

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS
WESTERN DIVISION

UNITED STATES OF AMERICA
STATE OF CONNECTICUT
COMMONWEALTH OF MASSACHUSETTS

CIVIL ACTIONS Nos. 99-30225;

99-30226; 99-30227-MAP

Plaintiffs,

THE HOUSATONIC RIVER INITIATIVE

Plaintiff Intervenor,

GENERAL ELECTRIC COMPANY,

Defendant.

MEMORANDUM OF LAW IN SUPPORT OF MOTION TO INTERVENE

February 22, 2000

Respectfully submitted

By Pro Se intervenor,

THE HOUSATONIC RIVER INITIATIVE

Tim Gray, Executive Director.

Dave Gibbs, President

Al Bertelli, Vice-President

Wendy Phillips, Treasurer

Rep. Christopher Hodgkins, Board of Directors

Etc., etc.

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Plaintiff Intervenor,
v. GENERAL ELECTRIC COMPANY,
Defendant

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The report below filed by *The Housatonic River Initiative* with the federal district Court in Springfield, Massachusetts is entitled "Memorandum of Law in Support of Motion to Intervene". It details massive and pervasive toxic chemical pollution in and around Pittsfield and its environs, involving chemical contaminants capable of affecting human central nervous, endocrine, and reproductive systems. If you live in Pittsfield or its environs, be prepared to learn details that might shock you about the land you live on, the woods you walk through, the water you play in, and the air you breathe.

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I. INTRODUCTION

A. The Housatonic River Initiative Has The Right To Intervene In This Action Under Fed. R. Civ. P. 24(a)(2) Or In The Alternative By Leave Of Court Under Fed. R. Civ. P. 24(b).

The Housatonic River Initiative, (HRI), a 501(c)(3) non-profit organization, was formed in 1992 to advocate for the cleanup of the Housatonic River and Silver Lake. HRI's Board of Directors includes a State Representative, the Chairman of the Massachusetts Department of Fisheries and Wildlife, educators, sportsmen and women, and environmentalists. HRI brings this motion to intervene in order to achieve modifications to this Consent Decree.

HRI has many hundreds of dues-paying members in every town and city in Berkshire County. Many of HRI's dues-paying members are individuals and families directly and negatively impacted by the actions to be taken by General Electric (GE) and the Agencies as a result of the Consent Decree. These members include Housatonic River property owners and contaminated commercial property owners. HRI's newsletter is sent to more than 2,000 residents.

HRI is a broad-based organization that has managed to bring together an unusually unlikely alliance of duck-hunters, former GE workers, river advocates, residents of Pittsfield's urban neighborhoods, and rural residents of Sheffield – all united to clean and restore PCB-contaminated land and our common River. (Exhibit 1).

HRI has been very successful in its efforts to galvanize public support and many local Boards of Selectmen have relied on HRI to represent their interests before the Massachusetts Department of Environmental Protection (MADEP) and the United States Environmental Protection Agency (USEPA), and to keep them informed of Agency activities.

Based on HRI's decade-long advocacy and its ability to represent a wide variety of stakeholders, 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."

When negotiations began in 1997 between the United States, Massachusetts, Connecticut and General Electric, HRI 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.

HRI was told that appropriate members of the USEPA, the U.S. Department of the Interior (DOI), the National Oceanic Atmospheric Administration (NOAA), etc., and MADEP could adequately represent and advocate for the public interest.

HRI was told, additionally, that the newly formed 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, HRI was 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.

HRI's absence at the negotiating table and HRI's resultant inability to adequately put forth alternative solutions and remedies to those fashioned at the table is the fundamental reason why HRI is filing this motion to intervene. Not only are those HRI members who own contaminated river-front or commercial property injured, but many of HRI's members are otherwise injured by the actions of GE and the Agencies.

HRI members who would like to swim and fish and consume the fish in the Housatonic River and Silver Lake are injured. HRI members who would like to trap and hunt and safely consume the River's game are injured. HRI members who would more likely canoe, hike or more frequently engage in other recreational activities in these contaminated areas are injured.

As Justice Ginsburg wrote recently in the Supreme Court's January 12, 2000 ruling in *Friends of the Earth Inc., et al. v. Laidlaw Environmental Services (TOC), Inc.*:

We have held that environmental plaintiffs adequately allege injury in fact when they aver that they use the affected area and are persons "for whom the aesthetic and recreational values of the area will be lessened" by the challenged activity, Sierra Club v. Morton, U.S. 405 U.S. 727, 735 (1972). See also Defenders of Wildlife, 504 U.S., at 562-563 ("Of course, the desire to use or observe an animal species, even for purely esthetic purposes, is undeniably a cognizable interest for purpose of standing.")... the affidavits and testimony presented by FOE in this case assert that Laidlaw's discharges, and the affiant members' reasonable concern about the effects of those discharges, directly affected those affiants' recreational, aesthetic, and economic interests. (Exhibit 2, No. 98-822, II A)

HRI has standing to bring this motion under Article III of the United States Constitution because many of its members are injured, and, as the Supreme Court has ruled in *Friends of the Earth v. Laidlaw*, as an association on behalf of its members who have standing in their own right, and whose interests at stake are germane to the organization's

purpose. This Consent Decree, and its decisions to leave large amounts of PCB and other toxic contamination in place, will clearly affect our members' recreational, aesthetic, and economic interest.

The United States Court Of Appeals for the First Circuit has ruled in *Conservation Law Foundation of New England, Inc., Et Al., v. Robert A. Mosbacher* that:

a regulated group has a sufficient interest to intervene as of right in a suit filed by public interest organizations seeking more extension regulation by a federal agency. We also conclude that the proposed intervenors' interest would not be adequately represented by the government. (Exhibit 3, No. 91-212, 966 F.2d 39; 1992 U.S. App.)

On August 28, 1991, the district court held that while seven commercial fishing groups had an interest in a fishery plan approved by the Secretary of Commerce under provisions of the Magnuson Act, 16. U.S.C.§§ 1801-1882, those interests were adequately represented by a governmental agency whose interests and purposes under the law are to protect the very interests the proposed intervenors seek to protect. The district court denied intervention.

Reversing the district court order denying intervention, Circuit Judge Weis wrote:

"Rule 24(a)(2) allows intervention as of right if an applicant meets four conditions. In Travelers Indem. Co. v. Dingwell, 884 F.2d 629, 637 (1st Cir. 1989), we listed those requirements:

- 1. The application must be timely (a factor not challenged here);*
- 2. The application must claim an interest relating to the property or transaction which is the subject of the action;*
- 3. Disposition of the action may, as a practical matter, impair or impede that applicant's ability to protect the interest; and*
- 4. The applicant must show that the interest will not be adequately represented by existing parties.*

...To justify intervention as of right, interests must be "significantly protectable." Donaldson v. United States, 400 U.S. 517, 27 L. Ed, 2d 580, 91 S. Ct. 534 (1971). However, because the case law varies substantially between courts, no bright line of demarcation exists.

*In general, the Courts of Appeals for the Second, Sixth, Tenth, and D.C. Circuits have adopted a liberal approach to intervention. They view the interest test as a practical guide to disposing of lawsuits by involving as many apparently concerned parties as is compatible with efficiency[*42] and due process.*

*...Applying more restrictive criteria, the Courts of Appeals for the Fifth, Seventh, Eleventh, and Federal Circuits reject [**8] interests that are speculative, indirect, or contingent.*

...This Court has not clearly adopted either of those approaches. Instead, we have emphasized that "there is no precise and authoritative definition of the interest required to sustain a right to intervene," while reiterating "that the intervenor's claims must bear a 'sufficiently close relationship' to the dispute between the original litigants' and that 'the interest must be direct, not contingent.'" Travelers Indem., 884 F.2d at 638.

...The circumstances that exist when individuals litigate private disputes or those governed by state law differ from those where public law disputes affecting federal regulatory programs are at issue. So too, the determination of whether an interest is sufficient for Rule 24(a)(2) purposes is colored to some extent by the third factor – whether disposition of the action may, as a practical matter, impair or impede the applicant's ability to protect its interest.

...The final matter for discussion is whether the fishing groups are adequately represented by the Secretary of Commerce. We conclude they are not.

...The Secretary's judgments are necessarily constrained by his view of the public welfare. While the Secretary may well believe that what best serves the public welfare will also best serve the overall interests of fishermen, the fact remains that the fishermen may see their own interest in a different, perhaps more parochial light.

*...We realize that in other cases some courts have found representation by a public agency to be adequate. Here, however, the interests of the Secretary and the proposed intervenors do not appear to justify such a conclusion. The circumstances are such that, viewed objectively, it is unlikely that the fishing groups' interests, as those interests are perceived and understood by them, would or perhaps even should be adequately protected by the Secretary. Accordingly, [****19**] we conclude that in this instance governmental representation is not adequate. (No. 91-212, 966 F.2d 39; 1992 U.S. App.)*

As Circuit Judge Boudin notes for the United States Court of Appeals for the First Circuit in *Massachusetts Food Association, Et Al., Plaintiffs, Appellants, v. Massachusetts Alcoholic Beverages Control Commission, Et Al., Defendants, Appellees*: The standard for intervention as of right is set forth in Rule 24(a)(2) as follows:

*"Upon timely application anyone shall be permitted to intervene in an action: ...when the applicant claims an interest relating to property or transaction which is the subject matter of the action and the applicant is so situated that the disposition [***16**] of the action may as a practical matter impair or impede the applicant's ability to protect that interest, unless the applicant's ability to protect that interest is adequately represented by existing parties."*

In such cases, the timeliness of intervention and the practical impact on the would-be intervenor are rarely in dispute: it is the "interest" and "adequately represented" criteria that are usually decisive.

Rule 24(a)(2)'s reference to "an interest relating to the property or transaction" suggests that the drafters had in mind something narrower and more akin to property or contract

*interests in conventional private litigation as the necessary stake; but this narrow reading has not been accepted in practice. ...But, perhaps as a counterweight to the broad reading of "interest," the courts have been quite ready [*17] to presume that a government defendant will "adequately represent" the interests of all private defenders of the statute or regulation unless there is a showing to the contrary. ... And while there are various ways to show that state representation is not adequate, the burden of overcoming the presumption is upon the would-be intervenor. (Exhibit 4, No. 99-1277, 197 F.3d 560, 1999 U.S. App.)*

In 1981, GE and the Agencies negotiated a Consent Order for this site. Eighteen years have elapsed before any large scale permanent clean-up action has begun in the Housatonic River. GE has brought to bear enormous financial and legal resources in an effort to delay and limit its responsibility to clean this site. Over these last two decades, the Agencies have been hampered by a lack of financial and human resources. In the 1980s and early 1990s, the USEPA was constantly changing its personnel in charge of this site. A close examination of the record will reveal that there is ample evidence supporting HRI's claim that the Agencies cannot "adequately represent" the interest of HRI and its members. HRI has the right to intervene in this action for the following reasons:

1. The application is timely. The Consent Decree was entered for approval by this Court in October, 1999, the comment period for the Decree is still open, and HRI has participated and expressed its concerns to all parties negotiating this agreement since 1992;
2. HRI, as an organization, and representing parties whose property interests are directly affected, has a direct interest relating to the property or transactions subject of the Consent Decree;
3. Disposition of this matter by approval of the Consent Decree will impede the ability of HRI's members from protecting their interests;
4. The interests of the members of HRI are not adequately represented by the existing parties in the case of the Newell Street property owners. Approval of the Consent Decree will result in a regulatory taking of these properties by the Federal and State Governments, as discussed more extensively below.

B. HRI, As An Organization, And Its Members Impacted By The Consent Decree, Have Contributed Extensively In The Prior Eight Years To Solve The Problems of PCB Contamination In Pittsfield And The GE Site And Were Denied Participation In The Negotiations That Resulted In The Consent Decree.

HRI began public advocacy for a cleanup in 1992 after more than a decade of widespread public frustration. HRI knew that only by marshaling a broad-based citizens group could the clean-up process be propelled forward. HRI became extremely frustrated when it learned that the USEPA had made the critical strategic decision to handle this site under

the Resource Conservation and Recovery Act (RCRA), rather than the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

In addition, state and federal environmental officials, and Massachusetts public health officials had allocated few resources to addressing the problem. Massachusetts agencies and USEPA were engaged in disputes about authority, and non-action was the order of the day.

HRI's loud and consistent advocacy was met with a change in attitude and personnel at both the state and federal level. It has been HRI's experience that from the initial discovery of contaminated milk coming from the DeVos farm in Lenox in the late 1970s, state and federal regulators have been extremely slow to fully comprehend the vast extent of PCB-contamination that moved, and continues to move, from GE's Pittsfield plant to the surrounding areas, either directly through storm drains and storage tank leakage to the river, or, in the form of contaminated materials transported from the GE facility to locations throughout the County. The Agencies were also extremely slow to take corrective action.

The court has ruled that Statute of Limitations prevents residential and commercial property owners from pressing some of their claims against GE. With all due respect, it is HRI's belief that public ignorance and inaction stemmed from a complex mix of factors: GE's decisions not to disclose pertinent information; regulatory inaction; a widespread desire not to antagonize the principal employer of Berkshire County; and the very slow process of the scientific and public health community to fully appreciate, and adequately communicate to the public, the dangers of relatively small dosages of the PCBs and other contaminants used on a daily basis at GE.

C. GE Dumped Millions Of Pounds Of PCBs In Berkshire County From 1932 to 1981 Which Contaminated, And Continue To Contaminate By Leaching From The GE Facility, The Housatonic River And Properties Of HRI's Members In Berkshire County.

GE had a practice of allowing its PCB-contaminated oil and other contaminants to move freely from its industrial facility out into the surrounding areas: down its drains forming underground plumes, and contaminating Pittsfield's groundwater, and Silver Lake, Unkamet Brook, and the Housatonic River. Much of these discharges from GE's property were non-permitted wastewater discharges.

GE had a practice of distributing PCB-contaminated materials off-site to the community. So concerned was the Commonwealth with GE's failure to notify state agencies about its program in the 1940s and '50s to distribute PCB-contaminated fill that on October 7, 1997 it filed Civil Action No. 99-4841E in Suffolk Superior Court. The Complaint alleged that GE failed to notify the Massachusetts DEP of releases and threats of releases of PCBs, that GE failed to produce documents responsive to its official requests, and that GE made inaccurate, incomplete and misleading statements in the

responses GE submitted, and that GE violated the Housatonic River Order. (Exhibit 5, Commonwealth of Massachusetts Complaint Civil Action No. 99-4841E; Exhibit 6, R. Kelly Neiderjohn May 15, 1981 Letter; and Berkshire Eagle and Boston Globe articles).

Another example of inaccurate or incomplete information involves the estimated amount of PCB-contamination in the Housatonic River. GE's 1982 Stewart Report estimated that there was a total of 39,000 pounds (less than 20 tons) of PCBs in the Housatonic River from the GE site to the Connecticut border. The USEPA, in its initial 1988 RCRA Site Assessment for the entire GE/Pittsfield/Housatonic Site, quoted GE's Stewart Report's assessment of the PCB problem in the Housatonic River:

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. (Exhibit 7, RCRA Site Assessment, III-29).

It took years and years of advocacy by HRI – including presenting testimony of Ed Bates, the former Manager of Tests at GE Power Transformer in Pittsfield, and his associate, Charles Fessenden, Supervisor of Calculations at Power Transformer – to establish that at least a million and a half pounds of GE's PCBs had gone down the drain and into the river, due to daily spillage and loss at Power Transformer alone.

HRI has additional reports by former Pittsfield Mayor Remo DelGallo about large PCB storage tanks leaking near Building 100 on East Street. (Exhibit 8, video interviews with Ed Bates and Remo DelGallo, etc.).

GE not only grossly under reported the amount of PCBs in the Housatonic River; it grossly misinterpreted the contamination levels in the River. HRI believes GE's misrepresentations violated its responsibilities under the 1981 Consent Agreement under RCRA to disclose all past releases.

From the onset HRI urged MADEP and USEPA to institute an independent testing regime to more adequately determine the range and extent of PCB-contamination in the Housatonic River and Silver Lake, and to conduct a more thorough review of GE's sampling protocol. The Agencies resisted our efforts from 1992 to 1996.

As a result of HRI's advocacy, in 1996 the USEPA undertook independent sampling. This independent sampling effort, and greater oversight of GE's sampling regime, has revealed large areas of previously undiscovered contamination.

Due to a finding of major PCB concentrations in the banks of the Housatonic River located on GE's facility, GE was forced to clean up contaminated bank soil and river sediment in what has become known as the Building 68 Removal Action.

During the 1997 Building 68 removal of a 550-foot section of bank soil and river sediment, HRI and the public learned from *The Berkshire Eagle* that:

*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. (Exhibit 9, December 16, 1997 issue of *The Berkshire Eagle*).*

Unfortunately, HRI believes today that, while the USEPA and MADEP have made major strides in the last few years, they are still playing catch-up with GE, both in fully delineating the scope of the problem and in their remediation plans. Because of the respect HRI has earned in the community over the years, many former and present GE employees or employees of GE contractors have informed HRI of additional areas of contamination. HRI has always communicated these concerns to the Agencies, and HRI is, to a large degree, responsible for encouraging and prodding the Agencies to take positive action in these areas.

But even after all these years of advocacy, the Agencies are still slow to recognize how pervasive PCB distribution is throughout our community. And while the Agencies have worked to reverse this dynamic, HRI is convinced that this Consent Decree fails to thoroughly address several major areas, and that several of its decisions fail to adequately protect either the public health and safety, or that of the environment.

Because of the past and present record of GE and the Agencies, HRI believes that under the fourth requirement noted in *Conservation Law Foundation of New England, Inc. Et Al., v. Mosbacher*, our interest "will not be adequately represented by existing parties." 966 F.2d. 39,41 (1st Cir. 1992).

II. THE CONSENT DECREE DOES NOT RESOLVE THE PCB CONTAMINATION PROBLEMS IN BERKSHIRE COUNTY

A. CERCLA And The Consent Decree

CERCLA Section 9621(b), General rules for cleanup standards, 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) the long-term uncertainties associated with land disposal;**
- (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;**
- (E) long-term maintenance costs;**
- (F) the potential for future remedial costs if the alternate remediate 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. 42 USC 9621(b) (Emphasis added).

HRI 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." (Id at 9621(b)(1)). And this 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" (Id at 9621(b)(1)).

The decision to exclude HRI 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." (Id at 9621(b)(2))

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. (42 USC 9622(f)(4)).

HRI believes this Consent Decree fails to serve the public interest under CERCLA in these 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. (42 USC 9622(f)(4)).

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

B. Impacted Areas Not Properly Addressed In The Consent Decree

1. The Remedial Decision For The 1/2 Mile of the Housatonic River from the GE Facility to Lyman Street - ("The 1/2 Mile Reach") – Will Not Adequately Prevent PCBs From Recontaminating The River And The Properties Of HRI Members In The Future.

Even though the Consent Decree has not been approved by the Court, GE is moving with haste to implement the Removal Action Plan for the first 1/2 Mile Reach of the Housatonic River. By the time the Court has had a chance to review and rule on the provisions of the Consent Decree, a major portion of the 1/2-Mile Reach will have been remediated, and a great precedent shall have been set. (Exhibit 8, video of 1/2 Mile Reach remediation)

These precedents include a strategy based on limited testing, limited removal, major capping, and extensive landfilling without treatment. Extremely high levels of contaminated soils and sediments will be left unremediated and covered up by a largely untested geotextile-based capping regime. There will be no substantive reduction of toxic materials, instead, these materials will be transported from the river and relocated at

the Hill 78 and Building 71 landfills, a mere 50 yards from the Allendale elementary school.

The Agencies maintain that the public has had ample opportunity to comment on the 1/2-Mile Reach Removal Plan. While HRI and its technical consultant, Joel Loitherstein, submitted substantial written comments in early June 1999 to GE's proposed Action Plan, it was only until the Agencies' responses were released to the public information repositories in November 1999 that HRI discovered the underlying and motivating reasons for the Agencies' decisions regarding the 1/2-Mile Reach.

EPA's response to our concerns can be found in its Responsiveness Summary for Allendale School Removal Action:

1/2 Mile Removal Action and Consolidation, October 1999 (Exhibit 10):

Comment:

Two commenters expressed concerns about the use of spatial averaging and also asked how EPA determined the cleanup levels for the sediments and bank soils.

Response:

Sediments. EPA did not explicitly specify a cleanup level for PCBs in sediments nor did EPA approve the use of spatial averaging for the sediments in the 1/2-Mile Reach; rather a cleanup approach was used to determine the limits of excavation. 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)

This is the first time that HRI had heard so clearly that the most critical decisions regarding the Agencies' cleanup strategy for the 1/2-Mile Reach were determined by the experience of the Building 68 remediation. In HRI's extended public comments to the Consent Decree (Exhibit 11), HRI examines the Building 68 experience in greater detail. Suffice it to say that there is reason to believe that both GE and the Agencies clearly underestimated the amount and depth of the contamination at the site.

The Building 68 chronology mimics HRI's experience with every other aspect of this site. A 1968 GE spill that goes unreported until 1982. 14 years of regulatory inaction that leads to a sampling program in 1996. Remediation in 1997, and additional

remediation in 1998, 30 years after the spill, that still leaves large amounts of contamination in place.

The underestimation of contamination led to an engineering plan that was ultimately unable to support dredging below 8 feet, and extremely high levels of contaminants were left unremediated. These remaining contaminants located with GE property continue to leach into the Housatonic River and Pittsfield's groundwater, posing a threat to HRI's members and impacting directly upon their properties.

GE's difficult experience with the Building 68 Removal Action, has, in effect, determined the limits of remedial action for the entire 1/2-Mile Reach. USEPA's analysis of the Building 68 Removal Action has affected all the subsequent decisions concerning the 1/2-Mile Reach, including the decision not to obtain PCB samples in the river beyond a depth of 2.5 feet. As the USEPA states on page 4-1 of Appendix F of the Consent Decree:

Recent sampling performed by the USEPA (August – 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 for the 1/2-Mile Reach to limit all activity to 2.5 feet. Unfortunately, HRI believes that 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.

The engineering limitations of the Building 68 Removal, and 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.

HRI believes that more extensive engineering, and/or a pilot project, ought to be considered as an alternative to the proposed plan. The Building 68 Removal Action revealed the existence of an unanticipated source of heavier-than-water contaminated Dense Non-Aqueous Phase Liquid oil (DNAPL) which contains extremely high levels of contamination. The thick underground DNAPL plumes that exist throughout this site contain not only PCBs but other toxic contaminants, including chlorobenzene, benzene, trichloroethylene, methylene chloride as well as metals.

HRI believes it makes sense now to consider a range of remediation strategies, including the construction of a more extensive 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 traveling below, the river itself are immobilized and remediated. Installing such a system wherever possible 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.

GE has already constructed a slurry ditch 380 feet long by 30 feet deep to aid its efforts to recover oil from the massive plume in East Street Area 2.

Our technical consultant, Joel Loitherstein of LEEI, has raised many questions about the Agencies decision to rely on a capping solution:

"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. (Exhibit 12)

HRI believes that the joint decision of the Agencies and GE to restrict removal of PCBs and other contaminants to a depth of 2 1/2 feet in the Housatonic River, coupled with their decision to employ an untested geotextile-based capping remedy will not adequately prevent PCBs from recontaminating the river and the properties of HRI members in the future.

2. The Hill 78 and Building 71 Landfills Located Within The GE Property Will Continue To Pollute With PCBs Pittsfield's Groundwater, Endanger The Housatonic River, The Schoolchildren At The Allendale School, And Affect The Properties of HRI's Members

USEPA and MADEP are permitting GE to use two landfills located on the GE facility to dispose of PCB contaminated soils and sediments. The Agencies' plan is to put PCB-contaminated material less than 50 ppm on top of an existing unlined landfill on Hill 78, and to create a new landfill for higher-level contaminated materials above 50 ppm on the adjacent Building 71 Site. These sites border an elementary school and a residential neighborhood. The Hill 78 landfill is 50 yards from the Allendale School.

HRI knows from many Agency documents and the testimony of former GE employees and Pittsfield residents that the existing dump at Hill 78, a former ravine, was filled with extremely toxic materials, including barrels containing Pyranol, GE's PCB oil. Sampling has shown contamination at levels of 120,000 ppm in the soil. A 1991 investigation revealed that the groundwater in the vicinity of Hill 78 had concentrations of PCBs at 9 ppb and dioxins and furans (much more toxic even than PCBs) at 30 ppb.

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. There is very significant concern among HRI members and members of the public that these dumps are located right across the street from a public elementary school, needlessly exposing schoolchildren to possible migration of contaminants. Several candidates for the Pittsfield City Council and the current Councilman representing this district raised public concern about the enlargement of these landfills, and expressed concern for the safety of the children. (Exhibit 13)

HRI believes 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 from the presence of buried barrels of liquid PCBs, contaminated fullers earth, possible metals, solvents, VOCs, and SVOCs.

EPA Project Leader Bryan Olson's response at the May 18, 1999 public meeting to some of these concerns 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 ... 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 recognizes and appreciates that the Agencies have set up a long-term monitoring program for this containment facility. But monitoring, unfortunately, will only confirm that migration has occurred; and that a problem exists. The Agencies are quick to tell the public that this is a "public perception" issue, not one of public health. But HRI's concerns are not based on a generalized, uninformed fear, or a typical "Not In My Back Yard" response. HRI has conducted extensive research, and contacted other communities who have had serious problems with landfills that release contaminants.

There are valid reasons to doubt the long-term ability of these proposed containment measures for both the Hill 78 and Building 71 landfills. First, it is necessary to reiterate that the Hill 78 landfill, the repository of PCBs in subsurface soils at an average concentration of 498 ppm and a maximum concentration of 120,000 ppm, has no base liner.

This is 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).

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).

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).

Given EPA's own admission of the many problems that characterize landfill liners, the inability of landfills to guarantee the long-term isolation of these toxic chemicals, and the emphasis CERCLA places on alternative and permanent solutions, HRI renews our advocacy for the treatment of these wastes. And HRI respectfully reminds the Agencies of their stated commitment to the treatment option.

According to the Corrective Action for Solid Waste Management Units at Hazardous Management Facilities; Proposed Rule (Subpart S) states that the four standards used in evaluating Corrective Measure technologies 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.**

1. 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. (Federal Register, July 27, 1990)

While the decisions to enlarge the Hill 78 Consolidation Area, and construct the Building 71, and possibly the additional New York Avenue/Merrill Road Consolidation Areas, meet the above 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.

HRI believes that there is a far more protective alternative: treatment. There are several treatment methods - thermal desorption, for example - which substantially reduce the volume of PCB-contaminated materials by heating the sediments and soils. What results from the thermal desorption process is large amounts of clean, sterile soil and very small and concentrated amounts of liquid PCBs, which are easily stored and isolated.

The clean soil can often be recycled and used. The Agencies have given HRI a cost estimate based on their experience with the remediation at the Loring Air Force Base. There, HRI was told, dumping on site, or very close to the site, was estimated to cost \$30 a ton, as opposed to \$300 a ton or more to treat it.

GE, in its revised *Removal Action Work Plan - Upper 1/2 Mile Reach of Housatonic*, estimates that it will remove approximately 12,740 cubic yards of contaminated soil and sediment. One cubic yard is equal to a ton and a half; 12,740 cubic yards equals 19,110 tons. Multiplied by \$300, the estimated cost of treating the soils and sediments of the 1/2 Mile Reach, is \$5,733,000. Let's assume that the \$300 a ton is a low estimate. If treatment costs average \$400 a ton, the added expense for treatment comes to \$7,644,000. If the treatment costs average \$500 a ton, the added expense for treatment comes to \$9,555,000.

The remediation decisions negotiated in the Consent Decree also encompass the next mile and a half of contaminated sediments and bank soils, the contaminated soil from the Allendale School, and anticipated contaminated soil from the Newell Street properties. GE arrives at a total estimate in its June 1999 *Detailed Work Plan for On-Plant Consolidation Areas*:

Using:

- 1) the information available for each RAA;*
- 2) GE's understanding of the response action requirements established in the sediments;*
- 3) information provided by the USEPA; and*
- 4) several assumptions (summarized below), the volume of materials potentially subject to on-plant consolidation is estimated to be approximately 230,000 cubic yards (cy). Of this total, it is currently estimated that approximately half of the materials would be regulated under TSCA, while the other half would be considered non-TSCA material*

containing less than 50 ppm PCBs. (Page 2-2, Appendix E to Consent Decree, Volume II, Annex 1)

Using the estimate of 230,000 cubic yards, brings the total volume of contaminated soil and sediments subject to possible treatment up to 345,000 tons. At \$300 a ton, the costs of treating 345,000 tons equals \$103,500,000. At \$400 a ton, the costs rise to \$138,000,000. At \$500 a ton, the costs rise to \$172,500,000.

So there is a range of \$103 million to \$172 million dollars to treat all this waste rather than bury it across from the Allendale School. The additional \$103 to \$172 million to ensure a permanent remedial solution would be an impossible burden for many Responsible Parties, but HRI believes, given the enormous profits General Electric made with its Power Transformer and Capacitor divisions in Pittsfield, and its continuing status as one of the world's most profitable corporations, that this extra expenditure can, and should be, met. In years past, no one could reasonably expect that this much money would be allocated to redress environmental grievances. But in an era where basketball players are awarded \$100 million dollar contracts, and corporate CEOs are routinely awarded multi-million dollar bonuses, why should public health and the environment be sacrificed when the financial resources are available.

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. According to a March 17, 1999 press release from the United Electrical Workers, CEO Jack Welch's total compensation package for 1998 equaled \$97 million dollars, averaging about \$50,000 an hour. Clearly, GE has the financial wherewithal to treat this contamination. (Exhibit 14)

For less than what GE's Board of Directors will compensate Jack Welch for two years' work, GE can treat the total 230,000 cubic yards of contaminated sediments, and bank soils from two miles of the Housatonic River, the Allendale School and the Newell Street area. The Berkshire community has endured irreparable damage because GE allowed PCBs and other toxics to escape its industrial facility and move to the Housatonic River, Silver Lake, adjacent neighborhoods and other towns. For an additional \$103 to \$172 million GE can treat this waste, and almost completely reduce its volume and toxicity. Given the financial price the Berkshire Community has paid, it is incumbent upon the Agencies to not allow this additional cost to stand in the way of the most thorough cleanup.

HRI refers once more to some of the strictures of CERCLA Section 9621(b):

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: ... the long- term uncertainties associated with land disposal; ... the persistence, toxicity, mobility, and propensity to bioaccumulate of such hazardous substances and their constituents; ... long-term maintenance costs; ... the potential for future remedial costs if the alternate remediate action were to fail; and ... 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 ... (42 USC 9621(b)) (Emphasis added)

HRI believes that treatment will greatly reduce the large volume of toxic contaminants. By destroying the contamination, rather than burying it, the treatment option better provides the CERCLA standard cited above of "long-term reliability and effectiveness." It clearly better meets the CERCLA standard cited above of "reducing the toxicity, mobility, or volume of wastes." It clearly eliminates the CERCLA concern cited above of "the long-term uncertainties associated with land disposal." It clearly eliminates the CERCLA concerns cited above of "long-term maintenance costs" and "the potential for future remedial costs if the alternate remediate action were to fail." (42 USC 9621(b))

Treatment is not only effective in the short-term, it is a far more effective option for the long-term. It certainly protects public health and the environment. In addition, 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.

Finally, HRI would to bring to the Court's attention the USEPA's remediation decision for the 2-acre PCB-contaminated site at Fletcher Paint Works and Storage in Milford, New Hampshire, EPA Region 1 site ID# NHD001079649. According to a March 12, 1999 EPA press release:

EPA signed the Record of Decision (ROD) on September 30, 1998 and called for excavation and use of thermal treatment as was proposed in the 1996 plan. (Exhibit 15) HRI believes that the advantages of cost, and the ability to implement, are clearly outweighed by the limitations of landfilling. HRI calls for the use of thermal treatment.

3. The Current Plan For Remediation of Silver Lake Will Render This Body Of Water Useless, And A Continuing Threat To The Housatonic River, And A Danger To HRI's Members

One of HRI's greatest disappointments with this Consent Decree lies with the Agencies' decision not to demand the removal of the highly-contaminated sediments from the bottom of Silver Lake. Silver Lake is a beautiful 26-acre lake in the heart of Pittsfield, adjacent to the soon-to-be redeveloped former GE plant. Older Pittsfield residents remember the days when they swam in Silver Lake in the summer, and skated on it in the winter. A truly remediated and renewed Silver Lake will once again attract Pittsfield residents in great numbers. Clearly, a clean, fishable, swimmable lake can serve as the centerpiece to the commercial renaissance envisioned by the Pittsfield Economic Development Authority (PEDA).

Attachment K to the *Statement of Work (SOW) for Removal Actions Outside the River* details the nature of the remedial solution intended for Silver Lake:

b. (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." Appendix E, Volume 1 to Consent Decree. (Emphasis added).

Thus, it appears the Agencies' solution to Silver Lake is to allow GE to drop silty sand 30 feet down from a barge to create a sand cover of twelve inches over contaminated sediments with levels as high as 20,700 ppm. There will be no removal of highly contaminated lake sediments and there will be no treatment of these sediments. The solution is just a silty sand cover.

Even GE, five years ago, publicly expressed doubts about such an armoring/capping strategy. At that time, GE was arguing that natural recovery, the re-silting of sediment, (a do-nothing strategy), would eventually remove the threat posed by Silver Lake sediments.

GE argued in their March 1995 revised *Proposal for the Preliminary Investigation of Corrective Measures for Housatonic River and Silver Lake Sediment* (PICM) that there are potential problems with an armoring scenario in waters as deep as Silver Lake:

The armor layers are placed either from a barge, from a floating platform, or from the banks of the river or lake. The depth of the water affects the ability to effectively place the armoring. In shallow water depths, the armoring can be placed with more control, reducing sediment resuspension. However, as discovered in the New Bedford Harbor Pilot Study described below, armoring is difficult to place effectively in deeper waters (depths greater than approximately 10 feet). (Exhibit 16 - PICM Page 2-3) (Emphasis added)

On occasion, placement of armoring at depth is difficult to control and can result in mixing of contaminated sediment with the clean cap material. In the New Bedford Harbor Pilot Study, one to three feet of clean sediment was placed on sediment contaminated with PCBs in an aquatic disposal area. Four months after capping, sediment cores taken from the capped area and analyzed for PCBs indicated that the capping effort was not successful [Herbich (undated) and USACE 1990b]. This was due to the method of placement and the fact that the site was in deep water, resulting in little control of placement of the capping material. This site is in relatively deep water, and thus, is generally applicable only to the deeper areas of Silver Lake and Woods Pond." (Exhibit 16 - PICM Page 2-5) (Emphasis added).

HRI believes it is reasonable to expect GE to truly clean Silver Lake. HRI believes it is reasonable to expect the Agencies to order GE to truly clean Silver Lake. For more than 50 years, PCBs, heavy metals, and other contaminants flowed constantly from the GE plant to poison a prized community resource. Few small communities in the United States have a lake positioned adjacent to its industrial center.

In its *Supplemental Phase II/RCRA Facility Investigation Report for Housatonic River and Silver Lake* (Bouck & Lee, Inc., January 1996), GE estimated the following approximate volumes for sediments and bank soils:

Approximate Volumes (cubic yards) - Silver Lake
Containing Greater than 1 ppm PCBs: 175,000
Containing Greater than 10 ppm PCBs: 140,000
Containing Greater than 50 ppm PCBs: 70,000
Containing Greater than 100 ppm PCBs: 60,000
Containing Greater than 500 ppm PCBs: 46,000
(Exhibit 17, Page 3-46)

5.5 Estimation of Volumes of Impacted Floodplain Soils
Approximate Volume (cubic yards) Silver Lake
Containing Greater than 1 ppm PCBs: 5,000
Containing Greater than 10 ppm PCBs: 3,200
Containing Greater than 50 ppm PCBs: 800
(Exhibit 17, Page 5-34)

If GE were to remove PCB-contaminated sediments above 10 ppm from Silver Lake, the approximate volume involved would be 316,000 cubic yards. 316,000 cubic yards is 474,000 tons. Let's use the high end estimate of what it costs to treat this contaminated sediment: 474,000 tons at \$500 a ton comes to \$23,700,000. For \$24 million dollars Pittsfield could have a truly clean, fishable, swimmable lake. At a time when Pittsfield and the state are considering spending \$12 million to restore the Colonial Theater, and communities are investigating hundreds of millions for sports facilities, \$24 million is not a large amount of money to restore and rehabilitate a 26 acre gem.

While HRI supports the Agencies' decision to require a spatial average of 2 ppm in the bank soils of residential properties abutting Silver Lake, HRI is disappointed that a similar average is not required in the non-residential properties abutting the Lake.

Unlike other areas of the site, such as the more industrial 1/2-Mile Reach where public access has not been easy in recent years, the city can reasonably anticipate large numbers of people taking advantage of Silver Lake: walkers, picnickers, teenagers, men and women fishing. As Figure 2-25 of the *Statement of Work for Removal Actions Outside the River* indicates, (Appendix E, Volume 1 to Consent Decree), Recreational Areas 1 through 5 circle Silver Lake, and provide the best access.

If, in fact, the City of Pittsfield invests time and energy in encouraging a renewed public appreciation of Silver Lake, these areas will experience great use. Why allow levels as high as 10 ppm when it is likely that children will be active in this area? HRI urges the Agencies to find some middle ground between their residential and normal recreational scenarios in the Silver Lake Removal Area.

At the very least, HRI requests a pilot project for the Silver Lake remediation to see whether or not extensive 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. HRI does not, nor does it 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 over massively contaminated sediments. HRI believes the Agencies' decision regarding Silver Lake fails to meet most of the strictures of CERCLA Section 9621(b) previously cited.

4. The PCB Contamination Of The West Branch Of The Housatonic River Has Not Been Addressed In The Consent Decree, Rendering Any PCB Removal From The Confluence Of The West And East Branches An Exercise In Futility And Continuing The Pollution With PCBs Of The Properties Of HRI's Members.

Based on information from former GE employees, and local waste haulers, HRI informed the Agencies of possible contamination at the Dorothy Amos Park and the King Street Dump. Both sites border the West Branch of the River. Both GE and the Agencies insisted for years that PCB contamination was confined to the East Branch. Finally, the Agencies began two years ago to do their own independent testing in the Housatonic. As part of this testing program, the Agencies sampled the confluence of the West and East branches and adjacent to Dorothy Amos Park on the West Branch. As the December 9, 1999 front page of *The Berkshire Eagle* revealed: "*PCB 'hot spot' found near West Street park*". (Exhibit 18). The Agencies' initial testing found levels as high as 7,630 ppm. Unfortunately, testing was limited to 11 locations and went no deeper than two and a half feet.

Because the Agencies believed the West Branch hadn't been contaminated, it was not included in the provisions of the Consent Decree. HRI has always had questions about the decision to clean downstream sections of the river even though all sources of upstream contamination have yet to be identified and remediated. MADEP, as of its December 8, 1999 letter to GE, has asked GE to prepare a Scope of Work (SOW) that would define the nature and extent of contamination in the West Branch "*from upstream of Dorothy Amos Park to the confluence of the East and West Branches*" and delineate "*the presence of the PCB sediment hot spot at a location in the West Branch adjacent to Dorothy Amos Park ...*" (Exhibit 19)

HRI urges that the Agencies insist on a testing program that includes substantial sampling of the West Branch adjacent to the King Street Dump and that all sampling extends vertically until they find levels at non-detect. As HRI has learned from the Building 68 Remediation, substantial levels of contamination can exist at great depth. The former scrapyard operation at what is now Dorothy Amos Park may, in fact, have landfilled PCB-contaminated liquids.

5. The Consent Decree Fails To Address The Fact That GE Gave Away Contaminated Wood From Its Transformers To The Citizens Of Pittsfield And Some Businesses And Possible Homes Were Built With PCB-Contaminated Wood.

Based on information from former GE employees, HRI raised the issue in 1998 of possible contamination problems stemming from the distribution of PCB-oil-soaked hard wood throughout the Berkshire community. This wood lined the insides of large power transformers. During the life of the transformer, the wood absorbed PCB-oil. GE made this wood available in much the way it handled the PCB-contaminated fill that is now being cleaned up in homes throughout Pittsfield.

HRI knows of at least two commercial properties on Newell Street that contain GE's contaminated wood: Stracuzzi Contracting and Ravin Auto Body, and HRI is concerned that people may have used contaminated wood in residential construction projects. HRI urges the Agencies to develop a public information campaign, including the use of radio, television, and print media, to alert the public to the possible dangers of using contaminated wood. In addition, HRI urges the Agencies to interview former and present GE employees to learn more about the wood giveaway program.

6. The Consent Decree Fails To Address The Fact That Some Commercial Buildings Have Earth Floors Contaminated With PCBs Presenting A Serious Danger to HRI's Members Who Own These Buildings

While there has been a major effort to remediate residential properties that have received PCB-contaminated fill to an averaged 2 ppm, there has been no similar effort to identify or remediate properties built upon contaminated fill, and still have exposed soil floors. Stracuzzi Contracting on Newell Street is just such a property, and the owner and his employees are continually exposed to possible PCB-contaminated soils.

7. The Compromise Reached Between GE And The Agencies Which Made The Consent Decree Possible Was That Large Areas Of Pittsfield Encompassing Properties of HRI's Members Will Not Be Cleaned-Up To Massachusetts Default Standards Rendering These Properties Worthless Which Represents A Regulatory Taking Of Those Properties

In its May 26, 1998 *Combined Action and EE/CA Approval Memorandum*, the USEPA lists these former oxbows as Potential Sources of PCBs to the Housatonic River:

6. *Heavily contaminated soils in the banks of the Housatonic River including the filled in portions of oxbows A through I. GE has documented high levels of PCBs in contaminated soils in the riverbanks in the subject area, especially in the former oxbows. ... In addition, PCBs have been detected in former oxbow soils in concentrations as high as 290,000 ppm (both at Lyman Street, sampling location LS-11 and Newell Street I, sampling location QP-9). The contaminated bank soils pose a threat of release of PCBs into the Housatonic River via erosion and storm runoff.*" (Appendix B of the Consent Decree, pp. 7-9).

In the *Action Memorandum for Removal Action Outside the River at the GE-Housatonic River Site*, Appendix D, the Agencies state:

In parts or all of the Unkamet Brook Area, Oxbows A and C, Oxbows J and K, ... access is unrestricted and the land use is residential, recreational, or commercial. Therefore, the potential exists for residents, recreational users, workers, and trespassers to come into contact with contaminated soil. Direct contact with contaminated surficial soil could result in the ingestion, inhalation and/or dermal absorption of hazardous substances. In addition, any disturbance of subsurface soils, which is currently not prohibited, could expose people to contaminated subsurface soils.

Other areas of the Site, such as Newell Street I, East Street Area I and portions of the Lyman Street Area, are non-GE owned commercial/industrial properties. Access in many of these areas is not restricted. Therefore, the potential exists for workers, customers, and trespassers to come in contact with contaminated surface soils. Also, any disturbance of subsurface soils (e.g., for building expansion, installation of fence posts, regrading of parking areas, repaving, etc.) could result in the uncovering and exposure of contaminated soils. (Appendix D of the Consent Decree, Pg. 24).

Section IX 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. (Pp. 116-117, 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, Volume I, provides further details:

For GE-owned commercial/industrial properties in the Former Oxbow Areas, or properties for which an Environmental Restriction Easement (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 GE 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. (Appendix E to Consent Decree, Volume I, Pg. 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..." (Appendix E to Consent Decree, Volume I, Pg. 51).

HRI does 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 HRI does not challenge that there is some difference between 24 hour a day residential exposure and less constant occupational or recreational exposure, HRI does not believe leaving PCB contamination at levels up to 25 ppm in the top foot in commercial areas like Newell Street fully protects public health. 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, an active social 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, HRI does 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. Vincent Stracuzzi recently unearthed GE electrical parts eight feet beneath the surface of his commercial property, directly adjacent to his building. 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 GE's demarcation of the thick heavily contaminated DNAPL and LNAPL plumes. For several years HRI 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 public announcement by EPA Project Manager Bryan Olson of a new plume in the Newell Street area reveals that HRI's concerns are well-founded. And since July 1999, they've pumped out at least 10,000 gallons of PCB-contaminated oil from this previously undetected plume.

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.

Additionally, the Consent Decree calls for GE to either:

a) obtain an ERE from owners of contaminated properties in Pittsfield (including HRI's members) for a value equivalent to 18% of the most recent assessed value of the property, in which case the property owners will be forever unable to dig, put foundations in or in any way alter more than the first foot of soil from their properties. (Consent Decree, Section 60, Pg. 191)

Those properties for which an ERE has been obtained will be cleaned to the following standards: GE shall calculate the existing spatial average PCB concentration for the 0- to 1-foot depth increment for (a) the unpaved portion of each averaging area, and (b) the paved portion of each averaging area.

If the spatial average PCB concentration in the unpaved portion of such area exceeds 25 ppm, GE shall remove and replace soils as necessary to achieve a spatial average PCB concentration of 25 ppm or below in the top foot. ...GE shall also calculate the existing spatial average PCB concentration for the 1 to 6-foot depth increment at each such property (considering the paved and unpaved portions together). If that spatial average PCB concentration exceeds 200 ppm, GE shall remove and replace soils as necessary to achieve a spatial average of 200 ppm or below in the 1 to 6-foot depth increment.

GE shall then calculate the spatial average for the 0- to 15-foot depth increment (or to whatever depth sampling data exist, if less than 15 feet), incorporating the anticipated performance of any response actions for the 0 to 1-foot and 1 to 6-foot depth increments. If that spatial average PCB concentration exceeds 100 ppm, GE shall install an engineered barrier in accordance with the specifications for such barriers in Attachment G to this SOW. (Appendix E to Consent Decree, Volume I, Pp.. 48-49).

Or: b) clean up those properties for which an ERE has not been obtained to the following standards:

GE shall initially calculate a spatial average PCB concentration for the 0 to 1-foot depth increment at each averaging area at the property. If the spatial average PCB concentration exceeds 25 ppm in this depth increment, GE shall remove and replace soils as necessary to achieve a spatial average PCB concentration at or below 25 ppm for this increment at each such area.

(In addition, if GE selected the option described in Standard #3.a, GE shall remove all soils containing PCB concentrations greater than 125 ppm from the top foot of unpaved portions of such property.) GE shall then calculate the spatial average PCB concentration for the 0 to 3-foot depth increment at each averaging area (incorporating the anticipated performance of any response actions for the 0 to 1-foot depth increment). If that spatial average exceeds 25 ppm, GE shall remove and replace soils as necessary to achieve a spatial average PCB concentration at or below 25 ppm for the 0- to 3-foot depth increment. ... If the resulting spatial average concentration exceeds 200 ppm in the 1 to 6-foot depth increment, GE shall remove and replace soils as necessary to achieve that spatial average concentration.

Finally, GE shall calculate the spatial average PCB concentration for the 0- to 15-foot depth increment (or to whatever depth sampling data exist, if less than 15 feet), incorporating the anticipated performance of any response actions for the uppermost 6 feet. If that spatial average PCB concentration exceeds 100 ppm, GE shall install an engineered barrier in accordance with the specifications for such barriers in Attachment G to this SOW ... (Appendix E to Consent Decree, Volume I, Pp.. 49-50).

The Agencies, in either case, are setting clean-up standards that leaves substantial levels of contamination in place: up to 25 ppm in the top foot, and 200 ppm from 1 to 6 feet. And should higher levels appear at depth, an engineered barrier will be installed.

Some of the affected Newell Street properties, currently used for commercial purposes, are zoned for residential use, use as restaurants, old age homes, hospitals and many other uses by right. In return for payment of 18% of the total value of the most recent accessed value, the affected property owner who agrees to an ERE agrees to restrict future use, abandoning these other uses, such as residential, day care and educational, community center for children etc., and agrees not to dig, excavate, or construct buildings or structures.

Those property owners who refuse to agree to an ERE receive no financial compensation from GE, who caused their property to be contaminated and devalued, and will continue to own property with levels as high as 25 ppm in the top foot. These properties are known to be contaminated and several affected property owners, and HRI members, have been unable to sell these properties or receive loans for improvements to these properties. GE has removed its PCB contamination from approximately 60 homes to an averaged level of 2 ppm. Unless GE and the Agencies clean these properties to the

standards for which they can be used, they will continue to render these properties worthless.

HRI believes that the Agencies' actions in refusing to enforce a clean-up of these properties for uses they have by right, constitutes a violation of the Fifth Amendment of the United States. These property owners were not allowed to participate in any of the negotiations leading to these decisions of the Consent Decree: either to the figure arrived at of 18% of assessed value, or the clean-up levels their properties will be cleaned to. The decision on the part of the Agencies to exclude these property owners, and HRI members, and subject them to the aforementioned provisions of the Consent Decree violates the Due Process Clause of the Fifth Amendment of the United States.

8. Pittsfield's Groundwater Will Remain Forever Unusable Due To Its Contamination With PCBs Under The Terms Of The Consent Decree

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, 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 ... Newell Street Area II: DNAPL that contains up to 388,500 ppm PCBs, 430,000 ppm 1,2,4- trichlorobenzene ... At the Hill 78 and Building 71 areas: PCBs have been detected in unfiltered groundwater in concentrations as high as 960 ppb. Non-PCB hazardous substances ... at the following maximum concentrations: chlorobenzene (36,000 ppb-estimated), ... trichloroethene (320,000 ppb) ... (Appendix C of Consent Decree, pp. 17-20).

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. (Appendix D of Consent Decree, Pp. 27-28).

The Agencies seem to have made the decision that Pittsfield's groundwater has been so thoroughly contaminated by GE's 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 won't have to tap this groundwater.

Let's review some recent history as regards Pittsfield's 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 city's 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, given the PCB contamination, 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.

Former Pittsfield Mayor Remo DelGallo has spoken about the city's concern for an increased water supply and the city's widespread concern with contaminated groundwater. (Exhibit 8 – video interview with Remo DelGallo)

While HRI appreciates the cost considerations involved in thorough removal scenarios rather than partial removal and capping, HRI nevertheless questions the wisdom and long-term efficacy of a policy that abandons a community's 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 all Pittsfield's PCB-contaminated ground water throughout the entirety of the GE/Pittsfield site, including those areas endangered by PCB-contaminated fill that was transported from the GE facility.

9. The Natural Resources Damage Award Is Grossly Inadequate And Represents A Fraction of the Defendant's Liability For Natural Resource Damages

HRI would like to challenge the provisions of Section XXII of this Consent Decree. HRI believes the amount of money negotiated by the Agencies and the Trustees and the

Settling Defendant for Natural Resource Damages (NRD) 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. HRI believes, 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 the Consent Decree 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.

From the very beginning of these negotiations, HRI has been asking to see both the raw data and estimated amounts of the Natural Resource Damage Assessment that the Trustees had prepared. HRI was told continually that these documents could not be made public during the negotiations and were considered to be privileged documents under the rules of the process. On January 3, 2000, HRI finally received a copy from the Massachusetts Executive Office of Environmental Affairs (EOEA) of Industrial Economics, Inc.'s January 28, 1997 *Housatonic River Preliminary Natural Resource Damage Assessment*.

Without having the pertinent data, HRI has, up to now, been unable in a timely manner to critically and competently offer an alternative assessment. While HRI will offer preliminary comments about the substance of this report, HRI can more generally speak to the failure of the Assessment process to reasonably involve a wide range of stakeholders with critical knowledge and experience with regard to the issues of the injuries these resources sustained as a result of GE's release of PCBs and other toxics, and to recreational and passive use losses.

Section 114 of the Consent Decree states:

Within 30 days of the effective date of this Consent Decree, Settling Defendant shall make the following payments:

- a. \$15,000,000 for Natural Damages, plus interest from the date of lodging of this Consent Decree;*
- b. \$600,000 as mitigation for wetlands impacts associated with PCB contamination and with response actions at the Site, plus interest from the date of lodging of this*

Consent Decree;

c. \$60,000 as mitigation for additional habitat impacts associated with PCB contamination and Removal Actions at the Site; and

d. \$75,000 for Restoration Work to be performed by the Trustees in Silver Lake.

(Consent Decree, pp. 258-59)

While HRI will examine the \$15,000,000 award in greater depth, Section 124 of the Consent Decree outlines another aspect of the Natural Damages settlement: the future contribution of the newly established Pittsfield Economic Development Authority (PEDA):

PEDA shall pay to the Trustees a total of \$4,000,000 consisting of in-kind services and/or a percentage of Net Revenues. PEDA intends to use good faith efforts to satisfy this obligation as soon as feasible."

a. In-Kind Services. The Trustees may accept in-kind services of any type that may be offered by or through PEDA, by the City of Pittsfield or by other entities, including those who may be involved in the redevelopment at the GE Plant Area ... Such in-kind services may include, but are not limited to, building space for use by the Trustees (for restoration, coordination, administration and public information) and habitat enhancements at the portion of the GE Plant Area to be redeveloped under the Definitive Economic Development Agreement. (Consent Decree, pp. 276-77)

HRI objects to the consideration of in-kind services as a fulfillment of PEDA's \$4,000,000 NRD obligation. This NRD award hardly begins to adequately compensate the Berkshire community for the loss of such a major resource: to further reduce potential financial compensation for building space, coordination, and administration, hardly serves the public interest.

To the extent that the Trustees believe that these are pressing needs, they ought to have negotiated appropriate reimbursement from the Defendant; not reduced the public's already meager compensation.

Let's examine the Industrial Economics, Inc. report, which served as the preliminary assessment for natural resource damages the Agencies relied upon in their negotiations. 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...

I. 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.

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.

1. 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).

F. Restoration: Due to the limitations of the injury data and the dependence of restoration planning on the injury assessment, we focused our efforts in this 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. (Housatonic River Preliminary Natural Resource Damage Assessment, Pp. 1-3 to 1-4) (Exhibit 20) (Emphasis added).

The clearly stated limitations of the report itself buttress HRI's previously stated concerns that the Trustees entered the negotiations with insufficient information: 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. HRI reminds the Court that many older residents of Pittsfield have spoken fondly of swimming in both the Housatonic River and Silver Lake, and Silver Lake was also the site of winter sports and outings.

The acceptance of a Natural Resource Damage Award absent a thorough assessment for past use loss of an extraordinarily popular 26 acre lake in the heart of Pittsfield reveals a major weakness in this settlement. Similar questions are raised by the lack of sufficient data for the Housatonic River.

HRI has written about the ongoing struggle for reliable data concerning the entire GE/Pittsfield/Housatonic site. A quick look at the information sources that Industrial Economics relied upon reveals why they've acknowledged the limitations of their work – all the data they accessed was generated by GE, beginning with the MCP Interim Phase II Report of 1991 on through the May 1996 PICM that HRI has previously referred to.

It is HRI's belief that these reports have systematically unreported the contamination at these sites. The Building 68 remediation coupled with the EPA's most recent acknowledgment of the contamination of the West Branch revealed major PCB contamination at levels and in places previously unreported.

As this report reveals, this lack of accurate data regarding contaminated river sediments and bank soils is absolutely critical. The authors state in Exhibit 2-1, on Page 2-3:

Sediments are the key link in the pathway to biological resource injuries. Sediment toxicity testing and/or a comprehensive review of the sediment toxicity literature is recommended. ... Contaminated floodplain soils may also be an important link in the pathway to biological resource injuries. Toxicity testing may be warranted. (Id, Pp. 2-3) (Exhibit 20)

Because of the time rush associated with the negotiations, the Trustees were unable to access data that only now is emerging as a result of the most recent EPA testing and studies on the River. The authors note in Exhibit 2-1: Injury Assessment Summary – Housatonic River NRDA, their lack of sufficient injury data about birds on Pages 2-3:

Lack of organism-specific data limits the current value of existing toxicity literature; expert opinion needed to judge likelihood of injury given PCB concentrations to which birds are potentially exposed. (Id, Pp. 2-3 to 1-4) (Exhibit 20) (Emphasis added)

New data generated by Susan Svirsky and her team at EPA has just emerged about the very high levels of contamination in young wood ducks is only one example. These PCB levels were the highest levels ever found in wood ducks in the nation (more than 17 times higher on average than levels found at the Lower Fox River Superfund Site in Wisconsin).

These levels triggered an immediate health advisory by the Massachusetts Department of Public Health alerting hunters not to consume wood ducks from Pittsfield south to Rising Pond in Housatonic, and for hunters to skin and remove fat from ducks found in southern sections of the river. Those hunters were urged to limit intake to two meals a month. These ducks accumulated these high levels in a very short time, as a result of feeding on plants and small invertebrates. The authors also note their lack of data about birds:

Previous investigations have not included the collection of organism-specific data that could be used to assess the effects of PCBs on bird populations that utilize habitat provided or influenced by the Housatonic River.

We note that a terrestrial ecosystem assessment (ChemRisk 1994) evaluated the density, diversity and reproductive success of avian species in a 5.85 hectare portion of the floodplain forest between New Lenox Road and Woods Pond. ... This study concluded that the weight of evidence indicates that the 'floodplain ecosystem ... is not impacted by the presence of PCBs. (Id, Page 2-16) (Exhibit 20) (Emphasis added).

The GE-funded study the authors quote either totally ignored or drastically underestimated the quantity and/or the effects of PCB-contamination. The same floodplain ecosystem that GE consultants claimed in 1994 had no adverse impact as a result of PCBs, is the cause in 1999 for the highest known levels of PCB contamination found in wood ducks.

This lack of critical data also impacted the consultants' ability to adequately gauge injury to invertebrates and the authors have noted similar concerns about the lack of organism-specific data regarding mammals. To quantify natural resource injuries, and gauge an appropriate restoration award, it is necessary to first establish a baseline condition for the resource, the *"conditions that would have been expected at the assessment area had the ... release of hazardous substances not occurred ..."*

While the authors note that GE began to use PCBs in 1932 and continued their active use until 1977, they state that because PCBs were first detected in fish and sediments approximately 20 years ago, and because:

"many damage assessments have limited the quantification of injury and damages to the period that began with the promulgation of CERCLA in December 1980" they have chosen "the date of CERCLA promulgation as a conservative starting point for injury determination and quantification." (Id, Pp. 2-4 to 2-6) (Exhibit 20) (Emphasis added).

Section 9607(f)(1) of CERCLA states:

There shall be no recovery under the authority of subparagraph (C) of subsection (a) of this section where such damages and the release of a hazardous substance from which such damages resulted wholly before December 11, 1980." (42 USC 960(f)(1)) (Emphasis added).

The fact of the matter is, that while GE stopped its use of PCBs before December 11, 1980, there has been since that time, and continues to be, a continuing release of PCBs and other substances into the Housatonic River and Silver Lake. GE, after all these years, has not yet controlled the release of hazardous substances into these natural resources and, as a result, there is on-going damage.

HRI believes Industrial Economics, Inc. has misread the intent of CERCLA in this matter. And their decision to limit the "Temporal Scope" for injury determination and quantification to the onset of CERCLA does a grave disservice to all those whose activities in and on the River and Silver Lake have been limited all these years by contamination.

Everyone in Berkshire County knew that pollutants had invaded the River and Silver Lake beginning in the 1930s with the use of PCB-oil at the GE facility. They smelled PCBs in the air and they had friends and family working at GE who spoke about the stench in the factory buildings and they knew men who suffered rashes from contact with Pyranol. They stopped swimming. Take a simple walk in the Lakewood community of Pittsfield and you can find people who can speak about what happened to the river and Silver Lake.

A truly accurate portrait of the baseline condition can be drawn from the drastically changed actions of real people, not the compilation of statistics or the promulgation of legislation in Washington, D.C. Hiring consultants from Cambridge, Massachusetts may not have been the best idea when it came to accurately establishing a true picture of how

the Berkshires felt about and utilized its own natural backyard. This lack of local input translated into lost opportunities for assessing other potential damages. The authors state:

We also considered the potential magnitude of impacts on wildlife viewing and other general outdoor activities involving the Housatonic River environment. In this case, while the number of participants affected may be large, no data exist to allow us to generate a preliminary damage estimate. (Id, Page 3-17) (Exhibit 20) (Emphasis added).

Another important factor associated with an injury assessment is endangered and threatened species. The authors note:

As reported in the PICM (HE&C 1996), a total of 120 species of flora and fauna that have protected status at the state and federal level are known or likely to occur in the Housatonic River environment. We do not currently have information that would lead us to conduct a focused injury assessment of one or more of these species.

As for "Collateral Injury During Remediation", the authors state:

Our assessment of injury focuses on the current state of resources associated with the Housatonic River. However, for restoration planning purposes, it may be necessary to estimate the extent of additional injury that might occur as a result of remedial activities (e.g., loss of wetlands due to dredging) and include this estimate in the final accounting of injury. (Id, Page 2-6) (Exhibit 20) (Emphasis added)

There are many other examples where the consultants were hampered by the lack of data: injury to mammals, including mink, reptiles and amphibians, and an assessment of groundwater resources.

In light of concerns HRI has noted in the section regarding the Former Oxbows and Groundwater, HRI notes the authors' statements on Page 2-21 concerning injury assessment for Groundwater Resources:

We have not yet reviewed the groundwater data collected as part of the investigations of the other GE-Pittsfield disposal sites.

"In general, groundwater is injured if concentrations of hazardous substances in the groundwater exceed existing standards for a potable drinking water supply. Injury can also be established if concentrations of hazardous substances in the groundwater are sufficient to cause injury to other natural resources (e.g., surface water) (43 CFR 11.62(c)(1)(iv)).

As noted in Chapter 5, injury to groundwater resources would be a significant concern if the injury were based on the degradation of a public water supply.

Without such an occurrence, the groundwater resource would be important only in the context of its contribution to the contamination of surface water. (Id, Page 2-21) (Exhibit 20) (Emphasis added).

Clearly, contaminated groundwater has and continues to be a threat to the Housatonic River. But even beyond that clearly acknowledged injury to the River, HRI contends that the Agencies have overlooked Pittsfield's past desire to utilize its groundwater. The de facto contamination and loss of a highly valuable potential source of potable water – a source the City invested funds to study and develop – surely needs to be considered for possible natural resource damage claims. And as the authors previously have noted in

Exhibit 2-1, an injury assessment for Groundwater:

Would be based on contamination of existing or potential drinking water supply; groundwater may be a continuing source of PCBs to the Housatonic River. (Id, Page 2-3) (Exhibit 20) (Emphasis added).

The authors state on Page 2-22:

The services that the Housatonic River provides can be divided into three general categories: human use-recreational, human nonuse (i.e., passive value), and ecological (i.e., habitat). In terms of restoration, the first two services are addressed separately through our calculation of a preliminary estimate of compensable values for recreational and passive use losses (which relies largely on the observed injury to fish). Additional injury assessment must be geared toward the third category. Therefore, future data collection and/or analysis must focus on the exposure of different resources to PCBs through a variety of pathways. This effort should emphasize the effects that PCBs in the environment have had or are having on biological resources.

With yet another caveat regarding inadequate data, the authors made several estimates regarding damages:

The results presented are for settlement and case management purposes only. These analyses could be extended and refined through primary data collection and analysis at this site. ... compensable damages for those categories for which preliminary damage estimates have been developed include \$11 million to \$32 million in direct use losses and \$25 to \$250 million in passive use losses.

Recreational fishing damages are estimated to be on the order of \$10 million to \$30 million. This range reflects uncertainty in the assumed recovery period (i.e., the date on which the human health risk advisories will be lifted), as well as uncertainty in the damages associated with fishing trips still taken to the river, despite the presence of elevated levels of PCBs.

Recreational boating damages are believed to fall in the range of \$1 million to \$2 million; this range also reflects uncertainty in the assumed recovery period. Compensable losses associated with changes in recreational behavior can also be expressed in terms of the number of 'trips lost' or 'trips with diminished value,' as described in the following sections.

Passive use losses are thought to fall in the range of \$25 million to \$250 million. This range reflects uncertainty in the extent of the 'market' for passive use values for the Housatonic environment, as discussed below.

While the presence of elevated levels of PCBs has likely had an effect on hunting and trapping activities near the Housatonic River, the relatively small number of participants involved leads us to conclude that this category of damages is likely to small.

In addition, wildlife viewing and other general outdoor activities may have been, and continue to be, affected by the presence of PCBs. However, no data are available to quantify this category of loss. Finally, economic damages may be associated with (1) reductions in the value of state-owned land in the Housatonic River floodplain; (2) contamination of groundwater resources in the vicinity of the GE facility; (3) the increased cost of development in and near the river, as a result of the presence of PCBs; and (4) a diminishment in ecological services provide (sic) by this resource. These

categories of damage, however, are outside the scope of this preliminary damage assessment. (Id, Pp. 3-1 to 3-2) (Exhibit 20) (Emphasis added).

While HRI believes this report reveals major flaws in the assessment process, HRI is 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. That leaves 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 the Agencies 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 the Agencies 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.

This is particularly important because many of us who have worked diligently to reawaken an appreciation for the Housatonic River, know all too well that the Berkshire community early on understood how poisoned their river was. While PCBs cannot be seen, their presence was palpable throughout the County, and extraordinarily large numbers of people turned their back on the River. That some poor people and some particularly hardy and stubborn fishermen continued and continue to eat fish from the River is quite different from the larger, more pervasive reaction of the community, which early on considered the River damaged goods. A similar dynamic occurred with Silver Lake.

Because of this, a Resource Damage Assessment that starts the clock on lost use with the passage of CERCLA legislation thoroughly misperceives the everyday experience and history of Berkshire County. Industrial Economics, Inc. made a good faith effort to fill its data gaps, but much of the pertinent data regarding lost use requires knowledge of, and experience with, Berkshire life. On Page 3-3, the authors state:

In order to develop estimates of lost or diminished value, we generally look to compare fishing pressure at a contaminated site prior to the issuance of public health advisories with current pressure (i.e., pressure given the presence of contaminants). Such comparisons of baseline angler behavior given a contaminant problem allow us to estimate, at a minimum, the number of trips lost or displaced from the site. In this

instance, however, data on fishing pressure prior to the public health advisories generally do not exist ... (Id, Page 3-3) (Exhibit 20) (Emphasis added).

HRI respectfully submits that this information can be gathered by interviewing older active and retired members of the many sportsmen's clubs active in the County. George Darey, HRI Board Member and Chairman of Massachusetts Division of Fisheries and Wildlife, is only one of several local residents who grew up near the Housatonic and has fished and trapped for more than 60 years. An organized effort could gather the extension anecdotal testimony that is available, and, in the process fashion an accurate portrait of how many people fished before fish advisories were posted. In fact, it was Massachusetts Fisheries and Wildlife who posted the river when it became apparent that the other Agencies hadn't gotten around to it.

Industrial Economics begins without accurate baseline data for fishing, then compounds the problem by its choice of current data for various stretches of the River from New Lenox Road south:

For each of these segments we consider both current and potential fishing pressure based on various data sources and assumptions. For example, for the New Lenox Road to Woods Pond segment we use data from a 1985-86 Connecticut angler survey to estimate potential fishing trips. Specifically, we use the data from Lakes Lillinonah and Zoar given their comparability to the New Lenox Road-Woods Pond segment in terms of fishery type (warm water), fish species, and fishing method (boat). We then assume that the 1985-86 data an adequate approximation of annual potential fishing pressure from 1980 forward.

To estimate actual fishing trips for the New Lenox Road-Woods Pond segment, we use data from a 1992 creel survey that includes fishing pressure estimates for Woods Pond and for the river segment between Woods Pond and Pittsfield. We calculate the fishing pressure per mile on the latter segment in order to estimate the number of trips on the portion of the segment downstream of New Lenox Road. (Id, Pp. 3-4 to 3-5) (Exhibit 20) (Emphasis added).

With all due respect, it is possible to gather accurate data for current use without having to extrapolate from Connecticut surveys. George Darey, in particular, has an intimate knowledge of the New Lenox Road to Woods Pond stretch; canoes it and fishes it frequently. There are many people who have long-term past and continuing experience fishing that stretch of the river.

As Exhibit 3-3, all final estimates for fishing losses in Massachusetts begin with 1980. The lack of prior data severely reduces the estimated damages.

HRI appreciates 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.

HRI believes 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.

Finally, HRI believes that a November, 1999 Fox River/Green Bay Natural Resource Damage Assessment prepared in Wisconsin by the U.S. Fish and Wildlife Service provides a more accurate model for a NRDA. According to Ecological Services Assistant Regional Director Charlie Wooley:

Following intensive studies, rigorous methodologies and very conservative assumptions, which include factoring in an aggressive cleanup proposed by the Wisconsin Department of Natural Resources, the Service has calculated over \$100 million in public damages due to the impacts of lost fishing opportunities from fish consumption advisories alone. However, a less-complete cleanup would increase damages further. Additional economic studies which look at injuries beyond fish consumption advisories are nearing completion as well. (Exhibit 20) (Emphasis added.)

These collective concerns with the grossly inadequate Natural Resource Damage Award, HRI believes, are one more reason why, under the standards of both *Conservation Law Foundation of New England, Inc., Et Al., v. Mosbacher and Massachusetts Food Association, Et Al., v. Massachusetts Alcoholic Beverages Control Commission, Et. Al.*, that HRI's interests "*are not adequately represented by existing parties.*"

III. PUBLIC HEALTH STUDIES PUBLISHED RECENTLY CONFIRM THE DANGERS OF EXPOSING HRI MEMBERS AND OTHER MEMBERS OF THE PUBLIC TO EVEN LOW LEVELS OF PCBs

HRI would like to put our concerns about remediation levels in a larger public health context. Recent history has taught us that there is almost always a lag between the introduction of potentially-dangerous chemicals and a clearly demonstrated understanding and quantification of the risks to human health.

The latest research on PCBs reveals a trend: lower levels than previously expected are causing cancers and creating developmental problems. Recent research seems to suggest that neurodevelopmental effects are the critical effects – the effects that show up first as exposure levels increase from zero. These results have been noted both in animal study and human studies.

According to a June, 1998 article entitled "*Assessing the Cancer Risk from Environmental PCBs*" by Vincent James Cogliano, Chief, Quantitative Risk Methods Group, USEPA:

Twenty years after their manufacture was halted, polychlorinated biphenyls (PCBs) remain a major environmental concern. Standards often have been based on cancer risk, yet before 1996 only commercial mixtures with 60% chlorine had been adequately tested. ... A recent study compared the cancer potential of the commercial mixtures Aroclors 1016, 1242, 1254, and 1260 (1). Its results strengthen the case that all PCB

mixtures can cause cancer, although different mixtures have different potencies. (Exhibit 21: Environmental Health Perspectives, Vol. 106, No. 6, Page 317)

Cogliano cites the 1998 Mayes study which found that a variety of Aroclors caused significant increases in liver cancer in rats. Some of the Aroclors were linked to increased thyroid cancer in male rats. According to Cogliano, the 1996 Brunner rat study found a 20% increase in liver tumors in females when they were exposed to doses of 25 ppm of Aroclor 1260; and a 48% increase when exposed to levels of 100 ppm. The Brunner study also revealed that less than lifetime exposure to the more persistent mixtures may pose disproportionately high risks. Aroclor 1260 is common to the GE/Pittsfield site.

A December 18, 1999 article in *New Scientist* (Exhibit 22) reports on a link between PCBs and the death of harbour porpoises they studied since 1990. Peter Bennett and Paul Jepson of the Institute of Zoology in London have found that harbour porpoises who died stranded on British coast had an average level of PCBs of 31.1 milligrams per kilogram of blubber. They compared these levels to levels found in otherwise healthy porpoises who suffocated in fishing nets. These healthier porpoises had an average level of PCBs of 13.6 milligrams per kilogram of blubber. In a paper delivered at the December 1999 International Symposium on Environmental Endocrine Disruption, Dr. John Peterson Myers noted:

The levels of exposure known to cause serious effects in laboratory experiments with animals is dramatically lower, thousands if not millions of times lower, than what was even five years ago toxicologists thought was relevant.

Every hormone system that has been studied carefully has been found vulnerable to one endocrine disruption or another. ... [and] the research is forcing us to ask about the adult consequences of fetal exposure. Niels Skakkebaek's work with testicular cancer, Fred vom Saal's with prostate effects, Dick Peterson's with dioxin impacts on sperm count, and many many others, fundamentally challenge generations of studies that appear to refute the links between chemical exposure and human health. (Exhibit 23) (Emphasis added).

Fetal exposure seems to be increasingly critical. A *Science News* article of November 27, 1997 entitled "*Breast Milk: a leading source of PCBs*" by Janet Raleigh (Exhibit 24) reports that a Netherlands study of 137 Rotterdam pre-schoolers found that those children who were breast-fed had 3.6 times more PCBs in their blood plasma than those who were fed formula.

A December 21, 1999 report by *Reuters Health Information* highlights an article in the December 18/25 issue of *The Lancet* that links organochlorines such as DDT and PCBs with gene mutations found in patients with cancer of the pancreas. The *Reuters* report declares:

The study is the first to link a genetic alteration commonly found in pancreatic cancer patients and an environmental substance, according to a statement issued by the editors of the journal. 'The results ... suggest new roles for organochlorines in the development of several cancers in human beings,' according to Professor Miquel Porta from Institut

Municipal d'Investigacio Medica in Barcelona, Spain and associates. ... Patients who were already diagnosed with pancreatic cancer were 5 to 10 times more likely to show increased blood levels of organochlorines than were patients hospitalized for reasons other than cancer ... (Exhibit 25) (Emphasis added)

The *Lancet* article states:

*Organochlorine compounds such as p,p9-DDT, p,p9-DDE, and some PCBs could play a part in the pathogenesis of exocrine pancreatic cancer through modulation of K-ras activation. (Exhibit 26: "Serum concentrations of organochlorine compounds and K-ras mutations in exocrine pancreatic cancer" Miquel Porta, etc. *The Lancet*, December 18, 1999, v354 i9196, p2125.)*

A January 3, 2000 article on the *WebMD* website by Rochelle Jones reports that:

*Rapidly falling sperm counts in the United States. Rising rates of genital defects in male infants. Unprecedented numbers of cases of testicular cancer among young American males. Scientists are increasingly worried that these problems are being caused by environmental estrogens, man-made chemicals capable of interfering with the hormones that regulate the male reproductive system. ...A review of data from 61 studies, published in *BioEssays* in 1999, found that the dramatic decline of average sperm density in the United States and Western Europe may be even greater than previously estimated. An earlier review, conducted by researchers at the University of Copenhagen in 1992, found that sperm density had fallen by 50 percent between 1938 and 1990. In the 1999 reanalysis of the controversial studies, Shanna Swan, Ph.D., a professor at the University of Missouri-Columbia, confirmed the findings and concluded that the decline may be more than 50 percent. (Exhibit 26) (Emphasis added).*

The people of the GE/Pittsfield site have had and continue to have many routes of exposure. According to Vincent James Cogliano, Chief, Quantitative Risk Methods Group, USEPA:

Capacitor manufacturing workers exposed to a series of commercial mixtures with 41-54% chlorine had increased mortality from liver, gall bladder, and biliary tract cancers, gastrointestinal tract cancers, or malignant melanoma. An analysis of these and a smaller study found the combined results significant for liver, gall bladder, and biliary tract cancers and for malignant melanoma. Earlier, petrochemical refinery workers exposed to Aroclor 1254 and other chemicals had significantly increased mortality from increased melanoma. More recently, electric utility workers exposed to PCBs had significantly increased mortality from malignant melanoma and brain cancer. Recent case-control studies have found a significant association between non-Hodgkin's lymphoma and PCB concentrations in adipose tissue and serum. In a general population, dietary consumption of rice oil accidentally contaminated with PCBs and chlorinated dibenzofurans, which can be formed when PCBs are heated above 270°C, was associated with significantly increased mortality from liver cancer and lung cancer. (Exhibit 21, Id, Pg. 317)

PCBs bioaccumulate, and as the chemical works its way through the food chain, the most potent PCB congeners, and the most difficult to eliminate, are passed on and up. Along the way PCBs can undergo a chemical transformation, where they no longer resemble the original Aroclor. Cogliano writes:

... ingesting contaminated sediment or soil or inhaling contaminated dust can pose relatively high risks. ... Bioaccumulated PCBs appear to be more toxic than Aroclors and more persistent in the body. The Aroclors tested in laboratory animals were not subject to prior selective retention of persistent congeners through the food chain. For exposure through the food chain, therefore, risks can be higher than those estimated in this assessment.

... Early-life exposure is treated with special concern because of the potential for higher exposure during pregnancy and nursing and the possibility of greater perinatal sensitivity. Metabolic pathways are not fully developed in human infants; for example, some nursing infants receive a steroid in human milk that inhibits the activity of glucuronyl transferase, reducing PCB metabolism and elimination. In animals, Aroclor 1260 induced high incidences of liver tumors when exposure began early in life and lasted a short time.

... It is, therefore, important to assess early-life exposure through human milk and other pathways.

... Finally, the EPA's assessment proves that good research can improve risk assessments. (Exhibit 21, Id, Pp. 320-322). (Emphasis added).

Recent studies have found a link between low levels of PCB exposure with immune system suppression and developmental neurotoxicity. Research in the Netherlands has linked dietary exposure to PCBs and dioxins – found in dairy products – with decreases in cognitive functioning. Negative effects were found at levels as low as 3 ppb in maternal plasma. This 3 ppb level corresponds with our current background level in the United States. The fact that levels as low as 3 ppb have been linked with observable problems in cognitive functioning is troubling given the results of the September 1997 Massachusetts Department of Public Health study, "*Housatonic River Area PCB Exposure Assessment Study*." (Exhibit 27)

HRI was critical of this study and questioned its methodology and the fact that only 79 participants had blood drawn. Nevertheless, the results are illuminating. Serum PCB levels ranged from not detect to 115 ppb, with a mean of 9.07 ppb and a median of 6.60 ppb. 53 of the 69 participants who had no opportunity for occupational exposure had a mean serum PCB level of 5.77 ppb (median 4.86 ppb). Those with opportunities for occupational exposure had a mean level of 15.79 ppb (median 8.81 ppb).

Participants had a range of exposure scenarios: fish-eating, eating fiddlehead ferns from the watershed, canoeing in the Housatonic, birdwatching, other recreational activities along the River, hunting, etc.

When evaluating these results, the Massachusetts Department of Public Health relied on an outdated estimate of U.S. background serum PCB levels of 4 to 8 ppb. They therefore found that these levels fell within the normal background range. HRI believes the most recent data shows background serum levels at 1 to 3 ppb. In which case, Berkshire County levels range from 2 to 8 times higher than national levels, and there is serious reason to be concerned that as much contamination as possible is removed from our community.

IV. CONCLUSION

As with much legislation, RCRA and CERCLA attempt to confront and provide remedies for extraordinarily complicated problems. And there are various interpretations about how best to implement the intentions of the laws in the real world of hazardous waste sites, and the competing interests of the public, the regulatory agencies charged with statutory responsibility, and the responsible parties.

The intrinsic problem with excluding knowledgeable members of the public from settlement negotiations is that they are without an intimate understanding of what might have been better negotiated. Compromise is strongest when it is forged by all the parties who must live with its consequences.

That said, HRI believes a better settlement can be crafted. HRI specifically calls for:

- More extensive removal of contaminated sediments and bank soils in the 1st 1/2-Mile Stretch of the Housatonic River.
- A remediation strategy that does not require a geotextile liner for the River.
- Construction of a slurry ditch, wherever technically feasible, to more effectively guarantee source control along the 1/2-Mile Stretch of the Housatonic River
- Treatment of the contaminated sediments and bank soils instead of landfilling at Hill 78 and Building 71 landfills
- Excavation and removal of all contaminated sediments and bank soils in Silver Lake
- An extensive sampling program, at depth, for the West Branch; and a thorough removal of all contaminated sediments and bank soils
- A thorough investigation of the GE contaminated wood giveaway program and complete cleanup of affected properties
- A thorough investigation of buildings with PCB-contaminated earth floors and a complete cleanup of affected properties
- Excavation and removal of all PCB-contaminated sediments and bank soils in the former Oxbow Areas, and especially the Newell Street properties, to the Massachusetts DEP Default Standard of 2 ppm
- Immediate treatment of PCB-contaminated groundwater throughout the GE/Pittsfield site
- A more accurate Natural Resource Damage Assessment and a Natural Resource Damage Award from the Defendant that better compensates the Trustees for damages and lost use.

Wherefore, HRI respectfully asks you allow the Housatonic River Initiative to intervene and be a party to this action, so that this Consent Decree may be modified to better protect human health and the environment.

Respectfully submitted,

By Pro-se Attorneys for The Housatonic River Initiative
Timothy Gray, Director, The Housatonic River Initiative
David Gibbs, President, Housatonic River Initiative
Al Bertelli, Vice-President
Wendy Phillips, Treasurer
Massachusetts Rep. Chris Hodgkins, Board of Directors
Mickey Friedman, Board of Directors
Benno Friedman, Board of Directors
Shepley Evans, Board of Directors
Donald Roeder, Board of Directors

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS
WESTERN DIVISION

UNITED STATES OF AMERICA
STATE OF CONNECTICUT
COMMONWEALTH OF MASSACHUSETTS

CIVIL ACTIONS Nos. 99-30225;

99-30226; 99-30227-MAP

Plaintiffs,

THE HOUSATONIC RIVER INITIATIVE

Plaintiff Intervenor,

GENERAL ELECTRIC COMPANY,

Defendant.

EXHIBITS SUBMITTED IN SUPPORT OF MOTION TO INTERVENE

February 22, 2000

Respectfully submitted
By Pro Se intervenor,

THE HOUSATONIC RIVER INITIATIVE
Tim Gray, Executive Director.
Dave Gibbs, President
Al Bertelli, Vice-President
Wendy Phillips, Treasurer
Rep. Christopher Hodgkins, Board of Directors
Etc., etc.

Appendix A: Lists of Exhibits

Exhibit 1 – HRI Articles of Incorporation.

Exhibit 2 - *Friends of the Earth Inc., et al. v. Laidlaw Environmental Services (TOC), Inc.* No. 98-822, II A

Exhibit 3 - *Conservation Law Foundation of New England, Inc., Et Al., v. Robert A. Mosbacher* No. 91-212, 966 F.2d 39; 1992 U.S. App.

Exhibit 4 - *Massachusetts Food Association, Et Al., Plaintiffs, Appellants, v. Massachusetts Alcoholic Beverages Control Commission, Et Al., Defendants, Appellees.* No. 99-1277, 197 F.3d 560, 1999 U.S. App.

Exhibit 5 - Commonwealth of Massachusetts Complaint Civil Action No. 99-4841E.

Exhibit 6 - R. Kelly Neiderjohn May 15, 1981 Letter; and *The Berkshire Eagle* and *Boston Globe* articles.

Exhibit 7- USEPA RCRA Site Assessment, III-29.

Exhibit 8 - video interviews with Ed Bates, Remo DelGallo, George Darey, views of the Housatonic 1/2-Mile Remediation, Hill 78 and Building 71 landfills, public comment about Hill 78, and some community concerns about health issues.

Exhibit 9 - December 16, 1997 article of *The Berkshire Eagle*.

Exhibit 10 – USEPA Responsiveness Summary for Allendale School Removal Action. 1/2 Mile Removal Action and Consolidation, October 1999.

Exhibit 11 - HRI's public comments to the Consent Decree.

Exhibit 12 - Joel Loitherstein's, (LEEI), comments to the Agencies on the 1/2-Mile Remediation.

Exhibit 13 – *The Berkshire Eagle* articles concerning public concern of candidates for Pittsfield City Council about the enlargement of Hill 78 and Building 71 landfills.

Exhibit 14 - *The Berkshire Eagle* article of April 9, 1999, and March 17, 1999 press release from the United Electrical Workers.

Exhibit 15 - March 12, 1999 EPA press release regarding Fletcher Paint Works and Storage in Milford, New Hampshire, Region 1 site ID# NHD001079649.

Exhibit 16 - March 1995 revised Proposal for the Preliminary Investigation of Corrective Measures for Housatonic River and Silver Lake Sediment (PICM) Page 2-3, Page 2-5.

Exhibit 17- Supplemental Phase II/RCRA Facility Investigation Report for Housatonic River and Silver Lake (Bouck & Lee, Inc., January 1996, Page 5-3.

Exhibit 18 - December 9, 1999 issue of *The Berkshire Eagle*.

Exhibit 19 - MADEP December 8, 1999 letter to GE

Exhibit 20 - Housatonic River Preliminary Natural Resource Damage Assessment, Pp. 1-3 to 1-4; Pp, 2-3 to 2-6; Page 2-16; Pp. 2-21 to 2-22; Pp. 3-1 to 3-2; Pp 3-3 to 3-5; Page 3-17.

Exhibit 21 - November, 1999 Press Release regarding Fox River/Green Bay Natural Resource Damage Assessment prepared in Wisconsin by the U.S. Fish and Wildlife Service.

Exhibit 22- "*Assessing the Cancer Risk from Environmental PCBs*" by Vincent James Cogliano, Chief, Quantitative Risk Methods Group, USEPA, June, 1998: Environmental Health Perspectives, Vol. 106, No. 6, Page 317, Pp. 320-322.

Exhibit 23 – "*Progress on Endocrine Disruption*", John Peterson Myers, Ph.D. delivered on December, 11 1999 at the International Symposium on Environmental Endocrine Disruption.

Exhibit 24 - *Science News* article of November 27, "*Breast Milk: a leading source of PCBs*" by Janet Raleigh.

Exhibit 25 – December 21, 1999 report by *Reuters Health Information* and "*Serum concentrations of organochlorine compounds and K-ras mutations in exocrine pancreatic cancer*" Miquel Porta and others., the December 18/25 issue of *The Lancet*.

Exhibit 26 – "*Experts agree: Male reproductive health at risk*" Rochelle Jones, *WebMD*, January 3, 2000.

Exhibit 27 - September 1997 Massachusetts Department of Public Health study,
"Housatonic River Area PCB Exposure Assessment Study--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.