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
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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

Figures

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).

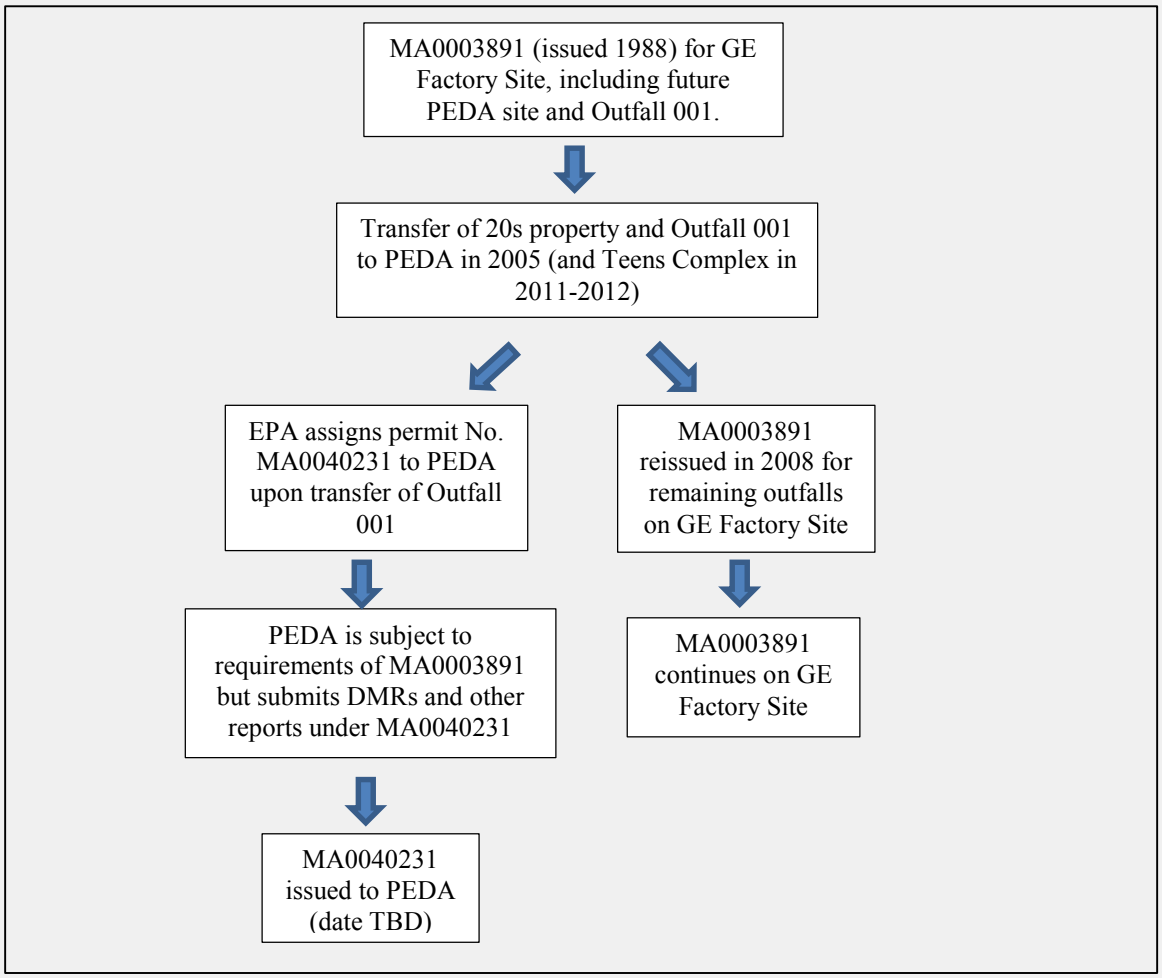
The City of Pittsfield storm sewer system is regulated by the 2003 MS4 General Permit. As such, the City of Pittsfield is responsible for its stormwater contributed to PEDA's stormwater collection system, including the six minimum control provisions contained in the 2003 MS4 General Permit. In accordance 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

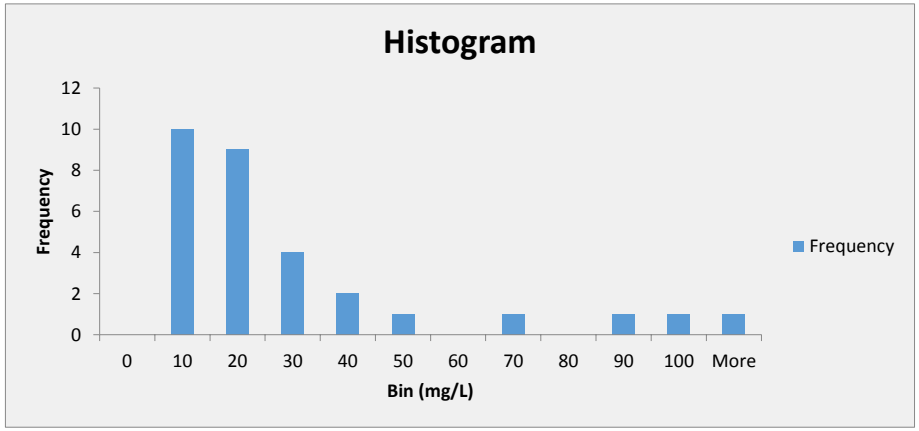
99th Percentile Daily Max Estimate = exp (u_y + 2.326*s_y)

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

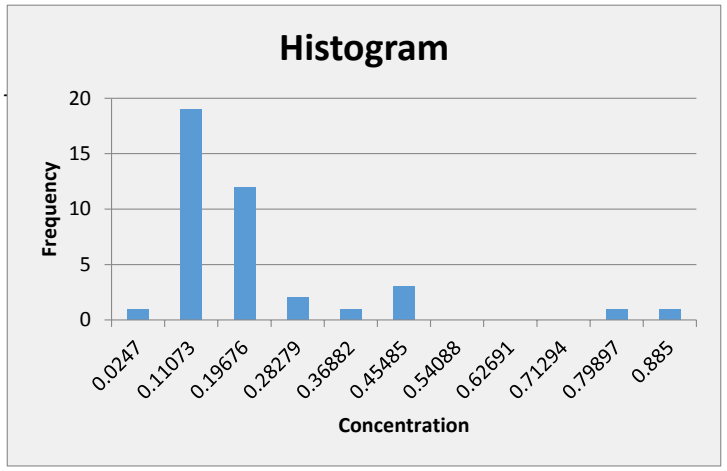
APPENDIX E

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

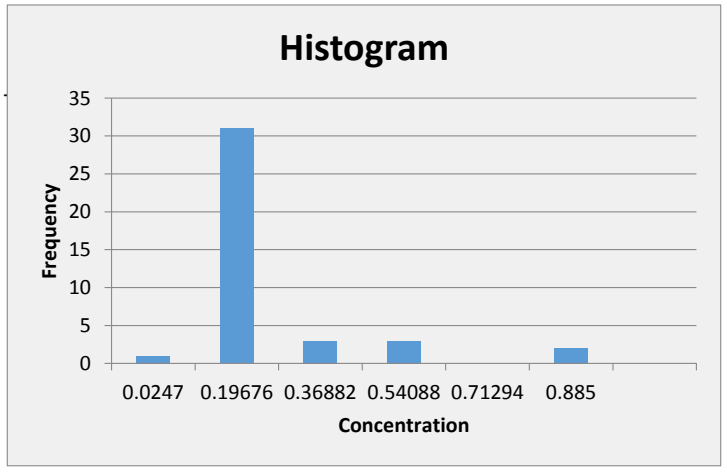


*ND values not plotted

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.

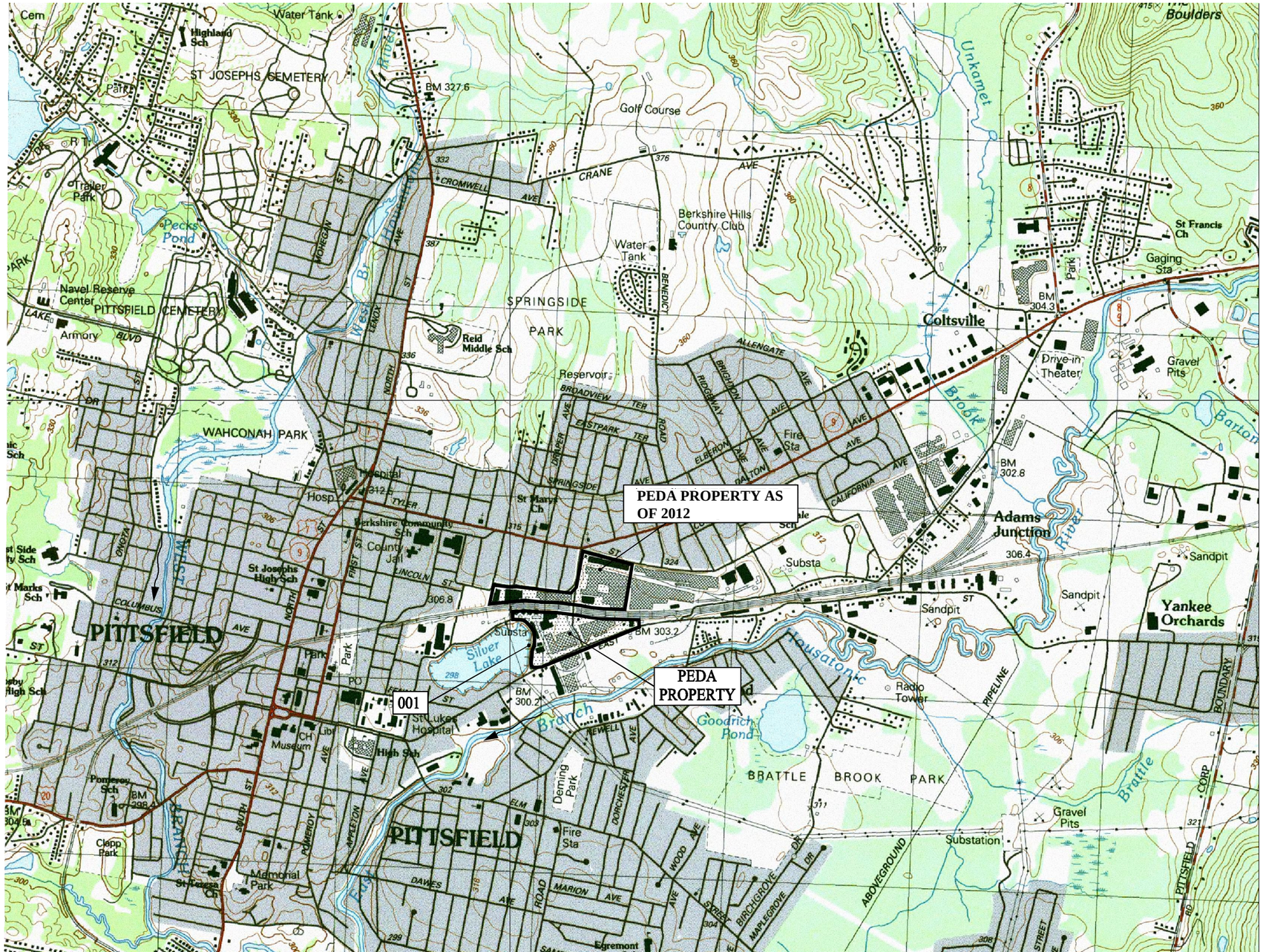
At this point in time we believe that the best alternative is to transfer the NPDES permit for Outfall 001 from PEDA to the City, to be permitted under the City's MS4 general permit. We are cognizant of the time and effort that you and your staff have invested in this the permitting process thus far 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

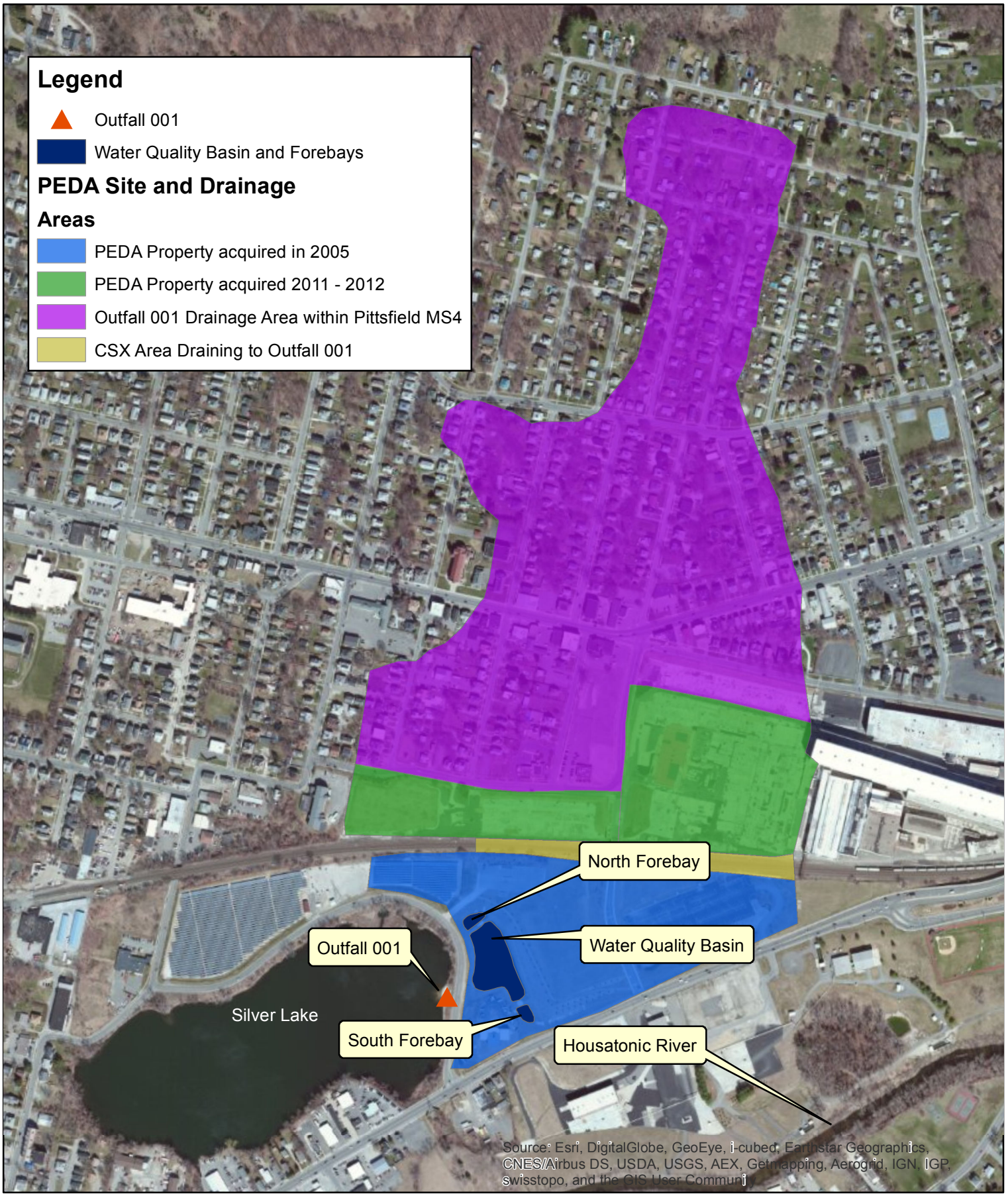
FORM 1 PART XI
FACILITY LOCATION & APPROXIMATE OUTFALL LOCATION MAP
PITTSFIELD ECONOMIC DEVELOPMENT AUTHORITY
NPDES PERMIT APPLICATION

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

EPA

Figure 2 - PEDA Site Map
NPDES Permit No. MA0040231
Permit Issuance

LEGEND:

- BUILDING DEMOLITION BARRIER AREA
- NATURAL STONE OR RIP RAP
- RESTRICTED SOIL AREA ANY DEPTH
- PROPOSED CATCH BASIN
- PROPOSED STORM DRAIN MANHOLE
- SPOT GRADE (986.5)
- EXISTING GRADE (1015)
- PROPOSED MINOR GRADE (1014)
- PROPOSED MAJOR GRADE (1015)
- PROPOSED STORM DRAIN (ST)
- SILVER LAKE BANK OUTER LIMIT

NOTES:

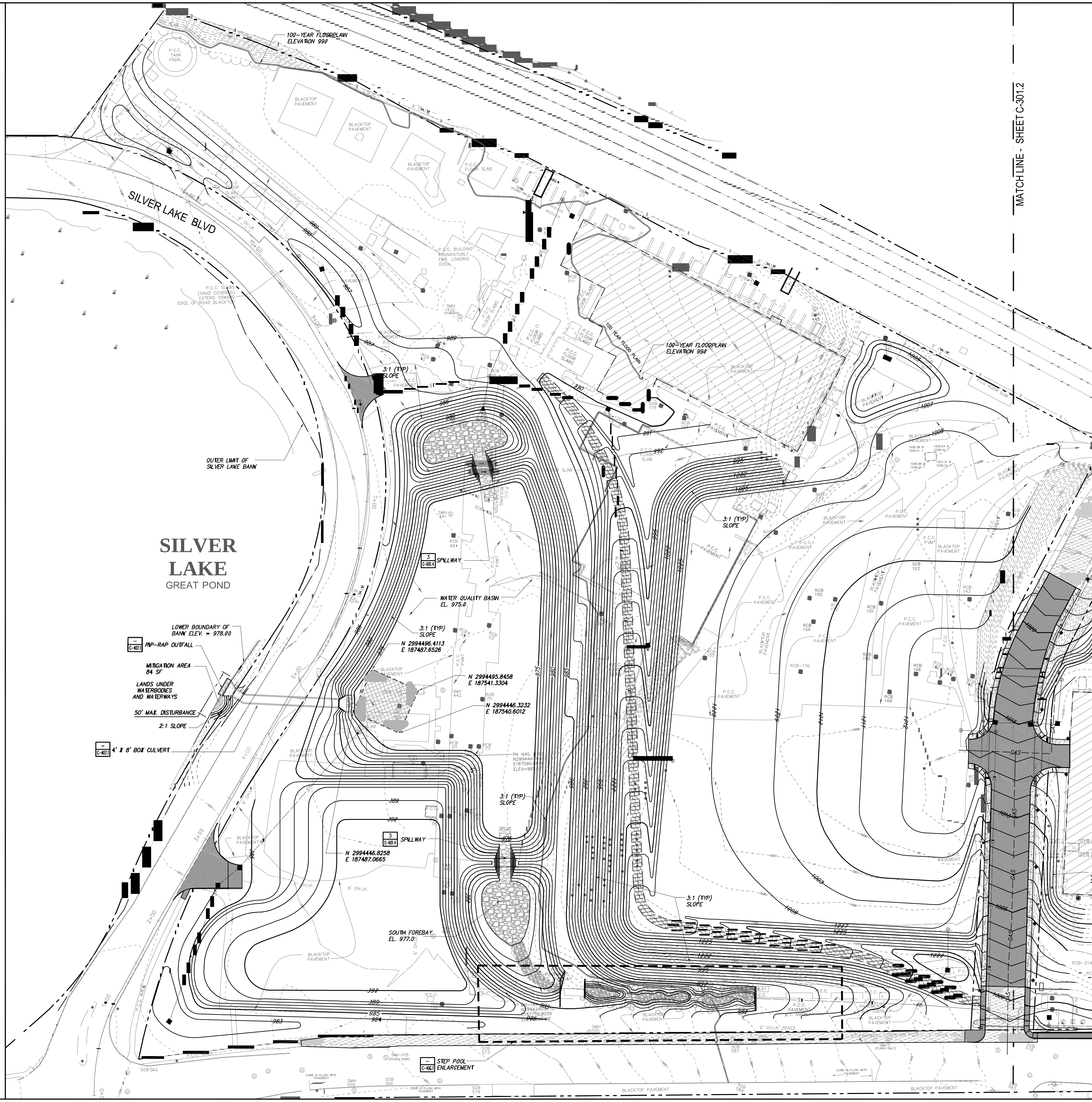
1. PROPOSED GRADES SHALL BLEND SMOOTHLY WITH EXISTING ELEVATIONS.
2. THE CONTRACTOR SHALL STAKE OUT ALL GRADES IN THE FIELD PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES. THE ENGINEER SHALL APPROVE STAKED GRADES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND 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



BID DOCUMENT – NOT FOR CONSTRUCTION DPA DPA 8/08

SASAKI

CLOUGH HARBOUR & ASSOCIATES LLP
III Winners Circle, PO Box 5269, Albany, NY 12205

Designed: DPA Drawn: MWT Checked: MLR

WILLIAM STANLEY BUSINESS PARK OF THE BERKSHIRES
South Side Park: Contract No. 2

GRADING & DRAINAGE PLAN - WEST

Date: 8/01/08 Project No: 13772 Scale: AS SHOWN

C-301.1

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