards the Housatonic River. For many years an underground lake of PCB-contaminated oil has infiltrated the river system, and the neighborhood bordering the facility. GE began to manufacture electrical capacitors and transformers at the Pittsfield plant beginning in 1903. According to research compiled by David Schalk of Bloomington, Indiana, PCBs, "polychlorinated biphenyls" are a group of distinct chemical compounds, none of which occur naturally. They were produced commercially by Swann Chemical Company beginning in 1929. During the 1930s and 1940s, PCBs were often combined with "chlorinated napthalenes" manufactured by the Halowax Company. Swann was purchased in 1935 by the Monsanto Industrial Chemical Company. Monsanto produced PCBs at plants in Sauget, Illinois and Anniston, Alabama until 1978. PCBs were used in capacitors, transformers, hydraulic fluids, lubricants, carbonless copy paper, inks, pesticide extenders, sealants and flame retardants.

In the following pages you will several names that describe different trademarked names for PCBs. Westinghouse called its product Inerteen. Monsanto used the trademark Aroclor while GE used the tradename Pyranol to denote its version of Monsanto-produced PCBs. The Transformer Manufacturing Division of GE manufactured large and medium-sized AC and DC power transformers. Pyranol was used by GE beginning in 1932 and until 1977 when they stopped due to the Environmental Protection Agency's (EPA) proposed regulations banning the manufacture of PCBs."

According to the August 1988 RCRA Facility Assessment prepared for the US EPA: "Prior to 1977, synthetic oil containing PCBs were used as the electrical insulating medium in transformers. Before shipment, transformers were filled, pressurized, and tested under load. ...After testing, the oil was drained. Both new and used oil had to be stored and piped to various areas of the plant, mainly between storage tanks and transformer assembly/testing areas. Four major oil storage centers existed in the PCB use areas of the facility: Buildings 3C, 12-F, 12-G and 29A." (Pg III-11)

"Historically, GE disposed of wastes on-site and off-site. On-site disposal occurred in landfills and a surface impoundment. The three surface water bodies on three sides of the GE facility, the Housatonic River to the south, the Unkamet Brook to the east, and Silver Lake to the southwest, received permitted and unpermitted wastewater discharges throughout GE's occupancy of the property.

"Off-site areas receiving wastes generated by GE include the Superfund Rose Site in Lanesboro, Massachusetts, and the Pittsfield Sanitary Landfill. Disposal also occurred in oxbow areas ... and the Newell Street - GE Parking site ... along the Housatonic River both on and off the facility property. "As a result of transformer and associated product manufacturing operations, various oils, including PCBs, have been released to soil, surface water, and groundwater from leaking tanks, pipes, and spills. ... Extensive ground water and soil contamination from the PCBs is well documented for this facility.

"Investigations conducted under the 1981 Consent Order indicated that the ground water around the perimeter of the East Plant Area contained contaminants such as chlorobenzene, benzene, trichloroethylene and methyl chloride, as well as metals. The ground water plume of benzene and chlorobenzene extends to the Housatonic River. The sediments and water of the Housatonic River, Unkamet Brook, and Silver Lake are contaminated with PCBs." (EPA I.D. NO. MAD 002084093 pp 6-8)

The EPA report continues: "In December 1982, the Housatonic River study, performed by Stewart Laboratories for GE, documented that approximately 40,000 pounds of PCBs were contained in the river sediments in Massachusetts, comprising more than 250,000 cubic yards of contaminated
The estimate of 40,000 pounds of PCB contamination has been used in statements and documents by both the Massachusetts Department of Environmental Protection and the US EPA.

But according to an 1990 interview with Ed Bates and Charles Fessenden, there is reason to believe that far greater contamination has spread from the GE facility to the river system and surrounding neighborhood.

Ed Bates was the former Manager of Tests at Power Transformer at GE in Pittsfield, and Charles Fessenden was the Supervisor of Calculations. According to Ed Bates: "People don't realize that Pyranol is twice as heavy as water. If you put a gallon of Pyranol in water and it sinks right to the bottom. Within that twelve and a half pounds of Pyranol weighs, seven pounds of every gallon is PCBs. We used to use an average of 20,000 gallons of Pyranol a week and this is if you do simple mathematics, this is one hundred and forty thousand pounds of ... PCBs a week that we were handling. And we had a loss rate: spillage, overfilling, of about 3% so this says that every week we would lose between four and five thousand pounds of PCBs that would go down into the drain and into the river. ...About a million and a half pounds of PCBs have been plowed into that river. I imagine a good 30% is left."

It is fair to say that up until the last few years, Berkshire County residents were less than impressed with the efforts of state and federal environmental regulators. For reasons no one is sure of, the jurisdiction for the Pittsfield contamination fell under federal Resource Conservation and Recovery Act (RCRA) legislation, rather than the more powerful Superfund (CERCLA) legislation. Seemingly fearful that GE would exercise its legal option under RCRA to litigate, it seemed to us that the timetable and scope of remediation was shaped more by GE than the pressing environmental and public health needs of the community.

For example, most of the initial testing of the river, floodplain, and the bordering residential and business properties were done by GE consultants. Because the agencies didn't have a budget for extensive testing they were constantly forced to make a case for why GE should engage in additional testing. And it is precisely because of this inadequate testing that in recent days we are discovering dangerously high levels of PCB contamination in areas believed to be free of contamination.

Early state and federal efforts required collection wells to drain the underground oil plume south of East Street, to prevent even more PCBs from reaching the river. These are the wells former Mayor Remo DelGallo speaks of in section entitled "The Allendale Neighborhood.". The wells continue to pump significant quantities of PCB contaminated oil.

Unfortunately, to deal with these large quantities, the EPA licensed GE to operate a thermal oxidizer on site, and adjacent to the Newell Street neighborhood. And GE imported PCB contaminated oil from other PCB sites. HRI worked hard to close the facility in 1996.

In the last three years, spurred by growing pressure from HRI and State Representative Chris Hodgkins, staff from the Massachusetts DEP and EPA have begun to apply coordinated pressure to speed up cleanup efforts. Recent discoveries of alarmingly high levels of PCBs in residential areas and the flood plain have triggered "imminent hazard" conditions and required immediate cleanup. Each day brings new word of additional contamination - often the result of off-site burial of PCB contaminated fill. In the last two years over 150 residences have been tested positive with levels of PCB contamination higher than the 2 parts per million level recommended for residential use. One homesite had levels of 44,000 parts per million.

An August 7, 1997 meeting hosted by the DEP, EPA and GE drew a standing-room only crowd of 150 anxious and angry Pittsfield residents. And the front page headline of the Boston Sunday Globe of August 10, 1997 read "GE knew of Pittsfield 'liability' for years."
As we investigated the history of PCB use and GE's continued pattern of delay and deception, we kept hearing the persistent question "Why?" "Why didn't GE stop its use of PCBs?" "Why don't they just clean it all up now?" It's important to remember just how much money was at stake, and how much money is still at stake. David Shalk puts some of the science and economy of PCB production and use in perspective:

"The U.S. government interdepartmental task force estimated that PCB impregnated capacitors are 1/6 the size, 1/5 the weight, and 1/4 the cost of comparable oil impregnated capacitors, providing the advantages of reliability, long life and compactness."

And an expert on PCB remediation and removal for Westinghouse estimated that a complete clean-up of the Housatonic River and its flood plain could cost as much as one billion dollars. Each and every day GE delays its cleanup, saves them an extraordinary amount of money. Every decision means money: How clean should a clean-up be? Which properties should be cleaned? How much of the river should be cleaned, and to what levels? Since the EPA mandate of 1977, GE's tactics of delay and study, study and delay, its unwillingness to accept responsibility for a thorough cleanup, and its possible criminal obstruction of the state and federal agencies investigation of the extent of the contamination has worked for twenty years now. They have successfully stalled long enough so that statute of limitations issues prevent former workers from suing, and may possibly keep flood plain property owners from suing for the contamination of their land.

As you think about PCB contamination and investigate this problem, the issue of money vs. safety, money vs. human health, and money vs. the environment will always be with you. And the issue for all of us is: how much is a human life worth? A city neighborhood? A playground? A river system?

HEALTH CONCERNS

As we have discovered, the issues of public health and PCBs are very complicated. It involves the rare and arcane science of risk assessment, the complicated issues of health studies, and death records and the attributable cause of death, and the relationship of human exposure to the exposure of animals in the laboratory. While we are by no means experts in this field, we have by necessity learned something about these issues.

The story of human health and PCBs begins with the men and women who worked in the GE buildings, handling the PCBs. There is very good reason to believe that these people were needlessly and recklessly exposed to PCBs. While the EPA mandate about PCBs was issued in 1977, public health officials and the companies involved in the manufacture and use of PCBs were discussing its obvious dangers as early as 1936.

A 1936 article written by Louis Schwartz, M.D., Senior Surgeon, U.S. Public Health Service, New York, N.Y. entitled "Dermatitis from Synthetic Resins and Waxes" was published in 26 American Journal of Public Health 586 (June, 1936). Schwartz writes:

"In addition to these skins lesions, symptoms of systemic poisoning have occurred among workers inhaling these fumes. Those working with the chloro diphenyls (PCBs) have complained of digestive disturbances, burning of the eyes, impotence and hematuria. The latter symptom developed among a number of men making amino diphenyl, which is used in the manufacture of a rubber antioxidant. Causes of death from yellow atrophy of the liver have been reported among workers exposed to the fumes of the chloro naphthalenes.

"Patch tests performed with Halowax and with the chloro diphenyls (PCBs) have yielded negative
results. The skin lesions probably result from the mechanical plugging up of the follicles of the skin with the waxes as the fumes solidify on the skin.* The chlorine present in the waxes may have an irritating effect on the plugged follicles and cause suppuration.

**PREVENTION**

"1. The protection of the workers from the irritating chemicals that compose the resins and waxes from the resins and waxes themselves. To do this, the process should be totally enclosed. If this is not possible, hoods with suction exhaust should be placed over open processes that dust and fumes are pulled away from the worker and out of the room.

"2. The workrooms themselves should be ventilated by intake and exhaust fans to remove dust and fumes.

"3. The floors, walls, and ceilings should be washed down at frequent intervals to keep them free of dust.

"4. Two lockers should be furnished to each worker. One for his street clothes and one for his work clothes. The lockers for street clothes and work clothes should be in separate rooms, with the shower baths between the locker rooms. The worker coming to work enters the locker room for street clothes, takes them off, and puts them in the locker and goes into the locker where his clothes are kept and dons them. From this room he goes to the workrooms through a connecting door. At the end of his shift, he goes through this door to the work clothes locker room, takes off his work clothes and leaves them on the floor or bench to be washed and then goes to the shower baths and bathes and dries. Then he goes to the street clothes locker room, puts on his clothes and goes out of the door leading to the street. It has been estimated at one point that 6 cents a day per worker will take care of furnishing clean clothes each day.

"* I have recently seen the wife and child of a worker who had developed comedones and pustules from contact with his work clothes which were saturated with halowax and which he was accustomed to wear at home.

..."7. There should be periodic medical examination of workers to detect cases of dermatitis and workers in chlorinated napthalenes and diphenyls (PCBs) should be periodically examined for symptoms of systemic poisoning.

"8. Laws should be passed making it compulsory for factories where there are skin hazards to adopt these measures."(pp. 591-592)

And in a second article "Skin Hazards in American Industry Part II": No. 229 Public Health Bulletin, U.S. Treasury Department, Public Health Service (September, 1936), Schwartz states: "Workers in chlorinated naphthalenes and diphenyls (PCBs) should be periodically examined for symptoms of systematic poisoning." (p. 10)

Our friends at the Hudson River Sloop Clearwater, www.clearwater.org, have been working for years to get GE to clean up its massive PCB contamination of the Hudson. They found a revealing article by Cecil K. Drinker and others: "The Problem of Possible Systemic Effects From Certain Chlorinated Hydrocarbons" from The Journal of Industrial Hygiene And Toxicology Vol. 19 (September, 1937).

Drinker reports on a one-day meeting held by the Harvard School of Public Health on the problems of "systemic effects" of chlorinated hydrocarbons including "chlorinated diphenyl" and attended by representatives of Monsanto, GE, the Halowax Corporation and The U.S. Public Health Service. Halowax use of chlorinated naphthalenes to coat electric wire preceded the Swan Chemical
company's manufacture of PCBs. GE began using Halowax's products. Sandford Brown, the president of Halowax stated, according to Drinker, that they hadn't seen any problems with their workers until "the past 4 or 5 years. ... Then ... combined with chlorinated diphenyl and other products, and suddenly this problem is presented to us." By the mid 1930s some of Halowax's workers, as well as workers at GE and other customers, were breaking out with chloracne. In 1936 three Halowax workers died. Halowax hired researchers from Harvard University to study the problem. They made "a number of estimates of chlorinated hydrocarbons in the air of different factories" then exposed rats to similar levels. Their report declared "the chlorinated diphenyl is certainly capable of doing harm in very low concentrations and is probably the most dangerous ... These experiments leave no doubt as to the possibility of systemic effects from the chlorinated naphthenes and chlorinated diphenyls."

F.R. Kraimer, an assistant manager at GE's Wireworks in York, Pennsylvania stated: "It is only 1 1/2 years ago that we had in the neighborhood of 50 to 60 men afflicted with various degrees of this acne which you all know. Eight or ten of them were very seriously afflicted - horrible specimens as far as their skin conditions was concerned. One man died and the diagnosis may have attributed his death to halowax vapors, but we are not sure of that ... The first reaction that several of our executives had was to throw it out - get it out of our plant. They didn't want anything like that for treating wire. But that was easily said but not so easily done. We might just as well have thrown our business to the four winds and said, 'We'll close up,' because there was no substitute and there is none today in spite of all the efforts we have made through our own research laboratories to find one."

GE's medical director, Dr. B.L. Vosburgh of Schenectady, New York was present and stated: "About the time we were having so much trouble at our York factory some of our customers began complaining. We thought we were having a hysteria of halowax mania throughout the country."

Monsanto was represented by Dr. R. Emmet Kelly who said "I can't contribute anything to the laboratory studies, but there has been quite a little human experimentation in the last several years, especially at our plants where we have been manufacturing this chlorinated diphenyl ... A more or less extensive series of skin eruptions which we were never able to attribute as to cause, whether it was impurity in the benzene we were using or to the chlorinated diphenyl." (The Journal of Industrial Hygiene and Toxicology Vol. 19 (September 1937), pp. 283-311)

David S. McCrea of McCrea & McCrea of Bloomington, IN has compiled a series of documents regarding PCBs. A report of March 28, 1938 written by W.P. von Oettingen, M.D. and Director of Haskell Laboratory of Industrial Toxicology entitled "The Toxicity and Potential Dangers of Inerteen" seconds the warnings of Dr. Schwartz. He writes:

"The contact of Inerteen with the skin causes dryness of the skin, thickening and scaling, and it appears that sufficient quantities may be absorbed in this way to cause damage of the liver. ..."

"For the safe handling of Inerteen it appears necessary that concentrations of its vapors in air are kept below 0.05 mg. per liter of air by adequate forced ventilation at the site of the production of such vapors.

"Greatest personal hygiene is of paramount importance. Contamination of the skin should be avoided by proper protective garments such as gloves, caps and coveralls. In case of accidents or with short exposure to higher concentrations, of and above 0.2 mg. per liter of air, respirators or open air masks should be worn. The skin should be kept immaculately clean and ointments such as or Aquafor should be applied to the skin after the washing of the hands.

"In view of the possibility of a toxic action of this material on the liver, persons suffering from injuries of the liver (jaundice), syphilis, and heart diseases should be excluded from operations in which Inerteen is handled.

"Workers handling Inerteen or with frequent exposure to its vapors should undergo periodic
examinations; special attention should be paid to their nutritional condition, and the condition of the liver should be checked by determining the icteric index in the blood and excretion of urobilin and urobilinogen in the urine."

According to interviews with Pittsfield workers, GE never provided the comprehensive safeguards suggested by Drs. Schwartz and von Oettingen, and some Pittsfield workers routinely worked up to their armpits in PCBs. Oftentimes the transformers, filled with PCBs, were put to pressure and PCB-laden oil spilled to the floor. Workers walked through small pools of PCBs.

Some workers were so sensitive to the fumes, they luckily had to be transferred to other operations. On a daily basis the floor of Power Transformer was soaked with oil, and large amounts of "fuller's earth," a kitty-litter like product was used to soak up the fluid. PCBs were a constant in the life of a GE worker at working with transformers.

David McCrea offers a September 20, 1955 letter written by Dr. R. Emmet Kelly of Monsanto Chemical Company (MCC) to a Dr. J.W. Barret of London about Aroclor Toxicity:

"MCC's position can be summarized in this fashion. We know Aroclors are toxic but the actual limit has not been precisely defined. It does not make too much difference, it seems to me, because our main worry is what will happen if an individual develops any type of liver disease and gives a history of Aroclor exposure. I am sure the juries would not pay a great deal of attention to MACs." (MAC = maximum allowable concentrate.)

On March 18, 1975 W.B. Papageorge, Manager of Product Acceptability, Specialty & Process Chemicals, Monsanto Company, St. Louis, Missouri responded to a series of questions from Dan A. Albert, Staff Supervisor, Personnel Relations at Westinghouse Electric Corporation in South Boston, Virginia about health problems possibly caused by PCBs.

Papageorge writes:

"Question: Does Inerteen have permanent effects on the human body? If so, what type of permanent damage and how long a period of time does it take for this to develop? If not, explain why, if possible. "The polychlorinated biphenyls in Inerteen can have permanent effects on the human body."

"... The problem arises from repeated and prolonged exposure to atmospheric concentrations in excess of the accepted Threshold Limit Levels or repeated and prolonged skin contact.

"... The potential toxic effects in humans from excessive exposure to polychlorinated biphenyls include injury to the liver and chloracne. In animals, the liver effect is demonstrated by increased liver weights and injury to cellular tissue. Although chloracne is difficult to evaluate in animals, in humans, this takes the form of comedones (large blackheads with typical acne pustules) and may be an external symptom of over exposure preceding serious liver injury.

"Animal data and human experience indicate that the toxic effects are similar whether exposure results from ingestion, inhalation of vapors, or absorption of the liquid material through the unbroken skin."

"Question: Since Inerteen affects birds and other animals, if there is no real effect to human beings, how do you explain it to employees in such a way that they will understand why it can kill a bird and not a human?

"There is a potential real effect to humans - including death - as discussed in answer to Question 1.

"Question: Employees carry Inerteen home on the soles of their shoes and complain quite a bit about the effect Inerteen has on wearing out of their shoes. Is this a serious problem? Will Inerteen in the soles and leather of shoes, over a long period of time, have an effect on the feet and skin since the shoe is the only protective equipment we wear on our feet and the Inerteen penetrates through the
leather.

"There should not be polychlorinated biphenyl on the floor for workmen to contaminate their shoes to carry home. The plasticizer or solvent action will destroy or shorten the life of the shoes. More importantly, the wearing of contaminated shoes could lead to absorption of the liquid through the soles of the feet as through any other unbroken skin surface."

David Schalk comments: "Regulatory authorities paid little attention to PCBs prior to the late 1960's. Only then did the U.S. Food and Drug Administration (FDA) begin the regulatory process by setting internal 'action levels.' In 1970, FDA announced guidelines for fish and milk, and in 1972 they published proposed tolerances in the Federal Register. Nearly all FDA activity regarding PCBs during the past few years has focused upon fish and shell fish.

"The Federal Insecticide, Fungicide, and Rodenticide Act canceled the registration of all pesticides which contained PCBs either as an active ingredient, or as an extender to retard evaporation, effective November 29, 1970.

"The U.S. EPA gathered information during the early 1970s, but did little to regulate PCBs before they were forced to administer the PCB phase-out mandated by Section 6(e) of the Toxic Substances Control Act of 1976 (TSCA). EPA currently regulates PCBs which are still in service in electrical equipment or which are distributed in commerce for special uses. They also regulate PCB discharges into the environment, and the disposal or destruction of discarded PCBs.

"The U.S. Department of Labor has not become very involved in PCB regulation; ... Workers must rely upon state regulations, their unions, and their own diligence for protection from PCB exposure."

http://www.housatonic-river.com/hri_community.html

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On February 22, 2000, the Housatonic River Initiative, (HRI), filed a pro se motion to intervene in the lawsuit between GE, the United States, the State of Connecticut, and the Commonwealth of Massachusetts to strengthen the agreement the environmental agencies negotiated with General Electric. Soon after, as the first public intervenor, we faced a firestorm of criticism from the Berkshire Eagle, the corporate and banking community of Pittsfield, and former EPA administrator John DeVillars.

We were charged with endangering any chance for a clean river; told repeatedly that GE would use such a legal challenge to walk away from the deal; and warned that the river would never be cleaned. Board Member Rep. Chris Hodgkins and HRI Executive Director Tim Gray received the harshest criticism, and were the targets of personal attack. Most of the environmental community fell silent during this period, though thankfully many of our members expressed written, financial, and vocal support. **>>continue>>**
ABOUT HRI: BOARD OF DIRECTORS

The Housatonic River Initiative (HRI), a non-profit coalition of Berkshire County residents, was formed in 1992 to work to reclaim the Housatonic River system from years of neglect and decades of toxic PCB contamination. We are conservationists, sportsmen and women, scientists, and homeowners whose land has been polluted. The more we have learned, the more we have realized what a large task we have set for ourselves, and the wider our scope of activities has become. While we began advocating for a river, our tasks multiplied to include fighting for a comprehensive cleanup of the General Electric (GE) facility in Pittsfield, Massachusetts, the closure of GE's PCB burn facility, the removal of PCBs from contaminated residential homes, businesses, schoolyards, and playgrounds, and demanding public health studies for former GE workers and members of the public whose homes were built on or near PCB-contaminated fill.

HRI is working to:

- restore the Housatonic River and its floodplain as a major community asset, a river safe to fish and swim.
- advocate with the Massachusetts Department of Environmental Protection (DEP) and the United States Environmental Protection Agency (EPA) for a timely and effective and comprehensive PCB cleanup, with strong public participation in all aspects of the negotiating and decision-making process.
- reintroduce the residents of Berkshire County to the actual and potential beauty of the Housatonic River.
- promote environmental education about the River and PCB contamination in area schools and colleges.
- keep our local political leaders, and members of local Boards of Selectmen, Health, and Conservation Commissions aware of the many complicated issues involved in the cleanup process.

Board of Directors, Housatonic River Initiative

- Vincent Curro - Citizens for PCB Removal
- Dave Gibbs - President HRI, Citizens for PCB Removal
- George Darey - Massachusetts Commissioner of Fish and Wildlife
- Benno Friedman - Housatonic River Action Coalition
- Mickey Friedman - Filmmaker and writer
- Tim Gray - HRI Executive Director, Lee Land Trust
- Ted Giddings - Berkshire Environmental Columnist - over 50 years
- Chris Hodgkins - Massachusetts State Representative
- Wendy Phillips - Mount Holyoke College
- Tom Stokes - Stockbridge Land Trust, Former Berkshire County Commissioner, Stockbridge Selectmen
- Dr. Don Roeder - Director, Berkshire Environmental Research Center, Prof. Environmental Sciences, Bard College/Simon's Rock
- Al Bertelli - Lakewood River steward
- Chris Windram - Tight Lines Fly Fishing
Accomplishments of Housatonic River Initiative

- Eight years of advocacy to have the Housatonic River/General Electric facility listed as a superfund site, which resulted in a settlement that paves the way for one of the largest PCB cleanups in the nation. EPA clean-up estimate: $700,000,000
- Working with community members and ex-GE workers to expose a contaminated children’s park, barrel dumps on the banks of the Housatonic River, underground plumes of chemicals threatening business and residential properties, and contaminated ponds all previously unknown by the agencies
- Bringing officials from affected communities together for the first time to discuss the Housatonic Clean up
- Bringing many state and federal officials including state senators, Massachusetts Attorney General, and EPA officials to canoe the river and understand the problem
- Researching and challenging GE technical reports to uncover PCB pollution far more vast than was documented both in the Housatonic River and surrounding dumping areas
- Successfully advocating for the chemical clean up of the playground at Allendale Elementary School
- Successfully built public pressure to demand that state and federal agencies start working together and appoint permanent project managers to oversee the Housatonic/General Electric clean up.
- Detection and reporting of numerous pollution sources that have led to clean up of effluents and industries installing new treatment plants
- Organized a neighborhood whose land was contaminated by PCBs to demand clean up- over 400 homes have been tested, over 175 found to be contaminated, and the majority have been cleaned up
- Organized a successful national media campaign to put public pressure on General Electric to clean up the PCBs in Berkshire County
- Successfully advocated with the Mass. Dept of Environmental Protection to publish an 800 number so GE workers and local citizens could call anonymously and report PCB pollution without fear
- Conducting an extensive education program in area schools and colleges to promote citizen participation in the PCB clean up, advocate for PCB treatment technology, and enhance river ecology and stewardship
- Organized and successfully helped to close “Puff the Magic Dragon” the controversial General Electric PCB burn facility that was burning PCB’s commercially in a residential neighborhood
- Organized forums on
  - Housatonic River Pollution Assessment
  - PCB elimination Technology
  - Massachusetts Attorney General Forum
  - Great Housatonic River Mapping Project - Children’s Vision for the River
- Participate in all PCB meetings opened to the public for a decade
- In partnership with Tufts University produced an alternative to GE’s study on treatment technologies and produced the first computer simulation of PCB levels in the first 12 miles of the Housatonic River
- Publishing a newsletter to inform the public about PCB’s and river issues
- Organized “Riverfest - a festival dedicated to celebrating the Housatonic River including performances by national recording acts on behalf of a clean river
- Help to organize local trash removal days on the river
- Assisting scores of students with projects on the Housatonic River
- Worked to increase the PCB document repositories so the public would have more access to information. The EPA named HRI a repository for the administrative record
- HRI has received many awards for our environmental advocacy

HRI has achieved these accomplishments with a “part time” director and volunteers
The HRI Board of Directors was deeply affected by this, and much discussion and debate took place over the months as each Board Member tried to determine what we had won with the Consent Decree, what we had lost, and what was at stake if we should prevail in Court. We began negotiations with the governmental agencies to see whether we could win additional improvements to the Consent Decree, sitting across the table from a small army of representatives and attorneys from the U.S. Department of Justice, the U.S. EPA, the Massachusetts DEP, the Connecticut DEP, the U.S. National Oceanographic Atmospheric Administration, and the Massachusetts Attorney General Office.

Needless to say, we were outgunned, though we brought spirit and two decades of accumulated knowledge about the site and a strong determination to get the best possible clean-up not only for the river but of the many other contaminated sites in Pittsfield. A month of exhausting negotiation resulted in a list of 11 demands the Agencies were willing to accept in return for our withdrawal of the motion to intervene.

SNAPPING TURTLE WITH EGGS

The list includes: the EPA’s agreement to evaluate whether or not to conduct a pilot project for treatment technologies in the Rest of the River section; an intensified effort via meetings and the EPA’s website to make public clean-up performance standards, results of sampling, etc.; actively soliciting public comment on the design for the cap system in Silver Lake; open house tours of the entire site, including on-going clean-up activities on GE property; more extensive sampling of the West Branch of the Housatonic, including the King Street dump; and EPA’s agreement to provide a letter to homeowners with contaminated property, stating that the EPA would not pursue innocent homeowners for liability with respect to GE-related contamination.

Rep. Hodgkins negotiated additional support for contaminated property owners with the Pittsfield banking community, including a three million dollar fund to provide mortgages and loans.

After a meeting in late April after many hours of intense discussion, the Board voted 7-5 to withdraw the motion to intervene and to accept the negotiated agreement with EPA. Several Board Members made the point that even though we were withdrawing our court action, our official comments to the Consent Decree would still have to be considered by the EPA and would go before the Court.

Several parties are still challenging the Consent Decree in Federal District Court before Judge Ponsor, including the Housatonic Environmental Action League (HEAL) of Connecticut; the Schaghticoke Indian Tribe of Connecticut; a group of contaminated Housatonic River property owners; and owners of contaminated commercial property in Pittsfield.

On July 20, 2000 the U.S. Department of Justice officially asked Judge Ponsor to enter the Consent Decree, stating:

"The Consent Decree is a fair and reasonable resolution of claims against GE, comports with the objectives of..."
CERCLA, RCRA and the CWA and is in the public interest. The public comments submitted in this action do not show that entry of the Decree is improper, inadequate or not in the public interest. The Court should defer to the agreements reached in the Decree, and enter the Decree as a final judgment.

Exhibit 2 provides EPA’s answers to some of our concerns: “Several commenters object to the Consent Decree on the grounds that the commenters were excluded from the negotiating process, that the negotiations were conducted in private, and that certain information regarding the negotiations continues to be maintained in confidence. It is well settled in law and policy that it is appropriate for the government to conduct private negotiations. Without the ability to discuss the possibility of settlement, and engage in a bargaining process, settlements could not be attained in this case, the government provided the public with more information and access to the negotiations than is required by law or policy. The commenters seek privileges or rights beyond what is contemplated by law or government policy.

As regards the government’s decision to provide GE covenants not to sue in exchange for cleanup action and reimbursement for the monies the agencies have spent, Lois Schiffer, the Assistant Attorney General of the Environment and Natural Resources Division of the Justice Department wrote:

“First, the future liability covenants not to sue provided GE do not take effect until EPA certifies that a particular removal or remedial action is complete. Second [they] are subject to satisfactory performance by GE of its obligations under the proposed Consent Decree. Third, the proposed Consent Decree includes reservations by the United States of its rights to pursue GE for future liability if new information or previously unknown conditions, together with any other information, indicate that a Removal Action or Remedial Action is not protective of human health and the environment. In addition, to respond specifically to a particular concern about PCBs being found to be a greater health risk in the future, the proposed Consent Decree addresses EPA’s ability to pursue the ‘reopeners’ in such a situation.

The government wrote: “the government weighed the benefits of the proposed settlement against the cost, time, and likelihood of success of litigation, and potential remedies associated by unilateral EPA action. In this case, the government decided that the proposed Consent Decree offers far more benefits compared to the costs and uncertainties associated with litigation.

In its Memorandum in Support of Its Motion to Enter the Consent Decree the government states: “Not only is the settlement fair, it is reasonable. Reasonableness is evaluated in three ways: technical adequacy, adequacy of the settlement to compensate the public; and how well the settlement reflects litigation risks and other considerations. The Decree passes these tests with flying colors.”

NORTHERN LEOPARD FROG

First, the various response actions that have been and will be performed at the Site are adequate to address the contamination. EPA used its best technical judgment and selected a series of response actions that will be protective. The various concerns identified by commenters were considered by the Agency and do not raise any serious issues.

Second, the settlement adequately compensates the public. The United States will recover 90% - 97% of the expected site costs through cost recovery and work. In addition, the Decree includes a natural resource damage package worth over $25 million. The overall settlement goes far beyond what would be required to demonstrate adequacy of compensation. Ö (Pg. 9) (Emphasis added.).

ANOTHER SIDE OF THE STORY

Those who continue to challenge the Consent Decree interpret the settlement differently. According to the Amended Complaint of Moldmaster Engineering, Vincent Curro, and Vincent Stracuzzi, business commercial
property owners located on Newell Street:

GE not only caused massive and widespread PCB contamination through its activities during the decades when it used PCBs at its Pittsfield, Massachusetts operations, but GE continues to do so because PCBs misused and mishandled by GE continue, and will until abated continue, to be released into the environment. The acts alleged against the United States and the Commonwealth of Massachusetts involve the entering into a settlement agreement with GE which will result in the unconstitutional taking of plaintiffs-intervenors properties, if approved by this Honorable Court.

The complaint argues:

137. The Commonwealth of Massachusetts and the United States became aware that the Quality Printing Property located on Newell Street was heavily contaminated with PCBs in 1987, and failed to require GE to conduct an extensive investigation of the Newell Street area to determine the extent and level of the contamination.

138. The Commonwealth of Massachusetts and the United States became aware in 1988 that PCB contaminated fill had been dumped by GE in the early 1940s in the entire Newell Street area stretching from Marchetoís property and to the West through the Quality Printing property, and failed to require GE to conduct extensive investigation of the Newell Street area to determine the level and extent of PCB contamination.

Between 1989 and 1999 the Commonwealth of Massachusetts and the United States knew fully well that the Newell Street area, which encompasses the properties of plaintiffs-intervenors, was heavily contaminated with PCBs and presented a serious threat to the lives of plaintiffs-intervenors and their workers, and failed to take any action that would have required GE to remove the PCBs from plaintiffs-intervenorsí properties.

140. In October of 1999 the Commonwealth of Massachusetts and the United States announced that they had negotiated a Consent Agreement with GE which states the levels of clean-up which GE is required to achieve for the properties of plaintiffs-intervenors and differ slightly only on whether or not GE wishes voluntarily to pay for an easement for the benefit of the United States and the Commonwealth of Massachusetts:

<table>
<thead>
<tr>
<th>Depth</th>
<th>Contamination Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 1 foot</td>
<td>spatial average of less than 25 ppm</td>
</tr>
<tr>
<td>1 to 6 feet</td>
<td>less than 200 ppm</td>
</tr>
</tbody>
</table>

For properties where an ERE cannot be obtained, cleanup levels are as follows: 0 to 1 foot, a spatial average of less than 25 ppm; if the spatial average, after incorporating anticipated response actions, will exceed 25 ppm at 0 to 3 feet, then GE shall remove and replace soils to achieve a less than 25 ppm average (Appendix E to Consent Decree, Volume I, Pg. 50).

141. General Electric has removed PCBs from at least 68 contaminated properties in Pittsfield down to the levels of 2 parts per million which is the Massachusetts default standard for PCB contamination. As specified above in the Consent Decree, the United States and the Commonwealth will allow General Electric to clean-up the properties of Plaintiffs Intervenors to a significant lower standard.

142. GE was allowed by the Commonwealth of Massachusetts, the United States and the City of Pittsfield, to leave PCBs in the ground beyond the levels specified by Massachusetts default standards in order for the United States and the Commonwealth to gain significant concessions from GE in the clean-up of other areas of Pittsfield, and in addition as admitted publicly by counsel for the United States for the payment of nineteen million dollars to the United States, and as admitted publicly by counsel for the City of Pittsfield, for contributions equivalent to many millions of dollars to the City of Pittsfield through the City of Pittsfield Economic Development Authority.

V. STRACUZZIÍS NEWELL STREET SIGN

143. The United States and the Commonwealth admit that the Consent Decree is in fact the taking of an easement on plaintiffs-intervenorsí properties, since they have asked General Electric to compensate Plaintiffs Intervenors for the taking of the easement.

144. The values for the easements, referred to in paragraph 143, were set by the Commonwealth and the United States in totally arbitrary and capricious fashion and are an abuse of discretion.
145. The Consent Decree is also arbitrary and capricious and an abuse of discretion in that it makes it totally voluntary upon GE to pay or not pay the totally inadequate easement amounts.
146. Plaintiffs-intervenors cannot dig in their properties.
149. The United States and the Commonwealth have gained concessions from GE estimated to add to more than two hundred million dollars in clean-up costs described in the propose Consent Decree.
150. The United States and the Commonwealth had however no right to acquire an easement on plaintiffs-intervenors' properties without adequate compensation.
151. The entering of the Consent Decree in its present form is a violation of the Fifth Amendment of the United States Constitution in that it represents a taking of an easement by the United States and the Commonwealth of Massachusetts, of plaintiffs-intervenors' properties without adequate compensation.

LATE BREAKING NEWS

On September 6, 2000, Judge Ponsor ruled in favor of the citizen intervenors, allowing them to present their concerns about the Consent Decree to the Court. They must submit written arguments on October 2, 2000, to which the EPA and the Justice Department have until October 23 to respond. Following those arguments, Judge Ponsor will decide whether or not to sign the Consent Decree.

A YES VOTE: BENNO FRIEDMAN

What we did accomplish:
The outcome of the negotiations is a ten point agreement that, in various ways, enhances and strengthens the Decree's promise to be protective of human and environmental health. In addition, we now have a written commitment from the EPA to investigate the applicability of remedial treatment technologies for the rest of the river. Of equal importance was the side agreement by the lending institutions of Pittsfield to create a pool of funds for residential property owners who might otherwise be unable to borrow on property that still contained some level of contamination.

What we did not accomplish:
The decision to contain and monitor PCBs rather than remove and permanently destroy them, the plastic sheeting in the river, Mt. Doyle, the mountain of toxic waste 50 yards from the Allendale Schoolyard, the absurdly low figure that General Electric is coughing up to compensate us for damage to the natural resources; the failures of the Decree stand, unaffected by our motion and its withdrawal. Ultimately, the political reality, the unified and nearly universal stamp of approval that had been given the Decree by the agencies, by Pittsfield's political machine, the business community and by the near unbroken silence of Pittsfield's citizenry had its effect on our board of directors. Each one of us will revisit that decision innumerable times, measuring our decision against the continuing cleanup and its aftermath.

What is our current position?
Our objections to the Consent Decree still stand. The language and logic supporting our motion is identical to what we filed as part of the public comments to the Decree. The motion's withdrawal does not signal a change in our approach to the problems associated with PCB contamination. We stand behind our belief that it would be best to remove and render them harmless, rather than contain them under plastic, rock or earth. We are not optimistic about the success of the agencies' solutions.

However, at this juncture, limited to the specifics covered by the Decree, we have conditionally accepted their methodology. The burden of proof rests on them. It is now the agencies' responsibility to live up to the terms of the agreement; to monitor the caps, the armoring and the landfills, the river, the floodplain, and the oxbows and to employ the full extent of their regulatory authority, as defined by performance standards and other yardsticks, to revisit and correct any deficiencies that may arise in the methodology that they have chosen. On numerous
occasions, agency representatives have asked for our trust. We give it to them, perhaps naively, certainly hopeful but definitely not blindly.

WOODS POND

A NO VOTE: MICKEY FRIEDMAN

I voted against accepting the settlement because I felt that there were too many aspects to the Consent Decree that compromised public health and the health of the environment. I wanted our day in court. In 1993 HRI published *The Housatonic Manifesto*, declaring our commitment to fight for the following: *The Housatonic River and its associated tributaries and wetlands shall be cleansed of all toxins, including PCBs, and there shall be no discharge of waste into the river. Broad reaches of land along the river shall be protected by public ownership.* I don't believe that the settlement either adequately removes the contamination or compensates the public.

GE will be leaving massive amounts of PCBs and other toxic contamination in underground plumes in the East Street, Lyman Street, and Newell Street neighborhoods, beneath the Housatonic River bed and in the river banks, in Silver Lake, and will be adding more toxic material to Hill 78 and the Building 71 landfill. In return for 70 years of river contamination, GE will be paying a natural resource damage award of only $25 million, of which approximately $16 million is a cash payment.

In its wake, GE is leaving a city unable to use its own groundwater, a workforce that many believe has been deeply affected by daily contact with toxic chemicals, and God knows how many people with PCB blood levels higher than the national background level. We will never know for sure the price our community has truly paid, and no public health official seems willing to calculate the price we will continue to pay.

Did environmental regulators work hard to craft a settlement they believe in? Absolutely. But they are overworked and underpaid and operate in a world of very limited resources, under enormous political pressure from politicians whose elections depend on corporate campaign contributions, and they face so many other exhausting battles with polluters at other sites.

In this context we are supposed to believe that we have won a big enough victory. The cranes are in the river; significant amounts of PCBs have been removed; and 130 homes have been cleaned. We have played a major part in all this, but for me it is not enough. I have fought for treatment, not landfilling; removal not a plastic-lined cap for the river.

I see Ed Bates and Charlie Fessenden, who worked at Power Transformer and fought valiantly to learn the truth about how the workers were affected by PCBs and tried unsuccessfully to get an open and honest occupational health study; Gig Darey who has fought longer than anyone to truly clean a river he loves and to fight for public ownership of land along the river; Vinnie Curro and Vinnie Stracuzzi, whose Newell Street businesses were poisoned and rendered worthless. They have not received justice.

Compromise has become our national game; and ordinary working people are the ones who always have to make the most compromises. GE faced several billion dollars worth of cleanup costs; they settled for spending several hundred million. We may have achieved more than we dreamed we would have, but that doesn't mean we've won enough. That's the problem with these kind of unbalanced battles.

It is discouraging that former allies have turned their energies to the politically easier and less inflammatory issues of river restoration and seem far more interested in GE's restoration money than PCB removal. From my vantage point, it is premature to talk about restoration until we have a truly clean river from Pittsfield to Long Island Sound. One of the biggest mistakes we made was to give into pressure to separate our Housatonic River
Restoration project from our PCB advocacy. It has shifted emphasis from clean-up to beautification, and encouraged egotism and greed. But more than that it works to isolate HRI and makes our continuing advocacy that much more difficult. It is easy to imagine GE refusing to clean the river through Lenox and Woods Pond and into Rising Pond.

When the HRI Board of Directors authorized Tim Gray to proceed with a legal challenge, and engage Cristobal Bonifaz, I believed the Board would follow through. I helped to prepare our legal challenge and believed strongly that we had made a strong and legally sound case. Though EPA and Department of Justice attorneys many times told us that GE would walk and that Judge Ponsor wouldnít consider our arguments, his September 7, 2000 ruling proves otherwise. Iím disappointed that we didnít have the political will to carry on with that challenge, and personally embarrassed not to be there with the other intervenors.

UPDATES AND PCB NEWS

At the June meeting of the CCC, Susan Svirsky of the EPA spoke about the agencyís on-going work for the Rest of the River assessing a wide range of impacts: sediment toxicity, the health of benthic invertebrates, fish reproduction, amphibian reproduction, tree swallow reproduction, as well as some important work studying the impact of PCBs on mink reproduction. The EPA is well aware of recent challenges to the risk assessment work performed on the Hudson River and has made sure to incorporate those concerns in their analysis.

Part of HRIís agreement with EPA called for the Agency to expand and improve public access to important information about the site. One of our main suggestions was to improve the EPA website, and they have done a wonderful job. Find a computer with internet access and log on to http://www.epa.gov/region01/ge. Many of the photographs we have used in this issue have come from the EPA site. You can download important documents, for viewing and printing with Adobe Acrobat.

Board Member Shep Evans suggests that people check out the website of the Environmental Defense Fund at http://environmentaldefense.org. Using their pollution locator ñ we entered the Pittsfield zip code 01201 - you can find information about the GE-HousatonicRiver Site.

We discovered that the site is tied for 13th place in the nation using the EPAís Hazard Rating System. One wonders what the ranking would be if every PCB dumpsite in the County ñ including those weíve been told about at the Super Stop N Shop, the softball complex etc., as well as those yet to be discovered - was included.

ANNISTON, ALABAMA PCB SITE

As part of the Superfund listing, the federal Agency for Toxic Substances and Disease Registry (ATSDR) was to conduct a health assessment of the Pittsfield community.

Recently ATSDR released a draft evaluation of soil, blood and air data from a PCB site in Anniston, Alabama. One of the first manufacturers of PCBs was the Swann Chemical Company - and workers at Swann exhibited some of the first adverse effects from PCBs and journal articles in 1936 and 1937 chronicled severe skin problems and systemic effects like liver damage. Monsanto purchased Swann in 1935 and manufactured PCBs and other chemicals at its Anniston facility. As a result of community pressure, ATSDR began an assessment in 1995. A just released draft reports states:

iPCBs in residential soil present a public health hazard of cancerous and non-cancerous health effects for persons with prolonged exposure. PCBs in residential soils in some areas may present a public health hazard for thyroid and neurodevelopmental effects after exposure durations of less than 1 year.

iPCB exposures may have been more severe in the past. However, the fact that young children have elevated
levels of PCBs indicates that exposure may still be occurring at high levels.

Persons with elevated blood levels (greater than 20 micrograms per liter) for whom there is evidence of current exposure to soil contamination should be a focus of particular attention in future environmental characterization and public health actions.

Of the 2,970 people who had blood taken, the average PCB level was 14.2 ppb, and levels ranged from non-detect to 2,111.5 ppb.

(Note: according to the ATSDR 95% of Americans have levels less than 10 µg/L (micrograms per liter or 10 ppb (parts per billion). But as you can see from Tim Grayís report, there is good reason to believe that this figure will be revised downward to show significantly lower levels.


**MONSANTO VERDICT**

Extract from The AGRIBUSINESS EXAMINER Issue # 87 August 30, 2000

Monitoring Corporate Agribusiness From a Public Interest Perspective A.V. Krebs Editor\Publisher

After listening to testimony that the danger to workers posed by PCBs was the reason state officials had to demolish and replace a 12-story state building next to the Capitol after a 1994 fire, a Philadelphia jury stunned the Monsanto Co. recently by ruling that the company should pay $90 million in damages to the state of Pennsylvania for selling defective and toxic PCBs that left the building contaminated after a 1994 fire.

Board member Don Roeder reports: "Our paper entitled "Polychlorinated Biphenyls in Tributary Fishes of the Housatonic River, Massachusetts" has been accepted for publication by the journal Freshwater Ecology and should be appearing soon. Authors are D. Roeder, D. Denenfeld and R. Schmidt."

HRI recently received an Environmental Justice grant from the EPA to conduct a survey to give Pittsfield residents an opportunity to recount their experiences with PCBs, express their concerns about PCBs, and comment upon the clean-up efforts underway in local schools, parks, neighborhoods, the Housatonic River and Silver Lake. If you would like to participate, please call Tim Gray at (413) 499-6112.

We've included a copy of the survey questionnaire for those of you living in Pittsfield. Please fill one out if you live on or near PCB-contaminated land, and think you may have come in contact with contamination. Return questionnaires to HRI, 20 Bank Street, Pittsfield, MA 01201.

**FROM EXECUTIVE DIRECTOR**

**TIM GRAY**

For a number of years HRI has been bringing up information at the public meetings about suspected underground plumes (under-ground pools of chemicals) and buried barrel sites that were reported to our organization by former General Electric Workers.

The usual scenario when we report this information to GE and the Agencies has been a long wait to get action. At many times HRI was told that our evidence did not support the indication that these sites did indeed exist.

HRI kept bringing up the information that a barrel site was located at the Pittsfield landfill. We were told that it had been investigated thoroughly and nothing was found. The agencies told us they did specialized testing to look for the barrels and even brought a person on site to show them where to dig only to find nothing. HRI insistently continued to bring this information in front of the agencies.

The City of Pittsfield was moving at a record pace to cap over the landfill and bring it to final closure under DEP regulations. At the final moments the bulldozer hit a barrel. This prompted DEP to order a full investigation. In the final analysis over 850 barrels were found at this site directly on the banks of the Housatonic. This would have been a time-bomb waiting to further pollute the river.
For almost two years I doggedly brought up more information about the Newell Street area and the well known "ax-yard" reported to HRI by GE workers. Once again we were led to believe that the agencies had sampled these areas and there was no indication that these sites were as problematic as HRI was asserting. That is until EPA finally made GE sink more sampling wells. At the Newell Street parking lot GE finally reported that over 15,000 gallons of a toxic mixture of chemicals had recently been pumped from this site in the weeks after discovery. Some of these plumes have PCB levels as high as 300,000 PPM. They continue to play down the information as a "small pocket" even though GE workers assert this area was a major dumping ground for GE and that barrels and pure chemicals were buried there.

When I asked EPA if under the consent decree settlement they would make GE excavate the barrels and clean up the mess from the bottom up I was told no. EPA will make GE "pump and treat" the chemicals. We worry because these sites are the banks of the Housatonic River and border a residential neighborhood already highly polluted because GE gave away free fill saturated with PCBs and other chemicals.

In the first 1/2 mile clean up GE and EPA have encountered at least three plumes in or on the banks of the river that they were not aware of. One of these plumes is directly next to the "ax yard" that HRI has been asking for years for the agencies to investigate. This plume has extremely high levels of chemicals.

**LYMAN ST PARKING AREA SITS ABOVE PLUME**

Close to two years ago HRI members also brought to the agencies attention an oily substance they observed directly next to the Lyman Street bridge. HRI was told that this oil was a naturally occurring substance brought about by the breakdown of organic compounds in the river system. It was nothing to worry about. Over a year went by but HRI members remained skeptical of this assessment. At the last citizen's coordinating council meeting EPA announced that they had found a problem directly in this area connected to the highly contaminated Lyman Street area. It now appears that this oil was not a naturally occurring substance but instead another surprise to the EPA.

HRI does not have a lot of faith in the pump and treat system GE uses. GE has been pumping these chemicals for over 15 years. Recently EPA said GE had pumped millions of gallons out of the ground over this extended period of time. After twenty years it is apparent that we still do not know all of the plume sites and EPA's assertion that all of this information was known seems to be a major miscalculation on their part. Only recently has EPA started talking about the unknowns that will occur in the clean up.

Over two years ago the MA Dept. of Public Health (MDPH) promised a study to help determine the toxic effects of PCBs and answer some of the questions that HRI posed to the Department and address the questions local citizens had regarding GE's claim that PCBs were not problematic.

HRI was particularly concerned about getting the latest, most scientifically up-to-date assessment of what background levels of PCBs in the blood are-the amount most Americans have in their blood who have not been exposed to out of the ordinary concentrations of PCBs. We were particularly concerned with the study the MDPH did of residents living along the Housatonic River corridor. That study, published in September 1997 concluded that "The serum PCB levels found among participants with the highest risk of exposure to PCBs in this study were generally within the background range reported for the non-occupationally exposed population in the U.S."

HRI was concerned that the data they based this decision on was from the 1980s. Upon further research HRI found that the most recent data was supporting a much lower national PCB blood level. If true, this would show peoples' blood levels in our area were indeed elevated, and of concern.

If you check out the report in this issue on the Anniston Alabama PCB site, you can see the importance of what
the federal agencies regard as background levels. In the MDPH study they used the figure of 4 ñ 8 ppb (parts per billion). What if the background levels are now 2 ppb. That means someone with 8 ppb in their blood has as much as 4 times the amount of PCBs in their blood as the typical American.

HRI had hopes of timely answers to some of our questions. It is now over two years later and the report is still being held up by the MDPH. There is no excuse for the delay. MDPH representatives sent to the Citizen Coordinating meeting have been uninformed, and unable to answer our questions. The people of Berkshire County deserve better than they're getting from MDPH.

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HRI exists on a tiny budget; and we donate hundreds and hundreds of hours of work. Please support our important advocacy by donating whatever you can.

Housatonic River Initiative
20 Bank Row
Pittsfield, MA 01201

HRI: WORKING FOR A FISHABLE, SWIMMABLE HOUSATONIC SINCE 1992
pcbs heading south

The intensity of PCB contamination and its variation with depth below the riverbed is demonstrated in this HRI project animation done at Tufts University. [click here to view it]

WATERFOWL SAMPLES FROM HOUSATONIC RIVER SHOW ELEVATED LEVELS OF PCBs; STATE DEPARTMENT OF PUBLIC HEALTH ISSUES DUCK CONSUMPTION ADVISORY

The table below summarizes the PCB concentrations found in the Housatonic study area and compares the results to the PCB levels found in mallards at the Lower Fox River Superfund Site in Wisconsin, another water body heavily contaminated with PCBs. Wisconsin is one of the two states (the other being New York) that currently have a waterfowl advisory for PCBs in effect. PCB concentrations are presented in parts per million, not adjusted for fat content.

Comparison of PCBs in Duck Tissue (reported in parts per million)

<table>
<thead>
<tr>
<th></th>
<th>average</th>
<th>maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housatonic River, MA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>breast tissue</td>
<td>7.1</td>
<td>19.4</td>
</tr>
<tr>
<td>liver tissue</td>
<td>10.6</td>
<td>38.6</td>
</tr>
<tr>
<td>Three Mile Pond, MA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>breast tissue</td>
<td>0.6</td>
<td>3.4</td>
</tr>
<tr>
<td>liver tissue</td>
<td>0.2</td>
<td>0.7</td>
</tr>
<tr>
<td>Lower Fox River, WI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>breast tissue</td>
<td>0.4</td>
<td>3.5</td>
</tr>
<tr>
<td>liver tissue</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

BOSTON - Waterfowl samples collected last summer on the Housatonic River in western Massachusetts show elevated concentrations of polychlorinated biphenyls (PCBs) - believed to be among the highest levels reported in the country, according to sampling results finalized this week by the U.S. Environmental Protection Agency.

The duck breast tissue samples had average PCB concentrations of 7.1 parts per million. When adjusted for fat content in accordance with U.S. Food and Drug Administration practices, the PCB concentrations averaged 648 ppm. The tolerance level for poultry set by the U.S. FDA is 3 ppm fat content, making these results over 200 times higher than the national tolerance level. The highest PCB levels - 3,700 parts per million adjusted for fat - were found in the breast tissue of a six-month old wood duck.
Concerned by the new sampling results, EPA and the Massachusetts Department of Environmental Protection have asked the Massachusetts Department of Public Health to evaluate the need for a public health advisory on waterfowl consumption. EPA is also working with the U.S. Fish and Wildlife Service to alert other Northeast states in the waterfowl "flyway," or migration route, of the results.

"Given the high PCB levels and upcoming duck hunting season, we are moving as quickly as possible to make the public aware of these results and provide some guidance on the appropriateness of consuming waterfowl," said John P. DeVillars, EPA's New England Administrator.

"These test results are further evidence of the serious damage to the Housatonic River," added Bob Durand, secretary of the Massachusetts Executive Office of Environmental Affairs. "We must expedite cleanup efforts to protect wildlife habitat along the river from further PCB contamination."

"The Massachusetts Department of Public Health has reviewed the U.S. Environmental Protection Agency data and is issuing a provisional waterfowl consumption advisory for Massachusetts. (See attached advisory) The department also reminds residents and local sports license holders of western Massachusetts that MDPH has a toll free hot line, 1-800-240-4266, established two years ago, which offers Housatonic area residents concerned about exposure, interviews and free blood tests to determine exposure levels," said MDPH Commissioner, Dr. Howard Koh. Koh added, "It is important to remind consumers that all duck served and sold in Massachusetts restaurants and food stores is required to come from U.S. Department of Agriculture regulated processing plants."

Last summer, EPA scientists collected 25 waterfowl (wood ducks and mallards) from a PCB-contaminated portion of the Housatonic River, just north of Woods Pond in Lenox. An additional 20 ducks were collected from an area uncontaminated by PCBs in the same watershed - specifically, Three Mile Pond in Sheffield.

EPA scientists conducting the duck study observed that the birds collected on the Housatonic River had spent the season nesting, feeding and rearing their young within the study area. The majority of the birds collected at Three Mile Pond came in from elsewhere as part of their fall migration shortly before being collected. Most of the birds collected from both areas were birds that had been born that spring.

All of the ducks collected from the Housatonic had PCB levels in excess of the 3 ppm FDA poultry limit. The results indicate that waterfowl nesting and feeding within the contaminated area of the Housatonic are accumulating PCBs in their tissue. Wood ducks and mallards feed on plants and small invertebrates.

This week's sampling results are one part of EPA's extensive investigation of PCB contamination and its impacts in the Lower Housatonic River. The investigation includes a detailed ongoing assessment of the risks to human health and the environment from PCBs and other contaminants in the lower river. (A similar evaluation has already been done for the upper two-mile stretch of the river, which is now being targeted for cleanup activities.)

The health and environmental risk assessments for the lower river are expected to be completed next fall. Upon completion, the risk assessments will be peer reviewed by outside experts. These assessments and the outcome from the peer reviews will then be used to help EPA determine future cleanup decisions for the lower river.
PCBs, a group of organic compounds used for many decades in electrical transformers as a coolant and insulator, are a probable human carcinogen. PCBs are extremely persistent in the environment because they break down very slowly and bioaccumulate in the fatty tissue of fish, birds and mammals, including humans. General Electric used PCBs for manufacturing and servicing of electrical transformers at its Pittsfield facility from the 1930s through 1977, the same year Congress banned their use and distribution.
Remo Del Gallo, is the former Mayor of Pittsfield and owns a bar right down the street from the plant. He spoke about one of the many ways the nearby community was contaminated:

"In the Lakewood area, most of the people work for the General Electric. It's called Lakewood because it was always under water off the lake. It was flooded. Now there is a dam, which rectifies the problem.

"We are worse off than Love Canal. We kept a low profile because people were very upset about it. ...This is the area we grew up in and we know the problem better than management. ... You see there above the railroad? General Electric used to have tanks with a capacity of 275,000 gallons. I know because I represented the neighborhood on this issue. Those tanks leaked for years - since the early thirties. When the trains used to go by, you could see the oil squishing up under the wheels - but they say we have no problem. In the old days they used to bring in grapes in those oil tanks for the people to make wine. ... They drilled 200 wells altogether at a cost of $1700 to $1800 a piece, I think - they were shallow wells. After that, they purchased some property in the area where PCBs were found." (1986 article by June Nash and Max Kirsch: "Polychlorinated Biphenyls in the Electrical Machinery Industry" Pergamon Press)

GE began to manufacture electrical capacitors and transformers at the Pittsfield plant beginning in 1903. According to research compiled by David Schalk of Bloomington, Indiana, PCBs, "polychlorinated biphenyls" are a group of distinct chemical compounds, none of which occur naturally. They were produced commercially by Swann Chemical Company beginning in 1929. Swann was purchased in 1935 by the Monsanto Industrial Chemical Company. Monsanto produced PCBs at plants in Sauget, Illinois and Anniston, Alabama until 1978. PCBs were used in capacitors, transformers, hydraulic fluids, lubricants, carbonless copy paper, inks, pesticide extenders, sealants and flame retardants.

GE used the tradename Pyranol to denote its version of Monsanto-produced PCBs. The Transformer Manufacturing Division of GE manufactured large and medium-sized AC and DC power transformers. Pyranol was used by GE beginning in 1932 and until 1977 when they stopped due to the Environmental Protection Agency's (EPA) proposed regulations banning the manufacture of PCBs."
GE, PCBs, and the Pittsfield/Housatonic Site

In 1990, I was hired with my ex-partner to videotape interviews for a proposed television documentary about General Electric and Pittsfield, Massachusetts. The producers, Barbara Abrash, a documentary filmmaker, and Dr. June Nash, an anthropologist, were unable to secure funding for the project. The footage lay on a shelf in our office. But I was haunted by an interview with Ed Bates and Charles Fessenden, two former GE employees, and two years later decided to continue the project on my own.

Unfortunately, before I went back in 1992 to continue the project and re-interview them, Charles Fessenden had died of leukemia. His death and the incredible story Ed Bates told of their efforts to get to the bottom of the health problems of the workers under his charge at GE Power Transformer has inspired me to devote eight years of my life to find out the truth about GE, PCBs, Pittsfield and the Housatonic River. Later that year I became a founding member of the Housatonic River Initiative (HRI) and have been working ever since to clean up the river and remove GEís PCBs from Pittsfield and contaminated sites in Berkshire County.

Since 1992 I have attended and videotaped countless meetings sponsored by the Massachusetts Department of Environmental Protection (DEP), the Massachusetts Department of Public Health (DPH), and the United States Environmental Protection Agency (EPA). I have conducted many interviews with former GE workers, the former Mayor of Pittsfield, Remo DelGallo, and those who contaminated residential and commercial properties. Excerpts from some of those videotaped meetings and interviews accompany HRIís official comments to the state and federal environmental Agencies regarding the Consent Decree they negotiated with GE, a decree which is now before the Federal District Court in Springfield, Massachusetts.

While I am not a chemist, nor a licensed engineer, I do believe my experience chronicling this complicated story of contamination and clean-up has provided me with a valuable viewpoint.

When I began to investigate this story, a generation of concerned citizens had already spent a decade working for a clean-up. Their numbers included Ed Bates, the former Manager of Tests at Power Transformer, and Charles Fessenden, his Supervisor of Calculations; environmentalists like George Wislocki of the Berkshire Natural Resources Council, George íGigeî Darey, a sportsman, a Selectman of Lenox, and the Chairman of Massachusetts Fisheries and Wildlife, Betty Phinney, a teacher, Tim Gray who lived on the river in Lee and was studying environmental science at UMASS, and George Hamilton, a professor of Environmental Sciences at Berkshire Community College; concerned parents at the Allendale School, which had been built on PCB-contaminated fill; and former Pittsfield Mayor DelGallo who with Bernie Kleban of Monterey had helped to organize an unofficial blood-testing program in the early 1980s for GE workers. All of these people were extremely frustrated with the lack of any appreciable action, and many of them had pretty much given up hope that any clean-up would occur.

The founding of the Housatonic River Initiative (HRI) in 1992, a broad-based coalition of local environmentalists, sportsmen, and political leaders, was regarded by many as our last chance to put pressure on GE and the environmental and public health officials to actually do something significant about the problem.

In its first newsletter, HRI published "The Housatonic Manifesto," which stated:

The Housatonic River Initiative sets forth the following objectives and commits itself to witnessing their achievement by the end of the 20th century, so that the people of Berkshire County may celebrate the river and its gifts:
The Housatonic River and its associated tributaries and wetlands shall be cleansed of all toxins, including PCBs, and there shall be no discharge of waste into the river.
Broad reaches of land along the river shall be protected by public ownership, and the public shall enjoy access to both land and water in pursuit of pleasure and enjoyment; appropriate improvements such as foot trails, bicycle paths and boat launches shall be encouraged for the public enjoyment.

On March 24, 1993 HRI mobilized the attendance of 300 people at a meeting with MADEP and the EPA to discuss public involvement in the clean-up effort. At that meeting MADEP officials were presented with a letter to Commissioner Daniel Greenbaum which stated:

As members of the Housatonic River Initiative, an ad hoc coalition of environmental groups and concerned citizens, we have for many years been witness to the Commonwealthís efforts to cleanse the Housatonic River of PCBs. The years that have been consumed by studies and deliberations have caused us to lose confidence that real progress will ever come.

One reason for our loss of faith is that the Department of Environmental Protection has not sought to include the citizens of Berkshire County as active participants in the clean-up process. This isolation from the process has often meant that we do not know what our public agencies, let alone General Electric, intend to do in regard to the clean up.

The lack of any consistent public citizen presence in clean-up activities is one of the reasons the process has been so disappointing to date. However, the people of Berkshire County have recommitted themselves to asserting the public interest in restoration of the Housatonic River, and we would welcome a similar recommitment to public involvement on the part of the agencies. Denying such involvement at this point would be a sad disservice to the citizens of this county.

To that end, the Housatonic River Initiative proposes to work cooperatively with the Massachusetts Department of Environmental Protection, and the U.S. Environmental Protection Agency in drafting and signing a Memorandum of Understanding, which would spell out ways to keep Berkshire citizens involved in the Housatonic River clean up.

In a May 5, 1993 letter, Alan Weinberg, Regional Engineer, Bureau of Waste Site Cleanup, Western Region of MADEP informed the Housatonic River Initiative of the following:

(1) In reference to future technical meetings for the Housatonic River and the GE facility sites in Pittsfield, it was concluded that DEP supports the proposal for a designee of the HRI to attend and participate in technical meetings between DEP and GE, and between DEP, GE and EPA, subject to EPA concurrence. The designee and/or HRI would receive any reports or written materials before such meetings, allowing an opportunity to review these materials and to discuss with DEP or EPA any concerns prior to technical meetings.

(2) HRI will seek to invite and include representatives of cities and towns along the Housatonic, particularly Pittsfield, Lee and Lenox, as well as other interested groups in the Pittsfield area, so as to effectively constitute a citizens advisory committee for the GE facility sites in Pittsfield as well as the Housatonic River site. HRI will develop a plan for channeling information on remedial planning and actions for the Housatonic River and the General Electric sites from technical meetings to the larger populace.

(3) DEP will seek funding through the Departmentís Site Assessment and Remediation Support Services (SARSS) contracts in effort to provide technical assistance to the HRI/Citizens Advisory Group.
The DEP Western Regional Office will make every effort to increase the level of staffing and to assemble a Project Team assigned to the Housatonic River and Pittsfield GE Facility sites.

Based on HRI's success and effective advocacy and our ability to represent a wide variety of stakeholders, the Massachusetts Department of Environmental Protection (MADEP) has recognized HRI "as a primary citizens advisory group for these sites" suggesting that "interested citizens and other parties are encouraged to join forces under the HRI umbrella." (Revised PUBLIC INVOLVEMENT PLAN for the Housatonic River and the General Electric Company Pittsfield Disposal Sites, prepared by Massachusetts Department of Environmental Protection, April 1995, Pg. 66.)

One of the first projects HRI undertook was to begin a prolonged period of research. Along with fellow members Benno Friedman, Tim Gray, and Professor Donald Roeder, I began to research some of the main issues, and read some of the principle documents generated by GE and its contractors, as well as the 1988 RCRA Site Assessment compiled by the EPA.

The first thing I realized was that there were serious and major discrepancies between the anecdotal testimony of former GE workers and Pittsfield residents, and General Electric and its contractors regarding the volume and extent of the PCB contamination. And that time and time again, the Agencies seemed to accept GEís calculations.

Before I review some of the history at this site, I want to create a larger context for all that follows. Two major events occurred in 1996 and 1997. The first was the discovery of extremely high levels of PCB-contaminated oil in riverbank soils and river sediment in a section of the Housatonic River opposite to the former GE Building 68 in an area of the river between the Newell and Lyman Street Bridges. The second development, probably not unrelated, was the decision of the EPA to finally propose this site on September 25, 1997 for placement on the National Priorities List (Superfund). This action, a clear and marked escalation by the EPA, brought GE to the negotiating table in the Fall of 1997. Negotiations began between representatives of the EPA, the U.S. Department of Justice, the U.S. Department of the Interior, the National Oceanographic Atmospheric Administration (NOAA), the Commonwealth of Massachusetts, the State of Connecticut and the City of Pittsfield. Unfortunately, the Housatonic River Initiative argued in vain to gain a seat at the negotiations. Not only was the constituencies of HRI denied ñ sportsmen, environmentalists, local official from South Berkshire towns which border the river ñ but EPA officials included representatives from the City of Pittsfield ñ Mayor Gerald Doyle, Jr. who had never been forceful advocate of a GE cleanup, and Thomas Hickey, the City Council President, a former GE employee, and one of the few people fortunate enough to have his PCB-contaminated property bought by GE several years before.

On September, 24, 1998 EPA Region One Administrator John P. DeVillars announced that the public agency and GE negotiating teams had achieved an agreement in principle. The Consent Agreement called for GE to clean the site in various degrees, reimburse state and federal agencies for past and continuing costs, in return for the Agencyís decision not to list the site on the National Priorities List.

John DeVillars declared that the agreement:
"sets the course for the environmental and economic restoration of Pittsfield and southern Berkshire County. The agreement provides for substantial investments in the cleanup of the Housatonic River, the GE plant site, and other contaminated properties, as well as brownfields redevelopment in Pittsfield and compensation for natural resource damages.

With this agreement, we have moved the cleanup onto the fast track. We have honored our most important responsibility - to protect the health and environment of Pittsfield and Berkshire County. We have built our agreement not only on a strong legal and scientific foundation, but on basic principles of fairness and equity. And we have demonstrated that whenever possible, the greatest common good is achieved through cooperation, not confrontation; through collaboration, rather than polarization.

This agreement affects many different interests - neighborhood residents, environmentalists, business people, towns throughout the valley from Pittsfield well into Connecticut. If each of these constituencies examines only the portion of the agreement most directly affecting them, they may well find something less than what they deem perfect. But if they look at not only their own interests but also the common good, I believe they will find, as we do, much to celebrate and take pride in.

We very much appreciate the patience of the community as GE and the government agencies took the time necessary to reach this agreement. It took longer than any of us expected or liked. But we believe our time and effort will pay substantial dividends for all the citizens of this community well into the future. As this agreement moves from concept to reality, we look forward to the community’s continued thoughtful and valuable participation.

Mr. DeVillars’ claims notwithstanding, I believe that the absence at the table of a strong locally-based environmental advocacy - combined with an atmosphere of great political pressure on environmental negotiators - set the stage for massive and unnecessary compromise during the negotiations.

It is my belief that the failures of the 1999 Consent Decree have been shaped by the history at this site. From the moment GE introduced the use of Pyranol, its trademarked name for PCB-oil in the early 1930s, it controlled and withheld information about potential health effects, the use and misuse of the chemicals, and where it was disposing its PCB-contaminated waste.

State and federal environmental agencies and public health agencies have been placing a catch-up game ever since. GE has masterfully withheld information in violation of Consent Agreements signed in 1980, 1990, and 1991; GE has skillfully avoided acknowledging responsibility until such time as Statute of Limitations realities have precluded workers, and contaminated property owners from gaining compensation. GE has outmaneuvered state and federal regulators for many decades; and in the final analysis, won far more than the government litigators have gained for the people.

Here is a review of some of the relevant history.

A SHORT HISTORY OF PUBLIC FRUSTRATION

One example of the discrepancy between the official record and personal experience regards the important issue of the underground movement of PCB-oil from the GE plant to the surrounding neighborhood. On August 15, 1997 and December 7, 1999, I videotaped Remo DelGallo, the former Mayor of Pittsfield, and the owner of DelGalloís Restaurant on Newell Street, across East Street from GEís Building 100. Remo DelGallo stated:
My involvement goes back to January 1980 when I saw a group of people drilling test wells in the road, and uh I was wondering what they were doing so I called the Commissioner of Public Works at that given time, and the Commissioner of Public Works at that time was Gerry Doyle, Senior, the Mayor's father. And he said to me, "Remo, I can only tell you what they told me. They're looking for the location of the water table and the flow of water in the water table." We knew that wasn't what they were looking for.

And uh that's when we became directly involved in what was going on and in the meantime they drilled approximately 200 test wells in this given area, bordering Newell Street, East Street, and Fasce Place, all the way to the Housatonic River. And uh, now what we were primarily concerned about was ñ is the liquid waste and uh you know I've mentioned time and again Pittsfield is a city but it's still a village. Everybody knows what's going on. I can go back 50, 60 years if need be that when the General Electric Company had the oil tanks, the oil house up on the northerly side of the railroad tracks next to Peckís Bridge, those tanks leaked for years and years and years and I don't know why they never took corrective measures and the oil flowed down the embankment, under the railroad tracks and then into East Street and what was said uh created a plume and when they say a plume, they're talking about an underground lake of oil Ö

We saw the oil ñ there was a tremendous amount of oil even in those days. Now you have to remember, inside the General Electric Company ñ it is an old plant located in the center of the city of Pittsfield and there were umpteen drains all over the place. And they dumped a voluminous amount of oil in those drains. Nobody even knew where the drains went. Some leached into Silver Lake; a good number of them went into the Housatonic River. But my real concern at the time was, when I say credibility gap, I say it for a given reason because the gentleman who was a personal friend of mine, a fellow by the name of George Rousseau, was in charge of all liquid waste disposal for the General Electric Company since 1936 and he is the one that informed as to where the liquid waste was being dumped ñ four given sites on General Electric property ñ and you probably don't understand what they mean by waste oil.

It came in 30 gallon barrels and 55 gallon barrels, some two-thirds Pyranol, one-third oil; two-thirds water, one-third Pyranol. And when I say disposed, we're talking about thousands and thousands and thousands of gallons of oil. We're not talking about crank-case oil, a hundred and fifty gallons. We're talking about thousands and thousands of gallons of oil, including that oil tank that they had up on what is known as Peckís Bridge, 550,000 gallons of oil, that's how much - it held that capacity ñ and it leaked for years and years and years, before 1964 and after 1964.

Now I'll go back to 1980 when we contacted Angelo Inatosca and he had an associate, Walter Schwartz, they worked for what we called the DEQE, the Department of Environmental Quality Engineering, and they stated that it never penetrated, the plume, the oil never penetrated the southerly side of East Street. So I took it upon myself to take them up to a place known as Bardois Bakery and now we have Hiser, H&S Automotive up there and uh Bardois Bakery, I remember he had a sump pump at the bottom of the stairs and I said to Angelo Inatosca at the time and representatives of the General Electric Company and EPA, if there's no oil in that sump pump I'll agree with you it never penetrated the southerly side of East Street. And now when we went up there and uh we
checked that sump pump, it was loaded with oil, loaded with oil.

And the sump pump was emptying into the city sewer line and I explained it to them what happens when you empty that sump pump into the city sewer line from there it goes down to the sewer treatment plant and from the sewer treatment plant into the Housatonic River, from the Housatonic River into Lenoxdale uh Woodís Pond Ö

And they also stated and when I say they Iím talking about representatives of the General Electric Company and Angelo Inatosca it did not touch the Housatonic River and yet we did find out it did penetrate the Housatonic River. They said it did not contaminate Goodrich Pond and since then we found out that it also contaminated Goodrich Pond.

Another critical dispute is centered around the extent of PCB-contamination in the Housatonic River. It is fascinating to read the Massachusetts DEPís own account of the 10 year period between 1981 and 1990. In its 1990 Draft version of its iPublic Involvement Plan, General Electric Company, Housatonic River And Newell Street Disposal Sites, Pittsfield, MAî the DEP wrote:

B. HOUSATONIC RIVER:

In 1981 the Department of Environmental Protection (then DEQE) and the US EPA executed a Consent Order with GE which required GE to conduct preliminary studies of PCB contamination in the Housatonic River; 1) document the facilityís hazardous waste disposal practices, 2) examine the extent of existing contamination on site, and 3) investigate contamination of the Housatonic River and corrective action alternatives. GE hired Stewart Laboratories, Inc. of Knoxville, TN to conduct the study. The report was issued in 1983 and entitled iThe Housatonic River Studyî.

iThe Housatonic River Studyî concluded that approximately 39,000 pounds of PCBs had adhered to the bottom and backwater sediments of the River, approximately 250,000 cubic yards of sediment contamination spread over 20 miles of river. The 1983 report estimated that approximately 70% of these PCBs were located in and along the Housatonic River between the GE facility and the headwaters of Woods Pond in Lee and Lenox, MA, an additional 20% of the PCBs were located in Woods Pond itself. The report concluded that PCBs were pulled from behind Woods Pond dam into the Housatonic River downstream.

The stretch of River believed to be the most heavily contaminated is between New Lenox Road and Woods Pond. Within this 4 mile stretch an estimated 22,000 pounds of PCBs have settled.


In 1985 GE also prepared a report entitled iHousatonic River Study, 135 Day Interim Reportî. This report proposed among other things the installation of stop logs in the raceway of the Woods Pond Dam to discourage the transport of sediment past the Woods
Pond Dam. (In 1987 the US Army Corps of Engineers under contract with the US EPA issued a report which supported GEís conclusion about the Woods Pond Dam and recommended further study.)

In June 1988 the Department executed a Notice of Responsibility and second administrative Consent Order with GE and several other parties. GE made improvements to the Woods Pond Dam abutment and constructed a closure structure at the Dam to minimize the transport of PCB contaminated sediments downstream.

In December 1989 GE completed construction of the new dam structure, downstream from the former Woods Pond Dam. The new dam is adjacent to and part of the stoplog structure.

In January 1990 GE requested permission to conduct a Pilot Test to determine the effectiveness of Biological Degradation in eliminating PCBs from sediments and soils in Woods Pond.

In March 1990 the Department issued a Notice of Responsibility to GE stating that portions of the Housatonic River, Silver Lake and their floodplains constitute a disposal site under MGL c. 21E and the MCP. The Department cited the 1983 Housatonic River Study Report by Stewart Laboratory and a subsequent investigation by Blasland & Bouck which confirmed the presence of PCBs in sediments and certain floodplain areas along the Housatonic River.

In Spring 1990 a Consent Order governing the continued investigation and cleanup of the Housatonic River and Newell Street disposal sites will be executed by GE and DEP. The Consent Order governs: resampling of water and sediments for PCBs and chemical compounds in: Woods Pond, upgradient of the GE Facility (to determine background levels), Silver Lake, upstream of Woods Pond Dam, and downstream of Woods Pond Dam; the confirmation of all ìhot spotî locations; floodplain and former oxbow sampling and analysis; a fish sampling program; sediment transportation, environmental and public health risk characterization; and (possible) future Short Term Measures Ö (Pp. 4-5)

Thatís the state agencyís account of those years. Our research revealed some very interesting additional and contradictory information. GEís 1982 Stewart Report estimated that there was a total of approximately 40,000 pounds (slightly less than 20 tons) of PCBs in the Housatonic River from the GE site to the Connecticut border. GE workers believed that that was a gross underestimation of the problem.

In a video interview conducted on July 6, 2000 Tim Gray recounts his early involvement with the Housatonic River:

Well it was right around the mid-seventies, í75 or í76 that I was at UMASS and uh we applied for a grant to the Institute for Man and His Environment ñ there were three other students that were interested in the Housatonic River. Um I at that time already lived on the Housatonic River so I had a keen interest in what was back there, and uh we were all young environmental science students and wanted a project Ó

And we worked for a couple of semesters sampling the Housatonic River, and indeed
finding out that everything we sampled had PCBs. We sampled frogs, fish, and sediment. And everything came up positive for PCBs, and at that point we approached a fellow named Jim Thayer um from General Electric with our results, trying to see if he was interested and he told us he wasn’t interested and our data was false and couldn’t be true. GE had done sampling in the river and knew more about the river than anyone else and um the PCB pollution wasn’t that extensive.

We also went to the Agencies, the DEQE and were basically told that our data was interesting but they also told us at the same time that because we didn’t use exact quality control procedures etc. and etc. um that they were quick to dismiss our data. And in fact we never portrayed our data as being absolutely perfect in the way that an engineering firm would sample in the worry that someday they might be hauled into court. We were just a bunch of young students trying to find out if there were PCBs in the river. And I think our data was good enough to say yes, there were PCBs in the river but at that time we were rebuffed by everybody.

On September 12, 1990 I participated in a videotaped interview with Ed Bates, the former Manager of Tests, and Charles Fessenden, the former Supervisor of Calculations, at GE Power Transformer in Pittsfield, Massachusetts.

Ed Bates stated:

Óthe GE scientist and engineer in 1936 come out with Pyranol which had polychlorinated biphenyls in it. And uh people don’t realize that Pyranol is twice as heavy as water. You put a gallon of Pyranol in water and it sinks right to the bottom. Within that twelve and half pounds of Pyranol weighs seven pounds of every gallon is PCBs. We used to use an average of 20,000 gallons of Pyranol a week. And this ò if you do simple mathematics ò this is 200, uh 140,000 pounds of Pyranol, of PCBs a week that we were handling. And uh we had a loss rate: spillage, overfilling of about 3% so this says that every week we would lose between 4- and 5,000 pounds of PCBs that would go down the drain and into the river. Ö [and] it wasn’t until 1975 and í76 that they started to use silicon and phase out Pyranol.

We had a meeting last Sunday that, a forum, where the head of the Pittsf- of the Massachusetts DEQE talked, and he said that they’ve been trying from 1981 to now, which is 1990 to get an agreement of consent from the GE. Uh he was very indefinite as to the now on it.

The Eagle said that they [GE] had put these special uh cylinders in the water, didn’t they Charlie? For three years, so this means its been 1981 to 1993 before they’ll decide to anything for the Housatonic River. In the meantime about a million and a half pounds of PCBs have been plowed into that river. Uh, I imagine a good 30% is left. (Emphasis added)

I was astounded by the differences in the calculations. GE’s estimates were accepted for more than a decade. There are several examples which indicate how these incredibly low estimates came to be accepted as truth. A November 1982 brochure entitled iPCBs and the Housatonic Riveri was published
jointly by the Berkshire County Regional Planning Commission, the Housatonic River Watershed Association, and the Housatonic Valley Association and was funded in part by an EPA grant. The pamphlet stated:

**Question:** Where are the highest concentrations of PCBs in the Housatonic River?
**Findings:** Of the estimated 22,200 total pounds of PCBs in the river sediments, roughly 60% are in the Massachusetts portion, and are located primarily in Woods Pond.

A one page fact sheet entitled *iPCB Contamination in the Housatonic River* was produced in October 1987 by the Berkshire County Regional Planning Commission and Galileo Studios with funding provided by the Massachusetts Department of Environment Quality Engineering. The sheet declared:

The estimated 39,400 pounds of PCBs clinging to the bottom and backwater sediment of the Housatonic River accumulated over a 40 year period.

Both the Massachusetts and federal environmental agencies accepted GE-sponsored data without any efforts at independent verification. In fact, the USEPA, in its *iFacility and Process Description* in its 1988 RCRA Site Assessment for the GE/Pittsfield/Housatonic Site, quoted the GE sponsored Stewart Report’s assessment of the PCB problem in the Housatonic River:

In December 1982, the Housatonic River study, performed by Stewart Laboratories for GE, documented that approximately 40,000 pounds of PCBs were contained in the river sediments in Massachusetts, comprising more than 250,000 cubic yards of contaminated sediment (Reference 123). Of this amount, 70% occurred between the GE plant and Woods Pond, 20% occurred in Woods Pond, and 10% occurred between Woods Pond and the Connecticut border. The PCB levels in sediments ranged from less than 1 to 210 ppm (dry weight) and appeared to be confined to the upper 12 inches of the sediment.

PCB transport was thought to occur mainly through sediment deposition, suspension, and redeposition. (RCRA Site Assessment, III-29).

This significant discrepancy in calculating the total amount and distribution of PCB-contamination of the Housatonic River continued. In its December 1991 *iMCP Interim Phase II Report/Current Assessment Summary For Housatonic River*, compiled to fulfill its obligations to both the Massachusetts Department of Environmental Protection and the USEPA, GE’s contractors, Blasland & Bouck, Engineers concluded that while it couldn’t locate the prior sampling locations of the Stewart Report:

However, a statistical comparison was made of log-normal means from the two data sets on a reach-by-reach basis for the river. **This comparison indicates that there has been no significant change in the overall distribution of PCB concentrations in the Housatonic River sediments since the comprehensive study in the early 1980s.** This conclusion is also supported by the existing information on PCB transport in the river, both as reflected in the sedimentation data from impoundments along the river (discussed immediately below).

Data from impoundments along the river indicate that sediments containing PCBs are subject to gradual *silting overi* with cleaner sediments such that PCB levels in the surficial sediments are lower than the levels in the deeper sediments. In addition, the recent PCB data indicate some evidence of natural PCB dechlorination in the sediments. (ES-2 to ES-3) (Emphasis added.)

In response to questions from the DEP, GE issued its Addendum to MCP Interim Phase II Report/Current Assessment Summary For Housatonic River defending its conclusions in August 1992.
Much like Remo DelGallo and his concern for the contamination of the plumes in Pittsfield, environmentalists concerned with the contamination of the Housatonic River were extremely frustrated with the early track record of the environmental agencies.

On August 8, 1992 during a canoe ride from the Decker canoe launch in Lenox, I interviewed George "Gige" Darey, an active sportsman who grew up fishing and trapping on the river, a Lenox Selectman at the time, and Chairman of the Massachusetts Division of Fisheries and Wildlife.

George Darey stated:

I’ve constantly been at most of the public meetings a thorn in the sides of GE and uh EPA, you know, trying to prod them into making GE own up to the seriousness of this problem and doing something about it. You know it’s uh, it’s very frustrating because I don’t think we’re any further along the way to correcting this problem than we were about, what is it, seven or eight years ago now or more that we started to have all the public hearings.

You know that woman who came in here from EPA, I forgot her name, the first one, said that she was going to stay here till the uh project was finished and uh you know she was gone in less than a year. And then we had somebody else here and I’ve taken them out on this ride that we’re taking right now, I took most of those people till I kind of got fed up with it. If I had decals for all the EPA people that I’ve given rides down this river to, they’d come halfway down this canoe.

And the last one that came here, I told her I said if you’re around here in a year, I said you let me know and I’ll give you a ride down here but it’s like doing anything with the federal government, that they’ve changed hands so many times, that we never seem to get anything done and, of course, GE is not doing very much to solve the problem they’re caused either. You know the solutions they give are so ridiculous and so outlandish that uh you know nobody wants to do them and it’s almost as if you feel, hey these guys are going to keep on doing this till we finally throw our hands up in the air and say, hey the river’s - is OK like it is, just leave it alone.

This kind of frustration was widespread. Massachusetts State Representative Christopher Hodgkins had a similar tale to tell. At a November 9, 1992 meeting of about one hundred people at Simon’s Rock College in Great Barrington, Rep. Hodgkins recounted his experience with the site:

When I was first elected to office, four months into that, there was a public meeting held at the Western Mass Electric Company building and there was a room about this size and we all went up there uh for the famous result which is this ñ the Remedial Alternatives Evaluation Proposals - Ö and the EPA at the time had three solutions, three proposals of which you can put forth. The first is removal, so you can come up with proposals to remove them. The second is containment, so you can come up with proposals for containment, and the third, of course is no action.

And this is the God’s honest truth, and for those of you who doubt, we even have little diagrams here of uh ñ this is always my favorite ñ this is their proposal for containment Ö Their proposal for containment. We’re going to contain the PCB sediments. It’s insoluble. It sinks right to the bottom, so let’s just contain it. So they go down the Housatonic River and they take the wildlife land to the right of the river going south, take the land to the right of the river and re-route the river. This is the truth. They even have diagrams of it. Cement it over but then they’re going to re-route the river, and then
where the sediment is, they contain that sediment by putting a cement cap over that sediment. And then they re-route the river back on to where it was and now we have a Housatonic River, it will be like a great big water slide.

The second proposal, the second proposal, and this is a true one too, this is what their proposal was. Their second proposal was removal. So how shall we remove it. Well welll re-route the river. We'll then look at the Sediment. We'll take the sediment and we'll scoop it up and we'll put it in these great big earth-moving trucks. We'll head them down East New Lenox Road, down Williams Street, down Dorchester Avenue, down East Street and we're going to dump it in Silver Lake, because that's already a Superfund Site and here's where they have a picture, Silver Lake Disposal Site, and uh that was their proposal for removal. And everybody in the room, 'cause this was hundreds of thousands of dollars for this study, you know, just stood there with their mouths open.

And then, guess what, we had to go through a whole stage where we had to have hearings on their proposals, no matter if they were just totally stupid. We had to have hearings on their proposals. So then as time went on and on, then they said, well if you don't like Silver Lake, where will we dump it. So we said, well we'll find you a place to put the stuff, even if you have to put it in tight tanks next to the river until you find a site. That's what they did with the Hudson. They at least dredged it then they had to find a site for it, or at least part of it they dredged. And uh, so then that was their only — there were only two alternatives.

And then as time went on, a lot of folks that kept on coming to these public hearings, and saying what is going on here. And the EPA during all this time had five Project Directors. The DEQE, unfortunately, has had only one Project Director and I know that after every meeting, every two years, we'd all get up and ask for his resignation en masse. And finally the good news is, of late, they have now taken that gentleman, who was in charge of Hazardous Waste Sites in Western Massachusetts, and they've moved him to the central office and he no longer has anything to do with this project, thank God.

But a lot went on during that time and quite frankly what we're all reading about now is what we read a couple of weeks ago, a couple of months ago. General Electric spends $25 million, now that's a total since all this started, $25 million on remediation and the remediation is their favorite one, and that's when you talked about the concern in your backyard — we have things that can break down the PCBs, the Pac-Man idea, the biodegradation. There's these things which can eat the PCBs and they're going to eat them all up and then they're going to go away. You know that's what they have going on right now.

So as all this was happening, some of us asked for some other things — the Berkshire Regional Planning Commission, all sorts of environmentalists, all good people, all involved said wait a minute! There's 114 proposals supposedly that you looked at, why not try some of them? Why not try wet dredging? Why not try several different alternatives, just as a test? And every single time the General Electric Company would come forth and say no, based on analysis that we conducted, this is no longer feasible! So we then said, well what is feasible? Are you talking about financially? Or environmentally? Just not feasible! Ö But it's so funny, it's so funny, it's sad.

When this all started ten years ago, the room was this filled. There were this many
people here, and then as time went on, the Ed Batesí of this world and others were all that were left, and uh the last meeting we had up at the Town Hall in Lenox, we looked around and there were only six of us.

Eleven years after the Stewart Report, on March 24, 1993 at a meeting at the Town Hall in Lenox, Massachusetts called in response to the Housatonic River Initiativeís efforts to strengthen the Agenciesí public participation process, it was clear that the Agencies were still relying on GE-sponsored data. At the meeting Alan Weinberg and Kathy Wanat of the DEP once again reinforced the notion that the river had 40,000 pounds of PCBs in it. Alan Weinberg stated:

The problem is weÍre dealing with years of study and hundreds and hundreds and hundreds of sampling locations and uh youÍre talking about sediments and soils and fish and frogs and uh any number of things and uh, you know, the PCB contamination ranges from nothing to hundreds of thousands of parts per million. I mean thereís no question that there are a lot of PCBs in the river. Thereís what 29,000 pounds Ô [Kathy Wanat: 40,000] Ô 40,000 pounds in the river, o.k. PCB contamination, PCBs. Thereís no ñ I donít think thereís any question about that. Thereís no question that the river is contaminated with PCBs and the floodplains have contamination, soil around the facility is contaminated. Thatís why weÍre here

The reliance on GE-generated data was a dynamic that characterized this site. GE and its contractors provided almost all of the testing and sampling. And the Agencies were resistant to calls from HRI and other interested parties, including flood plain property owners and owners of the Newell Street businesses, for an significantly increased, comprehensive, and independent testing program. The repeated reliance on GE data, shaped and marked the critically-important issue of how much contamination we were dealing with, where it was, and therefore effected the issue of how it should be dealt with.

On August 8, 1993, I submitted comments on behalf of the Housatonic River Initiative to Douglas Luckerman of the USEPA on GEís April 1993 Proposal for its RCRA Facility Investigation of the Housatonic River and Silver Lake. I wrote:

For the record it should be stated that concerned citizens of Berkshire county have a long-standing feeling that both the U.S. EPA and the Massachusetts Department of Environmental Protection (DEP) have allowed GE to set the all-important parameters at issue here, including the extent and location of PCB contamination of the Housatonic River and its flood-plain. This has mainly occurred by the very limited nature of the testing the DEP has mandated thus far. So please understand that the HRI welcomes the opportunity to provide a more extensive interpretation of what GE terms the limited number of additional data gaps that need to be filled Ô i (p. 1-3) Ô

It is HRIís feeling that at far too many locations, the testing was not deep enough to reach non-detectable PCB concentrations in the sediment of the Housatonic River. This is especially true in the floodplain where testing has often not met that standard, nor for that matter moved enough beyond the reaches of the 10 year floodplain.

It is our understanding that as part of the MCP Floodplain Investigation, floodplain soil samples were collected at depths of 0-6 inches and 6-12 inches at 121 sampling locations
Because MCP Phase II floodplain sampling was limited to 0-6 and 6-12 inch depths, the HRI believes that it is premature to conclude that the section of floodplain which exhibited PCBs above 1 ppm was generally limited to the area between the GE facility and the Woods Pond Dam.\(\text{p. 4.2}\)  

As general policy, before corrective measures are approved, the HRI would welcome a more complete profile of PCB contamination, both vertically at a greater number of test sites to non-detectable PCB concentrations, and horizontally throughout the 100 year floodplain. This is especially important because as GE notes data from impoundments along the river indicate that sediments containing PCBs are subject to gradual \textit{ësilting overí} with cleaner sediments such that PCB levels in the surficial sediments are lower than levels in the deeper sediments.\(\text{p. 2-8}\) All the more reason to establish the widest possible profile of the changing PCB concentrations in both the Housatonic River and its floodplain, and what better way to accurately reflect that by finding the levels at which there are non-detectable PCB concentrations.

This same concern prompts us to challenge GEís assertion that based on review of the site data by ChemRisk (GEís risk assessment consultant), the existing data on PCBs in the river sediments are considered sufficient to assess the potential risks relating to such PCBs. In addition, the existing data on the distribution, concentration, and volumes of PCB-containing sediments appear to be sufficient to conduct at least a preliminary study of corrective measures for the sediments.\(\text{pp. 2-8, 9}\)

Berkshire County citizens have seen all often how an inadequate and ill-informed knowledge of river use has resulted in an underestimation of potential risks. Until there is a more extensive and reliable data base of PCB concentrations and a more reliable profile of river use, similar underestimations of risk potential will occur. \(\text{Ö}\)

The HRI has several questions and concerns with GEís Preliminary Health and Environmental Assessment Proposal For The Housatonic River, Silver Lake, And Their Floodplains, April 28, 1993.\(\text{I}\) On Page 2 GE states: \textit{Based on present information, it appears that there is no current or reasonably foreseeable use of or exposure to groundwater in Area 6. Hence, exposure pathways associated with groundwater will not be further considered in this proposal.} \(\text{I}\) To our knowledge, no conclusive examination has been made of the ground water as to direction or flow rate, the groundís permeability, or any other factor that might bear on present or future contamination. Considerable amounts of land have already been contaminated ñ given the complex network of aquifers (sic) and the abundance of ground water in this area, we think itís impossible without additional testing to state with any degree of certainty that there will be no future use or exposure to contaminants. Nor do we think it within GEís purview to make such important public policy decisions. The HRI urges that appropriate Pittsfield officials and the public be consulted as to issues of future use and exposure to Pittsfieldís groundwater. \(\text{Ö}\)
As regards Task 7.0 Exposure Assessment, the HRI urges you to reject GEís assertion that "potential risks are often substantially overestimated." Similarly we urge you to reject GEís contention that "The use of numerous conservative assumptions in an assessment has the effect of introducing additional and unnecessary overconservatism into the results of the assessment." (p. 12) Public health and safety as well as effective stewardship of the Berkshire County environment demands the most conservative assumptions in risk assessment. Each day the scientific and public health communities are learning more and more about the complicated toxicology of PCBs. Now is not the time to relax risk assessment standards.

HRI also urges maximum public participation as regards Subtask 7.1 Refinement of Exposure Information and Identification of Exposure Scenarios. There is always the danger that outside consultants may underestimate both exposure information and exposure scenarios. We urge vigilant oversight in the development of scenarios for residential, recreational, and occupational exposure scenarios.

Similar vigilance is required in oversight of Task 8.0 Characterization of Risk to Human Health. Again we urge that the EPA maintain a policy of conservatism as regards predicted intakes and dose-response information, as well as consult with experts in environmental toxicology and public health. GE has a history of denying and minimizing the potential carcinogenic effects and non-carcinogenic hazards of PCBs.

On January 3, 1994 the EPA issued a modified Corrective Action Permit for the GE facility in Pittsfield under the Resource Conservation and Recovery Act (RCRA). As required by the Permit, in May 1994 GE submitted a Proposal for the Preliminary Investigation of Corrective Measures (PICM) for the Housatonic River and Silver Lake, which set forth a range of potential measures to address the contamination in the river and Silver Lake.

On July 15, 1994, the Housatonic River Initiative submitted extensive comments, including stating once again its concern that the true extent of contamination had yet to be calculated or delineated:

For the record, HRI would like to repeat comments it has previously made to both EPA and DEP concerning GE’s estimates of PCB contamination beginning not only from the GE plant and surrounding neighborhoods but throughout the river system. Local residents, including many who have worked extensively with PCBs at Power Transformer, have always felt that GE has underestimated the extent of the PCB problem, and have always questioned the accuracy of the Stewart report and subsequent reports of GE-employed consultants who often refer back to the Stewart report.

We ask that you bear this in mind as you consider GE’s assessment of the problem: "The volume of sediment with PCB concentrations exceeding 1 ppm in the main channel of the Housatonic River between the GE facility and the headwater of Woods Pond was estimated to be approximately 455,000 cubic yards (cy) (BBL 1991). Most of this sediment was found to consist of fine-grained, organic material that ranges in depth from 12 to 56 inches below river bottom. The volumes of sediment with PCB concentrations exceeding 10 ppm and 50 ppm are estimated to be approximately 320,000 cy and 179,00 cy, respectively (BBL 1991)” (PICM, 1-7).

Such concerns have prompted our continual demand that EPA and DEP demand that GE test along the floodplain both horizontally and vertically until there is reason to believe we have reached reliable non-detect levels of PCBs. Until we have such reliable data, we
are being asked to make profoundly important decisions without adequate data. A remediation strategy conducted without this kind of necessary data will only provide us with temporary and partial solutions.

GE next includes "bioremediation" as a second in-situ technology that warrants additional investigation: "Although a full-scale in-situ application of PCB sediment bioremediation has not yet been realized, there is reason to believe that this potential technology offers several environmental and economic advantages to other PCB remediation technologies under consideration." (PICM, 2-5).

The HRI disagrees. We regard "bioremediation" as a totally unproven, and yet to be successful technology which GE promotes in an effort to delay any kind of comprehensive, and, of course, costly, remediation strategy. GE has already gained years of delay with its bioremediation efforts at Woods Pond, and Berkshire County has yet to see any significant reduction in PCB-contamination. The bottom line is that even GE cannot state with any degree of optimism that bioremediation will be effective: "This is a promising and developing technology, but it is uncertain at this time whether it will prove to be a viable remediation alternative." (PICM, 2-8). We urge you to redirect GE's efforts and expenditures to studying and testing strategies that will prove effective within a matter of years not lifetimes.

GE offers us Mother Nature. GE states: "Natural recovery of the Housatonic River and Silver Lake sediments is defined as a combination of physical and/or biological processes that reduce the mobility and/or toxicity of PCBs contained in the river sediments. In addition, these processes could also reduce the potential for exposure by humans and biota to the PCB-containing sediments, as a result of the in-situ covering of PCB-containing sediments with "cleaner" sediments." (PICM, 2-9). What we are offered here is nothing more than natural "blending."

Some of what GE claims to be the reduction of PCB levels in our river system is merely demonstration that some of the contamination has moved downstream and into the Long Island Sound and beyond. We have merely transferred some of our poisonous legacy to others.

GE states: "Available sampling data suggest an overall declining trend in PCB levels in certain fish species in Massachusetts and, in some cases, Connecticut (Academy of Natural Sciences of Philadelphia 1991; BBL 1991). One possible explanation for this observed decrease in PCB levels in select species is a reduction in exposure of fish to PCB-containing sediments by the covering of PCB-containing sediments with cleaner sediments." (PICM, 2-11).

As you consider this claim we remind you of our comments of April 1993 regarding work being done by the Michigan Department of Public Health and the Institute for Environmental Toxicology at Michigan State University which calls into question GE's contention that there has been a general decrease in PCB-concentrations in fish since the 1980s:

"All of the methods currently used to develop consumption advisories are based on quantification of a total concentration of PCBs, even though PCBs are a complex mixture
of congeners. As a result of different PCB sources, differential partitioning, degradation, metabolism, and excretion of PCB congeners in environmental compartments and within organisms, the relative concentrations of PCB congeners in environmental samples can vary among matrices, over geographic regions, and over time (14). Individual congeners vary in toxic potency by as much as 6 orders of magnitude (15). The toxic potencies of PCB mixtures are dependent on the relative concentrations of the individual congeners. The most potent PCB congeners are also some of the congeners most resistant to degradation and metabolism (16). Thus, there has been concern that risk assessments based on total concentrations of PCBs are inaccurate because measurement of total concentrations of PCBs may not reflect the potency of the PCB mixture to cause toxic effects. "(Predictions of Concentrations of 2,3,7,8-Tetrachlorodibenzo-p-dioxins Equivalents from Total Concentrations of Polychlorinated Biphenyls in Fish Fillets, Environmental Science & Technology, Vol. 26, 1992).

GE continues: "Both published data and data generated by GE's Corporate Research & Development (CRD) facility are available and indicate that partial PCB dechlorination processes are underway in Silver Lake sediments and to a lesser extent in Housatonic River sediments (BBL 1985b; Brown et al. 1987). Biological degradation of PCBs represents a potential mechanism to reduce the toxicity of PCBs in these sediments (BBL 1985b)." (PICM, 2-11).

We'd like to remind you of our comments of September 3, 1993 which alert you to the results of recent work by Brian Eitzer of the Connecticut Agricultural Experiment Station published in Environmental Science Technology, 1993, 27, 1632-1637, entitled "Comparison of Point and Nonpoint Sources of Polychlorinated Di-benzo-p-dioxins and Polychlorinated Dibenzofurans to Sediments of the Housatonic River."

Some of his conclusions follow: "Clearly the Woods Pond (site code 2) samples are different from all other samples in both pattern and total concentration. The PCB point source is between Center Pond and Woods Pond (site codes 1 and 2 respectively). It is most likely, therefore, that this point source is creating a major impact on the dioxin and furan concentrations in the Woods Pond sediment samples."

"The Housatonic sites ... show elevated levels of PCDF homologs, particularly the F4, F5, and F6 homologs. This is most pronounced in the Woods Pond samples in which F4 actually exceeds D8. Since PCDF are known contaminants of PCB (10,11) it is quite likely that the elevated PCDF originate from the PCB source. The proportional increase in PCDF diminishes as samples are taken further downstream from Woods Pond, which indicates a reduced impact of the point source on the downstream sediments."

As we've stated previously, Mr. Eitzer's report demonstrates that we are dealing with previously unrecorded and potentially very dangerous levels of polychlorinated dibenzofurans.

Perhaps GE needs to be reminded of its own words. As GE's own Material Safety Data Sheet for Aroclor 1254, dated May 1980 clearly states: "At about 300 to 600 C some PCBs can oxidize to produce chlorinated dibenzofurans which are much greater in toxicity than the PCBs." (Emphasis added.)
After introducing huge amounts of Monsanto/Westinghouse/GE-made poisonous PCBs into our neighborhoods, air, and river system, GE asks us to defer to what may prove, if it is ever fully successful, to be several centuries worth of natural processes. At best this is a cynical proposal. At worst, it is an example of GE's callous disregard for both human and animal life.

In March 1995, General Electric, in response to several concerns of the EPA and DEP, issued a revised version of the PICM. Most of HRIís concerns fell on deaf ears. GEís revised PICM stated:

(2) Scope of Proposal
The PICM Proposal addresses potential corrective measures for sediments in the Housatonic River (including Woods Pond) and in Silver Lake in western Massachusetts. The scope of this proposal is limited to a preliminary screening of the technologies. The need for remediation at this time has not yet been determined (1-3).

4.1 Summary of Technologies Selected for Further Evaluation
This PICM Proposal addresses both in-situ and ex-situ technologies for PCB-containing sediment. In situ technologies do not involve removal of the sediment and thus avoid many of the difficulties associated with ex-situ technologies, which necessitate the removal, transportation, dewatering, possible ex-situ treatment, and ultimate disposal of the sediment. Of the in-situ technologies that were screened, armoring bioremediation, and natural recovery have been selected for further investigation in the PICM. Armoring, which involves placement of layers of clean material over the PCB-containing sediment, is potentially applicable to portions of the upstream and middle reaches of the Housatonic River and to the areas near the shores of Silver Lake and near the east, south, and west shores of Woods Pond. However, additional studies are needed to evaluate its effectiveness, reliability, implementability, environmental effects, and cost. Bioremediation, which involves the natural or enhanced biological degradation of PCBs, is potentially applicable to all locations, but further laboratory and field research is needed to determine whether this will prove to be a viable remediation technology. Natural recovery, which primarily consists of the natural deposition of clean sediment over contaminated sediment, is potentially applicable to all locations as well, although further investigations are needed to confirm that natural recovery is occurring and to define the location and extent of such recovery. Natural recovery may be augmented by certain active measures such as enhancing the process of sedimentation (e.g., in Woods Pond) or limited river channelization in particular localized areas.

In order to implement an ex-situ remediation technology, several steps must be satisfactorily addressed: removal of the sediment, its transportation to a place where the sediment can be processed, dewatering of the sediment, treatment of the extracted water, ex-situ treatment of the sediment (if necessary), and ultimate disposal of the sediment. Of the removal technologies that were screened, the grab dredge, cutterhead dredge, horizontal auger dredge, Pneuma dredge, and river isolation and wet excavation technologies have been selected for further investigation. Each of these removal
technologies is potentially applicable to different locations of the river or Silver Lake (depending on the depth and type of sediment as well as its accessibility to dredging equipment), although severe technical problems would be faced in attempting to remove sediment from backwaters and wetlands in the lower reach of the Housatonic River or certain other locations. Moreover, any of the available dredging or excavation technologies will have substantial adverse environmental impacts in terms of destruction of wetlands and wildlife habitat, disruption of the aquatic ecosystem, sediment resuspension, and incidental noise, traffic and odors.

With respect to transport of the sediments to the dewatering location, all of the available technologies carry some risk of accidental spillage or leakage as well as, in some cases, adverse environmental impacts. Ö

The ex-situ treatment technologies selected for further investigation include three forms of high temperature thermal treatment (fluidized bed incineration, rotary kiln incineration, and infrared thermal treatment), low temperature thermal desorption, nucleophilic substitution, and soil washing. High- and low-temperature thermal treatment technologies have been widely used to treat contaminated soil at a number of sites. However, their use in treatment of PCB-containing sediment is limited. In addition, high temperature treatment involves a lengthy and costly permitting process and public acceptance of an on-site PCB incinerator is generally low Ö (4-1, 4-3)

This extensive excerpt reveals two important realities. The first is that as of March 1995, we were no closer to a clean-up than we were in the 1980s. The three strategies remained containment, removal, and natural recovery, a fancy term for no action. The second is GEís continued championing of the two least expensive options, bioremediation, what Representative Hodgkins refereed to as the Pac-man approach, and natural recovery, the no action approach of allowing Mother Nature to gradually cover over the contamination with sediment.

In its Supplemental Phase II/RCRA Facility Investigation Report For Housatonic River and Silver Lake, Volume I, January 1996, GE restates its claims about the extent and delineation of the contamination:

2.6.1 Sediment

The extensive sediment PCB sampling and analyses and reconnaissance/probing efforts have shown that the predominant load of PCBs present in the sediments of the Housatonic River exists within the approximate 12 mile stretch of the river between the GE facility and Woods Pond Dam. The average PCB concentration in this reach has been determined to be approximately 29 ppm, and the average depth of PCB-containing sediment in this reach has been determined to be approximately 2.4 feet. Aroclor 1260 is the predominant PCB Aroclor detected in the Housatonic River, constituting approximately 85 percent of the total detections, with the remainder quantitated as Aroclor 1254 (approximately 14 percent of the total) or Aroclor 1242 (less than 1 percent of the total). (Pg. 2-7)

3.2.1 Prior Investigations

In accordance with a 1981 Consent order issued by the MDEP and USEPA, GE commissioned Stewart Laboratories, Inc. (Stewart) to conduct an extensive study of the
presence and distribution of PCBs within the Housatonic River system. In general, the Stewart Study included:

- A review of available aerial photographs and topographic maps;
- A site reconnaissance of the river from Center Pond in Dalton, Massachusetts to the Connecticut Border; and
- The collection of 892 sediment samples from 226 sampling stations generally representative of distinct sediment accumulation areas in the river between Center Pond and the Connecticut border. Each of these samples was qualitatively assessed for sediment particle size and was analyzed at various depth increments for PCBs.

The resultant report (Stewart, 1982) provides a comprehensive "baseline" survey of the occurrence, distribution, and transport of PCBs in the Housatonic River and Silver Lake. (Pp. 3-2 to 3-3)

Two years after its first PICM, General Electric issued its Report on the Preliminary Investigation of Corrective Measures for Housatonic River and Silver Lake Sediment in May of 1996. The report stated:

This report presents the results of the studies and research conducted in the PICM and the preliminary evaluation of the selected technologies using the proposed evaluation criteria. Consistent with its purpose, this report does not include any recommendation of corrective measures for the Housatonic River and Silver Lake sediments and is not intended to lead to the selection of such measures, since the sediment cleanup levels and remedial objectives for the site have not yet been established and the specific areas requiring remediation have not yet been identified. Such recommendation will be provided as part of the Corrective Measures Study (CMS), which will be proposed and conducted after the completion of all site investigations, the performance of a Health and Environmental Assessment (HEA), and the establishment of Media Protection Standards (MPS) and remedial objectives for the site. (ES-1)

The message was clear to the citizens of Berkshire County that they ought not expect to see a PCB-cleanup in the near future. And it was not a surprise to see that GE was still advocating its no action approach:

Natural Recovery

Information from other sites indicates that natural recovery has been selected as the primary remedial action or as a part of the overall remedy at a number of sites. Moreover, information collected from the Housatonic River and Silver Lake indicates that natural recovery in the form of silting-over is on-going to varying degrees at the site with more pronounced evidence of such silting-over in Woods Pond, Silver Lake, and several backwater areas in the downstream river reach. This evidence includes the results from numerous sediment cores, many of which show lower (and declining) PCB concentrations in the surficial sediments than at depth, particularly in Woods Pond, Silver lake, and the backwater areas. In addition, recent preliminary analytical results from GE’s Corporate Research and Development (CRD) group indicate that natural biodegradation in the form of dechlorination of PCBs is occurring to a greater extent than previously believed within certain site sediments.
Based upon the foregoing information, it appears that natural recovery is already occurring at portions of this site and can be an important part of an effective long-term remedial approach to the site.  ((ES-6) Ö

**In-Situ Bioremediation**

In-situ bioremediation is the enhanced biological degradation of PCBs contained in the sediments. Research on the biodegradation of PCBs had identified two classes of bacteria that contribute to such biodegradation. Anaerobic bacteria degrade highly chlorinated PCB compounds into less chlorinated derivatives by removing the chlorine atoms. The less chlorinated derivatives may then be susceptible to further degradation by aerobic bacteria Ö In-situ bioremediation has not yet been applied on a full-scale basis to any similar PCB site in the United States; and its potential effectiveness, reliability, and implementability for remediating PCB-containing sediments are uncertain at this time. However, natural and enhanced PCB dechlorination has been observed in numerous laboratory studies involving Silver Lake, Housatonic River, and Woods Pond sediments. Additionally, GE had performed two separate pilot-scale field tests in the Hudson River and Woods Pond that indicate a potential for successful application of this technology to PCB-containing sediments. The potential effectiveness of in-situ bioremediation for site sediments is further supported by evidence that some dechlorination of PCBs in Silver Lake, Housatonic River, and Woods Pond sediments has been occurring naturally over time. In fact, recent laboratory results from GEís CRD group appear to indicate that the natural dechlorination of sediments in the Housatonic River and Woods Pond may be more extensive and prevalent than previously believed. (ES 8-9)

At the same time GE was pushing natural recovery and bioremediation as feasible clean-up options, it was once again emphasizing the negative effects of removal technologies:

First, it should be recognized that, although sediment dredging has been widely used for navigational purposes, navigational dredging has limited applicability to remedial removal technologies, since the later must be concerned with contaminants in the sediments. In fact, there is no precedent for total remedial dredging of PCB-containing sediments from a flowing river. Second, experience from other sites, where removal technologies were used for PCB-containing sediments in different types of waters or on a limited basis, demonstrates that no sediment removal technology will remove all of the PCBs or achieve low-level PCB cleanup goals. Third, sediment removal must be followed by a series of other steps, including transport, dewatering, and treatment and/or disposal of the removed sediments, all of which must be considered in evaluating a removal technology.

Fourth, all sediment removal technologies have short-term and long-term adverse environmental impacts, including but not limited to) destruction or alteration of the aquatic or wetlands habitats in the affected areas, resuspension of sediments in the water column, changes in physical parameters of the water body, and exposure of the sediments to the air resulting in PCB volatilization and odor emissions. (ES-9)

Year after year HRI raised the issue of inadequate sampling and the gross underestimation of total contamination to no avail. GEís reports to the Agencies continued to mislead the regulators and public alike. And, in our experience, it took the Agencies many years to correct this problem.

But everything changed in the Spring of 1996, when reality intervened and finally contradicted the findings of the Stewart Report. As a result of an increased sampling regime ñ part of the ongoing analysis of GEís East Street Area 2/USEPA Area 4 Site and the adjacent
Housatonic River - the March sampling and analysis of riverbank soils adjacent to Building 68 and the May sampling of nearby sediments identified highly elevated levels of PCBs. A large amount of highly concentrated PCB oil was discovered in the area of the former Building 68 on GE property near the Housatonic River. And GE informed the Agencies of that fact on July 15.

J. Lyn Cutler of the MADEP responded in her July 24, 1996 letter to GE:

From:
J. Lyn Cutler, MADEP

To:
Ronald F. Desgroseilliers
General Electric Company
Manager, Area Environmental and Facility Operations

General Electric Company provided verbal notification on July 15 to the Department of Environmental Protection (the Department) of levels of polychlorinated biphenyls (iPCBs) in Housatonic River sediments in excess of 15,000 ppm at a location adjacent to Building 68 in East Street Area II. The Department had been previously notified of elevated levels of PCBs in adjacent bank deposits up to 37,000 ppm. As stated in numerous conversations with Andrew Silfer (GE), the Department expects GE to submit plans to address this issue. Per your request earlier today, the Department hereby makes its request in writing. (Emphasis added.)

The Department has determined that these levels of PCBs pose an imminent hazard to human health and to the environment, therefore, it is requesting the submission of an Immediate Response Action Plan (iRAP) by the close of business on Tuesday, July 30, 1996. The IRAP should contain a proposal to define the source(s) of the PCBs and to fully evaluate the vertical and horizontal extent of contamination, within the Housatonic River related to these source areas, on the riverbanks and in adjacent areas in East Street Area II. The remediation proposed in the IRAP should be adequate to remove the source(s) of the contamination and eliminate any further releases to the Housatonic River. Since the contaminated sediments and potentially bank deposits will continue to serve as ongoing sources of contamination to downstream reaches of the river, the IRAP should contain provisions to address complete removal of the potential source areas, rather than propose temporary measures, such as capping or armoring, to abate the imminent hazard. (Emphasis added.)
A subsequent letter from GE dated July 30, 1996 offers GE’s history of this release of oil, and GE’s position regarding possible cleanup measures:

From: Ronald F. Desgroseilliers
Manager, Area Environmental Operations
To: J. Lyn Cutler MADEP

As you know, these PCBs appear to be attributable to a release that occurred in 1968, when a tank containing PCB Aroclor 1260 in the Building 68 area collapsed, splitting the tank seam and releasing approximately 1,000 gallons of PCBs to the riverbanks and the river. Although the contaminated surface rock and river bottom sediments were excavated and removed at that time, the current findings indicate that some PCBs from this release still remain in the sediments and the riverbank.

**At the outset, GE does not accept the conclusion in your letter that the levels of PCBs found in the sediments and riverbank adjacent to Building 68 pose an imminent hazard to human health and the environment.** Your letter provides no supporting basis for that conclusion, and GE does not believe, based on existing information and the characteristics of the affected area, that the PCBs in that area would be found to present an imminent hazard. From a human health standpoint, access to the affected area is restricted by fencing and by the river itself. Specifically, the area in which Building 68 is located is completely surrounded by a locked chain-link fence, as is the area across the river, the Newell Street Parking Lot. Moreover, access to the riverbank is restricted by the steep and vegetated nature of the riverbank and by the river itself.

Hence, the only way that individuals could access the affected area is by climbing a fence or by walking along the steep, vegetated riverbank or in the river, which would be extremely difficult. Given these site-specific conditions, it is unlikely that the levels of PCBs in this area could be considered an imminent hazard to human health.

From an ecological standpoint, it is also unlikely that this area would present an imminent hazard given the small size of the affected area and the fact that, as discussed further below, it does not appear to be a significant source of PCBs to the water column of the river. The affected area itself appears to be very limited in size and is located in an urban setting within or adjacent to an industrial facility. As such, it does not provide a sufficiently large or suitable habitat for an ecological population or community, and hence is very unlikely to cause significant ecological harm (let alone an imminent ecological hazard) to environmental receptors at the subpopulation, community, or ecosystem-wide level, as required by the Massachusetts Contingency Plan (MCP) (see CMR 40.0995(4)(d)2.)

Moreover, recent water column PCB data indicate that this area is not a significant source of PCBs to the river. Analysis of water column samples taken from the river during seven sampling events in 1995-96 does not reveal any significant increase of PCB concentrations between the closest station upstream of this area (Newell Street Bridge) and the closest downstream of this area (the footbridge from East Street Area 2 to the Newell Street Parking Lot). (Emphasis added.)

GE and the Agencies argued for several months about the need for, and the extent of, remediation. An August 20, 1996 point letter from MADEP USEPA to GE declared that the site represented an imminent hazard.

From: J. Lyn Cutler, Section Chief, Special Projects MADEP
Bryan Olson, Project Manager, Corrective Action Section, Office of Site Remediation and Restoration, USEPA, New England Region

To: Ronald F. Desgroseilliers
General Electric Company

Re: DEP: 1-0147 Pittsfield; EPA: Area 6; GE/Housatonic River; DEP: 1-0146 Pittsfield; EPA: Area 4; GE/East Street Area II; Contamination adjacent to Building 68; basis for Imminent Hazard determination, requirements for removal plan

The Massachusetts Department of Environmental Protection and the United States Environmental Protection Agency (the Agencies) have received the Immediate Response Action Plan for contamination adjacent to Building 68 (IRAP). The IRAP, dated July 30, 1996, was submitted by the General Electric Company via facsimile transmission on July 30 and by hard copy July 31. The IRAP was submitted in partial fulfillment of the requirements for an IRAP outlined in the Department’s July 24, 1996 letter. In order to expedite the investigation of the extent of contamination, the Agencies reviewed and conditionally approved the sampling program of the IRAP in a letter, dated August 1, 1996. This letter of August 20, 1996 summarizes the Agencies’ review of the remaining portions of the IRAP.

Notwithstanding the determinations described below, the Agencies reserve the right to require additional sampling or analysis if new information indicates that such sampling is necessary to comply with the EPA RCRA Corrective Action Permit, the Massachusetts Contingency Plan, the National Contingency Plan or as otherwise appropriate.

Agencies’ Determination

(8) The Agencies have determined that remedial actions must be taken, pursuant to their respective statutes, regarding the contamination in and around the area of Building 68. The contaminated soils and sediments behind Building 68 present an imminent hazard to human health and may present an imminent and substantial endangerment to health or the environment, pursuant to 7003(a) of the RCRA statute, (hereafter, referred to as the imminent hazard). Support for this determination includes, but is not limited to, the information presented in Attachments I, II, and III.

(9) Within 10 days of the date of this letter, GE shall post PCB-warning signs in and around the contaminated area that is subject to this IRA. If any new sampling indicates that this area extends beyond the area of the current investigation, then signs shall be added accordingly within 10 days of knowledge of this extended area. The signs shall read: WARNING PCBs present in soil and sediment at levels which may pose a threat to human health. For more information contact Massachusetts Department of Environmental Protection (413) 784-1100. U.S. Environmental Protection Agency (617) 565-3420. These signs shall have a similar format, in size, color and font, to those signs produced for the fish consumption advisory and for Silver Lake.

(10) By September 3, 1996, GE shall submit a revised IRAP. The revised IRAP shall include plans for remedial action(s) to abate the imminent hazard. Based on review of available information, the Agencies believe that removal is the only remedial action
which can abate the imminent hazard for the sediments in this area for the following reasons: a) prevention of sediment transport and water column resuspension; b) maintenance of existing flood storage capacity; c) elimination of a potential source; d) prevention of human exposure to the contaminated sediments (and soils); e) prevention of ecological exposure to sediments (and soils); and f) consistency with, and not an impediment to, final remedial actions.

Additionally, the removal remedial action, if implemented now, would work toward the completion of the action begun by General Electric in response to the 1968 release. The Agencies also believe that, for riverbank soils in this area, abatement of the imminent hazard can be accomplished by a combination of removal, containment and bank stabilization, for the same reasons. However, if GE proposes other removal action(s), the Agencies will evaluate that proposal.

(11) The revised IRAP shall also include a detailed explanation of how the Aroclor 1260 release occurred and, specifically, what measures were taken to partially remediate the contaminated soil. (Emphasis added.)

The following letters were attached:

United States Government Memorandum ñ U.S. Fish and Wildlife Service, New England Field Office, 22 Bridge Street ñ Unit #1, Concord, New Hampshire 03301-4986

August 15, 1996

From: Kenneth C. Carr
To: J. Lyn Cutler, MADEP
Subject: Contamination Adjacent to Building 68

We have conducted a cursory assessment of the potential ecological risk associated with the PCBs adjacent to Building 68. We have modeled PCB uptake in the diet of American robins and mallards based on exposure to soil and sediment during feeding. We have not considered dietary exposure for consumption of food items. Therefore, these scenarios represent conservative estimates of exposure. Due to the lack of risk-based data for robins and mallards, we have compared likely dietary exposure in robins and mallards to literature values for pheasants and white leghorn chickens.

Models based on soil and sediment exposure alone, were used to determine PCB levels in the diet of American robins and mallards. These models indicate that PCBs in the river sediments and soils along the riverbank adjacent to Building 68 pose an imminent hazard to birds. Levels of PCBs consumed by American robins and mallards which forage in the heavily contaminated area are likely to cause imminent reproductive effects. The likely average dose of PCBs via soil for American robins and mallards is 12 mg PCB/kg body wgt-day and 1.6 mg PCB/kg body wgt-day, respectively, for a 10% exposure scenario (see calculations below). Dahlgren et al. (1972) reported an Aroclor 1254 LOAEL of 1.8 mg PCB/kg body wgt-day for egg hatchability in pheasants.
In the diet of adult female, white leghorn hens, PCBs at concentrations of 20 ppm have resulted in reduced hatchability, significant chick mortality, and reduced egg production (Britton and Huston 1973; Lillie et al. 1974; Scott 1977). Ingestion by soil by robins feeding in the most heavily contaminated locations is likely to result in PCB dietary concentrations equivalent to 76 to 572 ppm PCBs. Ingestion of sediments by mallards foraging in the area is likely to result in PCB dietary concentrations equivalent to 56 to 312 ppm PCBs. The exposure from soil and sediment associated with diet was calculated by multiplying the contaminant level in the media by the average fraction of the soil or sediment in the diet (e.g. for American robins, if 10.4% (EPA 1993) of diet is soil containing 5500 ppm PCBs, dietary equivalent from soils equals 572 ppm PCBs).

The area adjacent to Building 68 is limited in size (approximately 200 ft along the river by as much as 50 feet wide, for a total of about 0.2 acres). Suitable foraging habitat for robins is approximately 0.05 acres (200 ft in length by 10 ft of river bank). Since the typical territory of a robin is 0.30 acres (DeGrauf and Rudis 1986), robins in this area might be expected to spend approximately 20% of their time (0.05/0.30) foraging in contaminated soil. With an exposure scenario of 20%, the likely average daily does of PCBs via soil associated with food items for American robins is 24 mg PCB/kg body wgt-day. For mallards, which have a considerably larger territory size (about 2 square miles) (DeGraaf and Rudis 1986), but which concentrate feeding efforts in wetlands and waterbodies, a 10% exposure scenario is conservative.

August 20, 1996 Memorandum
From: Mary Bellew, Environmental Scientist, EPA
Margaret Harvey, Environmental Analyst,
Office of Research and Standards, DEP

To: Bryan Olson, EPA
J. Lyn Cutler, DEP

Re: Human Health Evaluation of Risks from Exposure to Elevated Levels of PCBs in Housatonic River Soil and Sediment in an Area Immediately Adjacent to Building 68

... This evaluation focuses on exposures to a youth (aged 9<18) who walks and plays in the sediment and riverbank soils on a regular and continuing basis during the summer months. The Agencies have referred to this receptor group as the “youth trespasser.” In this evaluation, the Agencies have evaluated the Reasonable Maximum Exposure (RME) to the youth trespasser. As defined in EPA Risk Assessment Guidance for Superfund, the RME is the highest exposure that is reasonably expected to occur (EPA, 1989). The intent of the RME is to estimate a high-end exposure case that is still within the range of possible exposures (EPA, 1989). EPA Superfund Guidance specifies that risks to the RME receptor be used as the basis for decisionmaking.

CONCLUSIONS
Based on the evaluation presented in this Memorandum, the Environmental Protection Agency and the Massachusetts Department of Environmental Protection conclude that the elevated levels of PCBs in the Housatonic River sediments and riverbank soils in an area immediately adjacent to Building 68 in Pittsfield, Massachusetts, may present an Imminent and Substantial Endangerment to Human Health pursuant to Section 7003 of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6973 and an Imminent Hazard to Human Health pursuant to Section 40.0955 of the Massachusetts Contingency Plan (MCP) and M.G.L. 21e.

HAZARD IDENTIFICATION

Elevated levels of PCBs have been found in Housatonic River sediments and riverbank soils in an area adjacent to Building 68 at the East Street Area II site at the GE facility in Pittsfield, Massachusetts. Based on limited sampling, PCBs have been detected in surficial sediments (0 to 6 inches in depth) at levels as high as 15,600 mg/kg and in surficial riverbank soils as high as 5500 mg/kg. (Emphasis added.)

The elevated levels of PCBs apparently are attributable to a spill of Aroclor 1260 in 1968 in or around Building 68. According to GE, the spill resulted in a release of approximately 1,000 gallons of PCBs to the riverbanks and river. According to GE, at the time of the release, contaminated surface rock and river bottom sediments were excavated and removed. Recent findings indicate that some PCBs from the 1968 release still remain. GE only recently informed the Agencies of the 1968 PCB spill when routine sampling conducted by GE revealed the highly elevated PCB levels in soil and sediment.

By October 1996 GE completed the additional sampling the Agencies required and submitted its Immediate Response Action Plan for Building 68 Area, Technical Report (IRAP)

The IRAP stated:

3.2 Extent of Release to Bank Soil
3.2.1 Soil Quality

As shown in Table 2-1 and on Figure 2-1, PCB concentrations in bank soils ranged from 8.6 to 5,500 ppm at the surface (0 to 6 inches) and from less than 1 to 102,000 ppm in subsurface soils. The arithmetic average surficial PCB concentrations is 720 ppm, while that for subsurface soils is 5,896 ppm. The relatively higher levels of PCBs (i.e., greater than 300 ppm) appear to be concentrated in the area immediately adjacent to and within approximately 65 feet downstream of the existing Building 68 structure (on the western or “downstream” side). (Pg. 3-2)

3.3.2 Evaluation of the Overall Extent of Release to Sediments

As indicated on Figure 2-1, the relatively higher concentrations of PCBs, notably Aroclor 1260, in sediments of this area generally encompass the northern approximately two-thirds of the river bed extending from the area immediately adjacent to Building 68 downstream for approximately 510 feet (from the upstream end of Building 68). These data appear to define the horizontal extent of the sediments that have been affected by the Aroclor 1260 release from Building 68. The extent of the affected sediment is depicted on Figure 2-1. The spatially weighted average PCB
concentrations in this affected area are 2,042 ppm overall and 2,041 ppm for surface (i.e., 0 to 6 inches) sediments only.

The vertical extent of PCBs in this area generally ranges from 2 to 4 feet. However, at several locations where core samples were collected to refusal and analyzed at depth, relatively high levels were detected in the deepest sample collected. Since the cores were advanced to refusal (using manual sampling techniques), attempts to collect additional sample from such locations using similar sampling techniques would not likely be successful. (Emphasis added.)

These figures for bank soils — PCB concentrations in bank soils ranged from 8.6 to 5,500 ppm at the surface (0 to 6 inches) and from less than 1 to 102,000 ppm in subsurface soils. The arithmetic average surficial PCB concentrations is 720 ppm, while that for subsurface soils is 5,896 ppm. The spatially weighted average PCB concentrations in this affected area are 2,042 ppm overall and 2,041 ppm for surface (i.e., 0 to 6 inches) sediments only. These figures exceeded the Stewart Report by an enormous amount.

The Agencies and GE spent several additional months debating the most appropriate strategies for remediation, and GE presented a revised Building 68 Area Removal Action Work Plan in May 1997.

In Section 5.2 Removal Limits/Quantities, GE stated:

The Agencies' March 27, 1997 comment letter stated that the initial sediment removal depth in the eastern portion of the removal area adjacent to Building 68 should be 5 feet. However, in subsequent conversations, the Agencies agreed that the initial removal in that area could be to a depth of somewhat less than 5 feet (e.g., 3 to 4 feet), provided that GE samples the remaining sediments and conducts additional removal at deeper intervals if the Agencies so require. Based on that understanding (as further discussed in Sections 5.5 and 5.6), the initial removal depth in the area adjacent to Building 68 will be 3 to 4 feet as shown in Figure 5.1. Similarly, the Agencies' letter stated that the initial removal in the upstream area where GE had proposed an initial excavation of 1.5 feet should be modified to a depth of 2.5 feet. Based on similar rationale to that noted above, the initial removal depth in the upstream area has been modified to 2 feet, as also shown on Figure 5-1. (Pp. 5-1 to 5-2.) (Emphasis added.).

The Work Plan called for remediation of contaminated river sediments at depths of six inches in the shallower depths to up to 4 feet in the vicinity of Building 68. In the event that post-removal sampling revealed additional significant contamination, GEís sheetpiling wall would allow them to go as deep as 8 feet.

The Plan stated:

For the design of the sheetpiling in this area, an allowance for additional removal has been identified based on available information. Specifically, from the sediment probing performed in January 1997, it was determined that the average depth of refusal for a metal rod driven into the underlying materials was approximately 8 feet (as measured from the top of the sediment layer). Based on this information, the sheetpile installation has been designed to allow sediment removal up to a depth of 8 feet.

Although the preliminary sheetpiling design supports the possible removal of up to 8 feet of the sediments, the need to remove sediments to this depth is contingent upon the results of post-removal sampling, as well as the technical practicabilities of continued further removal. These considerations are further discussed in Section
In determining the technical practicability of further excavation, the stability of such excavation is a critical factor. As discussed in Section 5.3.3, the sheetpiling installation has been designed to allow for an additional depth of sediment removal beyond the initial removal depth.

Specifically, the sheetpiling has been designed to support possible sediment removal to a maximum depth of 8 feet in the eastern portion of the removal area in the vicinity of Building 68 and to a maximum depth of 5 feet in the western portion of the removal area. GE does not believe that excavation in excess of those maximum depths would be appropriate. (Pp. 5-5 to 5-6.) (Emphasis added.)

According to the GE's February 1998 Report on Supplemental Characterization Activities în Building 68 Area:

During the course of sediment removal activities within the river, oil and sheens were observed within certain areas of the excavation limits on three separate occasions.

Responding to the Agencies' concerns, GE and its contractors discovered in well 3-6C-EB-25 extremely high levels of PCBs at 18 feet - a new, previously unknown source of contaminated oil with PCB levels as high as 624,000 ppm. While we're aware that in his March 7, 1997 letter Steve Simmer of the United States Army Corps of Engineers (US ACE) reviewed, and commented upon, GE's written Action Plan, we wonder whether the Corps or EPA engineers conducted any independent on-site engineering studies in the Building 68 Area. US ACE made detailed comments about GE's calculations of water flow, but we wonder if, with more time and effort put to engineering and design, the sheetpiling could have been sunk more deeply.

Or, if that was impossible, whether an alternative plan might have been implemented that called for a slurry ditch constructed on the GE riverbank property. Perhaps with either better engineering or an alternate strategy, the Building 68 remediation might have been able to more effectively remove the contamination at depth.

Many, many times during the last decade we have requested that the Agencies set up a pilot project for remediation - a site-specific project to better test the specific conditions of the river system and to do side by side comparisons of remediation choices, including several treatment modalities.

Faced with this new source of almost pure PCB product, and unanticipated high levels of contamination at depth, removal efforts were modified. The January 20, 1998 letter from Andrew T. Silfer to USEPA and MADEP reviews GE's removal actions at Building 68:

**Area A**

Excavation activities in Area A were performed on July 31, 1997 through August 8, 1997 and were completed to an approximate depth of 3.5 feet. Despite stability concerns with the footings of Building 68, excavation of this area did not proceed to the depth of the stormwater pipeline. Additionally, a wedge of soil was left against the building foundation due to stability concerns. As requested by the USEPA, five PCB samples were obtained on August 27, 1997 at the base of the wedge of soil for documentation purposes. These samples were obtained at the base of the sloped soil against the south
The results of these samples ranged from 891 to 63,700 ppm. Based on these results, the USEPA requested that GE place a geotextile on the sloped surface and bottom of this excavation prior to backfilling. Additionally, at the request of the USEPA, some additional soil was removed from the top of the soil wedge at the western end of the building (to ensure that a minimum of 6 inches of clean backfill would be placed over the PCB-containing soils). (Emphasis added)

GEís February 1998 Report on Supplemental Characterization Activities ñ Building 68 Area states:

3.5 NAPL/Surface Water Characterization

... NAPL sample 68-Cell 5-1 was collected from several locations approximately three to four feet below original grade (i.e., the top of the pre-removal sediment layer) in Cell 5 on October 7, 1997. The oil contained PCB quantified as Aroclor 1260 (930 ppm), chlorobenzene (100 ppm), tetrochloroethene (16 ppm - estimated value), pentachlorobenzene (31,000 ppm - estimated value), 1,2,4,5-tetrachlorobenzene (21,000 ppm - estimated value), and 1,2,4-trichlorobenzene (250,000 ppm). Ö

The DNAPL sample from well 3-6C-EB-25 (sample 3-6C-EB-25-1) was collected December 3, 1997. The NAPL exhibited Aroclor 1242 and Aroclor 1260 concentrations of 10,700 ppm and 613,000 ppm, respectively, and a specific gravity of 1.550. The compound 1,2,4-trichlorobenzene was detected at a concentration of 190,000 ppm. No other SVOCs or VOCs were present above quantitation limits.

NAPL sample 68 Cell-6-Oil-1, collected September 25, 1997 from Cell 6 excavation area, containing 251,000 ppm of PCB Aroclor 1260 as reported previously in Building 68 Removal Action - Assessment of Observed Oil and Proposed Activities.î (Pp. 3-3 to 3-4.) (Emphasis added.)


It seems as if the engineering limitations of the Building 68 Removal, coupled with the discovery of an unexpected source, led to the decision to leave contaminated bank soils with PCB levels as high as 102,000 ppm at a depth of 6 to 8 feet deep and river sediments with PCB levels of 2,240 ppm at a depth of 8 feet.

So two things happened simultaneously with the discovery of the PCB contamination at Building 68: first, it became clear that the Stewart Reportís conclusions were thoroughly inadequate. Indeed, as The Berkshire Eagle story of December 2, 1997 reported, ìIf GEís estimated average concentration of 1,550 parts per million for the sediments in the hot spot is even close, then at least 10 tons of pure PCBs were removed from the river bed off Building 68. That would represent more than half of the 39,000 pounds a GE consultant estimated was in the Housatonic River sediments above the Connecticut border in 1983.î (Emphasis added.)

Second, what now seems apparent is that GEís difficult experience with the Building 68 Removal Action, in effect, has determined the limits of remedial action for the entire 1/2-Mile Reach section of the Housatonic.

This detailed chronology about the Housatonic River sets the stage for the decisions that the
Massachusetts DEP and the USEPA made during its eighteen month secret negotiations with GE.

Let’s examine some of these decisions in greater detail.

According to Appendix F to Consent Decree: Removal Action Work Plan for Upper 1/2 Mile Reach of Housatonic River, dated August 1999, and EPA approval letter dated August 5, 1999, October 1999, the following remedies have been chosen:

i1.3.1 Sediment-Related Activities

iGE proposes to remove and restore (i.e., replace with cap and armor) certain river sediments in the 1/2-Mile Reach. **Within this reach, the vertical extent of removal in the majority of these areas where removal will occur will be up to 2 feet, with removal to a depth of 2.5 feet proposed for one area. In areas of low PCB concentrations, no action is planned.** For example, a stretch of the River downstream of Newell Street contains sediment with little to no detectable levels of PCBs; thus no action is required for this section. ... It is anticipated that approximately 8,100 cubic yards (cy) of sediment will be removed. ...

The removed sediment will be permanently consolidated with other GE site-related materials at USEPA-approved locations at the GE facility. Following removal, the sediment removal areas will be capped and armored using a multi-layer cap system.

... The current spatial average PCB concentration for the top foot of sediment in the 1/2-Mile Reach is approximately 55 ppm. Following implementation of the sediment removal and replacement activities, the sediment with the highest PCB concentrations will have been removed and the spatial average PCB concentration in the surficial sediment (top foot) will be reduced to less than 1 ppm. **Further, the proposed sediment replacement activities will effectively isolate any remaining PCB-containing sediment and minimize the potential for resuspension of sediments, desorption of PCB from the sediments into the water column, and direct contact of humans and biological receptors with PCB-containing sediment.** (pp. 1-4 to 1-5.) (Emphasis added)

In HRIIs June 1999 public comments to EPA regarding GEís proposed remediation for the Upper 1/2 Mile Reach we addressed the interconnected issues of permanently effective technologies vs. land disposal or containment, and raised several issues regarding the limits of the remediation. Our concerns were that:

1) unnecessarily high levels of contaminates are being left unremediated in the sediment and bank soil;

2) a geotextile liner will be placed above that unremediated and remaining contaminated layer of river sediment in an attempt to cover over contaminants that may, in later years, re-contaminate the river system;

3) geotextiles have only been used for twenty-five years; there is significant disagreement among technical experts as to its efficacy in riverine systems. There has not been an adequate pilot test in situations similar enough to the Housatonic to justify its use here without such a pilot test;

4) the Agencies have decided to allow GE to place contaminated river sediment and contaminated soil from the banks from the Upper 1/2-Mile Reach of Housatonic River, as well as contaminates from the Allendale School and Newell Street properties in an existing, unlined non-TSCA approved hazardous waste dump with existing PCBs averaging 498 ppm, and with levels as high as 120,000 ppm, 50 yards across the street from the playground of the Allendale School;
5) even though the costs of completely treating and removing the overwhelming bulk of the contaminated sediments and bank soils of the Upper 1/2-Mile Reach of Housatonic River from the local environment are reasonable and certainly affordable by General Electric - the Agencies have chosen instead to allow GE to landfill these contaminates in our community; and
6) the Agencies haven't followed their own guidelines regarding a thorough examination of all remediation options.

In his Responsiveness Summary for Allendale School Removal Action. 1/2 Mile Removal Action and Consolidation, October 1999, Bryan Olson, of the USEPA stated the Agencies response to public comments on their plan for the 1/2 Mile of the River:

**Based on the experience of the Building 68 Removal Area (a 550-foot section of the river located within the 1/2-Mile Reach), EPA determined that the complete removal of PCB-contaminated sediments in the 1/2-Mile Reach is not feasible.** For example, during the Building 68 cleanup, the sediments in some sections of the River were excavated to a depth of eight feet and PCB levels as high as 2,240 remained. Therefore, EPA based its review of the limits of sediment excavation on the following criteria: removing a significant mass of PCB-contaminated sediments; reducing surficial PCB sediment levels to less than 1 ppm; excavating sediments to a sufficient depth to allow for the installation of an appropriate cap/backfill configuration that would effectively prevent the residual PCBs that remain in the underlying sediments from migrating up to the surface sediments or water column. (Emphasis added).

And so it has become crystal clear that the USEPAís analysis of the Building 68 Removal Action has affected all subsequent decisions concerning the 1/2-Mile Reach, including the decision not to obtain PCB and Appendix IX+3 constituents samples in the river beyond a depth of 2.5 feet.

As the USEPA states on page 4-1 of Appendix F to Consent Decree: Removal Action Work Plan for Upper 1/2 Mile Reach of Housatonic River, dated August 1999: 'Recent sampling performed by the USEPA (August ñ October 1998) involved establishing 63 transects, approximately 50 feet apart, along the River in the 1/2-Mile Reach, and generally obtaining samples (when retrievable) from three locations along each transect at 6-inch depth intervals, **to a maximum depth of 2.5 feet.** Samples collected from this reach between 1981 and 1998 indicate the presence of PCBs in sediments ranging from less than 1 part per million (ppm) to 9,411 ppm. (Emphasis added.)

Why obtain deeper samples when a de facto decision had already been made to limit all remedial activity to 2.5 feet for the 1/2-Mile Reach. Unfortunately, this decision will leave extremely large quantities of PCBs untouched below the 2.5 feet level. And this strategic decision has led inevitably to the determination to employ a multi-layered computer-designed cap system.

More extensive engineering, and/or a pilot project, ought to have been considered as an alternative to the plan. The Building 68 Removal Action revealed the existence of an unanticipated source of DNAPL which would not make sense now to consider a range of remediation strategies, including the construction of a slurry/ditch and pumping system deep enough to capture and drain the DNAPL plumes that continue to endanger the river system.

There is certainly room enough on the extensive GE property which borders the 1/2-Mile Reach for such a drainage ditch and pumping system to ensure that the deep plumes heading to, and possibly travelling below, the river itself are immobilized and remediated. Such a system would not only prevent any possible future recontamination but would enable the remediation efforts in the 1/2 Mile Reach to go deeper and remove greater quantities of contaminated sediment.
Based on our long-standing concerns with the underground plumes that threaten the river, and our belief that GE, in violation of the 1980 and 1990 Consent Agreements it signed with the Commonwealth and the U.S., has failed to adequately chart and identify the extent of its contamination, HRI repeatedly suggested modifications to the EPA's approach for the 1/2 Mile Reach. Our advocacy for a slurry/ditch and pumping system along the stretch of the 1/2 Mile Reach was based on much anecdotal testimony from former GE employees and neighborhood residents who remember widespread dumping in the area. Unless and until all significant sources of contaminated oil are remediated the river will be continuously threatened.

It's instructive to go back out and revisit the concerns both the EPA and MADEP raised to GE on November 22, 1996 about its plan for the Building 68 Removal Action:

1. when and if there is any failure of the armoring

2. covering over the large volume of extremely elevated levels of PCBs in the sediment of a dynamic river system does not eliminate the potential source of PCBs to that river system

3. armoring the grossly-contaminated sediments in this area would be an impediment to any subsequent removal and disposal of grossly-contaminated sediment

Because of these apparent inconsistencies, HRI raised the following issues:

**Capping and geotextiles**: We have several comments about the decision of the Agencies to allow the use of GE's proposed cap for sections of the Upper 1/2 Mile Reach of the river without an adequate pilot-project under the real conditions of the Housatonic. Thus far, all major decisions regarding the cap are based on computer-modeling.

Our technical consultant, Joel Loithenstein of LEEI, has stated:

LEEI was not able to find other locations where a cap and armor has been placed beneath a river. The available literature refer to caps being placed beneath relatively calm surface waters such as harbors and lakes. There is a similar project being proposed in New York, but a pilot test is being performed before it is put in place.

It is the opinion of LEEI that these remedial decisions are based on entirely too little data, and that the data itself are highly questionable. Given GE's proposed plan to cap the remaining river sediment subsequent to excavation, we seriously question the benefit that such an exercise will have on the ecological systems and potential human receptors when compared to the disruption and uncertainties that the exercise will entail. ... It is also the opinion of LEEI that capping the sediment should be further evaluated as a remedial option before it is implemented over the entire 1/2-mile stretch. We have reviewed many articles on capping, including some cited in BBL's report ...

According to one study 'capping is likely to be used only in environments where the long-term integrity of the cap can be guaranteed. 'Typically this would mean low hydrodynamic energy environments such as harbours, estuaries and lake bottoms.' ... It is the opinion of LEEI that the Work Plan should also involve a pilot test of a high velocity and scouring area before the cap is implemented over the entire 1/2-mile reach. It is our opinion that, rather than a prediction of PCB flux based on computer models (Appendix G of BBL's report), that GE be required to obtain actual data on flux and PCB concentrations using seepage meters placed at key locations on the river bottom. These
data could then be used to calibrate the model to make more accurate predictions of the cap's useful life."

On February 11, 1999, at the request of HRI, the EPA brought their river remediation consultant from the U.S. Army Corps of Engineers to address the Community Coordinating Council. Michael Palermo, Ph.D., Director of the Center for Contaminated Sediments, who has extensive experience with a range of projects, said:

I don't know of that many riverine sites - once again, rivers present a set of site conditions that are a little different say than an estuarine or open ocean type of site - you have different things to design for, for instance, flood events, or in this case, even ice, you know, formation and ice effects, but no, we have not seen caps constructed in many riverine situations." (Emphasis added).

In response to HRI and CCC member Benno Friedman's question about what it would cost to go back into the river to fix the cap in the event of cap failure, Palermo said:

Well, I'm not a good cost estimator, but I would just guess it would cost more than it did to do it the first time for sure. It would not be an easy proposition to do, it would not be an inexpensive proposition to do.

When Benno Friedman continued to ask whether complete removal and treatment, even though it might cost more, made more sense than a system that might fail, Palermo added:

I have no way of knowing that because I don't know what the cost estimates are to remove, you know, even what they propose to remove - I haven't seen those figures."

We were disturbed to learn that even the EPA's own consultant hadn't been told what the most reasonable alternative to landfiling and capping might cost! And we wonder whether this indicates that the Agencies haven't adequately examined all the other remediation options!

Because of the Agencies' decision to allow GE to leave significant amounts of PCBs in the river, the ability of the cap to perform perfectly is critically important, and the fact that there has not been significant past experience with capping a similar riverine system is very significant.

Palermo continued:

... in this particular half-mile reach, you know, the objective is going the next step - this cap has got to not only physically stabilize what sediments are left in place, it's also got to isolate those contaminants from moving up, you know, up through the cap and back into the river system. This cap design has that added level of concern in the design, another process that has to be looked at very closely.

It's easier to design the armoring layer to resist scouring or erosion than it is to design a cap to contain the contaminants under certain circumstances."

**HRI and its consultants believe that these decisions are too important to be made by a computer modeling program.** We need a pilot project to prove it will work.î
The recent history of clean-up activities in the 1/2 Mile Reach bears this out. Several times the cranes dredging the river sediments and banks have uncovered significant sources of contaminants.

During the June 7, 2000 meeting of the Citizens Coordinating Council, GEís Andy Silfer reported on the discovery of DNAPL oil in Cell F1 on the south side of the 1/2 Mile Reach and DNAPL oil found during excavation of Cell G1 on the north side of the river.

During the July 20, 2000 Site Visit, standing on the river bank about 100 yards south of the Newell Street Bridge, Dean Tagliaferro, the EPA Project Manager for the 1/2 Mile Reach stated:

As you know in October GE started at the Newell Street Bridge. This part here the Removal Action is all completed down beyond the trees, so this part has been excavated and restored per the Work Plan. This area, the basic premise was based on extensive sampling ñ we decided how much needed to be removed from the sediments and it varied from two to two and a half fee up to three feet on the banks.

And the second criteria was that, at the base of the excavation, we would inspect it and if there was NAPL or oil at the base of the excavation, GE would be required to take additional actions. That situation did happen here, both um ñ with oil being present. On the upstream end the two feet was taken out, underlined with geotextile fabric, backfilled with sand and then rock on top of that and a lot of that rock you can see extending up the bank Ö

The area where we detected oil at the bottom of the excavation was right here in front of this head wall. GE sampled the oil ñ it was found about two feet down in the river ñ when the river was dry, there was sheetpile in the middle, it was dried out, two feet was excavated, there was oil in small patches. It was sampled and found to contain uh compounds that go with manufactured gas plant waste, which is a process gas companies did about a hundred years ago Ö

If there was any oil to be left, GE was required to put in a collection system. The last day I was out here there was still some oil at the bottom of the excavation, so GE installed a stone trench underneath the river and put this pipe in it on an angle which actually goes about 10 feet below the river into the stone to collect any oil. On top of that, there was an impermeable liner just in this area placed about 5 feet below the sediments and on top of that followed the regular restoration. So from the top you cannot see any of that. This well went back into the ground, uh underneath the river, and after that we took ñ GE has removed about 500 gallons of oil from that well.

As we have seen over the last few years, finding and delineating PCB contamination in not easy. A single boring within a 25 foot grid may detect or miss substantial concentrations of PCBs. As the river remediation continues, there will times when unexpected pockets or plumes of PCBs will be uncovered. There have been, and will be, times when those pockets remain untouched.

In its Removal Action Work Plan for the Upper 1/2 Mile Reach, the EPA has, in effect, turned this reach into one gigantic pilot project, except that as GE completes this work, the EPA will offer them a certificate of completion. And while there are re-openers within the provisions of the Consent Decree, anyone who has watched GE carefully over the years, can reasonably expect GE to mount a court challenge to any attempt by the Agencies to require large-scale modifications for work they have
completed and for which they have submitted and received approval for a Completion of Work Report.

In Exhibit 2, United States Memorandum In Support Of Motion To Enter Consent Decree, the United States offers its responses to comments on the proposed Consent Decree. Section II B, Comments on Adequacy of Public Process, Response 2 declares:

Overall, the public participation afforded on the lodged Decree by the United States in the area affected in the proposed Consent Decree was quite extensive and met all legal requirements. During the 120-day public comment period, EPA held three public meetings on November 16, 1999 in Pittsfield, on December 9, 1999 in Stockbridge, Massachusetts, and January 4, 2000 in Kent, Connecticut. Moreover, the EPA, the U.S. Department of Justice, and the Commonwealth of Massachusetts presented a summary of the Consent Decree at an October 26, 1999 meeting of the Citizens Coordinating Council (iCCCi). The CCC, established by EPA in November 1998, is a group of over 30 environmental, business and community leaders from both Massachusetts and Connecticut.

The public participation afforded by the United States on the proposed Consent Decree plainly satisfies all necessary legal requirements.

I firmly believe that the government overstates the nature and quality of public participation at this site from the onset of closed-door negotiations. Let’s review some of the previous statements of EPA officials regarding public participation. On April 8, 1998 EPA Region 1 Administrator John DeVillars spoke at a public meeting at Pittsfield High School to announce the failure of a round of negotiations with GE, and to announce a four-part action plan, including the listing of this site under Superfund. Mr. DeVillars declared:

The negotiations didn’t achieve the outcome we had hoped for, an agreement that we could all get behind, including GE, that was in the interests of this community, but we did achieve some benefits from it. We clearly narrowed our differences. I think for all of us on this stage, we deepened our understanding of this community, and the difficult situation that you’re in on this issue and importantly we built some strong relationships that will hold us in strong stead over the coming years Ö

Ö we announced a four-part plan, as you know on Monday, and I won’t review that except in very summary fashion. Four elements:

1) An aggressive enforcement action now immediately to ensure that there’s source control on the plant site so that further contamination of the river doesn’t take place, as well as to begin and complete remediation in the river to address some substantial public health risks in the first two miles of the river.

Secondly, to go forward in what frankly I think is as important a part of that four-part action plan as any and that is to build a community advisory board and to begin a process whereby we work very effectively in a very open fashion with this community to understand even better your interests and to make sure you have a voice in the process ñ that means the business community, that means the environmental community, it means the South County towns, the State of Connecticut, the Commonwealth and EPA, the Department of Fish and Wildlife for the Commonwealth, the people who contribute the most to this effort. We need you as part of it. That community advisory board is one mechanism that we’re going to use, but meetings like this, expanded office hours, material that we’re trying to get out for you, is all ñ out to you ñ is all to make certain that you’re informed and that you’re able to hold us accountable for what we owe you ñ which is a prompt and safe cleanup in this community Ö
And the fourth element, of course, is to move forward with the Superfund listing. For a variety of reasons, it’s the best tool that we can use. I’m happy it’s not simple stuff by any means, and I’m happy to get into why we think it’s the best tool as much as you want, but let me leave it at that and reiterate that this is but the second or third or fourth of many meetings that we’ve had and will continue to have on a regular basis so that we can make you as much a part of this as you care to be.

Ö all the engineering studies, the legal analysis, all the substantive issues here that are in play are ones that will be shared with that advisory board and any subcommittees that they establish, and, you know, a dialogue ñ and hopefully we can come to consensus as we move forward Ö

Ö ultimately, it’s EPA that has to make a judgment as to how much risk, where the cleanup happens, whatever, but what I’m also saying is that on the decisions about the advisory board as well as the many decisions that will follow we want the community input and I think if we get and we have a good dialogue, we collectively will be making those decisions. That’s certainly the process we’re going to be working hard to achieve.

Ö what I think is reasonable and fair to commit to in terms of the two miles of the river is as follows: We’re going to, and this is the Immediate Enforcement Order that we’re issuing. We’ll have that order out by May 15th. GE has to submit us a plan, an engineering study, in essence, by July. We will work with the community to evaluate that, possibly look for more analysis from them and make a decision on, for the plant site itself for controlling the continuing sources of pollution to the river, a decision that will lead to construction activity, cleanup if you will, at the plant site by November of this year. And then for the river itself, we’ll continue to sort of do that kind of analysis by the spring of next year. So within 12 months, remedial activity will begin in the river, and it will be approximately two years for those two miles. Ballpark estimate: a mile a year. It depends obviously a little bit what we find in further, in terms of further sampling and analysis Ö

Ö These schedules are going to change, it’s very complicated. We don’t know exactly where everything is, where we’re going to find it, that may change engineering for the remedy itself. And we’ve got to maintain a good dialogue and keep you posted. But what we’ve got available tonight is our best estimate of what those schedules are going to look like. As more information comes in, we’ll be sharing that with you, and we may have to modify those schedules. But that’s the time frame for those two miles of river.

If GE basically says ëWe’re not going to comply with your order. We don’t think that’s should be our responsibility.í Which I think would be an extremely irresponsible statement, or action, on their part, but if they do say that, then we’re prepared to move forward and do the work ourselves with dollars out of the Superfund, and seek penalties under the full force of the law: $27,500 a day from them and seek to recover our costs times three, which is what the law allows us to do, and we believe we have a very strong legal case ad a very strong public health and scientific case. So my hope is that they will do right by this community and comply with those orders. But if they don’t, we’re prepared to do it ourselves, and that timetable is roughly two years from next spring or three years from now that river remediation will be completed, yes completed.

After this announcement, the government agencies resumed negotiations with GE. HRI renewed its request for a seat at the table for public representatives, including representatives of contaminated river-
front properties, contaminated commercial property owners, and representatives from South County communities that bordered the river. We were refused the right to participate but were told once more that these constituencies could continually make their needs and desires known by active involvement with the newly-formed advisory board, the Citizens Coordinating Council.

HRI, in its response to the provisions of the Consent Decree, provided it evaluation of the limits of that participation. HRI stated:

When negotiations began between the United States, Massachusetts, Connecticut and General Electric, we strenuously but unsuccessfully argued that representatives of HRI and the Berkshire County community other than the Mayor and City Council President of Pittsfield be invited to participate. We were told that appropriate members of the USEPA, DOI, NOAA etc., and MADEP could adequately represent and advocate for the public interest.

We were told, additionally, that the Citizens Coordinating Council (CCC) would serve as the appropriate forum where community input could be offered. As active, and often frustrated members of this Council, we were repeatedly told at CCC meetings that the most critical and substantial matters regarding the cleanup were covered by the confidentiality provisions of the negotiating process, and could not be fully or openly discussed. True, substantive public participation was thwarted by this closed-door negotiating process.

While Mr. DeVillars assured the public they would have ample opportunity to provide input into the process of shaping any Consent Agreement, the public was presented a document as a fait accompli. Environmental regulators had negotiated an agreement that precluded any substantive change — it was understood by all parties that should the agreement be modified, GE could walk away from the agreement.

Thus, the public was told that any change would torpedo the great gains the regulators had won in the negotiation process. GE and the Commonwealth of Massachusetts, the State of Connecticut and the federal agencies all now had a stake in defending this agreement.

In addition to his promises regarding public participation, Mr. DeVillars outlined a strategy for an active and thorough cleanup utilizing the strongest possible federal legislation, CERCLA, or Superfund. For years we had labored under provisions of RCRA and for years the environmental community had urged federal regulators to list the site under Superfund. Finally, it seemed the community would be better served by the EPA. In response to a question concerning EPA's ability to fund initial work on the river, Mr. DeVillars emphasized the commitment of the agency to move forward with remediation and meet any legal challenge GE might launch:

What I can commit to is that if GE does not at this point in time, that if GE does not honor our order, if they do not do right by this community in terms of controlling sources at that plant site and cleaning up those two miles of river, the Environmental Protection Agency will step in and pay for it. That, we're going to need about, ballpark, and Bryan or others, Matt, Doug correct me if I've got this wrong but ballpark about 5 million dollars this year for the work, EPA work, that's required and GE, I
think, to their credit, you know we’ve got some disagreements obviously but they’re they are, as I understand it, quite committed to honoring the commitments they’ve already made to date in terms of the residential properties and the Allendale School, further sampling at the Newell Street commercial properties, I believe, is that correct, the last piece? [Bryan Olson: ‘not yet, no.’] Not yet, no, we’re working on that too, but you know, on the school and on the residential properties, to moving forward and doing, doing the right thing here.

We made it clear if they didn’t, we would bring that under the order as well although frankly I don’t think that’s why they’re doing it. I think they’re doing it because they legitimately see it as an appropriate thing to do, um but if they don’t in that same spirit address the issues in the river, and the banks of the river and the floodplain properties that are either contaminated or in danger of contamination, then we will step in and do the work: $5 million this year, ballpark we’re estimating and these are very rough numbers, approximately $20 million a mile of river and that includes floodplains and banks as well, and so as I mentioned earlier that will be over the next two fiscal years so I’m prepared to commit that the Environmental Protection Agency will be there to make certain that our resources, if necessary, get that job done in, according to that schedule. Um the only way I’m going to be able to do that is if the United States Congress funds the Superfund adequately. I can’t commit to future fiscal years because I don’t know what the Congress is going to appropriate Ô But that’s the context for the plant site source control and the two miles of the river.

And beyond, and I would just say one other thing on that and this may be more detailed than people want but uh you know one of the concerns is: will GE litigate this to death and nothing will ever happen? Um, it’s hard to predict litigation schedules and the like. Their opportunities for litigation and the amount of time they can tie this project up in litigation under Superfund is much less than under any other statute. Um and it’s our feeling that it would be ñ if they litigate at the time this is listed finally, that it is reasonable to assume that that litigation, during that, the other thing I’ll commit to is during that period of litigation, up to the time the shovels go in the ground to begin the construction work, we will on our dime, seeking to recover thirty cents for every dime we spend, do that work, the further engineering analysis to get the full Superfund piece ready for construction. Beyond that we’re then looking at probably even more substantial amounts and I can’t at this time uh commit to that. And again, my earlier commitment, not to appear to be, you know, duplicitous about this, is very much based on what the Congress appropriates. Um we think the litigation would likely have run its course and we feel confident we will win if it’s litigated before that the construction activities under Superfund would begin, so there should not be any delay in actual work getting done even if it’s litigated under Superfund. And that’s quite good news, I think, for this community. It’s not an absolute guarantee, ‘cause you can’t predict what judge is going to hear it, on what schedule but um our experience suggest it’s a realistic
It’s interesting to read this assessment in light of the government’s comments in United States’ Response To Comments On Proposed Consent Decree, Exhibit 2 to United States’ Memorandum In Support Of Motion To Enter Consent Decree. In response to comments that the EPA should have cleaned the river itself, then sued GE for damages, the government wrote:

Ö as with any settlement, the government weighed the benefits of the proposed settlement offer against the cost, time, and likelihood of success of litigation, and potential remedies associated with unilateral EPA action. In this case, the government decided that the proposed Consent Decree offers far more benefits compared to the costs and uncertainties associated with litigation Ö

If there is no settlement of this matter, the government faces a number of significant uncertainties. To begin, it is unclear if EPA could pay for the response actions outlined in the Consent Decree. EPA funding for response actions comes from the National Superfund which in turn is funded by Congressional appropriations. Because funding levels for the Superfund program are already insufficient to address all contaminated sites nationwide, and there are competing priorities, EPA may not be able to initiate or complete cleanup actions at this Site.

Further, the Trustees may not undertake restoration activities unless and until damages have been recovered from a responsible party Ö Thus, in this case, no restoration work, and possibly none or only a small portion of cleanup work, could proceed unless and until conclusion of litigation ñ a fight which could take years with uncertain results.î

In short, the government undertook a balancing of the benefits of the proposed settlement against the pros and cons of litigating the matter with GE. The government ultimately determined that the overall recovery, compensation and public health benefits of the settlement far outweigh the expense, time, and uncertainties associated with litigation.

The very critical issue of strategy was never brought before the CCC, nor brought before the public in any public meeting. Thus the most crucial issue affecting the river, contaminated river front property-owners, commercial property owners, contaminated residential homeowners, South County communities, sportsmen, active and passive users of the river was never open for public participation. The most critical strategic decision ever made regarding this community was made behind closed doors by environmental regulators and attorneys who live in Boston and Washington D.C. We had no voice in that process. And that behind closed door decision to forge a negotiated settlement was unfortunately just the way things had always been done at this site.

The government invested enormous time, effort and money in the effort to come to a settlement. Mr. DeVillars had a personal, political stake in both public acceptance and federal district court approval, having shepherded this agreement. State and federal agencies had a financial stake in approval of the agreement, since as part of the deal, GE would reimburse the EPA and MADEP for past expenses totaling up to nineteen million dollars. GE had a major stake because they had successfully negotiated an agreement that might cost them $200 million, when they could have easily faced cleanup costs and penalties amounting to more than a billion dollars; they had won an agreement in which the EPA would spend federal dollars to partially pay for river remediation at the site even though they clearly had the financial ability to fund it; in its entirety; and they had won an agreement that allowed them to cap contaminated areas, landfill contaminated wastes rather than pay for more expensive alternative treatment technologies; and leave enormous amounts of toxic contamination in the community. All these were important gains for a corporation facing the cleanup of other contaminated sites across the country; for this agreement would set important precedents for them.
HRI and other interested parties had only two avenues left: to introduce public comments in the hope that the EPA would revise the settlement or to intervene in the court process.

HRI carefully reviewed the settlement agreement and submitted 54 pages of detailed comments on the Consent Decree. HRI concluded that the Plaintiffs, the government agencies, needed to improve the agreement in several important respects:

Notwithstanding their best efforts, while the Plaintiffs declare, as a matter of fact, in V.8.b that they have determined that: (i) The Removal Actions, when implemented and completed in accordance with this Consent Decree, the SOW, and the Work Plan for the Upper 1/2 Mile Reach Removal Action (including achieving and maintaining Performance Standards are protective of human health and the environment with respect to areas addressed by those Removal Actions; and (ii) Except as expressly provided in this Consent Decree, no further response actions for the areas addressed by such Removal Actions are necessary to protect human health and the environment we believe a careful reading of the Consent Decree reveals several critical instances where the public health and welfare, and the well-being of the environment, can be better protected. In these respects, this Consent Decree can be more fair, reasonable, and better serve the public interest. As it stands, the proposed settlement is inadequate to the task of guaranteeing that the public health and environment will be fully protected from future releases of contamination stemming from the GE site and/or GEIs off-site dumping actions.

CERCLA Section 9621(b), General rules for cleanup, clearly states:

(1) Remedial actions in which treatment which permanently and significantly reduces the volume, toxicity, or mobility of the hazardous substances, pollutants, and contaminants is a principal element, are to be preferred over remedial actions not involving such treatment. The offsite transport and disposal of hazardous substances or contaminated materials without such treatment should be the least favored alternative remedial action where practicable treatment technologies are available.

The President shall conduct an assessment of permanent solutions and alternative treatment technologies or resource recovery technologies that, in whole or in part, will result in a permanent and significant decrease in the toxicity, mobility, or volume of the hazardous substance, pollutant, or containment. In making such assessment, the President shall specifically address the long-term effectiveness of various alternatives. In assessing alternative remedies, the President shall, at a minimum, take into account:

A (A) the long-term uncertainties associated with land disposal;
B (B) the goals, objectives, and requirements of the Solid Waste Disposal Act (42 U.S.C 6901 et seq.);
(C) the persistence, toxicity, mobility, and propensity to bioaccumulate of such hazardous substances and their constituents;
(D) short- and long-term potential for adverse health effects from human exposure;
C (E) long-term maintenance costs;
D (F) the potential for future remedial costs if the alternate remedial action were to fail; and

(G) the potential threat to human health and the environment associated with excavation, transportation, and redisposal, c. containment. The President shall select a remedial action that is protective of human health and the environment, that is cost effective, and that utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to maximum extent practicable. If the President selects a remedial action not appropriate for a preference under this subsection, the President
shall publish an explanation as to why a remedial action involving such reductions was not selected.

(2) The President may select an alternative remedial action meeting the objectives of this subsection whether or not such action has been achieved in practice at any other facility or site that has similar characteristics. In making such a selection, the President may take into account the degree of support for such remedial action by parties interested in such site. (Emphasis added.)

The Housatonic River Initiative believes that this Consent Decree fails to meet these standards. This site calls for a range of remedial actions and treatment which permanently and significantly reduces the volume, toxicity, or mobility of the hazardous substances. The Defendant and Responsible Party is more than able to meet the costs associated with alternative, remedial actions and treatment which permanently and significantly reduces the volume, toxicity, or mobility of the hazardous substances (Emphasis added.)

The decision to exclude the Housatonic River Initiative and other public representatives from these negotiations has ensured the fact that the great public support for selecting these alternative remedies has been discounted by the parties. And this exclusion all but ensured that, contrary to Section 9621(2), the President has unfortunately failed to take into account the degree of support for such remedial action by parties interested in such site.

Critical to this Consent Decree are the Plaintiffs’ covenants not to sue. Section 9622(f)(4) of CERCLA states:

In assessing the appropriateness of a covenant not to sue under paragraph (1) and any condition to be included in a covenant not to sue under paragraph (1) or (2), the President shall consider whether the covenant or condition is in the public interest on the basis of such factors as the following:

(A) The effectiveness and reliability of the remedy, in light of the other alternative remedies considered for the facility concerned.
(B) The nature of the risks remaining at the facility.
(C) The extent to which performance standard are included in the order or decree.
(D) The extent to which the response action provides a complete remedy for the facility.
(E) The extent to which the technology used in the response action is demonstrated to be effective.
(F) Whether the Fund or other sources of funding would be available for any additional remedial actions that might eventually be necessary at the facility.
(G) Whether the remedial action will be carried out, in whole or in significant part, by the responsible parties themselves.

As we will demonstrate in our comments below, this Consent Decree fails the public interest in several respects:

The effectiveness and reliability of the remedy, in light of the other alternative remedies considered for the facility concerned.
The nature of the risks remaining at the facility.
The extent to which performance standard are included in the order or decree.
The extent to which the response action provides a complete remedy for the facility.
The extent to which the technology used in the response action is demonstrated to be effective.

And because of these failures, we believe it is premature for the Plaintiffs to agree to
covenants not to sue.

In light of these concerns, we suggest specific improvements to provisions regarding:
1) Upper 1/2 Mile Reach Removal Action
2) The Hill 78 and Building 71 Consolidation Areas Removal Action
3) The Silver Lake Area Removal Action
4) Removal Actions at the Former Oxbow Areas
5) The Natural Resources Damage Award

I have previously reviewed the issues HRI raised regarding the Upper 1/2 Mile Reach Removal Action. HRIIs comments regarding the rest of the Consent Decree are as follows:

2. The Hill 78 and Building 71 Landfills:

The APRIL 1994 Public Involvement Plan document by the Massachusetts DEP states: "The Hill 78 landfill is approximately two acres in size with a maximum depth of approximately 40 feet. ... The school property is within 50 feet of the Hill 78 site fence line. From approximately 1940 to 1980, GE used the Hill 78 area as a landfill for demolition or construction debris, excess fill and solid (reportedly non-hazardous) waste.

GE also allegedly used the landfill to dispose of drums containing PCBs and fuller's earth saturated with PCBs in the 1950s and 1960s. The EPA RCRA Facility Assessment stated that former GE employees disposed of PCB oil in the landfill. From 1980 to early 1990, GE used this area to store soils containing less than 50 ppm PCBs from routine, facility-wide excavations. Sampling of the fill revealed areas with PCB concentrations up to 120,000 ppm in subsurface soil." (emphasis added).

In 1991, GE's consultants completed a Phase I investigation of the site. ... Results confirmed that the landfill area is the most contaminated portion of the site. Ground water in the vicinity of the landfill area is contaminated with PCBs at concentrations up to 9 ppb. In addition, VOCs were detected in ground-water samples collected from wells located downgradient of the landfill area and south of the Altresco power plant at concentrations of less than 1,000 ppb. Ground-water samples collected from a well in the southwestern corner of the site contained concentrations of less than 30 ppb of dioxins and furans.

The Department classified the site as a priority and GE submitted Phase II Scope of Work proposing further definition of ground-water contamination at the site and assessment of contamination potentially attributable to abandoned transformer oil lines extending from the East Street Area II site across this site and to Building 51 (part of the Unkamet Brook site). (Emphasis added).

And then from the DEP's Public Involvement Plan, Volume 5, Page 12: "Table 1: Descriptions and Characteristics of GE Pittsfield Disposal Sites
Hill 78 Landfill Area; 57 acres; DEP & EPA jurisdiction - Contamination: PCBs in
Members of the public and HRI kept reminding the EPA and DEP regulators that the existing Hill 78 landfill was already filled with all kinds of toxic materials, including liquid plumes, many barrels of PCB-contaminated liquids, solvents, and probably metals - precisely the kind of high-level, dangerous waste that the EPA wasn't willing to add to Hill 78 or put in the newly-lined Building 71 landfill.

HRI and many members of the public are very concerned that GE and the Agencies are adding tons and tons of more waste on top of extremely dangerous toxic wastes in Hill 78, ensuring that any potential problems of leaking barrels will be that much more difficult to deal with.

We believe public health and safety will be unnecessarily threatened by the Agencies' decision to not only leave such high-level contamination in place at Hill 78 but to add to it and make more difficult any efforts that may prove necessary at a later date to deal with potential problems.

Ö While the decisions to enlarge the Hill 78 Consolidation Area, and construct the Building 71, and possibly the New York Avenue/Merrill Road, Consolidation Areas meet the criteria for short-term effectiveness, ability to implement, and cost, it certainly fails the criteria for reducing the volume of waste. And there is reliable testimony and good reason to doubt that this decision provides either long-term reliability or effectiveness.

Hill 78 is 50 yards from an elementary school and a block from a populated residential neighborhood. School children, teachers, local residents are without protective clothing or respirators. An unexpected fire or explosion at Hill 78, with its large quantities of liquid PCB oil, buried barrels, and other toxic liquids would represent a public hazard. We appreciate that the Agencies have designed a ground water monitoring system and an inspection regime to ensure the integrity of the cap, but what about unanticipated fires, explosions, and tornadoes. Why needlessly expose schoolchildren to such risks?

Ö HRI believes that there is a far more protective alternative: treatment. Unfortunately, the Agencies have not adequately considered the clear benefits of a complete removal/treatment plan rather than the partial removal/capping/landfilling plans they have endorsed.

Ö And we believe that our position on treatment rather than landfilling is supported by the very mandates of the Agencies and an objective review of the standards regarding Corrective Measures:

1) overall protection of human health and the environment;
2) ability of the technology to attain media cleanup standards;
3) the ability of the technology to control the sources of releases; and,
4) the technology's compliance with standards for management of wastes

We believe a critical examination of these four factors leads to the treatment option rather than the decision to landfill across from a public school. As prior EPA testimony states, sooner or later landfills will discharge contamination into the environment and the landfilling option cannot, therefore, guarantee "to control the sources of releases." Therefore, neither can it guarantee the "overall protection of human health and the environment."

To the extent that EPA and DEP believe that landfilling meets those standards, they have the added burden of comparing the effectiveness of treatment and landfilling: "If two or more technologies meet the evaluation standards then there are five evaluation decision factors which must be considered. The five evaluation decision factors are:
1) ability of the remedy to provide long-term reliability and effectiveness;
2) ability to reduce the toxicity, mobility, or volume of wastes;
3) short-term effectiveness;
4) ability to implement; and,
5) cost."

HRI believes that treatment - thermal desorption, for example - will greatly reduce the large volume of toxic contaminants. By destroying much of the contamination, rather than burying it, the treatment option better provides "long-term reliability and effectiveness." It clearly better meets the standard of "reducing the toxicity, mobility, or volume of wastes." Treatment is not only effective in the short-term, it is a far more effective option for the long-term. GE has proven its ability "to implement" the treatment option in its remediation of the Rose Superfund site in Lanesboro, Massachusetts. Similarly, GE Canada is utilizing thermal desorption treatment in Canada. Only when it comes to cost, and the ability to implement, does landfilling have advantages.

3. The Silver Lake Area Removal Action

Attachment K to the SOW details the nature of the cap intended for Silver Lake:
ib.(i) This cap shall include an isolation layer positioned directly above the sediments over the entire lake bottom. This layer shall consist of silty sand, with a presumptive thickness of 10 inches, if geotextile is placed between the sediments and the cap (or 12 inches, installed in two six-inch lifts, if a geotextile is not placed between the sediments and the cap), an organic carbon content of 0.5 percent (as total organic carbon) and concentrations of PCBs at non-detectable levels and other constituents at background levels as approved by EPA. (The presumptive thickness of the cap is based on use of a 6-inch isolation layer to control PCB migration from the underlying sediments into the surface water of the lake, plus an additional 4 inches of silty sand if geotextile is not used), to account for uncertainties associated with bioturbation. GE shall perform pre-design investigations to confirm the design parameters which support the above presumptive thickness and organic carbon content assumptions presented in this Attachment, then the isolation layer.

If those pre-design investigations confirm the design assumptions presented in this Attachment, then the isolation layer will consist of a silty sand layer with a thickness of
10 inches, if geotextile is placed between the sediments and the cap (or twelve inches, installed in two six-inch lifts, if a geotextile is not placed between the sediments and the cap), and an organic content of 0.5 percent (as total organic carbon). If the pre-design investigations indicate that a thicker cap and/or a higher organic content is necessary, then the cap thickness and/or organic content will be modified using revised input parameters based on the results of the pre-design investigations and the procedures/equations presented in Exhibit K-1. GE shall ensure that the design cap thickness is achieved over the entire bottom of the lake.

(ii) The capping system shall also include an overlying armoring layer of stone, incorporated along the shoreline as necessary to prevent erosion of the isolation layer due to wind-induced wave action.

(d)(i) If the periodic inspections and monitoring of the cap thickness and the shoreline armoring layer indicate that the design standards for those components of the capping system are not achieved or maintained, GE shall evaluate and propose to EPA appropriate corrective actions to achieve those design standards, and shall implement such corrective actions upon approval by EPA.

(ii) If the sampling of the isolation layer indicates that that layer is not performing in general accordance with the predictions on which the isolation layer design was based in terms of controlling PCB migration from the underlying sediments into the surface water of the lake, GE shall evaluate corrective actions and submit the results of such evaluation to EPA for approval, and shall implement such corrective actions, if any, upon approval by EPA. (Technical Attachment K, pp. 2-3) (emphasis added).

The Agencies’ decision to limit remediation of Silver Lake to a 10 to 12 inch layer of silty sand is one of the most disappointing decisions we have seen at this site in the last decade.

The Agencies performed extensive independent testing in the Upper 2-Mile Reach of the Housatonic River. This did not happen with Silver Lake: the Agencies did no independent testing, nor, as far as we can tell, did they perform any independent analysis of remediation options. After a review of the publicly available records concerning Silver Lake, it appears to us, that with the hectic year and a half of difficult negotiations, the Agencies seem to have regarded Silver Lake as an afterthought.

At the least, HRI requests a pilot project for the Silver Lake remediation to see whether or not complete removal of contaminated sediments is possible. If the Agencies are serious about their desire to restore Silver Lake so that people can fish and swim in it, it is vital to restore public confidence. It is commonplace for older Pittsfield residents to reminisce about the years that the highly contaminated Silver Lake wouldn’t freeze or the time it caught fire. We do not, nor do we believe that the public will, regard as adequate a clean-up scenario limited to dropping twelve inches of sand from a barge thirty feet down to cover contaminated sediments with levels as high as 20,700 ppm.

This remediation plan can easily fail. It does not utilize permanent solutions. It does not reduce the quantity of toxic wastes in any large or material way.
4. Removal Actions at the Former Oxbow Areas

Section IX PERFORMANCE STANDARDS AND RELATED REQUIREMENTS, 23 e. of the Consent Decree sets the clean-up standards for these areas. It allows GE to select one of three options for determining spatial averaging of contamination for the top foot of soil at a property: 

(i) consideration of the overall property as an averaging area 
(ii) establishment of averaging areas which do not exceed 1.0 acre for GE-owned industrial portions of the GE Plant Area. 0.5 acre for other commercial/industrial properties or recreational properties, or 0.25 acre for residential properties 
(iii) proposal of other specific averaging areas to EPA for approval.  

If GE selects the first option, it must remove and replace all soils in the top foot in unpaved portions of such property or area in which PCBs have been detected in excess of the following NTE concentrations: 125 ppm at a commercial/industrial property or area; 50 ppm at a recreational property or area; or 10 ppm at a residential property.  

(Page 116, Consent Decree)

HRI urges a downward revision of these allowable not-to exceed (NTE) concentrations for Removal Actions Outside the River for the top foot of soil: current levels of 125 ppm at commercial/industrial properties; 50 ppm at recreational properties; and 10 ppm at residential properties should all be lowered.

Appendix E provides further details. For GE-owned commercial/industrial properties in the Former Oxbow Areas, or properties for which an ERE has been obtained, cleanup levels are as follows: 0 to 1 foot, a spatial average of less than 25 ppm; 1 to 6 feet, less than 200 ppm; and if averaged levels at 0 to 15 feet, incorporating anticipated response actions, will exceed 100 ppm, then GE shall install an engineered barrier. For properties where an ERE cannot be obtained, cleanup levels are as follows: 0 to 1 foot, a spatial average of less than 25 ppm; if the spatial average, after incorporating anticipated response actions, will exceed 25 ppm at 0 to 3 feet, then shall remove and replace soils to achieve a less than 25 ppm average; from 1 to 6 feet, after incorporating anticipated response actions, less than 200 ppm; and if averaged levels at 0 to 15 feet, incorporating anticipated response actions, will exceed 100 ppm, then GE shall install an engineered barrier. (Page 50).

For recreational properties within the Former Oxbows if the spatial average PCB concentration exceeds 10 ppm in the top foot or 15 ppm in the 1- to 3-foot depth increment, GE shall remove and replace soils as necessary to achieve spatial average PCB concentrations at or below those levels. GE shall then calculate the spatial average PCB concentration for the 0- to 15-foot depth increment. If that spatial average PCB concentration exceeds 100 ppm, GE shall install an engineered barrier. (Page 51).
We do not believe that these decisions fully protect public health or the environment. GE and the Agencies arrived at an averaged cleanup level of 2 ppm for residential fill properties. While we do not challenge that there is some difference between 24 hour a day residential exposure and less constant occupational or recreational exposure, we do not believe leaving PCB contamination at levels up to 25 ppm in the top foot in commercial areas like Newell Street.

Newell Street is a perfect example of an area that transcends simple categorization. The same area is home to the workers and management of Moldmaster Engineering, the members of the Italian American Club, and borders many homes.

Similarly, a sampling and remediation regime which allows averaging areas of half an acre does not adequately serve to either discover or remove potential hotspots.

Finally, we do not believe that a remediation strategy which calls for an engineered barrier when and if high levels of contamination are found at depth is an adequate solution to the potential dangers of buried barrels, new-found potential plumes and free product in the oxbows. Former GE workers have spoken often of buried barrels, and yet to be discovered GE dumpsites. Only a more comprehensive testing regime in the Former Oxbows and a commitment to remove all high level contaminants at depth can adequately protect the public health for years to come and ensure that the Housatonic River will not be recontaminated.

Recent experience reveals that the Agencies and GE have yet to detect all possible sources of contamination within the Former Oxbow areas. For several years HRI has been questioning the reliability of GEís demarcation of the DNAPL and LNAPL plumes. For several years we questioned whether or not it was possible that the plumes had migrated below and to the other side of the Housatonic River, and were assured that this had not happened. The recent discovery of a new plume in the Newell Street area reveals that our concerns are well-founded. And since July 1999, they’ve pumped out at least 9,000 gallons of PCB-contaminated oil from this previously undetected plume. This is a significant amount of oil.

According to Technical Attachment H of Appendix E, Groundwater/NAPL Monitoring, Assessment, and Response Programs, GE recovered 1,750 gallons of LNAPL and 600 gallons of DNAPL from 1990 to March 1999 from the Lyman Street Area, and 700 gallons of LNAPL from 1991 to the present in East Street Area 1. This new plume has already greatly exceeded those outputs. Hopefully it is far less extensive than the large plume at East Street Area 2, from which, since the 1970s, GE has removed 800,000 gallons of NAPL.

We are very concerned by the highly contaminated groundwater in these areas. The Combined Action and EE/CA Approval Memorandum (Appendix B) recognizes this problem as it relates to the Housatonic River: 

> Dissolved contamination in groundwater migrating into the Housatonic River. Due to the presence of several DNAPL plumes, LNAPL plumes, and heavily contaminated soils, PCBs are present in low levels in the groundwater. Although the concentrations of PCBs are low, the volume of groundwater discharging to the Housatonic River may be large, and the total loading of PCBs may be significant. Therefore, this represents a potential source of PCBs to the Housatonic River.

Appendix C of the Consent Decree gives a sense of how compromised Pittsfield’s groundwater has become. Within Groundwater Management Removal Action Area #1 (GMA #1), which includes the GE Plant, East Street Areas 1 and 2, Newell Street I and II and the Silver Lake area, the groundwater contains PCBs in levels as high as 51,600
ppb (unfiltered) and 420 ppb (filtered) in the Lyman Street Area and 3,700 ppb in unfiltered samples and 770 ppb in filtered samples along the east edge of Silver Lake Ö Lyman Street Area. LNAPL that contains up to:27,000 ppm PCBs, 1,280 ppm 1,2,4-trichlorobenzene, Ö up to 20,000 ppm trichloroethene Ö Newell Street Area II: DNAPL that contains up to 388,500 ppm PCBs, 430,000 ppm 1,2,4-trichlorobenzene Ö LNAPL that contains up to: 24,000 ppm PCBs, 7,300 ppm 1,4-dichlorobenzene Ö i (pp. 17-18).

The Agencies seem to have made the decision that Pittsfieldís groundwater has been so thoroughly contaminated by GEís PCBs and other toxics that it will never serve as a source for drinking water. Therefore, their remediation decisions at the GE plant, East Street Area 1 and 2, the first two miles of the Housatonic River, Silver Lake, the Oxbows etc. consist of limited removal/capping scenarios rather than complete removal. The Agencies also believe that for now the City has sufficient alternate sources of water so that it wonít have to tap this groundwater.

Letís review some recent history as regards Pittsfieldís groundwater. Concerned about future water needs in the early 1970s, the City of Pittsfield took land in Windsor for a reservoir. During a court battle, when this supply was in jeopardy, the city was assured by consultants that even if the court ruled against them, the city had plenty of usable groundwater available in the southeastern quadrant of the city.

In 1974, the Vincent property on East Street, not far from GE and the Housatonic River and 2,000 feet from the old city landfill in that section of town, was identified as one of the best sources for water. In 1977, the city was informed by the state that PCBs were found in the groundwater at the Vincent property. Afterwards, the City of Pittsfield in the late 1970s and the 1980s was so concerned about its limited water reserves, that it began a testing program to search for usable groundwater. During a drought in 1981, the City was considering pumping water from Lake Onota. The cityís concern for future water sources was quite clear. Based on that concern, the Berkshire Regional Planning Commission sought in 1983 a $250,000 state grant for expanded monitoring to determine the extent of contamination under the Vincent property on East Street, and for a possible clean-up program.

The application was rejected because the state felt that the site was a poor choice for potential drinking water, and that Pittsfield was competing against towns and cities forced to close already existing water supplies because of contamination.

The October 1999 Safe Water Act Ground Water Report to Congress speaks about the economic and ecological impacts of contaminated groundwater:
1. Removal of contaminants from drinking water sources through remediation or at the point of supply through treatment can be very costly.
2. Relocating wells and finding new ground water supplies is expensive and may not be technically feasible.
3. The presence of contaminants in ground water adds liability to the land owners of the property that is the source of the contamination.
4. Loss of ground water due to over-pumping and contamination can lead to loss of drinking water, agricultural and industrial supplies, and recreational uses.

Ö Contaminated ground water discharging into surface water can degrade surface
The August 4, 1999 Request for Removal Actions Outside the River at the GE-
Housatonic River Site Action Memo, Appendix D of the Consent Decree states:
*The groundwater at the Site discharges to either Unkamet Brook, Silver Lake or the
Housatonic River. Currently, control of the groundwater discharge to these surface
waters consists mainly of groundwater extraction and treatment in support of preventing
the migration of NAPLs. At a majority of the groundwater/surface water interface,
there is no hydraulic control to prevent discharge to the surface water. Therefore, there
is a potential threat of release of these hazardous substances to surface waters (i.e.,
sensitive ecosystems). Part of the proposed actions contained in this Action
Memorandum are procedures to further characterize the groundwater contamination,
the magnitude of the threat to the surface waters, and if necessary, to conduct
additional response actions.*

We have always advocated the most through clean-up strategies. And while we
appreciate the cost considerations involved in thorough removal scenarios rather than
partial removal and capping, we nevertheless question the wisdom and long-term
efficacy of a policy that abandons a communityís ability to utilize its groundwater to
meet its growing needs for water in the years to come.

HRI therefore suggests an expansion of the provisions of the Consent Decree regarding
groundwater and NAPL. Not only should GE implement an increased monitoring and
assessment program but should immediately expand its Groundwater Treatment
Program to begin a systematic and comprehensive treatment regime of Pittsfieldís PCB-
contaminated ground water throughout the Former Oxbow areas.

5. The Natural Resources Damage Award

HRI would like to challenge the provisions of Section XXII, Natural Resource Damages
of this Consent Decree. We believe the amount of money negotiated by the Agencies
and the Trustees and the Settling Defendant for Natural Resource Damages fails to
adequately reimburse the nation, the Commonwealth of Massachusetts, the State of
Connecticut and the people who live within the reach of the Housatonic River and
Silver Lake for the almost 70 year loss of these resources, and future losses until full
restoration, and for the damages to them.

Unlike the typical CERCLA process, the expedited nature of these negotiations created
a pressing need for the Natural Resource Trustees to quicken the process of assembling
the Natural Resource Damage Assessment. We believe, as a result of this time crush,
that the Trustees and their contractors, Industrial Economics, Incorporated of
Cambridge, Massachusetts failed to adequately quantify lost availability to the public of
the Housatonic River and Silver Lake, and damages to these natural resources, and
therefore underestimated the natural resources liability of the Defendant.

By excluding the Housatonic River Initiative from these negotiations, some of whose
members have a lifetime experience with these resources, as hunters, fishermen,
sportsmen, canoeists, hikers, etc. the Trustees failed to involve some of the most
important and informed stakeholders. These stakeholders ought to have been involved in the critical discussions between the Plaintiffs and the Defendant regarding Natural Resource Damages.

... Let's examine the Industrial Economics, Inc. report. On Page 1-3, in the *Limitations* section, the authors state: *The nature of existing, readily available data and information limited our ability to complete all of the objectives described in the Statements of Work. In particular, our injury assessment does not identify and quantify all of the natural resources injuries likely to present in the Housatonic River.*

5. **Contaminants of concern:** Polychlorinated biphenyls (PCBs) are the primary contaminants of concern at this stage of the damage assessment. *Though there are other hazardous substances present in the Housatonic River that may contribute to natural resource injuries, we have not addressed potential injuries resulting from exposure to substances other than the PCBs.*

6. **Geographic Scope:** We have not assessed potential injuries and damages associated with Silver Lake and Unkamet Brook. Both may require additional scrutiny. *In addition, we have not addressed specific injuries and damages that might be associated with the former oxbows located in Pittsfield, though we do recognize the potential importance of these areas to a final determination of restoration and compensation requirements. Furthermore, we recognize that these areas may be sources of continuing contamination to the Housatonic River.*

7. **Injury Assessment:** *Existing data are available to characterize the nature and extent of contamination in the Housatonic River environment but do not in all cases provide sufficient information to document natural resource injury. As a result our injury assessment focused on a summary of the existing contaminant concentration data and the likelihood that those data are indicative of natural resource injuries (which could be documented through additional data collection and/or analysis).*

8. **Restoration:** *Due to the limitations of the injury data and the dependence of restoration planning on the injury assessment, we focused our efforts in his area on the preliminary identification of categories of activities as well as specific activities that might be appropriate for the purposes of compensatory restoration. These activities do not include primary, physical restoration of natural resources (e.g., sediment removal), the specification of which would be the primary outcome of a completed injury assessment.* (Pp. 1-3 to 1-4)  (Emphasis added).

The clearly stated limitations of the report itself buttress our previously stated concerns that the Trustees entered the negotiations with insufficient data: limited natural resource injury data; a failure to include potential injuries resulting from exposure to substances other than the PCBs; and the failure to assess past active and passive use loss of Silver Lake are the most glaring examples.

*Ö while we believe this report reveals major flaws in the assessment process, we are nonetheless struck by the preliminary figures of between $11 million to $32 million for Recreational Damages, and $25 million to $250 million for Passive Use Losses. While Industrial Economics cautions that these two categories cannot be automatically added*
because of possible overlap the sums nevertheless exceed by a large factor the amounts
the Agencies and Trustees negotiated with the Defendant.

As an exercise let’s reduce the combined sums by 25% to account for possible
duplications in accounting for lost use. We are left with a combined range of $27
million to $211,500,000.

Now let’s imagine a Resource Damage Assessment that takes into account the newly
acquired data being gathered by the EPA’s Susan Svirsky and her team working on the
Ecological Risk Assessment. Add the emerging data about tree swallows, amphibians,
small mammals and minks, etc. Add an accurate assessment about the lost use and
ecological damage to Silver Lake. Take into account the fact that we now know the
West Branch of the Housatonic River has large levels of PCB contamination, and assess
that ecological damage. Do the same for Goodrich Pond which we now know has high
levels of PCBs in bank soils. Add the appropriate assessment for loss of Pittsfield’s
groundwater. And with a Berkshire-based comprehensive study, more accurately
estimate how wildlife viewing and other general outdoor activities have been, and will
continue to be, affected by the presence of PCBs.

We appreciate the fact that the Trustees and Agencies settled for a significant
remediation package, and that such remediation fulfills in part the mandate of the
Trustees to ensure that the injured resources be restored. Nevertheless, the Plaintiffs’
and public’s interest is ill-served by an underestimation of the damages these resources
incurred and an inaccurate accounting of the lost use of these resources.

We believe the public interest would be better served by conducting a full-fledged
Natural Resource Damage Assessment that better incorporates the newly emerging EPA
data and more accurately accounts for past and future lost Massachusetts usage.

That’s a summary of the important issues HRI raised in its public comments to the Consent
Decree. A review of Exhibit 2, United States Memorandum In Support Of Motion To Enter Consent
Decree, reveals that, in spite of our arguments, the government believes our concerns have been answered
by provisions of the Decree itself, and therefore needs no modification.

On July 20, 2000 the U.S. Department of Justice officially asked Judge Ponsor to enter the
Consent Decree, stating:

The Consent Decree executed by the United States, Massachusetts, Connecticut, the
City (of Pittsfield), PEDA and GE is a fair and reasonable resolution of claims against
GE, comports with the objectives of CERCLA, RCRA and the CWA and is in the public
interest. The public comments submitted in this action do not show that entry of
the Decree is improper, inadequate or not in the public interest. The Court should
derfer to the agreements reached in the Decree, and enter the Decree as a final
judgment.” (Emphasis added.)
Exhibit 2 to the United States’ Memorandum in Support of Its Motion to Enter the Consent Decree provides EPA’s answers to some of our concerns and the concerns of other commenters:

Several commenters object to the Consent Decree on the grounds that the commenters were excluded from the negotiating process, that the negotiations were conducted in private, and that certain information regarding the negotiations continues to be maintained in confidence. ... It is well settled in law and policy that it is appropriate for the government to conduct private negotiations. Without the ability to discuss the possibility of settlement, and engage in a bargaining process, settlements could not be attained ... in this case, the government provided the public with more information and access to the negotiations than is required by law or policy ... The commenters seek privileges or rights beyond what is contemplated by law or government policy. (Pg. 8)

As regards the government’s decision to provide GE covenants not to sue in exchange for cleanup action and reimbursement for the monies the agencies have spent, Lois Schiffer, the Assistant Attorney General of the Environment and Natural Resources Division of the Justice Department wrote:

Regarding civil liability, the governments have provided GE covenants not to sue for particular civil liability in exchange for GE’s commitment to complete the proposed Consent Decree’s obligations regarding comprehensive Site remediation, natural resource damage recovery, and recovery of government costs. The United States believes that the covenants not to sue provided by the governments are appropriate under the circumstances and do not unjustly limit the rights of property owners.

First, as to the appropriateness of the covenants, the covenants are limited or conditioned in several respects that protect the public from inappropriate releases from liability. First, the future liability covenants not to sue provided GE do not take effect until EPA certifies that a particular removal or remedial action is complete ... Second, the covenants not to sue provided GE are subject to satisfactory performance by GE of its obligations under the proposed Consent Decree ... Third, the proposed Consent Decree includes reservations by the United States of its rights to pursue GE for future liability if new information or previously unknown conditions, together with any other information, indicate that a Removal Action or Remedial Action is not protective of human health and the environment ... In addition, to respond specifically to a particular concern about PCBs being found to be a greater health risk in the future, the proposed Consent Decree addresses EPA’s ability to pursue the ‘reopeners’ in such a situation.

I began these comments by detailing the gap between what the community knew about this site and what the Agencies deemed to be true about this site. Whether it was the extent of contamination in the Housatonic River, the extent of the underground plumes, or the existence of PCB-dumpsites throughout the community, GE consistently under-estimated the problem and the state and federal agencies acted accordingly.

The government’s response to reasonable questions and concerns by community members continues that trend. Public participation, according to the government, was more than adequate, despite the fact that important public constituencies who took Mr. DeVillars’ pledge to heart - “to begin a process whereby we work very effectively in a very open fashion with this community to understand even better your interests and to make sure you have a voice in the process ...” now believe they were excluded from that very critical process.
Finally, the government declares that it has won an important victory for the community. In its Memorandum in Support of Its Motion to Enter the Consent Decree the government states:

Not only is the settlement fair, it is reasonable. Reasonableness is evaluated in three ways: technical adequacy, adequacy of the settlement to compensate the public; and how well the settlement reflects litigation risks and other considerations. The Decree passes these tests with flying colors.

First, the various response actions that have been and will be performed at the Site are adequate to address the contamination. EPA used its best technical judgment and selected a series of response actions that will be protective. The various concerns identified by commenters were considered by the Agency and do not raise any serious issues.

Second, the settlement adequately compensates the public. The United States will recover 90%-97% of the expected site costs through cost recovery and work. In addition, the Decree includes a natural resource damage package worth over $25. The overall settlement goes far beyond what would be required to demonstrate adequacy of compensation. ...

In the proposed settlement, GE will bear several hundred million dollars in costs and cleanup obligations to account for its responsibility for PCB contamination at the Site. The components of the settlement demonstrate substantive fairness: GE's obligation to complete a comprehensive and expeditious cleanup of the Site; GE's commitment to compensate the governments for natural resource damages; GE's requirement to reimburse a significant amount of the governments' past and future costs; the governments' relatively minimal degree of compromise in the settlement; the significant limitations and reservations regarding the governments' covenants not to sue GE; and the appropriate boundaries around GE's contribution protection in the settlement. (Pp. 40-41.)

And so we end for the moment, where we began. Despite 8 years of research, extensive contact with former GE workers, outreach with contaminated river front property owners, contaminated commercial property owners, residential homeowners, sportsmen, river enthusiasts, we are informed by the government that despite our detailed 54 pages of public comments: The various concerns identified by commenters were considered by the Agency and do not raise any serious issues.

Where then, is the opportunity promised us by EPA Region One Administrator John DeVillars to "make certain that you're informed and that you're able to hold us accountable for what we owe you – which is a prompt and safe cleanup in this community." It seems a slightly loaded deck of cards we're playing with if the same agency that pledges accountability determines ipso facto that despite our protestations to the contrary our concerns do not raise any serious issues.
1997-98 News

Boston Globe publishes 1948 GE memo

GE fattens Berkshire Eagle with full-page ads

HRI updates: SUNY joins ambient air study

HRI fights to expose dump sites

Removal Works

Longview Terrace PCBs level = 44,000 PPM

EPA orders clean-up of first 2 miles of the river

Housatonic River health assessment ordered

Property Owners Sue GE

Dorothy Amos Park contaminated

Berkshire towns in rare show of solidarity

GE's Building 68 estimates seriously in error

Housatonic River Restoration-Removal Works

HRI against Capping

HRI & Citizens for PCB Removal force Residential clean up

PITTSFIELD GE & THE HOUSATONIC RIVER:
THE NATION IS WATCHING

This past year has seen the nation take note of the widespread toxic contamination that has poisoned our community and the Housatonic River. Articles in the Wall Street Journal, television coverage on CNN, Hard Copy, and Extra, radio coverage on National Public Radio and its stations throughout New England, and AP wire service stories in newspapers all over the country have brought the issues of our PCB problems to much of the nation. So this is both a time for self-congratulation, and a time for a renewed commitment to citizen action. For with this national spotlight, we have an opportunity to demand and accomplish a comprehensive cleanup of contaminated residential and commercial properties, the Allendale School, Silver Lake, and the Housatonic River, and as we do so, help set an extraordinary precedent for communities like ours across the land.

GRASS ROOTS ACTION UNCOVERS PCB DUMPS

For many years the Housatonic River Initiative (HRI) has been pressing state and federal agencies for more comprehensive testing, and for more thorough investigations of the reports of former GE workers about where and how PCBs were used, and where they were transported. Events of the last year and a half have proven how right we were. In 1997 we pressured the Massachusetts Department of Environmental Protection (DEP) to establish an anonymous tip line so that people could tell what they...
knew about PCBs without worrying about GE retaliating, firing them or threatening their pensions. Well. 1-888-VIOLATE has proven to be a popular number. DEP's phones were ringing off the hook. The agencies have yet to catch up with the enormous numbers of tips they've received from former GE workers, employees of former GE contractors, and local residents.

CHILDREN'S PARK BUILT ON CONTAMINATED PROPERTY
The firestorm continued when HRI Director Tim Gray reported to the DEP information he had received that a local Pittsfield neighborhood park, the Dorothy Amos Children's Park on West Street had been constructed on land that a former GE contractor had used to bury PCB-contaminated waste. Soon testing revealed that high levels of PCBs were found in the dirt directly below and around the swingset. In the days that followed the now infamous Niederjohn Memos came to light. Written on December 10, 1979 and May 15, 1981, by former GE employee R. Kelly Niederjohn to GE officials, they detail his concern about contamination problems that the company hadn't dealt with. One memo stated: "In the sixties and early seventies General Electric purchased one to two million gallons of 10c Transformer Oil per year which was filtered and dried with dried Filter Press Paper and deaeration. They also bought and mixed three to four hundred thousand gallons of Pyranol per year. It was purified and dried by filtration through dried Fullers Earth." Niederjohn then reminded his former superiors of leaks and spills, and of several dumping grounds, including dumps in Lanesboro, the Sewer Treatment Plant, Nassau, NY, behind building OP3, and Pete's Diner oxbow. He wrote: "A real thorough study should be made to at least identify where spent Fullers Earth and discarded Pyranol were dumped. If we do not do that now our children and grandchildren will get bit by our neglect." As Niederjohn knew, a lot of this PCB-contaminated material ended up in the front and back yards of Pittsfield homes. In the 1940s and 50s, GE offered this material free to homeowners who were looking to fill up holes, or to landscape their property. And in some cases, when fill was delivered, GE had the homeowners sign a letter acknowledging that they had received "clean" fill. Home after home after home was found to be contaminated. Niederjohn's prediction had, in fact, become a widespread reality: many people and their children and grandchildren have needlessly been exposed to toxic contamination.

FINALLY THE TRUTH IS OUT
The Boston Globe headline of August 10, 1997 read: "GE knew of Pittsfield "liability" for years." At the very end of the article Michael Cohen, the Globe correspondent wrote: "A 1948 GE memo obtained by the Globe indicates that company officials relied to some extent on residents' willingness to take the fill as a way of handling its industrial waste. 'This is the last section anywhere near the plant where we can dump most anything that comes out of the factory,' a GE manager wrote in 1948 when describing the filling of the residential areas.'" On December 4, 1997, The Wall Street Journal's front page story weighed in: "Pollution From PCBs Keeps GE in Trouble With Pittsfield, Mass. - Health Fears Vex Residents, Many of Whom Worry Over Tainted Homes Sites - A Lot of Anger Out There."

LONGVIEW TERRACE - 44,000 PPM
One of the first "core" properties to be discovered, a home on 47/49 Longview Terrace in the Lakewood section had PCB concentrations of 44,000 parts per million (ppm) in the soil. A home on Benedict Road, more than mile away, had levels of 20,000 ppm. Massachusetts DEP standards for residential exposure call for removal of PCBs when average concentrations exceed 2 parts per million. That's 44,000 versus 2. HRI, led by Tim Gray, immediately began to offer all of our resources to affected homeowners in Pittsfield. Thirty of the first 37 properties to be tested had PCB concentration levels high enough to trigger emergency cleanup procedures. HRI organized and hosted neighborhood meetings; answered
hundreds of questions and phone calls; intervened and advocated with the DEP and EPA for those who wanted their homes tested; set up educational forums; and dealt with reporters from all over the country. An active group of Lakewood residents, working together with HRI, mobilized as Citizens for PCB Removal, and great pressure was brought to bear on GE, the Pittsfield City Council, and state and federal agencies.

PUBLIC PRESSURE DRIVES RESIDENTIAL CLEANUP
THE FIRST DO BEST
Facing increased media exposure and the growing organized outrage of the Lakewood community, GE, in the words of The Wall Street Journal, "capitulated in September," and agreed to clean up any PCB contamination on these first residential properties that was above 2 parts per million. And with DEP approval, GE has begun an extensive process of digging up the PCB fill. But recently, GE has modified this pledge, invoking DEP regulations that allow for "averaging" of contamination levels, so that PCB levels throughout an affected property can average no more than 2ppm. GE also quickly purchased the Longview Terrace property at a bargain price, and with a deed restriction (an activities and use limitation, AUL) that prohibits certain future uses, will be able to leave some residual contamination on site. Many neighbors are concerned that any residual PCB contamination will not only continue to present a public health hazard but will effectively destroy their property values.

HOMEOWNERS SUE GE
ATTORNEY GENERAL HARSHBARGER INVESTIGATES COVER-UP
Amherst Attorney Cristobal Bonifaz, who previously instituted court action for the owners of contaminated Housatonic River floodplain property, has sued GE in federal court on behalf of 18 "fill" homeowners or neighbors who are seeking damages for diminished property values. And investigators from both the EPA and the Massachusetts Attorney General's office were interviewer former GE employees and the employees of its contractors to determine whether there has been criminal action to cover up the existence of the Niederjohn and other internal memos that detail the PCB fill program.

GE FIGHTS BACK WITH FULL PAGE ADS
On September 9, 1997 GE launched its new ad campaign in an attempt to discredit its critics, defend its past practices, and to make its case that PCBs are not a health hazard. On September 30, 1997 GE's ad stated: "There have been a lot of studies of long-term worker exposure to PCBs, and they show overwhelmingly that even workers who had close contact with PCBs day after day, showed no unusual health problems." Not surprisingly, this is not exactly the truth. A September 1996 EPA draft document "PCBs: CANCER DOSE-RESPONSE ASSESSMENT" tells another story: "Occupational studies show some increases in cancer mortality in workers exposed to PCBs. Bertazzi et al. (1987) found significant excess cancer mortality at all sites combined and in the gastrointestinal tract in workers exposed to PCBs containing 54 and 42 percent chlorine. Brown (1987) found significant excess mortality from cancer of the liver, gall bladder, and biliary tract in capacitor manufacturing workers exposed to significant excess malignant melanoma mortality in workers exposed to Aroclors 1242 and 1016. Sinks et al. (1992) found significant excess malignant melanoma mortality in workers exposed to Aroclors 1242 and 1016." On October 9, 1997 GE's full page ad claimed a Massachusetts Department of Public Health study proved that: "PCB levels in blood are normal in Pittsfield. They're just the same as if you lived down the road in Sheffield or out in San Francisco. Everything we know tells us living near soil containing PCBs isn't going to hurt you. "We rely on health studies. We believe that studies show people do not get PCBs in
their blood from soil, that PCBs do not cause adverse health effects and that cleanup standards should be based on existing evidence not speculation about remote possibilities. Recent scientific studies suggest just the opposite. What is normal? Before the introduction of Monsanto/GE/Westinghouse PCBs, there were no PCBs in human blood and human and animal tissue. The fact that the Inuit in northern Canada have some of the highest concentrations of PCBs reveals, in the words of J.P. Meyers, that "the geography of contamination has become global." ("Endocrine Disruption: Patterns in science; goals in policy," www.altonjones.org (bad link) Research by Deborah Rice, and the Jacobsons among others, has shown that smaller and smaller concentrations of PCBs, and exposure to PCBs at earlier times in life, especially during pregnancy and in utero exposures, can cause severe health problems. As Meyers states: "The time frame for concern has been extended. from an initial focus on direct impact on the exposed adult, to in utero effects that cause life-long damage, including some patterns which may not appear until beyond puberty." Meyers notes that this has been born out by recent work undertaken by the Centers for Disease Control to study endocrine disruption. In a study published in November, 1997, they report a doubling of penis deformities in boys since 1970. A 1992 report of the worldwide decline in sperm count was roundly criticized. In November 1997, a report by Shanna Swan reexamined the issue and did a detailed re-analysis of data from 61 studies. She found "a significant decline in sperm density in the United States and Europe." GE's insistence that PCBs are safe is as dangerous as the tobacco companies continuing denials about the links of smoking to lung cancer. As we discover more and more dumpsites, additional contaminated properties, parks, schoolyards, and higher levels in the river floodplain, we need to be more vigilant about possible exposure.

EPA ORDERS CLEAN-UP OF 2 MILES OF THE RIVER

In a June 4, 1998 letters to Berkshire County residents John DeVillars, Region 1 Administrator for the US EPA announced the results of recently completed evaluations of the human health and ecological impacts of PCB contamination of the Housatonic River and its floodplain. Based on its own testing - spurred in large part by HRI'S decade-long loud and public insistence on a new independent testing program - EPA found high and dangerous levels on a two mile stretch of the river downstream from the GE plant. His letter states: "Young children and teenagers playing in and near portions of the river face noncancer risks that are 200 times greater than the EPA considers safe. Noncancer effects from PCBs may include liver and nervous system damage and developmental abnormalities, including lower IQs.

"Teenagers growing up near portions of the river face a 1 in 1,000 cancer risk due to exposure to contaminated riverbank soils. "Fish collected in the river had PCB concentrations of up to 206 parts per million, among the highest levels ever found in the United States and 100 times higher than the limits set by the U.S. Food and Drug Administration. "91 of 93 sediment samples taken in the Upper Reach of the river showed the presence of PCBs." And then, in spite of GE's claim to the contrary, DeVillars goes on to emphasize that "it is the EPA's concern for citizens' health that is driving the agency's actions to clean up the heavily contaminated 2-mile section of the Housatonic ...

"An EPA fact sheet contradicts GE's claim that "people do not get PCBs in their blood from soil," and directly states: "There are three primary means which people can be exposed to PCB contamination in and around the Housatonic River: • Eating fish from the river. • Children accidentally ingesting PCBs, for example by sticking hands covered with contaminated soils or sediments in their mouths. • Skin contacting contaminated soils and sediments long enough to absorb contamination. (Please see article on SUNY/HRI testing of ambient air on page _) A last thought about health effects. We have become used to, perhaps even resigned to an epidemic of cancer. Peter Montague in the September 25, 1997 issue of Rachel's Environment & Health Weekly #565 (www.monitor.net/rachel) reminds us that "in 1950, 25 percent of adults in the U.S. could expect to get cancer during their lifetimes; today about 40 percent of us (38.3 percent of women and 48.2 percent of
GE, EPA, DEP, MAYOR & OTHERS NEGOTIATE WHILE PUBLIC WAITS

On Monday August 4, 1997 EPA Administrator John DeVillars formally nominated the GE/Pittsfield site and 55 miles of the Housatonic River for inclusion on the national priority list (NPL) of Superfund. At the same time he set a February 1, 1998 deadline for a negotiated settlement that might preclude having to invoke Superfund. Despite repeated HRI requests for community representation, including seats at the table for HRI, South County representatives, and impacted Pittsfield residents, the negotiations were limited to representatives of state and federal government agencies, GE, and Pittsfield Mayor Gerald Doyle and City Council President Tom Hickey. HRI has been fighting from its very existence to move the GE site and river from its current jurisdiction under the Resource Conservation and Recovery Act (RCRA) to Superfund jurisdiction. GE has been able to delay cleanup activity for years, utilizing the incredibly slow and cumbersome administrative and appeal process of RCRA. Superfund designation allows the Federal government to order cleanup activity, and if GE balks, the EPA can take action and then sue not only to recover its costs but triple damages. DEP and EPA regulators have counseled patience, and reminded us many times that, by both statutory responsibility and personal commitment, they need and want to do everything they can to protect public health and safety and the environment. Nevertheless, it is our job to be skeptical, and do everything in our power to get the best cleanup possible. It has been painful to watch others negotiate the fate of our community and our river. An article by William Sanjour, "What's Wrong With The EPA" in the August 20, 1998 issue of Rachel's reminds us of the need to be vigilant. Sanjour, who has worked for EPA for 25 years, writes: "For decades, the Westinghouse Corporation disposed of its toxic waste at several dump sites in Bloomington, Indiana. In the early '80s, the dumps came under the aegis of the U.S. Environmental Protection Agency's Superfund program. While negotiations with Westinghouse over how to cleanup the waste dragged on for years, EPA, in order not to upset the negotiations, kept from the public the fact that toxic air levels near the sites were more than 15 times greater than the Superfund target risk level. At the same time that EPA was secretly recommending to its staff that they wear respiratory protection whenever on-site, it was assuring the people of Bloomington that they were in no immediate danger."

PRESSURE FOR INPUT RESULTS IN SPECIAL SESSION: HRI, CPCBR, ENVIRONMENTALISTS, SOUTH COUNTY TESTIFY

In an unprecedented display of unity, Lenox, Lee, Stockbridge, Great Barrington, and Sheffield presented separate testimony on July 22, 1998 to EPA, DEP, GE and other agencies conducting the on-going PCB negotiations. Even though each town made their presentations separately, the same issues seemed to be at the heart of what they had to say. The first issue was the need for further testing to accurately delineate PCB contamination in the sections of the river south of Pittsfield, and the area in which the EPA and DEP are currently focusing. Recent testing in Rising Pond in Housatonic found levels as high as 27 ppm in sediments, and in Lee new residential properties have been found to be contaminated. The towns emphasized that this new testing should be done quickly, and that GE shouldn't be allowed to use this as an excuse to delay remediation decisions. As both the residential fill property cleanup and the Building 68 cleanup has shown, the agencies and GE can accomplish an awful lot when they have to. The Town of Sheffield expressed concern for their extensive river farm land and the effects PCBs might present to crops intended for human consumption. There was also concern about those places where PCBs might have concentrated: dam sites, bridge abutments, and other possible hotspots. Great Barrington was
concerned about the PCB levels in Rising Pond. There was also concern expressed about the possibility of any new possible downstream transport of PCB, and questions about whether there will be a cleanup as far south as Great Barrington. Several environmental organizations participated. Mark Jester, representing the Berkshire County League of Sportsmen, testified: "... the Housatonic River, from its headwaters in Hinsdale to the point where it leaves Sheffield, is excellent fisheries and wildlife habitat. However, it is undermanaged and underutilized because its lands and species are contaminated with PCBs. "We want to see a restored Housatonic River. Our use of the river has been impaired and diminished for two decades. Remediation will bring further impacts. But the river can recover from remediation - it can not recover from inaction. "The promise of a cleaner, safer, healthier, more productive river causes us to support intensive PCB removal, and call for meaningful resources damage awards from General Electric." Frank Lowenstein of The Nature Conservancy testified: "A number of rare species of the southern Berkshires are associated with the main stem of the Housatonic or its floodplain, including two rare turtle species, one of which is federally threatened, two rare mussel species, and a number of rare plant species. "The combination of superb agricultural soils and a viable farming community makes this one of the areas in the state with the best potential for maintaining agriculture over the long term. "All of these resources may be at risk from the continuing PCB contamination of the river. In other locations, PCBs have been shown to impact the reproductive success of such diverse species as mink, otter, and great blue herons. "Clean-up should be a top priority in the negotiations, and should address not just areas near the GE plant but other hot spots as well, to ensure that the contamination does not spread over more and more land, impacting an ever-wider and more significant suite of natural resources." At the conclusion of the session, Tim Gray commented: "The message was loud and clear that South County has mobilized to reclaim the Housatonic as a treasured resource."

HRI UPDATES

Housatonic River Restoration. One of the aspects of a Superfund designation is the assessment of any possible "natural resource damages" the community may have suffered as a result of the PCB contamination of the Housatonic. This assessment is undertaken on behalf of the "trustees" of the river, including representatives of the Commonwealth of Massachusetts, the State of Connecticut and several federal agencies. If you've been reading newspaper reports of the on-going negotiations, you know that this has been one of the major sticking points for GE. Because they have the largest number of Superfund sites, they are, of course, wary of setting too large a precedent. With funding from the US EPA, and the Massachusetts Environmental Trust in partnership with the Berkshire Taconic Community Foundation, HRI has created Housatonic River Restoration, a broad-based coalition of interested and concerned stakeholders, to ensure public participation in the process. Rachel Fletcher, who is heading the project, has held several meetings already with Sportsmen's clubs, in Great Barrington, Stockbridge, Sheffield, and Dalton, and will be holding many more, in every town up and down the length of the river to hear from anyone who has suggestions about how we can restore, use, and protect our river. If you're interested, there's a town meeting scheduled for Lenox on Wednesday, October 28th and 7 PM in Lenox Town Hall. Other upcoming HRR events include a Pittsfield meeting, a meeting of historical societies, and an interfaith meeting. For more information contact Rachel Fletcher at (413) 528-3391 or Tim Gray at (413) 499-6112.

SUNY, HRI, AND CITIZENS FOR PCB REMOVAL LAUNCH NEIGHBORHOOD AMBIENT AIR STUDY

Anne Casey, who some of you might have met at an HRI health forum, has undertaken preliminary work
on what we hope will be an extensive investigation into the possible volatilization of PCBs into the air in the Lakewood section of Pittsfield. Anne has recently been taking samples of the ambient air in some of the homes of Pittsfield residents who may have received PCB-contaminated fill, or live nearby to those homes. Anne is a researcher at the State University of New York's School of Public Health and has recently been working with the Akwesasne Indians. They have been dealing with PCB contamination on their upstate tribal lands. Anne and the citizens of Lakewood are concerned that PCBs may become airborne, and that this volatilization may indeed be an important pathway of exposure. While it's clearly much too soon to tell, testing in one home has already shown levels high enough to prompt a more complete study. And Anne has begun to apply for major funding for this work.

MASS. DEPARTMENT OF PUBLIC HEALTH: HOUSATONIC RIVER ASSESSMENT ADVISORY COMMITTEE

In conjunction with the listing of the GE/Pittsfield and Housatonic River site under Superfund, the U.S. Agency for Toxic Substances and Disease Registry (ATSDR) is currently conducting a "health assessment" for the affected areas. The ATSDR Guidance Manual states: "A health assessment is the evaluation of data and information on the releases of hazardous substances into the environment on order to assess any current or future impact on public health, develop health advisories or other recommendations, and identify studies or actions needed to evaluate and mitigate or prevent human health effects." (pp. 2-1) The Massachusetts Department of Public Health is engaged in doing some of this work. The health assessment gathers "environmental characterization data" - a fancy way of saying information about environmental contamination and the pathways this contamination may travel. "Community health concerns associated with a site constitute a key data component of the health assessment." So if you're aware of possible areas of contamination, or places where people may be in contact with sources of contamination, contact HRI and we'll make sure this information gets to the Mass. Department of Public Health.

WE'RE ALL LIVING DOWNSTREAM

Most people have gotten the impression that the PCB problem is Pittsfield's problem. But we at HRI have been hearing for many years that GE'S PCBs were shipped and dumped all over the place. We've heard rumors about a dumpsite as far away as the Westfield River. A recent report in the August 24, 1998 Berkshire Eagle states: "Environmental regulators are quietly investigating a slew of suspected new PCB sites, some of them recently disclosed by GE after a review of millions of pages of archived company records." Dozens of commercial sites are suspected of containing possibly contaminated industrial waste in Lenox, Lenox Dale, Hinsdale, Peru, Cheshire, and New Lebanon, New York.

NO RUG FOR OUR RIVER, OR SILVER LAKE

Time after time GE has proposed a clean-up strategy that relies on "armoring" or "capping" or "geosynthetic materials" or what we think of as covering up the PCBs with an expensive rug. I quote from one of many dozens of GE studies, the PICM: "In some cases, two layers of materials are used: a layer that provides isolation of the contaminants and a cover layer designed to prevent erosion of the armor. The armor layers are placed either from a barge, from a floating platforms, or from the banks of the river or lake." (pg 2-3) If GE has its way, the river bottom and banks will be pockmarked with a series of geosynthetic Band-Aids. And we will all be praying that the River never again experiences the natural turmoil of a flood. As for Silver Lake, if GE gets its cap, we may very well see a bizarre man-made ten foot pond stretched above some newfangled guaranteed-never-to-stretch, bend, or break
space-age plastic cover. While beneath it lies an old-fashioned 20th century mausoleum of toxic waste. And all around it, some gorgeous gas lamps. Ye Olde, Quaint But Poisoned, Silver Lake.

BLDG 68 SHOWS GE'S ESTIMATES OF CONTAMINATION WAY OFF - REVEALS THAT REMOVAL (DRY DREDGING) WORKS

Two years ago, new sampling on the banks and in the Housatonic River near the former GE Building 68 revealed extremely high levels of PCBs. Levels as high as 54,000 ppm were discovered in the river sediment, and concentrations of 104,000 ppm were found on the bank. This was particularly interesting because for 15 years GE has been claiming that they knew where all the contamination was, and that, according to its 1983 Stewart Report: "The PCB levels in sediments ranged from less than 1 to 210 ppm (dry weight) and appeared to be confined to the upper 12 inches of the sediment." The Stewart Report went to estimate that a total of 39,000 pounds of PCBs remained in the river system. For many years we have questioned the Stewart Report, and demanded new testing. Well, the stark reality of the Building 68 site reveals that GE has grossly misrepresented the extent of river contamination. As Theo Stein put it in his December 2, 1997 article in the Berkshire Eagle: "If GE's estimated average concentration of 1,550 parts per million for the sediments in the hot spot is even close, then at least 10 tons of pure PCBs were removed from the river bed off Building 68. That would represent more than half of the 39,000 pounds a GE consultant estimated was in the Housatonic River sediments above the Connecticut border in 1983."

Invoking a 106 Administrative Order under Superfund, the U.S. EPA directed GE to remove the contamination. GE failed to convince the agency to allow the site to be capped, and GE's contractor, Maxymillian Technologies, began work to isolate one section of the river at a time. The affected sediment was dried and dug up. The Massachusetts DEP and the EPA monitored the Building 68 clean-up efforts and reported that downstream monitoring revealed that there was no noticeable movement or resuspension of contamination. The Building 68 clean-up proves what we've been saying for years.

REMOVAL WORKS

GE has mounted an extraordinary public relations campaign to convince the public that dredging doesn't work. Don't believe them. There are several state-of-the-art technologies that exist today to dig up and successfully treat PCB contamination. In fact a local Pittsfield contractor has already demonstrated it can remediate PCB contamination. Maxymillian Technologies is one of several companies that can do the job, and do it well. As William Carley wrote in the July 27, 1998 issue of The Wall Street Journal: "The stakes of the battle extend beyond the Housatonic. GE and the EPA are locked in a similar dispute over PCB contamination of the much larger Hudson River, and a loss in Pittsfield might set an expensive precedent."

GROUPS, AND MORE GROUPS

We thought we'd take a moment to clarify what to some is a bit of confusion. The Housatonic River Initiative (HRI), a non-profit coalition of Berkshire County residents, was formed in 1991 to work as a group to reclaim the Housatonic river system from years of neglect and decades of toxic PCB contamination. We are conservationists, sportsmen and women, scientists, and homeowners whose land has been polluted. The more we have learned, the more we have realized what a large task we have set for ourselves, and the wider our scope of activities has become. While we began advocating for a river, our tasks multiplied to include fighting for a comprehensive cleanup of the General Electric (GE) facility in Pittsfield, Massachusetts, the closure of GE's PCB burn facility, the removal of PCBs from
contaminated residential homes, businesses, schoolyards, and playgrounds, and demanding public health studies for former GE workers and members of the public whose homes were built on or near PCB-contaminated fill. We are sometimes confused with the Housatonic Valley Association (HVA). While we many times find ways to work with HVA, our mission is very different, and inextricably bound by our sense that the Housatonic River will never be fishable and swimmable unless GE is compelled to undertake a comprehensive clean-up. HVA has often hesitated to criticize GE because it receives significant funding from the company. We will continue to look for opportunities to work together for the river, but we will never hesitate to pressure GE to fulfill its responsibilities to the community and the natural environment.

Learn more about the Housatonic River Initiative. Go to the web page prepared by the Civil and Environmental Engineering Department at Tufts University for HRI citizens group.

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Housatonic River, above Wood's Pond

photo by AM Dromaris (Oct. 18, 1996)
Pittsfield / GE Plant / Housatonic River Sites

- Hydrograph real time Housatonic River-USGS
- EPA, New England - GENERAL ELECTRIC - HOUSATONIC RIVER
- PCBs In Ducks Spurs State Warning
- More PCBs in Ducks
- Citizens Wanted Say In Pittsfield PCB clean up
- HRI Called for Testing for four years - West Branch now found polluted
- WATERSHED EVENTS - FALL 1998
- Article-HRI
- EPA Region 1 - Press Release: GENERAL ELECTRIC TO REMOVE CONTAMINATED SOIL AND SEDIMENTS
- Close to Home, Winter 98- About PCB sites
- In Depth - Fragile Eden
- USGS CIRC 1155 subpage: Summary of major issues and findings
- EPA Region 1 - Press Release: EPA AWARDS BERKSHIRE COUNTY ENVIRONMENTAL GROUP GRANT AWARD OF $50,000 TO ENHANCE CITIZEN PARTICIPATION IN GE - PITTSFIELD SITE CLEANUP
- The ten (10) worst companies in the United States base on a 1994 report.
- EPA, New England - Summary of Agreement General Electric/Pittsfield - Housatonic River Sites
- EPA Region 1 - Press Release: GENERAL ELECTRIC TO REMOVE CONTAMINATED SOIL AND SEDIMENTS
- EPA Region 1 - Press Release: EPA ANNOUNCES ENFORCEMENT ORDER AND OTHER STEPS FOR PCB CLEANUP OF HOUSATONIC RIVER IN PITTSFIELD; RE-ISSUES INVITATION TO RESUME NEGOTIATIONS
- Toxteam -- USEPA Letter to GE on PCBs
- Tim Gray and the Housatonic River Initiative
- Pittsfield, Sensing Betrayal, Confronts GE's Toxic Legacy
- City Limits- Pittsfield Diary GE
- http://www.newschoice.com/Webnews/Index/NeBescri.asp?GPC=NeBe&ES=212.02
- A Tenacious, Lurking Presence.
- HRI helps to uncover PCBs at Playground - Pittsfield
- GE and PCBs- article
- TOSC- Housatonic Project
Other PCB Groups and Site Information

- Center for Health, Environment and Justice Home Page
- Persistent Organic Pollutants Elimination Platform
- Uncaged- Nassau, N.Y. Group fighting a nasty GE Dump
- CLEARWATER Hudson River Sloop
- Scenic Hudson to the Next Millennium a Non-Profit Organization Dedicated to Protecting and Restoring the Hudson River and it's Valley
- COPA, Inc. - The Seating Plan - Site Index
- COPA, Inc.
- PCBs and the Fox River
- Anniston, Alabama- Monsanto PCB Site
- GE Gives Aways Barrels of PCBs in Rome Georgia
- Capping PCBs with a Road- Anniston ,AL.
- FLETCHER'S PAINT SUPERFUND SITE
- Indigenous Environmental Network
- Sierra Club - Right Frame for Home Page
- Lower Fox River Clean-up and Restoration Project: U.S. EPA Region 5
- Wisconsin Department of Natural Resources
- Clean Water Action Council of Northeastern Wisconsin
- Great Lakes Areas of Concern: Waukegon Harbor, Illinois
- Project Description and Annual Research Progress-University at Albany - SUNY
- R-Environet-Communication Link for Local Grassroots Activists
- Alaska Community Action on Toxics_ Index
- Native Wisconsin - Ho-Chunk Nation
- Governor, Attorney General Announce Landmark Enviro Settlement
- R-Great Lakes Zero Discharge Alliance
PCB Information

- EPA PCB Information
- PCB Molecule
- EPA PCB Home Page
- R-The History of Chlorinated Biphenyl
- R-As the Story of PCBs Unfolds
- R-Dioxin Reassessed- Part one
- R-Dioxin Reassessed-Part two
- R-EPA Investigates Monsanto
- ATSDR - ToxFAQs - Polychlorinated Biphenyls (PCBs)
- THE ENVIRONMENTAL ASPECTS OF POLYCHLORINATED BIPHENYLS (PCBs)
- frontline: fooling with nature
- U.S. EPA Region 5 TRT -- PCBs Page
- Greenpeace-organo chlorines
- PCBs: These Supertoxins are Everywhere
- Thanks to Monsanto
- About PCBs - USEPA
- The Emperor's New Clothes - Risk Assessment
- How We Got There-Part 2 -Who will take responsibility for PCBs?
- The largest On-Line Environmental Resource on the Planet
- ATSDR- Case Studies in Environmental Medicine - PCB Toxicology
- Fetal Brain Damage, Developmental Delays and Intellectual Impairment as a Result of
Exposure to PCB's in Pregnancy
- Dioxin Proven to Cause Cancer and Heart Disease
- COPA's PCB Clearinghouse
- COPA's PCB Links CHECK IT OUT!!!!!

HEALTH
- ATSDR- Public Health Statement
- About Endocrine Disruption
- Statement from Work Session on Endocrine Disruptors
- PCBs Linked to Low IQ
- What Causes Declining Sperm
- R-Human Breast Milk is Contaminated
- R-New Prospectives on Toxics-Part Two- Male Reproductive System Harmed by Toxics
- Toxline record for Environmental PCBs
- SPERIM IN THE NEWS
- Medicine & Global Survival
- Dead End Street
- PCBs in the Green Bay Ecosystem
- Polychlorinated dibenzo-p-dioxins and Polychlorinated dibenzofurans
- poison caution beware
- Public Health Concerns About Environmental Polychlorinated Biphenyls (PCBs)
- Low Birth weight, Early Births Found Among Infants Near Hazardous Landfill
- RACHEL's Hazardous Waste News #279
- WWF Canada's Web Guide to Endocrine Disrupting Chemicals
- R-Dioxin-Part 4-New Study Links Dioxin to Human Cancer
- NWRI Digest #13 - Ecotoxicology of coplanar PCBs
- lester
- PCBs and Other Industrial Chemicals Linked to New Health Risks
- Low Birth weight, Early Births Found Among Infants Near Hazardous Landfill
- New Study Links Breast Cancer to DDT, PCBs, and the Chlorinated Chemicals
- Push Comes To Shove
- R-Brain Cancer is Rapidly Increasing
- R-Breast Cancer Epidemic Continues-Prevention Philosophy is Ignored
- R-Chemical Growth in Wildlife and Humans?(endocrine disrupters)
- R-Dioxin Dangers-Whats Going On
- R-Chemicals have Contaminated the Entire Planet
R-Dioxin and Health

Our Stolen Future Part One

Our Stolen Future part Two

About Endocrine Disrupters NIHS

R-Frogs and Philosophy (endocrine disrupters)

R-Dioxin 'demasculinizes' Rats (endocrine disruption)

PCBs Diminish Penis Size

R-Another Study Shows Sperm Loss

R-The Challenge of our Age (endocrine disruption)

R-Our Future in Doubt (endocrine disruption)

R-Warning on Male reproductive Health

R-PCBs Diminish Penis Size (endocrine disruption)

R-Major Challenge to Business As Usual (endocrine disrupters)

Endocrine Disruptor

R-New Ear in Toxicology-endocrine disrupters

R-Dioxin and PCBs and Endometriosis

R-Dioxin Causes Human Cancers

R-Do chemicals diminish masculinity? -endocrine disrupters

R-Children Born to Women near old dumps have Higher risk of birth defects

Technology

Remediation of PCB-Contaminated Sediments

Maxymillian Technologies

Bioremediation of Polychlorinated Biphenyls (PCBs) from Contaminated Soils

ECO-LOGIC Canadian PCB Remediation Technology

ARCS Remediation Guidance Document--Table of Contents

Moving Mud! Remediating Great Lakes Contaminated Sediments

Pollution On-Line

Remediation of PCB-Contaminated Sediments

Waste Management, hazardous wastes, PCBs Quantitative distribution, the available disposal technologies, the European incineration sector and the PCBs Italian sector Waste Management, hazardous wastes, PCBs Quantitative distribution, the available disposal technologies, the European incineration sector and the PCBs Italian sector Waste Management, hazardous wastes, PCBs Quantitative distribution, the available disposal technologies, the European incineration sector and the PCBs Italian sector

Assessment of Risks from Remediation of PCB-Contaminated Sediments

PCB degradation
Related Government Sites

- THE EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
- EPA New England
- NPL Superfund Sites
- Massachusetts Department of Environmental Protection
- ATSDR - Agency for Toxic Substances and Disease Registry - Dept. of Health and Human Services
- brownfields
- Massachusetts Department of Environmental Protection Western Regional Office (WERO) Massachusetts Riverways Program

Landfills / Incineration

- R-The Best Landfill Liner-HDPE
- R-Leachate Collection Systems-The Achilles' Heel of Landfills
- LANDFILLS
- R-Decade old study Revealed the Polluting Effects of Landfills
- Low Birth weight, Early Births Found Among Infants Near Hazardous Landfill
- R-EPA Says All Landfill Liners Leak- even those using best available liners
- R-EPA's Landfill Research Program
Housatonic River Initiative

- R-EPA Hazardous Waste Programs have Multiple Problems and Failures
- R-New Rules at Dump Sites may also Reveal Hazards in the Neighborhood
- R-Landfill Study Shows Low Birth Weight, Adult Cancers-
- R-Superfund Dumps and Health-Part Three
- R-Superfund Dumps and Health-Part Two
- R-Superfund Dumps and Health-Part One
- R-Children Born to Women near old dumps have Higher risk of birth defects
- R-All hazardous waste fail to meet regulations
- R-Toxic Gases Emitted from Landfill
- R-The Landfillers New Plan- Megafills
- R-Hazardous Waste Incinerators-Out of Control
- R-Commercial Hazardous Waste Landfills
- R-Superfund Part Three- Groundwater Cleanup is Harder Than Previously Thought
- R-Clay Landfill Liners Leak in Ways That Surprise Landfill designers
- R-New Evidence that All Landfill Leak
- R-Why Plastic Landfill Liners Always Fail
- R-Hazardous Waste Incineration R-Catch 22’s of Landfill Design
- R-Why All Landfills Leak
- R-Catch 22's of Landfill Design

OTHER HOUSATONIC SITES

- More Damn Big Carp Photos
- Housatonic River Photos -- SaltwaterFlies.Com
- Damn Big Carp Photos
- Northeast Paddler's Message Board
- Housatonic River Restoration
- Kampoosa Bog Efforts
- Housatonic River Walk
- Tight Lines Guide Service- Housatonic River
- GORP - NY Outdoors - The Housatonic River Valley - Connecticut's River Wonder
- Virtual Flybox-

Other River, Environmental, local, and related URL's

- RACHEL INDEX
- RACHEL's Environment & Health Weekly Table of Contents
Summer 1999 Newsletter

special edition

TO TREAT, OR TO DUMP? THAT IS THE QUESTION

1/2 of Jack Welch's salary can pay for treating PCB soils and sediments and prevent a toxic dump across from the Allendale School: what price a playground? a rug for the river?

As a result there will be two adjacent very large containment areas (dumps) on already contaminated GE property, at the existing dump on Hill 78 and at Hill 71 across from the playing fields of the Allendale School.

As you read this the United States Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection (DEP) and the General Electric Company (GE) have decided how, and to what extent, the first half mile of the Housatonic River will be cleaned. While they debated certain things like what levels of PCBs will remain after the clean-up, and whether or not GE could put a geotextile cap or rug in the river, they have decided not to treat the PCB-contaminated sediments of this section of the river and PCB-contaminated soil from the river bank. So, for the moment, the answer to the question is: to dump! to dump! to dump, and dump some more!

TO DUMP

For those of you who live in Pittsfield far enough away from the site, you might say, "Hey, it's got to go somewhere! That's the best place for it. It's already poisoned." For those of you who live in Lenox, Lenox Dale, Stockbridge, Lee, Great Barrington, and Sheffield, you might say: "Well, at least they're finally getting around to cleaning some of the river." Yet, for those who live, or work near the 11-acre, or send their kids to Allendale, it's an unnecessary tragedy. And, the fact of the matter is, the rest of us need to do whatever we can to make sure this doesn't happen.

According to the EPA, this dump is a done deal. This is the best place for it! Hill 78 is already
contaminated, and the other sections of the GE property are slated for redevelopment. And there's no point putting a dump next to a new business. So the current plan is to put PCB-contaminated material less than 50 ppm* (parts per million) on top of the existing dump at Hill 78, and create a new landfill for high-level contaminated materials above 50 ppm in nearby Hill 71.

* For your information, Massachusetts requires a cleanup of residential levels of PCB contamination above an average of 2 ppm.

EPA PUBLIC MEETING
5/18/99

In describing the Hill 78 landfill, Bryan Olson, the EPA Project Manager stated: "One of the main reasons why we chose ... the Hill 78 site is that it is an existing landfill - it's a landfill that contains high levels of PCBs, probably much higher than we're going to be putting in there, and you can't remove it, it's not the kind of project that anyone does - you don't remove landfills, you can cause many more problems by doing that, than just by capping it and leaving it in place ... from a risk standpoint you can use it, we have parks on top of landfills in other parts of the country in similar situations to this one." (emphasis ours) So, the reasoning goes, Hill 78 is already contaminated, and the EPA and DEP have no intention of cleaning it up, so why not add more contamination on top of it. And because it's an old dump without any kind of protective liner on the bottom, the EPA is only going to add lower levels of contamination, less than 50 ppm, on top of the old contamination. The higher-level contamination is going to be put in the new lined landfill right next to Hill 78 in Hill 71. And to better ensure it's safe, the EPA is going to make sure the very worst contamination isn't allowed. In describing the Hill 71 landfill, Bryan Olson said: "We're not going to allow any liquids ... we're not going to put in any drums, any transformers, any capacitors, or anything like that ... " Making sure there are no liquids, helps to ensure that the bottom liner and the cap on top will keep the contamination from moving back into the environment. Olson continued: "... as long as there's no liquids in there, it doesn't matter what ... the concentration is because we'd be doing the same thing, the same kind of protective cap and liner system."

To many in the audience, this logic didn't make much sense. Members of the public and HRI members kept reminding the EPA and DEP regulators that the existing Hill 78 was already filled with exactly the kind of toxic materials that the EPA wasn't going to put in Hill 71 because they were dangerous: including barrels and barrels of PCB-contaminated liquids, contaminated fullers earth, solvents, and probably metals, the worst kinds of high-level, dangerous wastes. People stressed that what the regulatory agencies were doing, by adding tons and tons of more waste on top of Hill 78, was just going to make potential problems of leaking barrels that much more difficult to deal with.

Bryan Olson's response was that: "we have monitored this landfill ... for a fairly long time and we don't see any impacts from the landfill, going away from the landfill."

In response to Nanci Bertelli's testimony that GE workers reported barrels being dumped at Hill 78, Olson stated: "we're expecting that they're probably drums in that landfill, but we think that the solution will work no matter what's in the landfill."

HRI Board Member Benno Friedman then raised the question of why the DEP was making the City of Pittsfield spend $1,500,000.00 to remove hundreds of barrels of contaminated GE waste from the city landfill a mile away from Hill 78? Wasn't it because they regarded these buried barrels as a significant environmental and human health problem? And wasn't the EPA turning its back on a potentially worse problem across the street from a public school? Doesn't it makes sense to check for barrels, and get them out of Hill 78 before you bury them even deeper.
Ultimately, Bryan Olson said the agencies would think about checking Hill 78.

A quick trip, several days later, to the repository at Simon's Rock where EPA and DEP and GE documents are stored, revealed the following information from the 1988 EPA Site Assessment: "Building 78 Landfill - The unit was formerly a ravine which has been filled with waste material. ... Former employees stated in an interview that drums and liquid containing 'Pyranol' were disposed in the landfill in the 1950s and 1960s. Pyranol is composed of 60% PCBs. Sampling of the fill has revealed some areas with PCB concentrations at several hundred ppm. ... DEQE [the Mass. Department of Environmental Quality and Engineering - which preceded the DEP] suspects an oil layer exists in the landfill. Former employees stated PCB-containing liquids were poured on the ground."

It only gets worse. An APRIL 1994 Public Involvement Plan document by the Massachusetts DEP states: "The Hill 78 landfill is approximately two acres in size with a maximum depth of approximately 40 feet. ... The school property is within 50 feet of the Hill 78 site fence line. From approximately 1940 to 1980, GE used the Hill 78 area as a landfill for demolition or construction debris, excess fill and solid (reportedly non-hazardous) waste. GE also allegedly used the landfill to dispose of drums containing PCBs and fuller's earth saturated with PCBs in the 1950s and 1960s.

The EPA RCRA Facility Assessment stated that former GE employees disposed of PCB oil in the landfill. From 1980 to early 1990, GE used this area to store soils containing less than 50 ppm PCBs from routine, facility-wide excavations. Sampling of the fill revealed areas with PCB concentrations up to 120,000 ppm in subsurface soil." (emphasis ours)

"Investigations in this area conducted prior to 1989 were completed on behalf of GE... Most of the soil sampling was completed to determine the extent of contamination in the proposed Altresco plant construction area. The location selected for the Altresco plant generally contains less than 1 ppm PCBs, except for the northern portion of this area, where concentrations as high as 16,000 ppm were detected at a depth of six feet." (emphasis ours)

"Oily sheens were present on two of the soil samples from the fill. The fill extends at least 25 feet below the ground surface. Subsurface soil at the site is contaminated with PCBs at concentrations up to 120,000 ppm and VOCs were present in soils at concentrations of less than 1 ppm. Ground-water samples were collected from the four wells and analyzed for VOCs, SVOCs, PCBs and inorganics. Results indicated the presence of phenols at 75 ppb. In 1991, GE's consultants completed a Phase I investigation of the site. ... Results confirmed that the landfill area is the most contaminated portion of the site. Ground water in the vicinity of the landfill area is contaminated with PCBs at concentrations up to 9 ppb.

In addition, VOCs were detected in ground-water samples collected from wells located downgradient of the landfill area and south of the Altresco power plant at concentrations of less than 1,000 ppb. Ground-water samples collected from a well in the southwestern corner of the site contained concentrations of less than 30 ppb of dioxins and furans. The Department classified the site as a priority and GE submitted Phase II Scope of Work proposing further definition of ground-water contamination at the site and assessment of contamination potentially attributable to abandoned transformer oil lines extending from the East Street Area II site across this site and to Building 51 (part of the Unkamet Brook site). (emphasis ours)

And then from the DEP's Public Involvement Plan, Volume 5, Page 12:

Table 1: Descriptions and Characteristics of GE Pittsfield Disposal Sites: Hill 78 Landfill Area; 57 acres; DEP & EPA jurisdiction - Contamination: PCBs in subsurface soils (average concentration 498 ppm; maximum concentration: 120,000 ppm)

WHY?
So the questions remain: With all our experience with leaking dumps, why decide to expand a toxic landfill across from a school? Why not make GE spend several million dollars and clean out Hill 78 the same way the City is removing PCB barrels from its municipal landfill?

And why not insist that GE treat its wastes from the Housatonic River, the Allendale School, and the Newell Street properties? Why put public health at risk when one of the world's most profitable corporations can clearly afford to spend the money for treatment.

DUMPS & LINERS

Here's some of what other EPA scientists have said about landfills in the past:
"There is good theoretical and empirical evidence that the hazardous constituents that are placed in land disposal facilities very likely will migrate from the facility into the broader environment. This may occur several years, even many decades, after placement of the waste in the facility, but data and scientific prediction indicate that, in most cases, even with the application of best available land disposal technology, it will occur eventually." (Federal Register, Feb. 5, 1981, pg. 11128)

"Manmade permeable materials that might be used for liners or covers (e.g., membrane liners or other materials) are subject to eventual deterioration, and although this might not occur for 10, 20 or more years, it eventually occurs and, when it does, leachate will migrate out of the facility." (pg. 11128)

"A liner is a barrier technology that prevents or greatly restricts migration of liquids into the ground. No liner, however, can keep all liquids into the ground. Eventually liners will either degrade, tear, or crack and will allow liquids to migrate out of the unit." (Federal Register, July 26. 1982, pg. 32284)

"Some have argued that liners are devices that provide a perpetual seal against any migration from a waste management unit. EPA has concluded that the more reasonable assumption, based on what is known about the pressures placed on liners over time, is that any liner will begin to leak eventually." (pgs. 32284-32285)

"Since disposing of hazardous wastes in or on the land inevitably results in the release of hazardous constituents to the environment at some time, any land disposal facility creates some risk." Federal Register, May 26, 1981, pg. 28315)

"The longer one wishes to contain waste, the more difficult the task becomes. Synthetic liners and caps will degrade; soil liners and caps may erode and crack ... EPA is not aware of any field data showing successful long-term containment of waste at facilities which have not been maintained over time." (pg. 28324)

"First, even the best liner and leachate collection will ultimately fail due to natural deterioration, and recent improvements in MSWLF containment technologies suggest that releases may be delayed by many decades at some landfills. For this reason, the Agency is concerned that while corrective action may have already been triggered at many facilities, 30 years may be insufficient to detect releases at other landfills." EPA, Federal Register, August 30, 1988, Vol., 53, No. 168.

Joel Hirschorn, a consultant and advisor to local activists in Warren County, North Carolina who were concerned about their hazardous waste landfill, has written:
"Data obtained from a 1983 EPA study showed conclusively that uncontrolled releases of PCBs into the air were occurring. Neither EPA or the state analyzed the data properly, and EPA made incorrect statements. In fact, the levels of PCBs found by EPA in the air near the landfill and in the yard of a residential house more than a half mile from the landfill were several times greater than the level of health significance in EPA's own risk assessments. ... An analysis of the only state documents referring to the 1983 study by EPA and the only information given to the public has shown that the state intentionally misrepresented the findings of the 1983 tests for PCB air releases from the landfill. For example, the highest levels of PCBs found at the

landfill's main vent were not reported by the state, and the state indicated that no measurable amounts of PCBs had been found around the site, which was not the case. The state has persistently deceived the public about PCB air releases and, more importantly, the significant public health risks resulting from them."

(emphasis ours)

And then, lo and behold, here at home in the Saturday, May 22, 1999's Berkshire Eagle comes the headline: "Levels of toxic vapors found in two West Main Street homes". The article stated that the DEP has found levels of toxic vapors of trichloroethylene, TCE, coming from the Sprague landfill in North Adams; and that TCE had leached into the groundwater at levels that could pose long-term health risks.

Without a detailed search of the Hill 78 landfill, and a thorough cleanup we will have to wait until it leaks badly enough for the DEP and EPA to take remedial action. What happened to the buzzword of the 1990s - proactive?

TO TREAT

There's another way to solve this problem. A way which benefits us all. It's called treatment. And, although it's not perfect, it works.

It worked in Lanesboro, when GE treated the PCB-contaminated soils at the Rose Landfill. It works in Canada, where GE Canada treats its PCB-contaminated waste. We're not saying treatment is perfect, but it reduces the massive quantities of contaminants, and removes the overwhelming bulk of them from the environment, leaving small quantities of liquid PCBs and large amounts of soil that is mostly detoxified and often used to cover landfills.

We have repeatedly asked for a series of pilot projects at the GE Pittsfield/Housatonic site to test the most promising treatment technologies. EPA and DEP have not been willing to grant our request. Instead, they have negotiated a solution in the "public interest" that relies on landfilling.

Why won't they make GE treat its PCBs from the River, Allendale, and Pittsfield properties?

Did GE flat-out refuse to treat the contaminated sediments and soils of the first half mile because they didn't want to set a major precedent for the rest of the river, the Hudson, and their many dozens of other Superfund sites? Did they go into the negotiations stating they would refuse to sign any agreement if the EPA insisted on treatment?

Of course, we weren't at the table, and you weren't at the table, and this is the deal they made. If we had participated, we would have made the loud and constant demand for treatment.

It's a great deal for GE. Why spend more money treating the PCBs, if you can bury them? GE isn't one of the richest corporations on earth because it spends money when it doesn't have to. And there must have been pressure from politicians in Boston, and Washington all of whom get campaign money from GE, telling the EPA to get the deal done.

But what about the people in Pittsfield who live near the dump? What about the school children and school staff who'll be spending many hours each day across from the unlined, anything but state-of-the-art Hill 78 dump?

And what about the precedent it sets? You who live far away from Allendale may breathe easy today, but what about tomorrow, when the people of Lenox want Woods Pond cleaned? Or the river in Lee, Stockbridge, Housa-tonic? Will GE treat those wastes?

HOW MUCH MONEY ARE WE TALKING ABOUT?

It's hard to get exact figures on the difference between treating and dumping. Because GE will be doing the
transporting and the dumping, they seem to be the only ones who know exactly what their costs are. And they haven't released what it would cost if they treated, rather than landfilled.

When we have asked the EPA for comparative figures for the clean-up of first half mile of the Housatonic, we were given an estimate based on their experience with the remediation at the Loring Air Force Base. There dumping on site costs $30 a ton, as opposed to $300 a ton to treat it. Treatment costs ten times as much as landfilling.

Let's do some calculating of our own. GE, in its draft Removal Action Work Plan - Upper 1/2 Mile Reach of Housatonic River estimates that "approximately 6,000 in-situ cubic yards of river sediment is currently targeted for removal" (page C-3). Add to that GE's estimate of bank soils: "A total of approximately 4,300 cubic yards of bank soils is currently targeted for removal" (page D-4). It comes to 10,300 cubic yards.

One cubic yard is equal to a ton and a half; 10,300 cubic yards equals 15,450 tons. Multiply that by $300. The total is $4,635,000.

According to the Berkshire Eagle of April 9, 1999, Jack Welch, CEO of General Electric, doubled his annual earnings in 1998 to $83.6 million dollars. If the decision was left to you, would you rather have GE pay for treating its toxic waste or burying it beside a public school. Can GE afford $4.6 million?

But, wait, the EPA says, it's not just the wastes from the first half mile of the river: there's the next mile and a half. Add the soil from the Allendale School, and the Newell Street cleanup. That brings the figure up to 100,000 cubic yards. Add a bit, just in case.

It's about $46 million dollars to treat it and only $4 million to bury it across from Allendale. $46 million dollars is a lot of money. More than half what Jack Welch makes in one year. Would you ask him to sacrifice that much money to treat GE's waste? EPA and DEP think that's too much to ask, too much to demand of GE. Putting that waste across from the school is absolutely safe. And it's their job to protect the public health and safety.

But what if they're wrong?
Who suffers from their mistakes?

REST OF THE RIVER

When it's time to clean the rest of the river, the Hill 78/71 dumps will be filled. If I were GE, I'd argue that since the EPA agreed to a dump in Pittsfield, they believe it's safe, they know it works, so let's landfill down in South County. And I'd refuse once more to treat any river contamination.

GE will argue it's unreasonable to ask us to spend ten times the money to treat the river wastes of Lenox, or Stockbridge, or Lenox Dale, or Great Barrington, or Sheffield, when for 1/10th the price we can landfill it. There's got to be a place to dump the stuff. You want the river cleaned, find us a place to put the PCBs!

So if you let them dump GE's poison near a school in Pittsfield, and you want your river cleaned, you better start looking for some large potential dumpsites down south. In keeping with the school motif, how about if the DEP and EPA put it across from Lenox High, or Monument Mountain, or maybe Searles School in Great Barrington?

HOW BIG A DUMP?

Well here's GE's guess as of a few years ago. Excerpts from: Proposal for the preliminary Investigation of Corrective Measures for Housatonic River and Silver Lake Sediment, Prepared for GE by Canonie Environmental, March 1995

"As discussed in Section 1.5, the in-situ volumes of sediment in the study area containing PCB concentrations greater than 1 ppm, 10 ppm, and 50 ppm have been estimated to be as follows (in cubic yards):
"Based on these estimates, a range of sediment volumes that might need to be dewatered and disposed of has been determined, along with the approximate size of the dewatering/disposal cells that would be required for these volumes (based on a 5-foot cell depth and a 10-foot berm). The range is as follows:

<table>
<thead>
<tr>
<th>Volume Dim. of Cell</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>100,000 cy 735 ft W x 735 ft L</td>
<td>12</td>
</tr>
<tr>
<td>300,000 cy 1,275 ft W x 1,275 ft L</td>
<td>37</td>
</tr>
<tr>
<td>500,000 cy 1,650 ft W x 1,650 ft L</td>
<td>62</td>
</tr>
<tr>
<td>1,000,000 cy 2,350 ft W x 2,350 ft L</td>
<td>127</td>
</tr>
</tbody>
</table>

So the way it works now is: the cleaner you want your river, the bigger the dump the EPA and GE will build. 12 acres, 37 acres, 62 acres. Or if you want the river cleaned to 1 ppm PCBs, how about 127 acres?

WHAT ABOUT A VOTE?

So what if we took a vote? What if every voter in Berkshire County could decide whether they would rather have GE spend $46 million dollars to treat the waste or build that eleven acre dump across from a school. And whether or not they want all of GE's contaminated sediments treated or landfilled.

The only members of the public from Berkshire County allowed to participate in the negotiations were Pittsfield Mayor Doyle and City Council President Tom Hickey. What do you think? Do you think GE can afford $46 million to treat the waste from the first two miles of the Housatonic, from the schoolyard, and from Newell Street? Whose contamination is it, after all?

We say that before a decision is made, bring in the best clean-up companies and let them compete to see who can treat the wastes at the most reasonable cost. And compare that to the immediate costs of landfilling, the long-term costs of monitoring and cleaning up the mistakes we know will happen in the long-term. And then add in the social costs to the Allendale community. And the potential health costs.

LONG-TERM COSTS

What about the risks of failure in the dump system? EPA scientists have acknowledged those risks. Innocent Americans all over the country have experienced the pain and disease that comes from leaking landfills.

There is always risk. When GE has the money to remove and treat its poison, why should Pittsfield people have to live with that risk?

WHAT PRICE FOR A PLAYGROUND?
When the EPA and GE announced its agreement for this summer's cleanup of Allendale School, the agreement was applauded by Michael J. McCarthy, a parent and co-chairman of the Allendale School Council, who declared that GE "has agreed to go above and beyond what is required by the law and what is in the consent decree." He informed members of the Citizens Coordinating Council (CCC) that GE has offered to clean contaminated soils to 2 parts per million (2 ppm) without regard to averaging, replace the school's playground equipment, install a new running track, and a new soccer field, baseball field, and some park benches.

A pretty good deal, except for the small, nagging fact that kids, teachers, school staff, joggers, and outfielders will be right across the street from a large 11 acre less-than-state-of-the-art PCB dump.

TAKING RESPONSIBILITY

The designation of this 11-acre dump is a failure on all our parts. In our attempt to work constructively with the EPA and DEP, we assumed they would make a good faith effort to incorporate treatment. We were hoping for a negotiated settlement we could live with. And many of us got heavily involved in the river restoration issues that will follow the clean-up, trying to ensure that some of the settlement money for natural resource damages would be controlled by Berkshire residents.

As soon as we discovered what was happening, we began to ask hard questions and speak out. But we were hesitant to come out and be too critical because we didn't want it to appear that we were undermining the entire settlement. We want to support redevelopment of the GE facility. We want new jobs for Pittsfield. We want a clean-up for the river. And we kept hoping we could convince the agencies to change their minds about treatment.

That hard work gained us a small victory - and because of our efforts - the EPA has mandated a bottom-liner that GE didn't think necessary for the new portions of the Hill 71 landfill.

But the more research we do, the less willing we are to accept that limited victory. The more we learn, the less able we are to live with the idea of a major landfill across from a school. They may not be our children, but they may be yours. Today, your children! Tomorrow, ours!

A SETTLEMENT WE CAN LIVE WITH

Other environmental and social organizations have fallen silent on this issue. If you support and contribute to local environmental, social, and religious organizations, ask them why they aren't speaking up about this unnecessary dump.

All of us who care about the environment, and care about a comprehensive river cleanup, must not forget that the students and staff at Allendale have played atop a toxic waste dump for too many years already. It's a hollow victory to have that contaminated soil trucked and stored a few hundred yards away. A toxic waste dump with flowers on top, is still a toxic waste dump.

We have enclosed a letter to Bryan Olson of the EPA about the dump. Please add your voice to the public comments the EPA has solicited. If you believe that treatment is preferable to dumping, and that GE should pay the price, please send it, or write your own comments, to:

Bryan Olson  
US EPA  
1 Congress Street  
Suite 1100  
Boston, MA 02114-2023
NO RUG FOR THE RIVER

Let's turn our attention to the agencies clean-up strategy for the river. HRI has received no written response to two sets of technical comments it has submitted regarding General Electric's "Removal Action Work Plan - Upper 1/2-Mile Reach of Housatonic River" of January, 1999. While Bryan Olson and Dean Tagliaferro have said at public meetings that public concerns have been incorporated into EPA's response to General Electric's proposal, specifically that geotextiles will not be used as part of the remediation of river bank contamination - we are unable to see their detailed response to GE's plan or the decisions they have made about remediation levels, capping, and the supporting scientific and technical rationale behind those decisions.

Instead, even though the agencies' first brief summary comments about the Upper 1/2-Mile Reach came one week into the four week public comment period that ends June 6, 1999, we have been expected to respond to decisions we do not fully appreciate, or understand.

Nevertheless, here's some of what bothers us. HRI's comments regarding the Removal Action Work Plan - Upper 1/2-Mile Reach of Housatonic River focus on several major areas:

1) our concern that unnecessarily high levels of contaminates are being left unremediated
2) our concern that a geotextile liner will be placed above that unremediated and remaining contaminated layer of river sediment in an attempt to cover over contaminants that may, in later years, re-contaminate the river system
3) our concern that geotextiles have only been used for twenty-five years; and that there is disagreement among technical experts as to its efficacy in riverine systems
4) our concern that there has not been an adequate pilot test in situations similar enough to the Housatonic to justify its use
5) our concern that the agencies seem determined to allow GE to place contaminated river sediment and contaminated soil from the banks from the Upper 1/2-Mile Reach of Housatonic River into the existing, unlined hazardous waste dump 50 feet across from Allendale School
6) our concern that even though the costs of treating and removing the overwhelming bulk of the contaminated sediments and bank soils of the Upper 1/2-Mile Reach of Housatonic River from the local environment would cost approximately $4,635,000 - a sum certainly affordable by General Electric - the agencies refuse to choose this remedy

Both HRI and the consultant we hired to review GE's plan raised the issue that GE's use of 50 feet polygons in its testing protocol and its clean-up decisions based on single hits of PCB contamination, would leave excess contamination in the river. Our consultant wrote:

"It is the opinion of LEEI that these remedial decisions are based on entirely too little data, and that the data itself are highly questionable. Given GE's proposed plan to cap the remaining river sediment subsequent to excavation, we seriously question the benefit that such an exercise will have on the ecological systems and potential human receptors when compared to the disruption and uncertainties that the exercise will entail. ... It is also the opinion of LEEI that capping the sediment should be further evaluated as a remedial option before it is implemented over the entire 1/2-mile stretch. We have reviewed many articles on capping, including some cited in BBL's report.

According to one study 'capping is likely to be used only in environments where the long-term integrity of the cap can be guaranteed. Typically this would mean low hydrodynamic energy environments such as harbours, estuaries and lake bottoms.' ... It is the opinion of LEEI that the Work Plan should also involve a pilot test of a high velocity and scouring area before the cap is implemented over the entire 1/2-mile reach. It is our opinion that, rather than a prediction of PCB flux based on computer models (Appendix G of BBL's report), that GE be required to obtain actual data on flux and PCB concentrations using seepage meters placed at key locations on the river bottom. These data could then be used to calibrate the model to make more accurate predictions of the cap's useful life."
WE NEED A PILOT PROJECT

On February 11, 1999, at the request of HRI, the EPA brought their river remediation consultant, Mike Palermo, from the U.S. Army Corps of Engineers to address the Community Coordinating Council. He told us:

"I don't know of that many riverine sites ... rivers present a set of site conditions that are a little different say than an estuarine or open ocean type of site - you have different things to design for, for instance, flood events, or in this case, even ice, you know, formation and ice effects, but no, we have not seen caps constructed in many riverine situations."

In response to Benno Friedman's question about what it would cost to go back into the river to fix the cap in the event of cap failure, Palermo said:

"Well, I'm not a good cost estimator, but I would just guess it would cost more than it did to do it the first time for sure. It would not be an easy proposition to do, it would not be an inexpensive proposition to do."

Benno asked whether complete removal and treatment, even though it might cost more, made more sense than a system that might fail, Palermo added:

"I have no way of knowing that because I don't know what the cost estimates are to remove, you know, even what they propose to remove - I haven't seen those figures."

Even the EPA's own consultant hasn't been told what the most reasonable alternative to landfilling might cost! Have they examined all the options?

About the geotextile liner GE plans for the river, Mike Palermo declared: " ... here I don't see why it's really necessary because this excavation will be done in the dry - what will be left will be more or less the sandy material, fairly sandy material and so to me, you know, geotextile placed between that and the cap layer will, doesn't serve any function that I can think of ..."

Then Bryan Olson of the EPA stated: "the geotextile that separates the different layers of the cap, I think there are probably other ways to do that besides using that, that geotextiles ..."

Why, then, has the EPA continued to support GE's use of a rug for our river? Why can't we see the reasons for their decision? How does this serve the public interest?

This cap, as Mike Palermo described, is being used as a containment option: to make sure that the toxic containment they are leaving in the river does not move and re-contaminate the river.

Because of the decision to leave significant amounts of PCBs in the river, the ability of the cap to work is critically important, and a significant difference from many of the caps that have previously been used. Palermo continued:

"... in this particular half-mile reach, you know, the objective is going the next step - this cap has got to not only physically stabilize what sediments are left in place, it's also got to isolate those contaminants from moving up, you know, up through the cap and back into the river system. This cap design has that added level of concern in the design, another process that has to be looked at very closely."

"It's easier to design the armoring layer to resist scouring or erosion than it is to design a cap to contain the contaminants under certain circumstances"

DO WE REALLY WANT A RUG FOR OUR RIVER?

These decisions are too important to be made by a computer modeling program. We need a pilot project to prove it will work.

Last but not least, here are some of the agencies own guidelines for remediation projects:
According to the federal register of July 27, 1990, Corrective Action for Solid Waste Management Units at Hazardous Management Facilities; Proposed Rule (Subpart S), there are four standards used in evaluating Corrective Measure technologies. The four evaluation standards are:

1) overall protection of human health and the environment;
2) ability of the technology to attain media cleanup standards;
3) the ability of the technology to control the sources of releases; and,
4) the technology's compliance with standards for management of wastes.

If two or more technologies meet the evaluation standards then there are five evaluation decision factors which must be considered. The five evaluation decision factors are:

1) ability of the remedy to provide long-term reliability and effectiveness;
2) ability to reduce the toxicity, mobility, or volume of wastes;
3) short-term effectiveness;
4) ability to implement; and,
5) cost.

The evaluation standards and factors of Subpart S (with any subsequent modifications) together with those specified in Special Permit Condition II.M and in the Massachusetts Contingency Plan, shall be condition in the CMS. ...

10. In accordance with the Permit and the proposed Subpart S regulations, economic considerations shall not be the sole standard or criterion applied to any technology in the Corrective Measures evaluation process.

General Determinations

12. In general (especially in view of existing DEP and EPA policies and TSCA), GE needs to give full consideration to removal technologies coupled with ex-situ treatment and/or disposal. As required by the Permit, the PICM Proposal proposes to study a selected number of these technologies. After sediment is removed, potential next steps include, at a minimum: dewatering, treatment and disposal. In the CMS, GE shall better evaluate these next steps and evaluate them on a reach-by-reach basis.

It is our belief, that in their efforts to achieve a negotiated settlement, the agencies have unfortunately short-changed the larger public interest. While Pittsfield Mayor Gerald Doyle and Pittsfield City Council President Thomas Hickey did their best to advocate for the economic redevelopment of the GE site, and worked diligently to bring desperately needed jobs back to the city, the details of the settlement that are slowly being revealed demonstrate that there was a clear need for broader public participation at the negotiating table.
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WHERE DO WE GO FROM HERE?

On February 22, 2000, the Housatonic River Initiative, (HRI), filed a pro se motion to intervene in the lawsuit between GE, the United States, the State of Connecticut, and the Commonwealth of Massachusetts to strengthen the agreement the environmental agencies negotiated with General Electric. Soon after, as the first public intervenor, we faced a firestorm of criticism from the Berkshire Eagle, the corporate and banking community of Pittsfield, and former EPA administrator John DeVillars. We were charged with endangering any chance for a clean river; told repeatedly that GE would use such a legal challenge to walk away from the deal; and warned that the river would never be cleaned. Board Member Rep. Chris Hodgkins and HRI Executive Director Tim Gray received the harshest criticism, and were the targets of personal attack. Most of the environmental community fell silent during this period, though thankfully many of our members expressed written, financial, and vocal support.

The HRI Board of Directors was deeply affected by this, and much discussion and debate took place over the months as each Board Member tried to determine what we had won with the Consent Decree, what we had lost, and what was at stake if we should prevail in Court. We began negotiations with the governmental agencies to see whether we could win additional improvements to the Consent Decree, sitting across the table from a small army of representatives and attorneys from the U.S. Department of Justice, the U.S. EPA, the Massachusetts DEP, the Connecticut DEP,
the U.S. National Oceanographic Atmospheric Administration, and the Massachusetts Attorney General Office.

Needless to say, we were outgunned, though we brought spirit and two decades of accumulated knowledge about the site and a strong determination to get the best possible clean-up not only for the river but of the many other contaminated sites in Pittsfield. A month of exhausting negotiation resulted in a list of 11 demands the Agencies were willing to accept in return for our withdrawal of the motion to intervene.

SNAPPING TURTLE WITH EGGS

The list includes: the EPAís agreement to evaluate whether or not to conduct a pilot project for treatment technologies in the Rest of the River section; an intensified effort via meetings and the EPAís website to make public clean-up performance standards, results of sampling, etc.; actively soliciting public comment on the design for the cap system in Silver Lake; open house tours of the entire site, including on-going clean-up activities on GE property; more extensive sampling of the West Branch of the Housatonic, including the King Street dump; and EPAís agreement to provide a letter to homeowners with contaminated property, stating that the EPA would not pursue innocent homeowners for liability with respect to GE-related contamination.

Rep. Hodgkins negotiated additional support for contaminated property owners with the Pittsfield banking community, including a three million dollar fund to provide mortgages and loans.

After a meeting in late April after many hours of intense discussion, the Board voted 7-5 to withdraw the motion to intervene and to accept the negotiated agreement with EPA. Several Board Members made the point that even though we were withdrawing our court action, our official comments to the Consent Decree would still have to be considered by the EPA and would go before the Court.

Several parties are still challenging the Consent Decree in Federal District Court before Judge Ponsor, including the Housatonic Environmental Action League (HEAL) of Connecticut; the Schaghticoke Indian Tribe of Connecticut; a group of contaminated Housatonic River property owners; and owners of contaminated commercial property in Pittsfield.

On July 20, 2000 the U.S. Department of Justice officially asked Judge Ponsor to enter the Consent Decree, stating:

îThe Consent Decree Ö is a fair and reasonable resolution of claims against GE, comports with the objectives of CERCLA, RCRA and the CWA and is in the public interest. The public comments submitted in this action do not show that entry of the Decree is improper, inadequate or not in the public interest. The Court should defer to the agreements reached in the Decree, and enter the Decree as a final judgment.î

Exhibit 2 provides EPAís answers to some of our concerns: îSeveral commenters object to the Consent Decree on the grounds that the commenters were excluded from the negotiating process, that the negotiations were conducted in private, and that certain information regarding the negotiations continues to be maintained in confidence. Ö It is well settled in law and policy that it is appropriate for the government to conduct private
negotiations. Without the ability to discuss the possibility of settlement, and engage in a bargaining process, settlements could not be attained. In this case, the government provided the public with more information and access to the negotiations than is required by law or policy. The commenters seek privileges or rights beyond what is contemplated by law or government policy.

As regards the governmentís decision to provide GE covenants not to sue in exchange for cleanup action and reimbursement for the monies the agencies have spent, Lois Schiffer, the Assistant Attorney General of the Environment and Natural Resources Division of the Justice Department wrote:

Ifirst, the future liability covenants not to sue provided GE do not take effect until EPA certifies that a particular removal or remedial action is complete. Second, they are subject to satisfactory performance by GE of its obligations under the proposed Consent Decree. Third, the proposed Consent Decree includes reservations by the United States of its rights to pursue GE for future liability if new information or previously unknown conditions, together with any other information, indicate that a Removal Action or Remedial Action is not protective of human health and the environment. In addition, to respond specifically to a particular concern about PCBs being found to be a greater health risk in the future, the proposed Consent Decree addresses EPAís ability to pursue the éreopenersí in such a situation.

The government wrote: the government weighed the benefits of the proposed settlement against the cost, time, and likelihood of success of litigation, and potential remedies associated by unilateral EPA action. In this case, the government decided that the proposed Consent Decree offers far more benefits compared to the costs and uncertainties associated with litigation.

In its Memorandum in Support of Its Motion to Enter the Consent Decree the government states: Not only is the settlement fair, it is reasonable. Reasonableness is evaluated in three ways: technical adequacy, adequacy of the settlement to compensate the public; and how well the settlement reflects litigation risks and other considerations. The Decree passes these tests with flying colors.

NORTHERN LEOPARD FROG

Ifirst, the various response actions that have been and will be performed at the Site are adequate to address the contamination. EPA used its best technical judgment and selected a series of response actions that will be protective. The various concerns identified by commenters were considered by the Agency and do not raise any serious issues.

Issecond, the settlement adequately compensates the public. The United States will recover 90% - 97% of the expected site costs through cost recovery and work. In addition, the Decree includes a natural resource damage package worth over $25 million. The overall settlement goes far beyond what would be required to demonstrate adequacy of compensation. (Pg. 9) (Emphasis added.).

ANOTHER SIDE OF THE STORY
Those who continue to challenge the Consent Decree interpret the settlement differently. According to the Amended Complaint of Moldmaster Engineering, Vincent Curro, and Vincent Stracuzzi, business commercial property owners located on Newell Street:

iÖ GE not only caused massive and widespread PCB contamination through its activities during the decades when it used PCBs at its Pittsfield, Massachusetts operations, but GE continues to do so because PCBs misused and mishandled by GE continue, and will until abated continue, to be released into the environment. The acts alleged against the United States and the Commonwealth of Massachusetts involve the entering into a settlement agreement with GE which will result in the unconstitutional taking of plaintiffs-intervenors properties, if approved by this Honorable Court.i

The complaint argues:

i137. The Commonwealth of Massachusetts and the United States became aware that the Quality Printing Property located on Newell Street was heavily contaminated with PCBs in 1987, and failed to require GE to conduct an extensive investigation of the Newell Street area to determine the extent and level of the contamination.

138. The Commonwealth of Massachusetts and the United States became aware in 1988 that PCB contaminated fill had been dumped by GE in the early 1940s in the entire Newell Street area stretching from Marchetoís property and to the West through the Quality Printing property, and failed to require GE to conduct extensive investigation of the Newell Street area to determine the level and extent of PCB contamination.

Between 1989 and 1999 the Commonwealth of Massachusetts and the United States knew fully well that the Newell Street area, which encompasses the properties of plaintiffs-intervenors, was heavily contaminated with PCBs and presented a serious threat to the lives of plaintiffs-intervenors and their workers, and failed to take any action that would have required GE to remove the PCBs from plaintiffs-intervenors properties.

140. In October of 1999 the Commonwealth of Massachusetts and the United States announced that they had negotiated a Consent Agreement with GE which states the levels of clean-up which GE is required to achieve for the properties of plaintiffs-intervenors and differ slightly only on whether or not GE wishes voluntarily to pay for an easement for the benefit of the United States and the Commonwealth of Massachusetts:

i0 to 1 foot, a spatial average of less than 25 ppm; 1 to 6 feet, less than 200 ppm Ö. For properties where an ERE cannot be obtained, cleanup levels are as follows: 0 to 1 foot, a spatial average of less than 25 ppm; if the spatial average, after incorporating anticipated response actions, will exceed 25 ppm at 0 to 3 feet, then GE shall remove and replace soils to achieve a less than 25 ppm average Öi (Appendix E to Consent Decree, Volume I, Pg. 50).

141. General Electric has removed PCBs from at least 68 contaminated properties in Pittsfield down to the levels of 2 parts per million which is the Massachusetts default standard for PCB contamination. As specified above in the Consent Decree, the United States and the Commonwealth will allow General Electric to clean-up the properties of Plaintiffs Intervenors to a significant lower standard.

142. GE was allowed by the Commonwealth of Massachusetts, the United States and the City of Pittsfield, to leave PCBs in the ground beyond the levels specified by Massachusetts default standards in order for the United States and the Commonwealth to
gain significant concessions from GE in the clean-up of other areas of Pittsfield, and in addition as admitted publicly by counsel for the United States for the payment of nineteen million dollars to the United States, and as admitted publicly by counsel for the City of Pittsfield, for contributions equivalent to many millions of dollars to the City of Pittsfield through the City of Pittsfield Economic Development Authority.

V. STRACUZZI'S NEWELL STREET SIGN

143. The United States and the Common-wealth admit that the Consent Decree is in fact the taking of an easement on plaintiffs-intervenors properties, since they have asked General Electric to compensate Plaintiffs Intervenors for the taking of the easement.

144. The values for the easements, referred to in paragraph 143, were set by the Commonwealth and the United States in totally arbitrary and capricious fashion and are an abuse of discretion.

145. The Consent Decree is also arbitrary and capricious and an abuse of discretion in that it makes it totally voluntary upon GE to pay or not pay the totally inadequate easement amounts.

146. Plaintiffs-intervenors cannot dig in their properties.

149. The United States and the Commonwealth have gained concessions from GE estimated to add to more than two hundred million dollars in clean-up costs described in the propose Consent Decree.

150. The United States and the Commonwealth had however no right to acquire an easement on plaintiffs-intervenors properties without adequate compensation.

151. The entering of the Consent Decree in its present form is a violation of the Fifth Amendment of the United States Constitution in that it represents a taking of an easement by the United States and the Commonwealth of Massachusetts, of plaintiffs-intervenors properties without adequate compensation.

LATE BREAKING NEWS

On September 6, 2000, Judge Ponsor ruled in favor of the citizen intervenors, allowing them to present their concerns about the Consent Decree to the Court. They must submit written arguments on October 2, 2000, to which the EPA and the Justice Department have until October 23 to respond. Following those arguments, Judge Ponsor will decide whether or not to sign the Consent Decree.

A YES VOTE: BENNO FRIEDMAN

What we did accomplish:

The outcome of the negotiations is a ten point agreement that, in various ways, enhances and strengthens the Decree's promise to be protective of human and environmental health. In addition, we now have a written commitment from the EPA to investigate the applicability of remedial treatment technologies for the rest of the river. Of equal importance was the side agreement by the lending institutions of Pittsfield to
create a pool of funds for residential property owners who might otherwise be unable to borrow on property that still contained some level of contamination.

**What we did not accomplish:**
The decision to contain and monitor PCBs rather than remove and permanently destroy them, the plastic sheeting in the river, Mt. Doyle, the mountain of toxic waste 50 yards from the Allendale Schoolyard, the absurdly low figure that General Electric is coughing up to compensate us for damage to the natural resources; the failures of the Decree stand, unaffected by our motion and its withdrawal. Ultimately, the political reality, the unified and nearly universal stamp of approval that had been given the Decree by the agencies, by Pittsfield's political machine, the business community and by the near unbroken silence of Pittsfield's citizenry had its effect on our board of directors. Each one of us will revisit that decision innumerable times, measuring our decision against the continuing cleanup and its aftermath.

**What is our current position?**
Our objections to the Consent Decree still stand. The language and logic supporting our motion is identical to what we filed as part of the public comments to the Decree. The motion's withdrawal does not signal a change in our approach to the problems associated with PCB contamination. We stand behind our belief that it would be best to remove and render them harmless, rather than contain them under plastic, rock or earth. We are not optimistic about the success of the agencies' solutions.

However, at this juncture, limited to the specifics covered by the Decree, we have conditionally accepted their methodology. The burden of proof rests on them. It is now the agencies' responsibility to live up to the terms of the agreement; to monitor the caps, the armoring and the landfills, the river, the floodplain, and the oxbows and to employ the full extent of their regulatory authority, as defined by performance standards and other yardsticks, to revisit and correct any deficiencies that may arise in the methodology that they have chosen. On numerous occasions, agency representatives have asked for our trust. We give it to them, perhaps naively, certainly hopeful but definitely not blindly.

**WOODS POND**

**A NO VOTE: MICKEY FRIEDMAN**

I voted against accepting the settlement because I felt that there were too many aspects to the Consent Decree that compromised public health and the health of the environment. I wanted our day in court. In 1993 HRI published *The Housatonic Manifesto,* declaring our commitment to fight for the following: *The Housatonic River and its associated tributaries and wetlands shall be cleansed of all toxins, including PCBs, and there shall be no discharge of waste into the river. Broad reaches of land along the river shall be protected by public ownership.* I don't believe that the settlement either adequately removes the contamination or compensates the public.

GE will be leaving massive amounts of PCBs and other toxic contamination in underground plumes in the East Street, Lyman Street, and Newell Street neighborhoods,
beneath the Housatonic River bed and in the river banks, in Silver Lake, and will be adding more toxic material to Hill 78 and the Building 71 landfill. In return for 70 years of river contamination, GE will be paying a natural resource damage award of only $25 million, of which approximately $16 million is a cash payment.

In its wake, GE is leaving a city unable to use its own groundwater, a workforce that many believe has been deeply affected by daily contact with toxic chemicals, and God knows how many people with PCB blood levels higher than the national background level. We will never know for sure the price our community has truly paid, and no public health official seems willing to calculate the price we will continue to pay.

Did environmental regulators work hard to craft a settlement they believe in? Absolutely. But they are overworked and underpaid and operate in a world of very limited resources, under enormous political pressure from politicians whose elections depend on corporate campaign contributions, and they face so many other exhausting battles with polluters at other sites.

In this context we are supposed to believe that we have won a big enough victory. The cranes are in the river; significant amounts of PCBs have been removed; and 130 homes have been cleaned. We have played a major part in all this, but for me it is not enough. I have fought for treatment, not landfilling; removal not a plastic-lined cap for the river.

I see Ed Bates and Charlie Fessenden, who worked at Power Transformer and fought valiantly to learn the truth about how the workers were affected by PCBs and tried unsuccessfully to get an open and honest occupational health study; Gig Darey who has fought longer than anyone to truly clean a river he loves and to fight for public ownership of land along the river; Vinnie Curro and Vinnie Stracuzzi, whose Newell Street businesses were poisoned and rendered worthless. They have not received justice.

Compromise has become our national game; and ordinary working people are the ones who always have to make the most compromises. GE faced several billion dollars worth of cleanup costs; they settled for spending several hundred million. We may have achieved more than we dreamed we would have, but that doesn’t mean we’ve won enough. That’s the problem with these kind of unbalanced battles.

It’s discouraging that former allies have turned their energies to the politically easier and less inflammatory issues of river restoration and seem far more interested in GE’s restoration money than PCB removal. From my vantage point, it’s premature to talk about restoration until we have a truly clean river from Pittsfield to Long Island Sound. One of the biggest mistakes we made was to give into pressure to separate our Housatonic River Restoration project from our PCB advocacy. It has shifted emphasis from clean-up to beautification, and encouraged egotism and greed. But more than that it works to isolate HRI and makes our continuing advocacy that much more difficult. It is easy to imagine GE refusing to clean the river through Lenox and Woods Pond and into Rising Pond.

When the HRI Board of Directors authorized Tim Gray to proceed with a legal challenge, and engage Cristobal Bonifaz, I believed the Board would follow through. I helped to prepare our legal challenge and believed strongly that we had made a strong and legally sound case. Though EPA and Department of Justice attorneys many times told us that GE would walk and that Judge Ponsor wouldn’t consider our arguments, his
September 7, 2000 ruling proves otherwise. I’m disappointed that we didn’t have the political will to carry on with that challenge, and personally embarrassed not to be there with the other intervenors.

**UPDATES AND PCB NEWS**

At the June meeting of the CCC, Susan Svirsky of the EPA spoke about the agency’s on-going work for the Rest of the River assessing a wide range of impacts: sediment toxicity, the health of benthic invertebrates, fish reproduction, amphibian reproduction, tree swallow reproduction, as well as some important work studying the impact of PCBs on mink reproduction. The EPA is well aware of recent challenges to the risk assessment work performed on the Hudson River and has made sure to incorporate those concerns in their analysis.

Part of HRI’s agreement with EPA called for the Agency to expand and improve public access to important information about the site. One of our main suggestions was to improve the EPA website, and they have done a wonderful job. Find a computer with internet access and log on to [http://www.epa.gov/region01/ge](http://www.epa.gov/region01/ge). Many of the photographs we have used in this issue have come from the EPA site. You can download important documents, for viewing and printing with Adobe Acrobat.

Board Member Shep Evans suggests that people check out the website of the Environmental Defense Fund at [http://environmentaldefense.org](http://environmentaldefense.org). Using their pollution locator ñ we entered the Pittsfield zip code 01201 - you can find information about the GE-HousatonicRiver Site.

We discovered that the site is tied for 13th place in the nation using the EPAís Hazard Rating System. One wonders what the ranking would be if every PCB dumpsite in the County ñ including those we’ve been told about at the Super Stop N Shop, the softball complex etc., as well as those yet to be discovered - was included.

**ANNISTON, ALABAMA PCB SITE**

As part of the Superfund listing, the federal Agency for Toxic Substances and Disease Registry (ATSDR) was to conduct a health assessment of the Pittsfield community.

Recently ATSDR released a draft evaluation of soil, blood and air data from a PCB site in Anniston, Alabama. One of the first manufacturers of PCBs was the Swann Chemical Company – and workers at Swann exhibited some of the first adverse effects from PCBs and journal articles in 1936 and 1937 chronicled severe skin problems and systemic effects like liver damage. Monsanto purchased Swann in 1935 and manufactured PCBs and other chemicals at its Anniston facility. As a result of community pressure, ATSDR began an assessment in 1995. A just released draft reports states:
iPCBs in residential soil present a public health hazard of cancerous and non-cancerous health effects for persons with prolonged exposure. **PCBs in residential soils in some areas may present a public health hazard for thyroid and neurodevelopmental effects after exposure durations of less than 1 year.**

iPCB exposures may have been more severe in the past. However, the fact that young children have elevated levels of PCBs indicates that exposure may still be occurring at high levels.

iPersons with elevated blood levels (greater than 20 micrograms per liter) for whom there is evidence of current exposure to soil contamination should be a focus of particular attention in future environmental characterization and public health actions.

Of the 2,970 people who had blood taken, the average PCB level was 14.2 ppb, and levels ranged from non-detect to 2,111.5 ppb.

(Note: according to the ATSDR 95% of Americans have levels less than 10 µg/L (micrograms per liter or 10 ppb (parts per billion.) But as you can see from Tim Grayis report, there is good reason to believe that this figure will be revised downward to show significantly lower levels.


**MONSANTO VERDICT**

Extract from The AGRIBUSINESS EXAMINER Issue # 87  August 30, 2000

Monitoring Corporate Agribusiness From a Public Interest Perspective A.V. Krebs Editor/Publisher

After listening to testimony that the danger to workers posed by PCBs was the reason state officials had to demolish and replace a 12-story state building next to the Capitol after a 1994 fire, a Philadelphia jury stunned the Monsanto Co. recently by ruling that the company should pay $90 million in damages to the state of Pennsylvania for selling defective and toxic PCBs that left the building contaminated after a 1994 fire.

Board member Don Roeder reports: Our paper entitled :"Polychlorinated Biphenyls in Tributary Fishes of the Housatonic River, Massachusetts" has been accepted for publication by the journal Freshwater Ecology and should be appearing soon. Authors are D. Roeder, D. Denenfeld and R. Schmidt.

HRI recently received an Environmental Justice grant from the EPA to conduct a survey to give Pittsfield residents an opportunity to recount their experiences with PCBs, express their concerns about PCBs, and comment upon the clean-up efforts underway in local schools, parks, neighborhoods, the Housatonic River and Silver Lake. If you would like to participate, please call Tim Gray at (413) 499-6112.

We've included a copy of the survey questionnaire for those of you living in Pittsfield. Please fill one out if you live on or near PCB-contaminated land, and think you may have come in contact with contamination. Return questionnaires to HRI, 20 Bank Street, Pittsfield, MA 01201.
FROM EXECUTIVE DIRECTOR
TIM GRAY

For a number of years HRI has been bringing up information at the public meetings about suspected underground plumes (under-ground pools of chemicals) and buried barrel sites that were reported to our organization by former General Electric Workers.

The usual scenario when we report this information to GE and the Agencies has been a long wait to get action. At many times HRI was told that our evidence did not support the indication that these sites did indeed exist.

HRI kept bringing up the information that a barrel site was located at the Pittsfield landfill. We were told that it had been investigated thoroughly and nothing was found. The agencies told us they did specialized testing to look for the barrels and even brought a person on site to show them where to dig only to find nothing. HRI insistently continued to bring this information in front of the agencies.

The City of Pittsfield was moving at a record pace to cap over the landfill and bring it to final closure under DEP regulations. At the final moments the bulldozer hit a barrel. This prompted DEP to order a full investigation. In the final analysis over 850 barrels were found at this site directly on the banks of the Housatonic. This would have been a time-bomb waiting to further pollute the river.

For almost two years I doggedly brought up more information about the Newell Street area and the well known iax-yardî reported to HRI by GE workers. Once again we were led to believe that the agencies had sampled these areas and there was no indication that these sites were as problematic as HRI was asserting. That is until EPA finally made GE sink more sampling wells. At the Newell Street parking lot GE finally reported that over 15,000 gallons of a toxic mixture of chemicals had recently been pumped from this site in the weeks after discovery. Some of these plumes have PCB levels as high as 300,000 PPM. They continue to play down the information as a ìsmall pocketî even though GE workers assert this area was a major dumping ground for GE and that barrels and pure chemicals were buried there.

When I asked EPA if under the consent decree settlement they would make GE excavate the barrels and clean up the mess from the bottom up I was told no. EPA will make GE ìpump and treatî the chemicals. We worry because these sites are the banks of the Housatonic River and border a residential neighborhood already highly polluted because GE gave away free fill saturated with PCBs and other chemicals.

In the first 1/2 mile clean up GE and EPA have encountered at least three plumes in or on the banks of the river that they were not aware of. One of these plumes is directly next to the ìax yardî that HRI has been asking for years for the agencies to investigate. This plume has extremely high levels of chemicals.

LYMAN ST PARKING AREA
SITS ABOVE PLUME

Close to two years ago HRI members also brought to the agencies attention an oily substance they observed directly next to the Lyman Street bridge. HRI was told that
this oil was a naturally occurring substance brought about by the breakdown of organic compounds in the river system. It was nothing to worry about. Over a year went by but HRI members remained skeptical of this assessment. At the last citizenís coordinating council meeting EPA announced that they had found a problem directly in this area connected to the highly contaminated Lyman Street area. It now appears that this oil was not a naturally occurring substance but instead another surprise to the EPA.

HRI does not have a lot of faith in the pump and treat system GE uses. GE has been pumping these chemicals for over 15 years. Recently EPA said GE had pumped millions of gallons out of the ground over this extended period of time. After twenty years it is apparent that we still do not know all of the plume sites and EPAís assertion that all of this information was known seems to be a major miscalculation on their part. Only recently has EPA started talking about the unknowns that will occur in the clean up.

Over two years ago the MA Dept. of Public Health (MDPH) promised a study to help determine the toxic effects of PCBs and answer some of the questions that HRI posed to the Department and address the questions local citizens had regarding GEís claim that PCBs were not problematic.

HRI was particularly concerned about getting the latest, most scientifically up-to-date assessment of what background levels of PCBs in the blood are the amount most Americans have in their blood who have not been exposed to out of the ordinary concentrations of PCBs. We were particularly concerned with the study the MDPH did of residents living along the Housatonic River corridor. That study, published in September 1997 concluded that The serum PCB levels found among participants with the highest risk of exposure to PCBs in this study were generally within the background range reported for the non-occupationally exposed population in the U.S.í

HRI was concerned that the data they based this decision on was from the 1980ís. Upon further research HRI found that the most recent data was supporting a much lower national PCB blood level. If true, this would show peoplesí blood levels in our area were indeed elevated, and of concern.

If you check out the report in this issue on the Anniston Alabama PCB site, you can see the importance of what the federal agencies regard as background levels. In the MDPH study they used the figure of 4 ñ 8 ppb (parts per billion). What if the background levels are now 2 ppb. That means someone with 8 ppb in their blood has as much as 4 times the amount of PCBs in their blood as the typical American.

HRI had hopes of timely answers to some of our questions. It is now over two years later and the report is still being held up by the MDPH. There is no excuse for the delay. MDPH representatives sent to the Citizen Coordinating meeting have been uninformed, and unable to answer our questions. The people of Berkshire County deserve better than theyíre getting from MDPH.

HRI BOARD OF DIRECTORS

Dave Gibbs, President
Al Bertelli, Vice-President
Wendy Phillips,
HRI exists on a tiny budget; and we donate hundreds and hundreds of hours of work. Please support our important advocacy by donating whatever you can.

Housatonic River Initiative
20 Bank Row
Pittsfield, MA 01201

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