

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I - NEW ENGLAND
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

FACT SHEET

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES.

NPDES PERMIT NO. : **MA0003891**

NAME AND ADDRESS OF APPLICANT:

**General Electric Company
159 Plastics Avenue
Pittsfield, MA 01201**

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

**General Electric Company
159 Plastics Avenue
Pittsfield, MA 01201**

RECEIVING WATERS: **Housatonic River (East Branch), Unkamet Brook, and Silver Lake**

CLASSIFICATION: **B, Warm Water Fishery** (Housatonic River Watershed)

I. Proposed Action, Type of Facility and Discharge Location.

The above named applicant has applied to the U.S. Environmental Protection Agency 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. This permit, after it becomes effective, will expire five (5) years from the effective date. The facility's location is shown on **Figure 1** of this fact sheet.

II. Description of Discharge

A quantitative description of the discharge in terms of significant effluent parameters based on recent monitoring data is shown on **Attachments D - Q** of this fact sheet.

III. Limitations and Conditions

The effluent limitations and all other requirements described herein may be found in the draft permit. The basis for the limits and the other permit requirements is described below.

IV. Permit Basis and Explanation of Effluent Limitation Derivation

A. SITE DESCRIPTION

The General Electric Company, Pittsfield, Massachusetts facility is located on 254 acres of land located along the East Branch of the Housatonic River and its tributaries. The facility's outfalls discharge to the East Branch of the Housatonic River, Unkamet Brook, and Silver Lake.

General Electric's current industrial activities at the site include market development (i.e., molding and extrusion studies) and a small Lexan sheet laminating operation that assembles and tests various sheet products typically used as window materials.

In the past, General Electric ("GE", or "the permittee") manufactured additives and monomers for finished resins and produced zinc oxide powder for lighting arrestor disks and until 1990, manufactured and serviced large electrical transformer equipment and military hardware. These operations resulted in the discharge of transformer fluids, containing polychlorinated biphenyls (PCBs), to the ground and into the storm water collection system. (See Also: **Attachment U - Site History and Description**)

Currently, the GE facility is subject to environmental study and remediation activities pursuant to a Consent Decree (CD) executed by EPA, MADEP, GE, and several other government agencies (entered on October 27, 2000) in the United States District Court for the District of MA. The CD requires (among other things) response actions to address polychlorinated biphenyls (PCBs) and other hazardous constituents in soils, sediments, and groundwater in several areas at and near the GE Pittsfield, MA facility.

GE has executed a Definitive Economic Development Agreement (DEDA) with the Pittsfield Economic Development Authority (PEDA) and the City of Pittsfield regarding the transfer of approximately 52 acres of land to PEDA in the near future. The land is targeted to be used for commercial development. The following outfalls are located on this 52 acre parcel, which discharge into Silver Lake and are currently permitted to GE: 001, 01A, 004 and YD3.

B. NPDES PERMIT HISTORY

GE currently holds two NPDES permits. An individual NPDES permit, MA0003891, was jointly issued by EPA and the MADEP on September 30, 1988, became effective on February 7, 1992 upon resolution of the permittee's evidentiary hearing request, was modified on May 21, 1992 and expired on February 7, 1997, and remains in effect pursuant to 40 C.F.R. § 122.6. GE has also obtained coverage under the Multi-Sector General Storm Water Permit for Industrial Activities (MSGP) issued on October 30, 2000, for a number of storm water discharges. During the past several months, EPA and the MADEP held several technical meetings for the purpose of gathering additional information and to clarify GE and PEDA's future site plans.

Individual NPDES permit

The company's individual NPDES permit, MA0003891, authorizes the discharge of wastewater from outfalls to the East Branch of the Housatonic River, Unkamet Brook, and Silver Lake. The permit authorizes the discharges from various industrial sources, including treated process water, contact and non-contact cooling water, and storm water runoff. (Outfalls containing only storm water were not covered by this permit). The permit also establishes monitoring requirements and limitations at a number of internal monitoring locations. Several of these monitoring locations were established to ascertain compliance with technology-based metal finishing limits, one was to monitor the discharge from the thermal oxidizer scrubber water, and two were established to monitor the discharge from the groundwater treatment plant and the storm water treatment plant, respectively. The table in **Attachment A** shows the outfalls and flow components authorized by the 1992 permit which are still owned and operated by GE.

GE has made many changes to the wastewater discharges since the current individual permit was issued. Major changes include: (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. The current status and flow schematic, showing the flow components through each permitted outfall, is also shown on **Figure 2** of this fact sheet.

On September 21, 1993, EPA issued a minor permit modification to GE to allow the transfer of permit responsibility, coverage, and liability for outfall 011 from GE to the Martin Marietta Corporation. A written agreement, signed by the two companies on June 3, 1993, preceded this action. The limitations and conditions in Martin Marietta's permit were identical to the limits and conditions in GE's permit, except that GE remained solely responsible for the whole effluent toxicity testing requirement. Permit decisions related to the outfalls owned by General Dynamics will be handled independently from the GE Permit.

General Permit Coverage

The company received coverage under EPA's Multi-Sector General Storm Water Permit (MSGP) for Industrial Activities issued on October 30, 2000 (see 65 Federal Register 64746) for 26 storm water outfalls. Based on Standard Industrial Classification codes of 2821, 3612, and 3629, the permittee is covered under Sector C (Chemical Allied Products) and Sector AC (Electronic and Electrical Equipment and Components). Seven of these storm water outfalls discharge to Unkamet Brook, two discharge into Silver Lake, and 17 discharge into the East Branch of the Housatonic River.

The proposed draft permit for this facility includes the discharges currently covered under the MSGP, except for 9 outfalls which were determined to be non point source discharges (i.e the discharge is not conveyed via a pipe or other point source discharge as defined by the CWA). When the draft permit becomes effective, the company's 17 point source storm water discharges which are currently covered under the MSGP (listed on **Attachment B** of this fact sheet) will be covered under the individual permit and coverage under the MSGP will be automatically revoked.

C. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. Overview of Federal and State Regulations

The Clean Water Act (CWA) requires that discharges satisfy both minimum technology and water quality requirements. The minimum technology requirements which are presently applicable are Best Practicable Control Technology Currently Available (BPT), Section 301(b)(1)A of the CWA; Best Available Technology Economically Achievable (BAT) for toxic pollutants, Section 301(b)(2)A; and Best Conventional Pollution Control Technology (BCT), Section 301(b)(2)E which applies to conventional pollutants. In the absence of technology based guidelines EPA is authorized to use Best Professional Judgement (BPJ) in accordance with Section 402(a)(1) of the Clean Water Act.

The antibacksliding requirements at 40 CFR 122.44(l) state that, subject to certain exceptions, " ... when a permit is renewed or reissued, interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards or conditions in the previous permit ... unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62."

Section 301(b)(1)(C) of the Clean Water Act requires water quality-based limits in NPDES permits when EPA and the State determine that effluent limits more stringent than technology-based limits are necessary to maintain or achieve state water quality criteria. Receiving water requirements are established according to numerical and narrative standards adopted under state law. A water quality standard consists of three elements: (1) beneficial designated use(s) for a water body or segment of a water body; (2) a numeric or narrative water quality criteria sufficient to protect the designated use(s); and (3) an anti-degradation requirement to ensure that once a use is attained, it will be maintained. The Massachusetts State Surface Water Quality Standards include both narrative and numeric criteria to control toxic pollutants. The narrative criterion states:

All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.

Whenever criteria are not specified in the regulations, the Massachusetts State Surface Water Quality Standards incorporate the EPA recommended numerical criteria established pursuant to Section 304(a)(1) of the CWA except where a site specific limit is established. The Massachusetts Department of Environmental Protection's (MADEP) Division of Watershed Management has a current toxics policy which requires toxicity testing for all major dischargers such as the General Electric Company. In addition, EPA has determined that toxicity testing is required to assure that the synergistic effect of the pollutants in the discharge does not cause toxicity, even though the pollutants may be at low concentrations in the effluent. Thus, the proposed draft permit includes a whole effluent toxicity monitoring requirement for the 64G discharge to assure that the General Electric Company does not discharge combinations of toxic compounds into the East Branch of the Housatonic River from outfall 005 in amounts which would affect aquatic or human life.

Consistent with the 2002 EPA National Toxicity Guidance Document, the proposed draft permit includes a requirement to calculate the minimum significant difference (MSD) (i.e., a measurement of the test's sensitivity), report the IC₂₅ and C-NOEC endpoints, and report the endpoint that most closely represents the test result based on the interpretation of the dose response curve. This additional information and analysis is new for this permit and will assist EPA and the MADEP with determining compliance with the *Massachusetts Water Quality Standards Implementation Policy for the Control of Toxic Pollutants in Surface Waters*, dated February 23, 1990.

Pursuant to 40 CFR § 122.44 (d), permittees must achieve water quality standards established under Section 303 of the CWA, including state narrative criteria for water quality. Additionally, under 40 CFR § 122.44 (d)(1)(i), "Limitations must control all pollutants or pollutant parameters which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard." When determining whether a discharge causes, or has the reasonable potential to cause or contribute to an in-stream excursion above a narrative or numeric criterion, the permitting authority shall use procedures which account for existing controls on point and non-point sources of pollution, and where appropriate, consider the dilution of the effluent in the receiving water.

The Massachusetts Surface Water Quality Standards (MASWQS) are set forth at 314 CMR 4.00, et seq. Massachusetts General Laws (M.G.L.) C. 21, §§ 26 through 53 charges the MADEP with the duty and responsibility to protect the public health and enhance the quality and value of the water resources of the Commonwealth. It directs the MADEP to take all action necessary or appropriate to secure to the Commonwealth the benefits of 33 U.S.C. §§ 1251 *et seq.* (the federal Clean Water Act). The objective of 33 U.S.C. §§ 1251 *et seq.* is the restoration and maintenance of the chemical, physical, and biological integrity of the Nation's waters. To achieve the foregoing requirements the MADEP has adopted the MASWQS, which designate the most sensitive uses for which the various waters of the Commonwealth shall be enhanced, maintained and protected; which prescribe the minimum water quality criteria required to sustain the designated uses; and which contain regulations necessary to achieve the designated uses and maintain existing water quality including, where appropriate, the prohibition of discharges.

Pursuant to 40 CFR §122.62 (b)(2), EPA may modify, or revoke and reissue a permit after it has become effective after EPA has received notification of a proposed transfer of the permit. A permit may also be modified to reflect a transfer after the effective date of an automatic transfer, but will not be revoked and reissued after the effective date of the transfer except upon the request of the new permittee.

2. Water Quality Standards; Designated Uses:

Silver Lake, Unkamet Brook, and the East Branch of the Housatonic River are classified as Class B warm water fisheries by the Massachusetts Department of Environmental Protection (MADEP) in the Massachusetts Surface Water Quality Standards, 314 Code of Massachusetts Regulations ("CMR") 4.05(4)(a).

The Massachusetts Surface Water Quality Standards describe Class B waters as having the following designated uses: (1) a habitat for fish, other aquatic life, and wildlife, (2) primary and secondary contact recreation, (3) a source of public water supply (i.e., where designated and with

appropriate treatment), (4) suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses, and (5) shall have consistently good aesthetic value. Primary contact recreation is defined as any recreation or other water use in which there is prolonged and intimate contact with the water with a significant risk of ingestion of water. These include, but are not limited to, wading, swimming, diving, surfing and water skiing. Secondary contact recreation is defined as recreation or other water use in which contact with the water is either incidental or accidental. These include but are not limited to fishing, boating and limited contact incident to shoreline activities. The MASWQS also describe Class B warm water fisheries as having an instream temperature that shall not exceed 83 °F (28.3 °C), and that the rise in temperature due to a discharge shall not exceed 3 °F (1.7 °C) in lakes and ponds, or 5° (2.8°C) in rivers and streams, and the receiving waters shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable taste to the edible portions of aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life.

The segment of the East Branch of the Housatonic River into which the GE facility discharges is identified in the Massachusetts Year 2002 Integrated List of Waters as not achieving water quality standards due to priority organics, unknown toxicity, pathogens, and cause unknown.

3. Polychlorinated Biphenyls (PCBs)

Chemistry, Toxicology, and Water Quality Criteria

Polychlorinated biphenyls (PCBs) are a category, or family, of chemical compounds formed by the addition of chlorine (C_{12}) to biphenyl ($C_{12}H_{10}$), which is a dual-ring structure comprised of two 6-carbon benzene rings linked by a single carbon-carbon bond. PCBs are manufactured as mixtures that include a number of different molecules that exhibit a wide range of physical properties, bioavailability and toxicity. (see **Attachment T** for a more complete description of PCB chemistry).

The human health and ecological risks associated with PCBs are a function of the toxicity of PCBs and the exposure. PCBs are known to cause cancer in animals and are classified as a probable human carcinogen by numerous national and international health-protective organizations, such as the EPA, the Agency for Toxic Substances and Disease Registry (an arm of the U.S. Public Health Service) and the World Health Organization. Research also links PCB exposure to developmental problems.

PCBs are highly lipophilic (fat soluble) and are rapidly accumulated by aquatic organisms and bioaccumulate through the aquatic food chain. Concentrations of PCBs in aquatic organisms may be two thousand to more than a million times higher than the concentrations found in the surrounding waters, with species at the top of the food chain having the highest concentrations. Tissue analyses of fish from the Housatonic River show elevated concentrations of PCBs.

Pursuant to the Massachusetts Surface Water Quality Standards, 314 Code of Massachusetts Regulations ("CMR") 4.03(1), the MADEP shall provide a reasonable margin of safety to account for any lack of knowledge concerning the relationship between the pollutants being discharged and their impact on water quality. Therefore, due to the persistence and high rate of bioaccumulation of PCBs in the environment, and to provide a reasonable margin of safety required by the Massachusetts Water Quality Standards under 314 CMR 4.03 (1), EPA and MADEP did not consider the use of dilution in establishing PCB limitations and conditions.

Impacts on human health due to exposure to waterborne toxicants can occur through three primary exposure routes: contact recreation, drinking water, and the ingestion of contaminated fish and shellfish tissues. Contact recreation may pose potential risks due to dermal absorption and incidental ingestion. Exposure through drinking water is a significant concern but can be mitigated for specific chemicals by applying drinking water criteria. The third exposure route, human consumption of contaminated aquatic life, is of primary concern due to the potentially high concentrations achieved in fish and shellfish tissues from bioaccumulation.

EPA has established water quality criteria for the protection of aquatic life and human health. The most recently published criteria may be found in National Recommended Water Quality Criteria: 2002. The Commonwealth of Massachusetts uses the recommended limit published by EPA pursuant to Section 304(a) of the CWA except where a site-specific limit is established.

Aquatic life criteria are based on protection of aquatic life. Acute criteria are derived from 48 hour and 96 hour tests of lethality or immobilization; chronic criteria are derived from longer term tests that measure survival, growth, reproduction, or in some cases bioaccumulation (see: EPA Technical Support Document, page 34). The 2002 recommended water quality criteria do not include an acute fresh water criterion for PCBs. 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).

Analytical Methods

The proposed draft permit includes a requirement to use Method 8082 (and Modified Method 8082 which has a lower detection limit) to test for PCBs in the discharges at this site, since Method 8082 is widely used for instream surface water analysis and is widely accepted in the scientific community, and since GE has provided numerous instream test results using this method. 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 CFR 136.3 (c) as necessary for a more complete quantification of PCBs. EPA approved method 608 only has a detection level of 0.5 ug/l which may result in an incomplete quantification of total PCBs compared to Method 8082 (and Modified Method 8082) which has a lower detection level. The Region is reviewing Method 8082 and Modified Method 8082 (attached to the draft permit) and anticipates approving this method for use in the GE permit before final issuance of this permit. If, for any reason the method is not approved prior to issuance of the final permit, the permit will require the use of method 608, or other method which may be NPDES approved at the time of permit issuance.

Water Quality Data and Fish Tissue Data - Instream sampling data for the Housatonic River and Unkamet Brook indicate periodic exceedances of instream PCB water quality criteria for aquatic life and human health protection downstream of GE's discharges. Instream sampling data for Silver Lake indicate consistent exceedances of aquatic life and human health criteria (see **Attachment C**). An instream surface water analytical method (Method 8082) with a detection level of 0.022 ug/l was utilized for this data.

The results of a comprehensive instream assessment program conducted by EPA, with additional sampling conducted by GE, showed concentrations of polychlorinated biphenyls (PCBs) in streambed sediments and fish in the Housatonic River that were among some of the highest detected in National Water Quality Assessment (NAWQA) Study Units across the nation. Concentrations of trace elements and organic contaminants in streambed sediment and fish were very high prior to the remediation work in the reach where the GE outfalls are located, and decline in the areas downstream through MA and into CT. Because of the presence of these contaminants, fish consumption advisories have been issued for a number of rivers and lakes throughout the Study Unit. These advisories recommend limiting the number of fish of certain species that should be consumed by people, particularly by children and pregnant women. (See also: **Attachment U** - Site History and Description)

Fish sampling has been conducted over many years for portions of the Housatonic River downstream of the remediated area. The remediation began in 1999, and is still ongoing. Average fish tissue concentrations of total PCBs at the GE site were 76 mg/kg/ww (milligram per kilogram per wet weight) in 1994, and 112 mg/kg/ww in 1995. These values are high compared to EPA reported maximum total PCB fish tissue concentrations nationally of 70.6 mg/kg/ww in 1976, and 6.7 mg/kg/ww in 1984.

For a comprehensive list of fish tissue PCB concentrations, see EPA's website at: www.epa.gov/ne/ge.

4. Overview of Best Management Practices (BMPs) Regulations

Regulations found at 40 CFR Part 122.44(k) describe conditions under which an NPDES permit will include Best Management Practices 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 believes that each of these factors support the inclusion of BMPs for GE's storm water discharges.

On September 1, 1996 EPA established an interim permitting approach for water quality-based effluent limitations in storm water permits. Due to the nature of storm water discharges, and the typical lack of information on which to base numeric water quality-based effluent limitations, EPA established a permitting approach using best management practices in first-round storm water permits, and where necessary, expanded or better tailored BMPs in subsequent permits to provide for the attainment of water quality standards. This permitting approach also emphasizes that each storm water permit should include a coordinated and cost-effective monitoring program to determine the extent to which the permit provides for attainment of applicable water quality standards.

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.

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. A storm water pollution prevention plan (SWPPP) is required for the entire site, and expanded BMPs, including activities such as catch basin and manhole cleaning, collection system inspection, and treatment enhancement, have been required in areas which have historically shown higher effluent concentrations of PCBs, including runoff areas 001, 005, 006, and 007.

The specific expanded BMPs may be found in Section D, and are also discussed in the descriptions of each outfall in Section C.5.

5. Description of Drainage Areas, Treatment Systems, and Discharge from each Outfall

Drainage Basin 001

Drainage Basin 001 has a total drainage area of 129 acres (124 impervious) and includes the following outfalls which discharge to Silver Lake: 001, and 01A. A substantial portion of the drainage area (91 acres) and associated storm water collection system is not on GE property. This area is served by the City of Pittsfield storm drain system. A schematic diagram of this drainage system is shown on **Figure 2**. As mentioned previously, the GE-owned land within this drainage basin is scheduled to be transferred to PEDA over the next several years; PEDA plans, as part of its re-development, to replace the collection system and significantly reduce runoff through construction of detention basins.

Outfall 001

The permittee is authorized to discharge groundwater infiltration and storm water through Outfall 001 to Silver Lake. During dry weather conditions, all flow is treated through oil/ water separator (OWS) 31W and discharged through outfall 001. The dry weather flow is approximately 15 gpm. During wet weather, flows up to approximately 2,500 gpm are treated by O/W separator 31W; flows exceeding this amount are discharged untreated through outfall 01A.

The **current permit** contains effluent limitations on flow, total suspended solids (TSS), and oil and grease, and requires monitoring of PCBs. The current permit also establishes a whole effluent toxicity limit for a composite sample of discharges from outfalls 001, 004, 005, 007, 009, and 011. Similarly, a monitoring requirement for copper, zinc, lead, cadmium, chromium, aluminum, nickel, phosphorus, silver and cyanide is based on a composite sample consisting of effluent from the same six discharges. Effluent data submitted by the permittee is shown on **Attachment D** and shows that the discharge achieves the permit limits but contains concentrations of PCB which exceed water quality criteria, and concentrations of copper that may

have the potential to exceed the water quality criteria.

The **proposed draft permit** retains the same limitations on TSS and oil and grease required in the current permit in accordance with antidegradation regulations. The monitoring requirement for PCBs has been retained, and the monitoring requirement for copper has been retained during dry weather. Consistent with the antidegradation exception under 40 C.F.R. §122.44(l)(2)(i)(A), and since the cooling water discharges have been eliminated, the **draft permit** does not retain the effluent limitations for flow and toxicity or the monitoring requirement for metals based on a lack of reasonable potential to exceed state water quality standards except for copper. Copper sample calculations are shown on **Attachment R** which show a potential to exceed the copper water quality criteria. In accordance with 40 CFR Part 122.44(k), the permit includes best management practices requirements requiring cleaning and enhancements of OWS 31W to increase its flow capacity and removal efficiency (see **Section V** for a more detailed description of the required BMPs). The draft permit also requires continued implementation of a storm water pollution prevention plan, to minimize the runoff of pollutants. Also, if PEDAs receives the land within drainage basin 001 and implements its re-development plans, both the quantity of flow discharged and the pollutant concentrations in the discharge will be significantly reduced.

Outfall 01A

As described above, Outfall 01A discharges untreated effluent to Silver Lake when flow to OWS 31W exceeds its hydraulic capacity.

The **current permit** contains effluent limitations for oil and grease, and requires monitoring of flow and PCBs. Effluent data submitted by the permittee is shown on **Attachment E** and shows that the discharge achieves the permit limits, but contains concentrations of PCB which exceed water quality criteria.

The **proposed draft permit** retains the oil and grease limit and PCB monitoring requirement in the current permit. The best management practices requirements described above for outfall 001 are expected to decrease the volume of flow discharged through outfall 01A by enhancing the hydraulic capacity of OWS 31W, and continued implementation of the SWPPP should continue to improve the quality of the discharge.

Outfall 004

Drainage Basin 004 has a total drainage area of 4.4 acres (3.8 impervious) and includes one outfall, number 004, which discharges to Silver Lake. This discharge currently does not include any dry weather flows, and is untreated.

The **current permit** authorizes the discharge of contact cooling water, non-contact cooling water and storm water runoff, includes effluent limitations on flow, oil and grease and pH, and requires monitoring of PCBs. The current permit also establishes a whole effluent toxicity limit for a composite sample of discharges from outfalls 001, 004, 005, 007, 009, and 011. Similarly, a monitoring requirement for copper, zinc, lead, cadmium, chromium, aluminum, nickel, phosphorus, silver and cyanide is based on a composite sample consisting of effluent from the same six discharges. Effluent data submitted by the permittee is shown on **Attachment F**. The effluent data shows that the discharge meets the applicable permit limits except for occasional exceedances of pH limits, but also shows that the PCB concentrations have exceeded applicable

water quality criteria.

The contact cooling water and non contact cooling water discharges have been eliminated; storm water is the only remaining discharge from outfall 004. GE plans to eliminate the discharge through outfall 004 entirely by removal of the storm water collection system in this area. This activity has been included as a required BMP (see **Section V.3**).

The **proposed draft permit** retains the pH and oil and grease limit, and PCB monitoring requirement in the current permit. Consistent with the antibacksliding exception under 40 C.F.R. §122.44(l)(2)(i)(A), and since the cooling water discharges have been eliminated, the **draft permit** does not retain the effluent limitations for flow and toxicity or the monitoring requirement for metals based on a lack of reasonable potential to exceed state water quality standards.

Drainage Basin 005

Drainage basin 005 has a total area of 52 acres (43 impervious acres) and includes the following 7 outfalls: 005, 05A, 05B, SRO1, SRO2, SR03, and SR04. All of these discharges drain to the East Branch of the Housatonic River. A schematic of the collection and treatment systems is attached as **Figure 2**.

Outfall 005

The only dry weather discharge in the 005 drainage area is through outfall 005 and consists of groundwater infiltration to the storm water collection system and treated groundwater from the 64G groundwater treatment facility. The groundwater treatment facility located within building 64G is designed to remove PCBs, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and suspended solids from contaminated groundwater on the GE site, which is pumped from recovery wells, periodic batch leachates, and other groundwater generated by remediation projects. The groundwater treatment is continuous, and the treated discharge from building 64G is discharged from outfall 005. The treatment capacity of the 64G facility is 600 gallons per minute (867,000 gallons per day), and the estimated average flow through this facility is 300 gpm (435,000 gpd). The groundwater treatment at the 64G facility includes the following processes: sodium hydroxide addition to achieve a pH of 8 - 8.2, polymer addition to promote flocculation of solids, slow mix, plate clarifier, sand filters and activated carbon adsorption filters to remove organic compounds, treated clear water tank, V-notch weir with ultra sonic flow sensor, and is discharged from outfall 005. The solids are dewatered in two plate presses and accumulated in one cubic yard containers. The plate presses service both 64G and 64T treatment buildings. The solids are disposed as PCB waste at either the Building 71 Consolidation Area on site, or at Model City, NY.

During wet weather, treated storm water runoff from the 64T treatment plant is also discharged through outfall 005. Treatment plant 64T consists of pH adjustment, polymer addition to promote flocculation of solids, mixing, inclined plate clarification and multimedia filtration, and can accept flows up to its capacity of 547,200 gpd. During small storms, wet weather flows are conveyed via the South Side Pumping Station, the East Street Diversion Structure and the 64Z Diversion Structure to O/W separator 64Z and then to treatment plant 64T; during larger storms, the capacity of the 64T treatment plant is exceeded and wet weather flows discharge through outfalls 05A, 05B, and storm water overflows (SROs) as described in subsequent sections of this

fact sheet.

The **current permit** contains effluent limitations for flow, BOD, TSS, PCBs, oil and grease, and pH, and monitoring-only requirements for VOCs, and SVOCs. The current permit also establishes a whole effluent toxicity limit for a composite sample of discharges from outfalls 001, 004, 005, 007, 009, and 011. Similarly, a monitoring requirement for copper, zinc, lead, cadmium, chromium, aluminum, nickel, phosphorus, silver and cyanide is based on a composite sample consisting of effluent from the same six discharges. Sampling for compliance with pH limits is to be conducted at the discharge from the 64G and 64T treatment plants; sampling for the other limited pollutants is to be conducted at the discharges from 64T and 64G and composited by flow.

The **current permit** authorizes the discharge of contact cooling water, non-contact cooling water, treated process water, treated groundwater, and storm water runoff through outfall 005. The **proposed draft permit** retains the same limitations on TSS and oil and grease required in the current permit in accordance with antibacksliding regulations. The **proposed draft permit** does not retain the toxicity effluent limitations and metals monitoring requirements consistent with 40 C.F.R. § 122.44(l)(2)(i)(A), since the cooling water and process water discharges have been eliminated. The discharge now consists of groundwater infiltration into the collection system, treated groundwater from treatment plant 64G, and treated storm water from treatment plant 64T.

The BOD, TSS, pH, and PCB limits in the **current permit** are technology based, and were established using best professional judgement (BPJ). The effluent data summary on **Attachment G** shows that these limitations are met, and that the concentration of PCBs in the discharge exceed the state water quality criteria.

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 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). This monitoring location will also be used for VOCs, SVOCs, whole effluent toxicity, and pH.

Because technology based effluent limits were established on the 005 discharge in the **current permit**, EPA and the MADEP have retained these limitations based on antibacksliding regulations. However, to simplify the sampling requirements, rather than requiring a composite sample of the 64T and 64G discharges, as done in the **current permit**, the **proposed permit** requires monitoring at the 005 outfall, only during wet weather. Wet weather sampling is required since this is the only weather condition in which all of the authorized flow components will be discharged through the outfall, and because there is no need to monitor at this point in dry

weather, since the monitoring at 64G will accurately characterize this discharge under dry weather conditions. Numeric PCB limits more stringent than the technology based limits in the **current permit** for outfall 005 have not been established in the **draft permit**; EPA and the MADEP have instead required that BMPs, including specific BMPs in the 005 drainage area be implemented to ensure that PCBs in the discharge are reduced. The specific BMPs include debris removal from catch basins and manholes, debris removal and enhancements at OWS 64W, pipeline cleaning and inspection, and physical modifications to the 60s complex to reduce storm water runoff. (see **Part I. Sections V.1, V.2, V. 3.** of this fact sheet). In addition, a PCB limit for the effluent discharged from the 64G treatment plant will be set, initially at 0.15 ug/l and then at 0.065 ug/l. (The **current permit** includes a PCB monthly average limit of 0.01 lbs per day for outfall 005 and allows a PCB effluent concentration of 0.5 ug/l at the permitted flow of 2.08 MGD.)

Outfall 05A

When higher wet weather flows exceed the capacity of 64T, flows continue to be treated at O/W separator 64Z up to its capacity of 3.3 MGD; these flows are discharged into the 64W diversion structure, treated through O/W separator 64W and discharged through outfall 05A.

The **current permit** contain limitations for oil and grease and pH for this outfall and also contains monitoring requirements for flow and PCBs. The effluent data submitted by the permittee is shown on **Attachment H**, and shows that the permittee complies with the **current permit's** effluent limitations, and also shows that the discharge contains PCB concentrations higher than applicable water quality criteria. As discussed above, EPA and the MADEP have established specific BMPs in the **draft permit** for the outfall 005 drainage area, which will serve to reduce the concentration of PCBs in storm water runoff, reduce the discharge through 05A, and improve the treatment efficiency of O/W separator 64W. In addition, the ongoing building demolition and the soil clean-up in the outfall 005 drainage basin associated with the Consent Decree are also expected to reduce discharges of PCBs through outfall 05A.

Outfall 05B

During large storms, when the capacity of O/W separator 64W is exceeded, flows are bypassed through outfall 05B. This discharge consists of treated wastewater from O/W separator 64Z, untreated storm water from the south side system, and untreated storm water from diversion chamber 64Z.

The **current permit** requirements for 05B are the same as for 05A. The effluent data submitted by the permittee is shown on **Attachment I**, and shows that PCB concentrations exceed water quality criteria, and are higher than those for 05A given that the discharge is largely untreated (a component of the discharge is treated discharge from OWS 64Z, and the remainder is untreated). Similar to the requirements of 05A, the **draft permit** requires monitoring of flow, PCBs, oil and grease and TSS. The specific BMPs for the outfall 005 drainage area will also serve to reduce discharges through 05B and improve the quality of the discharge.

SRO2, SRO3 and SRO4

These storm water overflows become active as collection and pumping capacity are exceeded in the South side system, and are untreated. The **draft permit** includes the following monitoring

requirements for outfall SRO4: flow, oil and grease, TSS, pH and PCBs. Only flow monitoring will be required of SRO2 and SRO 3; the pollutant monitoring data for SRO4 will be accepted as representative of the discharges from SRO2 and SRO3. The effluent data submitted by the permittee is shown on **Attachment J** (SRO4 only), and shows that the permittee complies with the **current permit's** effluent limitations, and also shows that the discharge contains PCB concentration higher than applicable water quality criteria. Similar to the other wet weather discharges in the 005 drainage area, the implementation of the BMPs required in **Attachment C** of the permit, the SWPPP, and remedial work conducted under the Consent Decree are expected to decrease the quantity of flow through the SROs and to improve the quality of the effluent.

Drainage Basin 006

Drainage basin 006 has a total area of 12.6 acres (4.3 impervious acres) and includes the following 3 outfalls: 006, 06A and SRO5. All of these discharges drain to the East Branch of the Housatonic River. A schematic of the collection and treatment systems is attached as **Figure 2**. As previously described in the drainage basin 005 description, dry weather flow, consisting of a small quantity of process-related flows generated within a portion of drainage basin 005 (i.e., approximately 5 to 20 gallons per minute flow related to operations within building 100) are routed to the East Street Diversion Structure, where they are then directed to OWS 64Z, through the 64T wastewater treatment facility, and then to outfall 005. Under wet weather conditions, these process flows are combined with storm water flows generated within the same portion of drainage basin 005 and are routed to the East Street Diversion Structure. When the combined flow entering the East Street Diversion Structure exceeds the diversion capacity within that structure (approximately 100 gpm), this flow is routed toward OWS 64X, which is located in drainage basin 006. Under this scenario, flows that are generated within drainage basin 005 plus runoff flows from the 006 drainage area, up to the hydraulic capacity of OWS 64X (3.0 MGD) are treated and discharged through outfall 006.

Storm water flows exceeding the capacity of O/W separator 64X are discharged untreated through outfall 06A. Under "full" storm water conditions, SR05 may also discharge untreated storm water.

Outfall 006

As described above, the discharge through outfall 006 is primarily storm water runoff.

The **current permit** contains oil and grease, and pH limits and also requires sampling of flow and PCBs. Effluent data reported by the permittee is shown on **Attachment K**. The effluent data shows that the permittee complies with the effluent limitations, and also shows that the discharge contains PCB concentrations higher than applicable water quality criteria.

The **proposed draft permit** retains the limitations for oil and grease, monitoring requirements for flow, PCBs and TSS, and requires the implementation of BMPs. Specific BMPs in the 006 drainage area include debris removal from catch basins and manholes, debris removal and enhancements at OWS 64X, and pipeline cleaning and inspection (see **Sections V.1 and V.2**). In addition, the ongoing building demolition and the soil clean-up in the outfall 006 drainage basin associated with the Consent Decree are also expected to reduce discharges of PCBs through outfall 006.

Outfalls 06A and SR05

When the capacity of OWS 64X is exceeded, flow is discharged through outfalls 06A and SRO5 to the East Branch of the Housatonic River. The **current permit** contains the same monitoring requirements for these outfalls as for outfall 006. The **draft permit** similarly contains the same requirements for outfalls 06A and SRO5 as for outfall 006. The sampling for 06A will be accepted as representative of the discharge from SRO5, with the exception of flow, which shall be estimated at SRO5. The effluent data submitted by the permittee is shown on **Attachment L** (06A only), and shows that the permittee complies with the **current permit's** effluent limitations, and also shows that the discharge contains PCB concentration higher than applicable water quality criteria. Implementation of BMPs discussed above are expected to increase the hydraulic capacity of OWS 64X and reduce PCBs in the storm water runoff.

Drainage Basin 007

Drainage Basin 007 has a total drainage area of 4.3 acres (4.3 impervious) and includes one outfall, number 007, which discharges through a City of Pittsfield storm drain, which discharges to the East Branch of the Housatonic River. This discharge currently does not include any dry weather flows, and is untreated. GE is investigating the elimination of this discharge. If the discharge is eliminated, GE must notify EPA and MADEP of the date of the elimination, and monitoring requirements will end as of that date.

The **current permit** contains effluent limitations for oil and grease, and requires monitoring of flow and PCBs. The current permit also establishes a whole effluent toxicity limit for a composite sample of discharges from outfalls 001, 004, 005, 007, 009, and 011. Similarly, a monitoring requirement for copper, zinc, lead, cadmium, chromium, aluminum, nickel, phosphorus, silver and cyanide is based on a composite sample consisting of effluent from the same six discharges. Effluent data submitted by the permittee is shown on **Attachment M** and shows that the discharge achieves the permit limits, but contains concentrations of PCB which exceed water quality criteria.

The **proposed draft permit** retains the PCB monitoring requirement in the current permit. The **proposed draft permit** does not retain the toxicity effluent limitations and metals monitoring requirements consistent with 40 C.F.R § 122.44(l)(2)(i)(A), since the cooling water and process water discharges have been eliminated. The best management practices requirements in the 007 drainage area includes debris removal from catch basins and manholes (see **Section V.1**). Continued implementation of the SWPPP should continue to improve the quality of the discharge.

Drainage Basin 009

Drainage basin 009 has a total area of 13 acres (11 impervious acres) and includes one outfall, number 009. This outfall discharges to Unkamet Brook. A schematic of the collection and treatment systems is attached as **Figure 2**.

The most recent flow balance diagram submitted by the permittee show no dry weather discharges to the collection system. During wet weather, storm water is treated by O/W

separator 119W up to its hydraulic capacity of 597,000 gallons per day. Wet weather flows exceeding this amount are diverted prior to the O/W separator and recombined with the treated effluent downstream. The outfall also receives untreated groundwater and storm water infiltration from the collection system which previously transported wastewater from building 120X.

Outfall 009

The **current permit** contains effluent limitations for oil and grease, pH, TSS, and BOD, and also establishes monitoring requirements for flow, and PCBs. The current permit also establishes a whole effluent toxicity limit for a composite sample of discharges from outfalls 001, 004, 005, 007, 009, and 011. Similarly, a monitoring requirement for copper, zinc, lead, cadmium, chromium, aluminum, nickel, phosphorus, silver and cyanide is based on a composite sample consisting of effluent from the same six discharges. The effluent data submitted by the permittee is shown on **Attachment N** and shows that the discharge achieves the limitations in the permit and also shows that the discharge contains PCB concentrations higher than applicable water quality criteria.

The **current permit** authorizes the discharge of non-contact cooling water, treated process water and storm water runoff, and also establishes internal monitoring locations and effluent limitations on metal finishing operations discharging to this outfall (09G, 09H, 09I, 09J). As discussed above, the metal finishing operations and non contact cooling water no longer discharge through this outfall (the operations have been eliminated). For the purposes of final effluent monitoring, the permit established monitoring locations at 09A, 09B and the final discharge prior to Unkamet Brook. Monitoring location 09A is the discharge from building 120X, and 09B is the discharge from OWS 119W. For BOD, TSS, and flow, the permit required sampling at 09A and 09B, and that the sum of the load for each parameter be reported; for pH, oil and grease and PCBs sampling was required at the final (combined) discharge to Unkamet Brook. The effluent data submitted by the permittee for outfalls 09A and 09B are shown on **Attachments O and P**, respectively, and shows that the permittee complies with the **current permit's** effluent limitations.

Since the metal finishing operations no longer discharge, monitoring locations 09G, 09H, 09I, 09J have been removed from the **proposed draft permit**. Similarly, because operations discharging from Building 120X have also been eliminated, the monitoring location 09A has been eliminated. The **proposed draft permit** contains a monitoring location at 09B (the discharge from OWS 119W) and another located at the final discharge for 009 (which includes effluent from OWS 119W and any flow bypassed around OWS 119W).

The **proposed draft permit** retains the same limitations on TSS and oil and grease required in the current permit in accordance with antibacksliding regulations. The **draft permit** contains monitoring requirements for flow and PCBs. The OWS upgrade required in the BMP (see **Section V.1.**) is expected to increase the hydraulic capacity and treatment efficiency of the separator. The specific BMPs for the outfall 009 drainage area will also serve to reduce discharges through 009 and improve the quality of the discharge.

6. Outfalls Previously Covered under the Storm Water Multi-Sector Permit for Industrial Activities

As discussed in Section B, this draft permit authorizes discharge from the 17 storm water point source discharges currently covered under the MSGP. The draft permit requires that the permittee update its SWPPP, which was established based on the requirements of the MSGP, and that the updated SWPPP include sampling for PCBs, zinc, and flow during the second and fifth year of this permit.

D. BEST MANAGEMENT PRACTICES PLAN (BMP)

As described previously, the permittee is required to implement the BMPs attached to the permit (**Attachment C**) upon the effective date of the permit and to update its SWPPP. A summary of the required BMPs and SWPPP requirements follows:

1. **Cleaning and Inspection of Existing Storm Sewer Components**²

BMP 1.A - Debris Removal from Manholes and Catch Basins

- Initial inspection and removal of accumulated debris from all storm sewer manholes (MHs) and catch basins (CBs) in Drainage Basins 005, 006, and 007 (total of approx. 211 MHs and 121 CBs).
- Quarterly inspections for one year of 10 to 15 "select" MHs and CBs in Drainage Basins 005 and 006. Removal of accumulated debris as needed (i.e., when observed debris thickness exceeds approximately 6 inches and prior to the catch basin exceeding 50% of the sediment storage capacity).³
- Annual inspection of select MHs and CBs in Drainage Basins 005 and 006 (debris removal as needed).
- Provide summary of completed inspection/cleaning activities in annual BMP report.

BMP 1.B - Debris Removal from Oil/Water Separators

- Removal of accumulated debris from OWSs 31W, 64W, 64X, 64Z, and 119W.
- Performance of annual inspection (including debris thickness measurements) of each active OWS.
- Removal of accumulated debris from OWSs every 2 years, or sooner if average thickness of debris observed during annual inspections exceeds 6 inches.
- Provide summary of completed inspection/cleaning activities in annual BMP report.

BMP 1.C - Pipeline Cleaning and Inspection

- For sections of piping within the 005/006 drainage basin where groundwater infiltration/inflow (I/I) is identified through the observation of dry weather flows attributable to I/I (if any), collect representative water samples for volatile organic compound (VOC) analysis prior to any pipe cleaning activities. Following the identification of dry weather groundwater I/I flows, if any, and

the subsequent cleaning or potential repair/rehabilitation of the subject piping, collect another round of water samples for VOC analysis for comparative purposes.

- Hydraulic pressure washing of the interior surfaces of approximately 6,500 linear feet (LF) of existing storm sewer piping to remove accumulated debris ⁴ (see Figure 1 of Permit Attachment C).
- Video inspection (following pipe washing) of approximately 3,200 LF of existing storm sewer piping to assess pipe integrity (see Figure 1 of permit Attachment C). ⁵
- Evaluate need for additional video inspections and/or additional BMPs based on results of pipeline cleaning and inspection activities.

2. Enhancements to Oil/Water Separators

BMP 2.A - Short-Term OWS Enhancements

- Modify each OWS discharge from an underflow to overflow arrangement.
- Where feasible, increase the water storage volume and solids settling capabilities within each OWS through changes to the physical configuration (e.g., weir plates, baffles, etc.).
- Install (where feasible) continuous flow monitoring equipment at the OWS discharges (note – OWS 64W already has provisions for continuous discharge flow monitoring).
- Following completion of short-term enhancements described above, conduct sampling and analysis to assess “baseline” effectiveness of each OWS. For (3) different events (selected to represent various flow conditions within each OWS), collect influent and effluent samples from each OWS. Analyze samples for total PCBs (using modified Method 8082) and total suspended solids (TSS). Record OWS flow information and other pertinent operating conditions.

BMP 2.B - Longer-Term OWS-Related Activities

- Conduct a pilot study at OWS 64Z to evaluate potential for increased solids removal. Potential activities include addition of pre-treatment solids removal equipment, installation of additional structures within OWS to promote solids settling, etc.
- To assess potential effectiveness of above activities, conduct sampling and analysis of OWS 64Z flow during (3) different events (to represent various flow conditions). Collect influent and effluent samples with analysis for total PCBs (using modified Method 8082) and TSS. Record OWS flow information and other pertinent operating conditions.
- Where feasible, implement permanent improvements to solids settling capabilities at OWS 64Z. Also, evaluate potential improvements to OWSs 64W and 64X.
- Identify and evaluate potential measures to optimize stormwater management within Drainage Basins 005 and 006 through physical modifications related to the East Street Diversion Structure

and existing OWS 64Z discharge/bypass piping network.

3. Physical Modifications to Drainage Basins

BMP 3.A - Abandon Outfall 004 and Related Piping

- With two exceptions (below), abandon existing storm sewer piping and related manholes and catch basins located in Drainage Basin 004.
- Retain the existing pipe sections traversing from the Outfall 004 discharge point, underneath Silver Lake Boulevard, and to first manhole within the GE facility for future use (by others) as a new outfall.
- Retain existing catch basin and piping used to convey runoff from parking area within GE facility to City of Pittsfield-owned storm sewer beneath East Street (and then to Outfall YD3).

BMP 3.B - Modify 60s Complex to Reduce Storm water Runoff Bypasses

- As a supplement to future CD and Brownfield activities for this area, provide soil/vegetation cover over areas that would otherwise remain impervious (e.g., building floor slabs, paved areas, etc.). Design new surface cover to facilitate infiltration (by intentionally compromising the integrity of the impervious areas) and promoting sheetflow surface runoff (through surface grading and contouring).
- Modify, abandon, or replace existing storm sewer piping (including existing Sewer Relief Overflows SRO-2, SRO-3, and SRO-4) to the extent feasible to reflect new drainage area conditions following building demolition, CD and BMP activities in the area.

4. Implementation Schedule

- Certain BMP activities will be completed within an approximate 4- to 6-month timeframe, including initial cleaning and assessment of manholes, catch basins, piping, and OWSs (i.e., BMPs 1.A, 1.B, 1.C); short-term physical modifications to OWSs (i.e., BMP 2A); and physical piping changes within Drainage Basin 004 (i.e., BMP 3A). The specific schedule for these activities is dependent on weather and flow conditions.
- The pilot study of OWS 64Z (part of BMP 2.B) will be performed following the completion of initial cleaning and assessment activities, and implementation of short-term enhancements. Once initiated, a minimum 6- to 9-month duration is anticipated, to ensure an adequate period of non-winter conditions.
- The specific scope and timing/schedule for the performance of remaining BMPs (i.e., remainder of BMP 2.B, and BMP 3.B) is uncertain and dependent on the results of the other BMPs and/or completion of various CD- and Brownfields-related activities, as well as EPA's use of certain areas within Drainage Basin 005. A preliminary timeframe of 2005 to 2007 is estimated.
- GE will prepare an annual BMP summary report for submittal to the Agencies. That report will describe all completed activities, and provide relevant information and data as appropriate. Other

information (e.g., proposed additional BMPs, schedule updates, etc.) will also be provided in the annual summary. This summary is due on March 1 of each successive year following the effective date of the permit.

Notes

1. In addition to the activities identified in this table, GE will continue to perform BMPs within the GE facility as identified in its *Stormwater Pollution Prevention Plan*.
2. Solid debris will be placed at GE's On-Plant Consolidation Area(s); waste water will be treated at GE's 64G Groundwater Treatment Facility (64G GWTF).
3. "Select" MHs and CBs subject to future inspections to be determined based on initial inspection and cleaning activities, as well as location within overall storm sewer network. Scope of future inspections may vary; for example, in response to results of annual inspections and/or ongoing CD and Brownfields activities.
4. Pipe sections subject to cleaning include piping that: was historically cleaned and/or sliplined; is located in potential PCB source areas (e.g., subsurface areas with non-aqueous phase liquids, elevated PCB concentrations in soil, etc.); is located in close proximity to existing discharge outfalls; or likely to remain active following CD and Brownfields activities. In addition, based on the results of the MH and CB cleaning and inspection activities (BMP 1.A), additional piping may be identified for hydraulic cleaning.
5. Initial pipe sections subject to video inspection (shown on Figure 1 of permit Attachment C) include piping that: was previously sliplined; is located in potential PCB source areas and the water table; and is likely to remain active following CD and Brownfields activities.

V. Essential Fish Habitat Determination (EFH)

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 et seq. (1998)), EPA is required to consult with the National Marine Fisheries Services (NMFS) if EPA's action or proposed actions that it funds, permits, or undertakes, may adversely impact any essential fish habitat, such as: waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (16 U.S.C. § 1802 (10)). "Adversely impact" means any impact which reduces the quality and/or quantity of EFH (50 C.F.R. § 600.910 (a)). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions. Essential fish habitat is only designated for species for which federal fisheries management plans exist (16 U.S.C. § 1855(b) (1) (A)). EFH designations for New England were approved by the U.S. Department of Commerce on March 3, 1999. The Housatonic River, Unkamet Brook and Silver Lake are not covered by the EFH designation for riverine systems and thus EPA has determined that a formal EFH consultation with NMFS is not required.

VI. Superfund Cleanup and Consent Decree

The Consent Decree¹ governing the comprehensive remediation and restoration of the Housatonic River (the River) and the General Electric (GE) facility in Pittsfield, Massachusetts, was entered in Federal District Court in Springfield on October 27, 2000. The consent decree provides for cleanup of Housatonic River sediments and bank soils, Silver Lake, Unkamet Brook, contaminated groundwater, several former oxbows of the River, the contaminated floodplain properties along the River, the former GE facility, and the Allendale School.

The Consent Decree (CD) includes a PCB ground water discharge limit of 0.3 ug/l, which was based on the Massachusetts Contingency Plan (MCP) Method 1 GW-3 technology standard of 0.3 ug/l, and this standard is applied to all groundwater that is part of a release pursuant to the MCP, and that discharges to a surface water body unless GE proposes, and EPA approves, a risk-based alternative standard. Since the state's instream water quality standard is more stringent than the MA technology limit, the draft permit includes PCB limits on the discharge from the 64G treatment facility through outfall 005 that are more stringent than the MCP groundwater technology standard.

VII. Monitoring and Reporting

The permittee is obligated to monitor and report sampling results to EPA and the MADEP within the time specified within the permit. Timely reporting is essential for the regulatory agencies to expeditiously assess compliance with permit conditions.

VIII. State Permit Conditions

The NPDES Permit is issued jointly by the U. S. Environmental Protection Agency and the Massachusetts Department of Environmental Protection under federal and state law, respectively. As such, all the terms and conditions of the permit are, therefore, incorporated into and constitute a discharge permit issued by the Commissioner of the Massachusetts Department of Environmental Protection pursuant to M.G.L. Chap.21, §43.

IX. State Water Quality Certification Requirements

The staff of the MADEP has reviewed the draft permit. EPA has requested permit certification by the State pursuant to 40 CFR § 124.53 and expects that the draft permit will be certified.

X. General Conditions

The general conditions of the permit are based on 40 CFR Parts 122, Subparts A and D and 40 CFR § 124, Subparts A, D, E, and F and are consistent with management requirements common to other permits.

XI. Public Comment Period and Procedures for Final Decision

¹*United States of America, State of Connecticut, Commonwealth of Massachusetts v. General Electric Company*, Civil Action No. 99-30225, 30226, 30227-MAP, D. Mass, October 27, 2000.

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the (60) sixty day public comment period, to the following two addresses: (1) U.S. EPA, Office of Ecosystem Protection, NPDES Unit, One Congress Street, Suite-1100, Boston, Massachusetts 02114, and (2) MADEP, Attention: Paul Hogan, Department of Environmental Protection, 627 Main Street, Worcester, MA 01608. Any person, prior to such date, may submit a request in writing for a public hearing to consider the draft permit to EPA and the State Agency. Such requests will state the nature of the issues proposed to be raised in the hearing. Public hearings may be held after at least thirty days public notice whenever EPA finds that response to this notice indicates a significant public interest. Since the Agencies expect considerable public interest, at least one public meeting and one public hearing will be held on the draft permit (i.e., the location/date/time and other specifics will be announced on EPA's internet website at www.epa.gov/ne/ge). A copy of the draft permit and fact sheet will be available at the locations listed below. In reaching a final decision on the draft permit, EPA will respond to all significant comments and make these responses available to the public at EPA's Boston office.

Following the close of the comment period and after a public hearing, if such a hearing is held, EPA will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice.

XII. Copy of the Draft Permit and Fact Sheet

A copy of the draft permit and fact sheet may be viewed at the following locations:

EPA's website : www.epa.gov/ne/ge

Berkshire Athenaeum
Pittsfield, MA

USEPA Field Office
Pittsfield, MA

XIII. State Contact

Additional information concerning the draft permit may be obtained between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays from:

Paul Hogan
MADEP
Department of Environmental Protection
627 Main Street
Worcester, MA 01608
Telephone: (508) 767-2796
email: paul.hogan@state.ma.us

XIV. EPA Contact

Additional information concerning the draft permit may be obtained between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays from:

Janet Labonte
Chemical/Environmental Engineer
U.S. Environmental Protection Agency
Office of Ecosystem Protection (CPE)
One Congress Street - Suite-1100
Boston, MA 02114
Telephone: (617) 918-1667
email: Labonte.Janet@epa.gov

Date

Linda M. Murphy, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency

Attachment A
 NPDES Permit No. MA0003891
 Active Outfalls Covered by Current Permit
 General Electric Company
 Pittsfield, MA

<u>Outfall:</u>	<u>Description of Discharge:</u>	<u>Location (Latitude/Longitude):</u>	<u>Receiving Water:</u>
001	wet and dry weather discharge including groundwater (infiltration), city water (used for fire protection testing) unknown dry weather flow from city storm drain system and storm water	42 27' 09" / 73 14' 16"	Silver Lake
01A	overflow from 001 drainage system - wet weather discharge including groundwater (infiltration), city water (used for fire protection testing), unknown dry weather flow from city storm drain system and storm water	42 27' 10" / 73 14' 18"	Silver Lake
004	wet weather discharge of storm water	—	Silver Lake
005	wet and dry weather discharge of treated groundwater, OPCA leachate and EPA-approved waters (64G), city water (used for fire protection testing), and storm water.	42 26' 59" / 73 13' 53"	Housatonic River
05A	overflow from outfall 005 drainage system: wet weather discharge of groundwater (infiltration), city water (used for fire protection testing), and storm water	42 26' 59" / 73 13' 53"	Housatonic River
05B	overflow from outfall 005 drainage system: wet weather discharge of groundwater (infiltration), city water (used for fire protection testing), and storm water	42 26' 59" / 73 13' 53"	Housatonic River

Attachment A (continued)
 NPDES Permit No. MA0003891
 Active Outfalls Covered by Current Permit
 General Electric Company
 Pittsfield, MA

<u>Outfall:</u>	<u>Description of Discharge:</u>	<u>Location (Latitude/Longitude):</u>	<u>Receiving Water:</u>
SRO2 SRO3 SRO4	overflows from 005 drainage system: wet weather discharge of storm water	—	Housatonic River
006	wet weather discharge of groundwater (infiltration), city water (used for fire protection testing) and storm water	42 27' 04" / 73 13' 44"	Housatonic River
06A	overflow from 006 drainage area: wet weather discharge of city water (used for fire protection testing), unknown dry weather flow from city storm drain, and storm water	42 27' 04" / 73 13' 44"	Housatonic River
SRO5	overflow from 006 drainage area: wet weather discharge of city water (used for fire protection testing), unknown dry weather flow from city storm drain, and storm water	—	Housatonic River
007	wet weather discharge of storm water	—	Housatonic River
009	wet weather discharge of ground water (infiltration), city water (, used for fire protection testing) and storm water	42 27' 42" / 73 12' 30"	Unkamet Brook