XII. COMMENTS FROM THE CONSERVATION LAW FOUNDATION (footnotes omitted)

Comment 1:

The Conservation Law Foundation ("CLF") submits the following comments on the draft National Pollutant Discharge Elimination System ("NPDES") permit for the General Electric Company ("GE") plant in Pittsfield, Massachusetts. We appreciate the opportunity to comment on this draft permit.

Since the August 1988 RCRA Facility Assessment by the Environmental Protection Agency ("EPA"), local residents have lived with uncertainty regarding the level of polychiorinated biphenyl ("PCB") contamination, the effects of PCBs on humans, and how long the contamination will persist in Pittsfield and the watershed. The proposed permit offers little comfort or certainty. In light of the documented continuing PCB-contaminated storm water discharges, EPA's refusal to impose numeric effluent limitations in the new NPDES permit, require adequate monitoring, or adequately track discharge sources is inexplicable. As it stands, the draft permit will clearly undermine the cleanup effort into which EPA already has invested five years and over *$45* million in taxpayer funds. Although EPA noted in a report written before the 2000 Consent Decree that "previously cleaned- up floodplain areas are being recontaminated by PCBs from the river during routine flooding," the draft permit fails to address these concerns.

The discharge of PCBs from the Pittsfield GE plant has long been of grave concern. As noted in Attachment T of the fact sheet accompanying the draft permit, PCBs are known to cause cancer in animals and are classified as a "probable human carcinogen" by the EPA, the Agency for Toxic Substances and Disease Registry, and the World Health Organization. Moreover, since PCBs are known to bioaccumulate, thereby increasing in concentration as they travel up the food chain, special concerns arise with human consumption of fish and waterfowl from PCB-contaminated water sources.[3] Indeed, the Massachusetts Department of Public Health ("MADPH") issued a fish consumption advisory for a section of the Housatonic River from Dalton, MA to the Connecticut border in 1982 as a result of PCB contamination, and also issued a waterfowl consumption advisory from Pittsfield to Great Barrington in 1999 due to PCB concentrations observed in wood ducks and mallards collected by the EPA.

The documented concentrations of PCBs in Housatonic fish and waterfowl tissue evidence extensive PCB contamination. A *1995* study found average fish tissue concentrations at the GE site of 112 mg/kg/ww (milligram per kilogram per wet weight). These concentrations are notably high when compared to "EPA reported maximum total PCB fish tissue concentrations nationally" of 6.7 mg/kg/ww in 1984, as cited in the fact sheet. In a later risk evaluation, EPA collected fish in the Housatonic River with PCB concentrations of up to 206 ppm, which are among the highest levels in the United States and "100 times higher than limits set by the U.S. Food and Drug Administration." Looking to the concentrations of PCBs in duck tissue, a 1999 sampling of mallards and wood ducks on the Housatonic River found average concentration of PCBs in breast tissue to be 648 ppm when adjusted for fat.[8] This is over 200 times higher than

the national tolerance level of 3 ppm fat content, as set by the U.S. Food and Drug Administration. This sampling caused MADPH to issue the 1999 waterfowl consumption advisory mentioned above.

The implications for public health stemming from continued PCB contamination are of grave concern. In a 1998 risk evaluation, EPA made striking findings regarding the risks that PCBs in the Housatonic River Watershed pose to the health of different age groups of residents. For instance, young children playing "for just one summer" in the lower section of the river face noncancer risks 200 times higher than "the hazard-index level EPA considers safe." These risks include reproductive and development abnormalities (such as lower IQs), liver damage, and nervous system damage. If a nine-year-old child consumes a meal of fish from the river each week for just one summer, these noncancer risks rise to 900 times higher than the hazard-index level EPA considers safe. In terms of cancer risks, teenagers who grow up alongside the river "in the vicinity of the Newell Street and Elm Street Bridges" face a one in 1,000 cancer risk "due to their exposure to riverbank soils.." Overall, EPA takes the position that "the entire two-mile section of river may present an imminent and substantial endangerment to human health and the environment."

Given the extensive existing contamination as well as the known dangers posed by PCBs, identification as well as comprehensive and frequent monitoring of all PCB discharges should be required. It is imperative that EPA develop an accurate understanding of all existing sources of PCB discharges, and require effective measures to address them. EPA should amend the draft permit to require numeric effluent limitations for PCBs at all outfalls rather than best management practices ("BMPs"), which are currently required by the draft permit. BMPs may be appropriate in certain situations, such as limited discharges of less harmful pollutants, but given the demonstrated toxicity of PCBs to humans and animals, numeric effluent limitations are clearly necessary in the present case.

Though the fact sheet accompanying the draft permit explains that EPA' s reasoning for choosing BMPs over effluent limitations is in part based upon insufficient information, we believe that the same facts actually dictate the opposite conclusion. As stated above, the toxicity of discharged PCBs calls for the application of numeric effluent limitations. The Code of Massachusetts Regulations elaborates upon this point, stating that a lack of knowledge concerning the "relationship between the pollutants being discharged and their impact on water quality" requires a reasonable margin of safety in establishing effluent limitations. Another provision in the Code expands this premise further, noting that an *"additional* margin of safety" is required in establishing effluent limits for pollutants that "are toxic to humans or aquatic life," or that "result in unacceptable concentrations in edible portions of marketable fish or shellfish or for the recreational use of fish, shellfish, other aquatic life or wildlife for human consumption." PCBs clearly fit this definition. Accordingly, the fact that PCBs are at issue should compel EPA to set numeric effluent limits with an additional margin of safety, as required by Massachusetts water quality regulations.

This permitting process represents a critical opportunity for EPA to address PCB contamination in the Housatonic. The choices that EPA makes in implementing this permit will affect the quality and efficacy of the cleanup effort, the ability of the Housatonic and its surrounding waters to recover, and the future quality of life and good will of local residents. Given the known dangers of PCBs, as well as the uncertainty regarding the long-term effects of PCBs on human health, a much more protective approach is clearly warranted. Accordingly, we urge EPA to strengthen the draft permit by requiring the identification and comprehensive monitoring of all PCB discharges, as well as numeric effluent limitations for PCB discharges from each outfall.

Response 1:

EPA's decision to move forward with non-numeric limits on industrial storm water discharges was clearly contemplated by the CWA section 402(p), by implementing NPDES regulations and the Interim Permitting Policy, and EPA believes reliance on these legal and policy rationales for so doing is reasonable. Effluent limitations may be expressed as best management practices if it is infeasible to express effluent limitations numerically. (It should be noted that the feasibility of numeric effluent limitations is determined not by whether compliance with those limits would be technologically or economically impracticable, but rather whether it is infeasible to derive them in the first place.) While not precluding the possibility of numeric effluent limitation in a future permit, EPA has concluded that calculation of a numeric effluent limitation for PCBs is neither technically feasible, nor necessary, at this time.

Neither EPA nor MassDEP believe it is appropriate or necessary to construe the Massachusetts Water Quality Standards provision in the manner suggested by the commenter. The "margin of safety" required by the Massachusetts Water Quality Standards need not result in the imposition of a numerical limit, regardless of the pollutant of concern. The notion of the dealing with uncertainty by providing an even more stringent numeric limit runs counter to clear intent of the Interim Permitting Policy, which is to avoid the imposition of unnecessarily stringent limits, and is also counter to the discretion afforded to EPA by the CWA, implementing regulations and guidance to utilize BMPs in the storm water context.[1] Based on the record before it, EPA has

[1] "Deriving numeric water quality-based effluent limitations for any NPDES permit without an adequate effluent characterization, or an adequate receiving water exposure assessment (which could include the use of dynamic modeling or continuous simulations) may result in the imposition of inappropriate numeric limitations on a discharge. Examples of this include the imposition of numeric water quality criteria as end-of-pipe limitations without properly accounting for the receiving water assimilation of the pollutant or failure to account for a mixing zone (if allowed by applicable State or Tribal WQS). This could lead to overly stringent permit requirements, and excessive and expensive controls on storm water discharges, not necessary to provide for attainment of WQS. Conversely, an inadequate effluent characterization could lead to water quality-based effluent limitations that are not stringent enough to provide for attainment of WQS. This could result because effluent characterization and exposure assessments for discharges with high variability of pollutant concentrations, loadings, and flow are more difficult

concluded that the permit as written will ensure compliance with water quality standards. EPA has enhanced the required BMPs; added dry weather effluent limits; improved monitoring and reporting requirements; and imposed a permit re-opener linked to the ambient monitoring program that will allow EPA to assess the efficacy of storm water pollution controls on the site. The margin of safety will be addressed by the permit's re-opener provision, as well as the enhanced monitoring program.

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than with process wastewater discharges at low flows." *See* Questions and Answers Regarding Implementation of an Interim Permitting Q and A.

XIII. COMMENTS FROM THE HOUSATONIC RIVER COMMISSION:

Comment 1:

The Housatonic River Commission (HRC) is a regional governmental body representing the seven Northwestern Connecticut towns that line the Housatonic River from the Connecticut-Massachusetts state line to the north and Boardman Bridge in New Milford to the south. As the regional voice of the towns of Northwestern Connecticut most directly impacted by the PCB contamination of the Housatonic we have been generally pleased by the progress made in cleaning up the river in Pittsfield.

Unfortunately, it has come to our attention that a critical aspect of that cleanup — the prevention of recontamination of the river — is in jeopardy. The runoff through storm drains and other sources of residual PCBs found in the GE property are a potential source of recontamination that must be examined thoroughly and effectively prevented. The monitoring of these drains is not an easy task, as flow through storm drains is intermittent and possibly difficult to control. Acknowledging this, it is essential that significant steps be taken to prevent contaminated material from reentering the river through storm drain run off. Not to do so risks recontamination of the rehabilitated Housatonic River as well as areas downstream.

We trust that the EPA will take all necessary steps to understand the nature of this potential source of recontamination. Upon further understanding of the situation it is also imperative that steps be taken to prevent recontamination through these drains into Silver Lake and the Housatonic River. To do otherwise undermines the extensive efforts the rehabilitate the river already taken and jeopardizes the true value of the entire river cleanup.

Response 1:

EPA appreciates the concerns raised in the comment regarding the source of potential recontamination. As discussed in the responses to previous comments, EPA has significantly increased the monitoring of all discharges from the site, required reporting of all data, have included water quality-based PCB effluent limitations on all dry weather discharges, included ambient monitoring requirements, and enhanced storm water BMPs. EPA has concluded that the permit limitations and conditions will lead to the attainment of water quality standards.

XIV. COMMENTS FROM MA STATE SENATOR NUCIFORO:

Comment 1:

I am writing to express serious concerns regarding the EPA's proposed National Pollutant Discharge Elimination System (NPDES) permit for the GE plant in Pittsfield.

Over the past five years; enormous strides have been made to cleanse the Housatonic River of PCBs. Hundreds of millions of dollars have been invested to preserve the health of this river and the vitality of its surrounding community. Yet, much work remains before the Housatonic watershed can truly move forward. This proposed permit, while not derailing the cleanup effort altogether, is a step in the wrong direction.

As you know, the viscous nature of PCBs causes it to cling to soil and sediment particles. Hence, any additional release of PCBs into the environment will further complicate on-going clean-up efforts. This problem, like PCBs themselves, will continue to resonate in both the environment and the consciousness of the surrounding community until the problem is completely resolved. The proposed NPDES permit will delay the closure that many people in the community so desire.

The proposed permit may also infringe upon the original Remediation and Restoration Agreement. According to the EPA, "Environmental Restrictions and Easements are to be placed on all GE-owned properties ... to protect the integrity of the cleanup" (October 7, 1999). As discussed above, this permit risks jeopardizing the collaborative efforts of numerous local, state, and federal agencies. Like many of my constituents, I remain committed to effective implementation of both the letter and the spirit of the Consent Decree.

Response 1:

EPA appreciates the concerns raised in the comment regarding the persistence of PCBs in the environment. As discussed in the responses to previous comments, EPA has significantly increased the monitoring of all discharges from the site, required reporting of all data, have included water quality-based PCB effluent limitations on all dry weather discharges, included ambient monitoring requirements, and enhanced storm water BMPs. EPA has concluded that the permit limitations and conditions will lead to the attainment of water quality standards.

The relationship between the NPDES permit and the Consent Decree is outlined in a previous response. The relevance of the partial quotation above to EPA's issuance of the Final Permit, or to any particular permit condition, is unclear.

XV. COMMENTS FROM THE U.S. FISH AND WILDLIFE SERVICE:

Comment 1:

Fact Sheet Page *7:*
"due to the persistence and high rate of bioaccumulation of PCBs in the environment, and to provide a reasonable margin of safety EPA and MassDEP did not consider the use of dilution in establishing PCB limitations and conditions." We strongly agree that this is the proper protocol to follow.

Response 1:

The comment is noted for the record.

Comment 2:

"Although Method 8082 (and Modified Method 8082) is not, at this time, an EPA NPDES-approved method, it can be required by the Region in accordance with C.F.R. 136.3 (c) as necessarily for a more complete quantification of PCBs". Because Method 8082 has a significantly lower detection level than Method 608, we concur with the requirement to use Method 8082.

Response 2:

The comment is noted for the record. As discussed in previous responses, the permit now requires that all PBC samples be analyzed using Modified Method 8082, which has a lower detection limit than Method 8082.

Comment 3:

Fact Sheet Page 9 and draft permit PCB limits for outfalls 001, O1A, 004, 05A, 05B, 006, 06A, 007, and 009: "Although many of the storm water discharges from the GE site have been regulated under previous permits, EPA does not believe it has sufficient information at this time to establish numeric limits on the storm water discharges... Therefore, EPA has not included numeric effluent limitations for PCBs in storm water discharges, but has required BMPs in order to meet water quality standards." The FWS must strongly disagree with this approach as it relates to PCB limits. Although we concur that past site remediation activities have generally reduced PCB concentrations, remediation is ongoing and there are areas of the site that have yet to be addressed. The wide variability of wet weather PCB concentrations reinforces our point and should not be used as a justification to preclude numeric limits. The fact that some of the storm drain discharges no longer contain industrial process discharges is not relevant to the discussion of PCB limits. Effluent data from Outfalls 001, 01A, 004, 05A, 05B, 006, 06A, 007,

and 009 (and their associated storm water overflows) have exceeded applicable water quality criteria, and yet the draft permit contains only a reporting requirement. While we understand, and generally agree, with the approach of using BMPs in first-round storm water permits with subsequent improvements, the circumstances of the draft permit do not appear to fit this approach in that this is neither a first-round permit nor is there a lack of information on which to base numeric effluent limits. At a minimum, there should be an interim compliance limit with evaluation of the efficacy of BMPs much like proposed for the 64G discharge.

Response 3:

EPA appreciates the concerns raised in the comment regarding the adequacy of BMPs in lieu of numeric limits. Nevertheless, the commenter does not directly address the question of whether accurately calculating numeric limits is feasible at this time, indicating neither what a numeric water quality-based number would be, nor how it should be derived. As discussed in the responses to previous comments, EPA has determined that the use of BMPs is appropriate. EPA has enhanced the required BMPs; added dry weather effluent limits; improved monitoring and reporting requirements; and imposed a permit re-opener linked to the ambient monitoring program that will allow EPA to assess the efficacy of storm water pollution controls on the site.

The notion that EPA is limited to using BMPs for first generation permits is incorrect. BMP's should be employed so long as they are effective and so long as derivation of appropriate numeric limits are infeasible due to information constraints. EPA has determined that the use of enhanced BMPs in this permit is consistent with the Interim Permitting Policy, which contemplates BMPs for as long as they are effective and appropriate, which could be several permitting cycles. *See* Interim Permitting Policy Q and A ("The interim permitting approach uses best management practices (BMPs) in first-round storm water permits, and expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for the attainment of water quality standards.").

EPA also disagrees with the commenter's conclusion that there currently exists sufficient information in the record to calculate appropriate numeric limits. For the reasons set forth above, EPA has concluded that numeric limits are infeasible and inappropriate at this time. However, one objective of the permit is to generate data that may be used to set numeric limits in the future if the BMPs imposed in this permit fail to achieve water quality objectives. *See* Interim Permitting Policy Q and A ("Each storm water permit should include coordinated and cost-effective monitoring program to gather necessary information to determine the extent to which the permit provides for attainment of applicable water quality standards and to determine the appropriate conditions or limitations for subsequent permits. Such a monitoring program may include, ambient monitoring, receiving water assessment, discharge monitoring (as needed), or a combination of monitoring procedures designed to gather necessary information."). In addition, EPA has concluded that the permit, through the imposition of improved BMPs, enhanced monitoring and a water quality-based reopener, will be sufficiently protective to ensure compliance with water quality standards.

The variability of wet weather PCB concentrations will be better defined with the wet weather-specific sampling requirements in the permit. If wet weather data shows that PCB concentrations in storm water discharges are high enough to cause or contribute to exceedances of standards, even after the required BMPs are implemented, EPA will impose additional BMPs to address these shortcomings or will impose numeric limitations

EPA agrees that the fact that some of the storm drain discharges no longer contain industrial process discharges is not particularly relevant to the discussion of PCB limits, but it is relevant to the data that has been historically collected by the facility. Many of the permitted discharges included discharges from industrial processes and discharged significant dry weather flows. The permit did not require wet weather-specific sampling, so the PCB data collected in accordance with the permit includes PCB data collected during both wet weather and dry weather, making it extremely difficult to establish the storm water discharge characteristics. Without knowing these characteristics, the receiving water flow, and the wet weather receiving water PCB concentrations, it is infeasible at this time to establish numeric limits.

Comment 4:

64G interim compliance limit (page 20-2 1 of draft permit):
The draft permit states *"If the 64G treatment facility does not demonstrate a 100% compliance capability.., then the interim compliance limit will remain at 0.15 ug/l until GE upgrades the 64G facility.... The upgrade shall be completed in accordance with the schedule proposed in the treatment capability study".* We are uncomfortable with such an open-ended compliance schedule. While we appreciate the provision in the draft permit that gives EPA and MassDEP the ability to prescribe an alternate compliance schedule, we believe that a more structured schedule would better serve both the applicant and the regulators by providing tangible benchmarks that the applicant could achieve with incentives to achieve the final limit of 0.065 ugh within a specified timeframe.

Response 4:

EPA agrees that the schedule, as proposed in the Draft Permit, is too open-ended for the reasons stated by the commenter above. EPA has changed the requirement to provide clearer interim milestones leading to compliance with the limit and to otherwise conform to the requirements of 40 C.F.R. § 122.47.

Comment 5:

General Comments:
We appreciate the complexity of this draft permit and recognize the significant amount of effort expended by EPA and MassDEP staff. Our comments are based both on the current draft permit

and subsequent activities to be performed as part of the Natural Resource Damage Assessment and Restoration activities. Significant financial and personnel resources will be expended by the Natural Resource Trustees in the coming months and years to implement restoration projects to compensate the public for injuries incurred as a result of PCB contamination. It is imperative that we all insure that sites like Silver Lake do not become recontaminated by the outfalls once they have been restored.

Response 5:

As discussed in the response to previous comments the discharges to Silver Lake (outfalls 001, 01A, 004, and YD3) were transferred to PEDA and are no longer in the permit. Limits and conditions for these outfalls will be addressed in the future reissuance of PEDA's NPDES permit.

XVI. COMMENTS FROM THE BERKSHIRE ENVIRONMENTAL ACTION TEAM:

Comment 1:

The GE NPDES draft permit is insufficient to protect the East Branch of the Housatonic River from being recontaminated with PCBs. According to GE's own data, every outfall that they have been monitoring is exceeding EPA PCB water quality standards. In addition, there are several discharge pipes that also go into the East Branch of the Housatonic River that are monitored. All these pipes are or could be releasing toxic materials from a site into the Housatonic River. All of these discharges are upstream of the river remediation area. All ready PCBs are being detected in the sediments of the remediated portion of the river. The river is being recontaminated and if these discharges are not eliminated the remediation will be in jeopardy.

1) EPA needs enough data to be able to set numerical limits.
Even though PCB standards are being exceeded, EPA included few numerical limits in the new permit. I believe this is because EPA did not require enough sampling in the previous permit to be able to characterize the amounts of PCBs being discharged.

Response 1:

EPA agrees that PCB sampling of storm water discharges required in the previous permit was not sufficient. As described in earlier responses, EPA has increased the monitoring of PCBs, included numeric limits on all dry weather (non-storm water) discharges, and required an ambient monitoring program. Specific wet and dry weather sampling is required in order to better characterize storm water discharges.

Comment 2:

2) Flow monitoring
This permit should require continuous flow monitoring of all pipes. This can be done mechanically and is not an undue burden. It is essential to being able to calculate how much PCB is getting into the river.

Response 2:

Continuous flow monitoring has been required for receiving water outfalls 005, 05A, 05B, 006, 06A, and 009, and also for internal outfalls 64G and 09B. Only outfalls SR05 and the yard drains are not required have continuous flow meters. SR05 is expected to overflow very intermittently and the yard drains drain very small areas. In light of this, EPA has determined that flow estimates are sufficient for these discharges.

Comment 3:

3) Contaminant monitoring protocols
The monitoring for PCBs of the pipes with continuous flows should be daily. The monitoring for PCBs of the pipes that only carry water during storm events should be four times per hour on storm events starting at first flow and continuing until there is no more flow. For pipes that only carry water during storm events, the flow and the PCB levels will change through out the event. The water may start with no PCBs, increase steadily up to a given point, then decrease; or it may have a strong blip in the graph if there is an area that has lots of PCBs that flushes through at a given time. The only way to know is to sample frequently during a rain event. Taking one grab can be grossly misleading. Once a number of storms have been monitored for each pipe, the events can be characterized to figure out when the pollutant load comes through each pipe and monitoring can be scaled back to capture the most likely load times for each pipe.

Response 3:

Daily sampling for PCB in continuous discharges is more frequent than necessary to characterize those discharges, because EPA does not expect there to be significant variability in the effluent from day to day. The Final Permit requires that 24-hour, flow-proportioned dry weather sample be collected twice per month for each discharge.

EPA concurs that pollutant concentrations in storm water discharges may vary over the course of a discharge event. The Final Permit requires that storm water samples be flow proportioned composite samples collected over the duration of the storm.

Comment 4:

4) Additional pipes to be monitored.
There are several other pipes that I know of that GE should be monitoring.

1. GE should monitor the pipe that has its outfall into the ditch next to Bobby Hudpucker' s Restaurant both for flow and for contaminants. This pipe runs through GE's property and had several connections from the GE plant. It also carried storm water runoff from the GE site. It also carries water from an area that at least one worker claims was used to dump GE waste water off Benedict Road. The potential for this pipe to carry PCB contamination is very high. The only way to know what is getting into the river is to monitor at the outfall. This pipe should be monitored continuously for flow and four times per hour during storm event flows to determine the amount of contamination. If this pipe flows continuously it should be monitored daily IN ADDITION to the monitoring during a storm event.

2. According to the Source Characterization Study, surface water and sediment contamination in the swales from Hill 78 are discharging into the river, as is groundwater

contamination from Hill 78 Area. Again, this should be quantified and stopped. I believe, this swale leads into a 42" pipe that has its outfall just north of East Street opposite Commercial Street. The outflow from this pipe then flows into a pipe under East Street, under part of Commercial Street, and empties into the East Branch of the Housatonic River. From the research I have done, it appears GE put in this pipe. In that this pipe also carries the storm water runoff from Hill 78's swale, the potential for this pipe to carry PCB contamination is very high. The only way to know what is getting into the river is to monitor at the outfall. This pipe should be monitored continuously for flow and four times per hour during storm event flows to determine the amount of contamination.

3. According to the Source Characterization Study, page 1-6, Unkamet Brook bisects the old GE landfill and flows directly to the Housatonic River. Also according to that Study, Table *5-1,* groundwater contamination and contaminated sediment in Unkamet Brook are flowing into the river above the remediated section of the river. When Unkamet Brook leaves the GE site, it flows under Merrill Road through a pipe. This pipe should be monitored for both flow and contaminants. This would show what is getting off the GE site through this pipe, and presumably getting into the East Branch of the Housatonic River. This should be done immediately even though the whole Unkamet Brook area is being studied. We know there are PCBs there. We need to know how much is getting into the river now!

4. According to the Source Characterization Study, outfall water and sediment contamination from Silver Lake as well as groundwater contamination is flowing into the river. The Silver Lake outfall goes through a pipe under East Street. This pipe should be monitored both for flow and for contaminants. Again, this would show what is getting into the East Branch of the Housatonic River above the remediation area. This is absolutely necessary given the proposed remediation of Silver Lake. It is inexcusable that this outflow has not been monitored for either flow or contaminants. When asked at a public meeting, the claim was that they could not monitor the flow from Silver Lake because of the design of the outfall. That is absurd. Monitoring the pipe will make it easy.

Response 4:

Please see Responses to Winn, Gray and Herkimer Comments Numbers 15-18.

Comment 5:

5) Preferential pathways.
Underground pipes, even those that are no longer used and have been capped, can act as preferential pathways for contaminants to find their way to a waterbody. Water will flow more easily along the pipe and therefore the pipes act as "preferential pathways" for the water. Pipes should be tested at their outfalls, but not just the water coming out of the pipe, but also any water that may have followed the pipe as a "preferential pathway".

Response 5:

The Final Permit requires routine inspections of plugged discharge pipes during wet weather to confirm the integrity of the seal and to observe whether there is breakout flow at the outer periphery of the outfall pipe or in the area immediately around the pipe.

Comment 6:

6) Accounting of current and historical pipes.
GE should account for and map all pipes under their property. GE should provide current and historical maps of pipes and account for all of them. In particular - the "perforated sub drain lines" that ran throughout the site shown on a map located in Pittsfield Engineering and hand labeled "GE DRAINS MAINS MAIN PLANT" and titled "PLANT DRAINAGE SYSTEM" in the lower right corner.

Response 6:

The Final Permit requires that storm drain maps be part of the SWPPP and that the maps be updated yearly.

Comment 7:

7) Determining the condition and connections of all pipes.
GE should videotape all pipes that run through the site that have an outfall into one of the waterbodies to show the condition of the pipe and that there are no unknown connections on the site. This includes city storm water pipes where they run through GE property.

Response 7:

The permit requires videotaping of certain storm water drains that are known to be in contaminated areas (see BMP I.C). The dry weather sampling and dry weather effluent limits required in the final permit will show any outfalls discharging contaminated infiltration. Violation of the limits will necessarily lead to investigations to locate contaminated areas, which may require additional videotaping.

Comment 8:

8) Accounting for what GE has done with underground structures on their site. GE should give a complete description of how all abandoned pipes, floor drains, liquid waste storage areas, underground storage tanks, tunnels, etc. were demolished, filled, removed, or left in place.

Response 8:

EPA added a requirement that the SWPPP include up to date mapping of the storm water collection system, including connections to the system.

Rather than require a detailed description of all remediation activities on the site, EPA has increased monitoring frequency, required wet weather and dry weather-specific sampling and included PCB limits on dry weather discharges. EPA believes that these measures will ensure that remaining problem areas are identified and addressed.

Comment 9:

9) Ditches
Any ditches from the site should be considered as outflows from the facility.

Response 9:

EPA has included discharges from ditches that it believes are point sources. See Response to Winn, Gray and Herkimer Comment 11 regarding the site survey to identify any additional point sources not currently authorized by the permit.

Comment 10:

10) Sheetflow & Infiltration
It is usually a good idea to promote sheetflow and infiltration, but in this case they may also carry PCB and other contaminant loading from the facility into the river. GE needs to be able to measure the contaminants carried by the sheet flow and infiltration at the locations they know it is getting into the river. If GE wants to disconnect a pipe and instead use sheet flow or infiltration, they should first have to prove that this will result in less contaminants being carried into the river.

Response 10:

See Response to Riverways Comment 7.

Comment 11:

11) Total PCBs entering the river.
GE should determine the amount of PCBs entering the receiving waters from all the sources combined per year. This should include data from Yard drains (YD), Overland Flow (OF), and Non-Point source (NP). This entire site is contaminated and thus could be considered in and of itself a point source.

Response 11:

The definition of point source (see 40 C.F.R. § 122.2) is confined to discrete conveyances, such as pipes and ditches. The GE site contains numerous point source discharges, but the entire site cannot be considered a point source. Using the point source monitoring and the ambient monitoring required by the Final Permit, non-point sources can be estimated.

Comment 12:

12) pH levels should have limits set.
Monitoring data showed pH levels in some of the outfalls are excessive in both directions. This should not be allowed.

Response 12:

Please see Response to Riverways Comment 20.

Comment 13:

13) What are the by products of the GE plastics operations and are they being tested for?

Response 13:

The plastics operation at GE was sold approximately a year ago, but does not include any wastewater discharges to waters of the United States, so there is no authorization to discharge and no monitoring requirements.

Comment 14:

14) GE should monitor the wells at Pittsfield Generating Co.
All these wells should be monitored monthly. Data should include "flow" (the quantity of water used) as well as PCB and other contaminant levels.

Response 14:

NPDES permits do not regulate the withdrawal of groundwater, and EPA is not aware that the Pittsfield Generating Company discharges through any GE outfalls.

Comment 15:

5) All monitoring data must be made public.
This eliminates the possibility of monitoring several times in one day and only submitting the

one that shows the least contamination.

Response 15:

All monitoring data collected in accordance with the permit requirements must be reported (Part I.D.1.d.2 of the final permit). All reported effluent data is public data and will be released by EPA upon request.

Comment 16:

16) Reservoir off Benedict Road
According to a former GE worker, contaminated water was pumped to a reservoir off Benedict Road. Obviously this waterbody should be tested, but also water from that area runs through pipes that cross the current GE property. This water should be tested NOW by GE, but when the city storm water is separated from the GE site, this water must still be tested to determine where the PCBs actually come from.

Response 16:

See Response to Winn, Gray and Herkimer Comment 23.

Comment 17:

17) Injection wells under Unkamet Brook area
Injection wells were used to disposed of contaminated liquids possibly hundreds of feet below ground in the Unkamet Brook area. There should be deep monitoring wells to test for contaminants in this area.

Response 17:

Such testing is beyond the scope of an NPDES permit since pollutants disposed in deep wells are not discharges to waters of the United States. A requirement for such monitoring may be pursued with MassDEP.

Comment 18:

18) Permit expiration and the Consent Decree
GE's previous NPDES permit expired in February 1997. The fact that this permit has lapsed for eight years so far, when this is a highly contaminated site, puts health and the environment at risk. This entire permit should be a reopener to the Consent Decree so that all the contamination entering the Housatonic River above the current remediation area is dealt with NOW, not eight years from now.

Response 18:

The Consent Decree and permit are separate legal documents. EPA agrees that a permit re-opener in the NPDES permit is warranted for the reasons stated in Response Winn, Gray and Herkimer Response 25 above. The justification for the permit re-opener is to ensure that the limits and conditions in the NPDES permit are sufficiently stringent to ensure compliance with the CWA and is unrelated to the CD.

XVII. COMMENTS FROM THE BERKSHIRE REGIONAL PLANNING COMMISSION

The General Electric Company is applying for re-issuance of its National Pollutant Discharge Elimination System (NPDES) permit to discharge to Silver Lake, Unkamet Brook, and the East Branch of the Housatonic River. The current permit expired on February 7, 1997, and is still in effect. Once effective, the permit will stand for five years.

The Federal Clean Water Act requires a National Pollutant Discharge Elimination System (NPDES) permit for the discharge of pollutants to the waters of the United States. The Clean Water Act requires that NPDES permits place limits on pollutants that are currently discharged at a level that has caused, has the potential to cause or contributes to water quality degradation. The US Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (DEP) have cooperated in the development of this permit. The effluent limits and permit conditions have been drafted to assure that the State Water Quality Standards and provisions of the Clean Water Act will be met. Discharges must satisfy both minimum technology and water quality requirements.

The draft NPDES permit covers 14 current permitted storm water outfalls and an additional 17 point source discharges that previously were covered by a nationwide general permit. Nine nonpoint discharges are not covered by the new permit. The area covered by the storm water system includes the PEDA site; the land south of East Street, and the rest of the GE site all the way to the Housatonic Railroad spur in Coltsville. The outfalls discharge into Silver Lake, Unkamet Brook and the East Branch of the Housatonic River. The draft establishes limitations and monitoring/sampling requirements for toxicity.

CONSIDERATIONS AND POTENTIAL ISSUES:
GE has made many changes to the wastewater discharges since the existing permit was issued. Major changes included (1) separation of non-groundwater flows from the storm drain system in cases where GE determined this change was feasible, and (2) discontinuing the discharge of treated process water, contact cooling water, and non-contact cooling water. Also, in 1993, permit responsibility, coverage and liability for one outfall was transferred from GE to Martin Marietta (and subsequently Lockheed-Martin and then General Dynamics). Permit decisions for that outfall will be handled independently from the GE Permit.

Silver Lake, Unkamet Brook, and the East Branch are classified as Class B warm water fisheries by the State. Thus they have the following designated uses: habitat for fish and wildlife, contact recreation, source of public water supply, suitable for irrigation and industrial cooling and process uses, and shall have consistently good aesthetic value. The segment of the East Branch into which all these discharges ultimately flow is identified as not meeting these standards due to priority organics, unknown toxicity, and pathogens. PCBs are a known pollutant in this segment as well and are considered a toxic. PCBs accumulate in the food chain and therefore consumption of fish from the river is a primary concern.

Due to the nature of storm water discharges, not just for the GE site but nationwide, EPA has generally utilized a permitting approach using best management practices (BMPs) as opposed to setting numeric limits for specific pollutants. As permits are considered for renewal, expanded or better tailored BMPs are required to provide for attainment of water quality standards. This also requires that each permit include a coordinated and cost-effective monitoring program to determine the extent to which the permit provides for attainment of the water quality standards. Due to fairly recent major changes in the activities occurring on the GE site and the lack of information on which to base numeric limits on pollutants, EPA proposes to continue to utilize a BMP approach for this permit renewal.

The permitting is made more complicated by the fact that in some cases, storm water from Pittsfield neighborhoods flow into the GE storm water system, and in other cases, GE outfalls flow into the City system. However, the "systems" are permitted separately. City storm water flows particularly affect the outfalls from GE that drain into Silver Lake. The Silver Lake outfalls serve the PEDA site. PEDA plans, as part of the site redevelopment, to replace the collection system and significantly reduce runoff through construction of detention basins. PEDA also expects that the City storm water system will be separated from the PEDA site system during the redevelopment of the site. This is expected to at least be under construction by 2009. In addition, the portion of the City system that comes from East Street, Newell Street and Lombard Street, which currently flows into the GE system and is treated, may be separated from the GE system. These changes should significantly decrease flows into the overall GE system, specifically in the area of the redevelopment site.

For all outfalls, a consistent comment contained in the draft permit is the discharge achieves the permit limits but contains concentrations of PCB which exceed water quality criteria. . . ." The draft permit sets a lower limit than the old permit for PCB discharges and notes that a number of provisions in the site clean-up/demolition work will reduce PCB discharges as well.

Due to the elimination of use of water for contact and non-contact cooling and for processing throughout the site, most of previous heavy metal limits contained in the old permit have been eliminated as no longer being necessary. This does not mean there are no limits on their discharge, they simply are no longer allowed.

COMMENTS AND RECOMMENDATIONS:

Given the complexity and size of the storm water system and the permitting requirements for the GE Site, BRPC feels that it does not have adequate technical knowledge to provide specific comments on the draft permit limits. Thus, we are limiting our comments to more general ones regarding the site.

Comment 1:

1. In redeveloping the PEDA site and the land that is cleared on the south side of East Street, every effort should be made to utilize the most effective best management practices possible. Detention basins are but one component of a total BMP system. The use of additional infiltration methods, particularly implemented as a component of the site landscaping design, should be strongly encouraged, including the use of Low Impact Development techniques. Low Impact Development (LID) is an innovative storm water management approach with a basic principle that is modeled after nature: manage rainfall at the source using uniformly distributed decentralized micro-scale controls. LID's goal is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source. Techniques are based on the premise that storm water management should not be seen as storm water disposal. Instead of conveying and managing/treating storm water in large, costly end-of-pipe facilities located at the bottom of drainage areas, LID addresses storm water through small, cost- effective landscape features located at the lot level. These landscape features, known as Integrated Management Practices (IMPs), are the building blocks of LID. Almost all components of the urban environment have the potential to serve as an IMP. This includes not only open space, but also rooftops, streetscapes, parking lots, sidewalks, and medians. LID is a versatile approach that can be applied equally well to new development, urban retrofits, and redevelopment / revitalization projects. More information can be found at http://www.lid-storm water.net/. The master plan for the William Stanley Business Park (the PEDA site) calls for extensive use of LID techniques.

Response 1:

As described previously, the outfalls now owned by PEDA have been transferred to PEDA and removed from the final GE permit. The commenter's recommendations regarding storm water management are similar to the preliminary plans described by PEDA in its comments, and appear to be consistent with EPA guidance regarding storm water management. EPA anticipates further discussion on storm water management for PEDA-owned discharges when reissuing that permit.

Comment 2:

2. It would seem to be preferable to have total storm water management plans for the affected drainage basins, including the large City-owned portion of the system serving portions of the Morningside neighborhood, and to develop basin-wide BMPs, including both operational and structural improvements or to separate the systems. The plans for the PEDA site include separation of the storm water system serving the PEDA site from that serving the Morningside neighborhood.

Response 2:

The City is required to have a storm water management program for its storm sewers pursuant to its coverage under the NPDES General Permit for Strom Water Discharges from Small Municipal Separate Storm Sewer Systems. The City should be coordinating with the permittee for those portions its storm drain system contributing flow to the permittee's collection system. As we understand it, outfall 001 is the only outfall receiving significant flows from the City. The outfall is now owned by PEDA, which has reported plans to remove the connection between its collection system and the City's.

Comment 3:

3. The obvious current PCB concentrations being discharged from the system, all of which are noted as exceeding water quality standards, is a major concern. If these are not eliminated, or at least significantly reduced to a level that does not exceed standards, the current very expensive cleansing of the river may ultimately be for naught and the river may not return to meeting Class B water quality standards. The expectation for the required BMPs is that they will serve to reduce the PCB levels currently being experienced in all outfalls. BRPC believes that these levels, after clearance activities or implementation of BMPs occurs, should be closely monitored. If levels do not show decreases to levels that would meet water quality standards for a low dry-weather flow river like the Housatonic, then additional measures should be required that will achieve water quality standards. These should be required immediately but no later than at the time of permit renewal, in five years. For the PEDA redevelopment site, the improvements should be staged in accordance with the schedule for overall redevelopment of the site.

Response 3:

EPA concurs with these observations and comments. EPA intends to closely monitor discharge quality. Consistent with the Interim Permitting Strategy, additional BMPs or numeric water quality limits will be imposed if information generated under the requirements of this permit shows that these measures are necessary to achieve water quality standards.

Comment 4:

4. We are also concerned about the nine outfalls which were determined to be non-point source discharges and therefore not included in this draft permit. These were covered by the old Multi-Sector General Storm Water Permit for Industrial Activities. Given the ongoing PCB discharges from the site, it might be preferable on this specific site to minimize use of non-point source discharges and to direct as much flow as practicable into the storm water treatment system which exists on the site. This is probably highly dependent upon whether water infiltration is occurring which facilitates further PCB flows into the river or whether

rainfall is simply flowing across a vegetated area and the vegetation acts as a filter, which is the more traditional use of vegetated buffers for storm water quality management.

Response 4:

Elimination of point source storm water runoff by directing runoff to pervious areas is typically a recommended management practice.

See Response to Riverways Comment 7 and Response to Winn, Gray and Herkimer Comment 11 regarding the site survey to identify any additional point sources not currently authorized by the permit.

Comment 5:

5. GE should be required to determine the amount of PCBs entering the receiving waters from all the outfalls combined per year. This should include estimating the amounts entering during unmonitored storm events. The data should not be pre-remediation. This should be an effective monitoring program testing each individual outflow, not batch testing. Flow measurements from pipes should be monitored continuously 24 hours a day, *365* days per year if at all practical.

Response 5:

Continuous flow monitoring has been required for receiving water outfalls 005, 05A. 05B, 006, 06A, and 009, and also for internal outfalls 64G and 09B. Only outfall SR05, and the yard drains are not required have continuous flow meters. SR05 is expected to overflow very intermittently and the yard drains serve very small areas. EPA believes that flow estimates are sufficient for these discharges.

Comment 6:

6. If GE chooses to replace pipe discharges with sheet flow, then PCBs should be measured in the sheet flow to ensure that this technique is an improvement.

Response 6:

It is not practical to measure pollutants in sheet flow, and EPA does not have authority under the NPDES program to regulate discharges from nonpoint sources. EPA has included monitoring condition from all outfalls meeting the definition of point source as defined by the CWA and federal regulations, including several ditches and swales.

Please see the Response to Riverways Comment 7 for further discussion regarding sheet flow.

Comment 7:

7. As part of the review process, GE should provide all maps and plans of the storm water collection and discharge system and underground storage tanks known to be on its property.

Response 7:

Rather than require a detailed description of all remediation activities on the site, EPA has added a requirement that the SWPPP include up to date mapping of the storm water collection system, including connections to the system. EPA has also increased monitoring frequency, required wet weather and dry weather-specific sampling and included PCB limits on dry weather discharges. EPA believes that these measures will ensure that remaining problem areas are identified and addressed.

Comment 8:

8. GE should videotape all pipes that run through the site that have an outfall into a water body to show the condition of the pipe and that there are no unknown connections on the site. This should include city storm water pipes where they run through the GE property.

Response 8:

The permit requires videotaping of certain storm water drains that are known to be in contaminated areas (see BMP I.C). The dry weather sampling and dry weather effluent limits required in the Final Permit will show any outfalls discharging contaminated infiltration. Violation of the limits will necessarily lead to investigations to locate contaminated areas, which may require additional videotaping.