

**RESPONSE TO PUBLIC COMMENTS ON
DRAFT PERMIT NO. MA0003891 FOR
GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS**

On December 22, 2004, the U.S. Environmental Protection Agency ("EPA") and the Massachusetts Department of Environmental Protection ("MassDEP") released for public notice and comment draft National Pollutant Discharge Elimination System ("NPDES") permit number MA0003891 ("Draft Permit"), which authorized discharges from a facility owned and operated by the General Electric Company ("GE" or "permittee") to Silver Lake, Unkamet Brook, and the East Branch of the Housatonic River. These waters have been classified as Class B warm water fisheries under the Massachusetts Surface Water Quality Standards. EPA and MassDEP held a joint public hearing on the Draft Permit in Pittsfield, Massachusetts, on February 10, 2005. The public comment period for this Draft Permit ended on March 25, 2005.

Written comments were received from:

1. General Electric Co.
2. Massachusetts Senator Andrea F. Nuciforo, Jr.
3. Connecticut Department of Environmental Protection
4. Massachusetts Riverways Programs, an Agency of Massachusetts Fish and Game
5. Housatonic River Commission
6. Environmental Stewardship Concepts, on behalf of the Housatonic River Initiative
7. Conservation Law Foundation
8. Jane Winn, Berkshire Environmental Action Team
Tim Gray, Housatonic River Keeper
Judy Herkimer, Housatonic Action League
9. Pittsfield Economic Development Authority
10. U.S. Fish and Wildlife Service
11. Mass Audubon
12. Housatonic Valley Association
13. Berkshire Environmental Action Team
14. Berkshire Regional Planning Commission
15. Twenty one other individuals (each submitting a form letter stating "Please do not let GE continue to release PCBs and other toxins into our river.")

Several persons made oral comments on the Draft Permit at the public hearing. The comments are substantively addressed by the responses below.

After a review of the comments received, EPA and MassDEP have determined to issue the permit. The permit is being jointly issued by EPA and MassDEP under the Clean Water Act and the Massachusetts Clean Waters Act, respectively.

This document includes responses to the written comments received during the public comment period and the oral comments made at the public hearing. EPA has organized the responses to comments in this document by commenter.

EPA's decision making process has benefited from the various comments and additional information submitted during the public comment period. The information and arguments presented did not raise any substantial new questions concerning the permit. EPA did, however, improve certain analyses and make certain changes in response to comments. These improvements and changes are detailed in this document and reflected in the Final Permit. The analyses underlying these changes are explained in the responses to comments that follow.

A copy of the final permit may be obtained by sending a written request to the following address:

United States Environmental Protection Agency, Region 1
Attn: Janet Deshais
1 Congress Street, Suite 1100 (CMP)
Boston, Massachusetts 02114-2023

Copies of the permit may also be obtained by calling or emailing Janet Deshais, who can be reached at (617) 918-1667. Copies can also be obtained from <http://www.epa.gov/region1/npdes/index.html>.

This document includes a background section which briefly describes the site and summarizes recent activities which have affected the final permit decision, followed by responses to the comments received.

I. BACKGROUND INFORMATION

The General Electric Company (GE) currently occupies and owns a 225-acre parcel of land adjacent to the Housatonic River in Pittsfield, Massachusetts. Although the GE site historically housed various manufacturing operations, GE had terminated the majority of those operations by 2003. The only manufacturing operations still conducted at the site are plastics molding and extrusion studies. This Division was sold by GE approximately a year ago, and the operation does not generate any process wastewaters that are discharge to waters of the United States.

GE occupied and owned 252 acres of land adjacent to the Housatonic River prior to and during the public comment period. In May of 2005, shortly after the public comment period closed, GE transferred approximately 27 acres of land to the Pittsfield Economic Development Authority ("PEDA") for re-development. This parcel is the first portion of a 52-acre parcel to be transferred. The details of the 52-acre land transfer, and how this will affect GE's permit, is discussed in more detail below under the heading "Activities Since the Close of the Public Comment Period."

GE is currently covered under two NPDES permits: the individual permit that is being reissued as a result of this permit decision (No. MA0003891) and the Multi-Sector General Storm Water Permit for Industrial Activities, or MSGP (No. MAR05A021).

The current individual permit was last issued by EPA and MassDEP on September 30, 1988, became effective on February 7, 1992, was modified on May 21, 1992 and expired on February 7, 1997 ("1992 permit" or "prior permit"). It has been administratively continued by virtue of a timely and complete renewal application, which was submitted by GE on August 9, 1996. GE sought and obtained coverage under the MSGP on April 4, 2001, for storm water discharges associated with industrial activity, which were not included in the individual permit. Pursuant to an EPA decision to cover all of GE's outfalls in the individual NPDES permit, GE also submitted the appropriate individual permit application materials for these discharges to EPA and MassDEP in July 2001. Since that time, GE has provided requested information to EPA and MassDEP in support of the development of a single NPDES permit. When the final individual permit is issued and has become effective, coverage under the MSGP will be revoked.

At the time the permit was last issued, the facility was an active manufacturing operation. Currently, the predominant activity on the GE site consists of environmental remediation, and is being conducted in accordance with a consent decree, which was signed by GE, EPA, MassDEP and others, and approved and entered by the U.S. District Court in Springfield, Massachusetts, on October 27, 2000 ("Consent Decree," "Decree" or "CD"). The Consent Decree established a program for comprehensive environmental remediation of the GE site and surrounding areas, including removal of contaminated soil, demolition of buildings, and groundwater treatment.

The changes in site uses have resulted in alterations in flows, pollutant constituents and operations that will continue to evolve as the GE site is further remediated and as additional portions of the GE site are transferred to and redeveloped by PEDA. With the phase-out of manufacturing operations, all manufacturing-related discharges have been eliminated, and the

remaining discharges consist primarily of groundwater and storm water. As described in GE Technical Exhibit 1, storm water and groundwater from the City of Pittsfield also contribute to discharge flows at certain outfalls.

II. ACTIVITIES SINCE THE CLOSE OF PUBLIC COMMENT

Since the close of public comment, GE has eliminated outfalls 004, 007, YD3, YD4, YD5, SR02, SR03, SR04, YD7, YD8, YD15, YD9, 09A, OF-P1, and GE has eliminated its flow contribution to outfalls YD6 and YD14. As a result, these outfalls are no longer authorized under the Final Permit, and the limits and conditions pertaining to such outfalls have accordingly been eliminated from the Final Permit. The comments related to these outfalls have been included in this response to comments document and have been addressed to the extent appropriate.

On May 2, 2005, GE transferred ownership of 26.8 acres of land to PEDA, pursuant to an agreement executed by GE, the City of Pittsfield and PEDA on July 22, 1999, known as the "Definitive Economic Development Agreement." This approximately 27-acre parcel includes outfalls 001, 01A, 004 and YD3 (however, as described above, outfalls 004 and YD3 have been eliminated). The NPDES permit coverage for these outfalls was therefore transferred by EPA from the existing GE permit to PEDA on May 2, 2005, and these outfalls have been removed from the final GE permit. EPA is currently preparing a draft permit for the PEDA outfalls. As required by federal regulations, PEDA's draft permit will be released for public notice and comment.

GE notified EPA by letters dated December 8, 2005 and June 26, 2007 and in update meetings held on November 17, 2005 and June 19, 2006 that it has performed the following best management practices required in the Draft Permit since the close of public comment: (1) filled in all of the drains located outside of Building 100, called scupper drains, and all of the floor drains in Building 100 that were not connected to the sewer system; (2) inspected and cleaned oil/water separators (OWS) 31W and 119W in August 2005, inspected and cleaned OWS 64W, 64X, and 64Z in 2006, and has committed to maintaining the "once every 3 years" schedule for inspection and cleaning of OWS; (3) installed weirs at the discharge of OWS 64Z, and intends to install a similar structure at OWS 64W and 64X; (4) inspected and cleaned all 127 manholes/catch basins located within the Drainage Basins 005, 006, and 007 prior to December of 2005; (5) in June 2006, conducted follow-up inspections at 15 select manholes/catch basins that had been previously cleaned, and will maintain a once per year inspection and cleaning schedule for these, since these structures have historically accumulated the greatest amount of debris; and (6) will continue to use a street sweeper at this site in order to maintain a minimal amount of debris in the manholes/catch basins.

III. COMMENTS FROM GE

GE's 43-page comment letter included an executive summary, a technical comments summary chart, a background section, a section on Consent Decree limitations, a section on Clean Water Act limitations, and a section with GE technical exhibits. The comments are presented in the following order:

- A. Consent Decree Limitations
- B. Clean Water Act Limitations
- C. Other Technical Comments

A. CONSENT DECREE LIMITATIONS

Among the public comments EPA has received on the Draft Permit are comments from GE with respect to the relationship of the Permit to a separate Consent Decree governing cleanup of hazardous substances. GE's comments relating to the Decree are structured as an overall comment that GE argues is supported by particular comments. In response, EPA first provides background on the Decree. Second, EPA responds to GE's overall comment. Third, EPA responds to each of the comments cited by GE in support of its overall comment.

Background:

On October 27, 2000, the U.S. District Court for Massachusetts entered a Consent Decree negotiated by the United States (on behalf of EPA and other federal agencies), Massachusetts, Connecticut and the General Electric Company ("GE"). Using the authority of the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. Section 9601 et seq. ("CERCLA"), the Decree requires GE to perform or pay for over 25 response actions to address unacceptable threats posed by polychlorinated biphenyls ("PCBs") and other hazardous substances that originated from GE's operations at its former Pittsfield facility. The Decree response actions deal with specific areas of soil, sediment or ground water contamination, and each response action is identified specifically in the Decree. The response actions include CERCLA removal actions at areas contaminated with PCBs, such as the former GE Plant Area; former oxbows of the Housatonic River; Silver Lake, a 26 acre lake in Pittsfield; the Allendale School; the Unkamet Brook area; residential and non-residential floodplain soils; and three segments of the Housatonic River. Under the Decree, two segments of the River cleanup, and several removal action areas outside the River, have been completed, with the remainder of response actions at different stages in the remediation process.

Comment 1 (Overall Comment):

GE's overall comment regarding the Decree is essentially that the presence of the Decree, and particular provisions therein, place limitations on the terms allowable in EPA's NPDES permit. Specifically, GE argues that as long as GE satisfies its obligations under the Decree, neither EPA nor Massachusetts Department of Environmental Protection has the authority to require GE to implement additional response actions to address the contaminants at or being discharged from its site. GE then argues that a number of individual Decree provisions support GE's assertion,

and that therefore certain requirements of the draft NPDES permit which GE asserts are response actions are in conflict with the Decree.

Response 1 (Overall Response):

The Clean Water Act's ("CWA") NPDES program, on the one hand, and CERCLA and RCRA cleanup programs, on the other, serve different statutory purposes. CWA Section 301 generally prohibits the discharge of pollutants from point sources to waters of the United States, and Section 402 establishes the NPDES program, under which permits may be issued to allow the discharge of pollutants that otherwise would be prohibited. In contrast, CERCLA and the RCRA corrective action program govern the cleanup of hazardous substances and hazardous waste that have already been released or for which there is a threat of release. Nothing in this Decree limits EPA's authority to issue an NPDES permit consistent with the CWA or to impose limitations on discharges authorized by the permit.

The Decree as a whole is clearly designed to use CERCLA and RCRA corrective action authorities for response actions and corrective measures under those statutes to address PCB contamination in soils, sediments and ground water in Pittsfield, the Housatonic River, Silver Lake, and Unkamet Brook.

The Work specified by the Decree consists of, *inter alia*, performing CERCLA removal actions and performing actions under a RCRA corrective action permit leading to a CERCLA remedial action. The Statement of Work for Removal Actions Outside the River, Appendix E to the Decree ("Statement of Work"), along with pertinent Decree provisions, provide requirements for GE's performance of the Removal Actions Outside the River, which include addressing soil contamination at Housatonic River floodplain properties, addressing soil contamination at the GE Plant area, addressing soil contamination at Former Oxbow Areas, addressing soil/sediment contamination at Silver Lake, addressing soil contamination at the Allendale Schoolyard, and investigating, monitoring and potentially taking other responses at five ground water management areas.

The Work Plan for the Upper ½ Mile Reach Removal Action, Appendix F to the Decree, along with pertinent Decree provisions, provides requirements for GE's performance of the Upper ½ Mile Reach Removal Action. The 1½ Mile Reach Removal Action is a CERCLA removal action performed by EPA under a cost-sharing agreement with GE, pursuant to Paragraph 21, and Paragraphs 103-111 of the Decree. The 1½ Mile Reach Removal Action work requirements are provided in EPA's July 17, 2000, Engineering Evaluation and Cost Analysis, and EPA's November 22, 2000 Action Memorandum for the 1½ Mile Reach Removal Action, and Paragraph 21 of the Decree.

The Reissued RCRA Corrective Action Permit, Appendix G to the Decree, along with Paragraph 22 of the Decree, provide requirements for GE to perform a RCRA Facility Investigation and a Corrective Measures Study for the Rest of River, and, following EPA's proposal for Rest of River corrective measures, provide GE and the public with the ability to appeal EPA's RCRA decision. Following all appeals, the Decree provides for GE to perform the Rest of River remedial action pursuant to CERCLA.

Each of these Decree-related statements of work or work plans is very detailed. None has any reference to, nor reflects any intent to, supersede either the NPDES permit that was in place when the Decree was signed or a reissued permit. The NPDES permit in place at the time the Decree was signed regulated manufacturing process water, storm water, cooling water, and contaminated ground water discharges to waters of the U.S. – similar to the discharges regulated by the reissued permit, with the exception that there are no longer manufacturing process and cooling water discharges from the facility.

Responses 1.A-1.E below provide more detail on the Decree provisions referenced by GE in its comments. None of these provisions shows any intent by the Decree parties to negate or limit EPA's NPDES permitting authority through the Decree.

Comment 1.A:

GE asserts that Paragraph 8.b. of the Decree is a bar against EPA's requiring, through the NPDES permit, other activities to be undertaken. Paragraph 8.b. includes a determination by EPA and MassDEP that the Removal Actions, when implemented and completed in accordance with the Decree, the SOW, and the Upper ½ Mile Reach Work Plan (including achieving and maintaining Performance Standards), are protective of human health and the environment with respect to the areas addressed by those Removal Actions (the "protectiveness determination"). The paragraph further states that no further response actions for the areas addressed by the Removal Actions are necessary to protect public health and the environment, unless expressly provided elsewhere in the Decree. GE asserts that this provision should be interpreted to preclude actions to implement the NPDES permit program.

Response 1.A:

Paragraph 8.b. refers to the Removal Actions required by the Decree. Each Removal Action consists of a set of activities at a particular geographic area. EPA's action memoranda for approval of the Removal Actions (Appendices B, C, and D of the Decree), the risk-based evaluations for the protectiveness of the PCB cleanup levels contained in Appendix D, and the performance standards for the Removal Actions contained in Appendices E and F, are all clearly focused on addressing upland soil contamination, river sediment contamination, bank soil contamination, and ground water contamination. The NPDES permit, in contrast, does not address either soil and sediment contamination or ground water contamination. Rather, it places limits on storm water and treated ground water that is discharged to the Housatonic River and Unkamet Brook. Nowhere does the Decree state that compliance with the Removal Action requirements obviates the need for any NPDES permit, let alone forbid continued implementation of the Clean Water Act. Had the parties intended an interpretation so at odds with the existing statutory scheme, the Decree surely would have said so explicitly. On the contrary, the Decree's provisions assume the continued applicability of NPDES permit requirements. See, e.g., Appendix K (page 7) and Appendix E (Technical Attachments B and H). GE is simply incorrect in its interpretation of Paragraph 8.b.

Comment 1.B:

GE asserts that the U.S. is bound by the covenants made in the Decree and cannot use the NPDES permit program to require new response actions outside of the Decree. GE asserts that “[i]n the federal covenants, EPA agreed that it would not seek to compel GE to implement additional response actions to address releases of waste material at the Site, including pursuant to Section 309 of the Clean Water Act. Section 309 is EPA’s source of authority to enforce the NPDES provisions of the Act.”

Response 1.B:

The U.S. covenants not to sue in the Decree do not limit implementation of the NPDES regulatory program as applied to GE.

First, GE’s argument regarding enforcement is premature. EPA has not brought an action under Section 309 to compel GE to implement additional response actions at the Site. If EPA ever sues GE under Section 309 to compel additional work at the Site, this argument will be ripe for consideration. Nothing in the Consent Decree prohibits the reissuance of an NPDES permit or constrains the conditions imposed in this reissued permit.

Second, the covenants not to sue in the Decree reference a number of provisions of environmental statutes. See Paragraphs 161.a. and 161.b. With respect to the CWA, the covenants reference Section 309 (related to enforcement), Section 311 (related to oil spills), Section 404 (related to discharges of dredged or fill material), and Section 504 (related to imminent and substantial endangerment). In contrast, the covenants do not reference either of the jurisdictional prerequisites of the NPDES program, namely Section 301 and Section 402 of the Clean Water Act. There is simply no evidence that the parties intended the covenants to preclude EPA’s reissuance of the NPDES Permit or constrain the conditions imposed in this reissued permit.

The CWA Section 309 reference in Paragraph 161.b. is among a number of statutory references which, if one reviews the paragraph in its entirety, are clearly intended only to preclude enforcement for injunctive relief designed solely to accomplish the same relief as that which is covered by the Decree, rather than to supplant all or part of the Section 402 CWA NPDES program. The terms used in this covenant are narrowly framed to avoid the potential of the United States using a statutory provision outside of CERCLA or RCRA corrective action to compel GE to take or pay for other CERCLA response actions or RCRA corrective actions.

This is underscored by the language that limits the covenant not to sue to actions to implement “response actions, corrective actions or measures, or other similar judicial or administrative response-type injunctive relief.” This phrase limits the scope of the covenant to include only actions *similar* to the response actions or corrective actions/measures described. “Response actions” is a term under CERCLA which encompasses the CERCLA “removal actions” and “remedial actions.” At the Site, GE is required to perform all but one of the discrete remediation activities as CERCLA removal actions; the remaining activity – the “Rest of River” -- is being performed currently under a RCRA corrective action permit. At the conclusion of the RCRA

corrective action permit process, the EPA will select “corrective measures” under RCRA for the Rest of River. By the clear language, the types of actions included under Paragraph 161.b. are intended to be those similar to the response actions, corrective actions or measures already being undertaken under the Decree – i.e., soil and sediment removal and remediation, ground water remediation, and other steps that address specified areas of past contamination. The NPDES permit, in contrast, addresses different activities, with different purposes, from the Decree’s response actions, corrective actions and measures.

The effluent limitations imposed by the NPDES permit also cannot reasonably be construed to be “other similar judicial or administrative response-type injunctive relief.” An NPDES permit is an authorization to discharge pollutants that would otherwise be prohibited from discharge under Section 301 of CWA. By contrast, an injunction is a prohibitive remedy sought by or issued in response to an administrative or judicial enforcement action.¹ Conditions in an NPDES permit are not injunctive relief.

Furthermore, the Decree demonstrates that where the parties intended to modify or revoke an environmental permit, they did so explicitly. Appendix G to the Decree is the Reissued RCRA Permit for the Rest of River portion of the Site. Prior to Decree entry, GE had been subject to a RCRA corrective action permit to address releases of PCBs and other hazardous waste. In the Decree, the parties agreed to reissue that RCRA corrective action permit to address a different set of activities than in the prior RCRA corrective action permit. To accomplish that, the parties followed the regulatory process for reissuance of a RCRA Permit, including a public comment period and a public hearing. If the parties to the Decree had meant to revoke or modify the NPDES Permit requirements, or to preclude its reissuance, the parties would have stated so explicitly, and followed the applicable regulatory process, including an opportunity for public comment.

Comment 1.C:

GE’s comments include references to Consent Decree terms that relate to discharges, to support GE’s argument that “discharges from the GE Site were fully understood and taken into account at the time that EPA, DEP and the Court all concluded that the Consent Decree would be fully protective of human health and the environment.” Specific references by GE are:

i. in the Upper ½ Mile Reach Removal Action Work Plan (“½ Mile Work Plan” (note GE refers to it as the Statement of Work for the Upper ½ Mile Reach Removal Action)), Performance Standard 7 provides that GE will evaluate potential redeposition of PCBs to the Upper ½ Mile Reach, within 5 years after completion of that Removal Action;

¹ Black’s Law Dictionary, 5th Ed: “Injunction” is “a prohibitive, equitable remedy issued or granted by a court at the suit of a party complainant, directed to a party defendant in the action, ..., forbidding the latter to do some act, or to permit his servants or agents to do some act, which he is threatening or attempting to commit, or restraining him in the continuance thereof, such act being unjust and inequitable, injurious to the plaintiff, and not such as can be adequately redressed by an action at law. A judicial process operating in personam, and requiring person to whom it is directed to do or refrain from doing a particular thing.”

ii. the Statement of Work for Removal Actions Outside the River ("Statement of Work") includes Work requirements for GE for each of the categories of Removal Actions Outside the River, including the Removal Action at Silver Lake. Within the Silver Lake section, the Statement of Work provides Performance Standard 9, which GE asserts bars EPA from requiring additional response actions if the redeposit of PCBs comes from currently known discharges of PCBs into the Lake from NPDES-permitted or other outfalls; and

iii. the Consent Decree specifically addresses discharges from GE's ground water treatment facility, known as the "64G" facility.

Response 1.C:

GE overstates the scope of the cited Performance Standards and the references to 64G. These Consent Decree provisions do not preclude EPA from issuing an NPDES permit consistent with the CWA.

Response 1.C.i:

The Removal Action for the Upper ½ Mile Reach involves the removal, replacement, and restoration of select river sediments and river bank soils in a half mile reach of the Housatonic River, as well as certain habitat enhancement activities. The Performance Standards establish requirements for the conduct of the Removal Action activities and for post-activity sampling and monitoring. Performance Standard 7 requires sampling to determine whether there has been redeposition of PCBs on the surface of the covered/restored sediments in the ½ Mile Reach. If there is redeposition, GE must determine the source of the PCBs and whether the sources are other than those being addressed by GE under the Decree. If so, GE must evaluate, propose, and implement source control measures; but if not, no further response actions shall be required to address such PCBs deposited on the surface of the covered/restored sediments (except under certain circumstances).

EPA's issuance of the final NPDES permit is not a "response action" to address PCBs that have been redeposited on the covered/restored sediments. The permit authorizes storm water and ground water discharges to the River subject to certain limitations. Such limitations are based on technology and water quality requirements of the Clean Water Act. They are not in any way premised on whether or not PCBs have been redeposited on restored or covered River sediments. There is simply no relationship between the requirements of the reissued NPDES permit and the activities that were undertaken under the Removal Action for the Upper ½ Mile Reach and its applicable Performance Standards. Furthermore, an NPDES permit was in existence for the GE facility at the time of the Decree entry. Nothing in the Work Plan for this Removal Action states anything about limiting the applicability of that NPDES permit, foreclosing EPA's authority to reissue a future, more stringent NPDES permit, or constraining the activities that may be required to comply with the terms of any such reissued permit.

Response 1.C.ii:

Since the issuance of the draft permit, areas of GE's Site that generate storm water discharges to Silver Lake have been transferred to the Pittsfield Economic Development Authority ("PEDA").

As a result, the final permit for GE no longer includes authorization of discharges to Silver Lake. Therefore there is no need to respond to GE's comments related to those discharges.

Response 1.C.iii:

The Decree's recognition that remediation-related water would be discharged from the 64G facility does not reflect any intent by the parties to limit or eliminate EPA's authority to impose through the NPDES program appropriate permit limitations to satisfy CWA requirements. Nothing in Attachment H of Appendix E suggests otherwise; rather, it simply notes that treated ground water is discharged under GE's NPDES permit.

Comment 1.D:

GE cites to language from four entries of the Statement of Work's Applicable or Relevant and Appropriate Requirements (ARAR) Tables to support its argument that EPA and the State specifically considered discharges from the Site into surface waters when evaluating the removal actions. GE further asserts that EPA relied on the then-existing (1992) NPDES permit limits to conclude that the discharge of treated waters from 64G would satisfy ARARs related to the federal Clean Water Act and the Massachusetts Surface Waters Act. Finally, GE asserts that EPA considered the ambient water quality criteria that relate to PCBs and concluded that if surface water quality standards are not met by the CERCLA removal actions required by the Decree, no further response actions would be required as part of such removal actions. As a consequence of these various statements in the ARARs Tables, GE claims that the Decree precludes EPA from imposing in the reissued permit any limits more stringent than those in the 1992 permit.

Response 1.D:

As a threshold matter, the only discharges implicated by GE's comment and examples are discharges from Building 64G, the ground water treatment plant at the facility. The storm water discharges covered by this NPDES permit are not addressed anywhere in the Decree. All other discharges that would be associated with the activities identified in the Statement of Work are outside the scope of the permit (although they may be regulated by other NPDES permits, such as the Construction General Permit for storm water discharges associated with construction site activities).

GE's argument that EPA's evaluation of ARARs reinforces GE's position that the Decree "comprehensively regulates PCBs that might be discharged," thereby precluding EPA from reissuing an NPDES permit more stringent than the 1992 permit, fails for several reasons. First, in addition to the ARARs, the Decree requires, in Paragraph 8.a., that all Work required under the Decree be performed in accordance with the requirements of "all applicable federal and state laws and regulations." Nowhere in Paragraph 8.a., in the Decree's definitions section (Section IV), or anywhere else in the Decree, is the term "applicable" limited in time only to requirements in effect at the time of entry of the Decree. Thus, consistent with Paragraph 8.a., discharges from 64G must comply with any CWA requirements that are applicable at the time the discharges occur, including any NPDES permit issued consistent with those requirements.

Second, GE reads too much into EPA's reference to effluent limitations in the "existing NPDES permit" in its conclusion that the discharge of treated waters from 64G would satisfy ARARs related to the federal Clean Water Act (specifically identified as BAT, BCT, and water-quality based effluent limitations and BMPs). GE's narrow interpretation of the term "existing permit" to mean *only* the permit that existed at the time the Decree was entered (i.e., the 1992 permit), and to preclude any reissued permit to the extent that it is more stringent than the 1992 permit, would essentially block implementation of the Clean Water Act at the site, a result that the parties did not intend.

Section 402(b)(1)(B) of the CWA limits the term of NPDES permits to no longer than five years. The fixed term allows permits to be updated to reflect changes in technology, analytic methods, water quality standards and other factors over time, consistent with the goal of the Clean Water Act to restore and maintain the chemical, physical and biological integrity of the nation's waters. When EPA reissues a permit, it is required to establish effluent limitations that reflect current technology and water quality requirements. Indeed, NPDES permit regulations forbid the issuance of a permit if its conditions do not provide for compliance with all applicable requirements of the CWA, or where the imposition of conditions cannot ensure compliance with water quality standards. *See* 40 C.F.R. §§ 122.4(a) and (d); *see also, In re City of Marlborough Massachusetts Easterly Wastewater Treatment Plant*, 12 E.A.D. 235, 250-252 (EAB 2005). Thus, as described in more detail below in Section B of this Response to Comments, EPA was required to establish more stringent limitations on PCBs compared to the 1992 permit, based on updated information about background levels of PCBs and the inability to use receiving water dilution in setting effluent limitations as was done in the 1992 permit. Reissuance of the permit with limits unchanged from the 1992 permit would have been inconsistent with the ARARs that were specifically identified as being applicable to the 64G discharges.

Finally, GE attempts to support its argument about the "existing permit" by reference to ARAR Table 1 (page 1), which contains EPA's attainment determination for "relevant and appropriate" PCB-specific ARARs. The determination states that if ambient surface water quality criteria for PCBs are not met at or adjacent to the CERCLA Removal Actions Areas, "no further response actions to attain the criteria shall be required *as part of such Removal Actions* . . . , because EPA has determined that such further response actions are not practicable *as part of these Removal Actions*" (emphasis added). On the contrary, this language has no bearing on the effluent limitations established by the NPDES permit, which implements CWA requirements that are "applicable" to point source discharges from GE's site. This language simply governs the extent to which additional response actions as part of the Removal Actions would be required.

Comment 1.E:

GE claims that the Best Management Practices (BMPs) required in the proposed NPDES permit are in violation of the agreement set out in the consent decree because the BMPs are *de facto* soil cleanup requirements beyond the work delineated in the settlement agreement.

Response 1.E:

First, nothing in the Decree even refers to ongoing storm water discharges from the Site; it only references storm water associated with construction activities required by the Decree, which discharges are subject to EPA's Construction General Permit for storm water associated with construction site activities, not to this individual permit.

Second, the permit is wholly consistent with EPA's policies and practices with respect to NPDES permits, including the requirement to undertake best management practices ("BMPs"), and is not an impermissible attempt to expand the scope of the "response actions" agreed to under the Decree. While the BMPs can be expected to result in the reduction of PCBs in the storm water discharges, they are far afield from the soil and sediment removal actions required by the Decree.

Within the regulations governing administration of the NPDES Program, 40 C.F.R. § 122.2 defines Best Management Practices as follows: "*Best Management Practices* means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of 'waters of the United States.' BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage." Furthermore, 40 C.F.R. § 122.44(k) authorizes EPA to impose BMPs in NPDES permits in several circumstances, including for the control of storm water discharges; where numeric effluent limits are infeasible; or where BMPs "are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA."

The BMPs in the final permit are included specifically for purposes of effective implementation of the NPDES permitting program for this facility. As discussed further in Section B of this Responsiveness Summary, EPA typically expresses effluent limits on storm water in terms of BMPs rather than numeric pollutant limits because of the difficulty associated with setting numeric limits on intermittent and variable discharges. See, e.g., Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits, issued September 1, 1996; <http://www.epa.gov/npdes/pubs/swpol.pdf>.

In this case, EPA has required a variety of BMPs to enhance the effectiveness of the NPDES permit, as follows:

- The obligation to remove accumulated debris from manholes and catch basins in drainage basins, and the continuing obligation to remove additional such debris, are basic operation and maintenance practices for any storm water collection system. Removal of accumulated solids is necessary to ensure that the collection system does not become blocked or have flow restrictions which inhibit its carrying capacity. Catch basins are specifically designed to remove solids so that they do not enter the conveyance pipes. Failure to remove these solids can reduce the removal efficiency of the catch basin, and in extreme cases, plug the catch basin inlet or outlet. Enhancement of solids removal efficiency is especially critical for this permittee since the main pollutant of interest, PCBs, has an affinity for solids.

- The requirement to remove accumulated debris from five specified oil-water separators is a basic operation and maintenance practice for any treatment system of this type and is especially important in this case given that PCBs have an affinity for solids. Routine removal of accumulated solids will ensure that these solids are not re-suspended and discharged during large storm events. This requirement is also consistent with 40 C.F.R. § 122.41(e), which requires all permittees to “properly operate and maintain all facilities and systems of treatment and control....”
- The requirement to clean, repair, and rehabilitate piping within drainage basins is a typical management practice for collection systems to ensure that transport capacity is maintained. In the GE collection system, these measures will also serve to remove PCBs that are bound to the accumulated solids, and reduce the quantity of PCBs which infiltrate into the collection system from ground water sources.
- The obligation to implement enhancements to oil-water separators, changing them from an underflow to an overflow system and increasing the water storage volume and solids settling capabilities of each, as well as the requirement to implement permanent changes to the solids setting capabilities of certain oil-water separators, will improve the removal of solids from storm water runoff from several drainage areas, and therefore improve the removal of PCBs from the discharge. Such enhancements are “...treatment requirements... to control plant site runoff” as described in the definition of BMPs found at 40 C.F.R. § 122.2.
- With respect to the requirement to place soil and vegetative covers over impervious surfaces in the 60's Complex at the GE Site, reducing storm water runoff by reducing impervious area is a fundamental storm water management technique (See, e.g., EPA's October 30, 2000 Storm Water Multi Sector General Permit for Industrial Activities, Part 4.2.7.2.2.2, Management of Runoff; see also the MSGP reissued on September 29, 2008 at Part 2.1.2.6; and EPA's 1992 guidance entitled “Storm Water Management for Industrial Activities, Developing Pollution Prevention Plans and Best Management Practices,” Part 4.6, Infiltration Practices, http://www.epa.gov/npdes/pubs/contents_indguide.pdf).

B. Clean Water Act Limitations

GE commented that there are substantial Clean Water Act reasons not to impose any more stringent requirements than are already contained in the Draft Permit, such as numeric effluent limits for PCBs. The comments are organized in the following sections:

1. Numeric Storm Water Limits are Unnecessary and Infeasible
2. Numeric Storm Water Limits Cannot be Calculated Until the Remediation Work is Completed
3. More Stringent PCB Limits Would be Inappropriate at 64G
4. The Conditions and Requirements Related to the Mass limits FOR Outfalls 001, 005, and 009 are Inappropriate and Should be Revised, including comments from Section V.D. and from Technical Exhibit 5

Comment 1:

Numeric Storm Water Limits Are Unnecessary and Infeasible

EPA's decision to impose storm water BMPs instead of numeric PCB limits in the Draft Permit is supported by long-standing EPA policy and unique site-specific constraints.

Due to the practical difficulties associated with regulating storm water runoff (*e.g.*, inherent variability and intermittent volume), EPA adheres to an interim permitting policy for water quality-based limits in storm water permits. See *Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits* (EPA 833-D-96-001) (September 1996); see also 61 Fed. Reg. 43,761 (August 26, 1996). EPA's policy is predicated on the technical infeasibility of deriving justifiable numeric limits and the risk of imposing unnecessarily stringent numeric limits. *Id.*

Through its interim permitting policy, EPA recommends BMPs (augmented as necessary in subsequent permit cycles) instead of numeric limits to protect water quality standards. EPA's recommended approach is supported by 40 C.F.R. § 122.44(k), which authorizes BMPs, *inter alia*, where numeric limits are infeasible. EPA's approach also is supported by a string of uniformly favorable court decisions.²

As contemplated in EPA's interim permitting policy, GE's existing and EPA's proposed BMPs render numeric limits unnecessary. Those BMPs include structural measures to reduce solids loadings (including PCBs) and non-structural measures to maximize removal efficiency. See Draft Permit Part I.C and Attachment C.

Site-specific constraints also render numeric limits infeasible. To even approach numeric PCB limits at its storm water outfalls, GE would need to design, construct, operate, and maintain a massive storm water collection, conveyance, storage and treatment system. The system would need to address an approximate 315-acre drainage area (80% of which is impervious) that is in flux due to remedial activity, demolition, reconstruction and City inflow. Due to the size and nature of this drainage basin, the system would need to accommodate very large runoff volumes.

² See *NRDC v. Costle*, 568 F.2d 1369 (D.C. Cir. 1977) (prompting the promulgation of 40 C.F.R. 122.44(k)); *In Re: Arizona Municipal Storm Water NPDES Permits for City of Tucson, Pima County, City of Phoenix, City of Mesa, and City of Tempe*, NPDES Appeal No. 97-3 (EAB 1998) (upholding the permit writer's decision not to impose numeric limits on grounds of infeasibility, in particular, due to the unique nature of storm water discharges in the arid Arizona environment and the uncertainties associated with the impacts of short-term, periodic discharges) (subsequently appealed and decided on other grounds); *Communities for a Better Environment, et al., v. State Water Resources Control Board*, 1 Cal.Rptr.3d 76 (Cal. Ct. App., 2003) (upholding the permit writer's decision not to impose numeric limits on grounds of infeasibility, in particular, due to the need for a comprehensive TMDL study of all sources and causes of impairment, the significant reductions achieved by the permit holder during the previous permit cycle, and the relatively prohibitive costs of additional reductions by the permit holder).

For example, one inch of rainfall results in 6.5 million gallons of runoff, while the 25-year, 24-hour storm event in Pittsfield would produce a runoff volume of approximately 34 million gallons. The location, number and size of the required system components would adversely impact areas of the GE Site slated for Brownfields redevelopment by PEDDA. The system also would be cost-prohibitive to design, construct, operate and maintain.

The factors that militate against numeric limits here (*i.e.*, necessity and feasibility) are precisely the same as the ones that prompted EPA to develop its interim permitting policy and that have led various courts to affirm the use of BMPs to protect water quality standards. The Draft Permit properly reflects this precedent.

Response 1:

NPDES permits may include Best Management Practices ("BMPs") to control or abate the discharge of pollutants, including when authorized under Section 402(p) of the Clean Water Act, when numeric effluent limitations are infeasible, or when the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the Clean Water Act. EPA has concluded that calculation of numeric effluent limitations for PCBs in the storm water discharges authorized by this permit is not technically or administratively feasible at this time. EPA's decision to move forward with non-numeric limits on these industrial storm water discharges is supported by CWA section 402(p), by federal regulations implementing the NPDES permitting program and the EPA Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits ("Interim Permitting Policy"), 61 Fed. Reg. 57,425 (Nov. 6, 1996). As explained in further detail below, EPA may impose numeric effluent limitations on PCBs in storm water discharges in a future permit once more information is known regarding storm water effluent characteristics and receiving water conditions during wet weather.

In order to calculate numeric effluent limitations for NPDES permits, the permit writer typically must be able to determine: (1) the water quality standards for each pollutant of concern in the receiving water; (2) the rate, volume and duration of flow of the effluent; and (3) the rate and volume of flow in the receiving water (for the purpose of ascertaining the effects of dilution and dissipation). In the case of continuous discharges, as from industrial facilities and publicly or privately owned waste treatment works, the rate, volume and duration of flow are known or can be easily measured. Therefore, the effluent's impact upon the receiving water can be estimated with a reasonable degree of accuracy. In the case of intermittent discharges from sources such as storm drains, information regarding rate, volume, duration of flow and quantities and types of pollutants does not typically exist, and the relationship among these parameters is not fully understood. Storm water discharges can be highly intermittent, are usually characterized by very high flows occurring over relatively short time intervals, and carry a variety of pollutants whose source, nature and extent varies according to local land use activities. *See* 55 Fed. Reg. at 48,038; 53 Fed. Reg. at 49,443. Water quality impacts, in turn, also depend on a wide range of factors, including the magnitude and duration of rainfall events, the time period between events, soil conditions, the fraction of land that is impervious to rainfall, land use activities, the presence of illicit connections, and the ratio of the storm water discharge to receiving water flow, among other factors. *See* 53 Fed. Reg. at 49,444. The variability in the system and minimal data generally available often make it difficult to determine with precision or certainty actual and

projected loadings for individual storm water dischargers or groups of dischargers. Storm water discharges accordingly present difficult challenges with respect to calculating numeric water quality-based effluent limitations.

The CWA and its implementing regulations provide EPA the authority to use BMPs, as opposed to numeric effluent limitations, in NPDES permits to control storm water discharges. Section 402(a) of the CWA provides that a permit for the discharge of any pollutant may be issued upon condition that such discharge will meet all the applicable requirements under sections 301, 302, 306, 307, 308, and 403 of the CWA, or prior to taking the necessary implementing actions relating to all such requirements, such conditions as the Administrator determines are necessary to carry out the provisions of the Act. This provision gives EPA substantial flexibility in framing permits to achieve desired reductions in pollutant discharges. *See NRDC v. Costle*, 568 F.2d 1369, 1380 (1977). Federal regulations governing the NPDES permitting program expressly authorize the use of BMPs to control or abate the discharge of pollutants, including when authorized under Section 402(p) of the Act for the control of storm water discharges; numeric effluent limitations are infeasible; or the practices are reasonably necessary to achieve effluent limitations and standards, or to carry out the purposes and intent of the Act. 40 C.F.R. § 122.44(k).

In regulating storm water discharges, EPA has repeatedly expressed a preference for doing so by way of BMPs, rather than by way of imposing water quality-based numeric limitations. *See* Interim Permitting Policy, 61 Fed. Reg. 43,761 and Questions and Answers Regarding Implementation of an Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits (“Interim Permitting Policy Q & A”), 61 Fed. Reg. 57,425 (November 6, 1996). “The interim permitting approach uses 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.” Interim Permitting Policy at 43,761. The rationale for this policy is “the nature of storm water discharges, and the typical lack of information on which to base numeric water quality-based effluent limitations.” *Id.* Some of the specific difficulties in deriving numeric water quality-based effluent limitations are summarized in the policy, and include the variability of storm water discharges in terms of both flow and pollutant concentrations, and the complex relationship between discharges and water quality. Interim Permitting Policy Q & A, 61 Fed. Reg. at 57,427. When it is infeasible for EPA to establish numerical effluent limitations on dischargers, the Agency may issue permits with conditions designed to reduce effluent discharges to acceptable levels. “[T]his may well mean opting for a gross reduction in pollutant discharge rather than the fine-tuning suggested by numerical limitations.” *Costle*, 568 F.2d at 1380.

As discussed in the Fact Sheet and as noted by GE, the approach taken by EPA in this permit is in accordance with the Agency’s storm water policy. EPA has imposed numeric PCB limits on all continuous discharges of PCBs on the GE Site. EPA has not imposed numeric PCB limits on storm water discharges, because the Agency does not currently have appropriate effluent or receiving water characterization to derive numeric limits.³ There are several reasons for this

³ This is in accordance with EPA storm water policy, which provides:

informational gap. First, the prior permit did not require collection of data reflecting the current quality of storm water runoff, nor collection of data from all dry weather discharges from the collection system. Second, the ongoing remediation effort at the site has resulted in substantial changes and reductions in storm water flows and makes a determination of future background conditions difficult. Third, the resuspension of contaminated sediments during storm events is not yet fully understood by EPA. In contrast to disturbance of sediment caused by continuous discharges, the sediment disturbances caused by storm drain discharges will vary according to any number of factors, including the rainfall depth and intensity, and inter-storm duration. Until sufficient information is available regarding the rate, volume and duration of flow of the effluent and the resulting rate and volume of flow in the receiving water (to take into account dilution and flushing patterns during rainfall events), accurate numeric effluent limitations cannot be calculated. To rectify the foregoing, the Final Permit requires effluent data monitoring, including a receiving water sampling program. The monitoring requirements in this permit will serve to provide effluent and receiving water characterization for future analyses.

EPA has also not imposed numeric water quality-based limits on storm water discharges given the considerable technical complexity associated with deriving such limits. Wet weather modeling is technically more difficult, time-intensive, and expensive than the simple dilution models generally used in the permitting process. In light of this, EPA has determined that effluent limitations expressed as BMPs are the most appropriate mechanism to achieve the purposes of the Act. The severe existing impairment in the receiving waters; the need to reduce pollutant loading into such waters in light of the tendency of the pollutants to persist in the sediments and water column, as well as to bioaccumulate; and the fact that the prior permit has long since expired are also factors counseling in favor issuing the permit without additional delay.

EPA has determined that the permit's limits and conditions, taken together, will ensure compliance with applicable water quality standards. Specifically, the permit includes:

- *Numeric Limits on Dry Weather Discharges.* The permit establishes numeric effluent limits for PCBs and sampling requirements for all dry weather discharges. EPA and MassDEP did not consider the use of dilution in establishing PCB limitations and conditions due to the persistence and high rate of bioaccumulation of PCBs in the

“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 in a discharge. Examples of this include the imposition of numeric water quality criteria as end-of-pipe limitations without properly accounting for receiving water assimilation of the pollutant or failure to account for a mixing zone....”

See Answer 5 in the Interim Permitting Policy Q & A.

environment, and to provide a reasonable margin of safety required by the Massachusetts Water Quality Standards under 314 C.M.R. 4.03(1).

- *Updated Storm Water Pollution Prevention Plan (SWPPP) to Further Reduce or Eliminate PCB Discharges.* The permit requires that a SWPPP be updated and implemented for the entire site.
- *Targeted BMPs to Further Reduce or Eliminate PCB Discharges from Areas of Concern.* The permit requires enhanced BMPs for areas which have historically shown higher effluent concentrations of PCBs, including runoff areas 005 and 006. These BMPs include: (1) cleaning and inspection of existing storm sewer components (debris removal from manholes and catch basins; debris removal from oil/water separators; pipeline cleaning and inspection); (2) enhancements to oil/water separators (short-term OWS enhancements; longer-term OWS-related activities); and, (3) physical modifications to drainage basins; modify 60s complex to reduce storm water runoff bypasses).
- *Comprehensive Monitoring Program to Relate Storm Water Discharges to Ambient Water Quality.* The permit imposes a comprehensive effluent and ambient sampling program to allow for a more accurate assessment of the PCB loads entering into the Housatonic River and its tributaries. The data generated by more comprehensive sampling will help in identifying the extent of recontamination and environmental degradation due to storm water discharges from the GE facility. This sampling augmentation coupled with continuous flow monitoring will allow loads entering the receiving waters to be calculated on a per outfall, event and annual basis.
- *Permit Re-opener Based on Monitoring Program.* To ensure compliance with applicable water quality standards in accordance with Section 301(b)(1)(C) of the CWA, the permit includes a re-opener provision under which EPA will assess the results of the monitoring program during the term of permit, and if necessary, modify the permit to include any more stringent limitations to ensure compliance with water quality standards.

While EPA agrees with the general thrust of GE's comment that "GE's existing and EPA's proposed BMPs render numeric limits unnecessary," the Agency wishes to clarify that its specific conclusion is that numeric limits are infeasible at this time based on the current record. In accordance with the Interim Permitting Policy, when "adequate information exists to develop more specific conditions or limitations to meet water quality, these conditions or limitations are to be incorporated into storm water permits as necessary and appropriate." Interim Permitting Policy at 61 Fed Reg. 43,761. Such conditions or limitations may include additional BMPs or numeric water quality-based effluent limitations.

EPA disagrees with GE's interpretation of "infeasibility" as it is used in the Interim Permitting Policy. The Policy refers to the technical infeasibility of developing appropriate numeric water quality-based limits; GE uses the term to describe the infeasibility of constructing treatment adequate to *meet* a numeric water quality based limit. In general, under the Clean Water Act cost considerations or technological feasibility are *not* permissible factors in setting water quality-based effluent limits. *See United States Steel Corp. v. Train*, 556 F.2d 822, 838 (7th Cir. 1977); *see also, In re City of Moscow*, 10 E.A.D. 135, 168 (EAB 2001). 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. Thus, water quality standards and the permit limits based on them may be set so as to force technological advances and environmental progress.

Comment 2:

Numeric Storm Water Limits Cannot Be Calculated Until the Remediation Work is Complete

The ongoing and planned remediation and redevelopment work will alter “background” water quality conditions in Unkamet Brook, Silver Lake and the Housatonic River. Until that work has been completed and a true background has been established, the Agencies cannot calculate or, more importantly, confirm the need for numeric limits for GE’s storm water outfalls.

Water quality-based limits are required whenever a permit writer determines that a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above an applicable water quality criterion (commonly referred to as a “reasonable potential determination”). In making a reasonable potential determination, the permit writer is required to use procedures that account for certain background water quality conditions, including existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and where appropriate, the dilution of the effluent in the receiving water.

Where, as here, water quality conditions are in flux due to ongoing and planned remediation and redevelopment work, the permit writer lacks the necessary inputs to make a reasonable potential determination. Recent precedent bears this out.

For example, remediation of PCB-contaminated sediments in New Bedford Harbor has been underway for over a decade. One of the facilities involved in and affected by the remediation work, Aerovox, Inc., received an NPDES permit for storm water discharges to the Acushnet River/New Bedford Harbor on October 17, 2000 (Permit No. MA0003379). In the fact sheet accompanying that permit, EPA acknowledged that PCBs would be present in the storm water discharge due to past activities at the facility. However, the Agency elected not to impose numeric PCB limits at Aerovox’s storm water outfalls for the following reason:

A true water quality based limit cannot be determined until the sedimentation remediation work is completed and background PCB levels are determined. It is reasonable to assume that remediation of the high concentration of PCBs in the sediments will result in improved background concentrations of PCBs.

Fact Sheet at p. 3.

EPA reached an identical conclusion in the NPDES permit proceeding for Cornell-Dubilier Electronics Corporation, which also discharges storm water contaminated with PCBs to the Acushnet River/New Bedford Harbor (Permit No. MA0003930, December 28, 2000). As in the

Aerovox proceeding, EPA elected not to impose numeric PCB limits at Cornell Dubilier's storm water outfalls due to the ongoing and planned remediation work in the Harbor.

In response to comments on the draft permit, EPA explicitly acknowledged that it was unable to make a determination at [that] time as to whether or not [Cornell Dubilier] causes or contributes to a water quality standards violation due to the ongoing Superfund cleanup activities.

EPA Response to Comment No. 1.

Like the New Bedford Harbor clean-up, the remediation and redevelopment activities associated with the GE Site will alter background water quality conditions in Unkamet Brook, Silver Lake and the Housatonic River. These activities include:

- GE has already completed remediation of the 1/2 Mile reach of the river adjacent to the plant site, including substantial removal of sediments and bank soils, and remediation of NAPL seeps to the river encountered during excavation activities.
- At Silver Lake, remediation will include removal of select bank soils, removal and replacement of identified sediments near an outfall, capping of the entire 26 acre lake bottom, and armoring the perimeter of the lake.
- For the GE Plant Area, GE must meet soil cleanup levels set forth in the CD. In some places, this will involve substantial excavation of soils, backfilling with clean soils, and installation of engineered barriers.
- Pavement will be removed in a 200-foot-wide buffer zone along an area on the northern side of the Housatonic River, in the plant area, to reduce storm water runoff.
- In the Lyman Street and Newell Street parking lots adjacent to the river, GE will install vegetative engineered barriers.
- In the oxbows, soil cleanup standards will be met through excavation of soils where necessary.
- Unkamet Brook will be rerouted to its former channel, and the Unkamet Brook landfill will be capped. Sediments in the brook and adjacent wetlands and floodplain areas will be removed to achieve specific standards.
- GE has conveyed to PEDDA the first portion of the 52 acres of the GE Site scheduled for Brownfields redevelopment (25 acres). PEDDA's redevelopment activities will include, at a minimum, grading, seeding and planting. More fundamentally, PEDDA has indicated that it plans substantial modifications to the existing storm water conveyance and discharge systems.

After this remediation and redevelopment work is complete, EPA will have a basis to determine background PCB levels and the impacts (if any) of storm water runoff from the GE Site on ambient water quality conditions. In the meantime, recognizing that GE is continuing to make progress toward eliminating contaminated storm water runoff, EPA properly followed the New Bedford Harbor precedent and imposed monitor-only conditions at GE's storm water outfalls. It would be arbitrary and capricious for EPA to depart from such precedent in the absence of distinguishing reasons to do so. None have been cited or in fact exist at the GE Site.

Response 2:

EPA acknowledges that an ongoing remediation effort can make a determination of future background conditions difficult. EPA, however, does not agree with the assertion that uncertainty generated by ongoing activity affecting a discharge and its impact on the receiving waters necessarily preclude the establishment of numeric water quality-based limits. Consistent with the Interim Permitting Policy, it is within EPA's authority to impose numeric limits whether or not remediation activities have concluded or other complexities have been fully resolved, so long as there is an adequate record basis to do so.

It is commonplace for EPA to exercise its reasoned judgment in the face of significant technical and scientific uncertainty, as well as informational gaps. At this point in the permitting process, however, EPA did not include numeric limits because the informational gaps were simply too substantial, largely as a result of the lack of adequate information regarding the current effluent characteristics due to the previous permit's sampling requirements, *i.e.*, no mandated storm water sampling.⁴ Still, for the reasons set forth above in GE Response B.1, EPA believes the permit as written will ensure compliance with water quality standards. Based on the results of the monitoring program imposed in the final permit, EPA may determine that numeric limits are necessary if the BMPs and other permit conditions are implemented and effluent and instream sampling show that the discharges continue to have the reasonable potential to cause or contribute to exceedances of water quality standards.

Comment 3:**More Stringent PCB Limits Would Be Inappropriate At 64G**

The PCB limits associated with GE's 64G groundwater treatment facility in the existing Individual Permit are technology-based. *See* Fact Sheet at p. 12. Since those limits already reflect the most stringent level of control technology required by the Clean Water Act, EPA lacks both authority and justification to impose more stringent technology-based limits in the Draft Permit. Even if the limits were water quality-based, it would be premature to impose more

⁴ As with the permits cited by GE, EPA specifically considered the uncertainties associated with ongoing remediation activity when determining whether to establish numeric effluent limits for PCBs in GE's permit at this time:

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. Until recently, many of the storm drain discharges covered by the permit also contained industrial process discharges, and monitoring was not required to be conducted during wet weather. Also, site remediation activities conducted under the consent agreement and other improvements have generally reduced PCB concentrations in discharges, and the wet weather data which has been collected has shown a wide variability in effluent PCB concentrations.

See Fact Sheet at 9.

stringent limits at this time. In any event, such limits would run afoul of the CD.

1. *The Best Available Technology Is In Place*

GE already has achieved the most stringent level of control required of it under the Clean Water Act. Achieving more is infeasible. Requiring more is arbitrary and capricious.

Where, as here, a limit is not required by EPA's national effluent guidelines, then a case-by-case technology-based limit, derived using best professional judgment ("BPJ"), may be imposed only if the permit writer performs the analysis required in 40 C.F.R. § 125.3. As part of that analysis, the permit writer must consider:

- a. the appropriate technology for the category or class of point sources of which the applicant is a member, based upon all available information; and
- b. any unique factors related to the applicant.

The permit writer also must consider the factors in § 125.3(d), which, for the most stringent level of control conceivably applicable to GE ("best available technology economically achievable" or "BAT"), include:

- a. The age of equipment and facilities involved;
- b. the process employed;
- c. the engineering aspects of the application of various types of control techniques;
- d. process changes;
- e. the cost of achieving such effluent reduction; and
- f. non-water quality environmental impact (including energy requirements).⁵

When conducting the required § 125.3 analysis, the permit writer must look at both the industry as a whole and the particular facility.⁶ In other words, before imposing a technology-based PCB limit on GE at 64G, the permit writer would need to conduct a reasoned analysis of control technologies available for PCB removal at groundwater remediation facilities generally, and at the 64G groundwater treatment facility in particular.

⁵ 40 C.F.R. § 125.3(d)(1).

⁶ See *U.S. Steel Corp. v. Train*, 556 F.2d 822, 844 (7th Cir. 1977); *Alabama v. EPA*, 557 F.2d 1101, 1110 (5th Cir. 1977).

Activated carbon has been recognized as the most widely practiced treatment method for PCBs in the aqueous phase. See, e.g., *Guidance on Remedial Actions for Superfund Sites with PCB Contamination* (EPA, 1990); *Granular Activated Carbon and Biological Activated Carbon Treatment of Dissolved and Sorbed Polychlorinated Biphenyls* (Ghosh, U., A. S. Weber, et al., Water Environment Research 71(2): 232-240, 1999); *Hudson River Water PCB Treatability Study* (O'Brien & Gere Engineers, Inc., 1982).

Activated carbon also has been determined to be BAT by EPA. See *Removal of Endocrine Disruptor Chemicals Using Drinking Water Treatment Processes* (EPA-625-R-00-015, 2001) (“[Granular activated carbon] is the BAT for removal of [PCBs]”). Consistent with this determination, EPA has used activated carbon in its own remediation projects.

For example, in New Bedford Harbor, EPA relied on two granular activated carbon units in series, with a design capacity of 350-400 gallons per minute, to achieve a discharge limit of 0.6 µg/L PCBs. Similarly, at this Site, in the ongoing remediation of the 1½ Mile Reach of the Housatonic River, EPA relies on two granular activated carbon units in series, with a design capacity of 400 gallons per minute, to achieve a discharge limit of 0.5 µg/L PCBs.⁷

In the current proceeding, GE already has an activated carbon treatment system in place. GE’s 64G groundwater treatment facility relies on four granular activated carbon units in series, with a design capacity of 700 gallons per minute (nearly twice that of EPA’s two treatment systems referenced above). The performance data for GE’s system over the past ten years (March 1994 to July 2004) indicate that GE can achieve a discharge limit of 0.5 µg/L PCBs (consistent with and, in some cases, even better than the performance at EPA’s own treatment systems).

Based on both general and site-specific information about available control technologies, activated carbon treatment indisputably is BAT. EPA cannot direct GE to go beyond BAT. Nor can EPA impose more stringent PCB limits than BAT is designed to achieve.

2. *Numeric PCB Limits Cannot Be Calculated Until The Remediation Work Is Complete*

Even assuming that the limits at 64G were water quality-based, it would be premature to impose more stringent limits until background water quality conditions have been established (*i.e.*, following completion of remediation and redevelopment). See Section V.B above (in particular, with respect to the pending remediation in Unkamet Brook, upstream of 64G).

Even if such conditions could be established, more studies of treatment options would be needed before EPA would have a legitimate basis to impose more stringent water-quality based PCB limits. EPA acknowledges the need for additional studies before water-quality based PCB limits could be determined in the Draft Permit, which calls for GE to complete PCB treatment capability and optimization evaluations of the 64G treatment system. See Draft Permit Part I.D.

⁷ It would be arbitrary and capricious for EPA to prescribe a double standard (one for itself and the other for the regulated community) for the same type of activity and the same treatment technology.

3. *More Stringent PCB Limits Would Run Afoul Of The Consent Decree*

GE believes that imposition of more stringent limitations at 64G would trigger additional “response actions” preempted by the Consent Decree. That said, in a number of past circumstances, GE has elected not to exercise all of its potential legal appeal rights and, as a consequence, has undertaken a number of discretionary environmental actions in Pittsfield in order to further site-wide remediation and development objectives. GE will determine whether to appeal specific NPDES requirements after the Agencies issue the final permit.

Response 3:

EPA approaches water quality-based limits for storm water differently than water quality-based limits for dry weather discharges from storm drains. The permit requirements for “wet weather” discharges (storm water) are different than for “dry weather” (non-storm water) discharges. In accordance with EPA’s Interim Permitting Policy, numeric water quality-based limits for storm water discharges are generally not imposed due to infeasibility. Numeric limits for dry weather discharges are not covered by the Interim Permitting Policy, and numeric limits have accordingly been imposed for such discharges on the GE site that have a reasonable potential to cause or contribute to exceedances of water quality standards.⁸

The permittee’s specific argument relative to BAT limits for 64G mistakenly assumes that the 64G effluent limit for PCBs is technology-based. EPA established the PCBs effluent limit for 64G on a water quality basis. The Fact Sheet stated that the discharge contains PCBs exceeding the applicable water quality criteria, and that the representative monitoring point for dry weather discharges from outfall 005 was the discharge from 64G, which was meant to show that there was reasonable potential for the discharge to cause or contribute to an exceedance of water quality standards, necessitating a water quality-based limit.⁹ When writing NPDES permits, the

⁸ “Storm water” means storm water runoff, snow melt runoff, and surface runoff and drainage (see 40 C.F.R. § 122.26 (b)(13)). Therefore, discharges from storm drains that do not include these flow components are not storm water. “Dry weather” discharges consisting solely of groundwater infiltration, illicit connections, industrial processes, or city water are not discharges of storm water and are not subject to regulations or policies pertaining to storm water.

Some storm water NPDES permits authorize the discharge of “non-storm water” discharges with no specific effluent limitations or monitoring requirements, but require that such discharges be uncontaminated (see, for example the Multi-Sector General Permit for Industrial Activities Part 1.2.2.2). GE has dry weather discharges from many of its outfalls during dry weather, including flows from groundwater infiltration, treated groundwater, city water, and unknown flows, but because of the contamination of the GE site, these “non-storm water” or “dry weather” discharges are contaminated with pollutants.

⁹ The fact sheet states as follows:

Because there is a continuous dry weather discharge from outfall 005 which contains PCBs exceeding the applicable water quality criteria, the **proposed draft permit** includes PCB monitoring requirements and limitations for the dry weather discharge

permit writer must compare the water quality-based effluent limits to any technology-based effluent limits developed for particular pollutants and incorporate the more stringent set of effluent limitations into the permit. CWA § 301(b)(1)(C); 40 C.F.R. § 122.44(d). Because the water quality-based limit for 64G is more stringent than the technology-based limit, EPA has included it in the final permit.

As stated in the fact sheet, the technology-based limits for outfall 005 are from the prior permit and are applied at the discharge from outfall 005 (the outfall of the pipe into which 64G discharges).¹⁰ EPA retained the technology-based limit for discharge 005, which includes discharges from 64G and 64T. EPA applied a water quality-based limit to 64G, which consists of a continuous discharge of treated groundwater. The prior permit includes mass limits for PCBs at outfall 005, calculated for the prior permit using a technology-based monthly average concentration of 1 ug/l and a daily maximum concentration of 3 ug/l, and a flow of 1.08 MGD. In the modification settling the appeal of the prior permit, the flow limit was raised to 2.09 MGD to allow for the tie-in of 64G, pursuant to a state order but limits were not increased.

However, based on information submitted by GE in its comments (see GE Technical Exhibit 1, Discharge Outfall Descriptions), it is clear that there are additional dry weather discharges to outfall 005 from 64T and from groundwater infiltration. Therefore, the monitoring location for the water quality-based PCB effluent limitation has been moved to the end of the 005 discharge pipe, downstream of the discharges from both 64G and 64T, the same location that the technology-based limits apply. The PCB effluent limitation for 64G has been removed. The monitoring requirements for 64G remain in the permit, as does the 64G capability study and the 64G optimization requirement found in Part D of the permit. A capability study has been added for treatment plant 64T to ensure that the dry weather discharge from this facility will not cause a violation of the dry weather discharge PCB limit at outfall 005.

As will be discussed in subsequent responses, in the Draft Permit EPA erred in expressing the

from this outfall. The proposed draft permit includes a quarterly monitoring requirement for whole effluent toxicity, since there is a continuous dry weather discharge located in a drainage basin with heavily contaminated soil, and since there is inconclusive toxicity test results (due to the combined composition of the samples). Since the dry weather flow consists almost entirely of effluent from the 64G treatment plant, the representative monitoring location has been established at the discharge from the 64G treatment plant. The **proposed draft permit** PCB limitation is established at the minimum level of the Modified Method 8082 (i.e., the minimum level, or ML, refers to the level at which the entire analytical system gives a recognizable mass spectra and acceptable calibration points when analyzing for pollutants of concern; this level corresponds to the lowest point at which the calibration curve is determined), and the draft permit contains a compliance schedule for attaining this limit (See: Part I.G. of the draft permit).

¹⁰ The fact sheet for the prior permit states that a water quality-based limit was calculated for outfall 005 but was less stringent than the technology-based requirement. This is because dilution was used (7Q10 = 13.6 cfs and annual flow = 120 cfs).

water quality-based PCB limits as the minimum level (ML) of the analytical test.¹¹ Cost and technological considerations are not permitted under the CWA to be considered by the permit-writer when setting water quality-based effluent limits. Thus, the limit in the Final Permit is based on the aquatic life water quality criteria. The compliance limit will continue to be the ML of the analytical test. In addition, since improvements to test methods are ongoing, EPA has also added a footnote stating that: "If a lower minimum level (ML) becomes available using an EPA-approved method, the enforcement limit will change to the more stringent ML limit."

The issue in the comment regarding whether numeric PCB limits would run afoul of the Consent Decree is addressed in EPA's responses above.

Comment 4:

The Conditions And Requirements Related To The Mass Limits For Outfalls 001, 005 And 009 Are Inappropriate And Should Be Revised

The Draft Permit imposes effluent limitations, including discharge conditions and sampling and analytical requirements, for total suspended solids ("TSS") and oil and grease ("O&G") at Outfalls 001, 005, and 009 during "wet weather." As described in more detail in GE Technical Exhibit 5, GE objects to the imposition of the mass limitations, particularly in relation to the discharge conditions and sampling and analytical requirements, and to the justification provided for imposition of the mass limitations. As a general matter, it is inappropriate to subject these discharges of storm water runoff to numeric limits. Assuming, though, that the Agencies retain these mass limits, then the discharge conditions and sampling/analytical requirements related to those limits need to be revised.

Response 4:

EPA has responded to this comment in detail in our response to the comments in GE's Technical Exhibit 5 (see Comment 7). Our general response is that the numeric mass limits in the Final Permit are not newly imposed but are technology-based limits from the prior permit, issued in 1992. In the Final Permit, EPA has reverted to the sampling conditions in the 1992 permit for determining compliance with the BPJ limitations for TSS, BOD, and oil and grease for outfalls 005 and 009 (again outfall 001 is no longer included in the permit).¹² Specifically, a twenty four hour composite sample is required, with no conditions for rainfall. EPA will expect that GE sample these outfalls according to a routine sampling schedule which will result in sampling

¹¹ The fresh water criterion continuous concentration (CCC) for PCBs is 0.014 ug/l, measured as total PCBs (*i.e.*, chronic criterion). The human health criterion for PCBs is 0.000064 ug/l, measured as total PCBs (*i.e.*, long term human health exposure). The minimum detection level (MDL) for the modified method 8082 is 0.014 ug/l, and the minimum level (ML)/enforcement limit in the permit is 0.065 ug/l.

¹² Outfall 001 is no longer included as an authorized discharge in the permit. Outfall 001 was removed because it was transferred to the Pittsfield Economic Development Agency (PEDA) on May 2, 2005 as part of the land transfer from GE to PEDA.

during whatever weather conditions are occurring on that day, which will ensure that the data are representative.

Comment 5:

The Draft Permit proposes the collection of an initial grab sample within the first 30 to 60 minutes of a storm event, as well as a 3-hour flow weighted composite sample, for TSS monitoring at Outfalls 001, 005 and 009. The requirement for an initial grab sample is inappropriate for TSS levels when a discharge includes dry and wet flow that has been routed through wastewater treatment systems. That grab sample requirement should be deleted. In addition, the use of 3-hour flow weighted composite samples is not appropriate or justified for a continuous discharge from a treatment system, such as those related to these outfalls (*i.e.*, oil-water separators and water treatment facilities). The use of a 24-hour time-weighted composite will capture entire runoff events thus providing more representative data, and will provide data that are consistent with historic data sets.

The Draft Permit recommends that monitoring be conducted at a number of discharge locations for a number of parameters during “wet weather.” In addition, the Draft Permit proposes application of the monthly average mass limits to this specific discharge condition at Outfalls 001, 005 and 009. In the Draft Permit, “wet weather” is defined as “a storm event with at least 0.1 inches of precipitation, providing the interval from the preceding storm is at least 72 hours.” The inclusion of a 72-hour dry period requirement in the definition of wet weather is not justified or appropriate, and this requirement will result in the collection of fewer and less representative data. GE therefore proposes that a 24-hour dry period be used in the definition of wet weather. The use of 24-hour dry period criteria will allow for the opportunity to collect more wet weather data, therefore providing a more representative data set that can routinely support calculation of monthly averages.

Response 5:

The Draft Permit required that wet weather (*i.e.*, storm water) samples be collected as 3-hour flow-weighted composites to reflect sampling requirements found at 40 C.F.R. § 122.21(g)(7)(ii). These regulations specify sampling requirements for permit applications for storm water discharges from existing manufacturing, commercial, mining and silviculture discharges. These regulations specify that samples be collected from a discharge resulting from a storm event that is greater than 0.1 inch and at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) event. The regulation further specifies that “a flow weighted composite sample shall be taken for either the entire discharge or for the first three hours of the discharge,” and that the storm water sample “may be taken with a continuous sampler or as a combination of a minimum of three sample aliquots taken in each hour of the discharge for the for the entire discharge or for the first three hours of the discharge, with each aliquot being separated by a minimum period of fifteen minutes.” The regulation allows EPA latitude to establish different sampling protocols, including time duration between the collection of aliquots for flow weighted composite sampling, as well as minimum duration between storms and precipitation required for an appropriate storm event. EPA recognizes that the cited regulation pertains to collection of storm water discharge data for permit applications and does not directly

require the same protocols for monitoring required in an NPDES permit. However, to ensure consistency between data collected for permit applications and data collected pursuant to NPDES permit requirements, EPA believes that the protocols should be as similar as possible for reasons of administrative efficiency.

It is unclear why the commenter believes that 3-hour composites (with a grab sample within 30 minutes) are inappropriate for discharges with continuous flow and treatment systems, and thus EPA cannot respond specifically to the commenter's concern. The sampling protocols found at 40 C.F.R. § 122.21(g)(7)(ii) do not differentiate between treated and untreated discharges, nor do they recommend different protocols for storm drains containing non-storm water flows. EPA believes that early grab samples, or flow weighted composites, are critical to gathering representative storm water data because they will characterize first flush effects, as accumulated pollutants on the surface and settled in the collection system are transported, treated and discharged, and also better characterize the total mass discharged during a storm event.

EPA disagrees with the comment that a 24-hour time weighted composite be used in lieu of the 3-hour composite required in the Draft Permit, and does not regard the commenter's rationale for such a change (it will be more representative of the discharge and will be consistent with past data) as persuasive. As can be seen from the sampling protocol in 40 C.F.R. § 122.21(g)(7), EPA has a strong preference for flow weighted composites for the reasons cited above (also see *NPDES Storm Water Sampling Guidance Document*, July 1992 part 2.7.5, page 25). EPA also disagrees that it is important to make the sampling period consistent with that in the prior permit. The monitoring requirements in the prior permit were not established to characterize storm water discharges from the facility, and a 24-hour monitoring period is not the appropriate sampling period, except for a storm of 24-hour duration or longer. Given that the permittee has expressed a preference for longer sampling periods for composite samples, that flow metering is in place for all major storm water outfalls (making the use of automatic samplers possible), and that such collection periods are acceptable under the sampling protocol in 40 C.F.R. § 122.21(g)(7), EPA has changed the permit requirements for composite "wet weather" samples to require flow weighted composite samples collected for the duration of the storm event.

For those pollutants required to be sampled as grabs, these are still required to be collected during the first 30 minutes of the storm, consistent with the 40 C.F.R. § 122.21(g)(7) sampling protocol.

Regarding the request to change the minimum duration between storms from 72 hours to 24 hours, EPA agrees that shortening the minimum duration will allow the collection of more samples and will probably not significantly change the measured characteristics of the discharge. EPA has therefore reduced the minimum duration between storms from 72 to 24 hours.

A more extensive discussion of these issues may be found in GE Response B7.

Comment 6:

Outfall 001, which receives mostly municipal runoff, is subject under the Draft Permit to requirements that are much more stringent than EPA imposes on discharges from municipal