AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act as amended (33 U.S.C. §1251 et seq.; the "CWA"), and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§26-53),

Pittsfield Economic Development Authority
81 Kellogg Street
Pittsfield, Massachusetts 01201

is authorized to discharge from the facility located at

William Stanley Business Park of the Berkshires
Generally bounded by East Street,
Silver Lake Boulevard, Kellogg Street, and Tyler Street
Pittsfield, Massachusetts 01201

to receiving waters named the

Silver Lake
(Housatonic River Watershed)

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein This permit shall become effective on November 1, 2021.

This permit expires at midnight on October 31, 2026.

This permit supersedes Permit MA0003891 that became on effective February 7, 1992.

This permit consists of 17 pages in Part I including effluent limitations and monitoring requirements; Attachment A (Freshwater Acute Toxicity Test Procedure and Protocol (February 2011), Attachment B: Site Map, and 25 pages in Part II including Standard Conditions.

Signed this day of

KENNETH MORAFF Digitally signed by KENNETH MORAFF Date: 2021.08.18 11:35:54 -04'00'

Ken Moraff, Director
Water Division
Environmental Protection Agency
Boston, MA

Lealdon Langley, Director
Division of Watershed Management
Department of Environmental Protection
Commonwealth of Massachusetts
Boston, MA

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge treated stormwater and groundwater through outfall serial number 001 to Silver Lake. The discharge will be limited and monitored by the permittee as specified below.

Effluent Characteristic	Unit	Discharge Limitation		Monitoring Requirement[1,2]	
Parameter		Average Monthly	Maximum Daily	Measurement Frequency[3]	Sample Type
Flow[4]	MGD	Report	Report	When Discharging	Meter or Estimate
Oil and Grease	mg/L	Report	15	1/Month	Grab
TSS	mg/L	30	100	1/Month	Grab
pH[5]	6.5 – 9.0 S.U.			1/Month	Grab
Escherichia coli	cfu/100 ml	Report	Report	1/Year	Grab
Total Nitrogen	mg/L lb/day		Report	2/Year	Grab
PCBs, Total [6,7]	µg/L	Report	Report	1/Month	Grab
Whole Effluent Toxicity[8,9,10]	Acute LC50 – Report			2/Year	Grab
Total Hardness	mg/L	Report	Report		
Total Suspended Solids	mg/L				
Specific Conductance	µmhos/cm				
Ammonia Nitrogen	mg/L				
Total Residual Chlorine	µg/L				
Total Cadmium	µg/L				
Total Chromium	µg/L				
Total Lead	µg/L				
Total Copper	µg/L				
Total Zinc	µg/L				
Total Nickel	µg/L				
Total Aluminum	µg/L				

Footnotes:

1. Samples shall be collected from the box culvert that receives final effluent from the water quality basin, unless otherwise specified. Samples shall be representative of the discharge.

2. In accordance with 40 C.F.R. § 122.44(i)(1)(iv), the Permittee shall monitor according to sufficiently sensitive test procedures (i.e., methods) approved under 40 C.F.R. Part 136 or required under 40 C.F.R. chapter I, subchapter N or O, for the analysis of pollutants or pollutant parameters (except WET). A method is "sufficiently sensitive" when: 1) The method minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter; or 2) The method has the lowest ML of the analytical methods approved under 40 C.F.R. Part 136 or required under 40 C.F.R. chapter I, subchapter N or O for the measured pollutant or pollutant parameter. The term "minimum level" refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL), whichever is higher. Minimum levels may be obtained in several ways: They may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a laboratory, by a factor.

3. Measurement frequency of 1/month is defined as the sampling of one discharge event in each calendar month. Measurement frequency of 1/year is defined as the sampling of one discharge event during one calendar year. If no sample is collected during the measurement frequencies defined above, the Permittee must report an appropriate No Data Indicator Code.

4. Report the monthly average and maximum daily flows. The monthly average flow is defined as the average flow per day of discharge. Also, report the flow from Outfall 001 and precipitation measured at the Pittsfield Airport or another nearby site for each day of the month as an attachment to the DMR. In the event of inclement weather, the permittee is allowed to estimate flow.

5. The pH of the effluent shall not be less than 6.5 standard units (S.U.) nor greater than 9.0 SU at any time. Please see Section I.C.4 of this permit for information on requirements for maintaining this pH limit range in future permits.

6. The minimum level (ML) for analysis for total PCBs shall be no greater than the published ML of 0.095 µg/L using EPA test method 608.3, unless the permittee requests, and EPA approves an alternate test method in accordance with Part 136.5. Provide the results of PCB analyses as the sum of Aroclors.

7. If EPA publishes a multi-lab validated method for PCBs in wastewater in 40 CFR Part 136 within the permit term that either replaces EPA test method 608.3 or achieves a ML less than the ML of EPA test method 608.3, the Permittee shall use that test method for reporting of PCBs in the effluent. This requirement takes effect beginning six months

after EPA notifies the Permittee that the updated PCB analytical method is available. Provide the results of PCB analyses as the sum of analyzed compounds.

8. Conduct acute toxicity tests twice per year. Test the daphnid, *Ceriodaphnia dubia*, and the fathead minnow, *Pimephales promelas*. Perform the tests in accordance with test procedures and protocols specified in **Attachment B** of this permit. After five years following the effective date of the permit and 10 valid test results (i.e., in the event the permit is administratively continued), the sampling frequency for WET testing shall be reduced to once every two years. The once every two years sample shall be collected in April. Sampling shall be performed concurrently with the monthly monitoring event.

Test Dates	Submit Results By:	Test Species	LC50
April October	the 30th day of the month following the test	*Ceriodaphnia dubia* (daphnid) *Pimephales promelas* (fathead minnow)	Report

9. The LC50 is the concentration of effluent which causes mortality to 50% of the test organisms.

10. If toxicity test(s) using receiving water as diluent show the receiving water to be toxic or unreliable, either follow procedures outlined in Attachments B (Toxicity Test Procedure and Protocol) Section IV., DILUTION WATER in order to obtain an individual approval for use of an alternate dilution water.

Part I.A., continued

2. The discharge shall not cause a violation of the water quality standards of the receiving water.

3. The discharge will not cause objectionable discoloration of the receiving waters.

4. The effluent will contain neither a visible oil sheen, foam, nor floating solids at any time.

5. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify EPA as soon as they know or have reason to believe (40 CFR § 122.42):

   a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

      (1) 100 micrograms per liter (µg/L);
      (2) 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (mg/L) for antimony;

(3) Five times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR § 122.21(g)(7); or
(4) Any other notification level established by EPA in accordance with 40 CFR § 122.44(f) and State regulations.

b. That any activity has occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(1) 500 μg/L;
(2) One mg/L for antimony;
(3) 10 times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR § 122.21(g)(7); or
(4) Any other notification level established by EPA in accordance with 40 CFR § 122.44(f) and State regulations.

c. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.

6. Properly operate and maintain all treatment systems.

7. Toxics Control
   a. The permittee will not discharge any pollutant or combination of pollutants in toxic amounts.
   b. Any toxic components of the effluent will not result in any demonstrable harm to aquatic life or violate any state or federal water quality standard which has been or may be promulgated. Upon promulgation of any such standard, this permit may be revised or amended in accordance with such standards.

8. Numerical Effluent Limitations for Toxicants

EPA or the MassDEP may use the results of the toxicity tests and chemical analysis conducted pursuant to this permit, as well as national water quality criteria developed pursuant to Section 304(a) (1) of the Clean Water Act (CWA), state water quality criteria, and any other appropriate information or data, to develop numerical effluent limitations for any pollutants, including but not limited to those pollutants listed in Appendix D of 40 CFR § 122.

B. REOPENER CLAUSE

The results of sampling required by the permit shall constitute new information within the meaning of 40 CFR § 122.62(a)(2) and shall be assessed by EPA during the term of the permit. If the results demonstrate that the permit as written is insufficiently stringent to comply with applicable water quality standards for toxics, including PCBs, EPA may re-open and modify the permit's terms to impose additional BMPs and/or numeric effluent limitations sufficient to ensure compliance with such water quality standards.

C. SPECIAL CONDITIONS

1. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

The Permittee shall develop a Stormwater Pollution Prevention Plan (SWPPP) to document the selection, design, installation, and maintenance of control measures, including BMPs, selected to meet the effluent limitations required in this permit, and Parts 2.1.2 and 9.10.7.2 of EPA's 2021 Multi-Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activities.[1] The SWPPP shall be a written document that is consistent with the terms of this permit designed to reduce, or prevent, the discharge of pollutants from the site to the receiving water. Additionally, the SWPPP shall serve as a tool to document the permittee's compliance with the terms of this permit.

a. The Permittee shall develop and certify the SWPPP in accordance with the signatory requirements in 40 CFR §122.22 and Part II. D.2 of this permit within 90 days after the effective date of this permit. The Permittee shall submit a copy of this initial certification to EPA and MassDEP within 120 days of the effective date of this permit in accordance with Part I.D.2 and 3 of this permit.

b. The SWPPP shall be consistent with the general provisions for SWPPPs included in Part 6 of EPA's 2021 MSGP. The SWPPP shall be prepared in accordance with good engineering practices and manufacturer's specifications. Specifically, the SWPPP shall contain the elements listed in Parts 6.2.1 through 6.2.5 of EPA's 2021 MSGP and as briefly listed below:

   (1) A stormwater pollution prevention team;
   (2) A site description;
   (3) A drainage area site map;
   (4) A summary of known and potential pollutant sources;
   (5) A description of all stormwater control measures (e.g., BMPs); and
   (6) Schedules and procedures for implementation of stormwater control measures, including the BMPs described below, inspections, assessments, and monitoring.

c. The Permittee shall amend and update the SWPPP within 14 days of any changes at the site affecting the SWPPP. Changes that may affect the SWPPP include, but are not limited to: a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the United States; a release of a reportable quantity of pollutants as described in 40 CFR § 302; a determination by the Permittee or EPA that the SWPPP appears to be ineffective in achieving the general objective of controlling pollutants in stormwater discharges associated; and revisions or improvements are made to the stormwater management program based on new information and experiences with wet weather events. Any amended, modified, or new versions of the SWPPP shall be re-certified

1 The 2021 MSGP is currently available at: https://www.epa.gov/npdes/stormwater-discharges-industrial-activities-epas-2021-msgp.

and signed by the Permittee. Such re-certifications also shall be signed in accordance with the requirements identified in Part II.D.2 of this Permit.

d. The Permittee shall certify at least annually that the previous year's required inspections, control measures, and training activities were conducted, results were recorded, and records were maintained, as described. If the facility is not in compliance with any limitations of this permit, the annual certification shall state the non-compliance and the remedies that are or will be undertaken. Such annual certifications also shall be signed in accordance with the requirements identified in Part II.D.2 of this permit. The Permittee shall keep a copy of the current SWPPP and all SWPPP certifications (i.e., the initial certification, re-certifications, and annual certifications) signed during the effective period of this permit at the site, and shall make these available for inspection by EPA. In addition, document in the SWPPP any violation of numerical or non-numerical stormwater effluent limits with a date and description of the corrective actions taken.

e. The Permittee shall keep all documentation of SWPPP activities shall be kept at the site for at least three years and provided to EPA upon request. EPA may extend this period and, if extended, will provide confirmation in writing to the Permittee.

2. BEST MANAGEMENT PRACTICES (BMPs)

a. The Permittee shall select, design, implement, and maintain control measures (e.g., BMPs) to minimize the discharge of pollutants in stormwater to waters of the United States. At a minimum, the Permittee must implement both structural controls (e.g., conveyance infrastructure and containment areas) and non-structural controls (e.g., operational procedures and operator training) consistent with those described in Part 2.1.2 of EPA's 2021 MSGP. The control measures must ensure the following effluent limitations are met:

(1) Minimize exposure of former industrial activity areas to stormwater discharges.
(2) Design good housekeeping measures to maintain areas that are potential sources of pollutants.
(3) Implement preventative maintenance programs to avoid leaks, spills, and other releases of pollutants in wastewater discharged to receiving waters.
(4) Implement spill prevention and response procedures to ensure effective response to spills and leaks if or when they occur.
(5) Design erosion and sediment controls to stabilize exposed areas and contain runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants.
(6) Utilize stormwater management practices to divert, reuse, contain, or otherwise reduce stormwater runoff to minimize pollutants in the discharge.
(7) Enclose or cover storage piles for salt or materials containing chlorides that are used for snow and ice control.
(8) Conduct employee training to ensure personnel understand the requirements of this permit;

(9) Evaluate for the presence of non-stormwater discharges. Any non-stormwater discharges not explicitly authorized in the permit or covered by another NPDES permit must be eliminated; and
(10) Minimize dust generation and vehicle tracking of industrial materials.

b. The control measures must include, at a minimum, the following components:

(1) The Permittee shall implement the control measure requirements in Part 2.1 and 2.1.1 of EPA's 2021 Multi-Sector General Permit (MSGP)[2] to identify pollutant sources, and select, design, install and maintain the pollution control technology necessary to meet the effluent limitations in the permit that ensure dilution is not used as a form of treatment;[3]
(2) The Permittee shall implement the inspection requirements in Part 3.1 and 3.2 of the 2021 MSGP to conduct routine site inspections;
(3) The Permittee shall implement the corrective action requirements in Part 5.1.1 through 5.1.4 of the 2021 MSGP if at any time the Permittee becomes aware, or EPA determines, that the discharge exceeds any effluent limitation, or does not meet applicable water quality standards;[4]
(4) The Permittee shall implement the quality assurance/quality control BMP in Part 2.5.2 of EPA's 2017 RGP[5] to document monitoring requirements, sample collection procedures, sample analysis procedures,[6] a schedule for the review of sample results, and data validation and reporting processes.
(5) The Permittee shall select, design, implement, and maintain control measures for stormwater associated with site activities to minimize the discharge of nutrients, including nitrogen and phosphorus, from the site to the receiving water. The following BMPs shall be implemented, at a minimum.

i. Procedures to minimize the use of pesticides, herbicides, and fertilizers. Procedures must include requirements for use of slow release fertilizers on permittee-owned property, in addition to reducing and managing fertilizer use (i.e., the proper use, storage, and disposal of pesticides, herbicides, and using only in accordance manufacturer's instructions).
ii. Practices for lawn maintenance and landscaping activities that are protective of water quality. Practices include reduced mowing frequencies, proper management and disposal of grass clippings and leaf litter, and use of alternative landscaping materials (e.g., drought resistant planting). Blowing organic waste materials onto adjacent impervious surfaces is prohibited.

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2 The 2021 MSGP is currently available at: https://www.epa.gov/npdes/stormwater-discharges-industrial-activities-epas-2021-msgp.
3 *See* Part 2.5.2.d of the 2017 RGP for example technologies and additional resources.
4 Where the MSGP refers to limitations, conditions or benchmarks, including the SWPPP, for the purposes of this permit, these shall refer to the limitations and conditions in this permit.
5 The 2017 RGP is currently available at: https://www.epa.gov/npdes-permits/remediation-general-permit-rgp-massachusetts-new-hampshire.
6 Sample analysis must comply with the *National Pollutant Discharge Elimination System (NPDES): Use of Sufficiently Sensitive Test Methods for Permit Applications and Reporting Rule*. *See* Fed. Reg. 49,001 (Aug. 19, 2014).

iii. Routine street sweeping program. The minimum frequency is monthly.

c. The Permittee shall select, design, implement, and maintain control measures to eliminate discharges of PCBs from the site to the receiving water through an iterative approach over the permit term, which must include the following components, at a minimum.

(1) Source Identification

The Permittee shall identify the components of the conveyance system and trace the components that contribute PCBs to the discharge. Specifically, the conveyance system must be accurately mapped and the sources of PCBs, or other site-related contaminants of concern, contributing to the Outfall 001 must be specifically identified. The following potential sources must be evaluated, at a minimum:

i. Residual presence of PCBs in soils, and other surfaces exposed to stormwater;
ii. Residual presence of PCBs in pipes, catch basins, and other conveyance system structures;
iii. Infiltration of groundwater into the conveyance system on PEDA property;
iv. Infiltration of groundwater directly into the water quality basin;
v. PCBs in sediment in the forebays and water quality basin being re-suspended;
vi. Onflow from offsite that contributes to the Outfall 001 conveyance system; and
vii. Inflow from illicit connections to PEDA's conveyance system.

EPA notes that the permittee may rely on existing site characterization to the extent that it meets the listed source identification requirements. The permittee shall use the results of this evaluation to prioritize the implementation of BMPs as appropriate.

(2) Optimization

The Permittee shall evaluate, select, design, implement, and maintain abatement and removal BMPs for existing infrastructure as follows:

i. Remove accumulated solids from the existing conveyance system, including, but not limited to: trunkline inlets/manholes, catch basins, sediment traps, sumps, which must include all of the 20s and 30s complex areas and Woodlawn Avenue adjacent to the 20s and 30s complex where owned or controlled by the Permittee, at a minimum;
ii. Remove accumulated solids from the existing forebays, and water quality basin;
iii. Complete line cleaning operations (e.g., jetting, vacuuming, removal, loading, storage, and/or transport), which must include the trunk line,

manholes DMH 396 and DMH 27, and any remaining storm drain lines in the 40s to DMH 27;

iv. Conduct street sweeping at paved areas, which must include all of the 20s and 30s complex and Woodlawn Avenue adjacent to the 20s and 30s complex, at a minimum;

v. Dispose of removed storm drain solids and liquids in accordance with applicable laws and regulations and document in the SWPPP;

vi. Enhance storage capacity of the water quality basin through upstream engineering controls, including, but not limited to: remotely controlled discharge valves, in-pipe and/or aboveground water storage, reuse systems, and passive remediation measures (e.g., infiltration through engineered media, targeted infiltration);

vii. Enhance storage capacity of the existing water quality basin;

viii. Inspect and evaluate the effectiveness of the optimization measures taken through routine site inspections, referenced in Part I.C.2.c.(2), and evaluation, described below, in Part I.C.2.c.(5).

These BMPs must be consistent with those found in Part 9.10.7.2 of EPA's 2021 MSGP,[7] which specifies Additional Effluent Limits for Discharges to Certain Impaired Waters and Sediment Cleanup Sites applicable to discharges to either directly or indirectly through a stormwater drainage system.

(3) Minimization

The Permittee shall evaluate, select, design, implement, and maintain control measures (i.e., BMPs) that eliminate or otherwise minimize (i.e., non-detect) the discharge of PCBs to the receiving water. Minimization must address source control and elimination of PCBs from contaminated soils, sediments, stormwater and groundwater entering the conveyance system via inflow and infiltration, as follows:

i. Disconnect the existing conveyance system identified as contributing PCBs to the discharge, including, at a minimum the current infrastructure from the Teens area through the 40s complex at the location where it combines with the City system that proceeds onto the Water Quality Basin and Outfall 001(e.g. to BMH 396), and must include: lines/trunkline, manholes, catch basins, sediment traps, and sumps; or

ii. Reline, recondition, replace or abandon in place existing conveyance system identified as contributing PCBs to the discharge, including, at a minimum the current infrastructure from the Teens area through the 40s complex at the location where it combines with the City system that proceeds onto the Water Quality Basin and Outfall 001(e.g. to BMH 396);

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7 EPA-821-R-04-014 is currently available at: https://www.epa.gov/eg/effluent-guidelines-plan-support-documents; The 2021 MSGP is currently available at: https://www.epa.gov/npdes/stormwater-discharges-industrial-activities-epas-2021-msgp. The 2017 RGP is currently available at: https://www.epa.gov/npdes-permits/remediation-general-permit-rgp-massachusetts-new-hampshire.

iii. If other modification is determined equivalent to elimination of PCB contributions (e.g., installation of active or passive treatment, diverting significant sources to sanitary sewer), notification must be provided to EPA for concurrence.
iv. Any future stormwater management infrastructure shall consist solely of new or slip lined stormwater piping.

(4) Design Standards

The Permittee shall evaluate, select, design, implement, and maintain design standards (e.g., procedures and protocols) that eliminate the discharge of PCBs during and following site redevelopment as follows:

i. Establish a frequency for routine cleaning for the conveyance system, including, but not limited to: trunkline inlets/manholes, catch basins, sediment traps, sumps, no less than annually, and that will ensure that no component shall be more than 50 percent full;
ii. Implement a frequency for routine cleaning for the forebays, and water quality basin, no less than annually, and that ensures proper operation and that will ensure the average thickness of debris does not exceed 12 inches in the forebays and the calculated pool volume in the water quality basin is not reduced by more than 25% due to sediment accumulation;
iii. Establish a frequency for routine street sweeping, no less than twice per year
iv. If any redevelopment results in new pavement, new catch basins, or new sediment treatment systems in the teens or 40s complexes, implement the optimization measures specified above for the existing infrastructure.
v. Utilize green infrastructure measures where practicable, such as streetscapes, vacant lots, riparian corridors, green roof systems, cisterns, bioswales and biobasins, and porous paving;
vi. Reuse runoff, where practicable, for irrigation, toilet flushing, and other site needs that may exist, including beneficial reuse of stored volumes; and
vii. Minimize the hydraulic gradient that draws contaminated groundwater into the system, where practicable.

(5) Evaluation

The Permittee shall implement ongoing evaluation. Specifically, the Permittee must maintain an accurate site plan depicting all drainage features and connections to the conveyance system. In addition, routine sampling for PCBs must be conducted no less than annually to assess areas to prioritize BMPs and to evaluate the effectiveness of BMPs, design standards, and procedures and protocols. Finally, the permittee must conduct representative sampling during both wet weather and dry weather conditions to determine:

i. Influent concentration of total PCBs and estimated total annual load[8] into the north forebay.
ii. Influent concentration of total PCBs and estimated total annual load into the south forebay.
iii. Effluent concentration of total PCBs and estimated total annual load discharging from outfall 001.
iv. Concentration of total PCBs and estimated total annual load in Silver Lake at the outlet.

The Permittee may rely on existing routine characterization conducted by both PEDA and GE, to the extent that it meets the listed evaluation requirements. For the purposes of this permit, samples analyzed using test methods that are not currently listed in 40 CFR Part 136 (i.e., EPA Method 8082A), are acceptable for characterization. This exception does not apply to the test method specified for compliance monitoring in this permit.

The Permittee shall document these components in the SWPPP. The Permittee shall submit a report annually to EPA certifying that discharges comply with these permit requirements and summarizing activities conducted to achieve such compliance.

3. COMPLIANCE SCHEDULE

a. The following must be completed within 120 days of the permit effective date and no later than January 15th of each calendar year thereafter:

(1) Submit written notification to EPA of completion and certification of the SWPPP, attaching a complete copy of the SWPPP and certification.
(2) Submit a written proposal for the BMPs required in Part I.C.2.b. to EPA that includes the following:
i. Description of proposed BMPs for the calendar year, including technical specifications;
ii. Description of the measurable goal(s) for each BMP, including a schedule, with milestones as prioritized based on the source identification required in Part I.C.2.C.(1), for its implementation that do not exceed the expiration date of this permit, have a quantity or quality associated with its endpoint, and a measure of assessment associated with it;
iii. Description of how these BMPs will achieve compliance with numeric limits in Part I.A.1, and non-numeric limits in Part I.C.2.a.; and
iv. The person(s) or entity responsible for each BMP.
(3) The Permittee shall submit the notifications and proposals specified in this part to EPA in writing in accordance with Part I.D.2. EPA will notify the Permittee in writing of any deficiency within 30 days following receipt of notification to EPA.

8 Loading calculation: Total PCBs (lb/day) = [(average monthly PCBs (mg/L) * total monthly effluent flow (MG)) / # of days in the month] * 8.345.

b. The following must be included in the SWPPP within one year of the permit effective date and updated annually thereafter:

(1) Documentation of the selection, design, implementation, and maintenance of control measures required in Part I.C.2.b.1. that includes a description of the BMPs implemented to date.
(2) Written procedures for the inspection requirements in Part I.C.2.b.2., including schedules and forms necessary to conduct routine site inspections; Documentation of compliance with inspection requirements must be included.
(3) Written procedures for the corrective action requirements in Part I.C.2.b.3.; Documentation of any corrective actions undertaken during the previous calendar year must be included.
(4) Written quality assurance/quality control requirements in Part I.C.2.b.4.; Documentation of monitoring requirements, sample collection procedures, sample analysis procedures, a schedule for the review of sample results, and data validation and reporting processes must be included.
(5) Documentation of the selection, design, implementation, and maintenance of BMPs required in Part I.C.2.b.5. to minimize the discharge of nutrients, including nitrogen and phosphorus.
(6) Documentation of the selection, design, implementation, and maintenance of BMPs to eliminate discharges of PCBs. The documentation must include, at a minimum:
    i. Documentation of the source identification requirements in Part I.C.2.c.1. completed to date.
    ii. Documentation of the optimization requirements in Part I.C.2.c.2. completed to date.
    iii. Documentation of the minimization requirements in Part I.C.2.c.3. completed to date and must include the components listed in Part I.C.3.a.(2), above.
    iv. Documentation of the design standards requirements (e.g., procedures and protocols) in Part I.C.2.c.4. completed to date.
    v. Documentation of the evaluation requirements in Part I.C.2.c.5. completed to date.

c. The following information must be included in the SWPPP within five (5) years of the permit effective date and updated annually thereafter, in the event this permit is administratively continued following expiration:

i. Description of the BMPs completed (or updated, in the event of expiration).
ii. Confirmation that these BMPs have achieved (or continue to achieve, in the event of expiration) compliance with numeric limits in Part I.A.1, and non-numeric limits in Part I.C.2.a.
iii. Description of requested SWPPP, BMP and/or Compliance Schedule considerations for permit reissuance.

4. pH STUDY

In order to continue the pH limit range of 6.5 - 9.0 S.U. in future permits, within three (3) years of the effective date of the permit, the Permittee must conduct a study to demonstrate that the pH in the receiving water does not exceed the range of 6.5 - 8.3 S.U. At least six (6) months prior to beginning the study, the Permittee shall contact MassDEP (massdep.npdes@mass.gov) for guidance on how to complete the study. The completed pH study shall be submitted to massdep.npdes@mass.gov.

D. MONITORING AND REPORTING

The monitoring program in the permit specifies sampling and analysis, which will provide continuous information on compliance and the reliability and effectiveness of the installed pollution abatement equipment and measures. The approved analytical procedures found in 40 CFR Part 136 are required unless other procedures are explicitly required in the permit. The Permittee is obligated to monitor and report sampling results to EPA and the MassDEP within the time specified within the permit. Unless otherwise specified in this permit, the permittee shall submit reports, requests, and information and provide notices in the manner described in this section.

1. Submittal of DMRs and the Use of NetDMR

   a. **Beginning on the issuance date of the permit** the permittee must submit its monthly monitoring data in discharge monitoring reports (DMRs) to EPA and MassDEP no later than the 15th day of the month following the completed reporting period.

   b. **For a period of one month from the effective date of the permit**, the permittee may submit its monthly monitoring data in DMRs to EPA and MassDEP either in hard copy form, as described in Part I.E.5, or in DMRs electronically submitted using NetDMR. NetDMR is a web-based tool that allows permittees to electronically submit DMRs and other required reports via a secure internet connection. NetDMR is accessed from:

   c. **Beginning no later than one month after the effective date of the permit**, the Permittee shall begin reporting monthly monitoring data using NetDMR. The permittee must continue to use the NetDMR after the permittee begins to do so. When a permittee begins submitting reports using NetDMR, it will no longer be required to submit hard copies of DMRs to EPA or MassDEP, unless otherwise specified in this permit.

   d. After the Permittee begins submitting DMR reports to EPA electronically using NetDMR, the Permittee shall electronically submit all reports to EPA as NetDMR attachments rather than as hard copies, unless otherwise specified in this permit. Permittees shall continue to send hard copies of WET test reports to MassDEP as specified in Part I.D.3. Because the due dates for reports described in this permit may not coincide with the due date for submitting DMRs (which is no later than the 15th

day of the month), a report submitted electronically as a NetDMR attachment shall be considered timely if it is electronically submitted to EPA using NetDMR with the next DMR due following the particular report due date specified in this permit.

2. Submittal of Requests and Reports to EPA and MassDEP Surface Water Discharge Permitting Program

   a. The following requests, reports, and information described in this permit shall be submitted to the EPA Water Division (WD) NPDES Applications Coordinator in the EPA and to the MassDEP Surface Water Discharge (SWD) Permitting Program
      (1) Transfer of Permit notice
      (2) Request for changes in sampling location
      (3) Request for reduction in testing frequency
      (4) Request for reduction in WET testing requirements
      (5) Report on unacceptable dilution water / request for alternative dilution water for WET testing
      (6) SWPPP Certification
      (7) Reports specified in Part I.C.3., Compliance Schedule

   b. These reports, information, and requests shall be submitted to EPA WD electronically at R1NPDESReporting@epa.gov or by hard copy mail to the following address:

U.S. Environmental Protection Agency
Water Division
NPDES Applications Coordinator
5 Post Office Square - Suite 100 (06-03)
Boston, MA 02109-3912

And also submitted electronically to MassDEP SWD Permitting program at MassDEP.NPDES@mass.gov.

   c. Submittal of Reports in Hard Copy Form

      (1) The following notifications and reports shall be signed and dated originals, submitted in hard copy, with a cover letter describing the submission:

         i. Written notifications required under Part II, Standard Conditions. Beginning December 21, 2025, such notifications must be done electronically using EPA's NPDES Electronic Reporting Tool ("NeT"), or another approved EPA system, which will be accessible through EPA's Central Data Exchange at https://cdx.epa.gov/.

      (2) This information shall be submitted to EPA ECAD at the following address:

U.S. Environmental Protection Agency
Enforcement and Compliance Assurance Division

Water Compliance Section
5 Post Office Square, Suite 100 (04-SMR)
Boston, MA 02109-3912

3. State Reporting

Duplicate signed copies of all WET test reports shall be submitted to the Massachusetts Department of Environmental Protection, Division of Watershed Management, at the following address:

Massachusetts Department of Environmental Protection
Bureau of Water Resources
Division of Watershed Management
8 New Bond Street
Worcester, Massachusetts 01606

4. Verbal Reports and Verbal Notifications

a. Any verbal reports or verbal notifications, if required in Parts I and/or II of this Permit, shall be made to both EPA and to the State. This includes verbal reports and notifications which require reporting within 24 hours (e.g., Part II.B.4.c. (2), Part II.B.5.c. (3), and Part II.D.1.e.).

b. Verbal reports and verbal notifications shall be made to EPA's Enforcement and Compliance Assurance Division at:

617-918-1510

c. Verbal reports and verbal notifications shall be made to the State's Emergency Response at:

888-304-1133

E. STATE PERMIT CONDITIONS

1. This authorization to discharge includes two separate and independent permit authorizations. The two permit authorizations are (i) a federal National Pollutant Discharge Elimination System permit issued by the U.S. Environmental Protection Agency (EPA) pursuant to the Federal Clean Water Act, 33 U.S.C. §§1251 et seq.; and (ii) an identical state surface water discharge permit issued by the Commissioner of the Massachusetts Department of Environmental Protection (MassDEP) pursuant to the Massachusetts Clean Waters Act, M.G.L. c. 21, §§26-53, and 314 C.M.R. 3.00. All of the requirements contained in this authorization, as well as the standard conditions contained in 314 CMR 3.19, are hereby incorporated by reference into this state surface water discharge permit.

2. Each agency shall have the independent right to enforce the terms and conditions of this permit. Any modification, suspension or revocation of this permit shall be effective only with respect to the agency taking such action, and shall not affect the validity or status of this permit as issued by the other agency, unless and until each agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this permit is declared invalid, illegal or otherwise issued in violation of state law such permit shall remain in full force and effect under federal law as a NPDES Permit issued by the U.S. Environmental Protection Agency. In the event this permit is declared invalid, illegal or otherwise issued in violation of federal law, this permit shall remain in full force and effect under state law as a permit issued by the Commonwealth of Massachusetts.

USEPA REGION 1 FRESHWATER ACUTE TOXICITY TEST PROCEDURE AND PROTOCOL

I. GENERAL REQUIREMENTS

The permittee shall conduct acceptable acute toxicity tests in accordance with the appropriate test protocols described below:

- **Daphnid (Ceriodaphnia dubia) definitive 48 hour test.**
- **Fathead Minnow (Pimephales promelas) definitive 48 hour test.**

Acute toxicity test data shall be reported as outlined in Section VIII.

II. METHODS

The permittee shall use 40 CFR Part 136 methods. Methods and guidance may be found at:

http://water.epa.gov/scitech/methods/cwa/wet/disk2_index.cfm

The permittee shall also meet the sampling, analysis and reporting requirements included in this protocol. This protocol defines more specific requirements while still being consistent with the Part 136 methods. If, due to modifications of Part 136, there are conflicting requirements between the Part 136 method and this protocol, the permittee shall comply with the requirements of the Part 136 method.

III. SAMPLE COLLECTION

A discharge sample shall be collected. Aliquots shall be split from the sample, containerized and preserved (as per 40 CFR Part 136) for chemical and physical analyses required. The remaining sample shall be measured for total residual chlorine and dechlorinated (if detected) in the laboratory using sodium thiosulfate for subsequent toxicity testing. (Note that EPA approved test methods require that samples collected for metals analyses be preserved immediately after collection.) Grab samples must be used for pH, temperature, and total residual chlorine (as per 40 CFR Part 122.21).

Standard Methods for the Examination of Water and Wastewater describes dechlorination of samples (APHA, 1992). Dechlorination can be achieved using a ratio of 6.7 mg/L anhydrous sodium thiosulfate to reduce 1.0 mg/L chlorine. If dechlorination is necessary, a thiosulfate control (maximum amount of thiosulfate in lab control or receiving water) must also be run in the WET test.

All samples held overnight shall be refrigerated at 1- 6^{o}C.

IV. DILUTION WATER

A grab sample of dilution water used for acute toxicity testing shall be collected from the receiving water at a point immediately upstream of the permitted discharge's zone of influence at a reasonably accessible location. Avoid collection near areas of obvious road or agricultural runoff, storm sewers or other point source discharges and areas where stagnant conditions exist. In the case where an alternate dilution water has been agreed upon an additional receiving water control (0% effluent) must also be tested.

If the receiving water diluent is found to be, or suspected to be toxic or unreliable, an alternate standard dilution water of known quality with a hardness, pH, conductivity, alkalinity, organic carbon, and total suspended solids similar to that of the receiving water may be substituted **AFTER RECEIVING WRITTEN APPROVAL FROM THE PERMIT ISSUING AGENCY(S)**. Written requests for use of an alternate dilution water should be mailed with supporting documentation to the following address:

Director
Office of Ecosystem Protection (CAA)
U.S. Environmental Protection Agency-New England
5 Post Office Sq., Suite 100 (OEP06-5)
Boston, MA 02109-3912

and

Manager
Water Technical Unit (SEW)
U.S. Environmental Protection Agency
5 Post Office Sq., Suite 100 (OES04-4)
Boston, MA 02109-3912

Note: USEPA Region 1 retains the right to modify any part of the alternate dilution water policy stated in this protocol at any time. Any changes to this policy will be documented in the annual DMR posting.

See the most current annual DMR instructions which can be found on the EPA Region 1 website at http://www.epa.gov/region1/enforcement/water/dmr.html *for further important details on alternate dilution water substitution requests.*

It may prove beneficial to have the proposed dilution water source screened for suitability prior to toxicity testing. EPA strongly urges that screening be done prior to set up of a full definitive toxicity test any time there is question about the dilution water's ability to support acceptable performance as outlined in the 'test acceptability' section of the protocol.

V. TEST CONDITIONS

The following tables summarize the accepted daphnid and fathead minnow toxicity test conditions and test acceptability criteria:

EPA NEW ENGLAND EFFLUENT TOXICITY TEST CONDITIONS FOR THE DAPHNID, CERIODAPHNIA DUBIA 48 HOUR ACUTE TESTS[1]

1.	Test type	Static, non-renewal
2.	Temperature (^{o}C)	20 $\pm$ 1^{o}C or 25 $\pm$ 1^{o}C
3.	Light quality	Ambient laboratory illumination
4.	Photoperiod	16 hour light, 8 hour dark
5.	Test chamber size	Minimum 30 ml
6.	Test solution volume	Minimum 15 ml
7.	Age of test organisms	1-24 hours (neonates)
8.	No. of daphnids per test chamber	5
9.	No. of replicate test chambers per treatment	4
10.	Total no. daphnids per test concentration	20
11.	Feeding regime	As per manual, lightly feed YCT and Selenastrum to newly released organisms while holding prior to initiating test
12.	Aeration	None
13.	Dilution water[2]	Receiving water, other surface water, synthetic water adjusted to the hardness and alkalinity of the receiving water (prepared using either Millipore Milli-Q^{R} or equivalent deionized water and reagent grade chemicals according to EPA acute toxicity test manual) or deionized water combined with mineral water to appropriate hardness.
14.	Dilution series	$\geq$ 0.5, must bracket the permitted RWC
15.	Number of dilutions	5 plus receiving water and laboratory water control and thiosulfate control, as necessary. An additional dilution at the permitted effluent concentration (% effluent) is required if it is not included in the dilution

		series.
16.	Effect measured	Mortality-no movement of body or appendages on gentle prodding
17.	Test acceptability	90% or greater survival of test organisms in dilution water control solution
18.	Sampling requirements	For on-site tests, samples must be used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples must first be used within 36 hours of collection.
19.	Sample volume required	Minimum 1 liter

Footnotes:

1. Adapted from EPA-821-R-02-012.
2. Standard prepared dilution water must have hardness requirements to generally reflect the characteristics of the receiving water.

EPA NEW ENGLAND TEST CONDITIONS FOR THE FATHEAD MINNOW (PIMEPHALES PROMELAS) 48 HOUR ACUTE TEST[1]

1.	Test Type	Static, non-renewal
2.	Temperature (^{o}C)	20 $\pm$ 1 ^{o} C or 25 $\pm$ 1^{o}C
3.	Light quality	Ambient laboratory illumination
4.	Photoperiod	16 hr light, 8 hr dark
5.	Size of test vessels	250 mL minimum
6.	Volume of test solution	Minimum 200 mL/replicate
7.	Age of fish	1-14 days old and age within 24 hrs of each other
8.	No. of fish per chamber	10
9.	No. of replicate test vessels per treatment	4
10.	Total no. organisms per concentration	40
11.	Feeding regime	As per manual, lightly feed test age larvae using concentrated brine shrimp nauplii while holding prior to initiating test
12.	Aeration	None, unless dissolved oxygen (D.O.) concentration falls below 4.0 mg/L, at which time gentle single bubble aeration should be started at a rate of less than 100 bubbles/min. (Routine D.O. check is recommended.)
13.	dilution water[2]	Receiving water, other surface water, synthetic water adjusted to the hardness and alkalinity of the receiving water (prepared using either Millipore Milli-Q^{R} or equivalent deionized and reagent grade chemicals according to EPA acute toxicity test manual) or deionized water combined with mineral water to appropriate hardness.
14.	Dilution series	$\geq$ 0.5, must bracket the permitted RWC

15.	Number of dilutions	5 plus receiving water and laboratory water control and thiosulfate control, as necessary. An additional dilution at the permitted effluent concentration (% effluent) is required if it is not included in the dilution series.
16.	Effect measured	Mortality-no movement on gentle prodding
17.	Test acceptability	90% or greater survival of test organisms in dilution water control solution
18.	Sampling requirements	For on-site tests, samples must be used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples are used within 36 hours of collection.
19.	Sample volume required	Minimum 2 liters

Footnotes:

1. Adapted from EPA-821-R-02-012
2. Standard dilution water must have hardness requirements to generally reflect characteristics of the receiving water.

VI. CHEMICAL ANALYSIS

At the beginning of a static acute toxicity test, pH, conductivity, total residual chlorine, oxygen, hardness, alkalinity and temperature must be measured in the highest effluent concentration and the dilution water. Dissolved oxygen, pH and temperature are also measured at 24 and 48 hour intervals in all dilutions. The following chemical analyses shall be performed on the 100 percent effluent sample and the upstream water sample for each sampling event.

Parameter	Effluent	Receiving Water	ML (mg/l)
Hardness[1]	x	x	0.5
Total Residual Chlorine (TRC)[2, 3]	x		0.02
Alkalinity	x	x	2.0
pH	x	x	--
Specific Conductance	x	x	--
Total Solids	x		--
Total Dissolved Solids	x		--
Ammonia	x	x	0.1
Total Organic Carbon	x	x	0.5
Total Metals			
Cd	x	x	0.0005
Pb	x	x	0.0005
Cu	x	x	0.003
Zn	x	x	0.005
Ni	x	x	0.005
Al	x	x	0.02
Other as permit requires			

Notes:

1. Hardness may be determined by:
   - APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
     - Method 2340B (hardness by calculation)
     - Method 2340C (titration)
2. Total Residual Chlorine may be performed using any of the following methods provided the required minimum limit (ML) is met.
   - APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
     - Method 4500-CL E Low Level Amperometric Titration
     - Method 4500-CL G DPD Colorimetric Method
3. Required to be performed on the sample used for WET testing prior to its use for toxicity testing.

VII. TOXICITY TEST DATA ANALYSIS

LC50 Median Lethal Concentration (Determined at 48 Hours)

Methods of Estimation:

- Probit Method
- Spearman-Karber
- Trimmed Spearman-Karber
- Graphical

See the flow chart in Figure 6 on p. 73 of EPA-821-R-02-012 for appropriate method to use on a given data set.

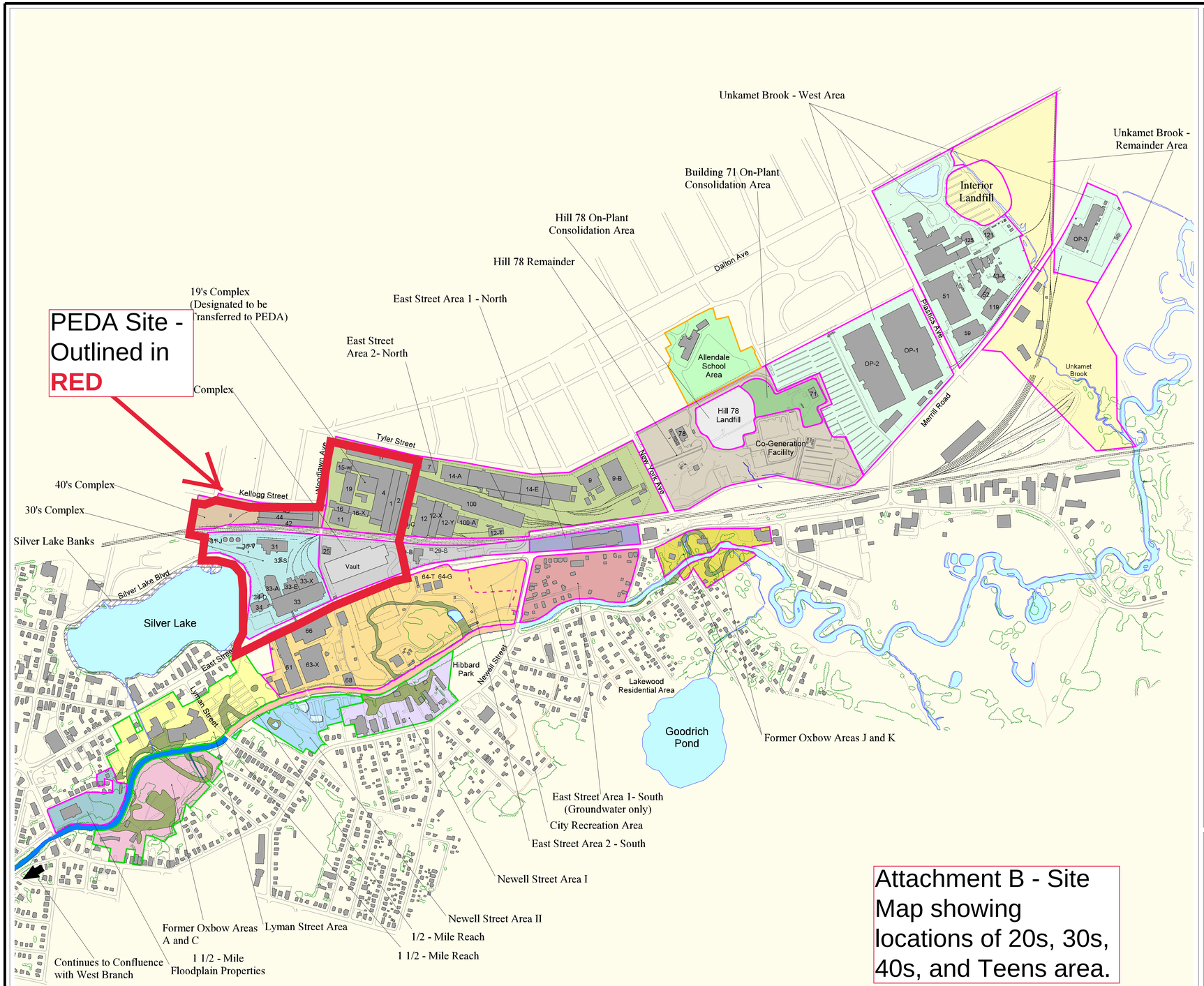
No Observed Acute Effect Level (NOAEL)

See the flow chart in Figure 13 on p. 87 of EPA-821-R-02-012.

VIII. TOXICITY TEST REPORTING

A report of the results will include the following:

- Description of sample collection procedures, site description
- Names of individuals collecting and transporting samples, times and dates of sample collection and analysis on chain-of-custody
- General description of tests: age of test organisms, origin, dates and results of standard toxicant tests; light and temperature regime; other information on test conditions if different than procedures recommended. Reference toxicant test data should be included.
- All chemical/physical data generated. (Include minimum detection levels and minimum quantification levels.)
- Raw data and bench sheets.
- Provide a description of dechlorination procedures (as applicable).
- Any other observations or test conditions affecting test outcome.



LEGEND:

GE Plant Area:

- 20's complex
- 30's complex
- 40's complex
- East Street Area 1- North
- East Street Area 1-South (Groundwater only)
- East Street Area 2 - North
- East Street Area 2 - South
- Building 71 On-Plant Consolidation Area
- Hill 78 On-Plant Consolidation Area
- Hill 78 Remainder
- Unkamet Brook - West Area
- Unkamet Brook - Remainder Area

Silver Lake:

- Silver Lake Sediment
- Silver Lake Banks

Former Oxbow Areas:

- Former Oxbow Areas A&C
- Former Oxbow Areas J&K
- Lyman Street Area
- Newell Street Area I
- Newell Street Area II
- Allendale School Area
- 1/2 - Mile Reach
- 1 1/2 - Mile Reach
- 1 1/2 - Mile Floodplain Properties
- Former Oxbows

Notes:

1. Base features provived by General Electric Contractors.
2. Not all physical features are shown.
3. Site Boundaries are approximate.
4. Map produced by Weston Solutions, Inc.

N W E S

Scale in Feet

500 0 500 1000 1500 2000

Attachment B - Site Map showing locations of 20s, 30s, 40s, and Teens area.

GE-PITTSFIELD/HOUSATONIC RIVER SITE

SITE MAP

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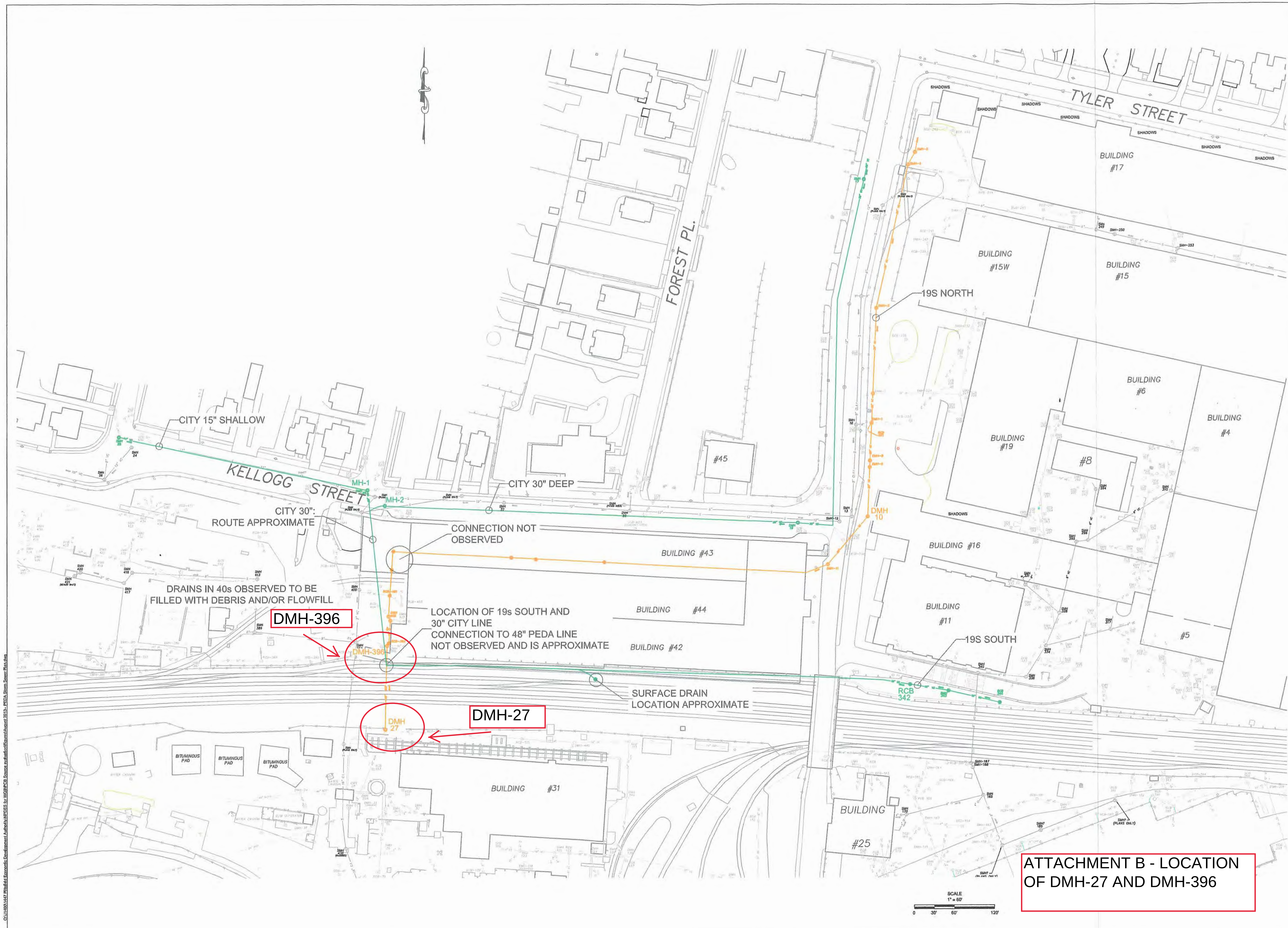

O'REILLY, TALBOT & OKUN [ASSOCIATES]

- PROJECT MANAGEMENT
- ENVIRONMENTAL ENGINEERING
- GEOTECHNICAL ENGINEERING
- ASBESTOS PLANNING & MANAGEMENT
- RISK ASSESSMENT
- CORPORATE CAD

293 BRIDGE STREET SUITE 500
SPRINGFIELD, MA 01103
PHONE: (413) 788-6222
EMAIL: OFFICE@OTO-ENV.COM

SCALE: 1" = 60'
PROJ. NO: J1447-01-06
DRAWN: CDA
CHECKED: JEG
DATE: 08/08/13

PROJECT TITLE:
PITTSFIELD ECONOMIC DEVELOPMENT AUTHORITY
PITTSFIELD, MASSACHUSETTS

DRAWING TITLE:
STORM DRAINS: 19s, 40s, CITY

DRAWING NO.:
S.D. NORTH

NPDES PART II STANDARD CONDITIONS
(April 26, 2018)[1]

TABLE OF CONTENTS

[1] Updated July 17, 2018 to fix typographical errors.

A. GENERAL REQUIREMENTS

1. Duty to Comply

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA or Act) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

a. The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

b. Penalties for Violations of Permit Conditions: The Director will adjust the civil and administrative penalties listed below in accordance with the Civil Monetary Penalty Inflation Adjustment Rule (83 Fed. Reg. 1190-1194 (January 10, 2018) and the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note. See Pub. L.114-74, Section 701 (Nov. 2, 2015)). These requirements help ensure that EPA penalties keep pace with inflation. Under the above-cited 2015 amendments to inflationary adjustment law, EPA must review its statutory civil penalties each year and adjust them as necessary.

(1) Criminal Penalties

(a) *Negligent Violations.* The CWA provides that any person who negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to criminal penalties of not less than $2,500 nor more than $25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation or by imprisonment of not more than 2 years, or both.

(b) *Knowing Violations.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than $5,000 nor more than $50,000 per day of violation, or by imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both.

(c) *Knowing Endangerment.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 303, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he or she is placing another person in imminent danger of death or serious bodily injury shall upon conviction be subject to a fine of not more than $250,000 or by imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing

endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in Section 309(c)(3)(B)(iii) of the Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

(d) *False Statement.* The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both. The Act further provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

(2) *Civil Penalties*. The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act, the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note, and 40 C.F.R. Part 19. *See* Pub. L.114-74, Section 701 (Nov. 2, 2015); 83 Fed. Reg. 1190 (January 10, 2018).

(3) *Administrative Penalties*. The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty as follows:

(a) *Class I Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act, the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note, and 40 C.F.R. Part 19. *See* Pub. L.114-74, Section 701 (Nov. 2, 2015); 83 Fed. Reg. 1190 (January 10, 2018).

(b) *Class II Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note, and 40 C.F.R. Part 19. *See* Pub. L.114-74, Section 701 (Nov. 2, 2015); 83 Fed. Reg. 1190 (January 10, 2018).

2. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit

condition.

3. Duty to Provide Information

The Permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

4. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from responsibilities, liabilities or penalties to which the Permittee is or may be subject under Section 311 of the CWA, or Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

5. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

6. Confidentiality of Information

a. In accordance with 40 C.F.R. Part 2, any information submitted to EPA pursuant to these regulations may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 C.F.R. Part 2 (Public Information).

b. Claims of confidentiality for the following information will be denied:

(1) The name and address of any permit applicant or Permittee;
(2) Permit applications, permits, and effluent data.

c. Information required by NPDES application forms provided by the Director under 40 C.F.R. § 122.21 may not be claimed confidential. This includes information submitted on the forms themselves and any attachments used to supply information required by the forms.

7. Duty to Reapply

If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must apply for and obtain a new permit. The Permittee shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Director. (The Director shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

8. State Authorities

Nothing in Parts 122, 123, or 124 precludes more stringent State regulation of any activity

covered by the regulations in 40 C.F.R. Parts 122, 123, and 124, whether or not under an approved State program.

9. Other Laws

The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.

B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a Permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Need to Halt or Reduce Not a Defense

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Duty to Mitigate

The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

4. Bypass

a. Definitions

(1) *Bypass* means the intentional diversion of waste streams from any portion of a treatment facility.

(2) *Severe property damage* means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. *Bypass not exceeding limitations.* The Permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (c) and (d) of this Section.

c. Notice

(1) *Anticipated bypass*. If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass. As of December 21, 2020 all notices submitted in compliance with this Section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to report electronically if specified by a particular permit or if required to do so by state law.

(2) *Unanticipated bypass*. The Permittee shall submit notice of an unanticipated bypass as required in paragraph D.1.e. of this part (24-hour notice). As of December 21, 2020 all notices submitted in compliance with this Section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to report electronically if specified by a particular permit or required to do so by law.

d. *Prohibition of bypass.*

(1) Bypass is prohibited, and the Director may take enforcement action against a Permittee for bypass, unless:

(a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and

(c) The Permittee submitted notices as required under paragraph 4.c of this Section.

(2) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 4.d of this Section.

5. Upset

a. *Definition*. *Upset* means an exceptional incident in which there is an unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or

improper operation.

b. *Effect of an upset.* An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph B.5.c. of this Section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. *Conditions necessary for a demonstration of upset.* A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the Permittee can identify the cause(s) of the upset;
(2) The permitted facility was at the time being properly operated; and
(3) The Permittee submitted notice of the upset as required in paragraph D.1.e.2.b. (24-hour notice).
(4) The Permittee complied with any remedial measures required under B.3. above.

d. *Burden of proof.* In any enforcement proceeding the Permittee seeking to establish the occurrence of an upset has the burden of proof.

C. MONITORING REQUIREMENTS

1. Monitoring and Records

a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

b. Except for records of monitoring information required by this permit related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least 5 years (or longer as required by 40 C.F.R. § 503), the Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

c. Records of monitoring information shall include:

(1) The date, exact place, and time of sampling or measurements;
(2) The individual(s) who performed the sampling or measurements;
(3) The date(s) analyses were performed;
(4) The individual(s) who performed the analyses;
(5) The analytical techniques or methods used; and
(6) The results of such analyses.

d. Monitoring must be conducted according to test procedures approved under 40 C.F.R. § 136 unless another method is required under 40 C.F.R. Subchapters N or O.

e. The Clean Water Act provides that any person who falsifies, tampers with, or

knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

2. Inspection and Entry

The Permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

a. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

D. REPORTING REQUIREMENTS

1. Reporting Requirements

a. *Planned Changes*. The Permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 C.F.R. § 122.29(b); or

(2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements at 40 C.F.R. § 122.42(a)(1).

(3) The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

b. *Anticipated noncompliance*. The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

c. *Transfers*. This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Clean Water Act. *See* 40 C.F.R. § 122.61; in some cases, modification or revocation and reissuance is mandatory.

d. *Monitoring reports*. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(1) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices. As of December 21, 2016 all reports and forms submitted in compliance with this Section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to report electronically if specified by a particular permit or if required to do so by State law.

(2) If the Permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 C.F.R. § 136, or another method required for an industry-specific waste stream under 40 C.F.R. Subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.

(3) Calculations for all limitations which require averaging or measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

e. *Twenty-four hour reporting.*

(1) The Permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A written report shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (combined sewer overflows, sanitary sewer overflows, or bypass events), type of sewer overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volumes untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the sewer overflow event, and whether the noncompliance was related to wet weather. As of December 21, 2020 all

reports related to combined sewer overflows, sanitary sewer overflows, or bypass events submitted in compliance with this section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to electronically submit reports related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section by a particular permit or if required to do so by state law. The Director may also require Permittees to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section.

(2) The following shall be included as information which must be reported within 24 hours under this paragraph.

(a) Any unanticipated bypass which exceeds any effluent limitation in the permit. *See* 40 C.F.R. § 122.41(g).
(b) Any upset which exceeds any effluent limitation in the permit.
(c) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours. *See* 40 C.F.R. § 122.44(g).

(3) The Director may waive the written report on a case-by-case basis for reports under paragraph D.1.e. of this Section if the oral report has been received within 24 hours.

f. *Compliance Schedules.* Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

g. *Other noncompliance.* The Permittee shall report all instances of noncompliance not reported under paragraphs D.1.d., D.1.e., and D.1.f. of this Section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph D.1.e. of this Section. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in paragraph D.1.e. and the applicable required data in Appendix A to 40 C.F.R. Part 127. As of December 21, 2020 all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events submitted in compliance with this section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), §122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to electronically submit reports related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section by a particular permit or if required to do so by state law. The Director may also require Permittees to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this Section.

h. *Other information.* Where the Permittee becomes aware that it failed to submit any

relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

i. *Identification of the initial recipient for NPDES electronic reporting data*. The owner, operator, or the duly authorized representative of an NPDES-regulated entity is required to electronically submit the required NPDES information (as specified in Appendix A to 40 C.F.R. Part 127) to the appropriate initial recipient, as determined by EPA, and as defined in 40 C.F.R. § 127.2(b). EPA will identify and publish the list of initial recipients on its Web site and in the FEDERAL REGISTER, by state and by NPDES data group (see 40 C.F.R. § 127.2(c) of this Chapter). EPA will update and maintain this listing.

2. Signatory Requirement

a. All applications, reports, or information submitted to the Director shall be signed and certified. *See* 40 C.F.R. §122.22.

b. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

3. Availability of Reports.

Except for data determined to be confidential under paragraph A.6. above, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the State water pollution control agency and the Director. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statements on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the CWA.

E. DEFINITIONS AND ABBREVIATIONS

1. General Definitions

For more definitions related to sludge use and disposal requirements, see EPA Region 1's NPDES Permit Sludge Compliance Guidance document (4 November 1999, modified to add regulatory definitions, April 2018).

Administrator means the Administrator of the United States Environmental Protection Agency, or an authorized representative.

Applicable standards and limitations means all, State, interstate, and federal standards and limitations to which a "discharge," a "sewage sludge use or disposal practice," or a related activity is subject under the CWA, including "effluent limitations," water quality standards, standards of performance, toxic effluent standards or prohibitions, "best management practices," pretreatment standards, and "standards for sewage sludge use or disposal" under Sections 301, 302, 303, 304, 306, 307, 308, 403 and 405 of the CWA.

Application means the EPA standard national forms for applying for a permit, including any additions, revisions, or modifications to the forms; or forms approved by EPA for use in

"approved States," including any approved modifications or revisions.

Approved program or *approved State* means a State or interstate program which has been approved or authorized by EPA under Part 123.

Average monthly discharge limitation means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

Average weekly discharge limitation means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

Best Management Practices ("BMPs") 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.

Bypass see B.4.a.1 above.

C-NOEC or *"Chronic (Long-term Exposure Test) – No Observed Effect Concentration" means* the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specified time of observation.

Class I sludge management facility is any publicly owned treatment works (POTW), as defined in 40 C.F.R. § 501.2, required to have an approved pretreatment program under 40 C.F.R. § 403.8 (a) (including any POTW located in a State that has elected to assume local program responsibilities pursuant to 40 C.F.R. § 403.10 (e)) and any treatment works treating domestic sewage, as defined in 40 C.F.R. § 122.2, classified as a Class I sludge management facility by the EPA Regional Administrator, or, in the case of approved State programs, the Regional Administrator in conjunction with the State Director, because of the potential for its sewage sludge use or disposal practice to affect public health and the environment adversely.

Contiguous zone means the entire zone established by the United States under Article 24 of the Convention on the Territorial Sea and the Contiguous Zone.

Continuous discharge means a "discharge" which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or similar activities.

CWA means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92-500, as amended by Public Law 95-217, Public Law 95-576, Public Law 96-483and Public Law 97-117, 33 U.S.C. 1251 *et seq*.

CWA and regulations means the Clean Water Act (CWA) and applicable regulations promulgated thereunder. In the case of an approved State program, it includes State program requirements.

Daily Discharge means the "discharge of a pollutant" measured during a calendar day or any

other 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Direct Discharge means the "discharge of a pollutant."

Director means the Regional Administrator or an authorized representative. In the case of a permit also issued under Massachusetts' authority, it also refers to the Director of the Division of Watershed Management, Department of Environmental Protection, Commonwealth of Massachusetts.

Discharge

(a) When used without qualification, *discharge* means the "discharge of a pollutant."

(b) As used in the definitions for "interference" and "pass through," *discharge* means the introduction of pollutants into a POTW from any non-domestic source regulated under Section 307(b), (c) or (d) of the Act.

Discharge Monitoring Report ("DMR") means the EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by Permittees. DMRs must be used by "approved States" as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

Discharge of a pollutant means:

(a) Any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or

(b) Any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any "indirect discharger."

Effluent limitation means any restriction imposed by the Director on quantities, discharge rates, and concentrations of "pollutants" which are "discharged" from "point sources" into "waters of the United States," the waters of the "contiguous zone," or the ocean.

Effluent limitation guidelines means a regulation published by the Administrator under section 304(b) of CWA to adopt or revise "effluent limitations."

Environmental Protection Agency ("EPA") means the United States Environmental Protection

Agency.

Grab Sample means an individual sample collected in a period of less than 15 minutes.

Hazardous substance means any substance designated under 40 C.F.R. Part 116 pursuant to Section 311 of CWA.

Incineration is the combustion of organic matter and inorganic matter in sewage sludge by high temperatures in an enclosed device.

Indirect discharger means a nondomestic discharger introducing "pollutants" to a "publicly owned treatment works."

Interference means a discharge (see definition above) which, alone or in conjunction with a discharge or discharges from other sources, both:

(a) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and

(b) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resources Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SDWA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Landfill means an area of land or an excavation in which wastes are placed for permanent disposal, and that is not a land application unit, surface impoundment, injection well, or waste pile.

Land application is the spraying or spreading of sewage sludge onto the land surface; the injection of sewage sludge below the land surface; or the incorporation of sewage sludge into the soil so that the sewage sludge can either condition the soil or fertilize crops or vegetation grown in the soil.

Land application unit means an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for agricultural purposes or for treatment and disposal.

LC_{50} means the concentration of a sample that causes mortality of 50% of the test population at a specific time of observation. The LC_{50} = 100% is defined as a sample of undiluted effluent.

Maximum daily discharge limitation means the highest allowable "daily discharge."

Municipal solid waste landfill (MSWLF) unit means a discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined under 40 C.F.R. § 257.2. A MSWLF unit also may receive other types of RCRA Subtitle D wastes, such as commercial solid waste, nonhazardous sludge, very small quantity generator waste and industrial solid waste. Such a landfill may be

publicly or privately owned. A MSWLF unit may be a new MSWLF unit, an existing MSWLF unit or a lateral expansion. A construction and demolition landfill that receives residential lead-based paint waste and does not receive any other household waste is not a MSWLF unit.

Municipality

(a) When used without qualification *municipality* means a city, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of CWA.

(b) As related to sludge use and disposal, *municipality* means a city, town, borough, county, parish, district, association, or other public body (including an intermunicipal Agency of two or more of the foregoing entities) created by or under State law; an Indian tribe or an authorized Indian tribal organization having jurisdiction over sewage sludge management; or a designated and approved management Agency under Section 208 of the CWA, as amended. The definition includes a special district created under State law, such as a water district, sewer district, sanitary district, utility district, drainage district, or similar entity, or an integrated waste management facility as defined in Section 201 (e) of the CWA, as amended, that has as one of its principal responsibilities the treatment, transport, use or disposal of sewage sludge.

National Pollutant Discharge Elimination System means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318, and 405 of the CWA. The term includes an "approved program."

New Discharger means any building, structure, facility, or installation:

(a) From which there is or may be a "discharge of pollutants;"

(b) That did not commence the "discharge of pollutants" at a particular "site" prior to August 13, 1979;

(c) Which is not a "new source;" and

(d) Which has never received a finally effective NPDES permit for discharges at that "site."

This definition includes an "indirect discharger" which commences discharging into "waters of the United States" after August 13, 1979. It also includes any existing mobile point source (other than an offshore or coastal oil and gas exploratory drilling rig or a coastal oil and gas exploratory drilling rig or a coastal oil and gas exploratory drilling rig or a coastal oil and gas developmental drilling rig) such as a seafood processing rig, seafood processing vessel, or aggregate plant, that begins discharging at a "site" for which it does not have a permit; and any offshore or coastal mobile oil and gas exploratory drilling rig or coastal mobile oil and gas developmental drilling rig that commences the discharge of pollutants after August 13, 1979, at a "site" under EPA's permitting jurisdiction for which it is not covered by an individual or general permit and which is located in an area determined by the Director in the issuance of a final permit to be in an area of biological concern. In determining whether an area is an area of biological concern, the Director shall consider the factors specified in 40 C.F.R. §§ 125.122 (a) (1) through (10).

An offshore or coastal mobile exploratory drilling rig or coastal mobile developmental drilling rig will be considered a "new discharger" only for the duration of its discharge in an area of biological concern.

New source means any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced:

(a) After promulgation of standards of performance under Section 306 of CWA which are applicable to such source, or

(b) After proposal of standards of performance in accordance with Section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal.

NPDES means "National Pollutant Discharge Elimination System."

Owner or operator means the owner or operator of any "facility or activity" subject to regulation under the NPDES programs.

Pass through means a Discharge (see definition above) which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

Pathogenic organisms are disease-causing organisms. These include, but are not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.

Permit means an authorization, license, or equivalent control document issued by EPA or an "approved State" to implement the requirements of Parts 122, 123, and 124. "Permit" includes an NPDES "general permit" (40 C.F.R § 122.28). "Permit" does not include any permit which has not yet been the subject of final agency action, such as a "draft permit" or "proposed permit."

Person means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

Person who prepares sewage sludge is either the person who generates sewage sludge during the treatment of domestic sewage in a treatment works or the person who derives a material from sewage sludge.

pH means the logarithm of the reciprocal of the hydrogen ion concentration measured at 25° Centigrade or measured at another temperature and then converted to an equivalent value at 25° Centigrade.

Point Source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff (see 40 C.F.R. § 122.3).

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials

(except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 *et seq*.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean:

(a) Sewage from vessels; or

(b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well is used either to facilitate production or for disposal purposes is approved by the authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

Primary industry category means any industry category listed in the NRDC settlement agreement (*Natural Resources Defense Council et al. v. Train*, 8 E.R.C. 2120 (D.D.C. 1976), *modified* 12 E.R.C. 1833 (D.D.C. 1979)); also listed in Appendix A of 40 C.F.R. Part 122.

Privately owned treatment works means any device or system which is (a) used to treat wastes from any facility whose operator is not the operator of the treatment works and (b) not a "POTW."

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly owned treatment works (POTW) means a treatment works as defined by Section 212 of the Act, which is owned by a State or municipality (as defined by Section 504(4) of the Act). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in Section 502(4) of the Act, which has jurisdiction over the indirect discharges to and the discharges from such a treatment works.

Regional Administrator means the Regional Administrator, EPA, Region I, Boston, Massachusetts.

Secondary industry category means any industry which is not a "primary industry category."

Septage means the liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system, or a holding tank when the system is cleaned or maintained.

Sewage Sludge means any solid, semi-solid, or liquid residue removed during the treatment of municipal waste water or domestic sewage. Sewage sludge includes, but is not limited to, solids removed during primary, secondary, or advanced waste water treatment, scum, septage, portable toilet pumpings, type III marine sanitation device pumpings (33 C.F.R. Part 159), and sewage sludge products. Sewage sludge does not include grit or screenings, or ash generated during the incineration of sewage sludge.

Sewage sludge incinerator is an enclosed device in which only sewage sludge and auxiliary fuel are fired.

Sewage sludge unit is land on which only sewage sludge is placed for final disposal. This does

not include land on which sewage sludge is either stored or treated. Land does not include waters of the United States, as defined in 40 C.F.R. § 122.2.

Sewage sludge use or disposal practice means the collection, storage, treatment, transportation, processing, monitoring, use, or disposal of sewage sludge.

Significant materials includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substance designated under Section 101(14) of CERCLA; any chemical the facility is required to report pursuant to Section 313 of title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

Significant spills includes, but is not limited to, releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the CWA (see 40 C.F.R. §§ 110.10 and 117.21) or Section 102 of CERCLA (*see* 40 C.F.R. § 302.4).

Sludge-only facility means any "treatment works treating domestic sewage" whose methods of sewage sludge use or disposal are subject to regulations promulgated pursuant to section 405(d) of the CWA, and is required to obtain a permit under 40 C.F.R. § 122.1(b)(2).

State means any of the 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, the Commonwealth of the Northern Mariana Islands, the Trust Territory of the Pacific Islands, or an Indian Tribe as defined in the regulations which meets the requirements of 40 C.F.R. § 123.31.

Store or storage of sewage sludge is the placement of sewage sludge on land on which the sewage sludge remains for two years or less. This does not include the placement of sewage sludge on land for treatment.

Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage.

Storm water discharge associated with industrial activity means the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant.

Surface disposal site is an area of land that contains one or more active sewage sludge units.

Toxic pollutant means any pollutant listed as toxic under Section 307(a)(1) or, in the case of "sludge use or disposal practices," any pollutant identified in regulations implementing Section 405(d) of the CWA.

Treatment works treating domestic sewage means a POTW or any other sewage sludge or waste water treatment devices or systems, regardless of ownership (including federal facilities), used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge. This definition does not include septic tanks or similar devices.

For purposes of this definition, "domestic sewage" includes waste and waste water from humans or household operations that are discharged to or otherwise enter a treatment works. In States where there is no approved State sludge management program under Section 405(f) of the CWA, the Director may designate any person subject to the standards for sewage sludge use and

disposal in 40 C.F.R. Part 503 as a "treatment works treating domestic sewage," where he or she finds that there is a potential for adverse effects on public health and the environment from poor sludge quality or poor sludge handling, use or disposal practices, or where he or she finds that such designation is necessary to ensure that such person is in compliance with 40 C.F.R. Part 503.

Upset see B.5.a. above.

Vector attraction is the characteristic of sewage sludge that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

Waste pile or *pile* means any non-containerized accumulation of solid, non-flowing waste that is used for treatment or storage.

Waters of the United States or waters of the U.S. means:

(a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(b) All interstate waters, including interstate "wetlands;"

(c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands", sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

    (1) Which are or could be used by interstate or foreign travelers for recreational or other purpose;

    (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

    (3) Which are used or could be used for industrial purposes by industries in interstate commerce;

(d) All impoundments of waters otherwise defined as waters of the United States under this definition;

(e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;

(f) The territorial sea; and

(g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 C.F.R. § 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States. Waters of the United States do not include prior converted cropland.

Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

Wetlands means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Whole Effluent Toxicity (WET) means the aggregate toxic effect of an effluent measured directly by a toxicity test.

*Zone of Initial Dilution (*ZID) means the region of initial mixing surrounding or adjacent to the end of the outfall pipe or diffuser ports, provided that the ZID may not be larger than allowed by mixing zone restrictions in applicable water quality standards.

2. Commonly Used Abbreviations

BOD	Five-day biochemical oxygen demand unless otherwise specified
CBOD	Carbonaceous BOD
CFS	Cubic feet per second
COD	Chemical oxygen demand
Chlorine	
Cl_2	Total residual chlorine
TRC	Total residual chlorine which is a combination of free available chlorine (FAC, see below) and combined chlorine (chloramines, etc.)
TRO	Total residual chlorine in marine waters where halogen compounds are present
FAC	Free available chlorine (aqueous molecular chlorine, hypochlorous acid, and hypochlorite ion)
Coliform	
Coliform, Fecal	Total fecal coliform bacteria
Coliform, Total	Total coliform bacteria
Cont.	Continuous recording of the parameter being monitored, i.e. flow, temperature, pH, etc.
Cu. M/day or M^3/day	Cubic meters per day
DO	Dissolved oxygen

kg/day	Kilograms per day
lbs/day	Pounds per day
mg/L	Milligram(s) per liter
mL/L	Milliliters per liter
MGD	Million gallons per day
Nitrogen	
Total N	Total nitrogen
NH3-N	Ammonia nitrogen as nitrogen
NO3-N	Nitrate as nitrogen
NO2-N	Nitrite as nitrogen
NO3-NO2	Combined nitrate and nitrite nitrogen as nitrogen
TKN	Total Kjeldahl nitrogen as nitrogen
Oil & Grease	Freon extractable material
PCB	Polychlorinated biphenyl
Surfactant	Surface-active agent
Temp. °C	Temperature in degrees Centigrade
Temp. °F	Temperature in degrees Fahrenheit
TOC	Total organic carbon
Total P	Total phosphorus
TSS or NFR	Total suspended solids or total nonfilterable residue
Turb. or Turbidity	Turbidity measured by the Nephelometric Method (NTU)
µg/L	Microgram(s) per liter
WET	"Whole effluent toxicity"
ZID	Zone of Initial Dilution

RESPONSE TO COMMENTS

NPDES Permit # MA0040231
Pittsfield Economic Development Authority
William Stanley Business Park of the Berkshires
Pittsfield, Massachusetts

The U.S. Environmental Protection Agency's Region 1 (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) (together, the Agencies) are issuing a Final National Pollutant Discharge Elimination System (NPDES) Permit (Final Permit) to the Pittsfield Economic Development Authority (the Permittee) for the William Stanley Business Park of the Berkshires (the site), located in Pittsfield, Massachusetts. This permit is being issued under the Federal Clean Water Act (CWA), 33 U.S.C., §§ 1251 et. seq. and the Massachusetts Clean Water Act, M.G.L. Ch. 21, §§ 26-35.

In accordance with the provisions of 40 CFR § 124.17, this document presents EPA's responses to comments received on the draft NPDES Permit #MA0040231 (the Draft Permit). The Response to Comments explains and supports EPA's determinations that form the basis of the Final Permit. From April 8, 2015 through June 6, 2015, EPA and MassDEP (together, the Agencies) solicited public comments on the Draft Permit, for the reissuance of a NPDES permit to discharge stormwater and groundwater infiltration from Outfall Serial Number 001 to Silver Lake in Pittsfield, Massachusetts.

Although EPA's decision-making process has benefited from the comments submitted, the information and arguments presented did not raise any substantial new questions concerning the permit that warrants EPA exercising its discretion to reopen the public comment period. EPA did, however, make certain changes in response to the public comments EPA received on the Draft Permit, listed in Part 1, below. The analyses underlying these changes are explained in the responses to individual comments in Part 2 and 3, below, and are reflected in the Final Permit. EPA maintains that the Final Permit is a "logical outgrowth" of the Draft Permit that was available for public comment.
A copy of the Final Permit may be also obtained by writing or calling Robin L. Johnson, U.S. EPA, 5 Post Office Square, Suite 100 (Mail Code: 06-1), Boston, MA 02109-3912; Telephone: (617) 918-1045; Email johnson.robin@epa.gov.

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1. Summary of Changes to the Final Permit

EPA has made administrative changes to correct the addresses and submittal procedures regarding the submittal of reports. These revisions have been included in Parts I.D.2.b and I.D.2.c. of the final permit.

EPA made several changes in response to comments and information received regarding the 2015 Draft Permit. For ease of reference, a list of these changes is provided below in accordance with to 40 CFR § 124.17(a)(1). The reasons for these changes are included in EPA's detailed responses to comments in Parts 2 and 3 of this document.

1. On the cover page, the Massachusetts contact was updated from David Ferris to Lealdon Langley and the Division from Massachusetts Wastewater Management Program to the Division of Watershed Management to reflect updated organizational structure at MassDEP.

2. On the cover page, the EPA contact information was updated from Office of Ecosystem Protection to Water Division to reflect recent the organizational realignment within the Region.

3. Footnote 2 was added to Table I.A.1. explaining that all analyses must use sufficiently sensitive analytical methods. Sufficiently sensitive methods are EPA-approved methods that are capable of detecting and measuring the pollutants at, or below, the applicable water quality criteria or permit limits. This is pursuant to amendments to the NPDES regulations that were finalized in 2014, but EPA did

not create the standard footnote until after the Draft Permit was issued in April 2015.

4. Footnote 3 of Table I.A.1 was modified to remove reference to a sample precipitation data report form. The Final Permit permits PEDA to report precipitation data from nearby Pittsfield Airport in lieu of on-site precipitation monitoring. See Response to Comment IV.b.

5. Table I.A.1, PCBs: Footnote 7 was added, which states that if EPA adopts an updated PCB detection method into 40 CFR Part 136, PEDA must begin using that method for PCB analysis and DMR reporting within 6 months after EPA notifies the Permittee that the updated PCB analytical method is available. See Response to Comment 2.A.IV.a.(viii).

6. In Table I.A.1, the PCB limit was changed from 0.000064 µg/L to a non-numeric (i.e. BMPs) limit with monthly monitoring and a minimum level requirement for analysis, and to demonstrate compliance with this limit. See Response to Comment 2.A.IV.a.(viii).

7. Table I.A.1, flow: the measurement frequency was changed to "When Discharging" and the Sample Type was changed to "Meter or Estimate." See Response to Comment 2.A.IV.a.(i).

8. Table I.A.1, Oil and Grease: the monitoring frequency was changed to once per month. See Response to Comment 2.A.IV.a.(ii).

9. Table I.A.1, TSS: The limits have been changed to 30 mg/L monthly average and 100 mg/L maximum daily. The monitoring frequency has also been changed to once per month. See Response to Comment 2.A.IV.a.(iii).

10. Table I.A.1, pH: The pH limits were changed to a range of 6.5 to 9.0 SU.

    Also, Footnote 5 has been added:

    > The pH of the effluent shall not be less than 6.5 standard units (S.U.) nor greater than 9.0 SU at any time. Please see Section I.C.4 of this permit for information on requirements for maintaining this pH limit range in future permits.

    See Response to Comment 2.A.IV.a.(iv) for discussion of pH changes.

11. Table I.A.1, *E. coli*: The monitoring frequency has been changed to once per year. See Response to Comment 2.A.IV.a.(iv).

12. Table I.A.1, Total Phosphorus: The monitoring requirement has been removed. See Response to Comment 2.A.IV.a.(v).

13. Table I.A.1, Total Nitrogen: The monitoring requirement has been reduced to twice per year. See Response to Comment 2.A.IV.a.(vi).

14. Table I.A.1, Whole Effluent Toxicity: The testing frequency was changed from four times per year to twice per year. See Response to Comment 2.A.IV.a.(ix).

15. Table I.A.1 Footnote 3 was added to Table 1.A.1. with updated measurement frequency language.

16. Table I.A.1, Footnote 8: The test dates for the semiannual WET test was updated to April and October. Five years after the effective date, the test frequency may be reduced to one test each two years if certain requirements are met. See Response 2.A.IV.a.

17. In Section I.C.2, the site specific BMPs were updated and expanded. See Responses 2.A.V.a through d.

18. In Section I.C.3, a Compliance Schedule was added for the BMP and SWPPP requirements of the permit. See Responses 2.A.V.a through d.

19. In Section I.D, Office of Ecosystem Protection was changed to the Water Division and Office of Environmental Stewardship was changed to the Enforcement and Compliance Assurance Division (ECAD)to reflect the recent organizational realignment within the Region.

20. Part I.F of the Draft Permit has been modified and is now included as Part I.E.1 and I.E.2 of the Final Permit. Language related to State Certification has been removed due to the length of time that has elapsed between EPA's issuance of the Draft Permit (and request for certification pursuant to section 401 of the CWA) and the issuance of this Final Permit. *See* 40 CFR § 124.53; 33 U.S.C. § 1341(a)(1). As such, EPA has deemed the certification waived, but has included Massachusetts' certification as part of the administrative record for this permit.

2. Response to Written Comments

A. Comments from Corydon Thurston, Director of the Pittsfield Economic Development Authority, dated June 4, 2015.

Comment I. Executive Summary

The Pittsfield Economic Development Authority ("PEDA") appreciates the opportunity to review and comment on draft permit number MA0040231, dated April 3, 2015, for the PEDA Outfall 001 at the William Stanley Business Park of the Berkshires in Pittsfield, Massachusetts. PEDA is submitting the following comments to the US Environmental Protection Agency ("EPA") and the Massachusetts Department of Environmental Protection ("MassDEP") with respect to the draft permit.

PEDA questions the legal basis for the effluent limits. We believe that the effluent limits conflict with and would be prohibited by the consent decree entered into by EPA, MassDEP, GE, the City of Pittsfield and others with respect to the remediation of the former GE manufacturing plant and other environmentally impacted areas ("the Site"). United States of America, State of Connecticut, and Commonwealth of Massachusetts v. General Electric Company, Civil Action No. 99-30225-MAP et seq., entered by the United States District Court for the District of Massachusetts on October 27, 2000 (the "Consent Decree") (see Exhibit A, Consent Decree) established cleanup requirements and performance standards that EPA and MassDEP determined to be protective of human health and the environment. GE has met the cleanup requirements and performance standards at areas of the Site that has been transferred to PEDA ownership; and PEDA has maintained those cleanup requirements and performance standards. Under the terms of the Consent Decree, EPA and MassDEP cannot require additional response actions or more stringent standards. The draft permit nevertheless establishes numeric effluent limitations that would impose cleanup requirements well beyond the Best Management Practices ("BMPs") required for stormwater outfalls under the Consent Decree and may require additional groundwater cleanup, again beyond the requirements of the Consent Decree.

An Agreement and Covenant Not to Sue between EPA and PEDA, dated January 3, 2002, as amended on February 10, 2012 (the "Covenant Not to Sue"), extends the protections of the Consent Decree to PEDA. The Covenant Not to Sue, as amended, is attached as Exhibit B. The effluent limitations proposed in the draft permit would be prohibited by the Consent Decree and by the Covenant Not Sue because they are far more stringent than the performance standards of the Consent Decree and would require PEDA to assume monitoring, treatment and site remediation activities beyond those required in the Consent Decree, in conflict with the protections provided under its Covenant Not to Sue.

As discussed herein, PEDA believes that the effluent limitations are unnecessarily stringent, arbitrary, and capricious. The site is no longer an active industrial site and should not be regulated as such. In fact, both PEDA and the City of Pittsfield contribute stormwater to this system (52 acres and 91 acres respectively). Both entities are municipal agencies and both should be regulated as municipal entities, based upon municipal permit standards. However, the limitations set forth in the draft permit are based on the land's former industrial use. The permit fails to take into consideration the current conditions and the improved sampling results achieved since PEDA first took over this permit and applied for the permit renewal more than ten years ago. For example, in 2009 EPA sent a letter to General Electric's counsel (attached at Exhibit C) stating that it had evaluated past data submitted to EPA and determined that PEDA was no longer required to sample for metals and whole effluent toxicity. However, the draft permit proposes to restore those same requirements that were previously determined to be unnecessary. In addition, PEDA has invested over $3.5 million for the construction of a water quality basin and updates to its stormwater system. For the past five years after completing that work the average concentration of polychlorinated biphenyls ("PCBs") discharged to Silver Lake has dropped significantly. During the past ten months of sampling, no polychlorinated biphenyls PCBs have been detected, yet this permit

proposes a limit that is technically and financially infeasible. Even EPA recognized the difficulty in achieve the standard. The Fact Sheet for the draft permit states that because the effluent limit for PCBs is "several orders of magnitude below the detection capabilities of current analytical methods," EPA established a separate compliance limit at the current technical capability to detect the presence of PCBs in water. PEDA questions the need to set a standard that cannot be quantified. PEDA also questions several of the other compliance limits, as discussed later in these comments.

The permit conditions are financially infeasible. Strict adherence would require a water treatment facility in excess of $5 million and even adhering to the compliance limit would require a capital cost in excess of $1 million for necessary improvements. This disproportionate financial burden would put PEDA out of business. Compliance monitoring alone will require approximately fifteen-percent of PEDA's annual budget, severely limiting PEDA's ability to advance its core mission of economic development. Given the lack of any meaningful justification for the need to increase compliance monitoring requirements, PEDA questions the need for these costly requirements and believes that any requirement for effluent limits would be arbitrary and capricious.

PEDA also questions the classification of Silver Lake as a Class B waterbody. The permit assumes that Silver Lake is a Class B warm water fishery based upon a default designation because it has not been otherwise designated. PEDA believes that this designation is arbitrary and ignores the unique conditions at Silver Lake. We understand that the regulations pursuant to the Clean Water Act ("CWA") require permit conditions that will be consistent with the water quality standards established under CWA Section 303. However, it is unlikely that Silver Lake will ever meet Class B conditions. GE completed the cleanup of Silver Lake and the EPA and MassDEP have approved the Final Completion Report, but the fish in the lake cannot be consumed. GE is required to maintain signs around the lake warning the public not to eat the fish (see Exhibit D, photo of fish warning sign at Silver Lake). As noted in the GE-Pittsfield River Site – Silver Lake Area (GECD600) 2014 Annual Monitoring Report, dated March 4, 2015, (Exhibit E), recent sampling of the water indicates the PCB levels remain in excess of the compliance limits set forth in the draft permit and well above the actual effluent limit for PCBs. MassDEP has some flexibility in determining the applicable criteria and should have established water quality criteria that are consistent with the performance standards of the Consent Decree. PEDA believes that the failure to harmonize the permit conditions with the actual post remediation conditions of the lake is a conflict with the terms of the Consent Decree and the Covenant Not to Sue.

PEDA has already installed expensive stormwater management Best Management Practices ("BMPs") that are proving effective and it is currently developing plans for additional BMPs including innovative low impact development infrastructure improvements. These additional BMPs would, if implemented, eliminate much of the discharge from Outfall 001. The BMPs under consideration include storage, reuse, and infiltration of stormwater and include some innovative measures for managing stormwater at brownfields sites.

PEDA has continuously embraced a responsible approach to managing stormwater on its site and intends to keep its progressive posture for planning, construction, and maintenance of BMPs. The construction of and subsequent improvements to the water quality basin, along with the grass swale which conveys water to the basin, represent concrete steps PEDA has implemented to manage stormwater. Further site development plans have continued to include effective stormwater BMPs starting at early planning stages, reflecting the proactive approach to early adoption of suitable BMPs. PEDA and its engineering team have recently retained the services of a green infrastructure expert, Wendi Goldsmith, who is a Certified Professional in Storm Water Quality and a Certified Professional Geologist. Her experience includes over twenty years of urban green infrastructure project work from early concept development, through complex operations and formal monitoring programs. Her green infrastructure projects in Massachusetts and elsewhere have been recognized through local, regional, national, and international awards. She will continue to offer technical and policy guidance to inform the development of future stormwater BMPs for PEDA, and her involvement represents a noteworthy commitment to ensuring a robust and creative approach to stormwater management. PEDA hopes that its BMPs can serve as a model for best practices at other brownfields properties throughout the country.

PEDA is willing to continue its investments in improved infrastructure. However, limited resources will not allow PEDA to develop and implement these beneficial BMPs while also complying with the monitoring requirements of the draft permit. PEDA respectfully requests that EPA and MassDEP revise the draft permit to eliminate the numeric effluent limits, as discussed more specifically in Section IV. We also request that EPA provide additional time to work with PEDA and the City of Pittsfield to establish an adaptive BMP approach for this brownfields property that has been transferred to municipal ownership for redevelopment.

Response to Comment I

As will be described in the more detailed responses that follow, issuance of the Final Permit does not conflict with the Consent Decree (“Decree” or “CD”), nor does it conflict with or undermine the Covenants Not to Sue. See Responses to Comments 2.A.III.a, 2.A.III.b, 2.B.II.b.1, and 2.B.II.b.2.

To the extent that the commenter objects to numeric effluent limits for PCBs and corresponding numeric compliance limits, as discussed previously in Table I.A.1, EPA is no longer including numeric limits and is instead requiring implementation of BMPs through an iterative approach to ensure PCB levels achieve compliance with Massachusetts’ water quality standards. See Response 2.A.V.a. Therefore, EPA need not respond to this objection as it is no longer relevant.

Financial Feasibility

PEDA claims that conditions included in the draft permit, particularly the PCB compliance limit, would be infeasible. First, as mentioned above and throughout, the Final Permit no longer includes numeric PCB limits.

Next, with respect to costs associated with achieving water quality-based effluent limitations, EPA is generally prohibited from considering cost when determining whether a water quality-based limit is necessary and when developing an appropriate limit. Section 301(b)(1)(C) of the CWA requires achievement of "any more stringent limitations than the technology-based requirements set forth in Section 301(b)(1)(A) and (B), including those necessary to meet water quality standards established pursuant to any State law or regulation." Therefore, NPDES permits must contain effluent limitations which are sufficiently stringent to attain and maintain the water quality in the receiving water, in the absence of considering the cost to achieve such limits, availability or effectiveness of treatment technologies. *See U.S. Steel Corp. vs. Train*, 556 F.2d 822, 838 (7th Cir. 1977) (finding "states are free to force technology" and "if the states wish to achieve better water quality, they may [do so], even at the cost of economic and social dislocation").

EPA may, however, consider those costs involved in achieving compliance with a water quality-based effluent limitation when establishing a reasonable schedule of compliance leading towards meeting a water quality-based effluent limitation. In the Final Permit, EPA has included a reasonable schedule for implementation of the BMPs required therein. See also EPA's consideration of cost in development of site-specific technology-based effluent limits for TSS in Response to Comment 2.A.IV.b below.

The monitoring guidance in the Permit Writers' Manual indicates that the "permit writer should establish monitoring frequencies sufficient to characterize the effluent quality and to detect events of noncompliance, considering the need for data and, as appropriate, the potential cost to the permittee."

The Outfall 001 discharge contains a mix of groundwater and stormwater, with limited treatment capability, significant variability in contaminant concentrations, and receiving waters that afford no dilution in the near field. Dry weather discharge contaminant levels vary with changing groundwater levels. In addition to the normal variability of stormwater with the precipitation amount, precipitation intensity, and length of time between precipitation events, wet weather discharges also vary with precipitation amounts.

Relative to cost considerations, the Permit Writers' Manual indicates that the cost of monitoring should be considered relative to the discharger's capabilities. More importantly, EPA regulations require monitoring at a frequency sufficient to yield data which are representative of the monitored activity (40 CFR § 122.48), and require reporting at a frequency that takes into account the nature and effect of the

discharge and assures compliance with permit limitations (40 CFR § 122.44(i)). As a result, as will be discussed in more detail in other responses in this document, EPA has incorporated monitoring requirements that will ensure representative data collection and compliance with any applicable permit limitations. In some instances, and in response to concerns from PEDA, monitoring frequencies have been reduced.

Water Quality Classification of Silver Lake

The comment describes methods by which the designated use of Silver Lake may be changed or would allow a temporary modification to surface water quality standards for elevated PCB concentrations. Although the Commonwealth of Massachusetts has the authority to issue water quality variances ("WQV") and conduct Use Attainability Analyses ("UAA"), it has done neither for Silver Lake. *See* 314 CMR 4.03(4). Neither has the Permittee petitioned MassDEP to adopt a variance or remove a use or designate a partial use pursuant to the Commonwealth's regulations. Such a specific request would require not simply an appeal to MassDEP, but also a demonstration supported by the relevant information clearly enumerated under 314 CMR 4.03(4), a UAA by MassDEP, and a public notice process. Without proceeding pursuant to the regulatory process, EPA does not have authority to adopt a variance or modify the Commonwealth's standards or waterbody classifications in this Final Permit issuance. *See also* 40 CFR § 131.14.

Furthermore, the comment seems to be implicitly requesting that EPA write the NPDES Permit as though a UAA or WQV for Silver Lake were already approved. Again, issuing a UAA or WQV is not within the scope of this permit proceeding and writing a permit as if a variance or UAA existed would violate the Clean Water Act and bypass the public notification and comment process laid out by the Act.

Existing BMPs

EPA notes PEDA's previous and ongoing investment in improved infrastructure and implementation of BMPs. EPA has addressed BMPs in the Final Permit in Responses to Comments 2.A.V.a through 2.A.V.d.

Comment II. Background

a. PEDA's Mission and History of the Property Acquisition

PEDA was established in 1998 pursuant to St. 1998 c. 194 §268, as amended by St. 1998, c. 486 §2 as a public entity for the purpose of promoting economic development in the City of Pittsfield, Massachusetts and in Berkshire County, Massachusetts through the acquisition and redevelopment of environmentally impacted property. In May 2005, GE transferred two parcels, totaling approximately 26 acres, of its former manufacturing facility to PEDA, pursuant to the Definitive Economic Development Agreement entered

into in July 1999 among GE, PEDA and the City of Pittsfield (the "DEDA"). In December 2010 and December 2011 PEDA acquired two additional parcels from GE, for a total of 52 acres of land. These parcels were transferred to PEDA after GE completed the remediation of these the parcels in accordance with the requirements of the Consent Decree and after EPA reviewed and approved the cleanup and issued Certificates of Completion. PEDA is in the process of redeveloping this land as the William Stanley Business Park.

b. Discharge Permit History

During the time that GE conducted active manufacturing operations at the property, GE maintained several outfalls that discharged stormwater and industrial wastewater under NPDES Multi-Sector General Permit, MAR05A021 and GE's individual permit, number MA 0003891. The GE individual permit expired on February 7, 1997 and was administratively continued upon GE's timely submission of a permit application.

With transfer of the first two parcels of land to PEDA in May 2005, PEDA notified EPA and MassDEP that PEDA was assuming responsibility for three of GE's outfalls (Outfalls 001, 01A and 004). EPA transferred the expired GE individual permit to PEDA solely with respect to the three outfalls and assigned new permit number MA0040231 for those three outfalls. In November 2005, PEDA submitted its application to renew its NDPES permit. In 2009 EPA notified PEDA that sampling for metals and whole effluent toxicity ("WET") was no longer required. (see Exhibit C). Now, more than ten years after PEDA submitted its original NPDES permit application, EPA issued the draft permit which include requirements for WET sampling and stringent effluent limitations. The draft permit now pending is for the renewal of PEDA's individual permit.

Several years after submitting its renewal application, PEDA completed major infrastructure modifications at its property (described in greater detail in paragraph II.c below). These modifications eliminated Outfalls 01A and 004, leaving only Outfall 001 subject to the permit. PEDA's modifications and implementation of BMPs have greatly improved the quality of the stormwater discharge (see Exhibit F). PEDA has kept EPA informed of these changes.[1]

c. Material Changes to the PEDA Stormwater System

After PEDA acquired the first 26 acres of land from GE and after PEDA submitted its permit renewal application to EPA and MassDEP, PEDA completed major infrastructure improvements at its property. These improvements were completed in 2010 and included:

[1] Letter from William Hines, PEDA Executive Director, to Robert Kubit (MassDEP), March 3, 2009 and letter from William Hines, PEDA Executive Director to Roger Janson (US EPA), March 9, 2009, requesting approval to move Outfall 001, updated application to confirm that the 91 acres of municipal land would continue to drain through the PEDA stormwater system; and provided conceptual design drawings for the water quality basin. By letter, dated November 6, 2009 from Roger Janson to William Hines, EPA approved the request to eliminate Outfall 01A and relocate Outfall 001. By letter, dated December 18, 2009, from David Langseth, consultant to PEDA, to Brian Pitt of EPA, PEDA confirmed that the outfall relocation was completed.

- Stormwater pipes throughout the 26-acres were replaced and/or lined;
- Outfalls 004 and 01A were eliminated and stormwater that previously discharged through those two outfalls was redirected;
- PEDA constructed a new stormwater conveyance system with grass swales conveying flows into a new water quality basin;
- A water quality basin was designed and constructed to treat stormwater prior to discharging through Outfall 001 and PEDA eliminated an old oil water separator that previously treated stormwater.
- New conveyance systems maintained the existing connections of the municipal stormwater system and stormwater from PEDA's northern 26 acres to the water quality basin.

The site conditions have changed since PEDA originally filed its permit renewal application ten years ago. The site improvements have greatly reduced the concentration of contaminants sampled at Outfall 001 (see Section IV.a below).

d. Sources of the Stormwater that Discharges Through Outfall 001

Although Outfall 001 is connected to the water quality basin located on the southern portion of the PEDA property, only one-third of the land area that drains through the outfall is owned by PEDA. The remaining two-thirds of the land is approximately 91 acres of the surrounding neighborhood (see Figure 2 attached to the Fact Sheet). The water that drains from these 91 acres is municipal stormwater discharge from the City of Pittsfield. The City has responsibility for the quality of its stormwater discharge. PEDA can recommend or reach agreements with the City, but PEDA does not have control over the quality or quantity of this municipal stormwater. PEDA's stormwater is collected from the northern and southern portions of William Stanley Business Park. As noted above, the southern portion has been upgraded with a new stormwater conveyance system and that drains to the water quality basin before discharging through Outfall 001. The northern portion retains the original infrastructure, and the stormwater from this area of the PEDA property drains into the water quality basin prior to discharging through Outfall 001.

The water quality basin is designed as a wet basin, meaning groundwater infiltrates into the basin and saturated soils are maintained for improved nutrient removal functions. Before PEDA constructed the water quality basin, GE had completed the remediation of the site and the groundwater has been determined to meet the performance standards set forth in the Consent Decree and to be protective of human health and the environment. The draft NPDES permit and the Fact Sheet, in contrast, assume that the groundwater is contaminated and must be treated as such. However, the agencies have confirmed that the groundwater meets the performance standards under the Consent Decree and that no further action is required under the Comprehensive Environmental Response,

Compensation, and Liability Act ("CERCLA"), the Resource Conservation and Recovery Act ("RCRA") and the CWA.

Response to Comment II

PEDA provides a general background of its property, divided into a few discrete topics. EPA will address each topic in turn.

a. PEDA's Mission and History of the Property Acquisition

EPA notes the facts related to PEDA's acquisition of the property from GE in 2005, 2010, and 2011. EPA further notes that the removal actions relevant to the transferred property were completed in 2012, after property transfer. However, the post-removal monitoring requirements continue and are the responsibility of PEDA per the Definitive Economic Development Agreement (DEDA). *See* DEDA, Section IV, pp. 11-13.

b. Discharge Permit History

EPA notes PEDA's description of its assumption of GE's NPDES permitted outfalls, the elimination of Outfalls 004 and 01A, and its application for NPDES permit coverage for Outfall 001. PEDA also states that, in 2009, EPA told or in some way promised the permittee that metals and WET testing requirements were no longer required at Outfall 001 and would not be required in future permits. *See* PEDA Comments, Attachment C. Contrary to PEDA's interpretation of the letter, the letter simply identifies that GE's 2008 NPDES Permit discontinued composite sampling (or WET testing) at GE's outfalls, including Outfall 001 (subsequently transferred to PEDA). Thus, EPA stated that the composite sampling requirements from the previous, 1992 GE Permit were no longer applicable for either GE or PEDA. This letter did not conclude or promise that WET testing requirements would not be required in future permits. During each permit renewal process, EPA must evaluate the data to determine appropriate limits, conditions, and monitoring requirements. Because a past permit did not require WET testing in no way bars WET testing from being required in future permits.

c. Material Changes to the PEDA Stormwater System

PEDA has performed work to redevelop the first 26 acres it acquired, and the stormwater treatment for that part of the site has improved since the acquisition. EPA is still concerned about the north side of the site, particularly the Teens Area. PEDA has hesitated to improve the stormwater situation in the Teens Area, presumably because thus far it has not been able to find a tenant for the parcel. As a result, the parcel is now the dominant source of PCBs discharging from Outfall 001.

EPA understands that PEDA may want to wait until the Teens Area is redeveloped before making the investment necessary for a new stormwater drainage system. However, as will be identified in the BMPs required in this Final

Permit, PEDA must take interim steps to control the runoff from the Teens Area. This may consist of some combination of plugging or slip-lining existing pipes and creating new stormwater infrastructure. See Response to Comment 2.V.c and d.

d. Sources of the Stormwater that Discharges Through Outfall 001

EPA acknowledges commenter's explanation that stormwater from other sources—namely, the City of Pittsfield—is discharged through Outfall 001. However, regardless of the source of the stormwater or other water, PEDA's discharges from Outfall 001 are subject to the Clean Water Act and require an NPDES Permit. That the "source" of the stormwater is not the PEDA property does not obviate the need for permit coverage and, importantly, the need for permit conditions that ensure that the discharge will not cause or contribute to an excursion from Massachusetts water quality standards. EPA notes that the City of Pittsfield, in its public comment (Comment 3.H. below) committed to continue to work with PEDA to reduce PCBs and other pollutants in the stormwater that discharges through Outfall 001. This commitment is supported by EPA and will aid PEDA in managing municipal stormwater generated by the City.

Additionally, PEDA suggests that the Consent Decree and associated response actions demonstrate that groundwater infiltrating into the wet basin is not "contaminated" and that this NPDES permit cannot require any additional actions to treat this groundwater. As EPA explains in several responses, *see, e.g.*, Responses to Comments 2.A.III.a and b, the conditions and limitations included in this Final Permit do not constitute response actions and do not conflict with or are otherwise limited by the Consent Decree.

Monitoring of Silver Lake shows that PCB concentrations have decreased since the cap was installed, although water column PCB concentrations remain above applicable water quality criteria. Recent sampling of the cap surface indicates that there is some deposition of PCBs on top of the cap.[2] While the Consent Decree precludes additional *response actions* to address such deposition, it in no way precludes regulation of NPDES permitted discharges that include PCBs. *See* Responses to Comments 2.A.III.b and 2.B.II.a.3.

Comment III. Regulatory and Legal Concerns

Comment III.a. Permit Conditions Conflict With the Consent Decree

The discharge of stormwater is adequately addressed under the Consent Decree. The Consent Decree, entered into by EPA, the Commonwealth of Massachusetts and MassDEP, GE, the City of Pittsfield, PEDA, and other parties is a comprehensive settlement and agreement on the remediation of the contamination located at, under, emanating from or originating on the GE manufacturing plant site. The Consent Decree

[2] Silver Lake Area 2018 Annual Monitoring Report. https://semspub.epa.gov/work/01/632592.pdf

established performance standards for the cleanup that were determined to be protective of human health and environment. Section 8(b) of the Consent Decree provides that the Removal Actions (as defined in the Consent Decree), when implemented and completed in accordance with the Consent Decree and the Statement of Work ("SOW"), "are protective of human health and the environmental with respect to the areas addressed by those Removal Actions." This section also states that "except as expressly provided in this Consent Decree, no further response actions for the areas addressed by such Removal Actions are necessary to protect human health and the environment." Further, the Consent Decree explicitly addressed known surface water discharges to Silver Lake. GE has completed the Removal Actions at the PEDA parcels and at Silver Lake. EPA approved the cleanup and issued Certificates of Completion for the completed work. Under the terms of the Consent Decree, neither EPA nor MassDEP have the authority to impose more stringent standards or to require additional response actions.

The Consent Decree also includes EPA's and MassDEP's covenants not to sue and covenants not to take administrative action against GE as long as GE meets and maintains the performance standards. These covenants apply to a wide range of state and federal statutes, including the provisions governing EPA's and the Commonwealth's authority to regulate and enforce the regulation of stormwater discharges, including Clean Water Act, Section 309 and M.G.L. c. 21 §§26-53. (Consent Decree, Sections 161 and 166). The covenants expressly preclude the United States or the Commonwealth of Massachusetts from requiring a higher standard or additional response actions unless new information becomes available that demonstrates that the performance standards are not adequately protective. Neither EPA nor MassDEP has asserted that new information has become available that would warrant more stringent standards for, or additional treatment or remediation of the stormwater or groundwater at the site. In fact, the latest information indicates that PCBs are not discharging from Outfall 001 at the current detection limit, which is lower than EPA's proposed compliance limit.

PEDA has similar liability protection. Under a separate Agreement and Covenant Not to Sue entered into on January 3, 2002 between the United States and PEDA, as amended by the First Amendment of Agreement and Covenant Not to Sue, dated February 21, 2012 (the "Covenant Not to Sue"), the United States agreed not to sue or take other civil or administrative action against PEDA under certain specified federal statutes, including the Clean Water Act. PEDA's Covenant Not to Sue parallels the provisions of the Consent Decree providing the federal and state covenants not to sue and covenants not to take administrative action against GE.

PEDA's liability protections under Massachusetts law is set forth in the PEDA's enabling act and in M.G.L. c. 21E ("Chapter 21E"). Under Section 7 of PEDA's enabling act, St. 1998 c. 194 §268, as amended by St. 1998, c. 486 §2, PEDA is expressly exempt from liability under Chapter 21E for releases that first occurred prior to PEDA's acquisition of the property. PEDA is protected from liability under Chapter 21E §5C because it is an "Eligible Person" that (i) did not cause or contribute to the contamination and did not own or operate the site at the time of the release and (ii) the hazardous materials have been remediated. To the extent that the NPDES permit conditions require additional soil or groundwater remediation or any measures beyond the BMPs required by the Consent

Decree (see Section III.b, below), the permit conditions are in conflict with PEDA's federal and state liability protections. In addition, pursuant to the DEDA, GE has retained responsibility for any groundwater remediation that may be required to meet the performance standards. PEDA cannot be compelled to remediate contamination that existed on its property prior to taking title; and PEDA cannot be required to comply with permit effluent limitations if those limits would require PEDA or GE to treat or otherwise remediate the groundwater or soils beyond the performance standards set forth in the Consent Decree.

Pursuant to the terms of the Consent Decree, Covenant Not to Sue, and PEDA's liability protections under Chapter 21E, upon completion and maintenance of the remedial measures in compliance with the performance standards, neither EPA nor the MassDEP can require additional remedial measures or impose more stringent requirements on PEDA for those matters addressed in the Consent Decree. The draft NPDES permit violates the terms of the Consent Decree and the Covenant Not to Sue by imposing new effluent limits that are significantly more stringent than the performance standards set forth in the SOW. (see Section III.b)

We acknowledge that the Consent Decree and the NPDES permit are issued under two separate regulatory schemes (see Fact Sheet page 6). We also are aware that the requirements of the Consent Decree may conflict with certain elements of the NPDES regulatory mandate. However, the Consent Decree supersedes the NPDES rules and regulations to the extent addressed in the Consent Decree. Conflicts between the Consent Decree and the rules and regulations are resolved in favor of the terms of the Consent Decree that was approved by EPA and MassDEP and by the federal District Court specifically for the GE/Housatonic Site, including Silver Lake. Simply put, PEDA cannot be required to meet effluent limits and permit conditions that are more stringent than the Consent Decree performance standards.

Response to Comment III.a.

The commenter asserts that the Draft NPDES Permit is in conflict with the Consent Decree and related Covenants Not to Sue, and that EPA and MassDEP lack authority to require any standards or response actions more stringent than those imposed under the Consent Decree.

With respect to these and other related comments (Comments 2.A.III.a, 2.A.III.b, 2.B.II.b.1, and 2.B.II.b.2), EPA disagrees with the assertion that the Consent Decree limits EPA's authority under the CWA to issue an NPDES Permit to authorize PEDA's discharge.

First, as PEDA concedes in its comment, the NPDES program, on the one hand, and CERCLA and RCRA cleanup programs, on the other, are separate and independent regulatory schemes serving 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 the Consent Decree limits EPA's statutory 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. *See also* Fact Sheet, p. 6.

With respect to Paragraph 8.b of the Consent Decree, Paragraph 8.b refers to the removal actions required by the Decree. Each CD 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, Housatonic River, Silver Lake and Unkamet Brook sediment contamination, bank soil contamination, and ground water contamination. If all of the enumerated performance standards and ARARs are attained for the removal actions, it is true that GE is not responsible for any additional *response actions* under CERCLA.

The NPDES permit, in contrast, does not address either soil, Housatonic River, Silver Lake or Unkamet Brook sediment, or ground water remediation. Rather, it places limits on commingled storm water and ground water that is discharged from Outfall 001 to Silver Lake. Nowhere does the Decree state that compliance with the Removal Action requirements obviates the need for any NPDES permit, let alone forbids continued implementation of the Clean Water Act. Had the parties intended an interpretation so at odds with the plain text of the existing statutory scheme and Congressional intent, 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). PEDA is simply incorrect in its interpretation of Paragraph 8.b.

Additionally, each of the 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.

Moreover, the discharges covered by *this* NPDES permit are not addressed 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). Whether there is overlap between the independent requirements of the reissued NPDES permit, separately derived pursuant to the Clean Water Act, and the activities that were undertaken under the Removal Action for Silver Lake or for any other Removal Actions conducted pursuant to the Decree and their applicable Performance Standards is not dispositive here; EPA is obligated under the Clean Water Act and implementing regulations to impose limits and conditions necessary to ensure compliance with the technology- and water quality-based requirements of the Act. 40 CFR §122.4(d) (*prohibiting* issuance of NPDES permits "when the conditions of the permit do not provide for compliance with the applicable requirements of CWA, or regulations promulgated under CWA").[3]

Furthermore, an NPDES permit was in existence for the GE facility at the time of the Decree entry. Nothing in the Work Plan or the final Post Removal Site Control Plan (Section 8 to the Final Completion Report) for the Silver Lake Area Removal Action or other remedial/corrective 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. See EPA's Response to Comment 2.A.III.b below for further discussion on the applicability of the Statement of Work and Performance Standards required by the Decree. In fact, neither the Statement of Work nor any response actions addressed the critical issues related to PEDA's discharge (e.g., no permanent stormwater infrastructure action items).

Turning now to the Covenants Not to Sue, the U.S. covenants Not to Sue in the Decree and later entered into with PEDA do not limit implementation of the NPDES regulatory program as applied to PEDA. For a complete discussion of the covenants, see Responses to Comments 2.B.II.b.1 and 2 below.

PEDA also points to particular aspects of state law that provide "liability protection." To the extent that PEDA suggests that EPA's covenants not to sue include these state laws, it is mistaken. First, these state laws are not cited or listed in paragraphs 26.a or b, or anywhere in the PEDA Agreement. EPA's covenants are strictly limited to the provisions of law listed in the Agreement. *See* PEDA Agreement, ¶ 27. Additionally, EPA specifically notes that it reserves all rights against PEDA not listed, including any liability under state or local law. *Id.*

[3] To the extent that the Permittee acknowledges that EPA can authorize PEDA's discharge through issuance of an NPDES permit, it must be underscored that issuance of such NPDES permit must conform fully to the Act and its requirements (*e.g.*, compliance with surface water quality standards (SWQSs)). The Permittee cannot enjoy the permit shield protections (CWA § 402(k)) and yet sidestep compliance with SWQSs. Even if EPA declined to issue this final permit, PEDA would still be subject to and could not avoid the citizen suit provisions of the CWA for unauthorized discharges. *See* 33 U.S.C. §§ 1311, 1365.

¶ 27(f). However, these provisions of state law (e.g., Chapter 21E) are not relevant here because, as stated throughout in this Response to Comments document, the NPDES Permit does not require additional remedial action, corrective action, or similar action under CERCLA or RCRA.

Comment III.b. Consent Decree Relies on BMPs to Manage Stormwater Quality

Applicable or Relevant and Appropriate Requirements ("ARARs") included in the Consent Decree SOW establish the performance standards applicable to the site subject to the Consent Decree. The ARARs apply to a wide range of environmental rules and regulations, including the federal and state water quality criteria. EPA and MassDEP developed the ARARs to be protective of human health and the environment and the ARARs served as the performance standards for the GE cleanup at the Site. The ARARs also apply to on-going maintenance of the remedy and should serve as a basis for PEDA's NPDES permit conditions.

The ARARs specify that the Massachusetts Water Quality Standards are to be used to develop groundwater performance standards. The Water Quality Standards for PCBs specified in the Consent Decree are: 0.014 µg/L for freshwater aquatic life due to chronic exposure; and 0.00017 µg/L for protection of human health from consumption of water and organisms.[4] However, the agencies recognized that GE may never be able to attain this standard and stated "If these criteria are not attained in surface waters at or adjacent to the Removal Action Areas, no further response actions to attain the criteria shall be required as part of these Removal Actions (beyond the actions described in the SOW), because EPA has determined that such further response actions are not practicable as part of these Removal Actions" [emphasis added].[5] EPA has continued to apply 0.00017 µg/L water quality standard at the Site and has not replaced it with the more stringent standard of 0.000064 µg/L that EPA has recently proposed in the draft permit. EPA has also agreed to waive the requirement to attain the less stringent standard if the Removal Actions do not attain that standard.

The water quality standard proposed in the draft permit should be revised to be consistent with the Consent Decree. Further, even if the water quality standard is revised, PEDA should not be required to meet specified effluent limits for its stormwater discharge. This is because the ARARs limit the applicability of effluent limitations to the discharge of GE's treated water, whereas, the ARARs expressly establish Best Management Practices as the control mechanism for stormwater discharges. (see, SOW, Technical Attachment B, Tables 2, pages 9 and 18; and Table 3.A page 4, "stormwater discharges must be controlled with BMPs"). The draft permit attempts to supersede these provisions of the Consent Decree ARARs that established BMPs as the appropriate mechanism for controlling stormwater discharge to Silver Lake.

The draft permit is also in conflict with the post-remediation site control requirements included in the SOW, Technical Attachment K, Section 1.0(e). This Technical

[4] SOW, Technical Attachment B, Table 1, page 1
[5] SOW, Technical Attachment B, Table 1, page 1

Attachment requires GE to conduct periodic sampling of the cap to determine if there is any deposition of PCBs on the cap from the surface water or other sources. If the deposition is traced to NPDES-permitted outfall or even an unpermitted outfall, then the deposition is permissible and no further action is required. Section 1.0(e) of Technical Attachment K provides:

"… if the periodic sampling of the cap indicates the deposition of PCBs on the surface of the cap (as opposed to migration of PCBs through the cap from the underlying sediments), GE shall evaluate, to the extent practical, whether such PCBs are attributable to sources other than erosion or surface runoff from the banks or currently known discharges of PCBs into the lake from NPDES-permitted or other outfalls. If the surface PCBs can be attributed to such other sources and such sources are located within property owned by GE, GE shall evaluate potential source control measures and shall submit a report on such evaluation, along with a recommendation for any appropriate source control measures, to EPA for review and approval. Otherwise, no further response actions shall be required to address such deposition of PCBs on the surface of the cap . . . ." [emphasis added].

The ARARs and other Technical Attachments to the SOW clarify that BMPs are the required and adequate mechanism to manage the discharge of stormwater to Silver Lake. Further, not only does the discharge from Outfall 001 qualify as a "currently known" discharge in the context of the above discussion, the current PCB concentrations from Outfall 001 are lower than the PCB concentrations in the discharges to Silver Lake that were known at the time Section 1.0(e) of Technical Attachment K was written.

Response to Comment III.b.

PEDA identifies several concerns related to perceived conflicts between the PCB limits included in the draft permit and the applicable or relevant and appropriate requirements (ARARs) and performance standards set forth in the Consent Decree and accompanying Statement of Work (SOW).

At the outset, EPA is no longer requiring numeric PCB limits in the Final Permit, and is instead requiring BMPs, as discussed in Response to Comment 2.A.I. To the extent that PEDA's comments are based on concerns about numeric PCB limits and potential conflicts between such numeric limits and the Consent Decree, these concerns are no longer at issue in the Final Permit.

While EPA need not address PEDA's concerns related to numeric PCB limits, EPA finds it important, nevertheless, to explain that the ARARs included in the Statement of Work and the associated performance standards do not preclude EPA's issuance of this Final NPDES permit, nor do they limit the scope of limits/conditions established in this Permit.

First, PEDA suggests that the ARARs included in the SOW not only set forth the performance standards for the removal action at Silver Lake, but also "apply to on-going maintenance of the remedy and should serve as a basis for PEDA's

NPDES permit conditions." As a threshold matter, ARARs have specific definitions and application under CERCLA and the National Contingency Plan (NCP):

> Applicable requirements means those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance found at a CERCLA site.
>
> . . .
>
> Relevant and appropriate requirements means those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that, while not 'applicable' to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site.

40 CFR § 300.5. Furthermore, these standards are utilized at CERCLA sites, and the statute and regulations require that any remedial action must attain (or waive) these standards, and further that removal actions must attain (or waive) these standards to the extent practicable, considering the exigencies of the situation. 40 CFR §§ 300.430(f)(i)(A) and 300.415(j). Taken together, these definitions and regulatory text demonstrate the specific application of ARARs to CERCLA response actions.

This fact is made even more apparent by the Consent Decree, Statement of Work (SOW), and ARARs tables appended to the SOW. The Consent Decree states that "[e]xcept for the Rest of the River Remedial Action, for *all activities undertaken pursuant to CERCLA* in this Consent Decree, Settling Defendant must also comply with any ARARs of all federal and state environmental laws, as described in Attachment B to the SOW . . .." Decree, p. 45 (emphasis added). Compliance with ARARs is limited to CERCLA response actions and does not extend to other actions or activities governed by other environmental statutes (e.g., CWA).

Moreover, Technical Attachment B in the SOW, entitled, *Applicable or Relevant and Appropriate Requirements*, underscores the limited applicability of ARARs. In Table 1, to which PEDA explicitly refers in its comment, the CWA Ambient Water Quality Criteria and State water quality standards are cited as ARARs. However, the description makes clear that the criteria apply to CERCLA response actions that are part of the Removal Actions required under the Consent Decree. The language that PEDA itself quotes confirms this:

> If these criteria are not attained in surface waters at or adjacent to the Removal Action Areas, no further *response actions* to attain the criteria shall be required *as part of these Removal Actions* (beyond the actions described in the SOW), because EPA has determined that such *further response actions* are not practicable *as part of these Removal Actions*.

SOW, Appendix E, Technical Attach. B, Table 1, p. 1 (emphasis added). Essentially, the parties to the Decree, including EPA, determined that the *Removal Actions* need not attain these water quality standard ARARs due to technical impracticability. This language simply governs the extent to which additional response actions as part of the Removal Actions would be required, and in no way waives EPA's obligations in implementing the NPDES program through this or any other CWA permit. Nor does any other language from the ARARs tables or SOW indicate that authorization of PEDA's discharge under the CWA is limited by the ARARs listed as applicable to Removal Actions conducted under CERCLA.

Second, PEDA claims, on a related note, that if numeric limits remain, EPA's permit should be revised to include the numeric water quality standard for PCBs that was listed as an ARAR in the Consent Decree. For the reasons just stated, ARARs apply to response actions taken as part of CERCLA Removal Actions under the Consent Decree. They do not extend to separate CWA implementation. Moreover, the CWA does not give EPA authority to permit a discharge that does not meet state water quality standards. 33 U.S.C. § 1311(b)(1)(C). Even EPA wanted to grant PEDA's request to include a less stringent water quality standard for PCBs equal to the standard applied under the Consent Decree, it simply could not. Finally, again, an ARAR requirement or waiver of attainment of an ARAR under CERCLA does not constitute a waiver of CWA Section 301(b)(1)(C), nor does it constitute a variance from water quality criteria or designated uses.

Third, PEDA states that no specific effluent limit should be applied to its stormwater because the ARARs require BMPs for stormwater discharges, and in doing so, "limit the applicability of effluent limitations to the discharge of GE's treated water." 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 would be subject to EPA's Construction General Permit for storm water associated with construction site activities, not to this individual permit. *See* SOW, Technical Attach. B, Table 2.A, p. 3 ("Discharges of stormwater ***associated with construction activities*** are required to implement measures, including best management practices, to control pollutants in stormwater discharges during and after construction activities.") (emphasis added); *see also id.* at Table 2.A, pp. 9, 18.

In addition, the Permit no longer includes numeric PCB limitations on which PEDA's arguments are focused, and the BMP approach included in the Final

Permit is wholly consistent with EPA's policies and practices with respect to NPDES permits, including the requirement to undertake best management practices ("BMPs"). The BMPs are therefore 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 discharges at Outfall 001, they are far afield from the soil and sediment removal actions required by the Decree.

Fourth, PEDA misinterprets the post-removal site control requirements included in the SOW. These requirements do not limit EPA's authority to issue or renew NPDES permits. Rather, they only place a limit on the requirement of GE being compelled to conduct additional *response actions* as a result of other, non-GE sources of PCB redeposition in Silver Lake. SOW, Section 2.6.2(9), p. 79. *See also* SOW, Technical Attach. K. EPA's issuance of the final NPDES permit is simply not a "response action" to address PCBs that have been redeposited on the covered/restored sediments. The permit authorizes storm water and groundwater discharges to Silver Lake subject to certain limitations. Such limitations are based on technology and water quality requirements of the CWA. 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 conflict between the requirements of the reissued NPDES permit and the activities that were undertaken under the Removal Action for Silver Lake and its Performance Standards. Furthermore, as PEDA notes, an NPDES permit was "known" and in existence for this discharge at the time of the Decree entry. Nothing in the Work Plan or Post Removal Site Control Plan for this Removal Action suggests 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.

Finally, EPA's Final Permit demonstrates that EPA agrees that, in this particular circumstance, BMPs are the appropriate and "adequate mechanism to manage the discharge" at Outfall 001. None of the BMPs are limited by or in conflict with the ARARs or performance standards established under the Consent Decree for all the reasons stated above.

Comment III.c. Groundwater is Remediated, Not an Illicit Discharge

In a January 13, 2015 letter from the City of Pittsfield and PEDA to EPA, the City and Pittsfield set forth some alternatives for NPDES permit compliance. One option was to transfer responsibility for permit compliance to the City. The Fact Sheet responded, identifying "contaminated groundwater" as a source of PCBs found in the Outfall 001 discharge. Under the proposed permit, if PEDA maintains responsibility for permit compliance, then the groundwater would be subject to new, more stringent effluent limits which cannot be met. If permit compliance is transferred to the City, then according to the Fact Sheet, the groundwater is deemed to be contaminated and associated with an

industrial activity and would be an illicit discharge under the City's MS4 permit.[6] This characterization is not correct. GE's manufacturing ceased long ago at the PEDA property, there are no current industrial activities at the property and the groundwater has been remediated to the performance standards. EPA and MassDEP reviewed GE's Final Completion Reports for each area of the property that discharges stormwater through Outfall 001. Both EPA and MassDEP determined that the groundwater complies with the performance standards of the Consent Decree. The groundwater is remediated, not "contaminated." In fact, it is permissible for the groundwater to migrate across the Site and into Silver Lake and into the Housatonic River. But when this same remediated groundwater enters the water quality basin on the PEDA property and comingles with stormwater and discharges through Outfall 001, it is deemed, under the draft permit, to be "contaminated" and subject to effluent limits, and would be an illicit discharge under the City's MS4 permit. PEDA disagrees with this determination.

The groundwater has been remediated in accordance with the performance standards and the agencies have concurred that the groundwater is protective of human health and the environment. In fact, the SOW, Technical Attachment B, Table 1 provides the specific ARARs applicable to the Site (see Exhibit A). The first two items on Table 1 address the federal and state water quality criteria applicable to the groundwater remediation and apply the Massachusetts water quality standards, but qualified these requirements by stating "if these criteria are not attained in surface waters at or adjacent to Removal Action Areas, no further response actions to attain the criteria shall be required as part of these Removal Actions . . . , because EPA has determined that such further response actions are not practicable as part of these Removal Actions." These ARARs make it clear that if the water quality criteria are not attained after completion of the cleanup, then the water quality ARARs would be waived.

Discharge of this groundwater from the Site has been determined to be acceptable under the water quality standards of the Consent Decree. Groundwater should not be subject to effluent limits nor should it be deemed to be an illicit discharge. Although no further actions are necessary, PEDA understands the importance of taking reasonable steps towards improving the quality of Silver Lake. It is PEDA's firm belief that BMPs, as described in the Consent Decree and summarized in Section V, are the appropriate control measure for management of the stormwater discharge into Silver Lake.

Response to Comment III.c.

PEDA outlines several concerns related to groundwater that commingles with stormwater in the water quality basin. First, with respect to referring to "contaminated groundwater," EPA's Multi-Sector General Permit (MSGP) authorizes "uncontaminated groundwater" as an allowable non-stormwater discharge. The MSGP further defines an "uncontaminated discharge" as a discharge that does not cause or contribute to an exceedance of applicable water quality standards. As EPA demonstrated in the fact sheet, discharges of PCBs cause, or have the reasonable potential to cause or contribute to an excursion

[6] Fact sheet, page 5.

above the applicable surface water quality standards of Class B, Silver Lake. PCBs have been identified in ground water at the site.

With respect to the City of Pittsfield's municipal separate storm sewer system (MS4) discharges, EPA notes that this NPDES permit has not been transferred to the City, and the City specifically notes that it is not proceeding with such a transfer. See Comment 3.F. below. Therefore, suggestions about the implications (e.g., illicit discharges) of transferring this permit to the City are not relevant and merely speculative at this time. Regardless, an MS4 permit allows discharges of uncontaminated ground water infiltration (as defined at 40 CFR § 35.2005(20)), that is, does not allow discharges of ground water that contains pollutants.

Next, PEDA suggests that any groundwater commingled with stormwater in the water quality basin is not "contaminated" and should not be subject to the NPDES program because it has been remediated in accordance with the CERCLA Consent Decree. As a preliminary note, when groundwater (commingled with other sources or alone) that contains pollutants, such as PCBs, discharges from a point source into a surface water, it becomes subject to the requirements of the Clean Water Act, including attainment of surface water quality and technology standards, and may not be discharged without an NPDES permit. 33 U.S.C. §§ 1311, 1342(a); 40 CFR §§ 122.4(a), (d).

In fact, discharges of groundwater to surface water are one of the largest discharge types authorized by NPDES permits in Region 1. EPA's Remediation General Permit governs the discharge of groundwater and certain surface waters that contain pollutants at concentrations that exceed surface water quality criteria. EPA has authorized discharges from over 950 sites in Massachusetts since 2005 from contaminated or formerly contaminated sites. While formerly contaminated sites have achieved closure relative to clean up standards under the programs regulating contaminated site remediation (e.g., CERCLA, Massachusetts Contingency Plan), contaminant levels remain that, if removed from the site via discharges to a Water of the U.S., exceed the standards promulgated under the Clean Water Act. Stormwater at the site has the potential to come into contact with contamination in soil or groundwater from historical activities, and groundwater has the potential to infiltrate the site conveyance system and monitoring data affirm that these concentrations exceed applicable Massachusetts surface water quality criteria.

Though groundwater at the former GE site has been remediated pursuant to CERCLA and achieved the performance standards identified in the Consent Decree, this fact does not obviate the need for an NPDES permit to authorize a discharge of pollutants from Outfall 001. The goals of the abovementioned response action and the applicability of the corresponding ARARs and performance standards are distinct from the goals and requirements under the CWA. In fact, the ARARs language cited by PEDA above is limited to the removal actions under the Decree and has no bearing on EPA's authority to issue this Permit. Ultimately, nothing in the Consent Decree or accompanying SOW

would immunize PEDA from the NPDES program requirements. For a complete discussion of the SOW and ARARs, see Response to Comment 2.A.III.b above.

Regarding a BMP approach to stormwater management, EPA agrees that BMPs are appropriate with respect to PCBs. For a complete discussion of EPA's decision to include a BMP approach in lieu of numeric limits for PCBs in the Final Permit, see Responses to Comments 2.A.V.a-b below.

Comment III.d. The Permit Applies Incorrect Surface Water Quality Standards

PEDA questions the classification of Silver Lake as a Class B waterbody. The Fact Sheet states that Silver Lake is a Class B warm water fishery based upon a default designation because it has not been otherwise designated.[7] We understand that the regulations pursuant to the Clean Water Act require permit conditions that will be consistent with the water quality standards established under CWA Section 303.[8] However, Class B is reserved for water bodies that "are designated as a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. Where designated in 314 CMR 4.06, they shall be suitable as a source of public water supply with appropriate treatment ("Treated Water Supply"). Class B waters shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. These waters shall have consistently good aesthetic value."[9] Silver Lake does not meet these standards and it unlikely to meet these standards in the foreseeable future, regardless of whether numeric effluent limits are imposed on the Outfall 001 discharge.

Silver Lake has been contaminated since the early 1900s. GE's Response Actions are intended to remediate the lake to be protective of human health and the environment, subject to the performance standards of the Consent Decree. The performance standards do not require attainment of a Class B for Silver Lake. The remediation did not intend to make Silver Lake swimmable, or suitable for irrigation, or for public water supply with appropriate treatment. The SOW expressly acknowledged that even after the cleanup was complete, the fish would not be safe for consumption and GE is required to maintain signs around the lake warning the public not to eat the fish (see Exhibit D). Class B water quality does not apply to Silver Lake.

MassDEP's Water Quality classification is based, in part, on EPA's National Recommended Water Quality Criteria: 2002, EPA 822- R-02-047, November 2002 (314 CMR 4/05(5)(e)). That document expressly states that the "Section 304(a) criteria do not reflect consideration of economic impacts or the technological feasibility of meeting the chemical concentrations in ambient water,"[10] and that the recommendations are not

[7] Fact Sheet, page 8.
[8] 40 CFR §122.44
[9] 314 CMR 4.05(3)(b)
[10] National Recommended Water Quality Criteria: 2002, EPA 822- R-02-047, November 2002, page 1

legally binding requirements and "might not apply to a particular situation based upon the circumstances."[11]

MassDEP has the authority to vary from the National Recommended Water Quality Criteria. Pursuant to 314 CMR 4.03(4), MassDEP is authorized to "remove a national goal use that is not an existing use, designate a segment as partial use, or grant a variance to authorize a discharge, provided the applicant demonstrates that . . . (c) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place."

There is nothing in the Consent Decree that requires GE to attain Class B status in Silver Lake. Both EPA and MassDEP have determined that the Response Actions are complete and are adequately protection without attaining Class B. As such, PEDA's NPDES permit should not be based on Class B. PEDA should not be held to this unattainable standard, which would require additional remediation in conflict with the liability protections of the Consent Decree, the Covenant Not to Sue and PEDA's statutory liability protections under state law.

As explained above, PEDA firmly believes that the permitting approach for Outfall 001 should be based on BMPs, not on numeric effluent limits. Nevertheless, in the event that EPA proceeds with the currently proposed permit structure, which is based on effluent limits, we are commenting in this section on several technical concerns regarding the proposed effluent limits. Despite its highly limited resources, PEDA has already implemented costly BMPs for the Outfall 001 discharge, which after an extended adjustment period appear to be performing effectively. Each of the effluent characteristics listed in the Draft Permit, Part I.A., is discussed below.

Response to Comment III.d.

PEDA presents a number of concerns related to the classification of Silver Lake as a Class B waterbody.

The CWA requires that each state develop water quality standards (WQSs) for all water bodies within the State. *See* CWA § 303 and 40 CFR §§ 131.10-12. Generally, WQSs consist of four parts: 1) beneficial designated use or uses for a water body or a segment of a water body; 2) numeric or narrative water quality criteria sufficient to protect the assigned designated use(s); 3) antidegradation requirements to ensure that once a use is attained it will not be degraded and to protect high quality and National resource waters; and 4) general policies. *See* CWA § 303(c)(2)(A) and 40 CFR § 131.12. The applicable State surface WQSs (SWQSs) can be found in Title 314 of the Code of Massachusetts Regulations, Section 4 (314 CMR 4.00).

PEDA questions Silver Lake's status as a Class B waterbody due to its assessment that the waterbody does not currently meet the standards necessary to attain Class

[11] Id. at page 1.

B designated uses. Silver Lake itself is a small waterbody, and a direct tributary to the East Branch of the Housatonic River (Segment MA21-02) defined in 314 C.M.R. 4.06 as a Class B waterbody.

Class B is the Basin Classification that also applies to Silver Lake pursuant to 314 CMR 4.06(4). The designated uses defined for any Class B water body are as follows:

> These waters are designated as a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. Where designated in 314 CMR 4.06, they shall be suitable as a source of public water supply with appropriate treatment ("Treated Water Supply"). Class B waters shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. These waters shall have consistently good aesthetic value.

310 CMR 4.05(3)(b). Designated uses are not necessarily uses currently being attained; rather, they are an expression of goals for the water. *See* 40 CFR 131.3(f) ("*Designated uses* are those uses specified in water quality standards for each water body or segment whether or not they are being attained."). Designated uses "are deemed attainable if they can be achieved by the imposition of effluent limits required under sections 301(b) and 306 of the Act and cost-effective and reasonable best management practices for the nonpoint source control." 40 CFR § 131.10(g).

The comment further describes methods by which MassDEP may change the designated use of Silver Lake to allow for elevated PCB concentrations under state law. Although the Commonwealth of Massachusetts may have the authority to issue water quality variances ("WQV") and conduct Use Attainability Analyses ("UAA"), it has done neither for Silver Lake. Moreover, a federal NPDES permit proceeding is not the appropriate forum for requesting a variance or UAA from MassDEP pursuant to state law. See Response to Comment 2.I.

Even if the state were to modify the designated uses of Silver Lake, SWQSs require the application of effluent limitations to protect designated uses and downstream and adjacent segments. *See* 314 CMR 4.03(1)(a). Thus, the downstream segment of the Housatonic (East Branch Housatonic) is Class B and its designated uses must also be protected regardless of whether Silver Lake is designated as Class B or not.

The commenter further suggests that the Final Permit should not be based on Massachusetts' Class B water classification of Silver Lake because the actions and performance standards required pursuant to the Consent Decree did not require attainment of Class B for Silver Lake. However, the finding under the Consent Decree that the remedy ensures protection of human health and the

environment does not negate the CWA mandates, including ensuring compliance with state water quality standards and protecting designated uses. Indeed, CERCLA's distinct goals and statutory regime do not necessarily require treatment and elimination of contamination; in certain circumstances, such as those existing at the GE site, preventing human *exposure* to contamination may be sufficient to achieve CERCLA's goals of protection of human health. That this type of remedy may be sufficient under CERCLA does not mean that the statutory mandates of the CWA are also met. See also Response to Comment 2.A.III.b above for a complete discussion of the applicability of the SOW and performance standards.

As the commenter requests, EPA has determined that application of BMPs is an appropriate method of ensuring the requirements of the Clean Water Act are satisfied for PCBs present in the discharges. See Response to Comment 2.A.V.a.

Comment IV. Technical and Financial Concerns with Proposed Effluent Limits

Comment IV.a. Technical Concerns With the Proposed Effluent Limits

As explained above, PEDA firmly believes that the permitting approach for Outfall 001 should be based on BMPs, not on numeric effluent limits. Nevertheless, in the event that EPA proceeds with the currently proposed permit structure, which is based on effluent limits, we are commenting in this section on several technical concerns regarding the proposed effluent limits. Despite its highly limited resources, PEDA has already implemented costly BMPs for the Outfall 001 discharge, which after an extended adjustment period appear to be performing effectively. Each of the effluent characteristics listed in the Draft Permit, Part I.A., is discussed below.

(i) Flow

We concur with the proposed discharge limitations, based on the rationale presented in the Fact Sheet Section VI.(a), but are concerned about potential interpretation of the requirement for continuous monitoring. The equipment currently installed for flow rate monitoring provides continuous monitoring and it is adequate for measuring flow rates during most storm events when flow rates are elevated, but has limitations for measuring lower flow rates that may occur between larger storm events and limitations for winter use.

The current PEDA flow monitoring equipment uses an ultrasonic Doppler probe. During low flow and high wind conditions, the water surface movement created by the wind can be detected as flow, giving a false high reading. Freezing conditions can damage the probe, so it must be removed prior to freezing to prevent damage. Additionally, the apparent slight settlement of the northern side of the culvert creates the potential for error during low flow conditions. These issues are not significant with regard to measurement of flow rates in larger storms, the events of greatest concern with regard to this outfall, but they may be of significance with respect to continuous monitoring even during lower flow rates. PEDA has noted in its discharge monitoring reports (DMRs) when the flow monitoring equipment was not in operation, but has not

considered these situations to be permit violations. PEDA specifically asks for recognition that the current flow monitoring equipment provides acceptable data under the draft permit conditions and that conditions such as those described above during which the current flow monitoring equipment may not be able to provide flow data will not be considered permit violations.

(ii) Oil and Grease

The draft permit proposes a weekly monitoring frequency for oil and grease ("O&G"), increased from monthly monitoring required by PEDA's current permit. The basis for this change stated in Fact Sheet Section VI.(d) is that there have been four exceedances of the current permit limits during the period January 2010 through December 2013. Fact Sheet Appendix A shows the monitoring records used by the EPA in their evaluation. We believe this increased monitoring frequency is not warranted, for the following reasons.

One of the four claimed exceedances was based on total mass discharged for the June 2013 monitoring event. As acknowledged by the proposed permit conditions, a mass discharge limit is not an appropriate criterion for the current situation of the discharge. Since the current situation of the discharge is the same as when that mass permit limit exceedance occurred, it should not be counted as an exceedance when evaluating the potential need for increased monitoring frequency. Further, that mass discharge exceedance was related to the same monitoring/flow event as one of the concentration exceedances. Claiming both the mass discharge and concentration exceedance as separate exceedances may be technically correct in terms of the permit conditions, but it mischaracterizes the number of discharge events during which there were permit limit exceedances. The June 2013 monitoring event should therefore be counted as only one exceedance for O&G.

Another of the four claimed exceedances, during the July 2010 monitoring event, appears to be a data entry error. Our records indicate that the O&G sample for that monitoring event was lost to breakage during shipping.

Given the above considerations, the correct count should be only two exceedances of the proposed O&G criterion in the 41 O&G monitoring events shown in Fact Sheet Appendix A. Additionally, there have been no permit limit exceedances from January 2014 through April 2015, expanding the number of monitoring events during which there were only two exceedances from 41 to 55 monitoring events.

The July 2011 and June 2013 exceedances both occurred during summer months, the peak season for roadway repair. Since there are no known sources of O&G on the PEDA property, a likely source for the excess O&G in those runoff events is runoff from freshly laid or repaired asphalt in the 91 acres of Pittsfield outside the PEDA property that discharge to Silver Lake through Outfall 001, a source over which PEDA has no control. The substantial difference between the rest of the concentrations (ranging from 0-5 mg/L) and the exceedances (25 and 40 mg/L) clearly suggests the presence on those days of a source that is not usually present. Increasing the monitoring frequency will not,

however, help to determine the source without substantial and burdensome additional effort to monitor activities throughout the contributing drainage area at all times. Simply investigating activities on the day of an exceedance would not be adequate since we would also need to know whether similar activities were occurring on days without exceedances. This would create an enormous burden of extra work related to a water quality parameter that is shown by the available data to be nearly always in compliance with the proposed permit limits.

The July 2011 exceedance occurred during extremely low flow (0.001 million gallons per day ("MGD"), while the June 2013 exceedance occurred at a much higher flow rate of 2.09 MGD, indicating a lack of correlation with flow rate. We also note that the maximum monthly flow rate in June 2013 was 2.4 MGD, not 2.04 MGD as listed in the EPA Fact Sheet Appendix A table.

PEDA proposes, therefore, that in the event that EPA does decide to impose numeric effluent limits, rather than a BMP-based approach to permitting the discharge from Outfall 001, the monitoring frequency for O&G should be at most monthly, and possibly quarterly, but not weekly.

(iii) Total Suspended Solids (TSS)

The draft proposed permit limits for TSS, as described in EPA Fact Sheet Section VI.(b), are based on a statistical approach for determining the permit limits needed to achieve a 1% chance of the discharge concentration exceeding the maximum daily limit (MDL) and a 5% chance of exceeding the average monthly limit (AML). Weekly, rather than monthly as in the current permit, monitoring is proposed. EPA has based this analysis on TSS concentration data from May 2011 through May 2014, a total of 30 monitoring events. EPA also used a benchmark concentration taken from the EPA Multi-Sector General Permit (MSGP) for industrial storm water discharges[12] and an assumed 80% TSS removal rate in the water quality basin. We believe this analysis is fundamental flawed, for several reasons including the following.

First, EPA mischaracterizes the TSS monitoring data only by range, stated as "2.06 mg/L to 377 mg/L from May 2011 through May 2014(number of samples(n) = 30." Review of the complete data record from January 2010 through April 2015, a period during which there were 53 samples, shows that the maximum value of 377 mg/L is substantially higher than the second highest value of 98 mg/L. Simply stating the full range, without acknowledging that the highest value is substantially higher than the second highest value does not provide sufficient characterization of the data.

Second, although EPA properly acknowledges through the elimination of mass discharge limits in the proposed permit conditions that mass discharge limits are not

[12] EPA Fact Sheet Section VI.b refers to EPA's MSGP without providing a specific citation. Since the 2008 MSGP is the currently effective MSGP (accessed 1 June 2015), we assume that EPA is referring to the 2008 MSGP. In our evaluation, however, we have considered the provisions of both the 2008 MSGP and the proposed 2013 MSGP.

appropriate for the current situation of the discharge from Outfall 001, EPA does not explicitly acknowledge this in its discussion of the mass discharge limit exceedance under the current permit. As part of EPA's discussion of the mass discharge limit exceedance for the current permit, EPA should explicitly acknowledge that the mass discharge limits are not appropriate for the current situation of the discharge and are therefore not an appropriate measure of discharge quality.

Third, EPA misapplies the benchmark value from the MSGP. The EPA Fact Sheet properly states that under the MSGP, TSS in storm water runoff is to be controlled using BMPs (see 2008 MSGP Section 2.1.2.6) and that values above a benchmark indicate the need for adjustments (see 2008 MSGP Sections 3.2 and 6). Both the currently applicable 2008 MSGP (Sections 3.2 and 6) and the proposed 2013 MSGP (Section 4.1) state that the possible need for corrective action is triggered when the average of four quarterly samples exceeds the benchmark value. If the average is below the benchmark, then the treatment system is considered to be functioning effectively. Further, both the 2008 MSGP (Section 6.2.1.2) and 2013 MSGP (Section 6.2.1.2) states that "After collection of 4 quarterly samples, if the average of the 4 monitoring values for any parameter does not exceed the benchmark, you have fulfilled your monitoring requirements for the permit term." Under this guidance, and using the benchmark value of 100 mg/L stated in the EPA Fact Sheet, PEDA would long ago have fulfilled its monitoring requirements for TSS. The long term average TSS concentration from over five years of monitoring has been 27 mg/L, no annual average has been above about a fourth of the benchmark, and only one of the 53 samples collected during that period has exceeded the benchmark value. Under the procedure in the MSGP, the draft permit for PEDA should have been proposing reduced TSS monitoring requirements, yet the draft permit proposes an increase in the monitoring frequency and proposes permit limits well below the benchmark value, an issue discussed further below. The available monitoring data show that the BMPs currently in place are functioning adequately to control TSS and therefore no additional controls are needed and increasing the monitoring frequency is not warranted.

Fourth, EPA applies the benchmark value to the water quality basin forebay influent, rather than the effluent. EPA uses an 80-percent removal efficiency for the combined forebay and water quality basin system to compute a target long term average (LTA) at the outfall of 20 mg/L. This contrasts with the MSGP permit approach in which the benchmark value is itself an LTA value applied at the outlet to the receiving water and used as a value with which long term (annual) averages are compared. In treating the water quality basin like a receiving water, EPA has effectively reduced the appropriate permit limit by a factor of five, appearing to disregard the water quality treatment intent and function of the basin. The effectiveness of the current BMPs should be judged by the Outfall 001 discharge, not the water quality basin forebay influent.

Fifth, the EPA Fact Sheet approach to setting a permit limit is based on procedures developed for treatment processes with variable input and/or treatment performance, creating a variable quality discharge, but are not appropriate for stormwater. The procedure EPA used is a statistically based procedure that estimates the maximum daily and average monthly discharge concentrations that are associated with

some small probability of exceeding the discharge limit at any time, including between monitoring events. The procedure was developed specifically for ongoing discharges in situations where a waste load allocation for the receiving water has been developed and for dealing with limited amounts of data. In essence, if the desired long term average (LTA) is X, this statistical procedure determines that the maximum daily value should be no higher than a multiple of X, based on an assumed distribution of variability for the values. The same concept is applied to average monthly values. However, the MSGP, EPA's fundamental guidance for managing stormwater discharge from industrial sites, has a different procedure for evaluating storm water discharges against the benchmark values. There is no valid reason for applying the procedure that EPA applied to develop the TSS discharge limitations, rather than the procedure from the MSGP.

Sixth, EPA cites to MSGP Industrial Sector AD as the source for the 100 mg/L benchmark value. We presume that EPA is citing to SubPart AD of Part 8 of the MSGP, the Sector-Specific Requirements for Industrial Activity. Although the MSGP uses a benchmark of 100 mg/L TSS for several other Industrial Sectors, we have not been able to find reference to a benchmark value for TSS in SubPart AD of Part 8 of the MSGP.

Finally, the reference to the draft permit Section IV(k) in the last paragraph of Fact Sheet Section VI.(b) is not clear. We have not been able to find Section IV(k) in either the Fact Sheet or the draft permit.

Although PEDA disagrees with EPA's decision to treat the William Stanley Business Park as an industrial site for discharge permitting purposes, PEDA believes that the EPA MSGP provides a technically suitable and reasonable framework for managing stormwater. PEDA specifically proposes that the monitoring and control approach described in the MSGP be applied at the Outfall 001 discharge, except that the monitoring frequency should be monthly, rather than quarterly as provided in the MSGP approach.

(iv) <u>pH</u>

The draft permit proposes an allowable pH range of 6.5-8.3 standard units, reduced from the range of 6.0-9.0 in the current permit. PEDA monitors pH weekly, when there is flow, and has been outside the currently allowable range, always on the high side, only three times over the period of record. The pH has been above the upper limit proposed in the draft permit numerous times. For just the period between January 2014 and April 2015, there have been 11 instances when the measured pH was above 8.3, though none when the measured pH was above 9.0. Values above 8.3 were recorded in 2014 for March (1), April (3), May (2), July (2), August (1), October (1) and November (1). There is thus no apparent seasonality to pH values above 8.3.

The draft fact sheet speculates that contact with concrete or demolition debris may be responsible for the elevated pH values, though site-specific data cast some doubt on this explanation. If contact with concrete or demolition debris along the flow path were responsible for the elevated pH values, it would be reasonable to expect that pH has some correlation with flow rate, since some combination of contact time and the

proportion of the total flow rate in contact with the materials would be expected to influence the pH. There does not, however, appear to be a correlation between elevated pH and flow, since similar elevated pH values have been recorded at both low flows (0.001 mgd flow with pH of 8.35 in May 2014) and high flows (0.36 mgd flow rate with pH of 8.31 in August 2014), suggesting that contact with materials along the flow path may not the explanation. If contact with concrete and demolition debris is the cause of the elevated pH, however, it is possible that as redevelopment proceeds, the instances of elevated pH will decrease.

Revision of the upper pH limit to 8.3 will most likely result in a substantially increased number of permit limit exceedances. At this time PEDA does not expect to be able to meet the draft permit criteria. PEDA specifically requests that the current pH limits of 6.5-9.0 remain in effect.

(v) Escherichia coli

EPA Fact Sheet, Section VI.(e) discusses the possible presence of Escherichia coli (E. coli) in the Outfall 001 discharge due to the presence of animals in the drainage area and possible illicit sewer connections to the storm water system that drains to Outfall 001. To the extent that any such sources exist (other than minimal wildlife presence), they would not be on PEDA property, but rather on the 91 acres of Pittsfield outside the PEDA property that drains to Outfall 001. As such, those sources should be managed through provisions in the Pittsfield municipal separate storm sewer system (MS4) permit, not through monitoring requirement imposed on PEDA. PEDA specifically proposes that the E. coli monitoring requirement be removed from the Outfall 001 permit.

(vi) Total Phosphorus

EPA Fact Sheet Section VI.(f) discusses the possible presence of phosphorus in the Outfall 001 discharge due to the presence of geese or other animals in the drainage area and possible fertilizer use in the area that drains to Outfall 001. To the extent that any such sources exist, they would not be on PEDA property (except for minor presence of geese), but rather on the 91 acres of Pittsfield outside the PEDA property that drains to Outfall 001. As such, those sources should be managed through provisions in the Pittsfield MS4 permit, not through monitoring requirement imposed on PEDA. PEDA specifically proposes that the phosphorus monitoring requirement be removed from the Outfall 001 permit.

(vii) Total Nitrogen

EPA Fact Sheet Section VI.(g) discusses the possible presence of nitrogen in the Outfall 001 discharge due to possible fertilizer use in the area that drains to Outfall 001. Since PEDA does not use fertilizers on lawn areas, any such sources would not be on PEDA property, but rather on the 91 acres of Pittsfield outside the PEDA property that drains to Outfall 001. As such, those sources should be managed through provisions in the Pittsfield MS4 permit, not through monitoring requirement imposed on PEDA.

PEDA specifically proposes that the nitrogen monitoring requirement be removed from the Outfall 001 permit.

(viii) PCBs

As described earlier, PEDA does not believe that EPA has legitimate authority to impose requirement on PCBs in Outfall 001 beyond the requirements addressed in the Consent Decree, and thus that the technical analysis of PCB concentrations and reasonable potential to pollute presented in Fact Sheet Section VI.(h) are not legitimate evaluations of the Outfall 001 discharge. Further, Fact Sheet Section VI.(h) also includes many statements about "contaminated" groundwater and remaining PCB "contamination" in other media. For the reasons discussed earlier, we do not believe is it appropriate to use the term "contamination" to describe the presence of PCBs in environmental media that have been remediated to the extent required under the terms of the Consent Decree. We are nevertheless, without negating the fundamental PEDA positions on the lack of EPA authority to impose requirements beyond those in the Consent Decree, providing comments on the discussion in Fact Sheet Section VI.(h). We present comments in this Section on the proposed PCB effluent limit and on the PCB concentration data analysis. EPA also invited comments on using a BMP approach to achieving adequate water quality, including consideration of compliance schedules for implementing and evaluating BMPs. PEDA provides such comment in Section V.

PEDA is aware that EPA does sometimes use a value such as the practical quantitation limit (PQL) as a compliance limit in situations where the effluent limit is lower than the concentration that can be reliably detected with current instrumentation. In this situation, however, such an approach could have a chilling effect on the future development potential for the WSBP. This approach to setting a compliance limit effectively leaves open the possibility that future compliance limits will be lower only because improved detection methods have been developed. This creates substantial uncertainty regarding the possibility that substantial additional costs related to PCB migration control could be required in the future. Such uncertainty makes it difficult to enter into business agreements in which tenants bear proportionate shares of the environmental quality management costs. PEDA accepted the land from GE based on the reasonable expectation that issues related to PCBs had been addressed to the satisfaction of EPA and MassDEP. This proposed permit would reopen matters that had been settled, creating substantial uncertainty about future costs, substantially increasing the difficulty of securing new development at the WSBP. New development however, as discussed in Section V, would bring enhanced BMPs that would further reduce the discharge of PCBs to Silver Lake. The provisions of this draft permit may, therefore, in the long term have the opposite of the intended impact and actually make it more difficult to reduce PCB discharges to Silver Lake.

EPA's analysis of the PCB concentration data is fundamentally flawed because it does not take into consideration the declining trend of concentrations and in particular does not include recent data that demonstrate the potential effectiveness of BMPs. Exhibit F provides two graphs of PCB concentration data. One is a graph of the annual average PCB concentrations and the other is a graph of the monitoring data from January 2014 through April 2015, data that is not considered in the EPA evaluation. The

reasonable potential analysis as conducted by EPA (Fact Sheet Appendix E) is based on the concept of a stationary population. That is, the statistics that characterize the population of data are not changing over time. The graph of the annual averages in Exhibit F shows that the fundamental characteristics of the PCB concentrations are changing over time, they are declining. In fact, as shown in the second graph in Exhibit F, PCBs have not been detected above a concentration of 0.0169 µg/L from July 2014 through April 2015, the most recent Discharge Monitoring Report data available. Exhibit G provides a statement from Pace Analytical regarding the laboratory method detection limit ("MDL") of 0.0169 µg/L for the PCB analysis of Outfall 001 samples. This MDL is below the proposed compliance limit of 0.022 µg/L. These data demonstrate that BMPs can provide adequate water quality protection and that numeric effluent limits for PCBs are unnecessary at Outfall 001. Further, implementation of additional BMPs as discussed in Section V would be expected to further reduce PCB concentrations in the Outfall 001 discharge.

PEDA specifically requests that PCB effluent limits be removed from the permit for Outfall 001 and that a BMP approach be used to manage PCB concentrations in the Outfall 001 discharge.

(ix) Whole Effluent Toxicity and Metals

EPA Fact Sheet Sections VI.(i) and VI.(j) discuss the draft permit proposal for adding whole effluent toxicity ("WET") and metals testing to the Outfall 001 effluent limits. The essential rationale for adding these requirements is lack of information. PEDA believes that addition of these effluent limits to the permit conditions is not warranted. Rather than adding these effluent limits to the permit based on lack of information, EPA could have discussed with PEDA the possibility of generating the information EPA felt was lacking. There was sufficient time between the permit renewal application and the draft permit issuance for such discussions to have taken place.

PEDA had no reason to suspect that EPA might have considered such data to be needed and hence no reason to collect and submit such data. There are no known sources for elevated metals concentrations on the PEDA property. EPA explicitly stated in a March 9, 2009 letter from Ken Moraff to Mr. Brooks Smith of Hunton & Williams and Mr. William Hines, then the PEDA Executive Director, that WET testing, and associated metals testing, was not required for the Outfall 001 discharge (see Exhibit C). Such WET and metals testing had previously been required for a composite sample from Outfalls 001, 004, 005, 007, 009, and 011. It is notable that WET and associated metals testing is not required in the current NPDES permit MA0003891 for Outfalls 005 and 009. Outfalls 004, 007, and 011 are no longer active. PEDA is not aware of any new information that was not available at the time of the March 9, 2009 letter or the time when permit MA0003891 was reissued that would justify treating Outfall 001 differently by imposing the WET and associated metals testing requirements on the Outfall 001 discharge. Further, there are no known sources for elevated metals concentrations on the PEDA property.

PEDA specifically requests that the metals and WET testing effluent limits be removed from the permit.

(x) Lack of consistency with the EPA MSGP

In the draft permit, EPA is treating Outfall 001 discharge as though it were an industrial discharge. PEDA does not agree that such treatment is appropriate, but even if it were, the draft permit conditions do not follow EPA guidance for industrial storm water management. The MSGP is the overarching EPA guidance for industrial storm water management. We discussed above how the TSS permit conditions are not consistent with the MSGP guidance. There are at least two other ways in which the draft permit is not consistent with the MSGP guidance.

First, in the Draft Permit, Part II.C.8[13], EPA specifies certain BMPs that are required to be included in the SWPPP. Mandating specific BMPs runs counter to the guidance provided in the 2008 and 2013 MSGPs. As stated in the 2008 MSGP Fact Sheet in Section VI.A.5, "EPA generally does not mandate the specific controls operators must select, design, install and implement. It is up to the operator to determine what must be done to meet the applicable effluent limits." The proposed 2013 MSGP Fact Sheet section VI.A.1 contains similar language. "EPA generally does not mandate specific stormwater control measures operators must select, design, install, and implement. It is left to the operator to determine what must be done to meet the applicable effluent limits."

Second, the MSGP does not support numerical effluent limits for storm water. As stated in the 2008 MSGP Section VI.A.4, "These factors create a situation where, at this time, it is generally not feasible for EPA to calculate numeric effluent limitations, with the limited exception of certain effluent limitations guidelines that have already been established through national rulemaking."

Response to Comment IV.a.

PEDA presents concerns with several effluent limits and monitoring conditions included in the 2015 Draft Permit. Generally, PEDA requests that BMPs be implemented in lieu of numeric limitations for nearly all the pollutants identified in its comment.

As a preliminary note, Sections 101, 301(b), 304, 308, 401, and 402 of the Clean Water Act provide the basis for the effluent limitations and other conditions in the permits. EPA evaluates discharges with respect to these sections of the Clean Water Act and the relevant NPDES regulations to determine which conditions to include in the draft permit. This includes consideration of pollutants or parameters not only known to be present in a discharge, but also those pollutants or parameters that may reasonably be present depending upon, among other things,

[13] This section, on pages 8-10 of the draft permit, is actually labeled as Part I, but since this Part follows Part I, we assume it is supposed to be Part II.

the type of facility, pollutant sources, and the type(s) of effluent discharged. Additionally, CWA Section 308(a), 33 U.S.C. § 1318(a), authorizes EPA to require the owner or operator of any point source to provide information as may reasonably be required to:

> carry out the objective of this chapter [of the CWA], including but not limited to (1) developing or assisting in the development of any effluent limitation, or other limitation, prohibition, or effluent standard . . . or standard of performance . . . ; (2) determining whether any person is in violation of any such effluent limitation, or other limitation, prohibition or effluent standard, . . . or standard of performance; (3) any requirement established under this section; or (4) carrying out sections 1315, 1321, 1342, 1344 . . .

EPA evaluated the discharge to determine compliance with CWA Section 301(b)(1)(C)'s mandate that permits include limitations to achieve compliance with state water quality standards. The regulations at 40 CFR § 122.44(d)(1), which implement section 301(b)(1)(C), require that NPDES permits include limits for all pollutants or parameters which "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, including State narrative criteria for water quality." When information is insufficient to make this determination, as EPA's *Technical Support Document for Water Quality-based Toxics Control* recommends, the collection of this information is required, either through an information request during permit development or incorporated into permit conditions.[14]

In the case of PEDA's discharge, where EPA was unable to determine if certain parameters had reasonable potential to cause or contribute to an excursion above water quality criteria because of a significant lack of information (*i.e.,* whole effluent toxicity and the associated water chemistry analysis noted above), the draft permit requires monitoring, without limits.

Each of the specific pollutants and issues identified by PEDA in its comment will be addressed separately in the following discussion.

(i) Flow

PEDA notes limitations of its current continuous monitoring equipment, particularly during low flow conditions, and requests "recognition that the current flow monitoring equipment provides acceptable data under the draft permit conditions and that conditions such as those described above during which the current flow monitoring equipment may not be able to provide flow data will not be considered permit violation."

[14] See Chapter 3 of EPA/505/2-90-001.

One specific example of where the continuous monitoring equipment was unable to provide adequate data is demonstrated in the January 2014 DMR, which states:

> *[d]ue to frozen conditions in the outfall prior to the sampling event, the flow monitoring probe was inoperable. Storm water flows during the sampling event are estimated based on Manning's Formula for gravity flow using observed flow depth and outfall geometry.*

Because the permittee can reasonably estimate the flow during periods of inclement weather, as demonstrated in the DMR above, use of the continuous flow monitoring probe is required to the maximum extent practicable. Estimates of flow are, therefore, acceptable during low flow, high wind, and/or freezing conditions where the Permittee demonstrates use of the probe was not operable. The Final Permit makes this clear and specifies that flow shall be monitored by meter or, in the event of inclement weather, estimate. See Part I.A.1. Footnote 2 of the Final Permit.

(ii) Oil & Grease

First, as to PEDA's suggestion that BMPs should be required in lieu of numeric limits for Oil and Grease, EPA has determined that numeric limits are still appropriate and required by law.

As stated in the Fact Sheet (p. 15), the 15 mg/L Oil and Grease limit in the Final Permit is consistent with the threshold value applied in industrial and stormwater permitting. *See* 40 CFR § 419; MSGP, p. 62, Table 8.D-2 (identifying effluent limitations applicable to certain industrial activity equal to 15 mg/L); *see also* 40 CFR § 122.44(d)(1)(vi).

In addition, the 15 mg/L effluent limit satisfies Massachusetts Surface Water Quality Standards at 314 CMR 4.05(3)(b)7, which provide:

> [Class B] 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.

An effluent concentration of 15 mg/L satisfies these narrative water quality standards because it is recognized as the concentration at which many oils produce a visible sheen. Thus, applying this concentration limit in the Final Permit prevents violation of the Commonwealth's narrative requirements cited above and satisfies the mandates set forth in section 301(b)(1)(C) of the CWA, and is consistent with the existing permit's concentration-based limit.

In its comment, PEDA describes the facts related to exceedances of the existing permit's Oil and Grease limits, and requests that monitoring frequency be reduced. As a result, the monitoring frequency for oil and grease has been reduced

to once per month in the Final Permit, consistent with PEDA's request. EPA notes PEDA's explanation and clarification related to the four exceedances identified in the Fact Sheet and the lack of clear trends for Oil and Grease exceedances. However, EPA has also reviewed data collected in the intervening period between the public notice from 2015 to 2020, which shows that Oil and Grease was rarely detected in the discharge, and there were no violations of the 1992 Permit Limits. For these reasons, EPA agrees that monthly monitoring is sufficient for Oil and Grease in the Final Permit. The Final Permit, therefore, includes effluent monitoring necessary for EPA to ensure that the limitations on Oil and Grease meet applicable SWQS.

(iii) TSS

PEDA expresses concerns with the TSS limits proposed in the Draft Permit, focusing primarily on EPA's explained methodology and alleged conflicts with TSS requirements set forth in the MSGP. PEDA requests that the TSS conditions be consistent with the framework set forth in the MSGP. However, PEDA's discharge is not eligible for coverage under the MSGP or any other general permitting scheme. As such, EPA is required, pursuant to the CWA and its implementing regulations, to assess and apply the appropriate technology-based and water quality-based effluent requirements for this *individual* NPDES permit, and is certainly not bound by the specific framework, conditions, or limits included in the MSGP.

To be clear, TSS limits included in the Draft Permit are site-specific technology-based effluent limits (TBELs) established using EPA's best professional judgment (BPJ); they are not a strict application of national effluent limitations guidelines or limits from a general permit like the MSGP. Fact Sheet, pp. 10, 12-15.

As discussed in the 2015 Fact Sheet (pp. 10-11), TBELs represent the minimum level of control that must be imposed under Sections 301(b) and 402 of the CWA to meet best practicable control technology currently available (BPT) for conventional and nonconventional pollutants, best available technology economically available (BAT) for toxic and nonconventional pollutants, and best conventional pollutant control technology (BCT) for conventional pollutants. Fact Sheet, p. 10. While TSS is a conventional pollutant, it is also a primary transport mechanism of toxic pollutants through adsorption, and thus, serves as an indicator pollutant for those other toxic (non-conventional) pollutants, including PCBs and must meet the BAT standard of control.

However, because no national technology-based effluent limitation guidelines (ELGs) are applicable for the type of activity or discharge from the site, in accordance with CWA § 402(a)(1)(B) and 40 CFR § 125.3(c)(2), EPA is authorized to establish technology-based effluent limitations on a case-by-case basis using its BPJ by applying the appropriate factors listed in 40 CFR § 125.3(d). *See* Fact Sheet, p. 10. As a result, determining BAT and then developing a TBEL for TSS based on BPJ is appropriate at this site.

The BPJ-based, site-specific BAT conditions proposed in the Draft Permit for TSS consist of monthly average and daily maximum concentration-based limits of 27 mg/L and 45 mg/L, respectively, based on the treatment of the effluent by sedimentation in conjunction with best management practices pertaining to solids minimization through implementation of a stormwater pollution prevention plan (SWPPP). Draft Permit, p. 2; Fact Sheet, pp. 12-14. These conditions and limitations are based on aspects of the MSGP for Stormwater Discharges Associated with Industrial Activity for Industrial Sector AD (non-classified facilities) as well as an assessment of present sedimentation treatment technology.

EPA's MSGP requires that control of total suspended solids through BMPs achieve a benchmark value, above which review and potential revisions to BMPs and additional monitoring are triggered. The Fact Sheet explained that this benchmark value, 100 mg/L, is therefore expected to be the maximum long-term average TSS value of water entering the sediment forebays.

With respect to sedimentation technology, the treatment technology applied to TSS at Outfall 001 in the Draft Permit consists of two sediment forebays leading to a wet basin. MassDEP's Stormwater Policy Handbook (1997) provides that a sediment forebay paired with a wet basin is capable of achieving a design removal rate of 80% of the annual TSS load entering the treatment system. In the Fact Sheet for the 2015 Draft Permit, EPA determined that an 80% removal efficiency through application of additional treatment in the infiltration, or wet basin would result in the reduction of TSS from the benchmark value of 100 mg/L to a long-term average of 20 mg/L. Fact Sheet, pp. 13-14. EPA then applied a statistical approach based on available effluent data to set permit limits (27 mg/L monthly average and 45 mg/l daily maximum) for TSS. *Id.*

In its comments, PEDA describes many aspects of EPA's assessment of the appropriate TBELs for TSS that it alleges are in error or otherwise inappropriate. In consideration of these concerns as well as more recent effluent data, EPA has reexamined its BPJ assessment of BAT and the resulting technology-based TSS limitations.

Assessment of BAT Based on EPA's BPJ

To determine site-specific BAT limitations for TSS, as an indicator pollutant for other toxic pollutants including PCBs, EPA must use its BPJ and consider the following factors: (i) age of the equipment and facilities involved; (ii) process employed; (iii) engineering aspects of the application of various types of control techniques; (iv) process changes; (v) the cost of achieving such effluent reductions; and (vi) non-water quality environmental impacts (including energy requirements). *See* CWA § 304(b)(2) and 40 CFR § 125.3(d)(3). In establishing a BAT TBEL for TSS, EPA must determine limits based on use of the most effective pollution control technologies that are technologically and economically achievable, and that will result in reasonable progress toward eliminating discharges of the toxic pollutant(s).

Ultimately, when setting BAT limits, EPA's consideration of the required factors and determination of BAT is governed by a reasonableness standard. *BP Exploration & Oil, Inc. v. EPA*, 66 F.3d 784, 796 (6th Cir. 1995), *citing American Iron & Steel Institute v. EPA*, 526 F.2d 1027, 1051 (3d Cir. 1975), *modified in other part*, 560 F.2d 589 (3d Cir. 1977), *cert. denied*, 435 U.S. 914 (1978); *Chemical Manufacturers Ass'n v. EPA*, 870 F.2d 177, 250 n.320 (5th Cir. 1989) (citing Congressional Research Service, *A Legislative History of the Water Pollution Control Act Amendments of 1972* (1973), at 170) (in determining BAT, "[t]he Administrator will be bound by a test of reasonableness."). As one court summarized it, "[s]o long as the required technology reduces the discharge of pollutants, our inquiry will be limited to whether the Agency considered the cost of technology, along with other statutory factors, and whether its conclusion is reasonable." *Ass'n of Pacific Fisheries v. EPA*, 615 F.2d 794, 818 (9th Cir. 1980).

According to 40 CFR § 125.3(c)(2), in determining BAT requirements, EPA should consider the "appropriate technology for the category of point sources of which the applicant is a member, based on all available information," and also "any unique factors relating to the applicant." EPA is again reviewing use of the site's existing sedimentation treatment technology in conjunction with BMPs included in a SWPPP taking into account site-specific information in its consideration of the six BAT factors below. To review other, different technologies that address TSS (e.g., Adsorption/Absorption, ion exchange, and precipitation), descriptions of these treatment technologies can be found in the Federal Remediation Technology Roundtable *Remediation Technologies Screening Matrix and Reference Guide, Version 4.0 (2007)*. Additionally, many of these off-the-shelf technologies, which are identified in the Remediation General Permit as well as the cited Screening Matrix, that are comparable in terms of effectiveness and costs to the technology that PEDA voluntarily installed and operates. However, the sedimentation technology is already installed and operating at the PEDA property.

(i) Age of the equipment and facilities involved

PEDA began using new treatment, which consists of two sediment forebays each leading to a wet basin, in 2009. The use of the new technology is a replacement of and represents an improvement in the treatment efficiency for TSS as compared to the old treatment, which was an oil water separator system. There is nothing about the age of the equipment and facilities involved that would prevent the ongoing use of the same or similar treatment or the implementation of a SWPPP to treat the wastestreams at the site.

(ii) Process(es) employed

The current processes employed at the site include implementation of the wet basin, or sedimentation basin. Again, this technology was voluntarily installed independent of the permit issuance process, and PEDA has operated this treatment

technology since installation. BMP (and SWPPP) implementation would not interfere with current processes at the property or operation of the wet basin.

(iii) Engineering aspects of the application of various types of control techniques

Treatment for TSS and toxic pollutants adsorbed to TSS typically include sedimentation and solids removal, with or without flocculation and/or coagulation, as needed. In combination, these processes are a straightforward, standard technology applied to treat many types of wastewaters containing suspended solids. The wastewater at this site is treated using settling or sedimentation, which is one of the well-established treatment techniques. In addition, the current treatment processes at the site have been in place at least since 2009, before the Draft Permit was issued for public comment, and were installed specifically to enhance the treatment efficacy. From an engineering standpoint, PEDA is expected to achieve significant reductions in TSS by maintaining the design performance of the treatment technology. Finally, implementation of the BMPs, which do not include the PCB, site-specific BMPs set forth in Section I.C (e.g. slip-lining or plugging existing pipes), will not entail engineered actions or installation of new infrastructure.

Requiring the Permittee to install different treatment technology other than the wet basin would involve engineering changes and may interfere with use of the site.

(iv) Process changes

As discussed above, PEDA's wastewater is treated using an existing treatment system and continued implementation of that system will not require process changes at the property. Further, the treatment technology does not appear to interfere with the re-development activities at the site, and likely will not interfere with anticipated plans for the property. The BMPs will not interfere with current or future use of the property. Because no active industrial processes exist on the PEDA property, implementation of the BMPs will not result in any process changes.

As stated above, other technologies may require process changes and interfere with current or future use of the property.

(v) Cost of achieving effluent reductions

As discussed above, EPA considers the cost of technological alternatives when determining the BAT and associated NPDES permit requirements. Where the BAT standard applies, CWA §§ 301(b)(2) and 304(b)(2) require "EPA to set discharge limits that reflect the amount of pollutant that would be discharged by a point source employing the best available technology that the EPA determines to be economically feasible . . .." *Texas Oil and Gas v. EPA*, 161 F.3d 923, 928 (5th Cir. 1998). To be an "available" technology, the option in question must be

"economically achievable." *See Chemical Manufacturers*, 870 F.2d at 250 (citing 33 U.S.C. § 1311(b)(2)(A)). The United States Supreme Court has interpreted the CWA to mean that the BAT should "represent a commitment of the maximum resources economically possible to the ultimate goal of eliminating all polluting discharges." *PA v. Nat'l Crushed Stone Ass'n*, 449 U.S. 64, 74 (1980).

Neither the CWA nor EPA regulations dictate precisely how the Agency should consider costs in its technology standards determinations, but the courts have made clear that only a reasonable consideration of cost is necessary and precise cost estimates are not required. *See BP Exploration*, 66 F.3d at 803; *NRDC v. EPA*, 863 F.2d 1420, 1426 (9th Cir. 1988) (EPA need "develop no more than a rough idea of the costs the industry would incur"). Moreover, the BAT standard does not call for consideration of a comparison of costs to benefits. *See, e.g., Crushed Stone*, 449 U.S. at 74; *Texas Oil*, 161 F.3d at 936.

PEDA voluntarily implemented the new treatment technology in 2009 and continues to operate it. As such, applying BAT limits based on use of the site's current technology will not result in any new installation costs to PEDA. EPA expects that there are no additional capital costs and minimal operating costs associated with continuing to operate and maintain the new treatment technology. To the extent PEDA incurs additional costs due to the operation of the new treatment technology, EPA notes that that PEDA has voluntarily installed this treatment technology and has been operating it for several years. As such, implementation of the water quality basin is, without question, "economically achievable." Additionally, implementation of the BMPs will likely result in minor operating costs.

On the other hand, requiring any additional or different treatment technology beyond the current wet basin as BAT for TSS would result in additional and potentially significant installation fees and capital costs.

> (vi) Non-water quality environmental impacts (including energy requirements)

Finally, EPA considers the non-water quality environmental impacts associated with the treatment of wastewater, including energy consumption, air emissions, noise, and visual impacts. The Permittee has operated the new treatment technology since 2009 and has not indicated or provided any information to suggest that the new technology results in an increase in energy usage, air emissions and noise as compared to the existing system prior to 2009. EPA does not expect any non-water quality environmental impacts associated with continuing to operate and maintain the new treatment system. Furthermore, any impacts of treatment equipment would be dwarfed by current and future active re-development and usage throughout the rest of the site and will be negligible in considering the activities across the site.

Based on consideration of the appropriate factors above and its best professional judgment, EPA has determined that performance of the current sedimentation (i.e. wet basin) in conjunction with BMPs included in a SWPPP is BAT for treatment of TSS at the PEDA's property. While this technology is the same technology identified as BAT in the Draft Permit, the resulting effluent limits, based on application of this technology, have also been reviewed and result in slightly different numeric effluent limits for TSS. Specifically, EPA has reviewed the basis for the maximum daily and average monthly TSS TBEL based on BAT. EPA concludes that the performance of the current treatment system for the discharge of TSS from this site is consistent with performance of technology addressing stormwater discharges under EPA's 2021 MSGP and groundwater and stormwater discharges under EPA's 2017 RGP. While PEDA's discharge is not covered by either of these general permits, the presence of TSS contamination in PEDA's discharge as well as PEDA's existing treatment technology is similar in certain respects to the technology and type of discharges evaluated in these permits.

The sedimentation treatment technology applied to TSS consists of retention and infiltration. For stormwater associated with industrial activity for all sectors, EPA's MGSP requires control of total suspended solids through best management practices, including a stormwater pollution prevention plan, that achieves a benchmark value. This benchmark value, 100 mg/L, is therefore expected to be the maximum long-term average at the site.

Part 9.10.7.2 of EPA's 2021 MSGP[15] (p. 199) also specifies Additional Effluent Limits for Discharges to Certain Impaired Waters and Sediment Cleanup Sites applicable to discharges to a 303(d)-listed waterbody (Category 5), or a sediment cleanup site in certain parts of the U.S., either directly or indirectly through a stormwater drainage system. Specifically, Table 9.10.7.2.1 requires a numeric daily maximum limit of 30 mg/L for TSS.

The MSGP further provides that where a discharge point is to an impaired waterbody and is subject to an effluent limit for a parameter that also has a benchmark, the effluent limit supersedes the benchmark.

In addition to the MSGP, the Remediation General Permit, or RGP, which applies to commingled groundwater and stormwater discharges associated with certain remedial actions, is also relevant and helpful in EPA's assessment of appropriate TSS limitations and conditions. The RGP requires compliance with a numeric TSS limit of 30 mg/L (a monthly average). *See* RGP, Table 2. More specifically, the RGP explains that a monthly average TSS limit of 30 mg/L is appropriate for discharges similar to PEDA's discharge, and is consistent with numerous nationally promulgated technology-based effluent limitations guidelines as well as

[15] EPA-821-R-04-014 is currently available at: https://www.epa.gov/eg/effluent-guidelines-plan-support-documents; The 2021 MSGP is currently available at: https://www.epa.gov/npdes/stormwater-discharges-industrial-activities-epas-2021-msgp. The 2017 RGP is currently available at: https://www.epa.gov/npdes-permits/remediation-general-permit-rgp-massachusetts-new-hampshire.

limits included in similar individual Massachusetts NPDES permits. *See* Fact Sheet, Remediation General Permit, NPDES Permit No. MAG910000 and NHG910000, at 81-82 (2016), *available at* https://www3.epa.gov/region1/npdes/remediation/2016FactSheet.pdf. Additionally, the selection of a monthly average limit of 30 mg/L is based on a thorough analysis of acceptable TSS treatment technologies, including the type of treatment applied to Outfall 001, and EPA's determination that such technology can achieve the 30 mg/L monthly average limit. *Id.* Therefore, EPA developed a numeric TBEL for TSS based on the requirements of EPA's 2021 MSGP and 2017 RGP and its evaluation of available data demonstrating the performance of this technology. Specifically, PEDA's available DMR data from 2015 through 2020 was reviewed to reassess the long-term treatment performance of the new technology (i.e., wet basin) used by PEDA to remove TSS. Having reviewed this information, EPA has concluded that a revised technology-based average monthly effluent limitation of 30 mg/L and maximum daily effluent limitation of 100 mg/L are more appropriate in this situation and are thus included in the final permit. First, the inclusion of a monthly average limit set at 30 mg/L is consistent with the approach taken in the RGP, which is appropriate for PEDA's discharge due to its composition and frequency. Second, inclusion of the *daily maximum* limit is based on the need for a daily maximum requirement from the MSGP (*see* Table 9.10.7.3.1). However, due to the variability of the actual performance of the wet basin technology and the unpredictable nature of PEDA's discharge, EPA has determined that the more appropriate daily maximum value is *100 mg/L* rather than the 30 mg/L set forth in the MSGP.

EPA has determined that the current technology, which represents BAT, is capable of achieving these effluent limitations in accordance with typical design standards. Inclusion of the numeric effluent limitations for this parameter will ensure continued effective maintenance and operation of the new treatment technology.

EPA recognizes that these limits are different from those limits proposed in the 2015 Draft Permit. However, the nature and frequency of the data collected pursuant to PEDA's existing permit and the variability of flow at Outfall 001 make it difficult ensure collection of representative data and to accurately assess the actual TSS levels in PEDA's discharge even when using a robust statistical analysis.[16] The MSGP and RGP, on the other hand, assess and specifically

[16] EPA has reconsidered the quality of available data, including the number and type of samples, data variability, and the confidence level of the data set. These data do not directly measure the TSS concentrations. To utilize these data, a number of assumptions must be made about TSS concentrations relative to mass. Further, the previous permit required effluent sampling relative to certain sized precipitation events. However, effluent discharged does not necessarily correlate to specific rainfall events due to storage of stormwater and detention time prior to discharge. In addition, samples collected only in association with a precipitation event do not provide data representative of discharges of non-stormwater discharges (*i.e.*, groundwater). Further, these data exhibit a high degree of variability.

account for the variability of flow and TSS levels present in discharges like PEDA's and, therefore, provide a more appropriate and reliable basis for technology-based TSS limitations. As a result of this and the discussion above, EPA has determined that its revised limitations, based on the MSGP and RGP, are more appropriate BAT limits, based on its BPJ. To the extent that PEDA's comments challenged EPA's statistical methodology in determining the proposed TSS numeric limits, EPA need not respond specifically to those comments because it has applied a revised, different methodology to determine the appropriate numeric limits in the final permit. Thus, those concerns are no longer at issue.

Furthermore, the final effluent limitations are expressed as concentration-based limits, which is both appropriate and consistent with the relevant CWA regulations. EPA has determined that discharges from the site are "non-continuous" because of the intermittent, and/or short duration at which discharges of primarily stormwater are expected occur. The regulations at 40 CFR § 122.45(e) provide that discharges which are *not continuous*, as defined in § 122.2, shall be particularly described and limited, considering the following factors, as appropriate: 1) Frequency; 2) Total mass; 3) Maximum rate of discharge of pollutants during the discharge; and 4) Prohibition or limitation of specified pollutants by mass, *concentration*, or other appropriate measure. Having assessed these factors with respect to PEDA's non-continuous discharge, EPA notes the intermittent, unpredictable nature of the discharges and that the discharges are expected to contribute low pollutant loads because of the combination of technology-based and water quality-based effluent limitations. For these reasons, concentration-based limits are appropriate.

In addition to the factors at 40 CFR § 122.45(e), section 122.45(f) further identifies exceptions to the requirement that limitations, standards or prohibitions in NPDES permits be expressed in terms of mass:

> If in establishing permit limitations on a case-by-case basis under § 125.3, limitations expressed in terms of mass are infeasible because the mass of the pollutant discharged cannot be related to a measure of operation (for example, discharges of TSS from certain mining operations), and permit conditions ensure that dilution will not be used as a substitute for treatment.

As a result, EPA has identified data representativeness as a source of concern. In general, a representative sample results in a greater confidence level that the sample collected is representative of the actual concentration of a parameter in the effluent at any given time, which in turn ensures permit compliance.

Because of data quality concerns (*e.g.*, limited quantity of direct measurements, significant number of assumptions required for usability, high degree of variability in the available data), EPA established the specific numeric limits for TSS based upon consideration of PEDA's discharge in conjunction with the MSGP and RGP, or a qualitative evaluation, as discussed above.

40 CFR § 122.45(f)(iii). This exception to mass-based limitations applies to PEDA's discharge. Specifically, the numeric effluent limitations for TSS are not expressed in terms of mass because: 1) the site-specific technology standards, which are consistent with EPA's MSGP, are concentration-based values that are not dependent upon a measure of production; 2) an appropriate measure of production/operation is infeasible for the types of discharges to be covered; and 3) the water quality criteria for toxic pollutants for which TSS is an indicator parameter, are concentration-based, representing the maximum value above which impacts are expected to occur for the averaging period (*see also* 40 CFR § 122.45(f)(ii)). Moreover, the concentration-based effluent limitations will ensure a pollutant concentration does not increase during periods of low flow. While mass-based effluent limitations may be imposed to ensure that dilution is not used as a substitute for treatment, consistent with EPA's MSGP and 40 CFR § 122.45(e), the final permit does not allow the use of dilution as a form of treatment, or as a means to comply with the permit effluent limitations.

Because EPA has considered the factors set forth in 40 CFR § 122.45(e) and has demonstrated that this discharge meets one of the exceptions set forth in 122.45(f), concentration-based TSS limits are included in the final permit. PEDA's comment includes a request that EPA conclude that the mass-based limits in the existing permit are incorrect and, therefore, exceedances of such mass-based limits is inappropriate or somehow invalid. While EPA has determined that the exception allowing for concentration-based limits applies in its final permit, this determination does not go into effect retroactively, nor does it negate violations of the previous permit's limits.

Finally, and on a related note, PEDA expressed disagreement and concern with EPA's reliance on the benchmark values from the MSGP. Although EPA considered a benchmark concentration in the Multi-Sector General Permit, or MSGP, as described above, to establish site-specific, appropriate technology-based limitations for TSS based on its BPJ, in so doing, EPA has not found that PEDA would be covered under the MSGP or otherwise applied the MSGP benchmark directly to PEDA's discharge. The screening procedures discussed in the comment are intended for stormwater from industrial sectors that qualify for coverage under the MSGP. PEDA's discharge *is not* eligible for EPA's MSGP, as the MSGP only authorizes uncontaminated groundwater as an allowable non-stormwater discharge. The pollutants in the groundwater discharged from Outfall 001 include, but are not limited to, oil and grease, TSS, PCBs, and SVOCs. Additionally, the site discharges to an active Superfund site. This is of particular importance because the MSGP has a limitation on coverage for Superfund-related discharges due to, for example, the risk of "recontamination of aquatic media at the CERCLA Site such that your discharge will cause or contribute to an exceedance of a water quality standard." (2021 MSGP Part 1.1.7). This is relevant to PEDA because continued discharges of PCBs to Silver Lake may cause recontamination of Silver Lake, which, as part of the GE Superfund Site, has undergone remediation with respect to PCBs.

Furthermore, benchmarks are not numeric limits. The MSGP benchmark TSS value, 100 mg/L, represents TSS concentrations resulting from proper operation and maintenance of a stormwater collection system. It represents the median TSS concentration observed by the National Urban Runoff Program ("NURP").[17] As the Federal Register notice (86 Fed. Reg. 10272, 10273 (February 19, 2021)) for the 2021 MSGP explains,

> EPA reminds operators and the public that benchmark thresholds are not effluent limitations. This permit requires benchmark monitoring as gauge of the performance of facilities' stormwater control measures.

Because BMPs such as catch basin and pipe cleaning, street sweeping, and spill prevention are practices that minimize the pollution sources before stormwater reaches a control structure such as a sediment forebay, it is entirely appropriate to consider the expected result of those BMPs to the influent of those control structures. Again, benchmarks in the MSGP are not effluent limitations, and EPA's consideration of benchmark TSS concentrations from the MSGP does not confer the MSGP permit conditions on PEDA's NPDES Permit.

The commenter is correct that the MSGP Sector AD does not have benchmark values of its own. This is because Sector AD is intended for facilities that cannot be described by the other sectors.

Ultimately, with respect to PEDA's permit, EPA's consideration of the MSGP benchmark TSS value is not contingent on PEDA's inclusion in any particular MSGP Sector or PEDA obtaining authorization under the MSGP. Rather, it is a common TSS limit applied in EPA's industrial permits on a case-by-case basis using BPJ, and is consistent with numerous national ELGs. Therefore, this value is relevant and helpful to EPA's site-specific analysis of TSS limits using its BPJ, as discussed in detail above. Further, a numeric limit, rather than a benchmark, is, in fact, included in the MSGP for TSS in particular circumstances, such as those present at the PEDA property. *See* MSGP, Part 9.10.7.3; *see also* above for further discussion of this part of the MSGP.

The use of data from the NURP, upon which the MSGP benchmark is based, is relevant to the PEDA site because the PEDA property receives runoff from 91 acres of urban residential area to the north of the site.

[17] In an analysis of discharge monitoring report (DMR) data from more than 775 facilities covered by the MSGP 2000, approximately 63 percent of the TSS samples met the benchmark (Tetra Tech, 2006). Tetra Tech, Inc. 2006. Review of Discharge Monitoring Report Data From the 2000 NPDES Industrial Stormwater Permit Program. Technical Memorandum to Jack Faulk, U.S. Environmental Protection Agency. Tetra Tech, Inc., Clemson, SC, and Fairfax, VA.

(iv) Regarding pH

The commenter requests that the pH limits included in the Draft Permit be removed and that the existing limits instead remain.

PEDA explains in its comment that its request is based on concern that PEDA's discharge will exceed the proposed pH limits more often. However, because a discharge would not meet an effluent limit is not a basis for disregarding state water quality standards and the CWA's clear mandate to ensure compliance with such standards.

As stated in the Fact Sheet, p. 14-15, the CWA requires that EPA impose the more stringent of technology-based and water quality-based effluent limits. *See* CWA § 301(b)(1)(C) and 40 CFR § 122.44(d). In this case, the applicable Massachusetts SWQS are more stringent and therefore, WQBELs apply. Massachusetts SWQSs at 314 CMR 4.05(3)(b)(3) provide that pH "[s]hall be in the range of 6.5 through 8.3 standard units and not more than 0.5 units outside of the natural background range. There shall be no change from natural background conditions that would impair any use assigned to this Class."

In the Draft Permit, EPA included an allowable pH range of 6.5 through 8.3 standard units (S.U.), consistent with the Massachusetts SWQSs. However, monitoring data from 2019 and 2018 at the location where Silver Lake discharges into the Housatonic River indicate that pH in Silver Lake, the receiving water for PEDA's discharge, was well within the 6.5 to 8.3 S.U. range established by the SWQSs, except for one exceedance (8.38 S.U.) in 2018. *See* Table 5-1 Surface Water Monitoring Results Summary, *2018 Annual Monitoring Report Silver Lake Area,* General Electric Company - Pittsfield, Massachusetts (Feb. 2019); Table 4-1 Surface Water Monitoring Results Summary, *2019 Annual Monitoring Report Silver Lake Area,* General Electric Company - Pittsfield, Massachusetts (Feb. 2020).

As a result, the pH limited range included in the Final Permit is 6.5 to 9.0 S.U.; this Final Permit has allowed the higher end of the pH range to be less stringent than the range in the Massachusetts SWQS (6.5-8.3 S.U.). In order for consideration to be given to retain this relaxed pH range in the subsequent permit reissuance and as described in I.C.4 of the Final Permit, PEDA is required to submit a study within three (3) years of the effective date of this permit demonstrating that the pH in the receiving water does not exceed the range of 6.5-8.3 S.U. This demonstration shall be conducted consistent with MassDEP's *Procedures for a pH Adjustment Demonstration Project for NPDES Permits* and approved by MassDEP.

(v) Regarding *E.coli*

PEDA comments that the *E. coli* monitoring should be removed from the permit because it is not a pollutant that originates within the PEDA property. Although

pollutants discharging through Outfall 001 may originate outside of the PEDA property, PEDA nonetheless owns the water quality basin and outfall. Under the NPDES program, permits are issued for discharges of pollutants at specific outfalls rather than for pollution sources. However, both the current and upcoming Small MS4 General Permits require towns to take measures to reduce bacterial contamination of stormwater, such as illicit discharge detection and elimination (IDDE) and education of pet owners about proper disposal of pet waste. EPA expects PEDA and the City of Pittsfield to work cooperatively to address sources of pathogens in stormwater discharging from Outfall 001. Thus, the source of potential *E. coli* sources does not change EPA's determination that *E. coli* monitoring is necessary.

This monitoring is retained in the final permit because Silver Lake discharges to a segment of the East Housatonic River that is listed as impaired for *E. coli* and fecal coliform on the 2016 303(d) list and there is insufficient monitoring data to determine whether Outfall 001 contributes bacterial impairment in this segment of the Housatonic River. *See* Fact Sheet, pp. 15-16; *see also* 2021 MSGP, Section 4.2.5.1.a, page 41. EPA notes that Silver Lake has not been assessed for impairment; however, it is possible that if it were, it may be deemed impaired for fecal coliform and *E. coli* as well. Because *E. coli* has replaced fecal coliform as the indicator of pathogenic bacteria for assessing attainment of secondary recreational water quality standards, the Final Permit includes monitoring for *E. coli* only. *See* 314 CMR § 4.05(3)(b)4.b; Fact Sheet, p. 15.

(vi) Regarding total phosphorus

PEDA similarly objects to the phosphorus monitoring requirements set forth in the Draft Permit because phosphorus is generated by sources outside the PEDA property. As stated above, the source of the pollutant contained in PEDA's discharge has no bearing on EPA's authority and responsibility to ensure that discharge the is only authorized discharge in satisfaction of the demands of the CWA.

However, unlike *E. coli*, the segment of the Housatonic River into which Silver Lake discharges is not identified as impaired for phosphorus or nutrients. Thus, EPA has determined that it is appropriate, at this time, to remove the quarterly monitoring requirement from the Final Permit. EPA notes, however, that phosphorus monitoring is required of all applicants as part of the NPDES application. EPA believes this application requirement will provide sufficient information to conduct an initial evaluation of the presence of phosphorus in the discharges from the site to determine if additional monitoring requirements or effluent limitations are necessary to meet water quality standards in the future.

On the other hand, EPA has retained non-numeric technology-based effluent limits (i.e., BMPs) specific to minimizing nutrients, including phosphorus in stormwater discharges from the site. *See* 2015 Fact Sheet, pp. 16-17; *see also id.*

at 24-26, and Section I.C. of the Final Permit. The following list of mandatory BMPs shall be implemented and documented in the SWPPP Permit:

- Procedures to minimize the use of pesticides, herbicides, and fertilizers. Procedures must include requirements for use of slow release fertilizers on permittee-owned property, in addition to reducing and managing fertilizer use (i.e., the proper use, storage, and disposal of pesticides, herbicides, and using only in accordance manufacturer's instruction).
- Evaluate to ensure practices for lawn maintenance and landscaping activities are protective of water quality. Practices include reduced mowing frequencies, proper management and disposal of lawn clippings and leaf litter, and use of alternative landscaping materials (e.g., drought resistant planting). Blowing organic waste materials onto adjacent impervious surfaces is prohibited.
- Implement a regular street sweeping program. The minimum frequency is monthly.

These BMPs are found in Part I.c.2. of the final permit.

(vii) Regarding total nitrogen

Again, PEDA's comment suggests that any nitrogen in its discharge originates outside of its property, and as a result, the quarterly monitoring requirement for nitrogen should be removed from the permit. See the previous discussion on this point for phosphorus and *E. coli*.

For reasons similar to those identified above in EPA's discussion of phosphorus monitoring and as explained further below, EPA is reducing nitrogen monitoring from quarterly to twice per year the Final Permit.

The permit application included only one sample of total nitrogen, with a result of 0.530 mg/L, which is above the Ecoregional criteria for Lakes and Reservoirs in Nutrient Ecoregion VIII[18] (0.008 mg/L). By proposing monitoring requirements without limits in the draft permit, EPA determined that a single sample, as provided to date, is not sufficient to determine effluent variability or make an informed decision regarding compliance with water quality standards. However, in response to this comment, EPA has decreased the monitoring frequency to twice per year, as part of the WET testing, which is consistent with EPA's *Technical Support Document for Water Quality-based Toxics Control* recommendation of a minimum of three years of data for ascertaining the attainment of both acute and chronic effect for chemical-specific approaches,[19] the recommendation for a minimum data set of 8 to 12 samples for evaluation of pollutants of concern[20] and 10 or more samples for statistical analysis.[21] This

[18] Report accessible at https://www.epa.gov/sites/production/files/documents/lakes8.pdf
[19] See Chapter 2; EPA/505/2-90-001: March 1991.
[20] See Chapter 3; EPA/505/2-90-001: March 1991.
[21] See Appendix E; EPA/505/2-90-001: March 1991.

monitoring is necessary and appropriate for EPA to carry out its responsibilities under the CWA and will allow EPA to determine if the discharge causes, has reasonable potential to cause, or contribute to an excursion above of water quality standards and impose effluent limitations, if necessary, to meet water quality standards in the future, given that downstream segments are impaired for nitrogen. *See also* Fact Sheet, pp. 16-17.

EPA also notes that total nitrogen monitoring is required of all applicants as part of the NPDES application, and monitoring for ammonia nitrogen is required in conjunction with whole effluent toxicity testing. EPA believes these requirements collectively will provide information necessary to conduct an evaluation of the presence of nitrogen in the discharges from the Facility to determine if additional monitoring requirements or effluent limitations are necessary to meet water quality standards in the future.

In addition, EPA has retained non-numeric technology-based effluent limits (i.e., BMPs) specific to minimizing nitrogen in stormwater discharges from the site. These BMPs are similar to ones proposed in the recently released draft General Permit for Small MS4s in Massachusetts, for MS4s located within the three watersheds and include minimization of fertilizer application, use of slow release fertilizer, management of grass clippings and leaf litter, and regular street sweeping. *See* 2015 Fact Sheet, p. 17.

(viii) Regarding PCBs

PEDA presents several comments on EPA's inclusion of numeric PCB limits in the 2015 Draft Permit. To the extent that PEDA asserts that the proposed limits were in conflict with or precluded by the Consent Decree, these assertions are not correct and are addressed throughout this document, including in Responses to Comments 2.A.III.a, b, 2.B.II, 2.B.II.a, 2.B.II.a.1-4.

Additionally, contrary to the opening remarks of this comment, EPA's description of the groundwater and soil on the PEDA site as "contaminated" is not inappropriate and is, therefore, maintained in the final permit. The groundwater, soil, and stormwater at the PEDA property is described as contaminated due to the presence of PCBs and other contaminants within these media. The attainment of Consent Decree performance standards does not change this characterization.

In the above comment, PEDA focuses on concerns about the compliance limit proposed in the draft permit as well as EPA's analysis of the PCB concentration data and use of such analysis in its reasonable potential assessment. PEDA cites these two concerns as reasons for removing numeric PCB limits from the permit. EPA has determined that BMP-based limits for PCBs are appropriate in lieu of numeric limits, based on its assessment of comments on the Draft Permit and evaluation of data and relevant information. *See* Response to Comment 2.A.V.c. Therefore, these concerns regarding compliance with numeric limits are no longer relevant.

However, EPA finds it worth explaining a few of the issues that PEDA raises, particularly with respect to its reasonable potential analysis. EPA follows the guidance in *Technical Support Document for Water Quality-based Toxics Control* to determine if any pollutant or pollutant parameter (conventional, non-conventional, and toxic) that is or may be discharged causes or has the "reasonable potential" to cause or contribute to an excursion above any water quality standard (40 CFR § 122.44(d)). An excursion occurs if the projected or actual in-stream concentration exceeds an applicable water quality criterion. In determining "reasonable potential," EPA considers the following factors: (1) existing controls on point and non-point sources of pollution; (2) pollutant concentration and variability in the effluent and receiving water as determined from the permit's re-issuance application, monthly discharge monitoring reports (DMRs), and State and Federal Water Quality Reports; (3) sensitivity of the indicator species used in toxicity testing; (4) known water quality impacts of processes on waste waters; and (5) where appropriate, dilution of the effluent in the receiving water.

Each of these five factors is discussed at length in the 2015 Fact Sheet. *See* Fact Sheet, pp. 18-19.

1) Existing controls on point and non-point sources of pollution

The existing controls consist of two sediment forebays that overflow into a permanently wet basin (i.e. the water quality basin). The north forebay is undersized and not capable of handling heavy stormwater flows with high TSS concentrations. This has been illustrated by four breaches of the north forebay that have occurred during storm events. Also, the water quality basin intercepts groundwater that contains PCBs, meaning that the water quality basin itself may be a source of PCBs.

2) Pollutant concentration and variability in the effluent and receiving water

Since the water quality basin has gone online, discharge concentrations of PCBs have been consistently higher than both the aquatic life criterion and the human health criterion. Using a method from the *Technical Support Document for Water Quality-based Toxics Control (TSD),* EPA calculated a projected upper bound for effluent PCB concentrations based on methods in the TSD, Section E-6. See Appendix E for the details of this statistical derivation. EPA determined that the projected 95th percentile effluent PCB concentration is 0.427 µg/L, which is over 30 times the aquatic life criterion of 0.014 µg/L.

The water column concentration of PCBs in Silver Lake has dropped since capping of the lake in 2013, but the median concentration, at 0.044 µg/L, is still above both the human health criteria of 0.000064 µg/L and the aquatic life criterion of 0.014 µg/L. Furthermore, the reach of the Housatonic River to which Silver Lake outlets has been listed as impaired for PCBs in fish tissue. Discharges

of PCBs in excess of the water quality criterion contributes to this water quality impairment.

3) Sensitivity of the indicator species used in toxicity testing

This factor pertains only to whole effluent toxicity test limits, which are not included in the draft permit.

4) Known water quality impacts of processes on wastewater

Because there are no longer any industrial processes on the site, this factor is inapplicable.

5) Where appropriate, dilution of the effluent in the receiving water

In a strictly quantitative approach, EPA tabulates available data, determines the applicable water quality criteria and statistically projects concentrations based on available effluent data using a steady state mixing that accounts for the contribution of the discharge, by volume as compared to the receiving water under worst case conditions, and the concentration already present in the receiving water. EPA completes this analysis when available data are sufficient.

To determine if the concentrations discharged cause or have a reasonable potential to cause or contribute to an excursion above the State SWQSs, EPA followed the guidance in *Technical Support Document for Water Quality-based Toxics Control*. While the commenter notes the reasonable potential analysis using this methodology as "not legitimate evaluations," no acceptable alternative acceptable method for analysis is suggested. Based on the lognormal distribution of effluent data and the quantity of available data, the percentile approach prescribed in EPA's *Technical Support Document for Water Quality-based Toxics Control* to determine reasonable potential is appropriate. As the reasonable potential analysis included in the permit's fact sheet demonstrated, the discharge has reasonable potential to cause an excursion above the applicable water quality criterion for PCBs. Therefore, effluent limitations are required. In consideration of PEDA's comment, EPA has determined that effluent limitations expressed as non-numeric water quality-based limitations (i.e., best management practices or BMPs) is appropriate.

Best management practices (BMPs) may be expressly incorporated into a permit on a case-by-case basis in specific circumstances where it is determined that they are necessary to achieve effluent limitations and standards or to carry out the purpose and intent of the CWA under § 402(a)(1). EPA regulations enumerate the circumstances where BMPs are authorized to control or abate the discharge of pollutants: 1) authorized under section 304(e) of the CWA for the control of toxic pollutants and hazardous substances from ancillary industrial activities; 2) authorized under CWA § 402(p) for the control of stormwater discharges; 3) numeric effluent limitations are infeasible; or 4) the practices are reasonably

necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA. 40 CFR §§ 122.44(k)(1)-(4).

The primary bases for inclusion of non-numeric limitations in lieu of numeric limitations for PEDA's discharges of PCBs are that BMPs are necessary to carry out the purposes of the Act (i.e., ensure compliance with water quality standards pursuant to CWA section 301(b)(1)(C)) and numeric effluent limitations are infeasible. *See* 40 CFR §§ 122.44(k)(3), (4). Numeric limitations are infeasible for a few reasons. First, while EPA conducted analysis based on available PCB loading and effluent data, PEDA's discharge is variable and difficult to accurately characterize. Much of the discharge is composed of stormwater, which EPA regulations and guidance recognize is often best regulated through BMPs due to its variability in flow, frequency, magnitude, etc. *See Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits,* 61 Fed. Reg. 43,761 (Aug. 26, 1996), *revised in* 61 Fed. Reg. 57425 (Nov. 6, 1996); *In re District of Columbia Municipal Separate Storm Sewer System,* 10 E.A.D. 323, 336-39 (EAB 2002)*; In re Arizona Municipal Storm Water NPDES Permits,* 7 E.A.D. 646 (EAB 1998).

Additionally, in this case, the applicable water quality criterion is multiple orders of magnitude below the most sensitive EPA-approved test method in 40 CFR Part 136. The water quality criterion is 0.000064 µg/L, and the most sensitive EPA test method, EPA Method 608.3 has a published minimum level of 0.095 µg/L for one or more PCB Aroclors.

Weathering of PCBs can result in degradation of Aroclors (commercial formulations of PCBs) into PCB congeners such that the chemical profile in sampled media (surface water, groundwater, soil) no longer matches the original release. EPA Method 608.3 only detects PCB Aroclors, but EPA anticipates the approval of an updated PCB test method that would incorporate analysis of PCB congeners and more accurately characterize the presence of PCBs in the discharge. If such a method is approved within the 5-year term of the Final Permit, EPA has included a requirement that PEDA begin using this method within 6 months of the method's approval. *See* Final Permit Part I.A.1. Footnote 7.

On the other hand, the non-numeric limitations, or BMPs, will ultimately result in the elimination of PCB discharges, which satisfies the purposes and requirements of the CWA and its regulations. EPA concludes that BMP-based water quality based effluent limitations are feasible, more practically achievable, and ensure compliance with Massachusetts SWQS. For additional explanation of EPA's decision to include non-numeric limitations in the Final Permit, see Response to Comment 2.A.V.c.

Finally, with respect to the appropriate test methods for monitoring PCBs in Part I.A.1., Footnote 6 of the Final Permit, as mentioned above, the most sensitive EPA test method is EPA Method 608.3. GC/LRMS procedure for PCB congener

and homolog analysis based on EPA Method 608.3 can determine all 209 PCB congeners or a subset of congeners (WHO, NOAA or custom list). This method is also capable of measuring groupings of PCB congeners as a function of their level of chlorination (e.g. homologs/homologues). Additionally, the GC/LRMS method can estimate PCB Aroclor concentrations from the same sample aliquot as the congener/homologs, allowing for the simultaneous measurement of congeners, homologs and Aroclors. This testing approach eliminates the potential variability associated with the analysis of multiple aliquots.

However, EPA is aware that GE currently collects relevant and related PCB monitoring data in Silver Lake, using RCRA method 8082. Therefore, for the purpose of characterization of the existence of PCBs at this site under the special conditions section of the permit, EPA will also allow RCRA method 8082 to be used (i.e., data do not have to be analyzed using Part 136 test method 608.3).

Further, the permittee may request an alternate test method, in lieu of 608.3, for compliance monitoring pursuant to 40 CFR § 136.5.

(ix) Regarding WET and metals analysis

PEDA comments that EPA's rationale for including WET testing requirements in the draft permit—which PEDA describes as "lack of information"—is somehow insufficient or invalid and, as a result, these requirements should be removed from the permit. EPA has considered this comment and the record and determined that WET testing requirements are appropriate and authorized by the Clean Water Act, as will be discussed in detail below.

As is well-established, the Clean Water Act authorizes EPA to require monitoring and reporting through the NPDES program. Specifically, section 308(a) of the Act, 33 U.S.C. § 1318(a)(A), "confers broad authority on the Agency to impose monitoring requirements on any point source." *In re City of Port St . Joe*, 7 E.A.D. 275, 306 (EAB 1997). Section 402(a)(2) of the Act provides that an NPDES permit may include "conditions on data and information collection, reporting, and such other requirements as [the Administrator] deems appropriate."

Whole Effluent Toxicity (WET) testing is often an important data gathering tool for EPA and permitting authorities. WET describes the aggregate toxic effect of an aqueous sample as measured by an organism's response upon exposure to the sample (e.g., lethality, impaired growth, or reproduction). EPA's WET tests replicate the total effect of environmental exposure of aquatic life to toxic pollutants in an effluent without requiring the identification of the specific pollutants.

WET test results and data are used for, among other things, assessing reasonable potential and determining compliance with narrative State SWQSs and are a vital component to implementing water quality standards under the NPDES permits program in accordance with the CWA Section 402 and supports meeting the goals

of the CWA Section 101(a) and (2). *See also* 40 CFR Part 122.41(j)(1) (Conditions applicable to all permits); 40 CFR Part 122.44(d)(1)(ii),(iv), and (v) (Establishing limitations, standards, and other permit conditions).

However, significant data gaps were noted in the 2015 Fact Sheet, which prevented EPA from utilizing specific values for pollutants of concern. *See* Fact Sheet, pp. 23-24. Specifically, because these parameters have not been monitored in the facility's discharges since 2009, available monitoring data are insufficient for EPA to make a definitive determination. The commenter has submitted no quantitative factual basis demonstrating that these pollutants are not present at the facility at levels that cause or have reasonable potential to cause or contribute to an excursion above water quality criteria, and in the absence of sufficient data, EPA cannot assume these parameters are not present given the types of toxic pollutants present at the site (e.g., PCBs), historical uses at the site (e.g., industrial manufacturing), the type of discharge (e.g., stormwater and contaminated groundwater), and/or pollutants identified as causing impairments to the receiving water (e.g., *E. Coli* and PCBs). EPA determined, pursuant to sections 308(a)(3)(A) and 402, further monitoring is necessary in order to evaluate the effluent from the facility with regard to certain pollutants associated with urban industrial activity and the response actions conducted pursuant to §§104, 106, 120, 121 or 122 of the Comprehensive Environmental Response, Compensation, and Liability Act. *See* Fact Sheet, pp. 23-24.

Further, EPA's rationale for requiring the facility to gather more data is based on ensuring that stormwater discharges do not impact the water quality of Silver Lake or pose a risk to human health or the environment by causing or contributing to recontamination, pursuant to the Clean Water Act. EPA's ability to exercise its legitimate regulatory authority granted in Sections 402 and 308 of the CWA to gather information to determine the concentrations of pollutants discharging into Silver Lake at the facility is of paramount importance to human health and the environment. EPA's decision to include site-specific and/or receiving water-specific parameters in the permit is reasonable and consistent with its responsibilities under the Act, particularly given the highly impacted nature of the watershed below the discharge and the nature of impairments in the receiving waters. EPA expects the frequency of this sampling to reduce with time, if pollutants are not detected.

Ultimately, given the pollutants identified for Silver Lake, the sources of these pollutants documented at the site, and the impairments related to these pollutants listed for downstream and adjacent segments in conjunction with the inadequacy of existing data, EPA maintains that WET testing is warranted.

Limited sampling, such as the Permittee suggests, is not sufficient to determine effluent variability or make an informed decision regarding compliance with water quality standards. However, given the cost burden of increased sampling and analysis is high for whole effluent toxicity, EPA has reduced the WET test frequency to twice per year for the five-year permit term. A five-year permit term

aligns with EPA's *Technical Support Document for Water Quality-based Toxics Control* recommendation for ascertaining the attainment of both acute and chronic effect for both chemical-specific and whole effluent approaches.[22] Further, a twice per year monitoring frequency aligns with the recommendation for a minimum data set of 8 to 12 samples for evaluation of pollutants of concern[23] and 10 or more samples for statistical analysis.[24] Over a five-year permit term, 2/Year sampling will yield 10 data points. Therefore, the Final Permit retains WET testing along with the metals effluent and receiving monitoring required in the testing protocol at a frequency of 2/year, in April and October.

However, after the five-year permit term, EPA agrees that WET testing frequency may be reduced or eliminated, assuming that the permit has been administratively continued. If five years has elapsed since the effective date and PEDA's WET testing has yielded 10 valid test results, the WET testing frequency will decrease to one test per two years. The biennial test WET test and associated monitoring shall be conducted in April.

An expected benefit of this monitoring frequency is to characterize the quality and variability of the effluent and receiving water, which in turn ensures permit compliance, including both compliance with new WQBELs derived from human health criteria for pollutants for which the receiving water and/or downstream and adjacent segments are impaired and for which the site area is a source is of significant concern. In general, a larger sample size results in a greater confidence level that the sample collected is representative of the actual concentration of a parameter in the effluent at any given time. In choosing this monitoring frequency, EPA considered specific aspects of the PEDA site, the discharge, the receiving water, and downstream segments. Factors increasing the risk of toxic effects include residual contamination of the site, proximity to an active CERCLA action, the lack of dilution in Silver Lake, commingling with urban area runoff, and the risk of recontamination. This discharge is different from the composite sample subject to toxicity testing in the prior NPDES Permit MA0003891. Factors mitigating the risk of toxic effects include prior remediation activities, lack of current industrial activity, and the treatment provided by the sediment forebays and the water quality basin.

PEDA states that EPA could have requested toxicity testing prior to issuing the draft permit; however, there is no legal or regulatory requirement that EPA request such testing prior to issuance of a draft permit. Additionally, EPA notes that since the draft permit was issued, PEDA has not sought to fill the data gap and has not provided data demonstrating a lack of need for additional WET testing at Outfall 001. Additionally, the practical effect and cost of this testing

[22] See Chapter 2; EPA/505/2-90-001: March 1991.
[23] See Chapter 3; EPA/505/2-90-001: March 1991.
[24] See Appendix E; EPA/505/2-90-001: March 1991.

prior to permit issuance or draft permit issuance is no different from the cost of the testing requirement in the Final Permit.

Finally, PEDA notes that the related GE permit does not require WET testing. However, this is, again, not a reason for removing the WET testing requirements in PEDA's permit, as explained above and in the Fact Sheet:

> When EPA reissued [the GE Permit] in 2008, it removed the requirement to conduct toxicity testing because the previous tests did not show reasonable potential for the composite discharge to violate water quality standards. However, the same cannot be said of Outfall 001, especially given the changes that have occurred on the PEDA site. Also, any toxicity present in the Outfall 001 discharge could have been diluted by the presence of other discharges in the composite sample.

Fact Sheet, p. 24.

(x) Regarding the applicability of EPA's MSGP

PEDA comments that EPA's draft permit is impermissibly inconsistent with EPA's MSGP in two respects: 1) requiring specific BMPs is inconsistent with the MSGP's BMP approach; and 2) the inclusion of numeric effluent limitations applicable to PEDA's discharge is at odds with the MSGP determination that numeric limits for stormwater are infeasible. At the outset, it is important to reiterate that PEDA's discharge is an industrial discharge, and comprises not only stormwater, but also groundwater. See Responses to Comments 2.B.IV; *see also* Fact Sheet, p. 24. As a result, PEDA is not covered by the MSGP and is, therefore, not bound by or subject to the MSGP's determinations and effluent limitations and permit conditions. However, EPA has found, as explained throughout this document, that because stormwater is discharged at Outfall 001, the MSGP is helpful and relevant to EPA's site-specific assessment of appropriate limits to satisfy the requirements set forth under sections 301 and 402 of the Clean Water Act.

The MSGP generally requires all facilities to implement technology-based pollution prevention measures in lieu of numeric limitations and to prepare a Stormwater Pollution Prevention Plan (SWPPP) documenting the implementation of these measures.[25] The general permit established a process whereby the operator of a facility evaluates potential pollutant sources at the site and selects and implements appropriate measures designed to prevent or control the discharge of pollutants in stormwater runoff.[26] This Final Permit contains BMPs for stormwater runoff at the PEDA property. In addition to BMPs, the Final Permit also requires the Permittee to develop, implement, and maintain a SWPPP for stormwater discharges associated with the site. EPA agrees that while the BMPs

[25] 57 Fed. Reg. 41,236, 41,264 (September 9, 1992).
[26] *Id.* at 41242.

that are required to be included in the SWPPP need not be, they could be more consistent with EPA's MSGP. Therefore, to clarify components of the MSGP that EPA has applied to PEDA's discharge, EPA has revised the SWPPP provisions that the Permittee must meet in the Final Permit to be more consistent with EPA's 2021 MSGP. Specifically, the SWPPP requirements in Part I.C.1 of the Final Permit are based on Part 6 of EPA's 2021 MSGP, and include:

- Stormwater pollution prevention team;
- Site description;
- Drainage area site map;
- Summary of potential pollutant sources;
- Description of all stormwater control measures; and
- Schedules and procedures pertaining to implementation of stormwater control measures, inspections and assessments, and monitoring.

To the extent applicable to the Facility, EPA has also incorporated technology-based limitations and conditions from EPA's 2021 MSGP. See Response to Comment 2.A.V.c. Thus, EPA has taken steps to ensure that this individual permit is consistent with those requirements from the MSGP that are appropriate and relevant at this specific site.

With respect to PEDA's first concern, PEDA is incorrect that requiring *specific* BMPs runs counter to the MSGP. To the contrary, the MSGP explicitly requires site-specific BMPs under certain circumstances (*i.e.*, when dischargers fall under specific industrial sectors, they are subject to site-specific BMPs that reflect factors unique to their sector or sub-sector). *See, e.g.,* 2021 MSGP, Part 8. In any event, PEDA's discharge is not covered by the MSGP, as has been explained throughout this document.

Turning now to PEDA's second concern, EPA disagrees that the MSGP does not support numeric effluent limits for stormwater. First, the conclusion that EPA made in 2021 about whether numeric limitations were appropriate in the context of a *general* permit (*i.e.,* the MSGP) is not applicable to EPA Region 1's site-specific assessment of appropriate limitations to comply with technology standards and water quality standards for this *individual* permit. Regardless, the MSGP itself does not foreclose the possibility of including additional numeric limitations; EPA states in the MSGP that any discharge may be subject to additional limitations if necessary to meet water quality standards, which may include numeric limits. 2021 MSGP, Part. 2.2, p. 24-25. Nothing in the MSGP prohibits these necessary limits from being expressed as numeric. Again, however, PEDA's discharge is not covered by the MSGP.

Finally, while EPA agrees that the MSGP is the general permit used to permit the majority of discharges of stormwater associated with industrial activity in Region 1, EPA notes that Region 1's Remediation General Permit, not the MSGP, is the general permit used to permit the majority of discharges of pollutants in

groundwater in Region 1, and is also relevant to its assessment of necessary conditions and limitations in PEDA's individual permit.

Specifically, Region 1's Remediation General Permit (MAG91000 and NHG91000) provides coverage for the majority of facilities in Massachusetts and New Hampshire with discharges of contaminated groundwater and certain surface waters. Activities covered include, for example, collection structure dewatering/remediation, which refers to dewatering/remediation of structures utilized for collecting miscellaneous sources of water from contaminated or formerly contaminated sites or sources, including when contamination is naturally occurring or a result of the infiltration of contaminated groundwater or storm water. The Remediation General Permit utilizes numeric and non-numeric technology-based and water-quality-based effluent limitations, including BMPs, which is consistent with EPA's approach in the PEDA draft permit and this final permit.

Comment IV.b. Financial Considerations

The proposed permit would impose an onerous financial burden on PEDA, beyond PEDA's financial capacity. The proposed permit would require both capital investment and increased operating costs. PEDA has worked with its consultants to estimate the cost of permit compliance. Our preliminary cost estimates follow.

(i) Capital and Initial Costs

- Modified flow monitoring equipment, approximately $30,000[27]
- SWPPP modification, approximately $40,000. While we recognize that a comprehensive SWPPP is appropriate, EPA must recognize that preparation of the plan for a 52-acre former industrial property is a major undertaking for PEDA. Preparation of the plan will compete with other costly permit requirements for adequate funding. If the requirements in the draft permit sections C.1-C.7 also apply to the 91-acres of municipal stormwater that drains into the north forebay, then the cost would be much higher.
- Initial pipe cleaning and inspection (draft permit Section C.8.a), approximately $75,000. Our cost estimate is based on a review of the general scope with a remediation contractor. The effort is expected to require a 4 to 5 man crew for up to two weeks, rental of a 20,000 gallon fractionation tank and associated pumps and piping, off-site disposal of thousands of gallons of liquid generated by the effort, off-site disposal of 20 to 30 tons of potentially PCB contaminated solids and video inspection

[27] This expense may not be needed if EPA agrees with the PEDA request regarding flow rate monitoring in Section IV.a(i).

of thousands of feet of variable diameter piping systems. Note that this estimate is only for the piping system on the northern side of the PEDA property. If the requirement in draft permit section C.8.a.i also applies to the 91 acres in Pittsfield that drain to the north forebay but are not owned by PEDA, then the cost would be much higher.

(ii) Increased Compliance Costs (incremental cost increases compared to current permit)

- Increased compliance monitoring costs, approximately $30,000/year. Our estimate is based on a detailed review of the increased scope and frequency of monitoring required by the draft permit. This estimate presents only the increased cost to PEDA above current costs for sample collection and processing labor, laboratory costs, DMR preparation and data management. This estimate also assumes that rainfall information from the Pittsfield Airport will suffice for the precipitation reporting in draft permit Attachment A. If an on-site weather station is required, costs would be higher.

- Increased annual drainage system maintenance costs, approximately $20,000/year. The Draft permit requires semi-annual removal of sediments from the forebays, which is an increase from the current schedule.

  Increased periodic drainage system maintenance costs. Draft permit section C.8.b.ii requires removal of accumulated sediment from the water quality basin at least every five years, or when the capacity is more than 25% less than the design capacity. At this time we have not estimated either the cost to measure the basin capacity or to remove the accumulated sediment when needed. We expect, however, that both of these activities would involve substantial cost.

PEDA does not have taxing authority, but is rather funded through a combination of a fixed pool of funds that needs to last until the site is fully redeveloped, modest fees from tenants on portions of the property that are currently redeveloped, and funds that may be available through grants. As discussed earlier, these available funds are not currently adequate to support both PEDA's ongoing operational costs and the increased costs associated with the proposed conditions in the draft permit. PEDA's limited resources would not permit PEDA to pursue innovative and beneficial BMPs and low impact infrastructure development (described in detail in Section V below) and at the same time comply with the sampling and monitoring requirements of the proposed permit.

Response to Comment IV.b.

EPA notes PEDA's concerns about potential financial burdens associated with compliance with the draft permit. As a threshold matter, while EPA understands that new conditions or requirements in the final permit may require additional

costs, section 301(b)(1)(C) of the Clean Water Act requires that EPA ensure any discharge complies with state water quality standards. This statutory obligation must be met, despite the associated costs. However, when EPA establishes site-specific *technology-based* effluent limits applicable to a discharge, it considers numerous factors set forth in the regulations, including cost. To the extent that the final permit includes technology-based effluent limits, cost was appropriately considered and accounted for, as is described throughout this Response to Comments document.

With respect to some of the specific potential costs noted by the commenter, the Final Permit does not require changes to the flow monitoring equipment and reduces the frequency of WET testing relative to the Draft Permit. See Response to Comment 2.A.IV.a. Also, EPA notes that the pipeline cleaning and inspection requirement only applies to the portions of those drainage pipes PEDA identifies as contributing PCBs to Outfall 001. To the extent that PEDA decides to plug those pipes or otherwise disconnect them from the Outfall 001 drainage area, it can reduce or eliminate the need for and associated costs of pipeline cleaning and inspection.

Regarding rainfall measurements, it is sufficient for PEDA to report rainfall amounts from the Pittsfield Airport. Thus, EPA has removed the sample precipitation data form from the Final Permit.

Regarding monitoring costs, while the Final Permit requires increased monitoring relative to the 1992 Permit requirements, EPA has re-examined the monitoring requirements and reduced the monitoring frequency for most of the parameters on the DMR due to PEDA's feasibility and other concerns. See Response to Comment 2.A.IV.a above.

Regarding the SWPPP and maintenance of the water quality basin and forebays, the Final Permit only requires that PEDA operate those technologies to ensure their continued effectiveness. Additionally, the cost of BMPs included in the SWPPP has been considered as part of EPA's assessment of BAT limits for TSS. See Response to Comment 2.A.IV.a above. Finally, PEDA is only required to perform BMPs on its own property, not the upper 91 acres identified in the above comment.

For a discussion of the costs of continued use of PEDA's updated wet basin, see Response to Comment 2.A.IV.a above. Ultimately, EPA expects that continued operation of PEDA's current technology to meet the limits and conditions set forth in the final permit is minimal and economically feasible.

Ultimately, the final permit has been modified to reduce the frequency of WET testing, reduce monitoring frequency for numerous other parameters, and has also been modified to include BMPs, many of which were proposed by PEDA in its comments, in lieu of numeric limitations for PCBs. Given these modifications, the costs associated with compliance have decreased significantly.

Comment V. Best Management Practices provide Appropriate Protection

Comment V.a. Purpose and Use of BMPs

Although, for the reasons described earlier, PEDA does not agree that EPA has the authority to require reductions in the PCB content of stormwater discharges from the PEDA property, PEDA does share EPA's concern for environmental quality. PEDA is committed to implementing reasonable measures to continue reducing the PCB content of discharges from the WSBP. The BMPs already implemented and the future BMP approach described herein is the foundation of those efforts.

Early consideration of future BMPs for the PEDA property has involved a tailored and substantially unconventional perspective, with the goal of addressing site-specific PCB loads in stormwater runoff and other regulatory concerns by incorporating unusual and creative solutions. While it is common for stormwater BMPs to focus on infiltration of water, in this case, the team recognizes the merit of going further to adopt approaches related to stormwater harvesting and beneficial reuse. Hence, a suite of measures has been considered which reflects state-of-the-art stormwater handling BMPs based on capture, storage, and re-use of water through many progressive green infrastructure practices, while minimizing the use of many common measures.

Response to Comment V.a.

EPA agrees that BMPs will be critical to meeting water quality standards. EPA appreciates the types of BMPs presented in the comment and has listed these among BMP approaches for PEDA to consider. The specific BMP requirements in the final permit are described further in Response to Comment 2.V.c. EPA has determined that non-numeric, water quality-based limits (e.g., BMPs) are sufficient to meet SWQSs for PCBs based on new information provided by commenters and additional updated analysis of the discharge.

Specifically, in the Fact Sheet accompanying the 2015 Draft Permit, EPA identified site-specific reasons for not relying on BMPs. Based on the comments received, EPA has assessed each of these and other concerns, and determined that the BMPs included in the Final permit alleviate the above-listed concerns, resolve any related issues, and successfully achieve compliance with Massachusetts surface water quality standards. Each is discussed in turn below.

1. PEDA has conducted work to characterize PCB sources contributing to Outfall 001 and has identified the Teens Complex as a major source of PCBs to Outfall 001.

2. PCB source identification has been incorporated into the BMP requirements of the final permit.

3. Where a specific source of PCB contamination has been or will be identified, the means to eliminate this source has been specified in the final permit through an integrated BMP approach.

4. The infiltration of contaminated groundwater directly to the water quality basin is addressed by BMPs pertaining to the water quality basin, in the event this source is identified as a significant source of pollutants.

5. BMPs specifically designed to minimize recontamination of the sediment cleanup site in Silver Lake have been included in the final permit.

For all of the above reasons, EPA has determined that the site-specific BMPs included in the Final Permit ensure compliance with the Massachusetts surface water quality standards for PCBs, and therefore, satisfy the requirements of the Clean Water Act.

The BMP approach included in the Final Permit is described fully in Response to Comment 2.A.V.c, below.

Comment V.b. Benefits of BMP Approach

Green infrastructure has been supported by EPA, as described in the April 2011 memorandum from Acting Assistant Administrator Nancy Stoner to EPA Regional Administrators (attached as Exhibit H). Recognizing that green infrastructure offers many advantages in terms of sustainability and community livability, climate change mitigation and adaptation, and practical as well as affordable solutions, the memo emphasizes EPA's current preference for rainwater infiltration, evapotranspiration, and harvesting. Citing several examples, including in Massachusetts, where MS4 permit drafts and various NPDES enforcement actions had recently adopted approaches incorporating green infrastructure. The memo also mentions the cross-agency activity to promote wider understanding and recognition of when and how to best incorporate green infrastructure, while relying upon sound modeling and technical approaches. Green infrastructure has also been practiced in Massachusetts for over 20 years, with abundant examples of BMPs successfully deployed in a variety of settings, including urban brownfields redevelopment and Superfund sites (Exhibit I). BMP approaches are well suited to cold climates and can deliver consistent long-run performance. Additional benefits of BMP-based stormwater management approaches include:

- Improving watershed function beyond the site scale;
- Improving neighborhood landscape aesthetics through greenspace;
- Mitigating urban heat island effects through evapotranspiration and cooling;
- Creating, improving, or protecting terrestrial and aquatic habitat;
- Naturally capturing and storing carbon from the atmosphere;
- Providing flood resilience in the face of peak rainfall trends, and;
- Incorporating native plant species, and
- Offering some benefits to urban air quality (e.g., particulates and ozone).

The specific BMPs which have thus far been identified for consideration on the PEDA property build upon the many lessons learned throughout the history of use outlined above. However they also tackle the additional site-specific and context-sensitive issues unique to the contaminants of concern and the complex decades-long regulatory processes which apply to the property. The main purpose of the BMPs is to reduce runoff through source control. By reducing volumes and rates of stormwater flows, PEDA seeks to develop a stormwater management solution aligned with EPA's regulatory goals and general community interests. A cornerstone principle to achieve this objective is the interception of precipitation in order to store, reuse, evaporate, and convey it offsite free of PCB exposure. Infiltration is generally desirable for recharge of groundwater and maintenance of stream base flows, especially in urban areas deprived of natural levels of infiltration. However, care must be taken to balance risk and uncertainty stemming from PCB contaminated site conditions when pursuing overall watershed health and functionality.

Response to Comment V.b

EPA agrees with the benefits of BMP-based stormwater management approaches described above. While source control is a general non-numeric limitation in this permit based on requirements in EPA's MSGP (including designing good housekeeping measures and erosion and sediment controls), BMPs must also address other aspects of the discharge, such as runoff management practices to reduce stormwater runoff and evaluating and eliminating non-stormwater discharges.

To this end, EPA has included green infrastructure among the BMPs PEDA may incorporate into the control of stormwater and groundwater discharges. EPA agrees that such BMPs must be undertaken with care given the PCB-contaminated site conditions. As a result, green infrastructure BMPs are at PEDA's discretion, given the risks associated with disturbing contaminated environmental media. A discussion of the specific BMP requirements in the final permit are described in Response to Comment 2.A.V.c, below.

Comment V.c. Technical Support for BMPs

(i) Conceptual Plans for Proposed BMPs

Various BMPs are under consideration for inclusion in a conceptual plan for the PEDA property. Some BMPs are practical to consider prior to and/or separate from site redevelopment actions, whereas others must be deployed in an integrated manner with future site redevelopment actions, and would depend on compatible design and operations and maintenance preferences. Some further BMPs could potentially be identified and included in a conceptual master plan, yet their implementation could be conducted later, either as parcels are redeveloped, or as additional needs or limitations become evident in the future. The current list of BMPs is in draft form, and continues to be expanded, reviewed, and refined. Alternative combinations and arrangements of BMPs will continue to be examined in order to develop a recommended Conceptual Plan,

and eventually a complete Master Plan. Categories for potential conceptual BMPs are as follows:

BMPs Suited for Early Implementation

- Diversion of municipal storm water flows to Pittsfield's separate MS4 permitted system, avoiding regulatory issues associated with terms of the PEDA individual discharge permit;
- Incorporation of green infrastructure measures within areas such as streetscapes, vacant lots, riparian corridors;
- Installation of sensor controlled valves to allow in-pipe storage of collected storm water volumes;
- Deployment of innovative passive remediation measures (potentially targeting PCBs, nutrients, metals, and other contaminants identified) within storm water pipes and/or water quality basin;
- Carefully targeted infiltration;
- Targeted cleaning of the older piping systems in the northern sections of the PEDA property.

BMPs Requiring Implementation Integrated with Future Redevelopment Actions

- Green roof systems on buildings;
- Cisterns for storing runoff from buildings and paved areas;
- Reuse of runoff for irrigation, cooling towers, toilet flushing, truck washing, and other operational needs that may exist;
- Relining, reconditioning, replacement, and/or other modification of existing storm water pipe network within PEDA property, as may better suit spatial layout and economic priorities of future site occupants.

BMPs Suitable for Inclusion on an As-Needed Basis Dependent on Future Development Actions and Ongoing Monitoring and Assessment

- Storage capacity enhancement of water quality basin through remotely controlled discharge valves;
- Beneficial reuse of water quality basin stored volume for irrigation and other purposes as above;
- Bioswales and biobasins coordinated with newly constructed buildings and paved areas;
- Porous paving for parking, paths, and other light-duty surfaces.

Response to Comment V.c.

EPA thanks PEDA for the thoughtful BMP framework submitted in this comment. EPA agrees that BMPs, including the types described in the comment, will ensure compliance with water quality standards.

As previously described, BMPs may be expressly incorporated into a permit on a case-by-case basis under specific circumstances, including where it is determined that they are infeasible or necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA. *See* 40 CFR § 122.44(k). Specifically, EPA has determined that numeric PCB limits would be infeasible, and the BMP approach outlined in this and other responses will ensure compliance with Massachusetts SWQSs for PCBs and section 301 of the CWA. Therefore, a numeric WQBEL is no longer included in the Final Permit. *See* Response to Comment 2.A.IV.a above.

The Final Permit continues to require the selection, design, implementation, and maintenance of control measures for stormwater associated with site activities in the Final Permit. However, as described elsewhere in this document, EPA agrees that several of these requirements can be made more consistent with EPA's MSGP and the EPA Region 1 RGP. Given that the discharge consists of stormwater associated with industrial activity and groundwater infiltration from a Superfund site, the Final Permit includes the general requirements (non-numeric limitations and conditions), including BMPs from EPA's MSGP and RGP as applicable, and as described below.

Non-numeric limitations in Part 2.1.2 of EPA's 2021 MSGP[28] as applicable to this site include:

- Minimize exposure of former industrial activity areas to stormwater discharges;
- Design good housekeeping measures to maintain areas that are potential sources of pollutants;
- Implement preventative maintenance programs to avoid leaks, spills, and other releases of pollutants to stormwater that is discharged to receiving waters;
- Implement spill prevention and response procedures to ensure effective response to spills and leaks if or when they occur;
- Design erosion and sediment controls to stabilize exposed areas and contain runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants;
- Utilize stormwater management practices to divert, infiltrate, reuse, contain, or otherwise reduce stormwater to minimize pollutants in the discharge;
- Enclose or cover storage piles for salt or materials containing chlorides that are used for snow and ice control;
- Conduct employee training to ensure personnel understand the requirements of this permit;
- Evaluate for the presence of non-stormwater discharges. Any non-stormwater discharges not explicitly authorized in the permit or covered by another NPDES permit must be eliminated; and
- Minimize dust generation and vehicle tracking of industrial materials.

[28] The 2021 MSGP is currently available at: https://www.epa.gov/npdes/stormwater-discharges-industrial-activities-epas-2021-msgp

Further, water quality-based effluent limitations in EPA's 2021 MSGP require that the discharge must be controlled as necessary to meet applicable water quality standards (i.e., your discharge must not cause or contribute to an exceedance of applicable water quality standards). EPA expects that compliance with the conditions in this permit will control discharges as necessary to meet applicable water quality standards. Thus, a similar narrative limitation was included in the Draft Permit and is retained in the Final Permit at Part I.A.2.

In addition, other relevant requirements in EPA's 2021 MSGP, which are applicable to all permittees, are included in the Final Permit as follows:

- Comply with the control measure requirements in Part 2.1 and 2.1.1 of the 2021 MSGP to identify pollutant sources, and select, design, install and maintain the pollution control technology necessary to meet the effluent limitations in the permit that ensure dilution is not used as a form of treatment;[29]
- Comply with the inspection requirements in Part 3.1 and 3.2 of the 2021 MSGP to conduct routine site inspections;
- Comply with the requirements in Part 5.1.1 through 5.1.4 of the 2021 MSGP if at any time the permittee becomes aware, or EPA determines, that the discharge exceeds any effluent limitation, or does not meet applicable water quality standards;[30]
- Comply with the SWPPP requirements in Part 6 of the 2021 MSGP.

Finally, EPA reviewed the general limitations in the 2017 RGP for applicability to the site because PEDA's discharge includes infiltration of groundwater from the Superfund site. Control measures in Part 2.5.2 of EPA's 2017 RGP[31] as applicable to this site include:

- Implement Quality Assurance/Quality Control to document monitoring requirements, sample collection procedures, sample analysis procedures,[32] a schedule for the review of sample results and data validation and reporting processes.

In addition to the general permit limitations described above, EPA has concluded, in agreement with PEDA, that additional site-specific BMP requirements for the control of PCBs in discharges from the site are necessary to meet Massachusetts SWQSs. Site evaluations to date indicate that substantial portion of the PCB load to the water

[29] *See* Part 2.5.2.d of the 2017 RGP for example technologies and additional resources.
[30] Where the MSGP refers to limitations, conditions or benchmarks, including the SWPPP, for the purposes of this permit, these shall refer to the limitations and conditions in this permit.
[31] The 2017 RGP is currently available at: https://www.epa.gov/npdes-permits/remediation-general-permit-rgp-massachusetts-new-hampshire.
[32] Sample analysis must comply with the *National Pollutant Discharge Elimination System (NPDES): Use of Sufficiently Sensitive Test Methods for Permit Applications and Reporting Rule. See* Fed. Reg. 49,001 (Aug. 19, 2014).

quality basin comes from the teens complex and up to 98% of the PCB mass loading to the water quality basin come from north of the railroad track (e.g., from the teens through the 40s complexes[33]). As a result, EPA maintains that the most critical BMPs to eliminating discharges of PCBs via Outfall 001 and ensuring compliance with SWQSs will be the elimination of discharges of PCBs from these areas to Outfall 001, as PEDA itself proposed in a letter to EPA dated October 2013. Further, since PCBs easily bind to sediment particles, the BMPs for PCB removal are correlated with sediment removal BMPs (*i.e.*, those installed for TSS reduction). EPA expects that the PCB load can be treatable with a combination of storm drain/line cleaning, targeted street cleaning, bioretention facilities (sedimentation, specialized filters, and soil mixes). The site-specific BMPs included in the final permit combine a general, yet flexible approach site-wide, with specific BMP requirements in these two primary source areas (the teens through the 40s complexes).

Specifically, the final permit requires the evaluation, selection, design, implementation, and maintenance of a BMP program that eliminates discharges of PCBs through an iterative approach over the permit term, which must include the following:

- Source identification
- Optimization of existing infrastructure
- Minimization with control measures
- Evaluation of future design standards
- Ongoing assessment

The Final Permit requires the Permittee to document these components in the SWPPP. The Final Permit also requires the Permittee to submit a report annually to EPA certifying that discharges comply with these permit requirements and summarizing activities conducted to achieve such compliance.

1. Source Identification

The final permit requires identification of the components of the conveyance system and tracing the components that contribute PCBs to the discharge. Specifically, the conveyance system must be accurately mapped and the sources of PCBs contributing to the Outfall 001 must be specifically identified. The following potential sources must be evaluated, at a minimum:

- Residual presence of PCBs in soils, and other surfaces exposed to stormwater;

[33] Sept 30, 2013 letter to D. Webster; November 27, 2013 letter to D. Webster; PEDA investigation summary in letters submitted by PEDA dated June 14, 2013, July 10, 2013, Sept 26, 2013, Sept 30, 2013, October 16, 2013, October 28, 2013, and Nov 18, 2013; PEDA's Sept 2013 Draft I, I, & M Stormwater management System Plan for North Side of the William Stanley Business Park and the Final Inspection, Monitoring And Maintenance Plan, Stormwater Management System, William Stanley Business Park Of The Berkshires, South Side Park, May 2013.

- Residual presence of PCBs in pipes, catch basins, and other conveyance system structures;
- Infiltration of groundwater into the conveyance system on PEDA property;
- Infiltration of groundwater directly into the water quality basin;
- PCBs in sediment in the forebays and water quality basin being re-suspended;
- Onflow from offsite that contributes to the Outfall 001 conveyance system; and
- Inflow from illicit connections to PEDA's conveyance system.

EPA notes that the permittee may rely on existing site characterization to the extent that it meets the identification requirements.

2. Optimization

The final permit requires evaluation, selection, design, implementation, and maintenance of abatement and removal activities for existing infrastructure as follows:

- Remove accumulated solids from the existing conveyance system, including, but not limited to: trunkline inlets/manholes, catch basins, sediment traps, sumps, which must include all of the 20s and 30s complex areas and Woodlawn Avenue adjacent to the 20s and 30s complex where owned or controlled by the Permittee, at a minimum;
- Remove accumulated solids from the existing forebays, and water quality basin;
- Complete line cleaning operations (e.g., jetting, vacuuming, removal, loading, storage, and/or transport), which must include the trunk line, manholes DMH 396 and DMH 27, and any remaining storm drain lines in the 40s to DMH 27[34];
- Conduct street sweeping at paved areas, which must include all of the 20s and 30s complex and Woodlawn Avenue adjacent to the 20s and 30s complex, at a minimum;
- Dispose of removed storm drain solids and liquids in accordance with applicable laws and regulations and document in the SWPPP;
- Enhance storage capacity of the water quality basin through upstream engineering controls, including, but not limited to: remotely controlled discharge valves, in-pipe and/or aboveground water storage, reuse systems, and passive remediation measures (e.g., infiltration through engineered media, targeted infiltration); [35]
- Enhance storage capacity of the existing water quality basin;
- Inspect and evaluating the effectiveness of the optimization measures taken through routine site inspections, referenced above, and evaluation, described below.

[34] Refer to Final Permit Attachment B: Site Map
[35] Groundwater infiltration may not be discharged to surface water via a direct and immediate connection.

These BMPs are consistent with those suggested by PEDA, those included in the Draft Permit, and those found in Part 9.10.7.2 of EPA's 2021 MSGP,[36] which specifies Additional Effluent Limits for Discharges to Certain Impaired Waters and Sediment Cleanup Sites applicable to discharges to a 303(d)-listed waterbody (Category 5), or a sediment cleanup site in certain parts of the U.S. either directly or indirectly through a stormwater drainage system. Given that the discharge is to a sediment cleanup site, and TSS is an indicator parameter used to control toxic pollutants that are readily transported by solids (i.e., PCBs), the Final Permit includes these BMPs for to address TSS as an indicator for PCBs in the Final Permit in addition to the numeric, technology-based effluent limitations applied to TSS described above. These requirements include specificity for the significant source areas at the site.

3. Minimization

The Final Permit requires the evaluation, selection, design, implementation, and maintenance of new control measures (i.e., BMPs) that eliminate or otherwise minimize the discharge of PCBs to the receiving water. Minimization must address source control and elimination of PCBs from soils, sediments, storm water and groundwater entering the conveyance system via inflow and infiltration, as follows:

- Disconnect the existing conveyance system identified as contributing PCBs to the discharge, including, at a minimum the current infrastructure from the Teens area through the 40s complex at the location where it combines with the City system that proceeds onto the Water Quality Basin and Outfall 001(e.g. to BMH 396), and must include: lines/trunkline, manholes, catch basins, sediment traps, and sumps; or
- Reline, recondition, replace or abandon in place existing conveyance system identified as contributing PCBs to the discharge, including, at a minimum the current infrastructure from the Teens area through the 40s complex at the location where it combines with the City system that proceeds onto the Water Quality Basin and Outfall 001(e.g. to BMH 396);
- If other modification is determined equivalent to elimination of PCB contributions (e.g., installation of active or passive treatment, diverting significant sources to sanitary sewer), notification must be provided to EPA for concurrence.
- Any future stormwater management infrastructure shall consist solely of new or slip-lined stormwater piping.

[36] EPA-821-R-04-014 is currently available at: https://www.epa.gov/eg/effluent-guidelines-plan-support-documents; The 2021 MSGP is currently available at: https://www.epa.gov/npdes/stormwater-discharges-industrial-activities-epas-2021-msgp. The 2017 RGP is currently available at: https://www.epa.gov/npdes-permits/remediation-general-permit-rgp-massachusetts-new-hampshire.

4. Design Standards

The Final Permit requires evaluation, selection, design, and implementation of design standards (e.g., procedures and protocols) that eliminate the discharge of PCBs during and following site redevelopment as follows:

- Establish a frequency for routine cleaning for the conveyance system, including, but not limited to: trunkline inlets/manholes, catch basins, sediment traps, sumps, no less than annually, and that will ensure that no component shall be more than 50 percent full;
- Implement a frequency for routine cleaning for the forebays, and water quality basin, no less than annually, and that ensures proper operation and that will ensure the average thickness of debris does not exceed 12 inches in the forebays and the calculated pool volume in the water quality basin is not reduced by more than 25% due to sediment accumulation;
- Establish a frequency for routine street sweeping, no less than twice per year
- If any redevelopment results in new pavement, new catch basins, or new sediment treatment systems in the teens or 40s complexes, implement the optimization measures specified above for the existing infrastructure.
- Utilize green infrastructure measures where practicable, such as streetscapes, vacant lots, riparian corridors, green roof systems, cisterns, bioswales and biobasins, and porous paving;
- Reuse runoff for irrigation, toilet flushing, and other site needs that may exist, including beneficial reuse of stored volumes; and
- Minimize the hydraulic gradient that draws groundwater into the system, where practicable.

5. Evaluation

The Final Permit requires ongoing evaluation. The Permittee must maintain an accurate site plan depicting all drainage features and connections to the conveyance system. In addition, routine sampling for PCBs must be conducted no less than annually to assess areas to prioritize BMPs and to evaluate the effectiveness of BMPs and design standards. Specifically, the permittee must conduct representative sampling during both wet weather and dry weather conditions to determine:

- Influent concentration of total PCBs and estimated total annual load into the north forebay.
- Influent concentration of total PCBs and estimated total annual load into the south forebay.
- Effluent concentration of total PCBs and estimated total annual load discharging from outfall 001.
- Concentration of total PCBs in Silver Lake at the outlet.

EPA notes that the Permittee may rely on existing routine characterization conducted by both PEDA and GE, to the extent that it meets the identification requirements. For

the purposes of this permit, samples analyzed using test methods that are not currently listed in 40 CFR Part 136 (i.e., EPA Method 8082), are acceptable for characterization. This exception does not apply to the test method specified for compliance monitoring in the Final Permit.

EPA also notes that PEDA also proposed BMPs pertaining to disconnecting the portion of the City of Pittsfield MS4 pipes from Outfall 001. PEDA is directed above to evaluate if drainage from offsite contributes PCBs to the discharge. If onflow from the offsite 91 acres is found to contribute, such as by straining the capacity of the North Forebay and allowing PCB-laden sediments transported from the teens area to resuspend and discharge to Silver Lake, including during major storm events, PEDA is expected to include this area in its optimization, minimization and evaluation processes. Whether to separate this flow from the rest of the PEDA drainage system is a matter to be decided between PEDA and the City of Pittsfield, provided that any solution complies with the City's MS4 Permit and PEDA's individual NPDES Permit. See Comment 3.F (Pittsfield explains that it does not intend to explore "transferring PEDA's permit to the City and/or disconnecting the portion of the City's stormwater system that discharges into the PEDA's water quality basin.").

The purpose of these requirements is to eliminate the discharge of PCBs to waters of the United States. Again, they have been selected on a case-by-case basis based on those appropriate for this specific facility. *See* CWA §§ 301(b)(1)(C), 304(e), 402(a)(1); 40 CFR § 122.44(k). These requirements will ensure that discharges from the Facility will meet Massachusetts SWQSs pursuant to CWA § 301(b)(1)(C) and 40 CFR § 122.44(d)(1). Unless otherwise stated, the Permittee may select, design, install, implement and maintain BMPs as the Permittee deems appropriate to meet the permit requirements. The selection, design, installation, implementation and maintenance of control measures must be in accordance with good engineering practices and manufacturer's specifications and must take future conditions into consideration.

Regarding the iterative process, please see Response to Comment 2.A.V.d., below.

Comment V.d. Evaluation of Proposed BMPs

(i) Proposed Evaluation Process

Having recognized site-specific issues which must inform and guide the stormwater management approach for the PEDA property, the development of future plans (envisioned to be a Conceptual Plan and a Master Plan) will proceed based on evaluation of how individual BMPs can best provide acceptable outcomes. Over time, including through future engagement with parties beyond PEDA, the practical combination of BMPs will be devised through similar evaluation. The proposed process for evaluating BMPs will include assessment of multiple variables including:

- Efficacy for managing water quality (e.g., PCBs, nutrients, hydrocarbons, heavy metals, and other known or likely pollutants[37]);
- Efficacy for managing water volume and rates (e.g., beneficial re-use, flood reduction, stream base flow maintenance);
- Habitat value, aesthetic character, community preferences, and other qualitative benefits;
- Cost of design, construction, operations and maintenance, and replacement;
- Willingness and ability of municipality and potentially interested future occupants and developers to fund and perform work;
- Documented performance under similar conditions;
- Innovative approaches worthy of expanded demonstration and monitoring;
- Alignment with regulatory mandates and/or preferences.

(ii) Potential Implementation Schedule

On pages 21 and 23 of the Draft Permit Fact Sheet, EPA invited comment on using a BMP-based approach to achieve the PCB effluent limits proposed in the Draft Permit. In that section of the Fact Sheet, EPA described details of a possible approach for developing a BMP-based approach. PEDA recognizes the merits of many of the specific BMP evaluation activities described on pages 21-23 of the Fact Sheet, but rather than offer specific comment on the details of the steps described by EPA, PEDA has in these comments stepped back to take a broader and fresh look at stormwater management alternatives. We present below a tentative schedule of activities developed from this fresh perspective. PEDA proposes that PEDA, EPA, and MassDEP, with participation of the City and other relevant parties, as appropriate, enter into discussions to blend the best elements of the approach laid out below and the approach described in the EPA Fact Sheet into a BMP implementation compliance schedule. Our expectation is that such a compliance schedule, developed to be completed within the term of the permit, will allow EPA and MassDEP to postpone implementing numerical water quality-based effluent limits for Outfall 001. We further expect that this approach will be successful and lead to the late conclusion that the discharge permitting for Outfall 001 can be based on a creative and tailored BMP approach consistent with the April 2011 Nancy Stoner memo rather than numerical water-quality based limits. PEDA looks forward to engaging EPA, MassDEP, the City and other relevant parties in constructive discussions to arrive a mutually agreeable plan.

The process that PEDA proposes will include the following tasks, in roughly sequential (and potentially iterative) order. PEDA is prepared to adopt the following general schedule, however, any schedule is completely dependent upon receipt of adequate funding, cooperation of the City and agreement of EPA and MassDEP. As such, this schedule is to be considered illustrative of the process, rather than a proposed actual

[37] Nutrients, hydrocarbons, and heavy metals are not currently known or expected pollutants associated with runoff from the WSBP. Future developments that include more vehicle traffic and parking, and various landscaping features, could, however introduce these potential pollutants in the future.

schedule. All durations in the plan below are stated in terms of elapsed time from the effective date of the permit.

- Prepare initial list of BMPs: within 3 months
- Commence sampling/testing to further characterize soil, water, and infrastructure existing conditions to inform BMP siting/design alternatives: within 6 months
- Evaluate likely BMP efficacy: within 8 months
- Identify potential siting for BMPs: within 9 months
- Characterize potential for sequential arrangement of BMPs (to establish multi-phase treatment trials for targeted pollutants): within 10 months
- Coordinate with identified stakeholders for feedback: within 12 months
- Refine conceptual BMP list: within 14 months
- Refine conceptual BMP siting: within 15 months
- Conduct risk-informed benefit cost assessment of conceptual BMP plan alternatives: within 16 months
- Assess conceptual BMP plan in light of informal sampling/testing described above: within 16 months
- Prepare draft recommended BMP conceptual master plan: within 18 months
- Coordinate again with stakeholders for feedback: within 20 months
- Finalize BMP Conceptual Master Plan within 22 months[38]
- Begin implementing elements of the BMP Conceptual Master Plan, with monitoring as appropriate
- Prepare annual reports as describe on page 23 of the Fact Sheet
- Prepare a summary BMP validation report to be submitted within 54 months.
- Refine and update BMP Master Plan in accordance with site development future activity 2017 and beyond
- Perform ongoing monitoring of storm water discharge 2015 and beyond

Response to Comment V.d.

EPA thanks PEDA for submitting a general schedule for BMP implementation in its comment. EPA agrees that an iterative process similar to the process described in the comment is appropriate.

Massachusetts regulations for schedules of compliance can be found at 314 CMR 3.11(10). Any schedule of compliance requires compliance "as soon as possible, but not later than the applicable statutory deadline under the CWA." Further, if a permit establishes a schedule of compliance which exceeds one year from the date of permit issuance, the schedule must include interim requirements and the dates for their achievement. *See* 40 CFR § 122.47(a). The Final Permit includes a

[38] This milestone is similar to the "PCB Loading and BMP Selection and Commitment Report" described on Fact Sheet, page 21, though the Conceptual Master Plan includes a more comprehensive evaluation of certain issues and hence requires more time to prepare.

compliance schedule of five years from the effective date of the final permit to meet the new BMP requirements included in the final permit. EPA determined that this compliance schedule is appropriate because the final permit BMP requirements may include physical modification of the existing infrastructure.

The final permit imposes the compliance schedule through an iterative process designed by PEDA within a framework of measurement goals and timeframes specified as follows in the final permit.

The following must be completed within 120 days of the permit effective date and no later than January 15th of each calendar year thereafter:

- Submit written notification to EPA of completion and certification of the SWPPP, attaching a complete copy of the SWPPP and certification.
- Submit a written proposal for the BMPs required in Part I.C.2.b. to EPA that includes the following:
    - Description of proposed BMPs for the calendar year, including technical specifications;
    - Description of the measurable goal(s) for each BMP, including a schedule, with milestones as prioritized based on source identification, for its implementation that do not exceed the expiration date of this permit, have a quantity or quality associated with its endpoint, and a measure of assessment associated with it;
    - Description of how these BMPs will achieve compliance with numeric limits in Part I.A.1, and non-numeric limits in Part I.C.2.a.; and
    - The person(s) or entity responsible for each BMP.

The following must be included in the SWPPP within one year of the permit effective date and updated annually thereafter:

- Documentation of the selection, design, implementation, and maintenance of control measures required in Part I.C.2.b.1. that includes a description of the BMPs implemented to date.
- Written procedures for the inspection requirements in Part I.C.2.b.2., including schedules and forms necessary to conduct routine site inspections; documentation of compliance with inspection requirements must be included.
- Written procedures for the corrective action requirements in Part I.C.2.b.3.; documentation of any corrective actions undertaken during the previous calendar year must be included.
- Written quality assurance/quality control requirements in Part I.C.2.b.4.; documentation of monitoring requirements, sample collection procedures, sample analysis procedures, a schedule for the review of sample results, and data validation and reporting processes must be included.
- Documentation of the selection, design, implementation, and maintenance of BMPs required in Part I.C.2.b.5. to minimize the discharge of nutrients, including nitrogen and phosphorus.

- Documentation of the selection, design, implementation, and maintenance of BMPs to eliminate discharges of PCBs. The documentation must include, at a minimum:
    - Documentation of the source identification requirements in Part I.C.2.c.1. completed to date.
    - Documentation of the optimization requirements in Part I.C.2.c.2. completed to date.
    - Documentation of the minimization requirements in Part I.C.2.c.3. completed to date and must include the components listed in Part I.C.3.a.(2), above.
    - Documentation of the design standards requirements (e.g., procedures and protocols) in Part I.C.2.c.4. completed to date.
    - Documentation of the evaluation requirements in Part I.C.2.c.5. completed to date.

The following information must be included in the SWPPP within five (5) years of the permit effective date and updated annually thereafter, in the event this permit is administratively continued following expiration:

- Description of the BMPs completed (or updated, in the event of expiration).
- Confirmation that these BMPs have achieved (or continue to achieve, in the event of expiration) compliance with numeric limits in Part I.A.1, and non-numeric limits in Part I.C.2.a.
- Description of requested SWPPP, BMP and/or Compliance Schedule considerations for permit reissuance.

Certain steps of the iterative process require notification to EPA. The final permit specifies that the Permittee submit such notifications to EPA in writing. EPA will notify the Permittee in writing of any deficiency within 30 days following receipt of notification to EPA.

B. Comments from General Electric Company, dated June 4, 2015

Comment I. Introduction and Summary

Comment I.a. Introduction

In 1999, the General Electric Company (GE), the U.S. Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection (MassDEP), and other parties entered into a comprehensive Consent Decree (CD), approved by a federal court in 2000, to address environmental conditions at the former GE plant site, Silver Lake, and the Housatonic River and environs. The CD established specific cleanup standards for polychlorinated biphenyls (PCBs) in soils and groundwater on the former GE plant site, and the parties fully understood that cleanup to those standards would allow residual levels of PCBs to remain in the soil where they would come into contact with stormwater, as well as in groundwater in the area. EPA and MassDEP determined that achievement of those cleanup standards is fully protective of human health and the

environment, and agreed that no further remedial work would be required – promises that were put into the CD in a series of binding covenants. GE subsequently transferred portions of its former plant site to the Pittsfield Economic Development Authority (PEDA). Prior to the transfer, GE completed everything required of it under the CD at those portions of the site, and EPA certified that the cleanup was complete and met all standards.

Now, in this proceeding, EPA in conjunction with MassDEP has proposed a stormwater discharge permit for PEDA that is premised on a revisionist determination – that the soil and groundwater cleanup standards are not protective of human health and the environment, because stormwater coming into contact with the soils can pick up trace levels of PCBs and groundwater might enter stormwater conveyances that discharge to Silver Lake. The proposed permit contradicts EPA's and MassDEP's clear pronouncement in the CD that the remediation is fully protective of human health and the environment, and would violate the covenants that are central to the agreement embodied in the CD.

Against this background, GE submits these comments on draft reissued National Pollutant Discharge Elimination System (NPDES) permit no. MA0040231 issued by EPA jointly with MassDEP in early April 2015 for public comment. This draft permit under the federal Clean Water Act (CWA) and the comparable state law would cover the discharge of stormwater by PEDA from a water quality basin on its property – part of the former GE plant site known as the 30s Complex – to Silver Lake in Pittsfield, Massachusetts through Outfall 001. The draft permit would impose an effluent limitation for PCBs of 0.000064 micrograms per liter (µg/L), based on EPA's health-based national ambient water quality criterion at the same level. However, recognizing that that limitation is several orders of magnitude below detection capabilities with current analytical methods, it would establish a PCB compliance level at the minimum level (ML) of analysis, based on the lowest level for reliable measurement of PCBs, which must be no higher than 0.022 µg/L.

EPA has not identified any known technology that would allow achievement of the proposed PCB effluent limitation of 0.000064 µg/L; and as noted above, it recognizes that that level cannot be reliably measured. At a minimum, to ensure compliance with the proposed permit, PEDA would need to construct a large-scale carbon-based water treatment plant and operate it continuously for an indefinite period. While EPA describes an alternative approach of using Best Management Practices (BMPs), instead of a numerical effluent limit, to address PCBs in stormwater, it has not proposed to allow PEDA to use that approach.

Response to Comment I.a.

> As a preliminary note, the CWA requires that any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," requires a NPDES permit issued under sections 307, 402, 318, and 405 of the Act. As set forth in 40 CFR § 122.2, the definition of pollutant specifically includes industrial, municipal, and agricultural wastes. EPA's issuance of this

Final Permit authorizes PEDA to discharge pollutants through Outfall 001, pursuant to the CWA and its regulations. As has been explained throughout this document, the final permit is not a *stormwater* permit and instead authorizes PEDA's discharge from Outfall 001, which includes both stormwater from the PEDA property and significant material remaining from former industrial activity (i.e., groundwater).

As discussed in more detail throughout this document, this Permit and the conditions and limitations included within do not conflict with or violate the Consent Decree entered into by GE, MassDEP, EPA, and the City of Pittsfield, or the Covenants included in the Decree and later extended to PEDA. See Responses to Comments 2.A.III.a and 2.A.III.b.

Importantly, much of GE's concern is focused on the numeric PCB limitations included in the 2015 Draft Permit. EPA has determined that a BMP approach is appropriate, and has removed the numeric PCB requirements from the Final Permit. See Responses to Comments 2.A.V.a through d and Section I.C. of the Final Permit (discussion of BMPs) and Response to Comment 2.A.IV.a (PCB detection level).

Comment I.b. Summary

This draft permit conflicts with the comprehensive agreement that was reached by EPA, MassDEP, GE, PEDA, and others in 1999 for cleanup of the former GE plant site in Pittsfield (which now contains the PEDA property) and adjacent areas, including Silver Lake. That agreement was embodied in the CD for the GE-Pittsfield/Housatonic River Site (the Site), which was entered into pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA) and was approved by the federal district court in 2000.

The CD established a set of cleanup performance standards for soil and groundwater, as well as for Silver Lake, and required the implementation of a series of cleanup actions to achieve those standards. Those standards did not require the removal of all PCBs from the areas addressed, but allow specified levels of PCBs to remain in both soil and groundwater, which could thus be discharged to Silver Lake. Nevertheless, the parties determined, and EPA and MassDEP explicitly stated in the CD, that achievement of those standards would be fully protective of human health and the environment. Moreover, both EPA and MassDEP agreed in the CD that, if the cleanup actions attained those standards, those Agencies would not require GE to conduct additional actions to address the residual PCB levels, unless the Agencies showed that there was new information demonstrating that the cleanup was no longer protective. EPA later extended that same agreement to PEDA in a prospective purchaser agreement (PPA).

All applicable cleanup performance standards under the CD have been achieved in the PEDA areas at the former GE plant site, as well as in Silver Lake. The PCB levels in PEDA's stormwater discharge are what would be expected given the residual PCB levels in the soils and groundwater that are allowed by the CD standards. However, EPA is now

attempting, through the draft NPDES permit, to circumvent its prior determination and agreement by requiring PEDA to perform additional actions to address the very same PCB levels that it previously determined were protective. In other words, it is attempting to use the NPDES process under the CWA to change the rules that it previously agreed to.

EPA claims that it has no choice but to issue the NPDES permit with the specified effluent limitations. That is not the case. EPA previously agreed that, if the CD performance standards were met, it would not use the CWA to require additional actions to address the residual PCB levels allowed by those standards. Moreover, under the CWA, there are at least three different administrative mechanisms available to EPA to issue the permit without violating its prior agreement. First, EPA could conduct a use attainability analysis to "right-grade" the water quality standards for Silver Lake, consistent with the determinations that EPA has already made in the CD. Second, EPA could grant PEDA a variance from the currently applicable water quality standards, subject to periodic review and revision. Third, EPA could impose non-numerical water quality-based effluent limitations in the form of BMPs in lieu of the currently proposed numerical limits, again subject to periodic review and revision. Each of these mechanisms is allowable under the CWA and each provides EPA with the "choice" that it claims not to have. [39]

Response to Comment I.b.

> GE provides an overview of its specific comments on the Draft Permit. Because each of the issues identified is fleshed out in greater detail in the comments that follow, EPA will not address these issues here and will instead respond to each of the specific comments.
>
> However, as a preliminary note, EPA disagrees with GE's characterizations of the purpose, intentions, and conclusions underlying the Consent Decree, but they are in any case irrelevant from the standpoint of EPA's authorization, and indeed obligation, to issue an NPDES permit that is sufficiently stringent to meet the requirements of the Act. EPA made no "promises" that it would not implement the Clean Water Act and its regulations, nor did it ever claim that completion of CERCLA and/or RCRA remedial/corrective actions barred future NPDES program implementation. See Responses to Comments 2.I, 2.III.a, and 2.III.b.

Comment II. Conflict with Consent Decree and Agreement with PEDA

EPA's and MassDEP's issuance of the draft permit to PEDA in its current form would conflict with the CD for the Site, to which EPA, MassDEP, GE, and PEDA are all parties, as well as with the separate agreement between EPA and PEDA extending the CD covenants to PEDA. As such, it would be unlawful.

[39] In addition, as discussed in Section IV of these comments, GE questions whether PEDA is subject to the NPDES permit program at all given that its current operations do not fall into any of the categories of activities specified in EPA regulations as requiring a stormwater permit.

In its Fact Sheet for the draft PEDA permit (p. 6), EPA argued against this position, broadly stating that the NPDES program under the CWA, which governs the discharge of pollutants into surface waters, "serves a different statutory purpose from CERCLA and RCRA cleanup programs," which govern the cleanup of contaminants that have already been released or for which there is a threat of release. Thus, EPA asserted that "[n]othing in [the CD] limits EPA's authority to issue an NPDES permit consistent with the CWA or to impose limitations on discharges authorized by the permit" (id.). As shown below, this argument is plainly incorrect.

Response to Comment II.

> GE states that EPA does not have authority to issue the 2015 Draft Permit because conditions and limitations included within conflict with the Consent Decree. This assessment is incorrect for the numerous reasons outlined in EPA's detailed responses to Comments 2.I, 2.III.a, and 2.III.b.

Comment II.a. The Draft Permit Conflicts with the Consent Decree

The CD represents a comprehensive agreement among the parties to address PCBs and other contaminants present at the Site, including releases to surface waters at the Site, and contains a determination, approved by the federal district court, that the actions required to do so will protect human health and the environment. Based on an understanding of the conditions at the Site, including discharges to surface waters, the CD specified a set of Performance Standards for soil, sediment, and groundwater and required the implementation of a series of response actions to achieve those Performance Standards. Those response actions included Removal Actions for the PEDA areas (which include the former 30s, 20s, and 40s Complexes and the western portion of East Street Area 2-North) and the Silver Lake Area (including the Lake itself). (See map provided as Figure 2-1 to Statement of Work for Removal Actions Outside the River [SOW; Appendix E to CD].) (The relevant provisions of the CD and the SOW cited herein are included in Exhibit A.)

Response to Comment II.a.

> See Response to Comment 2.A.III.a above for background and discussion of the interactions between the Consent Decree and CWA NPDES program.
>
> Responses to Comments 2.B.II.a.1 to 2.B.II.a.4 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 II.a.1. The Agencies' protectiveness determination

Paragraph 8.b of the CD contains a determination by EPA and MassDEP that the Removal Actions under the CD, once completed (including achievement of the Performance Standards), "are protective of human health and the environment with respect to the areas addressed by those Removal Actions," and that, "[e]xcept as

expressly provided in [the CD], no further response actions for the areas addressed by such Removal Actions are necessary to protect human health and the environment." (The exception mentioned in this provision refers to the covenant "reopener" provisions, described in Section II.B.1 below, allowing EPA to require further response actions if there is new information or conditions indicating that a response action under the CD is no longer protective of human health or the environment (CD ¶¶ 162-163].)

Response to Comment II.a.1.

> The Removal Actions were conducted under the Consent Decree pursuant to CERCLA. As stated in EPA's 2015 Fact Sheet as well as in its Responses to Comments 2.A.I, 2.A.III.a and 2.A.III.b, CERCLA and the CWA serve two distinct purposes. That the Removal Actions, once completed, are deemed "protective of human health and the environment," and achieve the statutory goals defined by CERCLA does not mean that these actions achieve the goals of the CWA. More importantly, nothing in the Consent Decree precludes or limits EPA's implementation of the NPDES program. It is simply beyond the intention or authority of the parties to the Consent Decree to eviscerate the CWA mandates and statutory requirements at or near this site indefinitely.

Comment II.a.2. Completion of CD response actions and achievement of Performance Standards

The areas owned by PEDA from which the PCBs in its stormwater discharge originate have met the applicable CD requirements, including achievement of the Performance Standards. The soils in those areas, including the former 30s Complex, were evaluated under the applicable CD Performance Standards. Those evaluations demonstrated that, following remediation (where required), the same soils that contact the stormwater discharged to Silver Lake met the Performance Standards previously determined by EPA and MassDEP to be protective. In fact, EPA issued Certificates of Completion for the 30s Complex and the other PEDA areas, stating that those Removal Actions were completed and that the Performance Standards were met, before those areas were transferred to PEDA (copies included in Exhibit B).

The Performance Standards plainly authorize certain residual levels of PCBs to be left in the soil, which could thus be present in discharges to Silver Lake. For example, the PCB Performance Standard for surface soil in commercial/industrial areas, such as the PEDA areas, is an average of 25 parts per million (ppm) (CD ¶ 25.a(iii); SOW at p. 26). It is clear, based on information that was available at the time the CD was executed, that that soil Performance Standard, which EPA and MassDEP agreed was fully protective, allows stormwater contacting such soil to have PCB concentrations far higher than the proposed NPDES effluent limitation of 0.000064 µg/L or the proposed compliance level of 0.022 µg/L. As an illustration, as shown in Exhibit C, based on the median concentration of total suspended solids (TSS) in urban runoff at commercial and mixed land-use sites (approximately 70 mg/L) as reported in a comprehensive EPA study conducted in 1979-1983, soils containing an average PCB concentration of 25 ppm would be expected to produce PCB concentrations of approximately 1.8 µg/L in stormwater.

In addition, the groundwater in the subject area, which EPA claims infiltrates into PEDA's stormwater collection systems and its water quality basin and thus (according to EPA) contributes to PCBs in the discharge from Outfall 001 (EPA Fact Sheet at p. 20), is subject to regulation under the CD as part of Groundwater Management Area (GMA) 1. The Performance Standard for that groundwater, insofar as it relates to discharges to surface water, is achievement of the Massachusetts Contingency Plan (MCP) Method 1 GW-3 groundwater standards (which have been developed to prevent adverse impacts on surface water) in perimeter monitoring wells (SOW at p. 82). Based on groundwater monitoring, all groundwater in this area has met the MCP Method 1 GW-3 standards for years,[40] and thus, under the CD standards, is not adversely affecting the surface water into which it discharges. Moreover, PEDA submitted its plans for its water quality basin to both EPA and MassDEP, and MassDEP approved those plans through conditional approval letters dated April 7, 2009 and September 3, 2009 (copies provided in Exhibit E).

The area that receives PEDA's stormwater discharge has likewise been remediated in accordance with the CD. Specifically, the Silver Lake Area Removal Action was completed in December 2013 and the Performance Standards have been met. A Final Completion Report for that Removal Action (reflecting comments from EPA) was submitted to EPA on May 20, 2015.

Since both the source area(s) and the receiving area for the PEDA discharge have met the applicable Performance Standards under the CD, they are covered by the CD determination in Paragraph 8.b that those areas are in a condition that is protective of human health and the environment (i.e., that the residual PCBs in those areas do not pose a danger to health or the environment), and that no further response actions are necessary to address those areas.

Response to Comment II.a.2.

> See Responses to Comments 2.A.III.a through 2.A.III.d, for discussion about the SOW, performance standards, and ARARs applicability.
>
> As for GE's mischaracterization of Paragraph 8.b, see Response to Comment 2.A.III.a above.
>
> Finally, with respect the MassDEP's conditional letters that GE identified in its comment, it is clear from the text of those letters that future NPDES permits were contemplated and determined necessary to address PEDA's discharges from the then-proposed water quality basin, including PCBs present in those discharges. These letters further demonstrate that an NPDES permit has been consistently deemed necessary, despite upgrades to PEDA's infrastructure, and that it is not made unnecessary or limited by the Consent Decree.

[40] See GE's Baseline Assessment Final Report and Long-Term Monitoring Program Proposal for Groundwater Management Area 1 (ARCADIS, July 2014), at pp.36-38 & Table 8 at pp. 1-3 & 6-7 (copies provided in Exhibit D).

Comment II.a.3. EPA's impermissible attempt to require additional response actions through NPDES permit

EPA's effort to distinguish the NPDES program from the CERCLA and RCRA cleanup programs on the ground that the former regulates discharges to surface waters while the latter addresses cleanup of contaminants misses the point. While the CD does not preclude EPA from issuing or re-issuing an NPDES permit to PEDA, it does reflect the determination by EPA and MassDEP that, if the CD response actions are implemented, no additional response actions would be required to address the existing contamination at the Site, even if imposed through another mechanism such as an NPDES permit.

At the time of execution of the CD, the parties were well aware of the various potential sources of the PCBs that could be discharged from upland areas to the receiving waters, including PCBs in soils, on other surfaces, in groundwater, and in stormwater collection and piping systems. The Agencies nevertheless determined that, if the Removal Actions prescribed by the CD to address soil, sediment, and groundwater were carried out in accordance with the CD and achieved the specified Performance Standards (which clearly contemplated the presence of residual PCBs), they would be protective of "the areas addressed by those Removal Actions," and that no additional response actions would be necessary for those "areas" (CD ¶ 8.b; emphases added). While the effluent limitations in an NPDES permit do not directly regulate soil, sediment, or groundwater contamination, compliance with those limitations in the draft PEDA permit would require additional response actions in areas addressed by the Removal Actions and directed to the same historical PCB contamination addressed by those Removal Actions.

There is no question that the actions that PEDA would need to take to meet the permit's effluent limitation on PCBs constitute response actions as defined in CERCLA. Under CERCLA, response actions include both removal actions and remedial actions (CERCLA § 101(25)). The statutory definition of remedial action expressly includes "onsite treatment" (CERCLA § 101(24)), such as the water treatment plant that would be necessary to ensure compliance with the proposed effluent limitation. Moreover, if PEDA were required to take other actions to meet that limitation, the purpose of such actions would be to "prevent or minimize the release" of PCBs to Silver Lake in excess of EPA's health-based national ambient water quality criterion, which would plainly fall within the definitions of remedial as well as removal actions.[41] Paragraph 8.b contains a determination that such additional response actions are not necessary in the Removal Action areas.

It is irrelevant to the current issue that the CD does not expressly preclude the need for an NPDES permit and even recognizes the existence of GE's then-current NPDES permit. The issue here relates to the substance of a new permit and what would be required to

[41] Removal actions include any "actions as may be necessary to prevent, minimize, or mitigate damage to the public health or welfare or to the environment, which may otherwise result from a release or threat of release" of a hazardous substance (CERCLA § 101(23)). Remedial actions mean actions, consistent with a permanent remedy, "to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health or welfare or the environment" (CERCLA § 101(24)).

comply with it. Where a new permit would require additional response actions to address an area where the CD Performance Standards have been met, that requirement cannot be reconciled with the Agencies' determination in the CD that no such requirements are necessary to protect health or the environment and that hence no such requirements would be imposed. The CD was meant to define the response actions that would be protective, and to prescribe the limited circumstances (reopeners) in which EPA or MassDEP might direct further response actions. The Agencies' use of an NPDES permit to require additional response actions would constitute an impermissible end run around the repose granted by the CD.[42]

EPA has indicated that it has no choice but to include such an effluent limitation in PEDA's reissued NPDES permit. The chief of the EPA Region 1 water permit branch has been quoted as saying: "What's in the permit are the limits and standards for safe levels for PCBs. . . . They are just handed to me. They are very stringent standards" (Berkshire Eagle, "Pittsfield Economic Development Authority wary of tough new standards for Silver Lake stormwater," April 28, 2015.) However, the CD already defines "safe levels for PCBs," and EPA's rationale does not justify inclusion of provisions in the permit that would require implementation of response actions that the Agency has previously agreed are not necessary to protect health or the environment. In fact, as discussed further in Section III below, EPA has other available options under the CWA – e.g., conducting a use attainability analysis for Silver Lake, granting a variance to PEDA, or reissuing an NPDES permit that relies on BMPs rather than numerical effluent limitations.

Response to Comment II.a.3.

> Again, EPA is not free to disregard the mandates of the Clean Water Act. Section 301 prohibits discharges of pollutants to a water of the United States, without authorization under Section 402 of the Act, pursuant to the NPDES program. Furthermore, Section 301(b)(1)(C) makes clear that any such permitted discharge must achieve compliance with state water quality standards. Thus, to the extent that the commenter suggests EPA has a "choice" to disregard these mandates and either not issue an NPDES permit at all for a prohibited discharge or to issue a permit that fails to comply with Massachusetts water quality standards, the commenter is incorrect.
>
> EPA does, however, have a "choice" about *how* to write a permit that complies with the CWA and its implementing regulations, and most importantly, ensures compliance with the Massachusetts surface water quality standards. In this case, EPA determined that the Final Permit would include BMPs to ensure compliance with the Massachusetts surface water quality standards rather than numeric limits,

[42] EPA's suggests in its Fact Sheet (p. 6) that the only way that a discharge to surface water may be authorized is through an NPDES permit under the CWA, and that thus "[n]othing in [the CD] limits EPA's authority . . . to impose limitations on discharges" through such a permit. This assertion ignores the fact that the CD authorizes residual levels of PCBs that result in stormwater containing PCB concentrations far higher than the proposed NPDES effluent limits.

which is consistent with one of the alternatives proposed by PEDA in its comments. See Response to Comment 2.V.a above.

To the extent that GE concludes that the proposed PCB limits applicable to PEDA's discharge constitute a response action or, more specifically, a "remedial action" under CERCLA, GE is mistaken. EPA's Draft Permit did not require specific remedial actions. Rather, the Draft Permit authorizes an otherwise unlawful discharge, so long as certain limits are achieved that ensure compliance with Massachusetts' water quality standards, as prescribed under the CWA. GE points to the CERCLA definition of remedial action, which reads:

> . . ."remedial action" means those actions consistent with permanent remedy taken instead of or in addition to removal actions in the event of a release or threatened release of a hazardous substance into the environment, to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health or welfare or the environment. The term includes, but is not limited to, . . . *onsite treatment* or incineration, provision of alternative water supplies, and any monitoring reasonably required to assure that such actions protect the public health and welfare and the environment.

42 U.S. C. § 9601(24) (emphasis added). This definition explicitly demonstrates that remedial action is confined to the goals and purpose underlying CERCLA, which is to " prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health or welfare or the environment." The CWA has a distinctly different goal, "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). While remedial action, in some circumstances, includes onsite treatment, this does not mean that *any onsite treatment* is remedial action. Under GE's reading of the definition, any onsite treatment that is conducted, including voluntarily undertaken treatment, treatment required pursuant to state law programs, or treatment implemented through other federal statutes (e.g., the Safe Drinking Water Act) would amount to CERCLA remedial action. This result is outside the scope of CERCLA's goals and objectives and is clearly not what Congress contemplated when enacting this statute. Moreover, if the Agency wanted CERCLA to establish the floor for NPDES permit requirements, it would have said so. *See* 40 CFR § 122.49 (omitting CERCLA from its list of other federal laws that apply to the issuance of NPDES permits).

Additionally, GE bases its interpretation of the above definition on an incorrect assessment of the purpose of the proposed numeric PCB limits. The PCB limits are included to ensure compliance with state water quality standards (*see* 33 U.S.C. § 1311(b)(1)(C)), not to "prevent or minimize release of hazardous substances." Finally, and perhaps most importantly, the Draft Permit did not mandate any treatment or specific manner by which PEDA must meet the

proposed PCB limits. In fact, it did not require "onsite treatment" at all. Instead, the Draft Permit simply required that, by whatever means the permittee chooses, a discharge would only be *authorized* under the CWA if such discharge met the proposed numeric PCB limits that EPA determined would satisfy Massachusetts surface water quality standards. *See NRDC v. EPA*, 808 F.3d 556, 565 (2d Cir. 2015) ("[A] water quality-based permit limit begins with the premise that a certain level of water quality will be maintained, come what may, and places upon the permittee the responsibility for realizing that goal." (citing *NRDC v. EPA*, 859 F.2d 156, 208 (D.C. Cir. 1988))). Thus, any argument that EPA's permit required remedial or removal action is facially incorrect, and nothing in the Draft Permit suggests otherwise.

Ultimately, EPA did not include numeric PCB limits in the final permit, so the question of whether the limits constitute remedial action is not relevant.

Comment II.a.4. Other Supporting CD Provisions

Other provisions of the CD and the accompanying SOW (Appendix E to CD) further support the conclusion that the CD parties intended that no additional response actions beyond those specified in the CD would be required at the Site to address contamination resulting from NPDES-permitted discharges or exceedances of the national ambient water quality criteria (which are not Performance Standards under the CD).

Response to Comment II.a.4.

GE broadly comments that other provisions of the CD and Statement of Work suggest that additional response actions to address discharges under the CWA are in some way precluded. EPA will respond to each of the specific comments presented by GE in support of this larger comment in its responses to the comments below. See also Response to Comment 2.A.III.b above.

Comment II.a.4.a. Silver Lake Performance Standard

The SOW contains a Performance Standard that specifically addresses discharges into Silver Lake. That Performance Standard requires GE to conduct periodic sampling of the cap that GE has installed across Silver Lake; and it provides that if that sampling indicates the deposition of PCBs on the surface of the cap, "GE shall evaluate, to the extent practical, whether such PCBs are attributable to **sources other than** erosion of surface runoff from the banks or currently known **discharges of PCBs into the lake from NPDES-permitted [or] other outfalls**" (SOW at p. 77; emphases added). If the surface PCBs cannot be attributed to such other sources on GE property (e.g., to the extent that the PCBs are attributable to NPDES-permitted outfalls), "no further response actions shall be required to address such deposition on the surface of the cap," except as otherwise required by the CD to address erosion or emergencies or by the CD covenant "reopeners" (id.).

This Performance Standard demonstrates the parties' recognition that NPDES-permitted discharges to Silver Lake would continue to contribute PCBs to the lake, and that if such discharges caused PCB deposition on the surface of the cap, no further response actions would be required to address them (except in circumstances not present here). While the draft NPDES permit does not specifically address the redeposition of PCBs on the surface of the Silver Lake cap, it would impose limitations on discharges to Silver Lake that would require PEDA to implement additional response actions on its property, as shown above. As an example, given this Performance Standard's specification that EPA cannot (unless it triggers the reopeners) use its CERCLA authority to compel response actions to address PCB discharges to the Lake that cause redeposition, it is clear that EPA could not achieve the same result under an NPDES permit. The same rationale applies to efforts to compel response actions to address other impacts in Silver Lake (e.g., exceedances of the national ambient water quality criteria), particularly when such impacts would be expected given the residual PCB levels allowed by the CD. Thus, this Performance Standard provides further evidence of the CD parties' intent that no additional response actions would be required to address contamination resulting from NPDES-permitted discharges.

Response to Comment II.a.4.a.

> GE cites to the Performance Standards applicable to the Silver Lake removal action to suggest that the Consent Decree intended to limit future NPDES-permitting. As explained above, in Response to Comment 2.A.III.b, GE's interpretation of the Performance Standards, particularly the post-removal standards, is incorrect.
>
> Additionally, nothing in this Final Permit constitutes a "response action," never mind a response action addressing redeposition of PCBs on the surface of the Silver Lake cap, which further demonstrates that the Performance Standard does not limit or preclude NPDES permitted discharges into Silver Lake. See Response to Comment 2.B.II.a.3.

Comment II.a.4.b. ARARs Table

The table included in the SOW specifying the applicable or relevant and appropriate requirements (ARARs) for the Removal Actions covered by the SOW identifies the federal and state ambient water quality criteria as ARARs, and provides that, "[i]f these criteria are not attained in surface waters at or adjacent to the Removal Action Areas, no further response actions to attain the criteria shall be required as part of these Removal Actions (beyond the actions described in the SOW), because EPA has determined that such further response actions are not practicable as part of these Removal Actions" (SOW Attachment B, Table 1 at p. 1). This provision reflects the parties' recognition that these water quality criteria may not be met in the surface waters at the Site (including Silver Lake), and their determination that no further response actions would be required

to attain those criteria.[43] Thus, this language is another reflection of the overall determination, embodied in CD Paragraph 8.b, that the CD Removal Actions and achievement of their Performance Standards are protective for the areas subject to them (regardless of whether they attain other criteria), and that no additional response actions would be required for those areas.

Response to Comment II.a.4.b.

See Response to Comment 2.A.III.b above.

GE's argument in the above comment fails for the following 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 Outfall 001 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 attempts to support its argument by reference to ARAR Table 1 (page 1),[44] 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). As stated in greater detail above, this language has no bearing on the conditions established by the NPDES permit, which implements CWA requirements that are "applicable" to point source discharges from the PEDA property. This quoted language simply governs the extent to which additional response actions as part of the Removal Actions would be required. See Response to Comment 2.A.III.b above.

Third, the ARARs tables further emphasize the scope of their applicability, namely that they only apply to the response actions at the site. As has been explained throughout this document, nothing included in the Final NPDES Permit

[43] The health-based national ambient water quality criterion listed in that table was the then-existing criterion of 0.00017 µg/L. The current national ambient water quality criterion of 0.000064 µg/L is even lower and thus even more unlikely to be attained. Indeed, EPA has continued to recognize that attainment of that criterion is not feasible in Massachusetts. In its draft modification of the Reissued RCRA Permit for the Rest of River portion of the Site, issued on May 30, 2014, EPA has proposed to waive the water quality criterion of 0.000064 µg/L in Massachusetts as an ARAR for the proposed remedy on the ground that achievement of this standard is "technically impracticable" (Draft Permit, Attachment C, at p. 1; Statement of Basis at p. 29; excerpts provided in Exhibit F).

[44] This Table can be found at https://semspub.epa.gov/work/01/38256.pdf (p. 131 of the .pdf document).

constitutes remedial, removal, or response action. See Responses to Comments 2.A.III.b, 2.B.II.a.3 and 2.B.II.b.2.

Comment II.b.1. [Issuance of the Draft Permit Would Violate the PPA Covenants] Description of covenants

In the CD, the United States covenanted not to sue or take administrative action against GE under numerous federal laws to require GE to implement or fund additional response actions or similar measures, beyond those required by the CD, to address waste materials at the Site, unless specified "reopener" conditions are met – i.e., that there is new information or conditions and EPA determines that such new information or conditions, together with other relevant information, indicate that a Removal Action or other response action under the CD is no longer protective of human health or the environment (CD ¶¶ 161-163). The listed federal-law provisions include Section 309 of the CWA, which is the source of EPA's authority to enforce the NPDES provisions of that statute, including the limitations in an NPDES permit.

EPA extended the same covenants to PEDA in a Prospective Purchaser Agreement (PPA), formally called "Agreement and Covenant Not To Sue," effective January 3, 2002 and amended on February 21, 2012 (copy provided in Exhibit G). The PPA noted that, because PEDA was acquiring properties at the same Site for which GE had received covenants, it was appropriate to provide PEDA with similar covenants (PPA ¶ 6). In the public notice soliciting comments on the proposed PPA, EPA stated that "[u]nder the Proposed Agreement, the United States grants a Covenant Not to Sue to the Purchaser under provisions of CERCLA, the Resource Conservation and Recovery Act, the Oil Pollution Act, the Clean Water Act, the Toxic Substances Control Act, and the Rivers and Harbors Act, with respect to existing contamination at the Site" (67 Fed. Reg. 3706-3707, Jan. 25, 2002; emphasis added).

The PPA provides that, so long as PEDA abides by certain post-remediation obligations, the United States "covenants not to sue or take any other civil or administrative action against [PEDA] for any and all civil liability for injunctive relief" with respect to "Existing Contamination" under a broad list of federal environmental laws, including Section 309 of the CWA (PPA ¶ 26), subject to certain reservations of rights (id. ¶ 27). "Existing Contamination" is defined to include any hazardous substances "present or existing on or under the Property" transferred to PEDA as of the effective date of the Agreement, as well as any such substances "presently at the Site that migrate onto or under or from the [PEDA] Property" after the effective date (id. ¶ 10(F)).[45]

Response to Comment II.b.1.

EPA disagrees with GE's selective interpretation of the Covenants Not to Sue included in the CD and the Agreement and Covenant Not to Sue entered into with PEDA ("PEDA Agreement"). As will be discussed in more detail in the next

[45] The February 2012 Amendment to the PPA extended the covenants to certain parcels along Silver Lake that PEDA planned to acquire (and has since acquired), but made no substantive changes to the covenants.

Response (Response to Comment 2.II.b.2), issuance of this Final NPDES Permit is not in violation of or otherwise inconsistent with the covenants extended to GE and PEDA.

To fully understand the covenants extended to PEDA, it is helpful to view the entirety of the language from the Agreement:

> 26. Subject to the Reservation of Rights in Section IX of this Agreement, upon the effective date of this Agreement, the United States . . .covenants not to sue or take any other civil or administrative action against Settling Respondent ***for any and all civil liability for injunctive relief or reimbursement of response costs*** pursuant to the following:
>
> > a. Sections 106 or 107(a) of CERCLA, Section 7003 of RCRA, Section 7 of the Toxic Substances Control Act ("TSCA"), and/or Section 504 of the Clean Water Act with respect to the Existing Contamination; and
> >
> > b. Sections 1002, 1005, 1006, 1009, 1015 of the Oil Pollution Act, Section 113(f) of CERCLA, Sections 3004(u) and (v) and 3008 of RCRA, Section 17 of TSCA, Sections 309, 311, and 404 of the Clean Water Act, and/or Section 10 of the Rivers and Harbors Act with respect to Existing Contamination. The United States' covenant set forth in this Paragraph 26.b with respect to such statutory provisions does not apply to any action or claim ***other than an action or claim to compel Settling Respondent to implement, comply with, or fund response actions, correction actions or measures, or other similar judicial or administrative response-type injunctive relief, or for recovery, reimbursement, contribution or equitable share of response costs of Natural Resource Damages***, and specifically does not apply to any action or claim for civil penalties under these statutory provisions.

PEDA Agreement, ¶¶ 26.a-.b (emphasis added). The entire covenant is limited to civil liability for 1) injunctive relief, and 2) reimbursement of response costs. As will be discussed below, authorization of discharge through issuance of an NPDES Permit is neither classified as injunctive relief nor a reimbursement of CERCLA response costs. Additionally, the emphasized language in paragraph 26.b further demonstrates that the covenant only applies to claims/actions brought under the listed statutory sections (including CWA section 309) if such actions seek to compel CERCLA response actions, RCRA corrective actions, or those similar actions intended to satisfy the CERCLA and RCRA goals contemplated in the Consent Decree. See Response to Comment 2.B.II.b.2 below.

Comment II.b.2. Violation of Covenants

Based on available information, the PCB contamination that would cause exceedances of the PCB effluent limit in the draft PEDA permit and would thus have to be addressed to meet that limit is part of "Existing Contamination," because those PCBs were present on the PEDA property as of the effective date of the PPA. As a result, EPA is precluded by the covenants in the PPA from requiring PEDA to conduct additional response actions to address that contamination – which the draft permit would do.[46]

It is clear that the purpose of the covenants in both the CD and the PPA is to prevent EPA from using CERCLA or RCRA or any other federal statute to require GE or, in this case, PEDA to implement or fund additional response actions at the Site beyond those required by the CD. That is why the covenants contain a broad list of statutory provisions that EPA could potentially rely upon to issue such requirements.

For the CWA, the covenants list the various provisions that could give EPA the authority to require response actions. These include Section 309, which provides, inter alia, that whenever EPA finds that a person is in violation of various CWA sections, including Section 301 (prohibiting discharges without a permit), or of any condition or limitation of a permit issued under Section 402 (authorizing NPDES permits), it shall issue an order requiring such compliance or bring a civil action to compel such compliance (CWA § 309(a)(3)). Thus, in the event that PEDA did not conduct the necessary actions to meet the effluent limits in its NPDES permit, EPA would need to rely upon Section 309 to compel such compliance. Such an action would fall squarely within the covenants' prohibition on civil or administrative actions for injunctive relief. In short, there was no need to list Sections 301 and 402 separately; the reference to Section 309 (which provides for enforcement of those provisions) prohibits EPA from using CWA authorities, including the mechanism of an NPDES permit, to require further response actions.[47] Accordingly, the issuance of a permit that would compel the permittee to take such actions would likewise run afoul of the covenants.

Response to Comment II.b.2.

> The U.S. covenants not to sue in the Decree and in the PEDA Agreement do not limit implementation of the NPDES regulatory program as applied to GE or PEDA. First, the commenter's argument regarding enforcement is premature. EPA has not brought an action under CWA Section 309 to compel PEDA to implement additional response actions at the Site. If EPA ever sues or commences

[46] EPA's reservations of rights in the PPA exclude from the covenants PEDA's liability resulting from hazardous substance releases "caused or contributed to" by PEDA or from PEDA's "exacerbation" of Existing Contamination (PPA ¶ 27(b), (c)). However, EPA has not claimed in the draft NPDES Permit or Fact Sheet or elsewhere that either of these conditions is present here.

[47] The covenants follow a similar approach for RCRA, for example. They do not specifically cite the provision of RCRA that authorizes EPA to issue permits for treatment, storage, and disposal (TSD) facilities (RCRA § 3005); but they do list the provision that authorizes EPA to enforce the requirements of such a permit (RCRA § 3008) (see PPA ¶ 26.b, following CD ¶ 161.b). Thus, as with the CWA, the covenants would preclude EPA from using a RCRA TSD permit to require additional response actions at the Site.

an action against PEDA under Section 309 to compel additional work at the Site, this argument will be ripe for consideration.[48] Nothing in the Consent Decree or the PEDA Agreement prohibits the reissuance of an NPDES permit or constrains the conditions imposed in this reissued permit.

Second, EPA agrees with GE that the purpose of these covenants is to prevent EPA from initiating an enforcement or administrative action to compel PEDA to "implement or fund additional *response actions* at the Site beyond those required by the CD." As stated in Responses to Comments A.III.b and B.II.a.3 above, a "response action" has a specific definition under CERCLA, and the PEDA Agreement specifically notes that terms of the agreement "shall have the meaning assigned to them in CERCLA." PEDA Agreement, ¶ 10. Nothing about the issuance of an NPDES Permit or the conditions included within such permit falls within the definition of "response action." *See also* discussion below.

Third, the covenants not to sue in the Decree and in the PEDA Agreement reference a number of provisions of environmental statutes. See Decree, Paragraphs 161.a. and 161.b; PEDA Agreement, Paragraphs 26.a and 26.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 Final Permit's BMPs are far from a response action intended by 161.b.

The CWA Section 309 reference in Paragraph 161.b of the Consent Decree and in Paragraph 26.b of the PEDA Agreement 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 or PEDA to take or pay for other CERCLA response actions or RCRA corrective actions.

[48] To the extent that GE refers to the citations to RCRA in section 161.b (Consent Decree) and 26.b (PEDA Agreement), this claim is neither relevant nor ripe for review. First, an NPDES permit proceeding is not the appropriate venue to assess whether and how RCRA statutory provisions cited in the PEDA Agreement and Consent Decree covenants operate. And, even if it was the correct venue, these claims too would be premature.

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 Superfund 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 and Paragraph 26.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.

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 stormwater and groundwater 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.

The effluent limitations imposed by the NPDES permit 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.[49] 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

[49] 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."

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, as they did for the RCRA Permit, 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 III. Alternative Approaches Under The Clean Water Act

As described above, EPA has already determined that Silver Lake may never achieve the water quality criterion of 0.000064 µg/L, even if this value could be reliably measured. Yet the Agency's water program seems to think that it has no choice but to impose effluent limits based on this criterion. Under EPA's approach, PEDA will be forced to make a Hobson's choice between trying to meet limits that may not be achievable at all and/or would require prohibitively costly response actions that violate the very covenants that EPA provided, or else face the risk of chronic noncompliance with its NPDES permit. The water program says that its hands are tied, but this is not the case. There are at least three options under the CWA that could avoid a direct conflict with the CD.

First, EPA could conduct a use attainability analysis (UAA) to "right-grade" the water quality standards for Silver Lake, consistent with the determinations that EPA has already made in connection with the CD. Recognizing that legitimate factors might prevent a use from being met, EPA issued regulations in 1983 that identify six scenarios where use attainment is not feasible and, in turn, authorize EPA or the state to remove or adjust (i.e., "right-grade") the use and corresponding water quality criteria.[50] At least one of those scenarios would apply here. Scenario (3) applies to situations where Human-caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place. Much of the structured scientific assessment of the factors affecting use attainment under Scenario (3) has already been conducted under the CD and should be directly transferrable to the water program for purposes of a UAA.

We recognize that the UAA process may take a year or more to complete, and will involve close coordination between EPA and MassDEP. Despite the time involved, there is nothing preventing EPA from administratively continuing the existing PEDA permit (as it has done to date) until after the UAA is complete. Only then will EPA be in a position to establish permit limits that are both necessary and achievable.

Alternatively, EPA could grant PEDA a variance from the need to achieve the 0.000064 µg/L criterion. EPA has a long history of granting variances (and approving state-granted variances) using the same factors as for a UAA, but on a time-limited and source- or waterbody-specific basis. Indeed, EPA has just finalized a set of targeted revisions to its water quality standards regulation that will provide additional specificity on the

[50] See 48 Fed. Reg. 51400, 51407 (November 8, 1983) (codified at 40 CFR § 131.10(g)).

development and use of variances.[51] If EPA has any reservations about pursuing a permanent change in standards using a UAA, then a variance would serve as the next best option, giving PEDA temporary relief from the 0.000064 µg/L criterion while still requiring interim performance measures that reflect the highest attainable condition of Silver Lake. This approach would be consistent with EPA's prior determination in the CD to waive the comparable water quality criterion as an ARAR for the Removal Actions on the ground that actions to attain that criterion are not practicable. It would also be consistent with EPA's proposal to waive the 0.000064 µg/L criterion as an ARAR in Massachusetts for the proposed Rest of River remedy on the ground that that criterion is "technically impracticable" to achieve (see note 5 above).

Finally, EPA could require BMPs in lieu of numerical end-of-pipe effluent limits. While EPA has mapped out an "Alternative BMP Approach" in the Fact Sheet, it has not proposed that approach. However, that approach could be appropriate here. Due to the practical difficulties associated with regulating stormwater runoff (e.g., inherent variability and intermittent volume), EPA has for many years adhered to a permitting policy that relies on BMPs in lieu of numerical limits to protect water quality.[52] This policy is predicated on EPA's recognition that numerical limits on stormwater are not necessary or, in many cases, feasible. Indeed, EPA's regulations specifically authorize use of BMPs where numerical limits are infeasible (40 CFR § 122.44(k)(3)). All of EPA's model general permits (e.g., its Multi-Sector General Permit, Construction General Permit, and Municipal Separate Storm Sewer System [MS4] general permit) rely on BMPs in lieu of numerical limits, and most of EPA's individual stormwater permits do so as well. For the PEDA permit, BMPs present an established approach to water quality protection that can be implemented in an adaptive manner over the course of successive permit terms, with or without a variance.

Response to Comment III.

> As explained in Response to Comment 2.V.a, EPA has determined that a BMP approach is appropriate and capable of ensuring compliance with the

[51] EPA's final rule was submitted to the Office of Management and Budget on January 8, 2015, but has not yet been published in the Federal Register.

[52] EPA's permitting policy dates back to August 26, 1996, and has been updated in stormwater policy memos from November 22, 2002 and November 26, 2014. See Interim Permitting Policy for Water Quality-Based Limitations in Stormwater Permits, 61 Fed. Reg, 43761 (Aug. 26, 1996), as revised in 61 Fed. Reg. 57425 (Nov. 6, 1996), and extended to municipal separate storm sewer systems in EPA's Phase II stormwater rule, 64 Fed. Reg. 68753, 68737 (Dec. 8, 1999); EPA's November 22, 2002 Memorandum titled Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs; and EPA's November 26, 2014 Memorandum titled Revisions to the November 22, 2002 Memorandum "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs." These policy memos reinforce EPA's longstanding position that BMPs may be used in lieu of numerical limits in stormwater permits. The validity of the BMP approach has also been confirmed by case law. See, e.g., In re: Arizona Municipal Stormwater NPDES Permits for City of Tuscon, Pima County, City of Phoenix, City of Mesa, and City of Tempe, NPDES Appeal No. 97-3 (EAB 1998) (upholding decision not to impose numerical limits on grounds of infeasibility, in particular due to the unique nature of stormwater discharges) (subsequently appealed and decided on other grounds).

Massachusetts surface water quality standards for PCBs, and has, therefore, included BMPs in the Final Permit rather than numeric PCB limits. The Final Permit is consistent with both GE's request that EPA remove numeric PCB limits and the third option presented by GE as an alternative approach to water quality protection. For further discussion of EPA's determination that BMPs are appropriate non-numeric water quality based effluent limitations, see Responses to Comments 2.A.IV.a and 2.A.V.c.

EPA acknowledges that the commenter also suggested two other alternatives to numeric PCB limits: conduct a use attainability analysis (UAA) or grant a variance from the Massachusetts surface water quality standards. Due to the inclusion of BMPs in lieu of numeric limits, EPA need not address these two suggested alternatives. However, see Response to Comment 2.A.III.d for a brief discussion of the viability of these two options.

Comment IV. Applicability Of The NPDES Permit Program To PEDA

Apart from GE's substantive comments on and concerns with the PEDA NPDES permit as drafted, GE continues to question whether PEDA is subject to the NPDES permit program in the first instance. PEDA's current operations do not involve any of the eleven categories of industrial activity set forth in 40 CFR § 122.26(b)(14) that require authorization under an NPDES industrial stormwater permit. Nor is PEDA considered a municipal separate storm sewer system (MS4) subject to 40 CFR § 122.26(a)(3). Moreover, the EPA Regional Administrator has not separately designated the PEDA discharge for NPDES permit coverage under 40 CFR §§ 122.26(a)(1)(v) or 122.26(a)(9)(i)(C) or (D). Thus, PEDA's stormwater discharge appears to fall outside the scope of EPA's NPDES permit program.

Response to Comment IV.

EPA maintains that PEDA is subject to the NPDES permit program for its discharge into Silver Lake. The commenter's question as to whether PEDA's discharge is subject to the NPDES permitting program is premised on a flawed application of 40 CFR section 122.26. GE suggests that in order for the NPDES program requirements to apply to PEDA, PEDA must fall within one of the categories of exceptions set forth in section 122.26(a)(i)-(v). However, the commenter fails to acknowledge the threshold requirement set forth in section 122.26(a)(1), that only "discharges *composed entirely of storm water* shall not be required to obtain a NPDES permit" except under the exceptions identified by the commenter. 40 CFR § 122.26(a)(1) (emphasis added); *see also* 33 U.S.C. § 1342(p). As stated in the 2015 Fact Sheet, "PEDA is authorized [under this NPDES permit] to discharge stormwater and contaminated groundwater infiltration." Fact Sheet, p. 5; *see also id.* at 8 ("[Outfall 001] discharges stormwater, groundwater infiltration, and potable water (used for fire protection testing) from approximately 148 acres of drainage area to Silver Lake."). The discharge from Outfall 001 comprises stormwater, groundwater, and potable water, and therefore, is not "composed entirely of storm water." As a result,

section 122.26(a)(1) does not apply, and EPA need not demonstrate that PEDA satisfies one of the exceptions to demonstrate that this permit is appropriately issued under the NPDES permit program.

However, even if PEDA's discharge was composed solely of stormwater, the NPDES permit program would still apply because the PEDA property involves industrial activity as defined in 40 CFR § 122.26(14). As stated, "for the categories of industries identified in this section, [storm water discharge associated with industrial activity] includes, but is not limited to, storm water discharges from . . . areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water." *Id.* Because GE owned this property previously and "[u]ntil 1990, GE manufactured and serviced large electrical transformer equipment and military hardware on this site," industrial activity that clearly satisfies one of the categories of industrial activity listed in section 122.26(14) has taken place in the past. Fact Sheet, p. 10. Significant materials remain in the soil, including PCBs, that are exposed to storm water through infiltration into the soil and groundwater and/or commingling in the water quality basin. *Id.* at 10. In sum, due to past industrial use of the PEDA property, PEDA's stormwater would be subject to the NPDES permit program. Industrial facilities can include those that are federally, state, or municipally owned or operated that meet the description of the facilities listed in 40 CFR 122.26(b)(14). The term also includes those facilities designated under the provisions of 40 CFR 122.26(a)(1)(v). *See* 40 CFR 122.26(b)(14).

Comment V. Conclusion

For the reasons given above, GE believes that EPA and MassDEP should withdraw the current draft permit and take steps that are consistent with their agreements in the CD and PPA.

Response to Comment V.

See responses to GE's specific comments in Part 2.B. above.

3. Response to Spoken Comments provided at May 19th, 2015 Public Hearing

A. Comment by Corydon L. Thurston

Thank you, David, and, for the record, Corydon L. Thurston, Executive Director of the Pittsfield Economic Development Authority. I do have a written statement. It's available if anyone would like copies. I've given a copy to the Recording Secretary for the record, and I thank you for your time and attention.

I believe the Environmental Protection Agency is unfairly burdening the Pittsfield Economic Development Authority, or PEDA, and the City of Pittsfield by proposing a draft discharge permit with new and unnecessarily stringent limits to our storm water outfall. The regulatory action directly conflicts with the intent of the Definitive

Economic Development Agreement, or the DEDA, that created PEDA, and conflicts with the fundamental terms of the Consent Decree, a highly touted and one of a kind, public-private agreement for environmental cleanup. The Consent Decree amongst GE, EPA, MassDEP, the United States Attorney General's Office and the City of Pittsfield was unique in the nation and charted a course for remediation, redevelopment and reuse of a brownfield site that as destined for the U.S. Superfund list.

PEDA and the City have relied upon the terms of the Consent Decree and EPA's assurances as the basis for taking title to this property. PEDA's primary mission, in fact, was to be the recipient of the remediated properties for the purposes of redevelopment. The Consent Decree provides that the environmental remediation, when implemented and completed in accordance with the Consent Decree and the Statement of Work, are "protective of human health and the environment with respect to the areas addressed by those Removal Actions." The Removal Actions at the PEDA parcels have been completed, and the EPA has issued an approval and Certification of Completion for each parcel, confirming that the land has been remediated to the approved standards, as a prerequisite to the transfer of title. We have relied on these assurances to market the property, and we have warranted these assertions and these assurances in our lease agreements to tenants in the Park.

The proposed permit requirements seem to ignore these commitments and unfairly put PEDA in the position of being responsible for meeting new standards, standards that are greater than what was required by the EPA in the Consent Decree for both the soil and groundwater. PEDA did not create the problem and we didn't set the standards for remediation, so why are we being burdened with the impacts of these new rules?

The new requirements and the establishment of limitations imposed by the proposed storm water discharge permit will be next to impossible to attain without the construction of an estimated $6+ million treatment facility. In addition, the new and expanded testing and monitoring requirements are estimated to cost PEDA in excess of $50,000 a year, a three-fold increase from the current costs of compliance. This is a significant financial burden upon PEDA, and we do not believe it's justified from the data currently collected and on file. The resultant impacts from costs of compliance and the very real possibility of enforcement action over the very near term threaten to put the future development of the William Stanley Business Park at risk and undermine PEDA's ability to sustain itself.

PEDA is currently measuring PCBs to a reporting limit of 0.065 micrograms per liter, which is so tiny, it's equal to one square inch of toilet paper on a roll stretching from New York to London. We have not had detected PCBs at that level entering Silver Lake in the last 10 months of testing. The new draft permit calls for a discharge limit of PCBs of 0.064 nanograms per liter, or parts per trillion, although there is no lab in the United States that can test to that level. One part per trillion is analogous to one second in 32,000 years, just to give you an idea, or one ounce in 7.5 billion gallons of water. Very, very minute particles.

PEDA is currently operating under an old, GE industrial permit that you heard about that expired in 1997. The permit transferred to PEDA when the first parcels of land were

officially transferred to us in May of 2005. Subsequently, PEDA filed an application for a new permit as the new owner in November of 2005. In the 10 years since this application has been pending, PEDA has spent over $180,000 monitoring and complying with the transferred permit. We've also invested $3.5 million on the construction of a new retention basin, which was designed to a capacity that anticipated the full build-out of the William Stanley Business Park. The basin also consolidated three outfalls into one and provided a pretreatment facility for 91 acres of city storm water that is combined with that of PEDA's 26 acres from the northern part and the Tyler Street areas. In preparing the southern portion of the William Stanley Business Park for redevelopment, that's the south of the tracks, PEDA also relined the old storm water conduits and improved the water quality by ensuring that there would be no infiltration contamination from cracks or leaks in the old infrastructure. These were planned, best practice initiatives, not regulatory mandates, and all of these efforts received EPA approval. Throughout the period, we continued to comply with the expired GE permit and, to the best of my knowledge, there was never an indication of more stringent or more serious issues with the EPA or that they intended to do anything more than modest modifications to the existing permit.

Actually, things are much improved, and, therefore, the expectations were much improved. As an example of what indicated improvements, in 2009, EPA issued a letter to PEDA eliminating the requirement for a Part I.A.13 of the 1992 permit that required testing for a variety of metals and whole effluent toxicity, and I quote, “As part of the reissuance of the 1992 permit, EPA evaluated the past data submitted for these composite samples and determined that further sampling was not required.” We are unaware of any changes since that letter of 2009 to indicate the need to resume expensive testing, but unfortunately it's included in this new draft permit. This is one of many actions that EPA specifies PEDA should take, or must take, but provides not rational justification for demanding these actions. The approach seems punitive and ignores the benefits of the water quality basin and the improvements that PEDA has already put into place.

Why have we been allowed to continue on this path and move so far down the road without guidance on a permit that expired in 1997? Certainly from PEDA's perspective, and the City's, I might add, if we had known that the rules could change in the bottom of the ninth inning, we certainly wouldn't have taken ownership of the property.

While we understand that the performance standards under the Consent Decree may conflict with certain NPDES standards and that the protections provided under the Consent Decree and Covenant Not To Sue may conflict with certain aspects of NPDES regulatory mandates, EPA cannot impose requirements that conflict with the terms of the Consent Decree. PEDA is in compliance with the relevant performance standards of the Consent Decree and cannot be required to meet a higher standard.

As previously pledged and evidenced by our past performance and actions, PEDA remains willing to continue reasonable monitoring and data collection and work towards environmental system improvements and seek ways to find additional best practice objectives and creative infiltration solutions in conjunction with the City of Pittsfield to further improve the storm water quality into Silver Lake. We respectfully request,

however, that EPA delay issuance of any draft permit, or any permit for that matter, until the referenced legal and factual issues are resolved and a permitting path is clarified that recognizes this is no longer an active industrial site, it is owned by municipal entities that share the storm water facilities and acknowledges that the obligation to the Consent Decree in conjunction with current conditions of the property and the infrastructure improvements that have been made to date.

And I thank you for your time and patience. A little more than five minutes.

Response to Comment A.

Several concerns identified by the commenter relate to the Consent Decree discussed throughout this document. As explained in several of EPA's responses, the Consent Decree does not conflict with or limit EPA's ability to issue this Final Permit. *See, e.g*., Responses to Comments 2.A.III.b and 2.B.III.a.

As to the commenter's assertions that the permit is unfair, EPA notes that the permit now includes BMPs to ensure compliance with the Massachusetts surface water quality standards related to PCBs, rather than numeric limits, and further that this was expressly requested by PEDA.

The commenter complains that PEDA should not be required to meet new standards because PEDA did not "create the problem." However, applicability of the Clean Water Act is not based on whether a particular individual generated or is responsible for the contaminants or pollutants being discharged. Instead, the Clean Water Act simply prohibits any discharge of any pollutant unless authorized by an NPDES permit. According to the commenter, PEDA could only be subject to the Clean Water Act if it was responsible for the "problem," or PCBs, that are present in its stormwater discharges. This is in direct conflict with the Act. Prior actions or responsibility under CERCLA have no bearing on whether the Clean Water Act applies to a discharge.

The commenter asserts that compliance with the numeric limits included in the Draft Permit would be financially burdensome and unjustified. Because EPA is no longer including numeric limits (see Response to Comment 2.A.V.c.), this concern is no longer relevant. *See also* Response to Comment 2.A.IV.b for a discussion of financial implications.

Regarding the WET testing requirements, please see Response to Comment 2.A.IV.a.(iv).

Finally, the commenter argues that the Consent Decree and Covenant Not to Sue conflict with the NPDES permit and regulatory program, and requests that EPA delay issuance of the permit until these legal issues are resolved. Again, as set forth in Response to Comment 2.A.III.a. and throughout this document, there is no conflict between the Consent Decree and related Covenant Not to Sue and the

requirements under the Clean Water Act and implemented in the Final Permit. Any further delay in issuance of this Permit is, therefore, unwarranted.

B. Comment by Thelma Barzottini

I'm Thelma Barzottini. I've lived in Pittsfield, Massachusetts most all of my life. I've been involved in this situation with the PCBs and environmental. I belong to what they call the Citizens for PCB Removal and the Citizens Coordinating Council. I have sat at the table for years.

I really don't know what to say. I think the Consent Decree kind of put the kibosh to everything because, I think, at the time they didn't have enough people to put teeth into it, as they say, and of course I'll always blame the GE. I guess what I'm trying to say is that I know PEDA is really trying to do a very good job, and they've come up with circumstances that certainly weren't even thought about, and everything changes. Of course, I want to make the world safe for the people's health and what else, but I don't understand why it took so many years for all this to transpire. They weren't even given any warning that this was going to happen, and suddenly they're presented with it.

I know how finances go within organizations today. It just gets eaten up, and I really don't know what else to say. I just think they've done a good job. I know that they've tried to clean the property up. It'll always be, in my mind, contaminated, but I think it goes back to the GE and has a lot to do with the Consent Decree, so I guess I'll have to rest my case. And I thought that was a wonderful presentation that the gentleman gave from PEDA.

What I wanted to know, I guess, one of the things is I thought we'd be informed of, what the Mayor of our City has submitted because I see that the comments are going to be after this meeting tonight. I would have liked to have known what, you know, I think part of it might hinge upon what is going to be presented in that.

I guess that's it, so I thank you and I thank everybody for coming. I'm really sorry that there wasn't more people interested, whether they had other things to do, but I think this is quite an issue for this city. Thank you.

Response to Comment B.

EPA notes the commenter’s concerns related to the Consent Decree. However, the Consent Decree and its implications are not at issue here. Any suggestion that the Consent Decree should be modified or deserves additional review is not relevant for EPA’s issuance of PEDA’s Final Permit.

To the extent that the commenter states that PEDA and others were not given warning or notice of this permit proceeding, the commenter is mistaken. The draft permit was issued in 2015, and EPA provided notice and opportunity for PEDA and the public to comment and provide input. These comments are evidence of the robust public notice and comment process underlying this Final Permit.

Additionally, as demonstrated throughout this document and in comments from PEDA representatives below (see Comment 3.C), PEDA knowingly inherited its NPDES permitting obligation as part of transfer of the property from GE to PEDA, and was not otherwise unfairly surprised by its CWA obligations.

Finally, EPA notes commenter's opinions about the efforts to clean up the GE property.

C. Comment by Pamela Green

Thank you very much. My name is Pamela Green. I'm a member of the Board of the Pittsfield Economic Development Authority, and I don't want to repeat too much of what Mr. Thurston has already stated, but I do want to highlight a few points that are important to the other Board members.

As has been discussed, PEDA has been working under a 1988 permit that was originally issued to GE as an industrial discharge permit. The area that is served by the storm water system being regulated by this draft permit includes 91 acres of City property over which PEDA has absolutely no control or authority and 52 acres of PEDA property, which currently contains absolutely no industrial activity, unlike at the time the original permit was issued.

PEDA submitted an application for its own permit in 2005. In the intervening years while waiting for our own permit to be issued, PEDA has fully complied with the terms of the original permit, including all testing requirements. In addition to complying with the permit, PEDA has incurred great expense in remediating the site to reduce concentrations of various materials. Despite continued compliance with the existing permit, remediation of the site, the recent absence of detectable PCB levels and the lack of any industrial activity at the site, the EPA has decided to regulate our storm water outfall as an industrial one.

Ten years after the original application was submitted, the EPA has issued a draft permit for PEDA with requirements that are far more onerous and burdensome than under the previous industrial permit and that are also more stringent than as required of other industrial sites and by industrial permits. The testing requirements of the new permit obligate PEDA to test at levels that are so stringent that there is no lab in existence that can detect to said levels. This sets up PEDA for noncompliance from Day 1 of the permit. We've been led to believe we can get to those limits in any way we want to, but the problem is we can't get there if we can't even test to those limits at this point in time. It again sets us up for an unattainable goal, and the cost associated with trying to reach that unattainable goal would essentially triple our current cost and would eventually bring PEDA closer to running out of the very finite amount of money that we have at our disposal. We are not an entity that has an unlimited source of funds.

If we're obligated to comply with the parameters that are set forth in this permit, we will run out of money and we will fail to meet our mission of bringing economic development back to Pittsfield. These costs will severely hamper our ability to fulfill that purpose to

attract tenants to the Park. Up to this point we have relied upon the Consent Decree and upon, as has already been discussed, the parameters set forth in that Consent Decree as a condition of taking control of this property and attempting to redevelop it.

PEDA believes in compliance and in environmental responsibility, but we must be realistic in the methods that we implement to achieve the best possible result for our community. We urge the EPA to permit reasonable, best management practices in lieu of onerous, numeric limitations that are unattainable for PEDA and that would send us to a place that would not benefit the City of Pittsfield nor its citizens. Thank you.

Response to Comment C.

The commenter, on behalf of PEDA, the permittee, requests that EPA include BMPs in the permit rather than numeric limits for PCBs. EPA has determined, considering this and other comments, recent data, new information, and updated analyses, that a BMP approach is both reasonable and appropriate to ensure compliance with the Massachusetts SWQSs for PCBs. As a result, the Final Permit does not require compliance with numeric PCB limits, but instead requires that the permittee to comply with the BMPs set forth in Section I.C. of the Permit. EPA's decision to move forward with non-numeric limits for PEDA's discharge is supported by the CWA and the relevant regulations, as explained in Responses to Comments 2.A.IV.a and 2.A.V.c. above.

See Responses to Comments 2.A.V.a-d for a complete description of the BMPs included in the Final Permit and their implementation.

Finally, with respect to the commenter's suggestion that discharge from Outfall 001 is solely stormwater and does not originate from an industrial site, see Response to Comment 2.B.IV.

D. Comment by Valerie Andersen

Thank you. I'm Valerie Andersen. A N D E R S E N. I live in Pittsfield, Massachusetts. I'm a sitting member of the Citizens Coordinating Committee, which was set up by the Consent Decree for cleanup of the Housatonic River, and I represent the Housatonic Clean River Coalition in that capacity.

Before this public hearing, we had a very informative information session from members of the EPA, and one thing that struck me was the fact that the Consent Decree, which governs the cleanup of the Housatonic River and Silver Lake, did not mention or deal with this permit at all. It seems like it's a glaring hole that was in the Consent Decree, and it underscores the deficiencies of the Consent Decree.

General Electric, which polluted the PEDA property for many years, was allowed to pass off this property to PEDA, a quasi-government agency, knowing that this permit expired in 1997 and there has not been a permit since 1997. We have discussed this for many, many years at the Citizens Coordinating Committee, that the permit has been expired, and representatives from the EPA have confirmed for many years now that runoff from

the groundwater of the former GE site now owned by PEDA is trickling, or more than trickling, into the storm water pond next to the MountainOne site and then flowing into Silver Lake.

It seems just absurd that the EPA and GE would have spent millions of dollars cleaning up the Housatonic River so far to have more contaminants being seeped into the already cleaned up river through Silver Lake and this Outflow 001. Tonight we learned, or I learned, probably people knew it before, but that Outfall 001, which is the subject of the permit, was “forgotten” when GE had the foresight to obtain a permit for its three remaining outflows. Cynically you could say that General Electric, the polluter, when it passed off its property to PEDA, a government agency, wanted to wipe its hands and knew that there would even be an outflow where contaminated groundwater would still seep into the river that it paid to clean up.

Now when we're finally dealing with an expired permit, we're told that PEDA has no money to implement the provisions of the proposed permit, and it doesn't, it's a quasi-governmental agency. Since the Consent Decree did not deal with this permit at issue now, I would advocate that the EPA, one of the parties to the Consent Decree, be directed to amend the Consent Decree so that General Electric be held to account to stop the source of this continued pollution. Since the Consent Decree did not deal with this at all, it should go back to the Court and have the responsible party, General Electric, which still has a lot of funds, unlike PEDA, to find the source of the contamination and deal with it, I think. But if that's not possible, then I think it has to be up to PEDA and the City of Pittsfield to comply with the Clean Water Act and stop the continued contamination and get rid of the source of the pollution.

We did learn tonight that most of the pollution that is still going into Silver Lake out of 001 is from the subsurface groundwater from the old, General Electric facility. We learned tonight too that there have been some violations of the current permit, which is expired, with regard to oil, gas (sic) and other pollutants, suspended solids. So I think it's unfortunate that PEDA had to take over this property from General Electric, that it passed it off without remaining on the hook, but given the fact that river is still being contaminated, that there is a substantial source of pollution, including PCBs, that this permit should be implemented.

There are some, we learned tonight, more stringent requirements in the proposed permit, and there are some less stringent requirements in the new permit. So maybe some of the requirements can be tweaked to make it a little easier for PEDA to comply if they have to, but the spirit of the Clean Water Act should be enforced in the permit. But I must say that, really, General Electric, and not PEDA, should be the ones who should clean up and stop the source of the contamination because it was GE's pollution that is still seeping into the cleaned up Housatonic River. Thank you.

Response to Comment D.

The commenter correctly notes that the Consent Decree did not address this NPDES permit. As explained throughout this document, the Consent Decree was

entered into pursuant to CERCLA, which has different goals and requirements and is not intended to administer the NPDES program or the CWA.

However, as required by the CWA, any NPDES permitted discharge must meet state water quality standards. The conditions and limitations included in this Final Permit assure that Massachusetts surface water quality standards as well as relevant technology-standards will be met. In fact, consistent with the commenter's request that the permit be "tweaked," the Final Permit has been modified to include a BMP approach to addressing PCB discharges rather than the numeric PCB limits from the Draft Permit. This ensures the stringent Massachusetts surface water quality standards will be met, but provides more flexibility to PEDA in achieving those standards.

Thus, the Final Permit limitations and conditions ensure PEDA's discharge will neither violate Massachusetts SWQS nor result in recontamination of Silver Lake.

EPA notes the commenter's opinions that GE should be responsible for continued contamination. As stated in the transfer agreement between GE and PEDA, GE remains responsible for its remedial and response actions at the Superfund Site pursuant to CERCLA. *See* Definitive Economic Development Agreement (DEDA), Section IV, pp. 11-13.

E. Comment by Jane Winn

My name's Jane Winn. I'm Executive Director of Berkshire Environmental Action Team, or BEAT. I also live in Pittsfield. BEAT strongly supports the limits set by the draft NPDES permit. While Mr. Thurston has said that this places an unfair burden that's unnecessarily stringent, we disagree completely. We think that this stringency is absolutely necessary for protecting human and environmental health.

The limits are appropriate because testing keeps getting better and better, and we need a good, strong limit. As the testing gets better, we may be able to test down to that limit, and we need to know that human and environmental health are protected. When you talk about these great comparisons of how small amount of PCBs compared to huge amounts, you have to think about the drugs that we take to cure diseases are in those same levels. These very small amounts have effects on human and environmental health. It's important that we set good, stringent limits.

In our reading of the terms of the transfer of the property to PEDA, it appears to us to be very clear that GE retains responsibility for their pollution. We think GE should be paying for this, and we think it's clear in the terms of the transfer that GE should be retaining responsibility and should be paying and should have been paying. It doesn't matter who owns the property. The testing must continue and must ensure that the outfall, the water from the outfall, is protective of human health and environmental health. It doesn't matter if it's an industrial property or a residential property. What matters is that the water flowing out of the outfall is protective of human and environmental health. It

doesn't matter the cost, the polluter, GE, should be paying to be sure that the water coming out of that outfall is protective of human health and environmental health.

And I'll just finish by saying we intend to submit written comments as well before June 6th, but thank you for the opportunity to speak tonight.

Response to Comment E.

The commenter supports inclusion of the numeric limits for PCBs included in the Draft Permit. While EPA continues to agree that inclusion of the numeric limits is one way to ensure compliance with the Massachusetts surface water quality standards for PCBs, as discussed in Response to Comment 2.A.V.a, EPA has also determined that, given the infeasibility of the numeric limits, BMPs provide an alternative approach that ensures compliance with water quality standards and satisfies the CWA. EPA notes the commenter's characterization of PCBs and its effects on human health and the environment.

With respect to the commenter's claims related to transfer of responsibility, the transfer documents make clear that GE is responsible for all response actions agreed to under the Consent Decree (other than post-removal site control, groundwater, and NAPL–related activities). *See* Definitive Economic Development Agreement (DEDA), Section IV, pp. 11-13. The obligations under the Consent Decree, as explained throughout this document, are distinct from obligations under the CWA. Therefore, while GE is responsible for the response actions, PEDA is responsible for affirmatively attaining authorization for any discharges to surface waters, including the discharge to Silver Lake authorized in the Final Permit.

Comment letter submitted by Mr. Daniel L. Bianchi, Mayor of Pittsfield, Massachusetts, dated June 5, 2015.

F. Comment by Daniel L. Bianchi

The Pittsfield Economic Development Authority (PEDA) is submitting a detailed comment letter of the Draft Permit. The City of Pittsfield is in general agreement with these comments and will not repeat theme here.

In our letter of January 13, 2015 the City indicated that an exploration would occur of transferring PEDA's permit to the City and/or disconnecting the portion of the City's stormwater system that discharges into the PEDA's water quality basin. At this time, the city has no plans to proceed with either of these efforts. The City does plan to work with PEDA to explore sharing of services and cost savings opportunities for stormwater management without formally combining any permits.

The redevelopment of the William Stanley Business Park is the highest priority economic development initiative in the City. Redevelopment at this site is very challenging because

of brownfield issues. This permit may bankrupt PEDA and may make any further redevelopment efforts impossible.

Without getting into the legal and technical issues raised in the PEDA letter, I would like to appeal to reason and fairness. GE, not the City not PEDA, is responsible for the PCBs at this site. If the draft permit is finalized as written, it is logical to conclude that the Consent Order [sic] was flawed, since its purpose was to negotiate a clear, complete, and comprehensive path forward for all parties; EPA, the City, PEDA, GE, the Commonwealth of Massachusetts and the State of Connecticut. Yet, the Consent Order can't be modified without GE's approval. It is unlikely that GE would agree to the modifications relative to the issue. Ironically, because of the Consent Order, we are ineligible for the EPA brownfields funds to assist with additional needed remediation.

It is the City's opinion that, with further investments of time effort and funds, a detailed and specific Best Management Practices (BMP) approach can be developed as an acceptable alternative to the effluent limits proposed in the draft permit. If the BMP proposal outlined in PEDA's comment letter is found to insufficient, we request that the City be given the opportunity to remedy the situation prior to EPA issuing the final permit.

Thank you for the opportunity to make these comments. We hope that, as has been the case in the past, EPA will work with the City and PEDA to arrive at an acceptable path forward that is both protective of the environment, but also fair and reasonable to the citizens of the City of Pittsfield.

Response to Comment F.

In its comment the City of Pittsfield explains that it currently has no plans to transfer this permit from PEDA to the City or disconnect the City's stormwater system from the PEDA property. The City will however continue to "explore sharing of services and cost savings opportunities for stormwater management." EPA supports and encourages such ongoing efforts.

As the commenter requests, EPA has developed and included a BMP approach to addressing PCB discharges in the Final Permit. See Response to Comment 2.A.V.a.

Finally, with respect to the commenter's characterization and complaints about the Consent Decree, please see Responses to Comments 2.A.III.a-b, 2.B.II.b.2, and elsewhere in this document.

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act as amended (33 U.S.C. §1251 et seq.; the "CWA"), and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§26-53),

Pittsfield Economic Development Authority
81 Kellogg Street
Pittsfield, Massachusetts 01201

is authorized to discharge from the facility located at

William Stanley Business Park of the Berkshires
Generally bounded by East Street,
Silver Lake Boulevard, Kellogg Street, and Tyler Street
Pittsfield, Massachusetts 01201

to receiving waters named the

Silver Lake
(Housatonic River Watershed)

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on the first day of the calendar month following sixty (60) days after signature if comments are received. If no comments are received, this permit shall become effective upon signature.

This permit expires at midnight, five (5) years from the last day of the month preceding the effective date.

This permit supersedes Permit MA0003891 that became on effective February 7, 1992.

This permit consists of 13 pages in Part I including effluent limitations and monitoring requirements; Attachment A (Example Effluent Monitoring Summary Table); Attachment B (Freshwater Acute Toxicity Test Procedure and Protocol (February 2011), Attachment C (Freshwater Chronic Toxicity Test Procedure and Protocol, 2007) and 25 pages in Part II including Standard Conditions.

Signed this day of

_____
Ken Moraff, Director
Office of Ecosystem Protection
Environmental Protection Agency
Boston, MA

_____
David Ferris, Director
Massachusetts Wastewater Management Program
Department of Environmental Protection
Commonwealth of Massachusetts
Boston, MA

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge stormwater and contaminated groundwater infiltration which commingle in the water quality basin prior to discharge, through outfall serial number **001** (flow from the water quality basin) to Silver Lake. The discharge will be limited and monitored by the permittee as specified below. Samples shall be collected from the box culvert that receives final effluent from the water quality basin, unless otherwise specified. Samples shall be representative of the discharge.

Effluent Characteristic	Unit	Discharge Limitation		Monitoring Requirement	
Parameter		Average Monthly	Maximum Daily	Measurement Frequency[2]	Sample Type
Flow[1]	MGD	Report	Report	Continuous	Recorder
Oil and Grease	mg/L	Report	15	1/Week	Grab
TSS	mg/L	27	45	1/Week	Grab
pH	6.5 – 8.3 S.U.			1/Week	Grab
Escherichia coli	cfu/100 ml	Report	Report	1/Quarter	Grab
Total Phosphorus	mg/L	Report	Report	1/Quarter	Grab
Total Nitrogen	mg/L lbs/day	Report	Report	1/Quarter	Grab
PCBs, Total Aroclors[3]	µg/L	0.000064 µg/L	Report	1/Month	Grab
Whole Effluent Toxicity[4, 5, 6, 7]	Acute LC50 – Report Chronic C-NOEC – Report			1/Quarter	Grab
Total Hardness	mg/L	Report	Report		
Total Suspended Solids	mg/L				
Specific Conductance	µmhos/cm				
Ammonia Nitrogen	mg/l				
Total Residual Chlorine	µg/L				
Total Cadmium	µg/L				
Total Chromium	µg/L				
Total Lead	µg/L				
Total Copper	µg/L				
Total Zinc	µg/L				
Total Nickel	µg/L				
Total Aluminum	µg/L				

Footnotes:

1. Report the monthly average and maximum daily flows. The monthly average flow is defined as the average flow per day of discharge. Also, report the flow and precipitation for each day of the month as an attachment to the DMR. An example summary table is shown in Attachment A.

2. In addition to the specific reporting required on the DMR, attach a summary of all samples collected for this discharge during the reporting period, showing the results of each sample per calendar day. If an analyte is not detected, record the practical quantitation limit (PQL) for each analyte. The PQL is the lowest concentration that can be reliably measured within specified limits of precision and accuracy for a specific laboratory analytical method during routine laboratory operating conditions. When an analyte is not detected above the PQL, the Permittee must report using the data qualifier signifying less than the PQL for that analyte (i.e. <0.1 µg/L, if the PQL for an analyte is 0.1 µg/L). An example summary table is shown in Attachment A.

3. The average monthly limit for total polychlorinated biphenyls (PCBs) is 0.000064 µg/L. The minimum level (ML) for analysis for total PCBs shall be no greater than 0.022 µg/L. The ML is not the minimum level of detection, but rather the lowest level at which the test equipment produces a recognizable signal and acceptable calibration point for an analyte, representative of the lowest concentration at which an analyte can be measured with a known level of confidence.

   Provide the results of PCB analyses as the sum of all Aroclors. The compliance level for total PCBs shall be equal to the ML for analysis for total PCBs, provided it is 0.022 µg/L or less. A detection of PCBs over 0.022 µg/L or an ML greater than 0.022 µg/L will be considered a violation.

4. Conduct acute and chronic toxicity tests four times per year. Test the daphnid, *Ceriodaphnia dubia*, and the fathead minnow, *Pimiphales v promelas.* Collect toxicity test samples once during each quarter. Submit the test results by the last day of the month following the completion of the test (i.e. for a March test, the deadline is April 30th). Perform the tests in accordance with test procedures and protocols specified in **Attachments B and C** of this permit.

Test Dates	Submit Results By:	Test Species	Chronic Limit C-NOEC	Acute Limit LC50
January - March April - June July - September October - December	the 30th day of the month following the test.	*Ceriodaphnia dubia* (daphnid) *Pimiphales promelas* (fathead minnow)	Report	Report

5. C-NOEC (chronic-no observed effect concentration) is defined as the highest concentration of toxicant or effluent to which organisms are exposed in a life cycle or partial life cycle test which causes no adverse effect on growth, survival, or reproduction, based on a statistically significant difference from dilution control, at a specific time of observation as determined from hypothesis testing. As described in the EPA WET Method Manual EPA 821-R-02-013, Section 10.2.6.2, all test results are to be reviewed and reported in accordance with EPA guidance on the evaluation of the concentration-response relationship.

6. The LC50 is the concentration of effluent which causes mortality to 50% of the test organisms.

7. If toxicity test(s) using receiving water as diluent show the receiving water to be toxic or unreliable, either follow procedures outlined in **Attachments B and C (Toxicity Test Procedure and Protocol**) **Section IV., DILUTION WATER** in order to obtain an individual approval for use of an alternate dilution water, or follow the Self-Implementing Alternative Dilution Water Guidance, which may be used to obtain automatic approval of an alternate dilution water, including the appropriate species for use with that water. This guidance is found in Attachment G of *NPDES Permit Program Instructions for the Discharge Monitoring Report Forms (DMRs)*, which may be found on the EPA Region I web site at http://www.epa.gov/Region1/enforcementandassistance/dmr.html. If this guidance is revoked, revert to obtaining individual approval as outlined in **Attachments B and C**. Any modification or revocation to this guidance will be transmitted to the permittees. However, at any time, the permittee may choose to contact EPA-New England directly using the approach outlined in **Attachment B**.

PART I.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. The discharge shall not cause a violation of the water quality standards of the receiving waters.

3. The discharge will not cause objectionable discoloration of the receiving waters.

4. The effluent will contain neither a visible oil sheen, foam, nor floating solids at any time.

5. All existing manufacturing, commercial, mining, and silvaculture dischargers must notify the Director as soon as they know or have reason to believe:

   a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
      (1) One hundred micrograms per liter (100 µg/l);
      (2) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2, 4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
      (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or

(4) The level established by the Director in accordance with 40 CFR §122.44(f).

b. That activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
   (1) Five hundred micrograms per liter (500 µg/l);
   (2) One milligram per liter (mg/l) for antimony;
   (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or
   (4) The level established by the Director in accordance with 40 CFR §122.44(f).

c. That the permittee has begun or expects to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.

6. This permit may be modified, or revoked and reissued, on the basis of new information in accordance with 40 CFR §122.62.

7. Properly operate and maintain all treatment systems.

8. Toxics Control

   a. The permittee will not discharge any pollutant or combination of pollutants in toxic amounts.
   b. Any toxic components of the effluent will not result in any demonstrable harm to aquatic life or violate any state or federal water quality standard which has been or may be promulgated. Upon promulgation of any such standard, this permit may be revised or amended in accordance with such standards.

9. Numerical Effluent Limitations for Toxicants

EPA or the MassDEP may use the results of the toxicity tests and chemical analysis conducted pursuant to this permit, as well as national water quality criteria developed pursuant to Section 304(a) (1) of the Clean Water Act (CWA), state water quality criteria, and any other appropriate information or data, to develop numerical effluent limitations for any pollutants, including but not limited to those pollutants listed in Appendix D of 40 CFR §122.

B. REOPENER CLAUSE

The results of sampling required by the permit shall constitute new information within the meaning of 40 CFR. §122.62(a) (2) and shall be assessed by EPA during the term of the permit. If the results demonstrate that the permit as written is insufficiently stringent to comply with applicable water quality standards for toxics, including PCBs, EPA may re-open and modify the permit's terms to impose additional BMPs and/or numeric effluent limitations sufficient to ensure compliance with such water quality standards.

C. STORMWATER POLLUTION PREVENTION PLAN

1. Develop, implement, and maintain a Stormwater Pollution Prevention Plan (SWPPP) designed to reduce, or prevent, the discharge of pollutants in stormwater to the receiving waters identified in this permit. The SWPPP shall be a written document that is consistent with the terms of this permit. Additionally, the SWPPP shall serve as a tool to document the permittee's compliance with the terms of this permit. Development guidance and a recommended format for the SWPPP are available on the EPA website for the Multi-Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activities (http://cfpub.epa.gov/npdes/stormwater/msgp.cfm).

2. Complete or update and certify the SWPPP within 90 days after the effective date of this permit. Certify that the SWPPP has been completed or updated and shall be signed in accordance with the requirements identified in 40 CFR §122.22. Send a copy of this initial certification to EPA and MassDEP within one hundred and twenty (120) days of the effective date of this permit.

3. Prepare the SWPPP in accordance with good engineering practices and ensure the SWPPP is consistent with the general provisions for SWPPPs included in the most current version of the MSGP. In the current MSGP (effective September 29, 2008), the general SWPPP provisions are included in Part 5. Specifically, the SWPPP shall document the selection, design, and installation of control measures and contain the elements listed below:

    a. A pollution prevention team with collective and individual responsibilities for developing, implementing, maintaining, revising and ensuring compliance with the SWPPP.
    b. A site description which includes the activities at the facility; a general location map showing the facility, receiving waters, and outfall locations; and a site map showing the extent of significant structures and impervious surfaces, directions of stormwater flows, and locations of all existing structural control measures, stormwater conveyances, pollutant sources (identified in Part 3.c. below), stormwater monitoring points, stormwater inlets and outlets, and industrial activities exposed to precipitation such as storage, disposal, material handling.
    c. A summary of all pollutant sources that includes a list of activities exposed to stormwater, the pollutants associated with these activities, a description of where spills have occurred or could occur, a description of non-stormwater discharges, and a summary of any existing stormwater discharge sampling data.
    d. A description of all stormwater controls, both structural and non-structural.
    e. A schedule and procedure for implementation and maintenance of the control measures described above and for the quarterly inspections and best management practices (BMPs) described below.

4. The SWPPP shall document the appropriate best management practices (BMPs) implemented or to be implemented at the facility to minimize the discharge of pollutants in stormwater to waters of the United States and to satisfy the non-numeric technology-based effluent limitations included in this permit. At a minimum, these BMPs shall be consistent with the control measures described in the most current version of the MSGP. In the current MSGP, these control measures are described in Part 2.1.2. Specifically, BMPs must be selected and implemented to satisfy the

following non-numeric technology-based effluent limitations:

a. Minimizing exposure of manufacturing, processing, and material storage areas to stormwater discharges.
b. Good housekeeping measures designed to maintain areas that are potential sources of pollutants.
c. Preventative maintenance programs to avoid leaks, spills, and other releases of pollutants in stormwater discharged to receiving waters.
d. Spill prevention and response procedures to ensure effective response to spills and leaks if or when they occur.
e. Erosion and sediment controls designed to stabilize exposed areas and contain runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants.
f. Runoff management practices to divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff.
g. Proper handling procedures for salt or materials containing chlorides that are used for snow and ice control.

5. In addition to the sampling required in Part I.A.1., all structural controls used to comply with effluent limits in this permit shall be inspected, at least once per quarter, by qualified personnel with one or more members of the stormwater pollution prevention team. Inspections shall begin during the 1st full quarter after the effective date of this permit. EPA considers quarters as follows: January to March, April to June, July to September, and October to December. Each inspection must include a visual assessment of stormwater samples (from each outfall), which shall be collected within the first 30 minutes of discharge from a storm event, stored in a clean, clear glass or plastic container, and examined in a well-lit area for the following water quality characteristics: color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of pollution. Document the following information for each inspection and maintain the records along with the SWPPP:

a. The date and time of the inspection and at which any samples were collected;
b. The name(s) and signature(s) of the inspector(s)/sample collector(s);
c. If applicable, why it was not possible to take samples within the first 30 minutes;
d. Weather information and a description of any discharges occurring at the time of the inspection;
e. Results of observations of stormwater discharges, including any observed discharges of pollutants and the probable sources of those pollutants;
f. Any control measures needing maintenance, repairs or replacement; and,
g. Any additional control measures needed to comply with the permit requirements.

6. Amend and update the SWPPP within 14 days of any changes at the facility that result in a significant effect on the potential for the discharge of pollutants to the waters of the United States. Such changes may include, but are not limited to: a change in design, construction, operation, or maintenance, materials storage, or activities at the facility; a release of a reportable quantity of pollutants as described in 40 CFR §302; or a determination by the permittee or EPA that the BMPs included in the SWPPP appear to be ineffective in achieving the general objectives of controlling pollutants in stormwater discharges associated with industrial activity.

7. Any amended, modified, or new versions of the SWPPP shall be re-certified and signed by the permittee in accordance with the requirements identified in 40 CFR §122.22. Also, certify annually, by March 15, that the previous year's inspections and maintenance activities were conducted, results recorded, records maintained, and that the facility is in compliance with this permit. If the facility is not in compliance with any aspect of this permit, the annual certification shall state the non-compliance and the remedies which are being undertaken. Such annual certifications also shall be signed in accordance with the requirements identified in 40 CFR §122.22. Maintain at the facility a copy of its current SWPPP and all SWPPP certifications (the initial certification, re-certifications, and annual certifications) signed during the effective period of this permit, and shall make these available for inspection by EPA and MassDEP. In addition, document in the SWPPP any violation of numerical or non-numerical stormwater effluent limits with a date and description of the corrective actions taken.

8. The following site-specific BMPs shall be included in the SWPPP:

   a. Pipeline Cleaning and Inspection

      i. Perform at least one hydraulic pressure washing of the interior surfaces of any active storm sewer piping draining to the north forebay to remove accumulated debris.
      ii. Conduct video inspection (following pipe cleaning) of active storm sewer piping draining to the north forebay to assess pipe integrity.
      iii. Complete the activities in this BMP within 1 year of the effective date of the permit and submit a report summarizing pipeline cleaning and inspection activities.
      iv. This requirement does not apply to stormwater infrastructure installed after 2005. Also, the stormwater piping cleaning and inspection work can be supplemented, or potentially replaced, by a program to plug existing stormwater pipes and provide an acceptable alternative infiltration and/or draining system that does not contribute pollutants to Outfall 001.

   b. Maintenance and Debris Removal from Sediment Forebays and the Water Quality Basin

      Within 6 months of the effective date of the permit, begin performing monthly inspections (including debris thickness measurements) of each sediment forebay and the water quality basin. During the inspections:

      i. Measure debris thickness from the floor of each forebay and the water quality basin. At least 3 measurements must be taken in the deepest part of each forebay during each inspection. On an annual basis, collect a minimum of 5 measurements of the sediment thickness from the water quality basin.
      ii. Remove accumulated debris from sediment forebays every 6 months, or sooner if average thickness of debris observed during monthly inspections exceeds 12 inches. Remove sediment from the water quality basin if the calculated pool volume has been reduced by 25% due to sediment accumulation. Otherwise, remove sediment every 5 years to restore the basin to its original elevations.

iii. Check for signs of rilling and gullying and inspect the rock spillways and berms separating the forebays from the water quality basin and repair as needed. Inspect the sidewalls of the water quality basin for erosion and sloughing and repair as needed. After removing sediment, replace any vegetation damaged during the clean-out by either reseeding or resodding. When reseeding, incorporate practices such as hydroseeding with a tackifier, blanket, or similar practice to ensure that no scour occurs in the forebay while the seeds germinate and develop roots.

c. Debris Removal from Manholes and Catch Basins

i. Within 6 months of the effective date of the permit, perform an initial inspection and removal of accumulated debris and sediment from all storm sewer manholes and catch basins on the PEDA site that drain to Outfall 001.

ii. Within one year of the effective date of the permit, optimize routine cleaning and maintenance of catch basins and any catch basin inserts on its site that drain to Outfall 001 such that the following conditions are met:

1. Establish a frequency of routine cleaning that will ensure that no catch basin shall be more than 50 percent full.
2. Prioritize inspection and maintenance for catch basins located near construction activities (roadway construction, residential, commercial, or industrial development or redevelopment). Clean catch basins in such areas more frequently if inspection and maintenance activities indicate excessive sediment or debris loadings.
3. If a catch basin sump (i.e. vertical space between catch basin outlet and bottom) is more than 50 percent full during two consecutive routine cleaning events, investigate the contributing drainage area for sources of excessive sediment loading, and to the extent practicable, abate contributing sources. Describe any actions taken in its annual report.
4. For the purposes of this part, an excessive sediment or debris loading is a catch basin sump more than 50 percent full. A catch basin sump is more than 50 percent full if the contents within the sump exceed one half the distance between the bottom interior of the catch basin to the invert of the deepest outlet of the catch basin.

d. Street Sweeping

Establish and implement procedures for sweeping and/or cleaning streets, and permittee-owned parking lots. Sweep and/or clean all streets and parking lots on the PEDA site a minimum of twice per year in the spring (following winter activities such as sanding) and fall (to collect leaf litter). The procedures shall also include more frequent sweeping of targeted areas determined by the permittee on the basis of pollutant load reduction potential, based on inspections, pollutant loads, catch basin cleaning or inspection results, land use, water quality limited or TMDL waters or other relevant factors as determined by the permittee. Include in each annual report the number of miles cleaned and the volume or mass of material removed.

e. Open Space Management

Establish procedures to address the proper use, storage, and disposal of pesticides, herbicides, and fertilizers including minimizing the use of these products and using only in accordance manufacturer's instruction. Evaluate lawn maintenance and landscaping activities to ensure practices are protective of water quality. Protective practices include reduced mowing frequencies, proper disposal of lawn clippings, and use of alternative landscaping materials (e.g., drought resistant planting).

9. Report all activities, results, and future actions required in Part I.C.8 in an Annual Report of Site-specific BMPs to be submitted to EPA and MassDEP on March 15 of each year following the anniversary of the effective date of the permit.

D. RECORD KEEPING

Keep all records required by this permit for a period of at least five years. EPA may extend this period at any time. Records include information used in the development of any written program required by this permit, any monitoring results, copies of reports, records of screening, follow-up and elimination of illicit discharges; maintenance records; inspection records; and data used in the development of the SWPPP, and annual reports. This list provides examples of records that should be maintained, but is not all inclusive.

E. MONITORING AND REPORTING

The monitoring program in the permit specifies sampling and analysis, which will provide continuous information on compliance and the reliability and effectiveness of the installed pollution abatement equipment. The approved analytical procedures found in 40 CFR Part 136 are required unless other procedures are explicitly required in the permit. The Permittee is obligated to monitor and report sampling results to EPA and the MassDEP within the time specified within the permit.

Unless otherwise specified in this permit, the permittee shall submit reports, requests, and information and provide notices in the manner described in this section.

1. Submittal of DMRs and the Use of NetDMR

Beginning the effective date of the permit the permittee must submit its monthly monitoring data in discharge monitoring reports (DMRs) to EPA and MassDEP no later than the 15th day of the month following the completed reporting period. **For a period of six months from the effective date of the permit**, the permittee may submit its monthly monitoring data in DMRs to EPA and MassDEP either in hard copy form, as described in Part I.E.5, or in DMRs electronically submitted using NetDMR. NetDMR is a web-based tool that allows permittees to electronically submit DMRs and other required reports via a secure internet connection. NetDMR is accessed from: http://www.epa.gov/netdmr. **Beginning no later than six months after the effective date of the permit**, the permittee shall begin reporting monthly monitoring data using NetDMR, unless, in accordance with Part I.E.7, the facility is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes the use of NetDMR for submitting DMRs. The permittee must continue to use the NetDMR after the permittee begins to do so.

When a permittee begins submitting reports using NetDMR, it will no longer be required to submit hard copies of DMRs to EPA or MassDEP.

2. Submittal of Reports as NetDMR Attachments

After the permittee begins submitting DMR reports to EPA electronically using NetDMR, the permittee shall electronically submit all reports to EPA as NetDMR attachments rather than as hard copies, unless otherwise specified in this permit. Permittees shall continue to send hard copies of reports other than DMRs to MassDEP until further notice from MassDEP. (See Part I.F.6. for more information on state reporting.) Because the due dates for reports described in this permit may not coincide with the due date for submitting DMRs (which is no later than the 15th day of the month), a report submitted electronically as a NetDMR attachment shall be considered timely if it is electronically submitted to EPA using NetDMR with the next DMR due following the particular report due date specified in this permit.

3. Submittal of Requests and Reports to EPA/OEP

The following requests, reports, and information described in this permit shall be submitted to the EPA/OEP NPDES Applications Coordinator in the EPA Office Ecosystem Protection (OEP).

A. Transfer of Permit notice
B. Request for changes in sampling location
C. Request for reduction in testing frequency
D. Request for Reduction in WET Testing Requirement
E. Report on unacceptable dilution water / request for alternative dilution water for WET testing
F. Notification of proposal to add or replace chemicals and bio-remedial agents including microbes
G. SWPPP Certification

These reports, information, and requests shall be submitted to EPA/OEP electronically at R1NPDES.Notices.OEP@epa.gov or by hard copy mail to the following address:

U.S. Environmental Protection Agency
Office of Ecosystem Protection
EPA/OEP NPDES Applications Coordinator
5 Post Office Square - Suite 100 (OEP06-03)
Boston, MA 02109-3912

4. Submittal of Reports in Hard Copy Form

The following notifications and reports shall be submitted as hard copy with a cover letter describing the submission. These reports shall be signed and dated originals submitted to EPA.

A. Written notifications required under Part II
B. Notice of unauthorized discharges
C. Reports and DMRs submitted prior to the use of NetDMR

This information shall be submitted to EPA/OES at the following address:

U.S. Environmental Protection Agency
Office or Environmental Stewardship (OES)
Water Technical Unit
5 Post Office Square, Suite 100 (OES04-4)
Boston, MA 02109-3912

5. State Reporting

Unless otherwise specified in this permit, duplicate signed copies of all reports, information, requests or notifications described in this permit, including the reports, information, requests or notifications described in Parts I.E.2, I.E.3, and I.E.4 also shall be submitted to the State at the following addresses:

MassDEP – Western Region
Bureau of Waste Prevention
436 Dwight Street, Suite 402
Springfield, MA 01103

Copies of toxicity tests only shall be submitted to:

Massachusetts Department of Environmental Protection
Surface Water Discharge Permit Program
627 Main Street, 2nd Floor
Worcester, Massachusetts 01608

6. Submittal of NetDMR Opt-Out Requests

NetDMR opt-out requests must be submitted in writing to EPA for written approval at least sixty (60) days prior to the date a facility would be required under this permit to begin using NetDMR. This demonstration shall be valid for twelve (12) months from the date of EPA approval and shall thereupon expire. At such time, DMRs and reports shall be submitted electronically to EPA unless the permittee submits a renewed opt-out request and such request is approved by EPA. All opt-out requests should be sent to the following addresses:

Attn: NetDMR Coordinator
U.S. Environmental Protection Agency, Water Technical Unit
5 Post Office Square, Suite 100 (OES04-4)
Boston, MA 02109-3912

And

Massachusetts Department of Environmental Protection
Surface Water Discharge Permit Program
1 Winter Street
Boston, MA 02108

7. Verbal Reports and Verbal Notifications

Any verbal reports or verbal notifications, if required in Parts I and/or II of this permit, shall be made to both EPA and to MassDEP. This includes verbal reports and notifications which require reporting within 24 hours. (As examples, see Part II.B.4.c. (2), Part II.B.5.c. (3), and Part II.D.1.e.) Verbal reports and verbal notifications shall be made to EPA's Office of Environmental Stewardship at:

U.S. Environmental Protection Agency
Office of Environmental Stewardship
5 Post Office Square, Suite 100 (OES04-4)
Boston, MA 02109-3912
617-918-1510

F. STATE PERMIT CONDITIONS

This authorization to discharge includes two separate and independent permit authorizations. The two permit authorizations are (i) a federal National Pollutant Discharge Elimination System permit issued by the U.S. Environmental Protection Agency (EPA) pursuant to the Federal Clean Water Act, 33 U.S.C. §§1251 et seq.; and (ii) an identical state surface water discharge permit issued by the Commissioner of the Massachusetts Department of Environmental Protection (MassDEP) pursuant to the Massachusetts Clean Waters Act, M.G.L. c. 21, §§26-53, and 314 C.M.R. 3.00. All of the requirements contained in this authorization, as well as the standard conditions contained in 314 CMR 3.19, are hereby incorporated by reference into this state surface water discharge permit.

This authorization also incorporates the state water quality certification issued by MassDEP under § 401(a) of the Federal Clean Water Act, 40 CFR 124.53, M.G.L. c. 21, §27 and 314 CMR 3.07. All of the requirements (if any) contained in MassDEP's water quality certification for the permit are hereby incorporated by reference into this state surface water discharge permit as special conditions pursuant to 314 CMR 3.11.

Each agency shall have the independent right to enforce the terms and conditions of this permit. Any modification, suspension or revocation of this permit shall be effective only with respect to the agency taking such action, and shall not affect the validity or status of this permit as issued by the other agency, unless and until each agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this permit is declared invalid, illegal or otherwise issued in violation of state law such permit shall remain in full force and effect under federal law as a NPDES Permit issued by the U.S. Environmental Protection Agency. In the event this permit is declared invalid, illegal or otherwise issued in violation of federal law, this permit shall remain in full force and effect under state law as a permit issued by the Commonwealth of Massachusetts.

Attachment A
Example Effluent Monitoring Summary Table
Outfall 001

Month:

Date	Precipitation Total (inches)	Total Flow (million gallons)	Oil and grease* (mg/L)	TSS* (mg/L)	pH (s.u.)	Total PCBs* (µg/L)	Other Parameters*, Comments, etc.
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
minimum							
average							
maximum							

*(if below the Practical Quantitation Limit, express result as ">{PQL value}."

ATTACHMENT B

USEPA REGION 1 FRESHWATER ACUTE TOXICITY TEST PROCEDURE AND PROTOCOL

I. GENERAL REQUIREMENTS

The permittee shall conduct acceptable acute toxicity tests in accordance with the appropriate test protocols described below:

- **Daphnid (Ceriodaphnia dubia) definitive 48 hour test.**
- **Fathead Minnow (Pimephales promelas) definitive 48 hour test.**

Acute toxicity test data shall be reported as outlined in Section VIII.

II. METHODS

The permittee shall use 40 CFR Part 136 methods. Methods and guidance may be found at:

http://water.epa.gov/scitech/methods/cwa/wet/disk2_index.cfm

The permittee shall also meet the sampling, analysis and reporting requirements included in this protocol. This protocol defines more specific requirements while still being consistent with the Part 136 methods. If, due to modifications of Part 136, there are conflicting requirements between the Part 136 method and this protocol, the permittee shall comply with the requirements of the Part 136 method.

III. SAMPLE COLLECTION

A discharge sample shall be collected. Aliquots shall be split from the sample, containerized and preserved (as per 40 CFR Part 136) for chemical and physical analyses required. The remaining sample shall be measured for total residual chlorine and dechlorinated (if detected) in the laboratory using sodium thiosulfate for subsequent toxicity testing. (Note that EPA approved test methods require that samples collected for metals analyses be preserved immediately after collection.) Grab samples must be used for pH, temperature, and total residual chlorine (as per 40 CFR Part 122.21).

Standard Methods for the Examination of Water and Wastewater describes dechlorination of samples (APHA, 1992). Dechlorination can be achieved using a ratio of 6.7 mg/L anhydrous sodium thiosulfate to reduce 1.0 mg/L chlorine. If dechlorination is necessary, a thiosulfate control (maximum amount of thiosulfate in lab control or receiving water) must also be run in the WET test.

All samples held overnight shall be refrigerated at 1- 6^{o}C.

IV. DILUTION WATER

A grab sample of dilution water used for acute toxicity testing shall be collected from the receiving water at a point immediately upstream of the permitted discharge's zone of influence at a reasonably accessible location. Avoid collection near areas of obvious road or agricultural runoff, storm sewers or other point source discharges and areas where stagnant conditions exist. In the case where an alternate dilution water has been agreed upon an additional receiving water control (0% effluent) must also be tested.

If the receiving water diluent is found to be, or suspected to be toxic or unreliable, an alternate standard dilution water of known quality with a hardness, pH, conductivity, alkalinity, organic carbon, and total suspended solids similar to that of the receiving water may be substituted **AFTER RECEIVING WRITTEN APPROVAL FROM THE PERMIT ISSUING AGENCY(S)**. Written requests for use of an alternate dilution water should be mailed with supporting documentation to the following address:

Director
Office of Ecosystem Protection (CAA)
U.S. Environmental Protection Agency-New England
5 Post Office Sq., Suite 100 (OEP06-5)
Boston, MA 02109-3912

and

Manager
Water Technical Unit (SEW)
U.S. Environmental Protection Agency
5 Post Office Sq., Suite 100 (OES04-4)
Boston, MA 02109-3912

Note: USEPA Region 1 retains the right to modify any part of the alternate dilution water policy stated in this protocol at any time. Any changes to this policy will be documented in the annual DMR posting.

See the most current annual DMR instructions which can be found on the EPA Region 1 website at http://www.epa.gov/region1/enforcement/water/dmr.html *for further important details on alternate dilution water substitution requests.*

It may prove beneficial to have the proposed dilution water source screened for suitability prior to toxicity testing. EPA strongly urges that screening be done prior to set up of a full definitive toxicity test any time there is question about the dilution water's ability to support acceptable performance as outlined in the 'test acceptability' section of the protocol.

V. TEST CONDITIONS

The following tables summarize the accepted daphnid and fathead minnow toxicity test conditions and test acceptability criteria:

EPA NEW ENGLAND EFFLUENT TOXICITY TEST CONDITIONS FOR THE DAPHNID, CERIODAPHNIA DUBIA 48 HOUR ACUTE TESTS[1]

1.	Test type	Static, non-renewal
2.	Temperature (^{o}C)	20 $\pm$ 1^{o}C or 25 $\pm$ 1^{o}C
3.	Light quality	Ambient laboratory illumination
4.	Photoperiod	16 hour light, 8 hour dark
5.	Test chamber size	Minimum 30 ml
6.	Test solution volume	Minimum 15 ml
7.	Age of test organisms	1-24 hours (neonates)
8.	No. of daphnids per test chamber	5
9.	No. of replicate test chambers per treatment	4
10.	Total no. daphnids per test concentration	20
11.	Feeding regime	As per manual, lightly feed YCT and Selenastrum to newly released organisms while holding prior to initiating test
12.	Aeration	None
13.	Dilution water[2]	Receiving water, other surface water, synthetic water adjusted to the hardness and alkalinity of the receiving water (prepared using either Millipore Milli-Q^{R} or equivalent deionized water and reagent grade chemicals according to EPA acute toxicity test manual) or deionized water combined with mineral water to appropriate hardness.
14.	Dilution series	$\geq$ 0.5, must bracket the permitted RWC
15.	Number of dilutions	5 plus receiving water and laboratory water control and thiosulfate control, as necessary. An additional dilution at the permitted effluent concentration (% effluent) is required if it is not included in the dilution

		series.
16.	Effect measured	Mortality-no movement of body or appendages on gentle prodding
17.	Test acceptability	90% or greater survival of test organisms in dilution water control solution
18.	Sampling requirements	For on-site tests, samples must be used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples must first be used within 36 hours of collection.
19.	Sample volume required	Minimum 1 liter

Footnotes:

1. Adapted from EPA-821-R-02-012.
2. Standard prepared dilution water must have hardness requirements to generally reflect the characteristics of the receiving water.

EPA NEW ENGLAND TEST CONDITIONS FOR THE FATHEAD MINNOW (PIMEPHALES PROMELAS) 48 HOUR ACUTE TEST[1]

1.	Test Type	Static, non-renewal
2.	Temperature (^{o}C)	20 $\pm$ 1 ^{o} C or 25 $\pm$ 1^{o}C
3.	Light quality	Ambient laboratory illumination
4.	Photoperiod	16 hr light, 8 hr dark
5.	Size of test vessels	250 mL minimum
6.	Volume of test solution	Minimum 200 mL/replicate
7.	Age of fish	1-14 days old and age within 24 hrs of each other
8.	No. of fish per chamber	10
9.	No. of replicate test vessels per treatment	4
10.	Total no. organisms per concentration	40
11.	Feeding regime	As per manual, lightly feed test age larvae using concentrated brine shrimp nauplii while holding prior to initiating test
12.	Aeration	None, unless dissolved oxygen (D.O.) concentration falls below 4.0 mg/L, at which time gentle single bubble aeration should be started at a rate of less than 100 bubbles/min. (Routine D.O. check is recommended.)
13.	dilution water[2]	Receiving water, other surface water, synthetic water adjusted to the hardness and alkalinity of the receiving water (prepared using either Millipore Milli-Q^{R} or equivalent deionized and reagent grade chemicals according to EPA acute toxicity test manual) or deionized water combined with mineral water to appropriate hardness.
14.	Dilution series	$\geq$ 0.5, must bracket the permitted RWC

15.	Number of dilutions	5 plus receiving water and laboratory water control and thiosulfate control, as necessary. An additional dilution at the permitted effluent concentration (% effluent) is required if it is not included in the dilution series.
16.	Effect measured	Mortality-no movement on gentle prodding
17.	Test acceptability	90% or greater survival of test organisms in dilution water control solution
18.	Sampling requirements	For on-site tests, samples must be used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples are used within 36 hours of collection.
19.	Sample volume required	Minimum 2 liters

Footnotes:

1. Adapted from EPA-821-R-02-012
2. Standard dilution water must have hardness requirements to generally reflect characteristics of the receiving water.

VI. CHEMICAL ANALYSIS

At the beginning of a static acute toxicity test, pH, conductivity, total residual chlorine, oxygen, hardness, alkalinity and temperature must be measured in the highest effluent concentration and the dilution water. Dissolved oxygen, pH and temperature are also measured at 24 and 48 hour intervals in all dilutions. The following chemical analyses shall be performed on the 100 percent effluent sample and the upstream water sample for each sampling event.

Parameter	Effluent	Receiving Water	ML (mg/l)
Hardness[1]	x	x	0.5
Total Residual Chlorine (TRC)[2, 3]	x		0.02
Alkalinity	x	x	2.0
pH	x	x	--
Specific Conductance	x	x	--
Total Solids	x		--
Total Dissolved Solids	x		--
Ammonia	x	x	0.1
Total Organic Carbon	x	x	0.5
Total Metals			
Cd	x	x	0.0005
Pb	x	x	0.0005
Cu	x	x	0.003
Zn	x	x	0.005
Ni	x	x	0.005
Al	x	x	0.02
Other as permit requires			

Notes:

1. Hardness may be determined by:
   - APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
     - Method 2340B (hardness by calculation)
     - Method 2340C (titration)
2. Total Residual Chlorine may be performed using any of the following methods provided the required minimum limit (ML) is met.
   - APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
     - Method 4500-CL E Low Level Amperometric Titration
     - Method 4500-CL G DPD Colorimetric Method
3. Required to be performed on the sample used for WET testing prior to its use for toxicity testing.

VII. TOXICITY TEST DATA ANALYSIS

LC50 Median Lethal Concentration (Determined at 48 Hours)

Methods of Estimation:

- Probit Method
- Spearman-Karber
- Trimmed Spearman-Karber
- Graphical

See the flow chart in Figure 6 on p. 73 of EPA-821-R-02-012 for appropriate method to use on a given data set.

No Observed Acute Effect Level (NOAEL)

See the flow chart in Figure 13 on p. 87 of EPA-821-R-02-012.

VIII. TOXICITY TEST REPORTING

A report of the results will include the following:

- Description of sample collection procedures, site description
- Names of individuals collecting and transporting samples, times and dates of sample collection and analysis on chain-of-custody
- General description of tests: age of test organisms, origin, dates and results of standard toxicant tests; light and temperature regime; other information on test conditions if different than procedures recommended. Reference toxicant test data should be included.
- All chemical/physical data generated. (Include minimum detection levels and minimum quantification levels.)
- Raw data and bench sheets.
- Provide a description of dechlorination procedures (as applicable).
- Any other observations or test conditions affecting test outcome.

ATTACHMENT C

FRESHWATER CHRONIC TOXICITY TEST PROCEDURE AND PROTOCOL

USEPA Region 1

I. GENERAL REQUIREMENTS

The permittee shall be responsible for the conduct of acceptable chronic (and modified acute) toxicity tests using three fresh samples collected during each test period. The following tests shall be performed as prescribed in Part 1 of the NPDES discharge permit in accordance with the appropriate test protocols described below. (Note: the permittee and testing laboratory should review the applicable permit to determine whether testing of one or both species is required).

- **Daphnid (Ceriodaphnia dubia) Survival and Reproduction Test.**

- **Fathead Minnow (Pimephales promelas) Larval Growth and Survival Test.**

Chronic and modified acute toxicity data shall be reported as outlined in Section VIII. The chronic fathead minnow and daphnid test data can be used to calculate an LC50 at the end of 48 hours of exposure when both acute (LC50) and chronic (C-NOEC) test endpoints are specified in the permit.

II. METHODS

Methods to follow are those recommended by EPA in: Short Term Methods For Estimating The Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms, Fourth Edition. October 2002. United States Environmental Protection Agency. Office of Water, Washington, D.C., EPA 821-R-02-013. The methods are available on-line at http://www.epa.gov/waterscience/WET/ . Exceptions and clarification are stated herein.

III. SAMPLE COLLECTION AND USE

A total of three fresh samples of effluent and receiving water are required for initiation and subsequent renewals of a freshwater, chronic, toxicity test. The receiving water control sample must be collected immediately upstream of the permitted discharge's zone of influence. Fresh samples are recommended for use on test days 1, 3, and 5. However, provided a total of three samples are used for testing over the test period, an alternate sampling schedule is acceptable. The acceptable holding times until initial use of a sample are 24 and 36 hours for on-site and off-site testing, respectively. A written waiver is required from the regulating authority for any hold time extension. All test samples collected may be used for 24, 48 and 72 hour renewals after initial use. All samples held for use beyond the day of sampling shall be refrigerated and maintained at a temperature range of 0-6^{o} C.

All samples submitted for chemical and physical analyses will be analyzed according to Section VI of this protocol.

Sampling guidance dictates that, where appropriate, aliquots for the analysis required in this protocol shall be split from the samples, containerized and immediately preserved, or analyzed as per 40 CFR Part 136. EPA approved test methods require that samples collected for metals analyses be preserved immediately after collection. Testing for the presence of total residual chlorine (TRC) must be analyzed immediately or as soon as possible, for all effluent samples, prior to WET testing. TRC analysis may be performed on-site or by the toxicity testing laboratory and the samples must be dechlorinated, as necessary, using sodium thiosulfate prior to sample use for toxicity testing.

If any of the renewal samples are of sufficient potency to cause lethality to 50 percent or more of the test organisms in any of the test treatments for either species or, if the test fails to meet its permit limits, then chemical analysis for total metals (originally required for the initial sample only in Section VI) will be required on the renewal sample(s) as well.

IV. DILUTION WATER

Samples of receiving water must be collected from a location in the receiving water body immediately upstream of the permitted discharge's zone of influence at a reasonably accessible location. Avoid collection near areas of obvious road or agricultural runoff, storm sewers or other point source discharges and areas where stagnant conditions exist. EPA strongly urges that screening for toxicity be performed prior to the set up of a full, definitive toxicity test any time there is a question about the test dilution water's ability to achieve test acceptability criteria (TAC) as indicated in Section V of this protocol. The test dilution water control response will be used in the statistical analysis of the toxicity test data. All other control(s) required to be run in the test will be reported as specified in the Discharge Monitoring Report (DMR) Instructions, Attachment F, page 2,Test Results & Permit Limits.

The test dilution water must be used to determine whether the test met the applicable TAC. When receiving water is used for test dilution, an additional control made up of standard laboratory water (0% effluent) is required. This control will be used to verify the health of the test organisms and evaluate to what extent, if any, the receiving water itself is responsible for any toxic response observed.

If dechlorination of a sample by the toxicity testing laboratory is necessary a "sodium thiosulfate" control, representing the concentration of sodium thiosulfate used to adequately dechlorinate the sample prior to toxicity testing, must be included in the test.

If the use of an alternate dilution water (ADW) is authorized, in addition to the ADW test control, the testing laboratory must, for the purpose of monitoring the receiving water, also run a receiving water control.

If the receiving water diluent is found to be, or suspected to be toxic or unreliable an ADW of known quality with hardness similar to that of the receiving water may be substituted. Substitution is species specific meaning that the decision to use ADW is made for each species and is based on the toxic response of that particular species. Substitution to an ADW is authorized in two cases. The first is the case where repeating a test due to toxicity in the site dilution water requires an **immediate decision** for ADW use be made by the permittee and toxicity testing laboratory. The second is in the case where two of the most recent documented incidents of unacceptable site dilution water toxicity requires ADW use in future WET testing.

For the second case, written notification from the permittee requesting ADW use **and** written authorization from the permit issuing agency(s) is required **prior to** switching to a long-term use of ADW for the duration of the permit.

Written requests for use of ADW must be mailed with supporting documentation to the following addresses:

Director
Office of Ecosystem Protection (CAA)
U.S. Environmental Protection Agency-New England
One Congress St., Suite 1100
Boston, MA 02114-2023

and

Manager
Water Technical Unit (SEW)
U.S. Environmental Protection Agency
One Congress Street, Suite 1100
Boston, MA 02114-2023

Note: USEPA Region 1 retains the right to modify any part of the alternate dilution water policy stated in this protocol at any time. Any changes to this policy will be documented in the annual DMR posting.

See the most current annual DMR instructions which can be found on the EPA Region 1 website at http://www.epa.gov/region1/enforcementandassistance/dmr.html for further important details on alternate dilution water substitution requests.

V. TEST CONDITIONS AND TEST ACCEPTABILITY CRITERIA

Method specific test conditions and TAC are to be followed and adhered to as specified in the method guidance document, EPA 821-R-02-013. If a test does not meet TAC the test must be repeated with fresh samples within 30 days of the initial test completion date.

V.1. Use of Reference Toxicity Testing

Reference toxicity test results and applicable control charts must be included in the toxicity testing report.

If reference toxicity test results fall outside the control limits established by the laboratory for a specific test endpoint, a reason or reasons for this excursion must be evaluated, correction made and reference toxicity tests rerun as necessary.

If a test endpoint value exceeds the control limits at a frequency of more than one out of twenty then causes for the reference toxicity test failure must be examined and if problems are identified corrective action taken. The reference toxicity test must be repeated during the same month in which the exceedance occurred.

If two consecutive reference toxicity tests fall outside control limits, the possible cause(s) for the exceedance must be examined, corrective actions taken and a repeat of the reference toxicity test must take place immediately. Actions taken to resolve the problem must be reported.

V.1.a. Use of Concurrent Reference Toxicity Testing

In the case where concurrent reference toxicity testing is required due to a low frequency of testing with a particular method, if the reference toxicity test results fall slightly outside of laboratory established control limits, but the primary test met the TAC, the results of the primary test will be considered acceptable. However, if the results of the concurrent test fall well outside the established **upper** control limits i.e. ≥3 standard deviations for IC25s and LC50 values and ≥ two concentration intervals for NOECs or NOAECs, and even though the primary test meets TAC, the primary test will be considered unacceptable and must be repeated.

V.2. For the *C. dubia* test, the determination of TAC and formal statistical analyses must be performed using only the first three broods produced.

V.3. Test treatments must include 5 effluent concentrations and a dilution water control. An additional test treatment, at the permitted effluent concentration (% effluent), is required if it is not included in the dilution series.

VI. CHEMICAL ANALYSIS

As part of each toxicity test's daily renewal procedure, pH, specific conductance, dissolved oxygen (DO) and temperature must be measured at the beginning and end of each 24-hour period in each test treatment and the control(s).

The additional analysis that must be performed under this protocol is as specified and noted in the table below.

Parameter	Effluent	Receiving Water	ML (mg/l)
Hardness[1, 4]	x	x	0.5
Total Residual Chlorine (TRC)[2, 3, 4]	x		0.02
Alkalinity[4]	x	x	2.0
pH[4]	x	x	--
Specific Conductance[4]	x	x	--
Total Solids[6]	x		--
Total Dissolved Solids[6]	x		--
Ammonia[4]	x	x	0.1
Total Organic Carbon[6]	x	x	0.5
Total Metals[5]			
Cd	x	x	0.0005
Pb	x	x	0.0005
Cu	x	x	0.003
Zn	x	x	0.005
Ni	x	x	0.005
Al	x	x	0.02
Other as permit requires			

Notes:

1. Hardness may be determined by:

- APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
  -Method 2340B (hardness by calculation)
  -Method 2340C (titration)

2. Total Residual Chlorine may be performed using any of the following methods provided the required minimum limit (ML) is met.

- APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
  -Method 4500-CL E Low Level Amperometric Titration
  -Method 4500-CL G DPD Colorimetric Method
- USEPA 1983. Manual of Methods Analysis of Water and Wastes
  -Method 330.5

3. Required to be performed on the sample used for WET testing prior to its use for toxicity testing
4. Analysis is to be performed on samples and/or receiving water, as designated in the table above, from all three sampling events.
5. Analysis is to be performed on the initial sample(s) only unless the situation arises as stated in Section III, paragraph 4
6. Analysis to be performed on initial samples only

VII. TOXICITY TEST DATA ANALYSIS AND REVIEW

A. Test Review

1. Concentration / Response Relationship

A concentration/response relationship evaluation is required for test endpoint determinations from both Hypothesis Testing and Point Estimate techniques. The test report is to include documentation of this evaluation in support of the endpoint values reported. The dose-response review must be performed as required in Section 10.2.6 of EPA-821-R-02-013. Guidance for this review can be found at http://www.epa.gov/ZDWLWFHQFHP HWRRGVZ HWSGI Z HWXIGHSGI . In most cases, the review will result in one of the following three conclusions: (1) Results are reliable and reportable; (2) Results are anomalous and require explanation; or (3) Results are inconclusive and a retest with fresh samples is required.

2. Test Variability (Test Sensitivity)

This review step is separate from the determination of whether a test meets or does not meet TAC. Within test variability is to be examined for the purpose of evaluating test sensitivity. This evaluation is to be performed for the sub-lethal hypothesis testing endpoints reproduction and growth as required by the permit. The test report is to include documentation of this evaluation to support that the endpoint values reported resulted from a toxicity test of adequate sensitivity. This evaluation must be performed as required in Section 10.2.8 of EPA-821-R-02-013.

To determine the adequacy of test sensitivity, USEPA requires the calculation of test percent minimum significant difference (PMSD) values. In cases where NOEC determinations are made based on a non-parametric technique, calculation of a test PMSD value**,** for the sole purpose of assessing test sensitivity, shall be calculated using a comparable parametric statistical analysis technique. The calculated test PMSD is then compared to the upper and lower PMSD bounds shown for freshwater tests in Section 10.2.8.3, p. 52, Table 6 of EPA-821-R-02-013. The comparison will yield one of the following determinations.

- The test PMSD exceeds the PMSD upper bound test variability criterion in Table 6, the test results are considered highly variable and the test may not be sensitive enough to determine the presence of toxicity at the permit limit concentration (PLC). If the test results indicate that the discharge is not toxic at the PLC, then the test is considered insufficiently sensitive and must be repeated within 30 days of the initial test completion using fresh samples. If the test results indicate that the discharge is toxic at the PLC, the test is considered acceptable and does not have to be repeated.

- The test PMSD falls below the PMSD lower bound test variability criterion in Table 6, the test is determined to be very sensitive. In order to determine which treatment(s) are statistically significant and which are not, for the purpose of reporting a NOEC, the relative percent difference (RPD) between the control and each treatment must be calculated and compared to the lower PMSD boundary. See *Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the NPDES Program*, EPA 833-R-00-003, June 2002, Section 6.4.2. The following link: Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the NPDES Program can be used to locate the USEPA website containing this document. If the RPD for a treatment falls below the PMSD lower bound, the difference is considered statistically insignificant. If the RPD for a treatment is greater that the PMSD lower bound, then the treatment is considered statistically significant.

- The test PMSD falls within the PMSD upper and lower bounds in Table 6, the sub-lethal test endpoint values shall be reported as is.

B. Statistical Analysis

1. General - Recommended Statistical Analysis Method

Refer to general data analysis flowchart, EPA 821-R-02-013, page 43

For discussion on Hypothesis Testing, refer to EPA 821-R-02-013, Section 9.6

For discussion on Point Estimation Techniques, refer to EPA 821-R-02-013, Section 9.7

2. *Pimephales promelas*

Refer to survival hypothesis testing analysis flowchart, EPA 821-R-02-013, page 79

Refer to survival point estimate techniques flowchart, EPA 821-R-02-013, page 80

Refer to growth data statistical analysis flowchart, EPA 821-R-02-013, page 92

3. *Ceriodaphnia dubia*

Refer to survival data testing flowchart, EPA 821-R-02-013, page 168

Refer to reproduction data testing flowchart, EPA 821-R-02-013, page 173

VIII. TOXICITY TEST REPORTING

A report of results must include the following:

- Test summary sheets (2007 DMR Attachment F) which includes:
  - Facility name
  - NPDES permit number
  - Outfall number
  - Sample type
  - Sampling method
  - Effluent TRC concentration
  - Dilution water used
  - Receiving water name and sampling location
  - Test type and species
  - Test start date
  - Effluent concentrations tested (%) and permit limit concentration
  - Applicable reference toxicity test date and whether acceptable or not
  - Age, age range and source of test organisms used for testing
  - Results of TAC review for all applicable controls
  - Test sensitivity evaluation results (test PMSD for growth and reproduction)
  - Permit limit and toxicity test results
  - Summary of test sensitivity and concentration response evaluation

In addition to the summary sheets the report must include:

- A brief description of sample collection procedures
- Chain of custody documentation including names of individuals collecting samples, times and dates of sample collection, sample locations, requested analysis and lab receipt with time and date received, lab receipt personnel and condition of samples upon receipt at the lab(s)
- Reference toxicity test control charts
- All sample chemical/physical data generated, including minimum limits (MLs) and analytical methods used
- All toxicity test raw data including daily ambient test conditions, toxicity test chemistry, sample dechlorination details as necessary, bench sheets and statistical analysis
- A discussion of any deviations from test conditions
- Any further discussion of reported test results, statistical analysis and concentration-response relationship and test sensitivity review per species per endpoint

NPDES PART II STANDARD CONDITIONS
(January, 2007)

TABLE OF CONTENTS

PART II. A. GENERAL REQUIREMENTS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

a. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirements.

b. The CWA provides that any person who violates Section 301, 302, 306, 307, 308, 318, or 405 of the CWA or any permit condition or limitation implementing any of such sections in a permit issued under Section 402, or any requirement imposed in a pretreatment program approved under Section 402 (a)(3) or 402 (b)(8) of the CWA is subject to a civil penalty not to exceed $25,000 per day for each violation. Any person who negligently violates such requirements is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than 1 year, or both. Any person who knowingly violates such requirements is subject to a fine of not less than $5,000 nor more than $50,000 per day of violation, or by imprisonment for not more than 3 years, or both.

c. Any person may be assessed an administrative penalty by the Administrator for violating Section 301, 302, 306, 307, 308, 318, or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the CWA. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000.

Note: See 40 CFR §122.41(a)(2) for complete "Duty to Comply" regulations.

2. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or notifications of planned changes or anticipated noncompliance does not stay any permit condition.

3. Duty to Provide Information

The permittee shall furnish to the Regional Administrator, within a reasonable time, any information which the Regional Administrator may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Regional Administrator, upon request, copies of records required to be kept by this permit.

4. Reopener Clause

The Regional Administrator reserves the right to make appropriate revisions to this permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the CWA in order to bring all discharges into compliance with the CWA.

For any permit issued to a treatment works treating domestic sewage (including "sludge-only facilities"), the Regional Administrator or Director shall include a reopener clause to incorporate any applicable standard for sewage sludge use or disposal promulgated under Section 405 (d) of the CWA. The Regional Administrator or Director may promptly modify or revoke and reissue any permit containing the reopener clause required by this paragraph if the standard for sewage sludge use or disposal is more stringent than any requirements for sludge use or disposal in the permit, or contains a pollutant or practice not limited in the permit.

Federal regulations pertaining to permit modification, revocation and reissuance, and termination are found at 40 CFR §122.62, 122.63, 122.64, and 124.5.

5. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from responsibilities, liabilities or penalties to which the permittee is or may be subject under Section 311 of the CWA, or Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

6. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges.

7. Confidentiality of Information

a. In accordance with 40 CFR Part 2, any information submitted to EPA pursuant to these regulations may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR Part 2 (Public Information).

b. Claims of confidentiality for the following information will be denied:

(1) The name and address of any permit applicant or permittee;
(2) Permit applications, permits, and effluent data as defined in 40 CFR §2.302(a)(2).

c. Information required by NPDES application forms provided by the Regional Administrator under 40 CFR §122.21 may not be claimed confidential. This includes information submitted on the forms themselves and any attachments used to supply information required by the forms.

8. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee must apply for and obtain a new permit. The permittee shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Regional Administrator. (The Regional Administrator shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

9. State Authorities

Nothing in Part 122, 123, or 124 precludes more stringent State regulation of any activity covered by these regulations, whether or not under an approved State program.

10. Other Laws

The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, nor does it relieve the permittee of its obligation to comply with any other applicable Federal, State, or local laws and regulations.

PART II. B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of storm water pollution prevention plans. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Need to Halt or Reduce Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

4. Bypass

a. Definitions

(1) *Bypass* means the intentional diversion of waste streams from any portion of a treatment facility.

(2) *Severe property damage* means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can be reasonably expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypass not exceeding limitations

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of Paragraphs B.4.c. and 4.d. of this section.

c. Notice

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
(2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph D.1.e. of this part (Twenty-four hour reporting).

d. Prohibition of bypass

Bypass is prohibited, and the Regional Administrator may take enforcement action against a permittee for bypass, unless:

(1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
(3) i) The permittee submitted notices as required under Paragraph 4.c. of this section.
ii) The Regional Administrator may approve an anticipated bypass, after considering its adverse effects, if the Regional Administrator determines that it will meet the three conditions listed above in paragraph 4.d. of this section.

5. Upset

a. Definition. *Upset* means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph B.5.c. of this section are met. No determination made during

administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the permittee can identify the cause(s) of the upset;
(2) The permitted facility was at the time being properly operated;
(3) The permittee submitted notice of the upset as required in paragraphs D.1.a. and 1.e. (Twenty-four hour notice); and
(4) The permittee complied with any remedial measures required under B.3. above.

d. Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

PART II. C. MONITORING REQUIREMENTS

1. Monitoring and Records

a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

b. Except for records for monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application except for the information concerning storm water discharges which must be retained for a total of 6 years. This retention period may be extended by request of the Regional Administrator at any time.

c. Records of monitoring information shall include:

(1) The date, exact place, and time of sampling or measurements;
(2) The individual(s) who performed the sampling or measurements;
(3) The date(s) analyses were performed;
(4) The individual(s) who performed the analyses;
(5) The analytical techniques or methods used; and
(6) The results of such analyses.

d. Monitoring results must be conducted according to test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, unless other test procedures have been specified in the permit.

e. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by

imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

2. Inspection and Entry

The permittee shall allow the Regional Administrator or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location.

PART II. D. REPORTING REQUIREMENTS

1. Reporting Requirements

a. Planned Changes. The permittee shall give notice to the Regional Administrator as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is only required when:

(1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR§122.29(b); or
(2) The alteration or addition could significantly change the nature or increase the quantities of the pollutants discharged. This notification applies to pollutants which are subject neither to the effluent limitations in the permit, nor to the notification requirements at 40 CFR§122.42(a)(1).
(3) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition or change may justify the application of permit conditions different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

b. Anticipated noncompliance. The permittee shall give advance notice to the Regional Administrator of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

c. Transfers. This permit is not transferable to any person except after notice to the Regional Administrator. The Regional Administrator may require modification or revocation and reissuance of the permit to change the name of the permittee and

incorporate such other requirements as may be necessary under the CWA. (See 40 CFR Part 122.61; in some cases, modification or revocation and reissuance is mandatory.)

d. Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(1) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.

(2) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in the permit, the results of the monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.

(3) Calculations for all limitations which require averaging or measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

e. Twenty-four hour reporting.

(1) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances.

A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(2) The following shall be included as information which must be reported within 24 hours under this paragraph.

(a) Any unanticipated bypass which exceeds any effluent limitation in the permit. (See 40 CFR §122.41(g).)
(b) Any upset which exceeds any effluent limitation in the permit.
(c) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Regional Administrator in the permit to be reported within 24 hours. (See 40 CFR §122.44(g).)

(3) The Regional Administrator may waive the written report on a case-by-case basis for reports under Paragraph D.1.e. if the oral report has been received within 24 hours.

f. Compliance Schedules. Reports of compliance or noncompliance with, any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

g. Other noncompliance. The permittee shall report all instances of noncompliance not reported under Paragraphs D.1.d., D.1.e., and D.1.f. of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in Paragraph D.1.e. of this section.

h. Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Administrator, it shall promptly submit such facts or information.

2. Signatory Requirement

a. All applications, reports, or information submitted to the Regional Administrator shall be signed and certified. (See 40 CFR §122.22)

b. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 2 years per violation, or by both.

3. Availability of Reports.

Except for data determined to be confidential under Paragraph A.8. above, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the State water pollution control agency and the Regional Administrator. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statements on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the CWA.

PART II. E. DEFINITIONS AND ABBREVIATIONS

1. Definitions for Individual NPDES Permits including Storm Water Requirements

Administrator means the Administrator of the United States Environmental Protection Agency, or an authorized representative.

Applicable standards and limitations means all, State, interstate, and Federal standards and limitations to which a "discharge", a "sewage sludge use or disposal practice", or a related activity is subject to, including "effluent limitations", water quality standards, standards of performance, toxic effluent standards or prohibitions, "best management practices", pretreatment standards, and "standards for sewage sludge use and disposal" under Sections 301, 302, 303, 304, 306, 307, 308, 403, and 405 of the CWA.

Application means the EPA standard national forms for applying for a permit, including any additions, revisions, or modifications to the forms; or forms approved by EPA for use in "approved States", including any approved modifications or revisions.

Average means the arithmetic mean of values taken at the frequency required for each parameter over the specified period. For total and/or fecal coliforms and Escherichia coli, the average shall be the geometric mean.

Average monthly discharge limitation means the highest allowable average of "daily discharges" over a calendar month calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

Average weekly discharge limitation means the highest allowable average of "daily discharges" measured during the calendar week divided by the number of "daily discharges" measured during the week.

Best Management Practices (BMPs) 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.

Best Professional Judgment (BPJ) means a case-by-case determination of Best Practicable Treatment (BPT), Best Available Treatment (BAT), or other appropriate technology-based standard based on an evaluation of the available technology to achieve a particular pollutant reduction and other factors set forth in 40 CFR §125.3 (d).

Coal Pile Runoff means the rainfall runoff from or through any coal storage pile.

Composite Sample means a sample consisting of a minimum of eight grab samples of equal volume collected at equal intervals during a 24-hour period (or lesser period as specified in the section on Monitoring and Reporting) and combined proportional to flow, or a sample consisting of the same number of grab samples, or greater, collected proportionally to flow over that same time period.

Construction Activities - The following definitions apply to construction activities:

(a) Commencement of Construction is the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction activities.

(b) Dedicated portable asphalt plant is a portable asphalt plant located on or contiguous to a construction site and that provides asphalt only to the construction site that the plant is located on or adjacent to. The term dedicated portable asphalt plant does not include facilities that are subject to the asphalt emulsion effluent limitation guideline at 40 CFR Part 443.

(c) Dedicated portable concrete plant is a portable concrete plant located on or contiguous to a construction site and that provides concrete only to the construction site that the plant is located on or adjacent to.

(d) Final Stabilization means that all soil disturbing activities at the site have been complete, and that a uniform perennial vegetative cover with a density of 70% of the cover for unpaved areas and areas not covered by permanent structures has been established or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

(e) Runoff coefficient means the fraction of total rainfall that will appear at the conveyance as runoff.

Contiguous zone means the entire zone established by the United States under Article 24 of the Convention on the Territorial Sea and the Contiguous Zone.

Continuous discharge means a "discharge" which occurs without interruption throughout the operating hours of the facility except for infrequent shutdowns for maintenance, process changes, or similar activities.

CWA means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended by Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, and Pub. L. 97-117; 33 USC §§1251 et seq.

Daily Discharge means the discharge of a pollutant measured during the calendar day or any other 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Director normally means the person authorized to sign NPDES permits by EPA or the State or an authorized representative. Conversely, it also could mean the Regional Administrator or the State Director as the context requires.

Discharge Monitoring Report Form (DMR) means the EPA standard national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by "approved States" as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

Discharge of a pollutant means:

(a) Any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source", or

(b) Any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation (See "Point Source" definition).

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead

to a treatment works; and discharges through pipes, sewers, or other conveyances leading into privately owned treatment works.

This term does not include an addition of pollutants by any "indirect discharger."

Effluent limitation means any restriction imposed by the Regional Administrator on quantities, discharge rates, and concentrations of "pollutants" which are "discharged" from "point sources" into "waters of the United States", the waters of the "contiguous zone", or the ocean.

Effluent limitation guidelines means a regulation published by the Administrator under Section 304(b) of CWA to adopt or revise "effluent limitations".

EPA means the United States "Environmental Protection Agency".

Flow-weighted composite sample means a composite sample consisting of a mixture of aliquots where the volume of each aliquot is proportional to the flow rate of the discharge.

Grab Sample – An individual sample collected in a period of less than 15 minutes.

Hazardous Substance means any substance designated under 40 CFR Part 116 pursuant to Section 311 of the CWA.

Indirect Discharger means a non-domestic discharger introducing pollutants to a publicly owned treatment works.

Interference means a discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

(a) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and

(b) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act (CWA), the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resources Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SDWA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection Research and Sanctuaries Act.

Landfill means an area of land or an excavation in which wastes are placed for permanent disposal, and which is not a land application unit, surface impoundment, injection well, or waste pile.

Land application unit means an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for treatment or disposal.

Large and Medium municipal separate storm sewer system means all municipal separate storm sewers that are either: (i) located in an incorporated place (city) with a population of 100,000 or more as determined by the latest Decennial Census by the Bureau of Census (these cities are listed in Appendices F and 40 CFR Part 122); or (ii) located in the counties with unincorporated urbanized

populations of 100,000 or more, except municipal separate storm sewers that are located in the incorporated places, townships, or towns within such counties (these counties are listed in Appendices H and I of 40 CFR 122); or (iii) owned or operated by a municipality other than those described in Paragraph (i) or (ii) and that are designated by the Regional Administrator as part of the large or medium municipal separate storm sewer system.

Maximum daily discharge limitation means the highest allowable "daily discharge" concentration that occurs only during a normal day (24-hour duration).

Maximum daily discharge limitation (as defined for the Steam Electric Power Plants only) when applied to Total Residual Chlorine (TRC) or Total Residual Oxidant (TRO) is defined as "maximum concentration" or "Instantaneous Maximum Concentration" during the two hours of a chlorination cycle (or fraction thereof) prescribed in the Steam Electric Guidelines, 40 CFR Part 423. These three synonymous terms all mean "a value that shall not be exceeded" during the two-hour chlorination cycle. This interpretation differs from the specified NPDES Permit requirement, 40 CFR § 122.2, where the two terms of "Maximum Daily Discharge" and "Average Daily Discharge" concentrations are specifically limited to the daily (24-hour duration) values.

Municipality means a city, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribe organization, or a designated and approved management agency under Section 208 of the CWA.

National Pollutant Discharge Elimination System means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318, and 405 of the CWA. The term includes an "approved program".

New Discharger means any building, structure, facility, or installation:

(a) From which there is or may be a "discharge of pollutants";

(b) That did not commence the "discharge of pollutants" at a particular "site" prior to August 13, 1979;

(c) Which is not a "new source"; and

(d) Which has never received a finally effective NPDES permit for discharges at that "site".

This definition includes an "indirect discharger" which commences discharging into "waters of the United States" after August 13, 1979. It also includes any existing mobile point source (other than an offshore or coastal oil and gas exploratory drilling rig or a coastal oil and gas exploratory drilling rig or a coastal oil and gas developmental drilling rig) such as a seafood processing rig, seafood processing vessel, or aggregate plant, that begins discharging at a "site" for which it does not have a permit; and any offshore rig or coastal mobile oil and gas exploratory drilling rig or coastal mobile oil and gas developmental drilling rig that commences the discharge of pollutants after August 13, 1979, at a "site" under EPA's permitting jurisdiction for which it is not covered by an individual or general permit and which is located in an area determined by the Regional Administrator in the issuance of a final permit to be in an area of biological concern. In determining whether an area is an area of biological concern, the Regional Administrator shall consider the factors specified in 40 CFR §§125.122 (a) (1) through (10).

An offshore or coastal mobile exploratory drilling rig or coastal mobile developmental drilling rig will be considered a "new discharger" only for the duration of its discharge in an area of biological concern.

New source means any building, structure, facility, or installation from which there is or may be a "discharge of pollutants", the construction of which commenced:

(a) After promulgation of standards of performance under Section 306 of CWA which are applicable to such source, or

(b) After proposal of standards of performance in accordance with Section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal.

NPDES means "National Pollutant Discharge Elimination System".

Owner or operator means the owner or operator of any "facility or activity" subject to regulation under the NPDES programs.

Pass through means a Discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

Permit means an authorization, license, or equivalent control document issued by EPA or an "approved" State.

Person means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

Point Source means any discernible, confined, and discrete conveyance, including but not limited to any pipe ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff (see 40 CFR §122.2).

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. §§2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean:

(a) Sewage from vessels; or

(b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well is used either to facilitate production or for disposal purposes is approved by the authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

Primary industry category means any industry category listed in the NRDC settlement agreement (Natural Resources Defense Council et al. v. Train, 8 E.R.C. 2120 (D.D.C. 1976), modified 12 E.R.C. 1833 (D. D.C. 1979)); also listed in Appendix A of 40 CFR Part 122.

Privately owned treatment works means any device or system which is (a) used to treat wastes from any facility whose operation is not the operator of the treatment works or (b) not a "POTW".

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly Owned Treatment Works (POTW) means any facility or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a "State" or "municipality".

This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

Regional Administrator means the Regional Administrator, EPA, Region I, Boston, Massachusetts.

Secondary Industry Category means any industry which is not a "primary industry category".

Section 313 water priority chemical means a chemical or chemical category which:

(1) is listed at 40 CFR §372.65 pursuant to Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) (also known as Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986);

(2) is present at or above threshold levels at a facility subject to EPCRA Section 313 reporting requirements; and

(3) satisfies at least one of the following criteria:

(i) are listed in Appendix D of 40 CFR Part 122 on either Table II (organic priority pollutants), Table III (certain metals, cyanides, and phenols), or Table V (certain toxic pollutants and hazardous substances);
(ii) are listed as a hazardous substance pursuant to Section 311(b)(2)(A) of the CWA at 40 CFR §116.4; or
(iii) are pollutants for which EPA has published acute or chronic water quality criteria.

Septage means the liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system, or a holding tank when the system is cleaned or maintained.

Sewage Sludge means any solid, semisolid, or liquid residue removed during the treatment of municipal wastewater or domestic sewage. Sewage sludge includes, but is not limited to, solids removed during primary, secondary, or advanced wastewater treatment, scum, septage, portable toilet pumpings, Type III Marine Sanitation Device pumpings (33 CFR Part 159), and sewage sludge products. Sewage sludge does not include grit or screenings, or ash generated during the incineration of sewage sludge.

Sewage sludge use or disposal practice means the collection, storage, treatment, transportation, processing, monitoring, use, or disposal of sewage sludge.

Significant materials includes, but is not limited to: raw materials, fuels, materials such as solvents, detergents, and plastic pellets, raw materials used in food processing or production, hazardous substance designated under section 101(14) of CERCLA, any chemical the facility is required to report pursuant to EPCRA Section 313, fertilizers, pesticides, and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

Significant spills includes, but is not limited to, releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the CWA (see 40 CFR §110.10 and §117.21) or Section 102 of CERCLA (see 40 CFR § 302.4).

Sludge-only facility means any "treatment works treating domestic sewage" whose methods of sewage sludge use or disposal are subject to regulations promulgated pursuant to Section 405(d) of the CWA, and is required to obtain a permit under 40 CFR §122.1(b)(3).

State means any of the 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, the Trust Territory of the Pacific Islands.

Storm Water means storm water runoff, snow melt runoff, and surface runoff and drainage.

Storm water discharge associated with industrial activity means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. (See 40 CFR §122.26 (b)(14) for specifics of this definition.

Time-weighted composite means a composite sample consisting of a mixture of equal volume aliquots collected at a constant time interval.

Toxic pollutants means any pollutant listed as toxic under Section 307 (a)(1) or, in the case of "sludge use or disposal practices" any pollutant identified in regulations implementing Section 405(d) of the CWA.

Treatment works treating domestic sewage means a POTW or any other sewage sludge or wastewater treatment devices or systems, regardless of ownership (including federal facilities), used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge. This definition does not include septic tanks or similar devices.

For purposes of this definition, "domestic sewage" includes waste and wastewater from humans or household operations that are discharged to or otherwise enter a treatment works. In States where there is no approved State sludge management program under Section 405(f) of the CWA, the Regional Administrator may designate any person subject to the standards for sewage sludge use and disposal in 40 CFR Part 503 as a "treatment works treating domestic sewage", where he or she finds that there is a potential for adverse effects on public health and the environment from poor sludge quality or poor sludge handling, use or disposal practices, or where he or she finds that such designation is necessary to ensure that such person is in compliance with 40 CFR Part 503.

Waste Pile means any non-containerized accumulation of solid, non-flowing waste that is used for treatment or storage.

Waters of the United States means:

(a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of tide;

(b) All interstate waters, including interstate "wetlands";

(c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands", sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

(1) Which are or could be used by interstate or foreign travelers for recreational or other purpose;

(2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

(3) Which are used or could be used for industrial purposes by industries in interstate commerce;

(d) All impoundments of waters otherwise defined as waters of the United States under this definition;

(e) Tributaries of waters identified in Paragraphs (a) through (d) of this definition;

(f) The territorial sea; and

(g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in Paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds as defined in 40 CFR §423.11(m) which also meet the criteria of this definition) are not waters of the United States.

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Whole Effluent Toxicity (WET) means the aggregate toxic effect of an effluent measured directly by a toxicity test. (See Abbreviations Section, following, for additional information.)

2. Definitions for NPDES Permit Sludge Use and Disposal Requirements.

Active sewage sludge unit is a sewage sludge unit that has not closed.

Aerobic Digestion is the biochemical decomposition of organic matter in sewage sludge into carbon dioxide and water by microorganisms in the presence of air.

Agricultural Land is land on which a food crop, a feed crop, or a fiber crop is grown. This includes range land and land used as pasture.

Agronomic rate is the whole sludge application rate (dry weight basis) designed:

(1) To provide the amount of nitrogen needed by the food crop, feed crop, fiber crop, cover crop, or vegetation grown on the land; and

(2) To minimize the amount of nitrogen in the sewage sludge that passes below the root zone of the crop or vegetation grown on the land to the ground water.

Air pollution control device is one or more processes used to treat the exit gas from a sewage sludge incinerator stack.

Anaerobic digestion is the biochemical decomposition of organic matter in sewage sludge into methane gas and carbon dioxide by microorganisms in the absence of air.

Annual pollutant loading rate is the maximum amount of a pollutant that can be applied to a unit area of land during a 365 day period.

Annual whole sludge application rate is the maximum amount of sewage sludge (dry weight basis) that can be applied to a unit area of land during a 365 day period.

Apply sewage sludge or sewage sludge applied to the land means land application of sewage sludge.

Aquifer is a geologic formation, group of geologic formations, or a portion of a geologic formation capable of yielding ground water to wells or springs.

Auxiliary fuel is fuel used to augment the fuel value of sewage sludge. This includes, but is not limited to, natural gas, fuel oil, coal, gas generated during anaerobic digestion of sewage sludge, and municipal solid waste (not to exceed 30 percent of the dry weight of the sewage sludge and auxiliary fuel together). Hazardous wastes are not auxiliary fuel.

Base flood is a flood that has a one percent chance of occurring in any given year (i.e. a flood with a magnitude equaled once in 100 years).

Bulk sewage sludge is sewage sludge that is not sold or given away in a bag or other container for application to the land.

Contaminate an aquifer means to introduce a substance that causes the maximum contaminant level for nitrate in 40 CFR §141.11 to be exceeded in ground water or that causes the existing concentration of nitrate in the ground water to increase when the existing concentration of nitrate in the ground water exceeds the maximum contaminant level for nitrate in 40 CFR §141.11.

Class I sludge management facility is any publicly owned treatment works (POTW), as defined in 40 CFR §501.2, required to have an approved pretreatment program under 40 CFR §403.8 (a) (including any POTW located in a state that has elected to assume local program responsibilities pursuant to 40 CFR §403.10 (e) and any treatment works treating domestic sewage, as defined in 40 CFR § 122.2,

classified as a Class I sludge management facility by the EPA Regional Administrator, or, in the case of approved state programs, the Regional Administrator in conjunction with the State Director, because of the potential for sewage sludge use or disposal practice to affect public health and the environment adversely.

Control efficiency is the mass of a pollutant in the sewage sludge fed to an incinerator minus the mass of that pollutant in the exit gas from the incinerator stack divided by the mass of the pollutant in the sewage sludge fed to the incinerator.

Cover is soil or other material used to cover sewage sludge placed on an active sewage sludge unit.

Cover crop is a small grain crop, such as oats, wheat, or barley, not grown for harvest.

Cumulative pollutant loading rate is the maximum amount of inorganic pollutant that can be applied to an area of land.

Density of microorganisms is the number of microorganisms per unit mass of total solids (dry weight) in the sewage sludge.

Dispersion factor is the ratio of the increase in the ground level ambient air concentration for a pollutant at or beyond the property line of the site where the sewage sludge incinerator is located to the mass emission rate for the pollutant from the incinerator stack.

Displacement is the relative movement of any two sides of a fault measured in any direction.

Domestic septage is either liquid or solid material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or similar treatment works that receives only domestic sewage. Domestic septage does not include liquid or solid material removed from a septic tank, cesspool, or similar treatment works that receives either commercial wastewater or industrial wastewater and does not include grease removed from a grease trap at a restaurant.

Domestic sewage is waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works.

Dry weight basis means calculated on the basis of having been dried at 105 degrees Celsius (°C) until reaching a constant mass (i.e. essentially 100 percent solids content).

Fault is a fracture or zone of fractures in any materials along which strata on one side are displaced with respect to the strata on the other side.

Feed crops are crops produced primarily for consumption by animals.

Fiber crops are crops such as flax and cotton.

Final cover is the last layer of soil or other material placed on a sewage sludge unit at closure.

Fluidized bed incinerator is an enclosed device in which organic matter and inorganic matter in sewage sludge are combusted in a bed of particles suspended in the combustion chamber gas.

Food crops are crops consumed by humans. These include, but are not limited to, fruits, vegetables, and tobacco.

Forest is a tract of land thick with trees and underbrush.

Ground water is water below the land surface in the saturated zone.

Holocene time is the most recent epoch of the Quaternary period, extending from the end of the Pleistocene epoch to the present.

Hourly average is the arithmetic mean of all the measurements taken during an hour. At least two measurements must be taken during the hour.

Incineration is the combustion of organic matter and inorganic matter in sewage sludge by high temperatures in an enclosed device.

Industrial wastewater is wastewater generated in a commercial or industrial process.

Land application is the spraying or spreading of sewage sludge onto the land surface; the injection of sewage sludge below the land surface; or the incorporation of sewage sludge into the soil so that the sewage sludge can either condition the soil or fertilize crops or vegetation grown in the soil.

Land with a high potential for public exposure is land that the public uses frequently. This includes, but is not limited to, a public contact site and reclamation site located in a populated area (e.g., a construction site located in a city).

Land with low potential for public exposure is land that the public uses infrequently. This includes, but is not limited to, agricultural land, forest and a reclamation site located in an unpopulated area (e.g., a strip mine located in a rural area).

Leachate collection system is a system or device installed immediately above a liner that is designed, constructed, maintained, and operated to collect and remove leachate from a sewage sludge unit.

Liner is soil or synthetic material that has a hydraulic conductivity of 1×10^{-7} centimeters per second or less.

Lower explosive limit for methane gas is the lowest percentage of methane gas in air, by volume, that propagates a flame at 25 degrees Celsius and atmospheric pressure.

Monthly average (Incineration) is the arithmetic mean of the hourly averages for the hours a sewage sludge incinerator operates during the month.

Monthly average (Land Application) is the arithmetic mean of all measurements taken during the month.

Municipality means a city, town, borough, county, parish, district, association, or other public body (including an intermunicipal agency of two or more of the foregoing entities) created by or under State law; an Indian tribe or an authorized Indian tribal organization having jurisdiction over sewage sludge management; or a designated and approved management agency under section 208 of the CWA, as amended. The definition includes a special district created under state law, such as a water district, sewer district, sanitary district, utility district, drainage district, or similar entity, or an integrated waste management facility as defined in section 201 (e) of the CWA, as amended, that has as one of its principal responsibilities the treatment, transport, use or disposal of sewage sludge.

Other container is either an open or closed receptacle. This includes, but is not limited to, a bucket, a box, a carton, and a vehicle or trailer with a load capacity of one metric ton or less.

Pasture is land on which animals feed directly on feed crops such as legumes, grasses, grain stubble, or stover.

Pathogenic organisms are disease-causing organisms. These include, but are not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.

Permitting authority is either EPA or a State with an EPA-approved sludge management program.

Person is an individual, association, partnership, corporation, municipality, State or Federal Agency, or an agent or employee thereof.

Person who prepares sewage sludge is either the person who generates sewage sludge during the treatment of domestic sewage in a treatment works or the person who derives a material from sewage sludge.

pH means the logarithm of the reciprocal of the hydrogen ion concentration; a measure of the acidity or alkalinity of a liquid or solid material.

Place sewage sludge or sewage sludge placed means disposal of sewage sludge on a surface disposal site.

Pollutant (as defined in sludge disposal requirements) is an organic substance, an inorganic substance, a combination or organic and inorganic substances, or pathogenic organism that, after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food chain, could on the basis on information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction) or physical deformations in either organisms or offspring of the organisms.

Pollutant limit (for sludge disposal requirements) is a numerical value that describes the amount of a pollutant allowed per unit amount of sewage sludge (e.g., milligrams per kilogram of total solids); the amount of pollutant that can be applied to a unit of land (e.g., kilograms per hectare); or the volume of the material that can be applied to the land (e.g., gallons per acre).

Public contact site is a land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.

Qualified ground water scientist is an individual with a baccalaureate or post-graduate degree in the natural sciences or engineering who has sufficient training and experience in ground water hydrology and related fields, as may be demonstrated by State registration, professional certification, or completion of accredited university programs, to make sound professional judgments regarding ground water monitoring, pollutant fate and transport, and corrective action.

Range land is open land with indigenous vegetation.

Reclamation site is drastically disturbed land that is reclaimed using sewage sludge. This includes, but is not limited to, strip mines and construction sites.

Risk specific concentration is the allowable increase in the average daily ground level ambient air concentration for a pollutant from the incineration of sewage sludge at or beyond the property line of a site where the sewage sludge incinerator is located.

Runoff is rainwater, leachate, or other liquid that drains overland on any part of a land surface and runs off the land surface.

Seismic impact zone is an area that has 10 percent or greater probability that the horizontal ground level acceleration to the rock in the area exceeds 0.10 gravity once in 250 years.

Sewage sludge is a solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to:, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in treatment works.

Sewage sludge feed rate is either the average daily amount of sewage sludge fired in all sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located for the number of days in a 365 day period that each sewage sludge incinerator operates, or the average daily design capacity for all sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located.

Sewage sludge incinerator is an enclosed device in which only sewage sludge and auxiliary fuel are fired.

Sewage sludge unit is land on which only sewage sludge is placed for final disposal. This does not include land on which sewage sludge is either stored or treated. Land does not include waters of the United States, as defined in 40 CFR §122.2.

Sewage sludge unit boundary is the outermost perimeter of an active sewage sludge unit.

Specific oxygen uptake rate (SOUR) is the mass of oxygen consumed per unit time per unit mass of total solids (dry weight basis) in sewage sludge.

Stack height is the difference between the elevation of the top of a sewage sludge incinerator stack and the elevation of the ground at the base of the stack when the difference is equal to or less than 65 meters. When the difference is greater than 65 meters, stack height is the creditable stack height determined in accordance with 40 CFR §51.100 (ii).

State is one of the United States of America, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Trust Territory of the Pacific Islands, the Commonwealth of the Northern Mariana Islands, and an Indian tribe eligible for treatment as a State pursuant to regulations promulgated under the authority of section 518(e) of the CWA.

Store or storage of sewage sludge is the placement of sewage sludge on land on which the sewage sludge remains for two years or less. This does not include the placement of sewage sludge on land for treatment.

Surface disposal site is an area of land that contains one or more active sewage sludge units.

Total hydrocarbons means the organic compounds in the exit gas from a sewage sludge incinerator stack measured using a flame ionization detection instrument referenced to propane.

Total solids are the materials in sewage sludge that remain as residue when the sewage sludge is dried at 103 to 105 degrees Celsius.

Treat or treatment of sewage sludge is the preparation of sewage sludge for final use or disposal. This includes, but is not limited to, thickening, stabilization, and dewatering of sewage sludge. This does not include storage of sewage sludge.

Treatment works is either a federally owned, publicly owned, or privately owned device or system used to treat (including recycle and reclaim) either domestic sewage or a combination of domestic sewage and industrial waste of a liquid nature.

Unstable area is land subject to natural or human-induced forces that may damage the structural components of an active sewage sludge unit. This includes, but is not limited to, land on which the soils are subject to mass movement.

Unstabilized solids are organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Vector attraction is the characteristic of sewage sludge that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

Volatile solids is the amount of the total solids in sewage sludge lost when the sewage sludge is combusted at 550 degrees Celsius in the presence of excess air.

Wet electrostatic precipitator is an air pollution control device that uses both electrical forces and water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

Wet scrubber is an air pollution control device that uses water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

3. Commonly Used Abbreviations

BOD	Five-day biochemical oxygen demand unless otherwise specified
CBOD	Carbonaceous BOD
CFS	Cubic feet per second
COD	Chemical oxygen demand
Chlorine	
Cl_2	Total residual chlorine
TRC	Total residual chlorine which is a combination of free available chlorine (FAC, see below) and combined chlorine (chloramines, etc.)

TRO	Total residual chlorine in marine waters where halogen compounds are present
FAC	Free available chlorine (aqueous molecular chlorine, hypochlorous acid, and hypochlorite ion)
Coliform	
Coliform, Fecal	Total fecal coliform bacteria
Coliform, Total	Total coliform bacteria
Cont. (Continuous)	Continuous recording of the parameter being monitored, i.e. flow, temperature, pH, etc.
Cu. M/day or M^3/day	Cubic meters per day
DO	Dissolved oxygen
kg/day	Kilograms per day
lbs/day	Pounds per day
mg/l	Milligram(s) per liter
ml/l	Milliliters per liter
MGD	Million gallons per day
Nitrogen	
Total N	Total nitrogen
NH_3-N	Ammonia nitrogen as nitrogen
NO_3-N	Nitrate as nitrogen
NO_2-N	Nitrite as nitrogen
NO_3-NO_2	Combined nitrate and nitrite nitrogen as nitrogen
TKN	Total Kjeldahl nitrogen as nitrogen
Oil & Grease	Freon extractable material
PCB	Polychlorinated biphenyl
pH	A measure of the hydrogen ion concentration. A measure of the acidity or alkalinity of a liquid or material
Surfactant	Surface-active agent

Temp. °C	Temperature in degrees Centigrade
Temp. °F	Temperature in degrees Fahrenheit
TOC	Total organic carbon
Total P	Total phosphorus
TSS or NFR	Total suspended solids or total nonfilterable residue
Turb. or Turbidity	Turbidity measured by the Nephelometric Method (NTU)
ug/l	Microgram(s) per liter
WET	"Whole effluent toxicity" is the total effect of an effluent measured directly with a toxicity test.
C-NOEC	"Chronic (Long-term Exposure Test) – No Observed Effect Concentration". The highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specified time of observation.
A-NOEC	"Acute (Short-term Exposure Test) – No Observed Effect Concentration" (see C-NOEC definition).
LC_{50}	LC_{50} is the concentration of a sample that causes mortality of 50% of the test population at a specific time of observation. The LC_{50} = 100% is defined as a sample of undiluted effluent.
ZID	Zone of Initial Dilution means the region of initial mixing surrounding or adjacent to the end of the outfall pipe or diffuser ports.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1 - NEW ENGLAND
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

FACT SHEET

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

NPDES PERMIT NO.: **MA0040231**

PUBLIC NOTICE START AND END DATES: April 8, 2015-June 6, 2015

NAME AND ADDRESS OF APPLICANT:

Pittsfield Economic Development Authority
81 Kellogg Street
Pittsfield, Massachusetts 01201

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

William Stanley Business Park of the Berkshires
Generally bounded by East Street,
Silver Lake Boulevard, Kellogg Street, and Tyler Street
Pittsfield, Massachusetts 01201

RECEIVING WATERS: **Silver Lake**

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

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Appendices

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I. Proposed Action, Type of Facility and Discharge Location

The above-named applicant has applied to the U.S. Environmental Protection Agency for reissuance of its National Pollutant Discharge Elimination System (NPDES) permit to discharge to Silver Lake. The current permit expired on February 7, 1997 and is still in effect[1]. The facility is a former industrial site currently being redeveloped into a business park. The facility's location is shown on **Figure 1, Location Map** of this fact sheet.

(a) Site Description

William Stanley Business Park of the Berkshires, Pittsfield, Massachusetts is located on 52 acres of the former General Electric Company (GE) plant area. Until 1990, GE manufactured and serviced large electrical transformer equipment and military hardware on this site. These operations resulted in the release of transformer fluids, containing polychlorinated biphenyls (PCBs), to the ground and into the stormwater collection system. At that time, the site was mostly impervious, with several large buildings and parking lots.

In 1999, GE, PEDA, and the City of Pittsfield signed an agreement, known as the DEDA[2], to facilitate the redevelopment of a portion of the GE property at the GE-Pittsfield site. GE transferred approximately 26 acres to PEDA in 2005, an area shown in blue on **Figure 2, PEDA Site Map.** An additional 26 acres was transferred in 2011-2012; these areas are shown in green on **Figure 2.** Also, **Figure 2** shows 91 acres off-site (i.e. not controlled by PEDA) that drain to Outfall 001 in purple.

South Side Park

The southern 26 acres, which PEDA calls the "South Side Park", have changed considerably since the 2005 transfer. GE demolished all buildings on the site and either buried or removed the demolition waste before transferring parcels. PEDA redeveloped the southern 26 acres of the property, including but not limited to the following changes:

(1) Construction of a new stormwater conveyance system relying on grassy swales, replacing a system of pavement and pipes;
(2) Creation of grassy building lots after the removal of pavement and building foundations;
(3) Construction of a water quality basin to treat Outfall 001, replacing Oil Water Separator (OWS) 31W which previously treated flow to Outfall 001,
(4) Consolidation of former Outfalls 001, 004, and 01A into a new Outfall 001 located approximately 200 feet to the north of the old outfall.

A flow schematic, showing the new Outfall 001 treatment system, is shown on **Figure 3, PEDA Grading and Drainage Plan.**

The Consent Decree[3] for the former GE factory area requires PEDA to maintain pavement in four areas of the site where building demolition debris was buried. This includes a large parking lot and small paved area on the southeastern portion of the site, a paved area where the former power plant was located on the southwestern area of the site, and a small paved area on the northeastern area of the site. Currently, there are two structures on the site, a solar panel array and a financial services building.

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[1] See I.(c) below for permitting history
[2] The agreement is known as the Definitive Economic Development Agreement (DEDA).
[3] See Section I.(b) on page 6 of this document for more information on the Consent Decree.

North Side Park

The northern half of the site ("North Side Park") was transferred to PEDA in 2011-2012. This portion of the site consists mostly of pavement and building foundations. North Side Park contains an area previously known as the "Teens Complex" area of the GE Factory Site. Based on preliminary source tracking, subsurface drainage infrastructure in this area appears to be the primary source of PCBs discharging from Outfall 001. PEDA plans to redevelop this parcel in a similar fashion to the south half of the site; however, no significant redevelopment activities have occurred yet. PEDA recently reported that it has obtained a commitment for a portion of the funding needed to design and implement the plan for mitigating PCB contributions from the Teens Complex.

On June 25, 2014 heavy stormwater flows resulted in a breach of the spillway between the north forebay and the water quality basin. This was the fourth such breach in the north forebay, and according to PEDA's consultant, was caused by sediment buildup. The sediment reduced the forebay's storage capacity, and in the process created a channel for the stormwater to enter the spillway at high velocities. MassDEP was notified of the breach on July 7, 2014, and on August 28, 2014 sent PEDA a letter requiring that the spillway be repaired within 14 days as part of compliance with the MassDEP's Grant of Environmental Restriction and Easement. In September 2014, PEDA submitted preliminary plans to the MassDEP and EPA to reinforce the spillway by using larger rocks and grout to anchor the rocks in place. In addition, PEDA conducted temporary repairs of the spillway on September 18, 2014. This consisted of placing riprap in the area of the spillway that eroded.

In a January 13, 2015 letter from the City of Pittsfield and PEDA to Region 1 EPA, the City and PEDA explore several possible future actions related to this permitted discharge and ways to address reducing pollutant discharges. This letter is Appendix F to this Factsheet. Representatives of PEDA and EPA subsequently discussed these possible actions in general terms.

One possibility identified in the letter is "disconnecting the portion of PEDA property known as the Teens Complex." The disconnection itself is not precluded by the current permit or draft permit. This may be a viable way to reduce the discharge of pollutants through Outfall 001. Such an action is identified in Part I.C.8.a.iv. of the draft permit as a possible site-specific BMP.

Another possible action described in the January 13, 2015 letter is "transferring responsibilities for NPDES compliance to the City of Pittsfield" through a change in ownership and operational control for the discharge. It is noted that PEDA currently owns the property, and Pittsfield's municipal stormwater discharges are currently authorized under Region 1 EPA's 2003 Small MS4 General Permit. EPA is currently working to update and reissue this municipal stormwater general permit for small MA MS4s, such as Pittsfield. It is scheduled for reissuance in 2015. Note that the current MS4 permit covering Pittsfield does not authorize the discharge of stormwater associated with an industrial activity as defined in 40 CFR § 122.26 (b)(14)(i)-(ix) and (xi) or the discharge of contaminated groundwater. If these discharges are not authorized under a separate NPDES permit they are considered an "illicit discharge" for the purposes of MS4 permitting. As described in this fact sheet and in this draft individual (non MS4) permit for PEDA, PEDA is authorized to discharge stormwater and contaminated groundwater infiltration.

EPA is interested in receiving comments during the public notice period regarding the possible further actions identified in the January 13, 2015 letter to EPA from the City of Pittsfield and PEDA, in particular if there is a proposed method and scope of transferring responsibility for meeting CWA requirement for Outfall 001.

(b) Consent Decree

On October 27, 2000, the U.S. District Court for Massachusetts approved 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") and the Resource Conservation and Recovery Act ("RCRA"), the Decree requires GE to perform or pay for over 25 response actions to address unacceptable threats posed by PCBs and other hazardous substances that originated from GE's operations at its former Pittsfield facility.

The Clean Water Act's ("CWA") NPDES program serves a different statutory purpose from CERCLA and RCRA cleanup programs. 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.

(c) NPDES Permit History

When PEDA acquired Outfall 001, EPA assigned permit No. MA0040231 to PEDA. Because of PEDA's timely submission of a NPDES Reissuance Application and pursuant to 40 CFR 122.6, the requirements for Outfall 001 (established in the 1988-issued Permit MA0003891) were administratively continued for Outfall 001. It should be noted that, although the current permit requirements for PEDA derive from MA0003891, PEDA submits DMRs and other reports under the permit No. MA0040231.

Therefore, the provisions of the 1988-issued MA0003891 that apply to Outfall 001 remain in effect for the entire PEDA site (see **Figure 4, Flowchart of PEDA and GE Factory Site NPDES Permits**). This permit was issued on September 30, 1988 and became effective on February 7, 1992 upon resolution of an evidentiary hearing request made by GE. The permit was modified on May 21, 1992, and expired on February 7, 1997. This permit is included as Appendix D of this fact sheet.

The 1988 permit authorizes the discharge of non-contact cooling water and stormwater runoff from Outfall 001 to Silver Lake. As discussed previously, manufacturing operations on this site ceased in 1990, and Outfall 001 no longer discharges non-contact cooling water. Outfall 001 discharges stormwater and PCB contaminated groundwater infiltration, all of which commingle in the water quality basin prior to discharge through Outfall 001 to Silver Lake. Stormwater discharged through PEDA's Outfall 001 is collected from the 52-acre PEDA site and from approximately 91 acres served by the City of Pittsfield Municipal Separate Storm Sewer System (MS4).

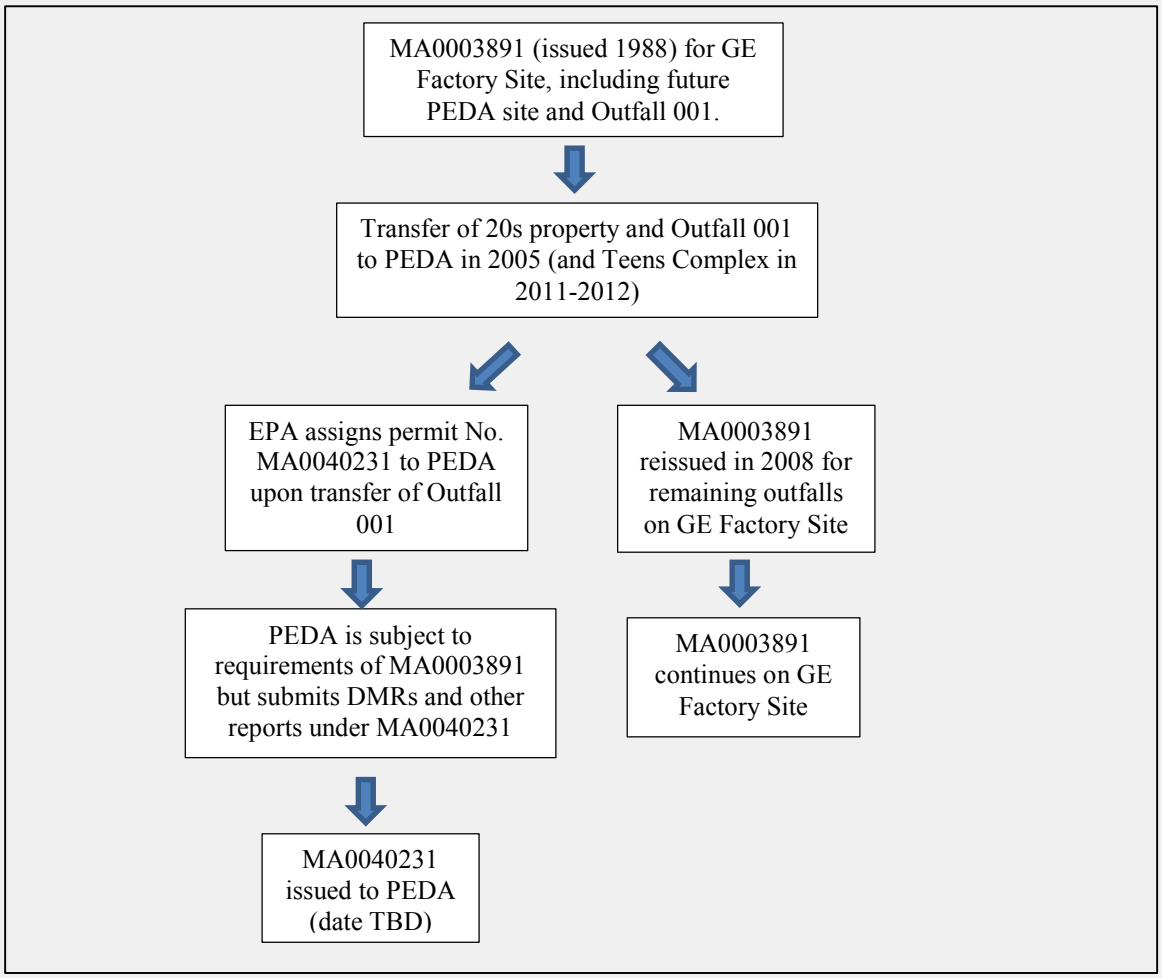
The City of Pittsfield storm sewer system is regulated by the 2003 MS4 General Permit. As such, the City of Pittsfield is responsible for its stormwater contributed to PEDA's stormwater collection system, including the six minimum control provisions contained in the 2003 MS4 General Permit. In accordance with Part I.C. of the 2003 MS4 Permit, Pittsfield is also responsible for developing and implementing a Stormwater Management Plan (SWMP) that addresses any discharge to impaired waters such as Silver Lake and the Housatonic River.

(d) Current Permit Requirements

The **current permit** (MA0003891, issued in 1988), originally issued to GE and still in effect for the PEDA Site, contains effluent limitations on flow, total suspended solids (TSS), pH, and Oil and Grease, and requires monitoring of PCBs.

The current permit also established a whole effluent toxicity C-NOEC (Chronic No Effect Concentration, expressed as percent effluent) limit of at least 35% for a monthly 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 was based on a composite sample consisting of effluent from the same six discharges. When EPA reissued MA0003891 to GE in 2008, Outfall 001 was no longer on GE property, and therefore the chronic toxicity limit and monitoring requirements for a composite of GE outfalls no longer applied to Outfall 001. Furthermore, the requirement was removed for GE outfalls because the previous tests showed no reasonable potential for the discharge to cause toxicity in the receiving waters.

Figure 4. Flowchart of PEDA and GE Factory Site NPDES Permits



II. Description of Treatment System and Discharge

Outfall 001 is located on the southwest side of the PEDA property at the outlet of the water quality basin. It discharges stormwater, groundwater infiltration, and potable water (used for fire protection testing) from approximately 148 acres of drainage area to Silver Lake. A substantial portion of the drainage area and associated stormwater collection system is outside of PEDA property. As shown on **Figure 2, PEDA Site Map**, there is a 4-acre CSX rail corridor that bisects the site and drains to Outfall 001. Ninety-one acres of the drainage area is served by the City of Pittsfield MS4, and is also depicted on **Figure 2**. A schematic diagram of this drainage system is shown on **Figure 3, PEDA Grading and Drainage Plan**.

The PEDA property previously included two other outfalls, 01A and 004. Under the previous configuration, Outfall 001 conveyed flow treated by OWS (oil/water separator) 31W. When wet weather flows exceeded the capacity of OWS 31W, which was 2,500 gallons per minute, excess flow would be conveyed directly to Silver Lake via Outfall 01A. Outfall 004 discharged untreated stormwater from 4.4 acres on the PEDA site to Silver Lake.

On December 11, 2009, PEDA abandoned and plugged Outfalls 01A and 004 and relocated Outfall 001 approximately 200 feet to the south of its previous location. All flow that previously discharged through Outfalls 01A and 004 now discharges through the relocated Outfall 001. As part of the outfall relocation/abandonment, PEDA disconnected OWS 31W and rerouted flow through a new stormwater system consisting of two sediment forebays and a water quality basin (**See Figure 3, PEDA Grading and Drainage Plan**).

The treatment system consists of a wet retention basin (the water quality basin) with pretreatment by two sediment forebays. The south forebay collects drainage from the south portion of the site through a grassy swale that runs along the southern edge of the site. The north forebay receives piped flow from North Side Park and the 91 acres off-site. The two forebays provide treatment by allowing sediment to settle out of the water, which flows through berms constructed of large rocks into the water quality basin.

The water quality basin is designed to be a permanently wet basin. The bottom contour is below the groundwater table, therefore; the basin collects groundwater seepage through the sidewalls. Groundwater infiltration also enters the water quality basin through infiltration of stormwater pipes elsewhere in the drainage area. Hence, the water quality basin commingles dry and wet weather flows, and also mixes stormwater with contaminated groundwater (meaning groundwater that contains PCBs) infiltration prior to discharge through Outfall 001. This presents one source of pollution through Outfall 001 to Silver Lake due to the historical groundwater contamination on the site as well as due to pollutants in stormwater.

III. Receiving Water Description

Silver Lake is classified under the Clean Water Act (CWA) as a Class B warm water fishery by MassDEP in the Massachusetts Surface Water Quality Standards (MA SWQS), 314 CMR 4.00. Although Silver Lake is not currently listed in the Massachusetts 2012 Integrated List of Waters (http://www.mass.gov/eea/docs/dep/water/resources/07v5/12list2.pdf), it is a Class B Water pursuant to the following clause in the SWQS:

> *"Unless otherwise designated in 314 CMR 4.06 or unless otherwise listed in the tables to 314 CMR 4.00, other waters are Class B, and presumed High Quality Waters for inland waters…"* (314 CMR 4.06(4))

Silver Lake drains to the East Branch of the Housatonic River (Segment ID MA21-02). This segment of the East

Branch of the Housatonic River is listed as impaired for fecal coliform and PCBs in fish tissue.

At 314 CMR 4.05(3)(b), 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, including for their reproduction, migration, growth and other critical functions, (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, kayaking, 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, human consumption of fish, 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 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 U.S. Fish and Wildlife Service (FWS) and the Massachusetts Division of Fisheries and Wildlife (MADFW), in coordination with EPA and the Massachusetts Department of Environmental Protection (MassDEP) released a report[4] in 2005 detailing PCB levels in tissue from fish collected from Silver Lake in Pittsfield in October 2004. Fish tissue concentrations of total PCBs ranged from 24 to 168 parts per million (ppm), 2,000 times the EPA risk-based cancer threshold[5] for fish consumption of 0.012 ppm[6] total PCBs in fish tissue.

As required by the Consent Decree, GE substantially completed remediation of Silver Lake for PCB contamination in October 2013, with some restoration activities continuing through December 2013. Remediation consisted of removal of 12,500 cubic yards of near-shore sediment and bank soil and capping of the bottom of the lake with a layer of clean silty sand. Monitoring data showed a sharp drop in water column PCB concentrations in Silver Lake since the cap was placed (see Appendix B for pre-remediation surface water data and Appendix C for post-remediation surface water data). The post-capping median PCB surface water sampling indicates that PCB concentrations in Silver Lake range from non-detect to 0.097 µg/L, with the median concentration of 0.044 µg/L. Both values are above water quality criteria for PCBs, but lower than pre-capping concentrations.

IV. 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.

[4] Silver Lake Fish Tissue Analytical Results Report http://www.epa.gov/region1/ge/thesite/silverlake/reports/232770.pdf
[5] Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories (2000). EPA 823-B-00-008.
[6] This amount of PCBs in fish tissue would raise the risk of cancer by 1 in 100,000 of a 70 kilogram person who eats 8 ounces of fish four times per month.

V. Permit Basis: Statutory and Regulatory Authority

(a) General Requirements

The Clean Water Act (CWA) prohibits the discharge of pollutants to waters of the United States without a National Pollutant Discharge Elimination System (NPDES) permit unless such a discharge is otherwise authorized by the CWA. The NPDES permit is the mechanism used to implement technology and water quality-based effluent limitations and other requirements including monitoring and reporting. This draft NPDES permit was developed in accordance with various statutory and regulatory requirements established pursuant to the CWA and any applicable State regulations. The regulations governing the EPA NPDES permit program are generally found at 40 CFR Parts 122, 124, 125, and 136.

When developing permit limits, EPA must consider the most recent technology-based treatment and water quality-based requirements as well as all limitations and requirements in the existing permit. Subpart A of 40 CFR Part 125 establishes criteria and standards for the imposition of technology-based treatment requirements in permits under Section 301(b) of the CWA, including the application of EPA-promulgated effluent limitations and case-by-case determinations of effluent limitations under Section 402(a)(1) of the CWA.

(b) Technology-Based Requirements

Technology-based treatment requirements represent the minimum level of control that must be imposed under Sections 301(b) and 402 of the CWA (see 40 CFR §125 Subpart A) to meet best practicable control technology currently available (BPT) for conventional pollutants and some metals, best conventional control technology (BCT) for conventional pollutants, and best available technology economically achievable (BAT) for toxic and non-conventional pollutants.

In general, the statutory deadline for non-POTW[7], technology-based, effluent limitations must be complied with as expeditiously as practicable but in no case later than three years after the date such limitations are established and in no case later than March 31, 1978 (see 40 CFR 235.3(a)(2)). Compliance schedules and deadlines not in accordance with the statutory provisions of the CWA cannot be authorized by a NPDES permit.

Historically, the previous site owner, GE, made transformers and military hardware on the site. The industrial operations and apparatuses have been removed, although residuals of the operations remain. Because industrial operations have ceased, Outfall 001 is not subject to any effluent limitation guidelines (ELGs) associated with manufacturing. When in operation, the GE factory on the property was categorized under 40 CFR Part 414 Subpart D, Thermoplastic Resins.

In the absence of published technology-based effluent guidelines, the permit writer is authorized under Section 402(a)(1)(B) of the CWA to establish effluent limitations on a case-by-case basis using best professional judgment (BPJ). The technology-based requirements have been established in the draft permit to control the discharge of stormwater pollutants such as TSS, Oil and Grease, bacteria, nutrients, and metals from Outfall 001. A number of these technology-based requirements are expressed as Best Management Practices (BMPs) to address particular aspects of the PEDA site, including requirements to do the following:

- develop, implement, and maintain a Stormwater Pollution Prevention Plan (SWPPP);
- remove debris from manholes and catch basins; and

[7] A POTW is a publicly owned treatment works that collects and treats domestic sewage. PEDA is not a POTW.

- clean and maintain sediment forebays.

The required BMPs are described further in Section VI(k).

(c) Water Quality-Based Requirements

Section 301(b)(1)(C) of the CWA requires that effluent limitations based on water quality considerations be established for point source discharges when such limitations are necessary to meet state or federal water quality standards that are applicable to the designated receiving water. This is necessary when technology-based limitations would interfere with the attainment or maintenance of water quality in the receiving water. Under Section 301(b)(1)(C) of the CWA and EPA regulations, NPDES permits must contain effluent limits more stringent than technology-based limits where more stringent limits are necessary to maintain or achieve state or federal water quality standards.

Water quality standards consist of three parts: (1) beneficial designated uses for a waterbody or a segment of a waterbody; (2) numeric and/or narrative water quality criteria sufficient to protect the assigned designated use(s); and (3) anti-degradation requirements to ensure that once a use is attained it will not be degraded. The Massachusetts Surface Water Quality Standards, found at 314 CMR 4.00, include these elements. The state will limit or prohibit discharges of pollutants to surface waters to assure that surface water quality standards of the receiving waters are protected and maintained or attained. These standards also include requirements for the regulation and control of toxic constituents and require that EPA criteria, established pursuant to Section 304(a) of the CWA, shall be used unless a site-specific criterion is established.

The draft permit must limit any pollutant or pollutant parameter (conventional, non-conventional, and toxic) that is or may be discharged at a level that causes or has the "reasonable potential" to cause or contribute to an excursion above any water quality standard (40 CFR §122.44(d)). An excursion occurs if the projected or actual in-stream concentration exceeds an applicable water quality criterion. In determining reasonable potential, EPA considers: (1) existing controls on point and non-point sources of pollution; (2) pollutant concentration and variability in the effluent and receiving water as determined from the permit's re-issuance application, monthly discharge monitoring reports (DMRs), and State and Federal Water Quality Reports; (3) sensitivity of the indicator species used in toxicity testing; (4) known water quality impacts of processes on waste waters; and (5) where appropriate, dilution of the effluent in the receiving water.

(d) Antibacksliding

A permit may not be renewed, reissued or modified with less stringent limitations or conditions than those contained in the previous permit unless in compliance with the antibacksliding requirements of the CWA [see Sections 402(o) and 303(d)(4) of the CWA and 40 CFR §122.44(l)(1 and 2)]. EPA's antibacksliding provisions prohibit the relaxation of permit limits, standards, and conditions except under certain circumstances. Effluent limits based on BPJ, water quality, and state certification requirements must also meet the antibacksliding provisions found at Section 402(o) and 303(d)(4) of the CWA.

The current PEDA site bears little resemblance to the 1988 GE site. When EPA issued the current permit in 1988, GE owned and operated Outfall 001, which drained the PEDA site along with Outfalls 01A and 004 (which have since been plugged). At that time, the site consisted of industrial buildings and paved areas, and an oil water separator treated the discharge. The site was close to 100% impervious area and still contained the subsurface infrastructure from past industrial activity on the site, which ceased in 1990. All former industrial buildings on the site have been demolished. In addition, South Side Park has new stormwater infrastructure,

including two sediment forebays and a water quality basin. While North Side Park has not changed appreciably since demolition of the buildings, South Side Park has much less impervious area than it did before its transfer to PEDA. The site characteristics will likely change further as PEDA proceeds in redeveloping the site.

Based on these site alterations, EPA has determined that the PEDA site and Outfall 001 fall under an exception to the antibacksliding provision listed in 40 CFR §122.44(l)(2)(i):

"material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation." [40 CFR §122.44(l)(2)(i)(A)]

(e) Antidegradation

Federal regulations found at 40 CFR Section 131.12 require states to develop and adopt a statewide antidegradation policy which maintains and protects existing instream water uses and the level of water quality necessary to protect the existing uses, and maintains the quality of waters which exceed levels necessary to support propagation of fish, shellfish, and wildlife and to support recreation in and on the water. The Massachusetts Antidegradation Regulations are found at Title 314 CMR 4.04. There are no new or increased discharges being proposed with this permit reissuance. Therefore, EPA believes that the draft permit meets these antidegradation requirements. MassDEP is being requested to certify that the permit meets state WQS including state antidegradation requirements and is expected to do so.

VI. Explanation of Permit's Effluent Limitations

(a) Flow

The current permit, originally issued to GE, contains an average monthly flow limit of 1.1 million gallons per day (MGD) and a maximum daily limit of 2.55 MGD for Outfall 001. These limits were established when Outfall 001 accepted non-contact cooling water and stormwater flows of up to 2,500 gallons per minute. Any flow that exceeded 2,500 gallons per minute was diverted to Outfall 01A, which did not have flow limits. Since that time, the discharge of non-contact cooling water has ceased, and Outfalls 01A and 004 have been eliminated. Stormwater and infiltrated groundwater that previously discharged through Outfalls 01A and 004 now discharge through Outfall 001.

From January 2010 through December 2013, there were five violations of the maximum daily flow limit, and the maximum daily flow ranged from 0.16 MGD to 7.33 MGD. Average monthly flow ranged from 0.01 MGD to 0.71 MGD from January 2010 through December 2013 (see Appendix A).

Conditions on the site have changed enough to render the previous flow limits obsolete. The draft permit instead requires reporting of the average monthly and maximum daily flow on the DMR. The permit also requires the permittee to report precipitation and flow for each day of the month on an attachment to the DMR (see Attachment A to the draft permit). It is anticipated that comparing the flow and pollutant concentration at Outfall 001 with precipitation will be helpful in assessing the performance of the stormwater treatment system in a variety of storm conditions. The flow shall be monitored continuously.

(b) Total Suspended Solids (TSS)

The current permit contains an average monthly limit of 138 lbs/day (pounds per day) of total suspended solids (TSS) and a maximum daily limit of 628 lbs/day. Effluent data submitted by PEDA is shown on Appendix A

and indicates that there were four violations of the maximum daily TSS loading limit and 15 violations of the average monthly TSS loading limit. These violations are the result of high sediment loads to the sediment forebays and the water quality basin during rain events.

Although PEDA is not required to report effluent TSS concentrations on the monthly DMR, laboratory reports indicate that the effluent TSS discharge from Outfall 001 has ranged from 2.06 mg/L to 377 mg/L from May 2011 through May 2014 (number of samples (n) = 30).

The treatment technology applied to TSS at Outfall 001 consists of two sediment forebays leading to a wet basin. In MassDEP's Stormwater Policy Handbook (1997), a sediment forebay paired with a wet basin is capable of achieving a design removal rate of 80% of the annual TSS load entering the treatment system. For stormwater associated with industrial activity for Industrial Sector AD (non-classified facilities), EPA's multi-sector general permit requires that control of total suspended solids through best management practices, including a stormwater pollution prevention plan, achieve a benchmark value, above which monitoring adjustments to BMPs are triggered. This benchmark value, 100 mg/L, is therefore expected to be the maximum long term average TSS value of water entering the sediment forebays. An 80% removal efficiency through application of additional treatment in the infiltration basin results in the reduction of TSS to a long-term average of 20 mg/L according to the following:

(TSS concentration entering the BMP) x (removal rate %) = Long Term Average

Permit Limit Determination

The Technical Support Document for Water Quality-Based Toxics (TSD)[8] describes a statistical approach to setting permit limits for a given effluent parameter to ensure the desired level of treatment. Section 5.2.2 (page 95) of the TSD introduces this method.

> *Effluent data from any treatment system may be described using standard descriptive statistics, such as the mean concentration of the pollutant or pollutant parameter (i.e., the long-term average [LTA] and the coefficient of variation [CV]). The CV is a standard statistical measure of the relative variations of a distribution or set of data, defined as the ratio of the standard deviation to the mean. Using a statistical model, such as the lognormal, an entire distribution of values can be projected from limited data, and limits can be set at a specified probability of occurrence.*

The TSD then describes the recommended method for deriving technology-based effluent limitations.

> *In the development of technology-based effluent limits guidelines, the operating records of various wastewater treatment facilities for a particular category of discharger are examined. Based on the effluent data for the treatment facilities, a composite mean or LTA value for the parameter is determined. This LTA value, with relevant estimates of variability, is then used to derive effluent limit guidelines, which lead directly to permit limits.*

Based on the MassDEP data cited above, EPA considers 20 mg/L to be the LTA for this particular treatment system. Using this LTA and effluent variability data, EPA calculated an average monthly limit (AML) and a maximum daily limit (MDL) for TSS. The coefficient of variation (CV) for PEDA effluent TSS data is 0.4 (see

[8] EPA Office of Water, Technical Support Document for Water Quality-Based Toxics Reduction, 1991. (EPA/505/2-90-001)

Appendix E).

Using an LTA of 20 mg/L, EPA applied the procedure described in Box 5-2 (page 100) of the TSD. Because this is a technology-based limit with a predetermined LTA, the limit calculation starts with Step 4.

$$MDL = LTA \times e^{(z\sigma - 0.5\sigma^2)}$$

Where $\sigma^2 = \ln(CV^2 + 1)$
Where z = 2.326 for 99% probability

To simplify this calculation, the TSD includes a table listing the values of $e^{(z\sigma - 0.5\sigma^2)}$ based on the CV in Table 5-2 (page 103). For CV = 0.4 and a 99% probability basis (meaning that there is a 1% chance of the effluent exceeding the MDL) the value of $e^{(z\sigma - 0.5\sigma^2)}$ is 2.27.

Therefore,

$$MDL = 20\,mg/L \times 2.27 = 45.4\ mg/L \sim 45\,mg/L$$

The procedure is similar for the Average Monthly Limit (AML), except that number of samples per month is a factor. The amount of data points changes the statistical properties and variation of the monthly average, and the TSD adjusts the AML to account for this. The draft permit proposes weekly sampling; therefore, n = 4.

$$AML = LTA \times e^{(z\sigma_n - 0.5\sigma_n^2)}$$

Where $\sigma_n^2 = \ln(CV^2/n + 1)$
Where z = 1.645 for 95% probability
Where n = proposed number of samples per month = 4

To simplify this calculation, the TSD includes a table listing the values of $e^{(z\sigma_n - 0.5\sigma_n^2)}$ based on the CV and the proposed sampling frequency in Table 5-2 (page 103). For CV = 0.4, four samples per month, and a 95% probability basis (meaning that there is a 5% monthly chance of the effluent exceeding the AML) the value of $e^{(z\sigma_n - 0.5\sigma_n^2)}$ is 1.36.

Therefore,

$$AML = 20\,mg/L\ x\ 1.36 = 27.2\,mg/L \sim 27\,mg/L$$

Hence, the average monthly TSS limit is 27 mg/L. The proposed monitoring frequency in the draft permit will be once per week. Because of the changes in site conditions, no mass-based TSS limit is included in the draft permit.

In addition to the numeric TSS effluent limits, the draft permit requires a SWPPP to limit the discharge of TSS and other stormwater related pollutants as described in Section IV(k). The SWPPP requires a number of BMPs including catch basin and sediment forebay cleaning to reduce discharges of sediment from Outfall 001.

(c) pH

The current permit requires a pH effluent limitation range of 6.0 to 9.0 SU, which is a technology-based limit for several industrial sectors. From January 2010 through December 2013, the pH of the discharge through Outfall 001 ranged from 6.5 – 9.14 SU, with three violations of the maximum pH limit, in July 2010, July 2011, and

May 2012. It is not clear what is causing the periodic maximum pH exceedances. Concrete fill and demolition debris, which is present below ground surface on the PEDA site, may contribute to the high pH in groundwater[9].

The draft permit requires an effluent pH limitation range of 6.5 to 8.3 standard units (SU), which is required for state certification and is consistent with water quality standards. The proposed monitoring frequency is once per week.

(d) Oil and Grease

The current permit limits Oil and Grease to maximum daily values of 15 mg/L (milligrams per liter) and 319 lbs/day. The mass-based limit is the amount of Oil and Grease discharged at the maximum daily flow limit of 2.55 MGD at 15 mg/L. There were four Oil and Grease exceedances from January 2010 through December 2013, one of the loading limit and three of the concentration limit.

The 15 mg/L Oil and Grease effluent limit in the current permit represents the same threshold often used by EPA in the context of industrial and stormwater permitting. In the context of industrial permit limits, the Petroleum Refining Point Source Category standard (40 CFR § 419) does not require treatment of the wastewater if it does not exceed 15 mg/L of Oil & Grease. Second, in the context of stormwater, the Multi-Sector General Permit sets 15 mg/L of Oil and Grease as a benchmark.

The effluent limit of 15 mg/L is sufficient to meet the water quality standard established for Oil and Grease by Massachusetts Surface Water Quality Standards at 314 CMR § 4.05(3)(b)7. These standards state that Class B "…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." An effluent concentration of 15 mg/L is recognized as the concentration at which many oils produce a visible sheen and/or cause undesirable taste in edible fish.

The draft permit contains concentrations limits rather than loading limits because of changes in site conditions, as previously described. The draft permit limits Oil and Grease to a maximum daily value of 15 mg/L. Due to the periodic exceedances of this parameter under the current permit, EPA has decided to increase the monitoring frequency for Oil and Grease to once per week.

(e) *Escherichia coli*

The current permit does not contain limits or monitoring requirements for *E. coli*. The permit application listed *E. coli* as "believed present" in the discharge based on the presence of animals in the drainage area. In addition to animal sources of *E. coli*, there is the potential for *E. coli* from domestic sewage in the discharge if there are illicit sewer connections to the stormwater system that drains to Outfall 001. As discussed in Section III, the segment of the Housatonic River to which Silver Lake drains is listed as impaired for fecal coliform. Since the listing of this segment of the Housatonic River as impaired for fecal coliform, Massachusetts has revised its Water Quality Standards for Class B waters (314 CMR § 4.05(3)(b)4.b.) and replaced fecal coliform with *E. coli* as the indicator of pathogenic bacteria. For this reason, coupled with insufficient monitoring data to determine if Outfall 001 contributes to the bacterial impairment, the draft permit includes a quarterly monitoring requirement

[9] Shi, C. and Spence, R. 2005. High pH Groundwater— The Effect of The Dissolution of Hardened Cement Pastes. Water Encyclopedia. 5:362–365.

for *E. coli*.

In addition to monitoring, the draft permit requires a SWPPP to limit the discharge of *E. coli* and other stormwater-related pollutants, as described in Section IV(k).

(f) Total Phosphorus

Phosphorus and other nutrients promote the growth of nuisance algae and aquatic plants. When these plants and algae undergo decay, they generate strong odors, lower dissolved oxygen levels in receiving waters, and impair benthic habitat.

The Massachusetts Surface Water Quality Standards (314 CMR § 4.00) do not contain numerical criteria for total phosphorus. The narrative criteria for nutrients at 314 CMR § 4.05(5)(c) state:

> *"Unless naturally occurring, all surface waters shall be free from nutrients in concentrations that would cause or contribute to impairment of existing or designated uses and shall not exceed the site specific criteria developed in a TMDL* [Total Maximum Daily Load] *or as otherwise established by the Department pursuant to 314 CMR 4.00. Any existing point source discharge containing nutrients in concentrations that would cause or contribute to cultural eutrophication, including the excessive growth of aquatic plants or algae, in any surface water shall be provided with the most appropriate treatment as determined by the Department, including, where necessary, highest and best practical treatment (HBPT) for POTWs and BAT for non POTWs, to remove such nutrients to ensure protection of existing and designated uses. Human activities that result in the nonpoint source discharge of nutrients to any surface water may be required to be provided with cost effective and reasonable best management practices for nonpoint source control."*

An effluent sample from Outfall 001 taken for the permit application contained 0.210 mg/L of phosphorus. According to the permit application, phosphorus in the discharge is due to the use of fertilizers and the possible presence of geese and other animals in the drainage basin. PEDA has stated that it does not use fertilizers in the area around the water quality basin. It is possible, however, that fertilizers used in other portions of the drainage basin could contribute phosphorus to the discharge, or that the phosphorus is due to a variety of sources in the stormwater.

The draft permit includes a quarterly monitoring requirement for total phosphorus, which will help EPA determine if the discharge has reasonable potential to contribute to an exceedance of water quality standards and assist in future permit limit development. The development and implementation of a SWPPP, including BMP provisions such as catch basin and sediment forebay cleaning requirements, is required in the draft permit to limit the discharge of total phosphorus and other stormwater-related pollutants.

(g) Total Nitrogen

Excessive nitrogen in a water body can cause eutrophication, a condition in which aquatic plant and algal growth is excessive and can be toxic at elevated levels. Decomposition of plants and algae can reduce instream dissolved oxygen concentrations below levels necessary to support aquatic life.

Excessive nitrogen loadings are causing significant water quality problems in Long Island Sound, including low dissolved oxygen. In December 2000, the Connecticut Department of Environmental Protection (CT DEP) completed a TMDL for addressing nitrogen-driven eutrophication impacts in Long Island Sound. The TMDL

included a waste load allocation (WLA) for point sources and a load allocation (LA) for non-point sources.

The point source WLA for out-of-basin sources (Massachusetts, New Hampshire and Vermont wastewater facilities discharging to the Connecticut, Housatonic and Thames River watersheds) requires an aggregate 25 percent reduction from the baseline total nitrogen loading estimated in the TMDL.

Basin	Baseline Loading[10] (lbs/day)	TMDL Target[11] (lbs/day)	2004-2005 Loading[12] (lbs/day)
Connecticut River	21,672	16,254	13,836
Housatonic River	3,286	2,464	2,151
Thames River	1,253	940	1,015
Totals	26,211	19,657	17,002

The permit application indicates that PEDA collected one sample of the discharge for total nitrogen, with a result of 0.530 mg/L. The application states that the nitrogen source is fertilizer used on lawn areas of the site. PEDA says it does not use fertilizer on the immediate area surrounding the water quality basin.

The draft permit requires reporting of total nitrogen once per quarter, and the draft permit proposes certain non-structural BMPs to minimize nitrogen discharges from Outfall 001 (see Section VI.(k) of this fact sheet). These BMPs are similar to ones proposed in the recently released draft General Permit for Small MS4s in Massachusetts, for MS4s located within the three watersheds. These practices include minimization of fertilizer application, use of slow release fertilizer, management of grass clippings and leaf litter, and regular street sweeping.

(h) Polychlorinated Biphenyls

Polychlorinated biphenyls (PCBs) are a group of chemical compounds formed by the addition of chlorine ($C1_2$) 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 (generally referred to as PCB "aroclors").

The human health and ecological risks associated with PCBs are a function of exposure and the toxicity of PCBs. PCBs are known to cause cancer in animals and are classified as a probable human carcinogen by national and international health-protective organizations, such as the EPA, the Agency for Toxic Substances and Disease Registry (ATSDR, an arm of the U.S. Public Health Service) and the World Health Organization. According to ATSDR[13],

> *PCBs do not readily break down in the environment and thus may remain there for very long periods of time. PCBs can travel long distances in the air and be deposited in areas far away from where they were released. In water, a small amount of PCBs may remain dissolved, but most stick to organic particles and bottom sediments. PCBs also bind strongly to soil.*

[10] Estimated loading from TMDL (see Appendix 3 to CT DEP "Report on Nitrogen Loads to Long Island Sound", April 1998).
[11] 25% reduction
[12] Estimated loading from 2004 – 2005 DMR data.
[13] http://www.atsdr.cdc.gov/tfacts17.pdf

> *PCBs are taken up by small organisms and fish in water. They are also taken up by other animals that eat these aquatic animals as food. PCBs accumulate in fish and marine mammals, reaching levels that may be many thousands of times higher than in water.*

Silver Lake and the Housatonic River are both Class B waters under the Massachusetts Water Quality Standards (314 CMR 4.00). For Class B waters, 314 CMR § 4.05(5)(e) establishes the following water quality criteria for toxic pollutants:

> *For pollutants not otherwise listed in 314 CMR 4.00, the National Recommended Water Quality Criteria: 2002, EPA 822R-02-047, November 2002 published by EPA pursuant to Section 304(a) of the Federal Water Pollution Control Act, are the allowable receiving water concentrations for the affected waters, unless the Department either establishes a site specific criterion or determines that naturally occurring background concentrations are higher.*

EPA's National Recommended Water Quality Criteria, 2002, require a human health criterion of 0.000064 µg/L for fish consumption as well as a freshwater aquatic life criterion continuous concentration (CCC) for PCBs of 0.014 µg/L, measured as total PCBs.

The current permit requires reporting the maximum daily PCB load each month. It does not require reporting of effluent PCB concentrations; however, these data were collected for the purpose of calculating PCB loading. PCB concentrations in the discharge regularly exceed the CCC. From January 2010, shortly after the water quality basin went online, through December 2013, the range of PCB concentrations was 0.0247 µg/L to 0.885 µg/L. See Appendix A for more information.

Reasonable Potential Analysis

As discussed previously in Section V(c), EPA considers five factors in determining reasonable potential:

(1) existing controls on point and non-point sources of pollution;
(2) pollutant concentration and variability in the effluent and receiving water as determined from the permit's re-issuance application, monthly discharge monitoring reports (DMRs), and State and Federal Water Quality Reports;
(3) sensitivity of the indicator species used in toxicity testing;
(4) known water quality impacts of processes on waste waters; and
(5) where appropriate, dilution of the effluent in the receiving water.

Each of these five factors is discussed below.

(1) existing controls on point and non-point sources of pollution

The existing controls consist of two sediment forebays that overflow into a permanently wet basin (i.e. the water quality basin). The north forebay is undersized and not capable of handling heavy stormwater flows with high TSS concentrations. This has been illustrated by four breaches of the north forebay that have occurred during storm events. Also, the water quality basin intercepts groundwater that contains PCBs, meaning that the water quality basin itself may be a source of PCBs.

(2) pollutant concentration and variability in the effluent and receiving water

Since the water quality basin has gone online, discharge concentrations of PCBs have been consistently higher than both the aquatic life criterion and the human health criterion. Using a method from the Technical Support Document for Water Quality-based Toxics Control (TSD), EPA calculated a projected upper bound for effluent PCB concentrations based on methods in the TSD, Section E-6. See Appendix E for the details of this statistical derivation. EPA determined that the projected 95th percentile effluent PCB concentration is 0.427 µg/L, which is over 30 times the aquatic life criterion of 0.014 µg/L.

The water column concentration of PCBs in Silver Lake has dropped since capping of the lake in 2013, but the median concentration, at 0.044 µg/L, is still above both the human health criteria of 0.000064 µg/L and the aquatic life criterion of 0.014 µg/L. Furthermore, the reach of the Housatonic River to which Silver Lake outlets has been listed as impaired for PCBs in fish tissue. Discharges of PCBs in excess of the water quality criterion contributes to this water quality impairment.

(3) sensitivity of the indicator species used in toxicity testing

This factor pertains only to whole effluent toxicity test limits, which are not included in the draft permit.

(4) known water quality impacts of processes on waste water

Because there are no longer any industrial processes on the site, this factor is inapplicable.

(5) where appropriate, dilution of the effluent in the receiving water

In this case, EPA is exercising its discretion pursuant to 40 CFR § 122.44(d)(1)(ii) to disregard dilution when determining reasonable potential or setting permit limits for PCBs because of their persistence and bioaccumulation in the environment.

After considering the above factors, EPA has concluded that there is reasonable potential for the discharge from Outfall 001 to cause or contribute to an exceedance of the human health (and aquatic life) water quality criteria for PCBs in Silver Lake and the Housatonic River.

PCB Effluent Limit Determination

EPA has established a water quality-based effluent limit at the human health water quality criterion to ensure the discharge does not cause or contribute to a water quality standard exceedance in Silver Lake or the Housatonic River. In setting the effluent limit, EPA also examined recently issued permits with PCB effluent limits. The 2010 Remediation General Permit (RGP) regulates discharges related to site remediation. The RGP imposes an effluent limitation for total PCBs based on the current human health criterion of 0.000064 µg/L. EPA also considered the example of the GE Pittsfield permit (MA0003891), which has a numeric PCB effluent limit of 0.014 µg/L at one outfall, and source reduction and good housekeeping BMPs as effluent limits at other outfalls. In the case of the PEDA draft permit, EPA is including the human health criterion as the numeric effluent limit for PCBs. EPA is required to set limits that lead to attainment of water quality standards for receiving waters, and Silver Lake will not be in attainment as long as the human health criterion for PCBs is exceeded.

Section 301 of the CWA and its implementing regulations obligate EPA to establish water quality based effluent limits for Outfall 001 that are as stringent as necessary to attain and maintain applicable water quality standards. In this case, EPA has determined there is a reasonable potential for the discharges of PCBs to contribute to such a water quality impairment, and EPA is required to establish a water quality-based effluent limit for the Outfall

001 to ensure the discharge does not cause or contribute to a water quality standard exceedance in Silver Lake or the Housatonic River.

The required BMPs, including the SWPPP, are not expected to reduce PCB levels to a degree necessary to ensure that these levels do not cause or contribute to a water quality standard violation. In the case of PEDA's discharge through Outfall 001, EPA is not relying on technology-based BMPs or water quality-based BMPs for several site-specific reasons, including the following:

1. The extent of the drainage area contributing to Outfall 001 is relatively large and the conditions are variable and uncertain despite recent initial work by PEDA to characterized PCB sources contributing to Outfall 001. PEDA has tentatively identified the Teens Complex as one major source of PCBs to Outfall 001.
2. A successful PCB source identification study has not been completed. Among the potential sources of PCBs contributing to the Outfall 001 discharge are:
    - Infiltration of contaminated groundwater into the stormwater collection systems on PEDA property, or in the Pittsfield MS4 within the Outfall 001 catchment;
    - Other illicit connections to this stormwater collection system;
    - Residual PCB contamination in soils, and other surfaces exposed to stormwater;
    - Residual PCB contamination in pipes, catch basins, and other collection system structures;
    - Infiltration of contaminated groundwater directly into the water quality basin; and
    - Sediment in the forebays and water quality basin being re-suspended or otherwise being the source of PCBs.
3. Where a specific source of PCB contamination has been or will be identified (e.g. sediment in a particular catch basin, leakage and infiltration in a particular stormwater collection pipe) the means to eliminate this source has not been identified, designed, accomplished, and confirmed.
4. In some cases, such as the control of the infiltration of contaminated groundwater directly to the water quality basin, a straightforward management practice to eliminate the source of PCB contamination is not readily apparent at this time.
5. Remediation efforts in Silver Lake have been substantially completed, and subsequent recontamination due to PCB discharges from Outfall 001 is of immediate concern.

Therefore, a numeric water quality-based effluent limit is included in the draft permit to ensure that the discharge that does not cause or contribute to a water quality standard violation. The draft permit proposes a numeric average monthly PCB limit of 0.000064 µg/L, with a reporting requirement for the maximum daily value. An average monthly limit is warranted in this case because of the predominant concern for the chronic effects of PCBs, such as those resulting from bioaccumulation in the environment, rather than the acute effects. This limit applies as the sum of all aroclors. The draft permit proposes a monitoring frequency of at least once per month. If PEDA samples once per month, it should report the same result as the monthly average and maximum daily.

Reporting Limit

The PCB effluent limit, 0.000064 µg/L, is several orders of magnitude below the detection capabilities of current analytical methods. Where effluent limits have been established in NPDES permits but compliance cannot be determined using currently approved analytical methods (e.g. if WQBELs are less than the analytical capability of the methods), EPA's TSD, page 111, recommends that "the compliance level be defined in the permit as the minimum level (ML)" and the permit defines the quantitative methodology required. The ML is not the minimum level of detection, but rather the lowest level at which the test equipment produces a recognizable signal and acceptable calibration point for an analyte, representative of the lowest concentration at which an

analyte can be measured with a known level of confidence. Further, EPA's Federal Advisory Committee on Detection and Quantitation recommends permits contain a condition that the Practical Quantitation Level (PQL)[14] used for analysis be at or below the ML. Therefore, the draft permit requires that the quantitative methodology used for PCB analysis must achieve a Minimum Level (ML) of 0.022 µg/L or lower, using EPA Method 608.3 (Organochlorine Pesticides and PCBS).

When an analyte is not detected above the PQL, the Permittee must report using the data qualifier signifying less than the PQL for that analyte (i.e. <0.1 µg/L, if the PQL for an analyte is 0.1 µg/L). The PQL is the lowest concentration that can be reliably measured within specified limits of precision and accuracy for a specific laboratory analytical method during routine laboratory operating conditions.

EPA is aware that PEDA is unlikely to be able to comply with the PCB numeric water quality-based effluent limit by the effective date of the final permit. In this situation, EPA is willing to discuss the terms of a Consent Order containing a reasonable compliance schedule and/or receive comments on a reasonable compliance schedule to be included in the Final Permit.

Alternative BMP Approach

There is no provision in the draft permit precluding the permittee from achieving the numerical PCB effluent limit through the use of additional BMPs beyond than those specified in the draft permit. EPA is interested in receiving comment on the approach of EPA and MassDEP to include a numerical water quality-based effluent limit as opposed to relying on BMPs. For example, if the degree of present uncertainty in the understanding of BMP effectiveness, identification, implementation and verification can be addressed, EPA might establish a water quality-based effluent limit based on BMPs. EPA would need to be convinced that relying on site specific BMPs would ensure compliance with water quality standards. EPA and MassDEP could consider a compliance schedule with iterative milestones for BMP implementation to occur as soon as possible to achieve a delayed effective date of the numerical effluent limit.

The following paragraphs describe the actions that might make such an approach viable. EPA invites comment on the following paragraphs. At the same time, EPA encourages a commitment from PEDA to perform the work described in the paragraphs below. This work may enable a determination to be made that a numerical water quality-based effluent limit can either be postponed with a compliance schedule within the term of the permit or is not necessary at all in this 5-year permit cycle to ensure that discharges from the permittee's Outfall 001 does not cause or contribute to an exceedance of water quality standards in Silver Lake or the Housatonic River.

> Within one (1) year of the effective date of the permit, the permittee shall prepare and submit to EPA and MassDEP a PCB Loading and BMP Selection and Commitment Report (special study). The PCB Loading and BMP Selection and Commitment Report shall include all studies, sampling and analyses necessary to develop site-specific BMPs necessary to limit and/or prevent the introduction of PCBs into the Water Quality Basin and Silver Lake. These site-specific BMPs shall be measured to control, reduce, and/or eliminate PCB concentrations within the storm drain discharges, groundwater infiltration, and other PCB loadings to the Water Quality Basin and Silver Lake. The PCB Loading and BMP Selection and Commitment Report shall include the following.

[14]ML and PQL are both expressions of the laboratory detection level. The ML is the level at which a signal is quantified by the analytical instrument. MLs are developed by EPA, which uses them to specify the sensitivity of analytical methods. EPA's TSD, page 112, defines the PQL as "a specific (and sometimes arbitrary) multiple of the method detection level" and discourages its use in setting compliance levels. PQLs are typically used by laboratories in reporting lab results.

1. Provide a quantitative mass balance allocation of PCB loading among the potential sources of PCBs contributing to the Outfall 001 discharge based on field measurements. For this mass balance of PCB loadings, use measured PCB concentrations and measured or estimated monthly flows from various sources to calculate the monthly PCB load in mass per month from each source. Trace these sources up the watershed and provide a quantitative allocation of PCB loading for each source to represent a total PCB loading to Outfall 001 that is equal to the measured load in pounds per day discharged at Outfall 001. These sources include:

- The combined stormwater and infiltrated groundwater into the stormwater collection systems on PEDA property draining to the north forebay from within the Outfall 001 catchment and from within contributing sub-catchments defined by key junction manholes of other sampling points;
- The combined stormwater and infiltrated groundwater into the stormwater collection systems on PEDA property draining to the south forebay from within the Outfall 001 catchment;
- The combined stormwater and infiltrated groundwater into the stormwater collection systems from the Pittsfield MS4 within the Outfall 001 catchment;
- The discharge from the north forebay to the water quality basin;
- The discharge from south forebay to the water quality basin;
- Infiltration of contaminated groundwater directly into the water quality basin;
- Sediment in water quality basin being re-suspended or otherwise being the source of PCBs;
- Residual PCB contamination in soils, and other surfaces exposed to stormwater being added to stormwater;
- Residual PCB contamination in pipes, catch basins, and other collection system structures added to stormwater; and
- Illicit connections to this stormwater collection system.

2. For each source, or type of source, evaluate and identify specific BMPs for PCB load elimination or reduction, along with the documented effectiveness of that BMP in terms of PCB removal efficiency. For each BMP, provide a commitment to implement and maintain the BMP and the estimated resulting reduced PCB load. Provide a schedule for each BMP, including the date constructed or the date the BMP otherwise becomes effective, as well as the operation and maintenance (O/M) required to maintain the BMP effectiveness and a commitment to maintain and monitor the effectiveness of each O/M measure. Provide an analysis calculating the sum of the resulting PCB load reductions from each source and demonstrate that the resulting monthly average PCB concentration at Outfall 001 attains the permit's compliance level for PCBs at Outfall 001.

The Permittee shall begin implementation of the non-structural BMPs developed in the PCB Loading and BMP Selection and Commitment Report (special study) no later than one (1) year after the effective date of this Permit. The site-specific BMPs shall be prepared in accordance with good engineering practices.

Within two (2) years from the effective date of this Permit, the Permittee shall, at a minimum, construct and operate any structural site-specific BMPs to control, reduce, and/or eliminate the sources of PCBs.

Within four (4) years from the effective date of this Permit, the Permittee shall validate the effectiveness

of these BMPs through sampling and analysis and submit a report of this validation to EPA and MassDEP.

Each year, 60 days after the anniversary date of the permit, the Permittee shall submit to EPA and MassDEP a PCB BMP and Loading Annual Report. The PCB BMP and Loading Annual Report shall include from the previous year:

- all PCB analyses,
- an updated mass-balance of PCB loadings,
- any changes from or additions to the BPM information provided in the and BMP Selection and Commitment Report,
- the status of each PCB BMP, and
- the PCB reduction efficiency of each BMP

Again, EPA invites comment on such a BMP approach.

(i) Metals

As explained in Permit Attachments B and C, permittees must analyze the effluent and dilution water for several parameters. The draft permit requires PEDA to report the results of the metals and hardness analyses performed as part of the WET tests on the DMR. Effluent data submitted with the permit application indicate that the discharge may contain certain metals in excess of water quality criteria. Due to the age and small sample size of the data for these three metals, EPA cannot determine reasonable potential of metals in the effluent to cause or contribute to excursions of the WQC. Therefore, the draft permit requires quarterly sampling for these constituents to assist EPA in determining the need for metal effluent limits in the next permit reissuance.

Table 2. Effluent Data for Outfall 001 (from permit application)

Date	Lead	Copper	Zinc
2000 – Outfall 001 (dry weather)	30 µg/L	180 µg/L	160 µg/L
2002 – Outfall 01A (wet weather)	32 µg/L	27 µg/L	64 µg/L
Chronic Criterion*	2.5 µg/L	9.0 µg/L	120 µg/L
Acute Criterion*	65 µg/L	13 µg/L	120 µg/L

*** at 100 mg/L hardness**

(j) Whole Effluent Toxicity

EPA's Technical Support Document for Water Quality-Based Toxics Control, March 1991, EPA/505/2-90-001, recommends using an "integrated strategy" containing both pollutant- specific (chemical) approaches and whole effluent (biological) toxicity approaches to better detect toxics in effluent discharges. Pollutant-specific approaches, such as those in EPA's Gold Book (ambient water quality criteria) and state regulations, address individual chemicals, whereas whole effluent toxicity approaches evaluate interactions between pollutants, i.e., the "additivity", "antagonistic" and/or "synergistic" effects of pollutants. In addition, the presence of an unknown toxic pollutant can be discovered and addressed through this process.

Section 101(a)(3) of the CWA specifically prohibits the discharge of toxic pollutants in toxic amounts, as do the Massachusetts Water Quality Standards, which state, in part, that "all surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife." The NPDES regulations at

40 CFR §122.44(d)(1)(v) require whole effluent toxicity (WET) limits in a permit when a discharge has a reasonable potential to cause or contribute to an instream excursion above the State's narrative criterion for toxicity. This WET test is a proactive method of protecting the environment so as to properly carry out EPA's Congressional mandate to prevent the discharge of toxic substances into the Nation's waterways.

The previous permit, issued to GE in 1988, included a WET test limit that required the chronic toxicity endpoint C-NOEC (Chronic No Effect Concentration) to equal or exceed 35% for a monthly 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 was based on a composite sample consisting of effluent from the same six discharges.

When EPA reissued MA0003891 in 2008, it removed the requirement to conduct toxicity testing because the previous tests did not show reasonable potential for the composite discharge to violate water quality standards. However, the same cannot be said of Outfall 001, especially given the changes that have occurred on the PEDA site. Also, any toxicity present in the Outfall 001 discharge could have been diluted by the presence of other discharges in the composite sample.

Therefore, the draft permit contains requirements for quarterly acute and chronic toxicity tests using the species *Ceriodaphnia dubia* and *Pimiphales promelas*. The permittee must report the acute toxicity endpoint (LC50) concentration and the chronic toxicity endpoint C-NOEC (Chronic No Effect Concentration). The tests must be performed in accordance with the test procedures and protocols specified in Permit Attachments B and C. The tests will be conducted four times a year, once per calendar quarter.

(k) Stormwater Pollution Prevention Plan

According to 40 CFR 122.26(b)(14), stormwater discharge associated with an industrial activity, which requires an NPDES permit, includes "stormwater discharges from…areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water." General Electric had previously engaged in activities on this site that have resulted in the discharge of transformer fluid containing PCBs and other contaminated material to the ground, equipment, and into the stormwater collection system. The residuals containing PCBs and other pollutants in soils, on surfaces, and in stormwater collections systems are potentially exposed to stormwater. In addition, current activities on areas that drain to Outfall 001 result in the discharge of pollutants to waters of the United States either directly or indirectly through stormwater runoff.

To control the activities and operations which could contribute pollutants to waters of the United States, potentially violating the State's WQS, the draft permit requires the permittee to implement and maintain a SWPPP containing best management practices (BMPs) appropriate for this facility (See Sections 304(e) and 402(a)(1) of the CWA and 40 CFR §122.44(k)(2)). Although manufacturing of transformers and ordnance is no longer occurring at this site; remaining infrastructure, residual contamination, and operations related to the on-site groundwater remediation still are contributing pollutants to the receiving water in stormwater runoff.

The goal of the SWPPP is to reduce or prevent the discharge of pollutants through the stormwater system. The SWPPP requirements in the draft permit are intended to provide a systematic approach by which the permittee shall at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are used to achieve compliance with the conditions of the permit. The SWPPP shall be prepared in accordance with good engineering practices and identify potential sources of pollutants that may reasonably be expected to affect the quality of stormwater discharges associated with industrial activity from the facility. The SWPPP documents the appropriate BMPs implemented or to be implemented at the facility. These

non-numeric effluent limitations support, and are equally enforceable as, the numeric effluent limitations included in the draft permit.

Implementation of the SWPPP involves the following four main steps:

(1) Forming a team of qualified facility personnel who will be responsible for developing and updating the SWPPP and assisting the site manager in its implementation,
(2) Assessing the potential stormwater pollution sources,
(3) Selecting and implementing appropriate management practices and controls for these potential pollution sources, and
(4) Periodically re-evaluating the effectiveness of the SWPPP in preventing stormwater contamination and in complying with the various terms and conditions of the permit.

Pursuant to Section 304(e) of the CWA and 40 CFR §125.103(b), BMPs may be expressly incorporated into a permit on a case-by-case basis where necessary to carry out Section 402(a)(1) of the CWA.

Generally, BMPs should include processes, procedures, schedules of activities, prohibitions on practices, and other management practices that prevent or reduce the discharge of pollutants in stormwater runoff. A copy of the most recent SWPPP shall be kept at the facility and be available for inspection by EPA and MassDEP. The draft permit requires the permittee to continue to implement the SWPPP and revise it as necessary no later than ninety (90) days after the permit's effective date.

Site-specific BMPs included in the SWPPP are activities such as catch basin and manhole cleaning and sediment forebay maintenance. These and the other portions of the SWPPP are required in the draft permit as technology-based effluent limitations. Planned and accomplished actions undertaking to implement these site-specific BMPs shall be reported in an Annual Report as further described below. The draft permit's site-specific BMPs are as follows:

Pipeline Cleaning and Inspection

The draft permit requires PEDA to hydraulically clean and inspect all active drainage pipes discharging to the north forebay at least once within one year of the effective date of the permit. These pipes, mostly in the old Teens Complex of the old GE site (shown in green on **Figure 2, PEDA Site Map**), are several decades old and may contain debris from storm flows and demolition activities. New stormwater infrastructure that was installed by PEDA after 2005 is not subject to this requirement. This stormwater piping cleaning and inspection work can be supplemented, or potentially replaced, by a program to plug existing stormwater pipes and provide an acceptable alternative infiltration and/or draining system that does not contribute pollutants to Outfall 001.

Maintenance and Debris Removal from Sediment Forebays and Water Quality Basin

The draft permit requires frequent inspection and debris removal from sediment forebays and the water quality basin. Sediment forebays are built to reduce stormwater velocities and settle out suspended solids. However, sediment forebays are ineffective if they fill up or are allowed to erode. Sediment can also overflow into the larger water quality basin. The maintenance frequencies required in the draft permit are taken from Volume 2 Chapter 2: Structural BMP Specifications for the Massachusetts Stormwater Management Handbook[15].

[15] Available electronically at http://www.mass.gov/eea/agencies/massdep/water/regulations/massachusetts-stormwater-handbook.html

Debris Removal from Manholes and Catch Basins

This BMP requires the permittee to perform an initial inspection and cleaning of active manholes and catch basins to remove any accumulated debris or sediment. Rather than a specific frequency for cleaning catch basins, the draft permit requires the permittee to optimize its frequency of routine cleaning with a goal that no basin shall be greater than 50 percent full. The permittee must track the amount of material removed from each basin and increase the frequency of cleaning if evidence suggests that material is accumulating more quickly than in other basins.

EPA encourages the use of catch basin inserts or filter socks to improve removal of suspended solids entering catch basins. If used, these devices must be maintained per manufacturer specifications to prevent clogging or sediment escape.

Open Space Management

This BMP requires the permittee to establish requirements for use of slow release fertilizers on permittee owned property currently using fertilizer, in addition to reducing and managing fertilizer use. Establish procedures to address the proper use, storage, and disposal of pesticides, herbicides, and fertilizers including minimizing the use of these products and using only in accordance manufacturer's instruction. Evaluate lawn maintenance and landscaping activities to ensure practices are protective of water quality. Protective practices include reduced mowing frequencies, proper disposal of lawn clippings, and use of alternative landscaping materials (e.g., drought resistant planting).

Also, establish procedures to properly manage grass cuttings and leaf litter on permittee property, including prohibiting blowing organic waste materials onto adjacent impervious surfaces.

Annual Report on Site-specific BMPs

PEDA will prepare an annual BMP summary report for submittal to the EPA and MassDEP. 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 15 of each year following the effective date of the permit (see Part I.C.9. of permit)

VII. 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 CFR § 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 and Silver Lake are not covered by the EFH designation, and thus EPA has determined that a formal EFH consultation with NMFS is not required.

VIII. Endangered Species Act

Section 7(a) of the Endangered Species Act of 1973, as amended (ESA), grants authority to and imposes requirements upon Federal agencies regarding endangered or threatened species of fish, wildlife, or plants ("listed species") and habitat of such species that has been designated as critical (a "critical habitat"). The ESA requires every Federal agency, in consultation with and with the assistance of the Secretary of Interior, to ensure that any action it authorizes, funds, or carries out, in the United States or upon the high seas, is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat. The United States Fish and Wildlife Service (USFWS) typically administers Section 7 consultations for bird, terrestrial, and freshwater aquatic species. The National Marine Fisheries Service (NMFS) typically administers Section 7 consultations for marine species and anadromous fish.

EPA has reviewed the federal endangered or threatened species of fish and wildlife to determine if any listed species might potentially be impacted by the re-issuance of this NPDES permit. The review revealed that the only federally protected species that merits further discussion is the bog turtle (*Clemmys muhlenbergii)*.

PEDA discharges stormwater and groundwater infiltration into Silver Lake, which is hydrologically connected to the Housatonic River. The bog turtle has been identified in Egremont and Sheffield, Massachusetts, which are approximately 25 miles away from Pittsfield. In addition, the bog turtle is found in wet meadows, according to the USFWS website. This species would not likely be found in an open lake; therefore even if the species is found closer to the Pittsfield area, it is unlikely that it would come into contact with the PEDA discharge.

Based on the permit conditions and absence of listed species in the vicinity of the facility's discharge, EPA has determined that this permit action will have no effects on this species. EPA is coordinating a review of this finding with USFWS through the draft permit, this fact sheet, and a letter under separate cover.

IX. Monitoring and Reporting

The effluent monitoring requirements have been established to yield data representative of the discharge under authority of Section 308 (a) of the CWA in accordance with 40 CFR §§122.41 (j), 122.44 (l), and 122.48.

The draft permit includes new provisions related to Discharge Monitoring Report (DMR) submittals to EPA and the State. The Draft Permit requires that, no later than six months after the effective date of the permit, the permittee submit all monitoring data and other reports required by the permit to EPA using NetDMR, unless the permittee is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes the use of NetDMR for submitting DMRs and reports ("opt-out request").

In the interim (until six months from the effective date of the permit), the permittee may either submit monitoring data and other reports to EPA in hard copy form, or report electronically using NetDMR.

NetDMR is a national web-based tool for regulated Clean Water Act permittees to submit discharge monitoring reports (DMRs) electronically via a secure Internet application to U.S. EPA through the Environmental Information Exchange Network. NetDMR allows participants to discontinue mailing in hard copy forms under 40 CFR Part 122.41 and Part 403.12. NetDMR is accessed from the following url: http://www.epa.gov/netdmr. Further information about NetDMR, including contacts for EPA Region 1, is provided on this website.

EPA currently conducts free training on the use of NetDMR, and anticipates that the availability of this training will continue to assist permittees with the transition to use of NetDMR. To participate in upcoming trainings,

visit http://www.epa.gov/netdmr for contact information for Massachusetts.

The Draft permit requires the permittee to report monitoring results obtained during each calendar month using NetDMR, no later than the 15th day of the month following the completed reporting period. All reports required under the permit shall be submitted to EPA as an electronic appendix to the DMR. Once a permittee begins submitting reports using NetDMR, it will no longer be required to submit hard copies of DMRs or other reports to EPA and will no longer be required to submit hard copies of DMRs to MassDEP. However, permittees must continue to send hard copies of reports other than DMRs (such as toxicity test results) to MassDEP until further notice from MassDEP.

The Draft permit also includes an "opt-out" request process. Permittees who believe they cannot use NetDMR due to technical or administrative infeasibilities, or other logical reasons, must demonstrate the reasonable basis that precludes the use of NetDMR. These permittees must submit the justification, in writing, to EPA at least sixty (60) days prior to the date the facility would otherwise be required to begin using NetDMR. Opt-outs become effective upon the date of written approval by EPA and are valid for twelve (12) months from the date of EPA approval. The opt-outs expire at the end of this twelve (12) month period. Upon expiration, the permittee must submit DMRs and reports to EPA using NetDMR, unless the permittee submits a renewed opt-out request sixty (60) days prior to expiration of its opt-out, and such a request is approved by EPA.

Until electronic reporting using NetDMR begins, or for those permittees that receive written approval from EPA to continue to submit hard copies of DMRs, the draft permit requires that submittal of DMRs and other reports required by the permit continue in hard copy format. Hard copies of DMRs must be postmarked no later than the 15th day of the month following the completed reporting period. Hard copies of WET test reports must be postmarked by the 30th day of the month following the test.

X. 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.

XI. State Water Quality Certification Requirements

The staff of the MassDEP have 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.

XII. General Conditions

The general conditions of the permit are based on 40 CFR §§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.

XIII. Public Comment Period and Procedures for Final Decision

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 (30) thirty day public comment period, to the following two addresses:

Robin L. Johnson
U.S. EPA
5 Post Office Square, Suite 100
Mail Code OEP06-1
Boston, Massachusetts 02114

And

Cathy Vakalopoulos
MassDEP
Department of Environmental Protection
1 Winter St. Boston, Massachusetts 02108

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. 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.

XIV. 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 GE Housatonic River Site website: www.epa.gov/ne/ge
- EPA New England NPDES website: http://epa.gov/region1/npdes/draft_permits_listing_ma.html
- MassDEP's website: http://www.mass.gov/eea/agencies/massdep/news/comment/

XV. 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:

Cathy Vakalopoulos
Massachusetts Department of Environmental Protection
1 Winter Street
Boston, MA 02108
Telephone: (617) 348-4026
email: catherine.vakalopoulos@state.ma.us

XVI. 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:

Robin L. Johnson
U.S. Environmental Protection Agency
5 Post Office Square, Suite 100
Mail Code OEP06-01
Boston, MA 02109
Telephone: (617) 918-1045
email: johnson.robin@epa.gov

_____
Date

Ken Moraff, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency

Appendix A
Effluent Characteristics, January 2010 - December 2013

Month	Flow, avg monthly MGD	Flow, max daily MGD	pH min s.u.	pH max s.u.	TSS, max daily lbs/day	TSS, avg monthly lbs/day	Oil and Grease lb/day	Oil and Grease mg/l	PCB lbs/day
Jan-10	0.116	**3.521**	7.98	7.98	**1850**	**1850**	0	0	1.27E-02
Feb-10	0.073	1.007	8.16	8.16	**641.28**	**641.28**	10.16	1.21	7.00E-04
Mar-10	0.395	2.538	8.14	8.47	21.1	21.1	0	0	4.02E-05
Apr-10	0.154	0.406	8.06	8.41	66.31	66.31	0	0	8.30E-05
May-10	0.104	0.706	7.75	8.1	96.78	96.78	0	0	3.11E-04
Jun-10	0.09	0.845	7.64	8.27	8.49	8.49	0	0	2.06E-05
Jul-10	0.11	1.39	8.37	**9.11**	0.2	0.2	0.5	**40**	1.96E-06
Aug-10	0.51	**7.33**	6.5	8.1	283.2	**283.2**	0	0	5.48E-05
Sep-10	0.07	2.17	7.55	7.55	660	**660**	23.04	1.27	1.61E-02
Oct-10	0.25	**4.39**	7.53	8.61	33	33	0	0	1.48E-04
Nov-10	0.04	0.84	7.57	7.92	18.7	18.7	1.8	2.02	1.40E-04
Dec-10	0.05	1.51	8.08	8.22	153.9	**153.9**	0	0	5.79E-04
Jan-11	F	F	F	F	F	F	F	F	F
Feb-11	F	F	F	F	F	F	F	F	F
Mar-11	0.22	2.07	7.72	8.31	11	11	24.5	1.42	2.63E-03
Apr-11	0.29	1.69	8.03	8.52	15.7	27	0	0	4.48E-05
May-11	0.11	0.37	8.13	8.66	1471.1	1471.1	0.2	1.37	1.29E-04
Jun-11	0.37	1.57	7.33	8.2	116.3	116.3	0	0	1.83E-04
Jul-11	0.11	1.39	8.34	**9.11**	0.2	0.2	0.5	**40**	1.96E-06
Aug-11	0.51	**7.33**	6.5	8.01	283.2	**283.2**	0	0	5.48E-05
Sep-11	0.71	**3.86**	7.58	7.76	**500.6**	**500.6**	0	0	1.31E-02
Oct-11	0.14	0.92	7.89	8.02	10.5	10.5	0	0	7.21E-04
Nov-11	0.11	1.93	8.03	8.13	12.6	12.6	0	0	5.42E-06
Dec-11	0.23	2.52	7.55	8.31	3.2	3.2	1.3	1.86	2.23E-04
Jan-12	0.21	0.24	7.66	8.3	7.2	7.2	0	0	4.14E-04
Feb-12	0.02	0.36	7.71	8.06	0.5	0.5	0.1	0.98	3.91E-05
Mar-12	0.02	0.16	8.04	8.43	1.35	1.35	0.04	1.62	2.55E-06
Apr-12	0.03	0.6	8.32	8.32	256.92	**256.92**	7.04	1.4	5.71E-04
May-12	0.11	0.88	8.19	**9.14**	148.73	**148.73**	2.33	1.6	2.08E-04
Jun-12	0.06	0.89	8.18	8.62	F	F	0	0	3.47E-05
Jul-12	0.01	0.19	7.36	7.36	F	F	F	F	F
Aug-12	0.12	2.29	7.7	7.7	5.26	5.26	F	F	F
Sep-12	0.06	0.68	7.55	7.55	33.14	33.14	0.83	1.11	7.39E-05
Oct-12	0.06	1.05	7.4	7.95	117.1	117.1	36.14	4.15	1.74E-03
Nov-12	F	F	F	F	F	F	F	F	F
Dec-12	0.05	0.98	8.39	8.39	77.3	77.3	8.4	2.9	4.31E-04
Jan-13	F	F	7.45	7.45	F	F	F	F	F
Feb-13	0.05	1.27	8.05	8.05	319.8	**319.8**	2.7	1.9	1.83E-04
Mar-13	0.05	1.08	7.47	8.6	736.3	**736.3**	17	1.89	1.05E-03
Apr-13	0.05	0.67	8.66	8.66	308.2	308.2	0	0	1.80E-04
May-13	0.27	1.42	7.71	7.71	39.5	39.5	7.7	1.96	7.14E-04
Jun-13	1.09	2.04	7.74	8.3	140.3	**140.3**	**442.3**	**25.3**	0.00E+00
Jul-13	NS	NS	7.94	8.16	72.5	72.5	0	0	2.21E-04
Aug-13	NS	NS	7.9	7.9	166.1	**166.1**	29	1.24	2.54E-03
Sep-13	0.07	1.73	7.55	7.68	32.7	32.7	0	0	1.32E-04
Oct-13	F	F	7.47	7.47	F	F	F	F	F
Nov-13	0.07	1.73	7.55	7.48	32.7	32.7	0	0	1.32E-04
Dec-13	0.025	0.396	7.92	7.92	66.5	66.5	16.2	5.43	3.94E-04
1992 Permit Limits	1.1	2.55	6	9	628	138	319	15	Report
Minimum	0.01	0.16	6.5	7.36	0.2	0.2	0	0	1.96E-06
Average	0.2	1.8	7.8	8.2	227.6	228.0	3.6	3.3	0.0
Maximum	0.71	7.33	8.37	9.14	1850	1850	36.14	40	0.0161
Standard Deviation	0.2	1.8	0.4	0.4	433.4	433.2	8.7	10.0	0.0
# measurements	36	36	36	36	36	36	36	36	36
# exceed 1992 permit limit	0	5	0	3	5	15	1	3	N/A

bold = exceeds 1992 permit limit
N/A = not applicable
PCB = Polychlorinated biphenyl
TSS = Total Suspended Solids
F = not sampled due to insufficient flow
NS = Not sampled due to equipment issues

Appendix A
Effluent Characteristics, January 2010 - December 2013

PCB Data, Outfall 001		
Date	Total PCBs (µg/L)	Reporting Limit (µg/L)
1/26/2010	0.376	0.065
2/26/2010	0.0414	0.065
3/17/2010	0.0789	0.065
4/9/2010	0.027	0.065
5/14/2010	0.0723	0.065
6/15/2010	0.0247	0.065
7/27/2010	0.737	0.065
8/1/2010	F	F
9/30/2010	0.885	0.065
10/7/2010	0.1043	0.065
11/5/2010	0.154	0.065
12/1/2010	0.0458	0.065
1/1/2010	F	F
2/1/2010	F	F
3/11/2011	0.1523	0.065
3/22/2011	0.0508	0.065
4/2/2011	0.0639	0.065
4/12/2011	Non-detect	0.065
5/16/2011	0.1129	0.065
6/23/2011	0.0888	0.065
7/19/2011	0.1645	0.065
8/16/2011	0.1093	0.065
9/7/2011	0.406	0.065
10/14/2011	0.1051	0.065
11/18/2011	0.0548	0.065
12/9/2011	0.3237	0.065
1/13/2012	0.2037	0.065
2/6/2012	0.3745	0.065
3/23/2012	0.1013	0.065
4/23/2012	0.1137	0.065
5/9/2012	0.1426	0.065
6/4/2012	0.1393	0.065
7/1/2012	F	F
8/1/2012	F	F
9/19/2012	0.0991	0.065
10/19/2012	0.1983	0.065
11/1/2012	F	F
12/18/2012	0.1326	0.065
1/1/2013	F	F
2/28/2013	0.1294	0.065
3/14/2013	0.1162	0.065
4/12/2013	0.0571	0.065
5/24/2013	0.1812	0.065
6/7/2013	Non-detect	0.065
7/26/2013	0.0489	0.065
8/12/2013	0.1086	0.065
9/13/2013	0.0778	0.065
10/1/2013	F	F
11/1/2013	0.0456	0.065
12/23/2013	0.1318	0.065
minimum	0.0247	
average	0.164505	
maximum	0.885	

Appendix B
Silver Lake Pre-Remediation PCB Data

Silver Lake
Pre-construction surface water results
Samples collected at outlet to Housatonic River

Date	Total PCBs (µg/L)	Date	Total PCBs (µg/L)
12/19/2006	0.181	4/29/2010	0.193
1/24/2007	0.103	6/2/2010	0.269
2/28/2007	0.123	6/29/2010	0.409
3/20/2007	0.044	7/28/2010	0.297
4/26/2007	0.223	8/26/2010	0.372
5/30/2007	0.41	9/22/2010	0.297
6/28/2007	0.362	10/28/2010	0.08
7/26/2007	0.576	11/18/2010	0.093
9/5/2007	0.799	12/16/2010	0.071
9/26/2007	0.93	2/4/2011	0.094
10/30/2007	0.411	3/1/2011	0.141
11/27/2007	0.319	3/30/2011	0.058
12/20/2007	0.203	4/28/2011	0.039
1/29/2008	0.164	5/26/2011	0.149
2/28/2008	0.088	6/29/2011	0.165
3/26/2008	0.255	7/26/2011	0.525
4/30/2008	0.317	8/31/2011	0.273
5/28/2008	0.433	9/29/2011	0.23
6/25/2008	0.518	10/25/2011	0.181
7/31/2008	0.502	11/29/2011	0.201
8/26/2008	0.381	12/20/2011	0.129
9/24/2008	0.293	1/19/2012	0.127
10/30/2008	0.218	2/16/2012	0.132
11/18/2008	0.131	3/29/2012	0.177
12/16/2008	0.1	4/25/2012	0.214
1/22/2009	0.085	5/24/2012	0.358
2/26/2009	0.128	6/28/2012	0.786
3/26/2009	0.13	7/19/2012	0.697
4/28/2009	0.156	**Average**	**0.264**
5/28/2009	0.351	**Maximum**	**0.930**
6/25/2009	0.377	**Minimum**	**0.044**
7/21/2009	0.253	**# of samples**	**0**
8/27/2009	0.281		
9/24/2009	0.287	Results are a summation of quantified Aroclors	
10/29/2009	0.137		
11/19/2009	0.392		
12/18/2009	0.128		
1/21/2010	0.142		
2/23/2010	0.1		
3/25/2010	0.13		

Appendix C
Silver Lake Post-Remediation PCB Data

Silver Lake Post-Remediation PCB Data
All data collected at lake discharge channel

Date	Total PCBs (µg/L)	Laboratory	Notes
10/14/2013	0.04	GE	First data with dam removed
10/29/2013	0.06	GE	Start of monthly sampling
11/21/2013	0.038	GE	
12/19/2013	0.028	GE	
1/28/2014	ND (0.022)	GE	
2/20/2014	0.038	GE	
3/27/2014	0.044	GE	
4/24/2014	ND (0.010)	EPA/Weston	Split Sample
4/24/2014	0.063	GE	
5/21/2014	0.08	GE	
6/26/2014	0.097	GE	
7/22/2014	0.004	EPA/CLP	Split Sample
7/22/2014	ND (0.010)	EPA/Weston	Split Sample
7/22/2014	0.094	GE	GE DATA
median	0.044		

Notes:
1. Results are a summation of quantified Aroclors
2. ND = Non-detect with the detection limit shown in parenthesis
3. GE's laboratory was Pace Analytical Services
4. EPA/Weston laboratory was Test America, Burlington, Vermont
5. EPA/CLP is laboratory contracted by EPA under the Contract Lab Program

State Permit No. 356
Federal Permit No. MA0003391

MODIFICATION OF AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act, as amended, (33 U.S.C. §§ 1251 et seq.; the "CWA"), and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§26-53),

General Electric Company

is authorized to discharge from the facility located at

100 Woodlawn Avenue
Pittsfield, MA 01201

to receiving waters named

East Branch of the Housatonic River,
Silver Lake and Unkamet Brook

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit modification shall become effective on the date of issuance.

This permit modification and the authorization to discharge shall expire at midnight, February 7, 1997.

This modifies the permit issued on September 30, 1988, which became effective on February 7, 1992 due to the resolution of the permittee's evidentiary hearing request.

This permit modification consists of 30 pages in Part I including effluent limitations, monitoring requirements, etc., and 22 pages in Part II including General Conditions and Definitions.

Signed this 21st day of May 1992

Director
Water Management Division
Environmental Protection Agency
Region I
Boston, MA

Director, Division of Water
Pollution Control
Department of Environmental
Protection
Commonwealth of Massachusetts
Boston, MA

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through the expiration date the permittee is authorized to discharge from outfall serial number 001 (non-contact cooling water and stormwater runoff) into Silver Lake.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	lbs/day		Other Units(Specify)		Measurement	Sample
	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Frequency	Type
Flow-m3/Day (MGD)	-	-	1.10 mgd	2.55 mgd	Continuous	Recorder
Total Suspended Solids	138	628	-	-	Monthly	Composite
Oil & Grease	-	319	-	15 mg/l	Monthly	Grab
PCBs		Monitor			Monthly	Grab

See page 19 for metals monitoring requirements and limitations.

See page 22-27 for toxicity monitoring requirements and limitations.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly, report range. If the pH of public water supply is less than 6.0, that would be the lower limit.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: at the discharge from oil/water separator.

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PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

3. During the period beginning on the effective date and lasting through the expiration date the permittee is authorized to discharge from outfall serial number 004 (contact cooling water, non-contact cooling water and stormwater runoff) into Silver Lake.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	lbs/day		Other Units(Specify)		Measurement	Sample
	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Frequency	Type
Flow-m^3/Day (MGD)	-	-	0.38 mgd	2.09 mgd	1/month	Recorder
Oil & Grease	-	261		15 mg/l	1/month	Grab
Polychlorinated Biphenyls		Monitor			Quarterly	Grab

See page 22-27 for toxicity monitoring requirements and limitations.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly, report range. If the pH of the public water supply is less than 6.0, that would be the lower limit.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: in plant manhole station on 004.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

4. During the period beginning on the effective date and lasting through the expiration date, the permittee shall monitor the discharge from internal serial number 05X (scrubber water discharge from the thermal oxidizer)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	lbs/day		Other Units(specify)		Measurement	Sample
	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Frequency	Type
Flow (MGD)	-	-	Report	Report	Monthly	Estimate
*Polychlorinated dibenzofurans (ppt)	-	-	Report	Report	Monthly	Composite

*The permittee shall submit lab reports with test result summaries each month with the appropriate DMRs. Reports and summaries shall list the test method used, and the detection limits for each congener or isomer analyzed. The method for analysis of polychlorinated dibenzofurans approved by EPA-Environmental Services Division (ESD) must be utilized.

Samples taken in compliance with the monitoring requirements specified above shall be collected during the same sampling period during which the polychlorinated dibenzofurans sample is collected at 005, and taken at the following locations: discharge point of scrubber effluent from the thermal oxidizer prior to mixing with any other wastestream or receiving water.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

5. During the period beginning on the effective date and lasting through January 31, 1989, the permittee is authorized to discharge from outfall serial number 005 (contact cooling water, non-contact cooling water, treated process water and stormwater runoff).

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	lbs/day		Other Units(Specify)		Measurement	Sample
	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Frequency	Type
Flow-m^3/Day (MGD)	-	-	1.08 mgd	1.08 mgd	Continuous	Daily Avg.
BOD5	90#/day	135#/day	-	-	Weekly	Composite
TSS	188	270	-	-	Weekly	Composite
*Polychlorinated Biphenyls	0.039	0.12	-	-	3/Weekly	Composite
**PCDD	-	-	Report	Report	Weekly	Composite
**PCDF	-	-	Report	Report	Weekly	Composite
Oil & Grease	-	135	-	15 mg/l	Weekly	Grab

*After 1 year of monitoring, with the new treatment system (see pg. 23) EPA will consider reduction of the monitoring frequency if the monitoring data shows that the permittee has complied with the permit limits.

**The permittee shall submit lab reports with test result summaries each month with the appropriate DMRs. Reports and summaries shall list the test method used, and the detection limits for each congener or isomer analysed. The method for analysis of PCDD and PCDF must be approved by EPA-Environmental Services Division (ESD). EPA may develop and require specific limitations for PCDDs and PCDFs through permit modification in the near future.

See page 13 for metals monitoring requirements and limitations.

See page 16-20 for toxicity monitoring requirements and limitations.

I.A.5. (con'd)

The pH shall not be less than 6.0 standard units nor greater than 8.5 standard units and shall be monitored weekly with 4 grab samples, report ranges. If the pH of the public water supply is less than 6.0, that would be the lower limit.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: discharge point of the treatment system.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

6. During the period beginning on February 1, 1989, and lasting through expiration date the permittee is authorized to discharge from outfall serial number 005 (contact cooling water, non-contact cooling water, treated process water, treated groundwater and stormwater runoff) to Housatonic River.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	lbs/day		Other Units (Specify)		Measurement	Sample
	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Frequency	Type
Flow-m^3/Day (MGD)	-	-	2.09 mgd	2.09 mgd	Continuous	Recorder
BOD5	90	135	-	-	Monthly	Composite
TSS	188	270	-	-	Monthly	Composite
Polychlorinated Biphenyls	0.01	0.03	-	-	Weekly	Composite
Polychlorinated* dibenzofurans	-	-	Report	Report	Monthly	Composite
Oil & Grease	-	135	-	15 mg/l	Weekly	Grab
**Volatile Compounds	-	-	Report	Report	Quarterly	Grab
***Semi-Volatile Compounds	-	-	Report	Report	Quarterly	Grab

*The permittee shall submit lab reports with test result summaries each month with the appropriate DMRs. Reports and summaries shall list the test method used, and the detection limits for each congener or isomer analyzed. The method for analysis of polychlorinated dibenzofurans approved by EPA-Environmental Services Division (ESD) must be utilized. EPA may develop and require specific limitations for PCDDs and PCDFs through permit modification in the future.

I.A.6. (con'd)

**Refers to the GC/MS Fraction - Volatile Compounds, as listed in Table V-C of NPDES Application Form 2C.

***Refers to the GC/MS Fractions - Base/Neutral/Acid Extractable Compounds, as listed in Table V-C of NPDES Application Form 2C.

See page 19 for metals monitoring requirements and limitations.

See pages 22-27 for toxicity monitoring requirements and limitations.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly , report ranges. If the pH of the public water supply is less than 6.0, that would be the lower limit.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: for Volatile Compounds, Semi-Volatile Compounds, and pH, discharge point of the groundwater treatment system (64-G); for polychlorinated dibenzofurans and pH, discharge point from wastewater treatment system (64-T); for all other substances, discharge points from wastewater treatment system (64-T) and from groundwater treatment system (64-G), composited by flow.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

7. During the period effective date and lasting through expiration date the permittee is authorized to discharge from outfall serial number 007 (non-contact cooling water and stormwater runoff), to Housatonic River.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units(Specify)		Measurement	Sample
	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Frequency	Type
Flow-m^3/Day (MGD)	-	-	Report	Report	Monthly	Calculation
Temperature			70°F	75°	Monthly	Grab
*PCBs	-	-	Report	Report	Quarterly	Grab

See pages 22-27 for toxicity monitoring requirements and limitations.

* If all monitoring for this parameter at this outfall have resulted in nondetects after the completion of the fourth quarterly monitoring, then no further monitoring for this parameter at this outfall is required under this Permit. For purposes of this provision, any reading <0.5 ppb is defined as a nondetect.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly, report range. If the pH of the public water supply is less than 6.0, that would be the lower limit.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: @ Manhole prior to city storm drain.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

8. During the period beginning on the effective date and lasting through the expiration date the permittee is authorized to discharge from outfall serial number 009 (non-contact cooling water, treated process water and stormwater runoff), to Unkamet Brook.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	lbs/day		Other Units(Specify)		Measurement	Sample
	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Frequency	Type
Flow-m^3/Day (MGD)	-	-	Report	Report	Continuous	Recorder
Oil & Grease	-	438	-	15 mg/l	Weekly	Grab
TSS	213	876	-	-	Weekly	Composite
BOD5	106	438	-	-	Weekly	Composite
PCBs	-	-	Report	Report	Quarterly	Grab

See page 19 for metals monitoring requirements and limitations.

See pages 22-27 for toxicity monitoring requirements and limitations.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly , report range. If the pH of the public water supply is less than 6.0, that would be the lower limit.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: For BOD, TSS, and flow, at 09A and 09B, report sum of load as 009; for pH, oil & grease, and PCBs, at discharge point to Unkamet Brook.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

10. During the period beginning on the effective date and lasting through the expiration date the permittee is authorized to discharge metal finishing process wastewaters that discharge to outfalls 005, 009 and 011. These internal wastestream sampling points shall be designated 05H, 05I, 09G, 09H, 09I, 09J, and 11G. See page 15 of 30 for a list of the current metal finishing operation sampling points.

a. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units(Specify)		Measurement	Sample
	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Frequency	Type
Flow, gpd	-	-	Report	Report	Daily, when in use	Estimate
Cadmium			0.26 mg/l	0.69 mg/l	2/month	Composite1
Chromium, total			1.71 mg/l	2.77 mg/l	2/month	Composite1
Copper			2.07 mg/l	3.38 mg/l	2/month	Composite1
Lead			0.43 mg/l	0.69 mg/l	2/month	Composite1
Nickel			2.38 mg/l	3.98 mg/l	2/month	Composite1
Silver			0.24 mg/l	0.43 mg/l	2/month	Composite1
Zinc			1.48 mg/l	2.61 mg/l	2/month	Composite1
Cyanide, total			0.65 mg/l	1.20 mg/l	1/month	Grab
*TTO			-	2.13 mg/l	1/quarter	Grab

1 Representative grab samples may be used for batch discharges.

*See page 21 for definition.

b. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly , report range. If the pH of the public water supply is less than 6.0, that would be the lower limit.

I.A.10. (con'd)

c. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: at the end of treatment system prior to mixing with non-metal finishing flows. The exact monitoring location(s) approved by EPA & MA DEP shall be used.

d. The permittee shall submit to EPA and DEQE a report detailing each metal finishing discharge at the facility. At a minimum, this report must provide: the location of each discharge, and the final outfall, and DMR I.D. number (eg 01A, 09C, etc.-- no more than three characters) for each discharge; the type of operation for each discharge; instantaneous (not averaged) daily flow for each batch discharge; volume of each batch discharge; frequency of each batch discharge; monthly average and daily maximum flows for each continuous discharge. This report shall also contain a complete and up-to-date process wastewater flow diagram for the facility, detailing exactly where each metal finishing discharge is sampled prior to mixing with any other wastestream or receiving water, where it enters the facility sewer system, and detailing process water discharges, treatment, and bypasses. Analyses for the metals listed on page 11 shall be conducted for each metal finishing discharge, and submitted with the report. As part of this report the permittee may submit alternative monitoring schemes for approval by EPA and DEQE. This report shall be submitted no later than 90 days after the effective date of the permit.

I.A.10. (con'd)

CURRENT LIST OF INTERNAL METAL FINISHING WASTESTREAMS

EPA (DMR) I.D. No.	Outfall	Building	G.E. I.D. No.	Operation
05H	005	63	W1- 3,9	Anodizing tanks, post inspection wash and rinse
05I	005	63	W1- 4A,B	Deburring tumbler
09G	009	OP-1	W1-2,4	East side rinse tanks, hose and rinse, lab sink, East side scrubber, anodize rinse continuous makeup, West side rinse water, West side scrubber, deburring tumblers, secondary rinse
09H	009	OP-1	W1-10	Engineering circuits lab
09I	009	OP-2	W1-1	Scanning electron microscope lab
09J	009	59	W1-1	Deburring tumblers and rinse sink
11G	011	OP-3	W1- 2,3	Anodizing rinsewater overflow and anodizing area sink

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

11. Each stormwater-related bypass through Outfall(s) serial number(s) 01A, 05A, 05B, 006, 06A, 09D, 11A, and the SROs is hereby approved as an anticipated bypass within the meaning of Part II, GENERAL REQUIREMENTS, (m) Bypass, Pages 7 & 8 of 19, PROVIDED that each of the following conditions are met:

a. Such bypass results from wet weather flow exceeding system capacity in accordance with the "F... Stormwater Management Plan," dated July, 1990, including any modifications, supplements, or later versions of such Plan approved by EPA [hereinafter referred to as the "Stormwater Plan"].

b. General Electric reports in the Discharge Monitoring Report for the month the date of such discharge.

c. General Electric conducts a physical inspection of all diversion devices no less frequently than quarterly, to determine whether discharges could occur during wet weather flows not exceeding the system capacities identified in the Stormwater Plan. The results of such physical inspection are to be reported together with the Discharge Monitoring Report to be submitted no later than four months after the issuance of this Modification of Authorization to Discharge, and every three months thereafter. If any such physical inspection reveals that discharges could occur during wet weather flows not exceeding the system capacities identified in the Stormwater Plan, General Electric is to identify and report to EPA and DEP the conditions under which such discharges could occur, and promptly propose to EPA and DEP and implement actions to make the conditions under which discharges could occur consistent with the terms of the Stormwater Plan.

d. General Electric conducts quarterly monitoring at the bypass outfalls for the following parameters:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units(Specify)		Measurement	Sample
	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Frequency	Type
Flow-m^3/Day (MGD)	-	-		Monitor	Quarterly	*Estimate
**PCBs	-	-		Monitor	Quarterly	Grab
Oil and grease	-	-		15 ppm	Quarterly	Grab

* Estimated instantaneous flow at time of sampling

** Monitoring for PCBs is not required at outfall 11A.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored quarterly.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: for 11A, at overflow weir in manhole outside oil/water separator at building OP#3; for all other outfalls, at points of discharge.

e. Allowance of such bypasses may be terminated by EPA or DEP upon the finding that such discharges no longer satisfy the provisions of Part II, General Requirements, (m) Bypass, or that they pose a threat or a potential threat to human health or the environment.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

12. During the period beginning on the effective date and lasting through the expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 05A and 006 nonprocess water from the operation of the barrel screens, to Housatonic River.

Such dry weather discharges through outfalls 05A and 006 shall be monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units(Specify)		Measurement	Sample
	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Frequency	Type
Flow-m^3/Day (MGD)	-	-		Monitor	Quarterly	*Estimate
PCBs	-	-		Monitor	Quarterly	Grab
Oil and grease	-	-		15 ppm	Quarterly	Grab

* Estimated instantaneous flow at time of sampling

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored quarterly.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken when no bypass flows are contributing to discharge, at the following location: at point of discharge.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

13. During the period beginning on the effective date and lasting through expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 001,004,005,007,009 & 011.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Other Units (Specify)		Monitoring Requirements	
	Avg. Monthly	Max. Daily	Avg. Monthly	Max. Daily	Measurement Frequency	Sample Type
Copper		Monitor Only			Weekly	Composite
Zinc		"			Weekly	"
Lead		"			Weekly	"
Cadmium		"			Monthly	"
Chromium		"			Monthly	"
Aluminum		"			"	"
Nickel		"			"	"
Phosphorus		"			"	"
Silver		"			"	"
Cyanide		"			"	Grab
*NOAEL		≥35%			*	*
*NOCEL		Monitor Only			*	*

* See pages 22-27 for definitions and description of toxicity monitoring requirements and limitations.

The test sample shall be a composite sample made by combining proportionate to flow 24 hour composite samples collected at outfalls 001, 004, 005, 007, 009 and 011.

14. All existing manufacturing, commercial, mining, and silvi-cultural dischargers must notify the Director as soon as they know or have reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

(1) One hundred micrograms per liter (100 ug/l);

(2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l for antimony;

(3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. §122.21(g)(7); or

(4) Any other notification level established by the Director in accordance with 40 C.F.R. §122.44(f).

b. That any activity as occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(1) Five hundred micrograms per liter (500 ug/l);

(2) One milligram per liter (1 mg/l) for antimony;

(3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. §122.21(g)(7); or

(4) Any other notification level established by the Director in accordance with 40 C.F.R. §122.44(f).

c. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.

d. Total Toxic Organics

The term Total Toxic Organics (TTO) is the summation of all quantifiable values greater than 0.01 milligrams per liter (mg/l) for the following:

Acenaphthene
Acrolein
Acrylonitrile
Benzene
Benzidine
Carbon tetrachloride (tetrachloromethane)
Chlorobenzene
1,2,4-Trichlorobenzene
Hexachlorobenzene
1,2,-Dichloroethane
1,1,1-Trichloroethane
Hexachloroethane
1,1-Dichloroethane
1,1,2-Trichloroethane
1,1,2,2-Tetrachloroethane
Chloroethane
Bis (2-chloroethyl) ether
2-Chloroethyl vinyl ether (mixed)
2-Chloronaphthalene
2,4,6-Trichlorophenol
Parachlorometa cresol
Chloroform (trichloromethane)
2-Chlorophenol
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
3,3-Dichlorobenzidine
1,1-Dichloroethylene
1,2-Trans-dichloroethylene
2,4-Dichlorophenol
1,2-Dichloropropane (1,3-dichloropropene)
2,4-Dimethylphenol
2,4-Dinitrotoluene
2,6-Dinitrotoluene
1,2-Diphenylhydrazine
Ethylbenzene
Fluoranthene
4-Chlorophenyl phenyl ether
4-Bromophenyl phenyl ether
Bis (2-chloroisopropyl) ether
Bis (2-chloroethoxy) methane
Methylene chloride (dichloromethane)
Methyl chloride (chloromethane)
Methyl bromide (bromomethane)
Bromoform (tribromomethane)
Dichlorobromomethane
Chlorodibromomethane
Hexachlorobutadiene
Hexachlorocyclopentadiene
Isophorone
Naphthalene
Nitrobenzene
2-Nitrophenol
4-Nitrophenol
2,4-Dinitrophenol
4,6-Dinitro-o-cresol
N-nitrosodimethylamine
N-nitrosodiphenylamine
N-nitrosodi-n-propylamine
Pentachlorophenol
Phenol
Bis (2-ethylhexyl) phthalate
Butyl benzyl phthalate
Di-n-butyl phthalate
Di-n-octyl phthalate
Diethyl phthalate
Dimethyl phthalate
1,2-Benzanthracene (benzo(a)anthracene)
Benzo(a)pyrene (3,4-benzopyrene)
3,4-Benzofluoranthene (benzo(b)fluoranthene)
11,12-Benzofluoranthene (benzo(k)fluoranthene)
Chrysene
Acenaphthylene
Anthracene
1,12-Benzoperylene (benzo(ghi)perylene)
Fluorene
Phenanthrene
1,2,5,6-Dibenzanthracene (dibenzo(a,h)anthracene)
Indeno(1,2,3-cd) pyrene (2,3-o-phenlene pyrene)
Pyrene
Tetrachloroethylene
Toluene
Trichloroethylene
Vinyl chloride (chloroethylene)
Aldrin
Dieldrin
Chlordane (technical mixture and metabo lites)
4,4-DDT
4,4-DDE (p,p-DDX)
4,4-DDD (p,p-TDE)
Alpha-endosulfan
Beta-endosulfan
Endosulfan sulfate
Endrin
Endrin aldehyde
Heptachlor
Heptachlor epoxide (BHC-hexachloro-cyclohexane)
Alpha-BHC
Beta-BHC
Gamma-BHC
Delta-BHC
(PCB-polychlorinated biphenyls)
PCB-1242 (Arochlor 1242)
PCB-1254 (Arochlor 1254)
PCB-1221 (Arochlor 1221)
PCB-1232 (Arochlor 1232)
PCB-1248 (Arochlor 1248)
PCB-1260 (Arochlor 1260)
PCB-1016 (Arochlor 1016)
Toxaphene
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

In monitoring for TTO, the permittee shall analyze for only those pollutants which would reasonably be expected to be present. The permittee may make the following certification on its monitoring reports in lieu of conducting an analysis: "Based on my inquiry of the person or persons directly responsible for managing compliance with permit limitations for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics has occurred since filing of the last monitoring report. I further certify that this facility is implementing the solvent management plan submitted to the permitting authority".

In requesting the certification alternative the permittee shall submit a solvent management plan that specifies, to the satisfaction of the permitting authority, the toxic organic compounds used; the method of disposal used instead of dumping, such as reclamation, contract hauling, or incineration; and procedures for insuring that toxic organics do not routinely spill or leak into the wastewater. This plan shall become an enforceable provision of this permit.

PART I

15. Toxicity Testing Requirement

TOXICITY TESTING

Toxicity of the effluent discharged from outfalls 001,004,005, 007,009 & 011 shall be measured by a 48 hour static acute toxicity test and a 7 day chronic static toxicity test, using daphnia pulex and ceriodaphnia sp, respectively, as the test organisms.

Each acute test shall be run in duplicate using a minimum of five dilutions and a control. Each chronic toxicity test shall use a minimum of five dilutions and a control. The dilution and control water shall be collected from the East Branch of the Housatonic River upstream of the discharge, with an additional control to be run with lab water. The test sample shall be a composite sample made by combining proportionate to flow 24 hour composite samples collected at outfall 001,004,005,007,009 & 011.

The NOAEL (no observed acute effect level) is the concentration of the test sample at which 90% or more of the test organisms survive after 48 hours.

The NOCEL (no observed chronic effect level) is the highest effluent concentration by volume which causes no adverse effects on the survival, growth, or reproduction of the test organisms.

Toxicity testing will be conducted on the following schedule:

Calendar Period	Testing Required	Duration	Limit
Monthly	1 acute (report NOAEL) per month (one test per quarter is to be under wet weather conditions, if possible)	48 hours	≥ 35%*
July, August and September	1 chronic (report NOAEL and NOCEL) per calendar month.	7 days	Report only

Each report shall include a chemical analysis for the parameters listed in the table on page 23 of 30.

* This limitation applies to dry weather testing only. The results of wet weather testing are to be reported only.

Toxicity Testing - continued:

CHEMICAL ANALYSES OF EFFLUENT SAMPLE AND DILUENT

	Sample to be tested	
Parameter to be Tested	Dilution Water	Effluent Sample
1 Chlorine, Total Residual		x(see Note 1)
2 Hardness	x	x
Alkalinity, Total	x	x
pH	x	x
Specific Conductance	x	x
Ammonia	x	x
Aluminum	x	x
Copper (total)	x	x
Lead (total)	x	x
Chloride	x	x
Total Solids	x	x
Total Suspended Solids	x	x
Total Organic Carbon	x	x
Zinc	x	x
Cadmium	x	x
Chromium	x	x
Nickel	x	x
Phosphorus	x	x
Silver	x	x
Cyanide	x	x

1. Chlorine Residual (only to be run by facilities using chlorine). Three tests will be run on each sample collected for testing:
   a. one at time of collection (for composite samples, at end of compositing period).
   b. one at initiation of the toxicity test.
   c. one at termination of the toxicity test. Test residual in one of the 100% effluent test replicates.

   Methods: either of the following methods from the 16th edition of the APHA (1985) Standard Methods for the Examination of Water and Wastewater may be used for these analyses:
   a. Method 408-C (Amperometric Titration Method).
   b. Method 408-C (Ferrous Titrimetric Method).

2. Hardness

   Method: 314 A (Hardness by Calculation) from APHA Standard Methods, 16th edition (1985). Method 314 B may be used for determining the hardness of the daily samples from the chronic toxicity test.

For metals (effluent samples only), Dissolved Metals shall be analyzed in addition to Total Metals. Effluent samples collected for dissolved analyses are first passed through a 0.45 um filter. The pH of this sample is then reduced to between 1.5 and 2.0 standard units for storage. The resulting sample is analyzed using the same methods as for Total Metals (set forth in the protocol).

I) ACUTE TOXICITY TESTING

I. ACUTE TOXICITY TESTING

a. Acute Toxicity Testing is used to determine the effluent concentrations, by volume that is lethal to 50 percent of the test organisms within a prescribed period of time, usually 96 hours or less. Death is the effect measured. Effluent toxicity thus measured is expressed as the median lethal concentration, in percent effluent by volume, or LC50. The no-observed effect level is the effluent concentration at which 90% or more test organisms survive.

b. Test Protocol

Test type - Static acute
Duration - 48 hours
Species - daphnia pulex (daphnid-water flea)
End Point - LC50 and No observed effect concentration reported as the NOAEL (No observed Acute Effect Level).

Dry Weather NOAEL limit ≥ 35%

Monitoring Frequency - monthly.
One test per quarter is to be under wet weather conditions, if possible.
(wet weather NOAEL is to be reported only).

Sample Type - Composite

Diluent - Upstream receiving water (unless otherwise authorized)*

* When upstream receiving water is used as a diluent in the toxicity test, additional controls (0% effluent) made of laboratory water of known quality will also be used. The number of additional controls shall equal the number of replicates used in the test.

Dilution water collected from the receiving water shall be collected upstream of the discharge at a point that is free from mixing with the discharge.

Toxicity Test procedures shall be approved by EPA Environmental Services Division (Telephone Number 617-861-6700).

A portion of each whole effluent sample used for toxicity testing and a portion of the upstream dilution water shall be chemically analyzed. See page 23 of 30 for specific chemical by chemical requirements. Raw bench data for the toxicity tests shall be submitted with the toxicity results.

II. CHRONIC TOXICITY TESTING[1]

a. Chronic toxicity testing is used to detect the subtle, low level, long term, adverse effects of effluents on aquatic organisms, such as a reduction of growth and reproduction. Recently developed test methods have resulted in the availability of methodology which allows detection of chronic effects in seven days or less. Short term chronic toxicity testing is used to determine the highest effluent concentration by volume which causes no adverse effects on the survival, growth, or reproduction of the test organisms. This concentration is expressed as the No Observed Chronic Effect Level (NOCEL).

b. Test protocol

Test type - Reproductive chronic, static

Duration - 7 days

Species - Daphnid Ceriodaphnia sp

Endpoint - No Observed effect concentration reported as the NOCEL (no observed chronic effect level). Also report mortality of ceriodaphnia at various effluent dilutions.

Monitoring Frequency - July, August and September

Sample Type - Composite

Diluent - Upstream receiving water (unless otherwise authorized)*

* When upstream receiving water is used as a diluent in the toxicity test, additional controls (0% effluent) made of laboratory water of known quality will also be used. The number of additional controls shall equal the number of replicates used in the test.

Dilution water collected from the receiving water shall be collected upstream of the discharge at a point that is free from mixing with the discharge.

Toxicity Test procedures shall be approved by EPA Environmental Services Division (Telephone Number 617-861-6700).

A portion of each whole effluent sample used for toxicity testing and a portion of the upstream dilution water shall be chemically analyzed. See page 23 of 30 for specific chemical by chemical requirements.

Raw bench data for the toxicity tests shall be submitted with the toxicity results.

Toxicity Testing - continued:

Factors to consider when selecting a consultant for toxicity testing:

- Commitment of management and staff to an effective Quality Assurance Program.
- Staff experience and education.
- Facilities - Adequate laboratory space and equipment to conduct testing.
- Data handling, record keeping, review, interpretation and reporting
- Written test protocols and quality control practices.

References

- Peltier, W., and C.I. Weber. 1985. Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, 3rd edition, Office of Research and Development, Cincinnati, OH, EPA-600/4-85-013.

- William B. Horning,II and Cornelius I. Weber. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. EPA/600/4-85/014

III. Toxicity Reduction Evaluation (TRE)

If any toxicity test demonstrates non compliance with the Effluent Toxicity limitations set forth in Section 14 of this permit, the permittee shall conduct a second toxicity test . This second test shall be conducted within 1 week following receipt of the test results, weather permitting, or as soon as possible thereafter. The permittee is required to make arrangements with the lab to obtain the initial results of the second test as soon as the results become available. If the second toxicity test also demonstrates non compliance with the Effluent Toxicity limitations, the permittee is required to inform EPA by phone (within 24 hours) and then follow up with a letter. The permittee shall then, according to the following schedule, conduct a Toxicity Reduction Evaluation (TRE) to determine how the permittee can achieve the Effluent Toxicity limitations. If the results of any four (4) toxicity tests during a six month period indicate noncompliance with toxicity limitations, then the permittee shall conduct a TRE.

The TRE can be used to bring a discharger into compliance with NOCEL or NOAEL limitations. The TRE should isolate the sources of the effluent toxicity, where possible identify the specific causative pollutants, and determine what pollution control options are effective in reducing effluent toxicity.

Within 30 days of the second consecutive test demonstrating noncompliance with Effluent Toxicity limitations, or within 30 days of the fourth test within a six month period demonstrating noncompliance with Effluent Toxicity limitations, whichever first occurs, the permittee shall submit a TRE study plan to EPA and DEP detailing what toxicity reduction procedures the permittee will employ. Within 270 days of submittal of the study plan, the permittee shall complete implementation of those measures identified in the study as necessary to attain compliance with the Effluent Toxicity limitations, and shall attain compliance with such limitations; except that with respect to the implementation of any measure identified in the study subject to prior approval under federal or Massachusetts statutes or regulations, Permittee shall immediately submit a full and complete application for all required prior approvals to the appropriate federal, state or local agency and shall complete the implementation of such measures as soon as possible but no later than 270 days after date of all required prior approvals.

The permittee is required to comply with all the permit conditions, limitations and monitoring requirements while performing the Toxicity Reduction Evaluation (TRE) and implementing the measures to achieve compliance.

B. MONITORING AND REPORTING

1. Reporting

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report Forms postmarked no later than the 28th day of the month following the completed reporting period. The first report is due on the 28th day of the month following the effective date of the permit.

The results of the toxicity testing shall be reported to the agency postmarked no later than 30 days after the submission of the Discharge Monitoring Report for that month.

Duplicate signed copies of these, and all other reports required herein, shall be submitted to the Director and the State at the following address:

Permits Processing Section
Compliance Branch
Water Management Division
Environmental Protection Agency
JFK Federal Building
P.O. Box 8127
Boston, MA 02203

The State Agency is:

Massachusetts Division of Water Pollution Control
Western Regional Office
4th Floor, State House West
436 Dwight Street
Springfield, MA 01103

Signed copies of all other notifications and reports required by this permit shall be submitted to the State at:

Massachusetts Division of Water Pollution Control
Regulatory Branch
1 Winter Street
Boston, Massachusetts 02108

C. STATE PERMIT CONDITIONS

This Discharge Permit is issued jointly by the U. S. Environmental Protection Agency and the Division of Water Pollution Control under Federal and State law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Director of the Massachusetts Division of Water Pollution Control pursuant to M.G.L. Chap. 21, §43.

Each Agency shall have the independent right to enforce the terms and conditions of this Permit. Any modification, suspension or revocation of this Permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of this Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this Permit is declared, invalid, illegal or otherwise issued in violation of State law such permit shall remain in full force and effect under Federal law as an NPDES Permit issued by the U. S. Environmental Protection Agency. In the event this Permit is declared invalid, illegal or otherwise issued in violation of Federal law, this Permit shall remain in full force and effect under State law as a Permit issued by the Commonwealth of Massachusetts.

D. Schedule of Compliance

The permittee shall construction a treatment system to achieve compliance with final effluent limitations on PCB discharges from outfall 005 in accordance with the following schedule:

a. Submit progress reports to EPA detailing progress toward completion of the treatment system for PCBs by November 1, 1988.

b. Complete construction of the proposed PCBs treatment system by December 1, 1988.

c. Achieve compliance with the effluent limitations for PCBs as required on page 8 of the permit by February 1, 1989.

TSS Concentration

APPENDIX E

Date	TSS (mg/l)	Yi ln TSS (mg/L)
May-11	377	5.9322
Jun-11	9.19	2.2181
Jul-11	2.06	0.7227
Aug-11	21.7	3.0773
Sep-11	16.3	2.7912
Oct-11	12.9	2.5572
Nov-11	20	2.9957
Dec-11	5.19	1.6467
Jan-12	3.9	1.3610
Feb-12	2.45	0.8961
Mar-12	12.9	2.5572
Apr-12	24.6	3.2027
May-12	22.5	3.1135
Sep-12	8.62	2.1541
Oct-12	15.3	2.7279
Dec-12	23.8	3.1697
Feb-13	35	3.5553
Mar-13	85.1	4.4438
Apr-13	97.9	4.5839
May-13	15.9	2.7663
Jun-13	7.89	2.0656
Jul-13	4.32	1.4633
Aug-13	7.1	1.9601
Sep-13	13.5	2.6027
Nov-13	12.5	2.5257
Dec-13	15.2	2.7213
Jan-14	48.2	3.8754
Feb-14	66.5	4.1972
Apr-14	7.8	2.0541
May-14	32.8	3.4904

flow - (Lognormal distribution, no ND)

Estimated Daily Maximum Effluent Concentration

k = number of daily samples =	30
u_y = Avg of Nat. Log of daily Discharge =	2.78095
s_y = Std Dev. of Nat Log of daily discharge =	1.11853
σ_y^2 = estimated variance = (SUM[$(y_i - u_y)^2$]) / (k-1) =	1.251110029
cv(x)= Coefficient of Variation =	0.40221096

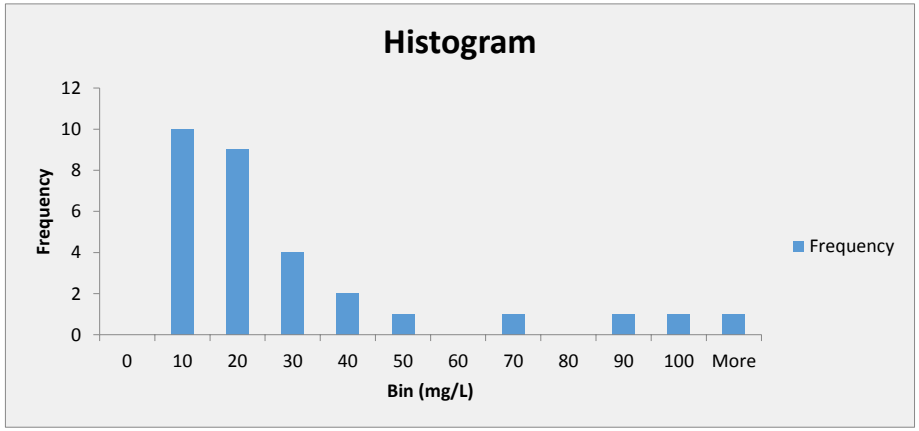
99th Percentile Daily Max Estimate = exp (u_y + 2.326*s_y)

Estimated Daily Max 99th percentile = 217.5994 mg/L

95th Percentile Daily Max Estimate = exp (u_y + 1.645*s_y)

Estimated Daily Max = 101.5891 mg/L

Bin	*Frequency*
0	0
10	10
20	9
30	4
40	2
50	1
60	0
70	1
80	0
90	1
100	1
More	1



APPENDIX E

PCB Reasonable Potential Analysis
data with ND, >10 samples, lognormal distribution

Date	PCBs* (ug/l)	ln(PCB) (ug/l)	$(y_i - u_y)^2$
1/26/2010	0.376	-0.9782	1.3899
2/26/2010	0.0414	-3.1845	1.0555
3/17/2010	0.0789	-2.5396	0.1463
4/9/2010	0.027	-3.6119	2.1165
5/14/2010	0.0723	-2.6269	0.2207
6/15/2010	0.0247	-3.7010	2.3835
7/27/2010	0.737	-0.3052	3.4297
9/30/2010	0.885	-0.1222	4.1410
10/7/2010	0.1043	-2.2605	0.0107
11/5/2010	0.154	-1.8708	0.0820
12/1/2010	0.0458	-3.0835	0.8582
3/11/2011	0.1523	-1.8819	0.0757
3/22/2011	0.0508	-2.9799	0.6769
4/2/2011	0.0639	-2.7504	0.3520
4/12/2011	Non-detect		
5/16/2011	0.1129	-2.1813	0.0006
6/23/2011	0.0888	-2.4214	0.0698
7/19/2011	0.1645	-1.8048	0.1241
8/16/2011	0.1093	-2.2137	0.0032
9/7/2011	0.406	-0.9014	1.5768
10/14/2011	0.1051	-2.2528	0.0092
11/18/2011	0.0548	-2.9041	0.5580
12/9/2011	0.3237	-1.1279	1.0592
1/13/2012	0.2037	-1.5911	0.3203
2/6/2012	0.3745	-0.9822	1.3805
3/23/2012	0.1013	-2.2897	0.0176
4/23/2012	0.1137	-2.1742	0.0003
5/9/2012	0.1426	-1.9477	0.0438
6/4/2012	0.1393	-1.9711	0.0346
9/19/2012	0.0991	-2.3116	0.0239
10/19/2012	0.1983	-1.6180	0.2907
12/18/2012	0.1326	-2.0204	0.0187
2/28/2013	0.1294	-2.0448	0.0126
3/14/2013	0.1162	-2.1524	0.0000
4/12/2013	0.0571	-2.8630	0.4982
5/24/2013	0.1812	-1.7082	0.2016
7/26/2013	0.0489	-3.0180	0.7411
8/12/2013	0.1086	-2.2201	0.0040
9/13/2013	0.0778	-2.5536	0.1572
11/1/2013	0.0456	-3.0878	0.8663
12/23/2013	0.1318	-2.0265	0.0171

PCBs- (Lognormal distribution, ND)

Daily Maximum Effluent Derivation (some measurements < detection limit)	
Detection Limit** =	0.065
u_y = Avg of Nat. Log of daily Discharge (mg/L) =	-2.15710
S $(y_i - u)^2$ =	24.96770
k = number of daily samples =	41
r = number of non-detects =	1
s_y^2 = estimated variance = $(S[(y_i - u_y)^2]) / (k-r-1)$ =	0.64020
s_y = standard deviation = square root s_y^2 =	0.80012
δ = number of nondetect values/number of samples =	0.02439
z 99th percentile=z-score[(0.99-δ)/(1-δ)] =	2.31707
z 95th percentile=z-score[(0.95-δ)/(1-δ)] =	1.632852606
Daily Max = exp (u_y + z-score*s_y)	
99th Percentile Daily Max Estimate=	**0.7385 µg/L**
95th Percentile Daily Max Estimate =	**0.4272 µg/L**

** Detection limit here is the detection limit that resulted in the greatest number of Non Detects in the dataset

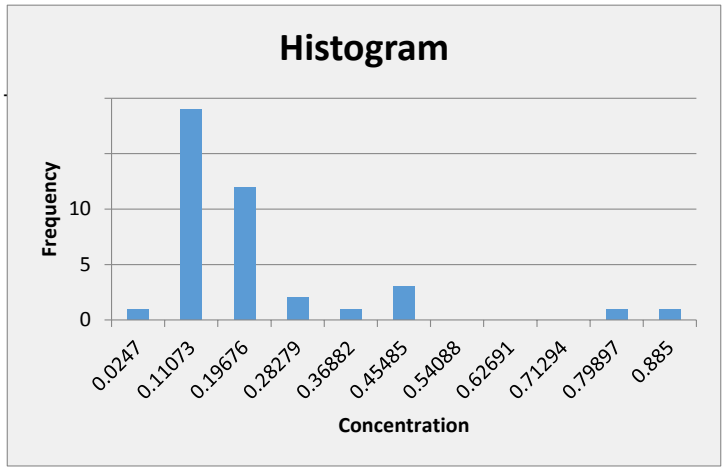
APPENDIX E

PCB HIST(

Histogram 1

max	0.885	
min	0.0247	*not including NDs
number of I	10	*not including min bin -
bin separat	0.08603	

	Bin	count
0	0.0247	1
1	0.11073	19
2	0.19676	12
3	0.28279	2
4	0.36882	1
5	0.45485	3
6	0.54088	0
7	0.62691	0
8	0.71294	0
9	0.79897	1
10	0.885	1

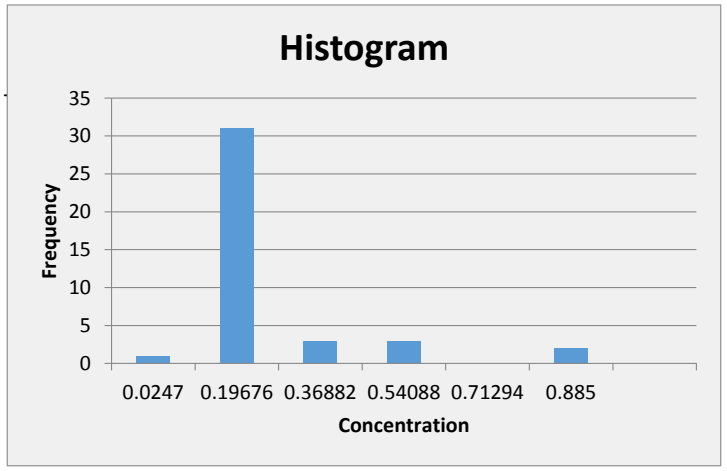


*ND values not plotted

Histogram 2

max	0.885	
min	0.0247	*not including NDs
number of I	5	*not including min bin -
bin separat	0.17206	

	Bin	count
0	0.0247	1
1	0.19676	31
2	0.36882	3
3	0.54088	3
4	0.71294	0
5	0.885	2



*ND values not plotted

OFFICE OF THE MAYOR
DANIEL L. BIANCHI

CITY OF PITTSFIELD, 70 ALLEN STREET, PITTSFIELD, MA 01201, PHONE: 413-499-9321

January 13, 2015

David Webster
Chief, Water Permits Branch
U.S. Environmental Protection Agency, Region I
5 Post Office Square, Suite 100
Boston, Massachusetts 02109-3912

Re: Pittsfield Economic Development Authority, Pittsfield, Massachusetts
NPDES Permit Renewal Application MA0040231

Dear Mr. Webster:

We are writing to seek your guidance on recent developments with respect to the Pittsfield Economic Development Authority's ("PEDA") application for renewal of its permit under the National Pollution Discharge Elimination System ("NPDES").

Based on our review of the draft NPDES Permit Fact Sheet, PEDA is considering alternatives to assuming full responsibility for the discharge of stormwater from its outfall. These alternatives, discussed in greater detail below, include transferring responsibilities for NPDES compliance to the City of Pittsfield (the "City"), disconnecting the portion of the PEDA property known as the "Teens Complex" from the PEDA stormwater system, and/or disconnecting the City's 91-acres of stormwater discharge from the PEDA stormwater system.

As we have previously made clear, PEDA is a public entity that was created by special act of the Massachusetts Legislature for the limited purpose of redeveloping brownfields sites. PEDA acquired property from the former General Electric ("GE") facility *after* completion of the remediation on the acquired property and *after* the Massachusetts Department of Environmental Protection ("MassDEP") and the U.S. Environmental Protection Agency ("EPA") confirmed that the remediation was completed in compliance with the requirements of the Consent Decree. When the Consent Decree was drafted and PEDA was created, and even later when the property was transferred, none of the parties anticipated a future NPDES permit with requirements such as those included in the proposed permit. As a result, PEDA was not

established with sufficient capital or administrative capability to comply with the proposed permit conditions. PEDA does not have a regular source of revenue; it does not have profits; and it does not have taxing authority. PEDA has extremely limited and finite sources of revenue. Simply put, if the permit is issued as drafted, the requirements of the permit would quickly deplete PEDA's resources and put PEDA out of business. PEDA would never meet its legislated brownfields redevelopment mission.

PEDA has therefore reached the conclusion that it will not have adequate financial or administrative resources to comply with the proposed permit conditions. As you may recall, approximately two-thirds of the stormwater that discharges through PEDA's water quality basin and Outfall 001 originates off-site in City neighborhoods. Given the relatively small proportion of stormwater originating at the William Stanley Business Park, PEDA and the City are contemplating a transfer of responsibility for the stormwater system from PEDA to the City. We believe that the City has the staff, funding and capabilities to better manage the requirements under its MS4 permit.

Transferring the permit to the City would free up time and funding for PEDA to focus on changes to the stormwater system on the PEDA property. PEDA is exploring the option of completely disconnecting the Teens Complex from the stormwater system and designing a low impact system that allows the water to infiltrate into the ground, or to be reused on-site, or other options currently available for brownfields sites. However, this proposed change would require balancing between what is allowable under the Environmental Restrictions and Easements and the environmental benefits of managing the stormwater on-site.

We are also exploring an option for the City to disconnect its 91- acres of stormwater discharge from the PEDA stormwater system. This reduced flow, combined with reductions achieved by disconnecting the Teens Complex stormwater flow will allow PEDA to contain and manage stormwater flow on-site and potentially eliminate the need for any discharge into Silver Lake except under extreme conditions. We assume that if the City takes this step, the City's stormwater from the 91-acres would merge with the existing Fourth Street discharge into Silver Lake. We note that since this stormwater would not run through the William Stanley Business Park, it would not be impacted by residual contamination on the PEDA property and could be managed as ordinary municipal stormwater under the City's MS4 permit.

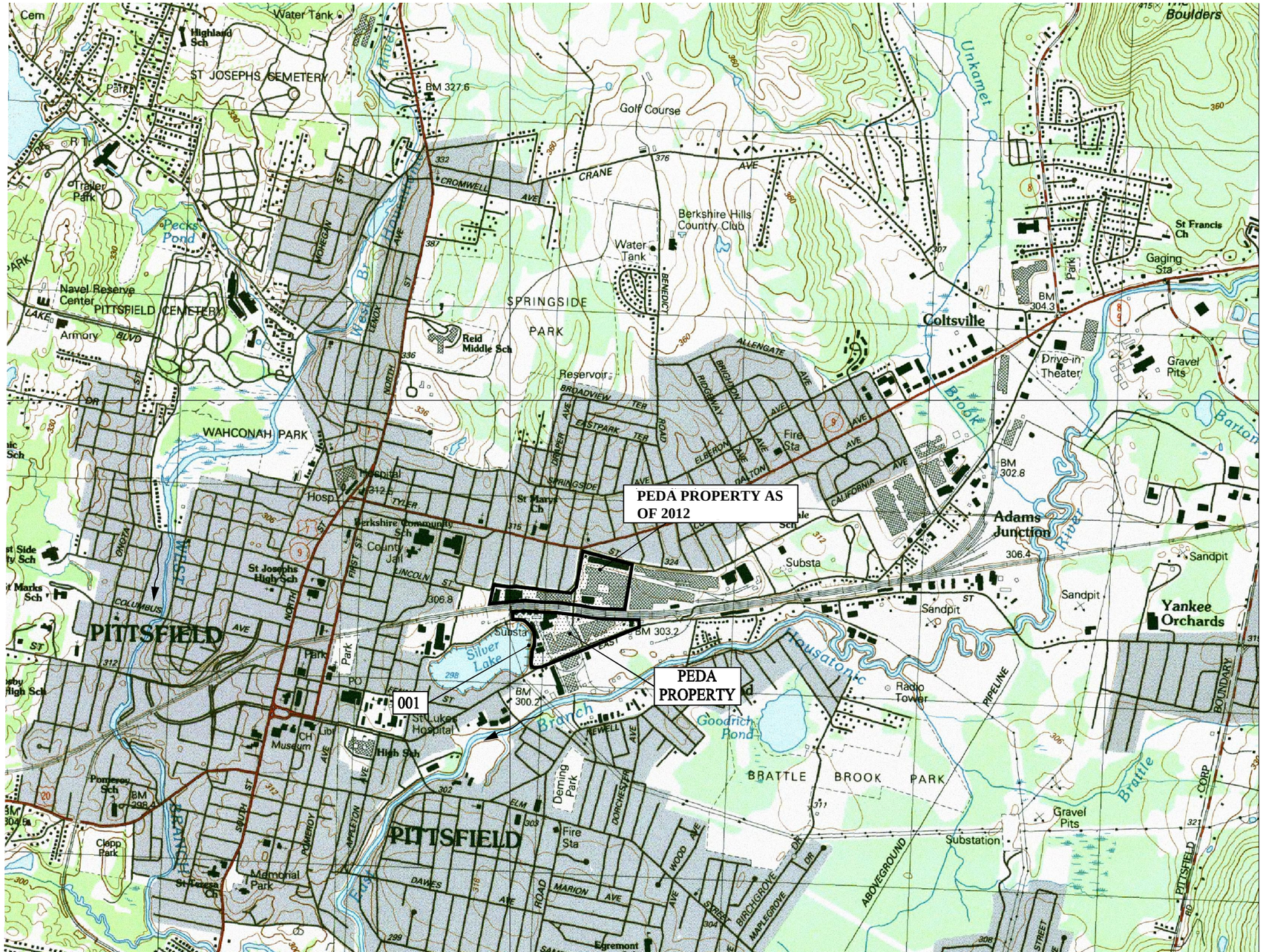
At this point in time we believe that the best alternative is to transfer the NPDES permit for Outfall 001 from PEDA to the City, to be permitted under the City's MS4 general permit. We are cognizant of the time and effort that you and your staff have invested in this the permitting process thus far and would greatly appreciate your guidance and advice in developing the alternatives discussed in this letter.

We will follow up with you in later in January to update you on the progress of the discussions between PEDA and the City. If appropriate, we also propose a meeting or conference call with EPA to obtain additional information about these alternative options.

Sincerely,

Corydon L. Thurston Mayor Daniel Bianchi

cc: Curt Spaulding, USEPA *(via electronic mail and first class mail)*
(via electronic mail only)
Robin Johnson, USEPA
Dean Tagliaferro, USEPA
Matt Hoagland, USEPA
Catherine Vakalopoulos, MADEP
Michael Gorski, MADEP



LEGEND:

001 APPROXIMATE LOCATION OF DRAINAGE DISCHARGE POINT

DIRECTION OF HOUSATONIC RIVER FLOW

AREA LOCATION

REFERENCE:

BASE MAP SOURCE USGS QUADS, PITTSFIELD, MA

−2000 0 2000

1" = 2000'

NORTH

CHA

45 Winthrop Street · Concord, MA 01742-2052
Main: (978) 369-2890 · www.chacompanies.com

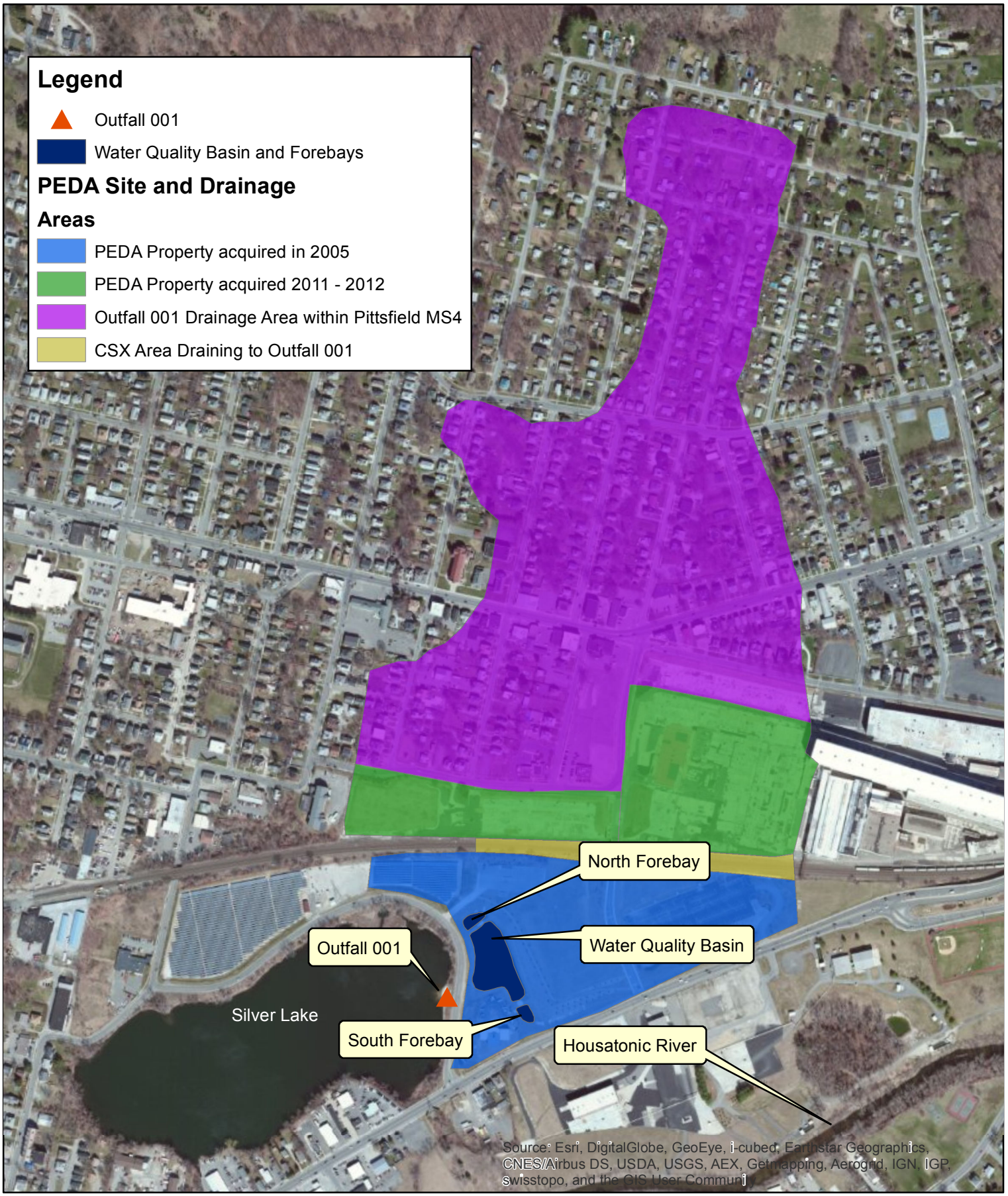
FORM 1 PART XI
FACILITY LOCATION & APPROXIMATE OUTFALL LOCATION MAP
PITTSFIELD ECONOMIC DEVELOPMENT AUTHORITY
NPDES PERMIT APPLICATION

PROJECT NO. 13772

DATE: 10/18/10

FIGURE 1

File: i:\13772 – 1200 – WILLIAM STANLEY – CONTRACT 2\PERMITTING\NPDES_OUTFALL\04_PERMIT_MAPS\FORM 1 ITEM XI – 10-15-10.DWG Saved: 10/15/2010 1:30:01 PM Plotted: 10/15/2010 1:30:38 PM User:



N

1 inch = 600 feet

Figure 2 - PEDA Site Map
NPDES Permit No. MA0040231
Permit Issuance

LEGEND:

(hatched box with dashed outline)	BUILDING DEMOLITION BARRIER AREA
(stone-pattern box)	NATURAL STONE OR RIP RAP
(cross-hatched box with dashed outline)	RESTRICTED SOIL AREA ANY DEPTH
(black square)	PROPOSED CATCH BASIN
(D)	PROPOSED STORM DRAIN MANHOLE
+ 986.5	SPOT GRADE
- - - 1015 - - -	EXISTING GRADE
1014	PROPOSED MINOR GRADE
1015	PROPOSED MAJOR GRADE
—ST—	PROPOSED STORM DRAIN
—···—···—	SILVER LAKE BANK OUTER LIMIT

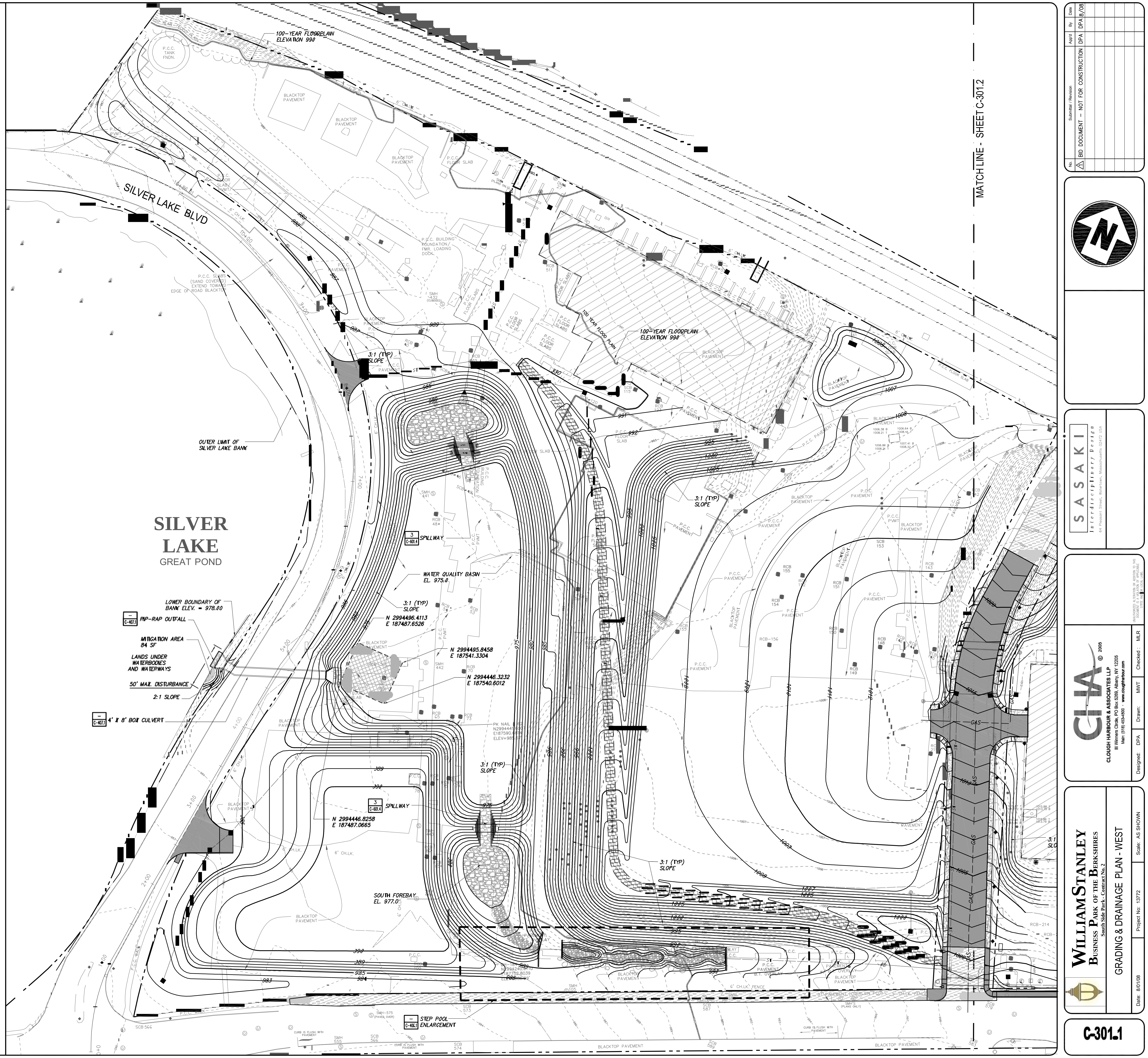
NOTES:

1. PROPOSED GRADES SHALL BLEND SMOOTHLY WITH EXISTING ELEVATIONS.
2. THE CONTRACTOR SHALL STAKE OUT ALL GRADES IN THE FIELD PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES. THE ENGINEER SHALL APPROVE STAKED GRADES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND THE MAINTENANCE OF SURFACE DRAINAGE DURING THE COURSE OF WORK. THE CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE PATTERNS THROUGHOUT THE PERIOD OF CONSTRUCTION.
4. EXISTING VEGETATION SHALL REMAIN UNDISTURBED WITHIN ALL AREAS OF SITE WHICH DO NOT REQUIRE GRADING.
5. ALL DISTURBED AREAS SHALL BE SEEDED AND SHALL BE DISCED, HARROWED, AND FORMED TO PROVIDE SMOOTH TRANSITIONS WITH PROPOSED IMPROVEMENTS, PRIOR TO PLACEMENT OF SEED.
6. THE PLANS SHOW SUBSURFACE STRUCTURES, ABOVE-GROUND STRUCTURES AND/OR UTILITIES FROM FIELD LOCATION AND RECORD MAPPING, EXACT LOCATION OF WHICH MAY VARY FROM THE LOCATIONS INDICATED. IN PARTICULAR, THE CONTRACTOR IS WARNED THAT THE EXACT OR EVEN APPROXIMATE LOCATION OF SUCH PIPELINES, SUBSURFACE STRUCTURES AND/OR UTILITIES IN THE AREA MAY BE DIFFERENT FROM THAT SHOWN OR MAY NOT BE SHOWN, AND IT SHALL BE HIS RESPONSIBILITY TO PROCEED WITH GREAT CARE IN EXECUTING ANY WORK. 72 HOURS BEFORE YOU DIG OR DRILL, CALL DIG SAFE @ 1-888-DIG-SAFE.
7. REFER TO C-402.1, C-402.2 AND C-402.3 FOR DRAINAGE PLANS.

SOIL NOTES:

1. REFER TO SECTION 02080 SOIL AND WASTE MANAGEMENT FOR SOIL RESTRICTIONS AND CUT/FILL REQUIREMENTS.
2. CUT FROM 0-6' DEEP (EXCEPT HATCHED AREA) SHALL BE USED AS FILL ANY DEPTH AT ANY LOCATION.
3. CUT > 6' SHALL BE PLACED AS FILL IN ACCORDANCE WITH SECTION 02080 SOIL AND WASTE MANAGEMENT.
4. CUT WITHIN SILVER LAKE BANK SHALL BE PLACED AS FILL IN ACCORDANCE WITH SECTION 02080 SOIL AND WASTE MANAGEMENT.

Figure 3
2008 PEDA Grading and Drainage Plan



0 40 80
Scale in feet

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
COMMONWEALTH OF MASSACHUSETTS
1 WINTER STREET
BOSTON, MASSACHUSETTS 02108

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY – REGION 1
OFFICE OF ECOSYSTEM PROTECTION
5 POST OFFICE SQUARE
BOSTON, MASSACHUSETTS 02109

JOINT PUBLIC NOTICE OF COMMENT PERIOD AND OF A PUBLIC HEARING PERTAINING TO THE ISSUANCE OF A DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE INTO WATERS OF THE UNITED STATES UNDER SECTIONS 301 AND 402 OF THE CLEAN WATER ACT, AS AMENDED, AND SECTIONS 27 AND 43 OF THE MASSACHUSETTS CLEAN WATERS ACT, AS AMENDED, AND REQUEST FOR STATE CERTIFICATION UNDER SECTION 401 OF THE CLEAN WATER ACT.

PUBLIC NOTICE START AND END DATES: April 8, 2015 – June 6, 2015

PERMIT NUMBER: MA0040231

PUBLIC NOTICE NUMBER: MA-012-15

NAME AND MAILING ADDRESS OF APPLICANT:

Pittsfield Economic Development Authority
81 Kellogg Street
Pittsfield, Massachusetts 01201

NAME AND ADDRESS OF THE FACILITY WHERE DISCHARGE OCCURS:

William Stanley Business Park of the Berkshires
Generally bounded by East Street,
Silver Lake Boulevard, Kellogg Street, and Tyler Street
Pittsfield, Massachusetts 01201

RECEIVING WATER: Silver Lake (Class B)

The U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) have cooperated in the development of a draft permit for the Pittsfield Economic Development Authority, which discharges treated stormwater and contaminated groundwater. The effluent limits and permit conditions imposed have been drafted to assure compliance with the Clean Water Act, 33 U.S.C. sections 1251 et seq., the Massachusetts Clean Waters Act, G.L. c. 21, §§ 26-53, 314 CMR 3.00, and State Surface Water Quality Standards at 314 CMR 4.00. EPA has requested that the State certify this draft permit pursuant to Section 401 of the Clean Water Act and expects that the draft permit will be certified.

INFORMATION ABOUT THE DRAFT PERMIT:

The draft permit and explanatory fact sheet may be obtained at no cost at http://www.epa.gov/region1/npdes/draft_permits_listing_ma.html or by contacting:

Robin L. Johnson
U.S. Environmental Protection Agency – Region 1
5 Post Office Square, Suite 100 (OEP06-1)
Boston, MA 02109-3912
Telephone: (617) 918-1045

The administrative record containing all documents relating to this draft permit including all data submitted by the applicant may be inspected at the EPA Boston office mentioned above between 9:00 a.m. and 5:00 p.m., Monday through Friday, except holidays.

PUBLIC HEARING:

The Regional Administrator has determined, pursuant to 40 C.F.R. Section 124.2, that a significant degree of public interest exists in this proposed permit and that a public hearing should be held to consider this draft permit.

A public hearing and meeting (information session) will be held on the following date and time.

DATE: Tuesday, May 19, 2015

MEETING TIME: 6:30pm – 7:15pm

HEARING TIME: 7:30pm

LOCATION: EPA Pittsfield Field Office
(yellow office building on the corner of East and Lyman Streets)
10 Lyman Street
Pittsfield, MA 01201

PUBLIC COMMENT AND REQUEST FOR PUBLIC HEARING:

All persons, including applicants, who believe any condition of this draft permit is inappropriate, must raise all issues and submit all available arguments and all supporting material for their arguments in full by June 6, 2015, to the address listed above. In reaching a final decision on this draft permit, the Regional Administrator will respond to all significant comments and make the responses available to the public at EPA's Boston office.

FINAL PERMIT DECISION:

Following the close of the comment period, and after the public hearing, the Regional Administrator 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.

DAVID FERRIS, DIRECTOR
MASSACHUSETTS WASTEWATER
MANAGEMENT PROGRAM
MASSACHUSETTS DEPARTMENT OF
ENVIRONMENTAL PROTECTION

KEN MORAFF, DIRECTOR
OFFICE OF ECOSYSTEM PROTECTION
EPA-REGION 1