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),

MeadWestvaco Corporation
501 South 5th Street
Richmond, VA 23219

is authorized to discharge from the facility located at

MW Custom Papers, LLC
Laurel Mill
Pleasant Street
South Lee, MA 01260

to the receiving water named **Housatonic River**, a class B water, 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 the date of signature.

This permit and the authorization to discharge expire at midnight, five (5) years from the last day of the month preceding the effective date.

This permit supersedes the permit issued on June 21, 2005.

This permit consists of 10 pages in Part I including effluent limitations, monitoring requirements, and state permit conditions, Attachment A – Freshwater Chronic Toxicity Test Protocol (May 2007), and 25 pages in Part II, Standard Conditions.

Signed this day of , 2012.

_____
Stephen S. Perkins, 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 the expiration date, the permittee is authorized to discharge treated process wastewater from papermaking operations, miscellaneous equipment and pump seal water, boiler blowdown, water softener backwash water, vacuum pump water, filter backwash water, non-contact cooling water, storm water from roof drains, and landfill leachate from outfall serial number **001** to the Housatonic River. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	EFFLUENT LIMITS		MONITORING REQUIREMENTS	
PARAMETER	**MONTHLY AVERAGE**	**MAXIMUM DAILY**	**MEASUREMENT FREQUENCY**	**SAMPLE[1] TYPE**
Flow	Report MGD	Report MGD	Continuous	Recorder[2]
Total Production	Report tons/day	Report tons/day	Daily	Daily Calculated
pH Range	6.0 – 9.0 s.u.		1/Week	Grab
Total Suspended Solids	100 lbs/day	250 lbs/day	2/Week	24-Hour Composite[3]
Biochemical Oxygen Demand, 5 day	8.5 lbs/day	16.4 lbs/day	2/Week	24-Hour Composite[3]
Temperature	Report ^{o}F	90 ^{o}F	1/Week	Grab
Total Residual Chlorine [4]	Report mg/l	Report mg/l	1/Week	Grab
Total Phosphorus [5]	Report mg/l	Report mg/l	1/Week	24-Hour Composite[3]
Aluminum, Total	8.3 mg/l	Report mg/l	1/Month	24-Hour Composite[3]
Total Ammonia Nitrogen [5]	Report mg/l & lbs/day	Report mg/l & lbs/day	1/Month	24-Hour Composite[3]
Total Kjeldahl Nitrogen [5]	Report mg/l & lbs/day	Report mg/l & lbs/day	1/Month	24-Hour Composite[3]
Nitrite and Nitrate Nitrogen [5]	Report mg/l & lbs/day	Report mg/l & lbs/day	1/Month	24-Hour Composite[3]

Footnotes are listed on Page 4 and 5.

EFFLUENT CHARACTERISTIC	EFFLUENT LIMITS		MONITORING REQUIREMENTS	
PARAMETER	**MONTHLY AVERAGE**	**MAXIMUM DAILY**	**MEASUREMENT FREQUENCY**	**SAMPLE[1] TYPE**
Total Nitrogen [5]	Report lbs/day	Report lbs/day	1/Month	Calculated
Whole Effluent Toxicity [6,7,8]	$LC_{50} \geq 100\%$; Report C-NOEC %		1/Quarter	24-Hour Composite[3]
Total Recoverable Aluminum [9]	**********	Report ug/l	1/Quarter	24-Hour Composite[3]
Total Recoverable Cadmium [9]	**********	Report ug/l	1/Quarter	24-Hour Composite[3]
Total Recoverable Copper [9]	**********	Report ug/l	1/Quarter	24-Hour Composite[3]
Total Recoverable Lead [9]	**********	Report ug/l	1/Quarter	24-Hour Composite[3]
Total Recoverable Nickel [9]	**********	Report ug/l	1/Quarter	24-Hour Composite[3]
Total Recoverable Zinc [9]	**********	Report ug/l	1/Quarter	24-Hour Composite[3]

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

b. The pH of the effluent shall be in the range of 6.0 to 9.0 standard units and not more than 0.5 s.u. outside of the naturally occurring range.

c. The discharge shall not cause objectionable discoloration of the receiving waters.

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

e. The results of sampling for any parameter above its required frequency must also be reported.

Footnotes:

1. Samples taken in compliance with the monitoring requirements specified above shall be taken at Outfall 001 prior to mixing with any other stream. A routine sampling program shall be developed in which representative samples are taken at the same location, approximately the same time, and the same days of every month. Any deviations from the routine sampling program shall be documented in correspondence appended to the applicable discharge monitoring report that is submitted to EPA. In addition, all samples shall be analyzed using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136.

2. For flow, report maximum and minimum daily rates and total flow for each operating date. Attach this data to each DMR form.

3. Composite samples shall be comprised of at least 24 flow-weighted individual samples taken throughout one full operational day (e.g., 0700 Monday to 0700 Tuesday).

4. The minimum level (ML) for Total Residual Chlorine (TRC) is defined as 20 ug/l using EPA approved methods found in the most currently approved version of Standard Methods for the Examination of Water and Wastewater, Method 4500 CL-E and G, or USEPA Methods for Chemical Analysis of Water and Wastes, Method 330.5. One of these methods must be used to determine TRC. The ML is not the minimum level of detection, but rather the lowest point on the curve used to calibrate the test equipment for the TRC sample. When reporting sample data below the ML, see the latest EPA Region NPDES Permit Program Instructions for the Discharge Monitoring Report Forms (DMRs) for guidance.

5. See Part I.C for requirements for the optimization of removal of phosphorus and nitrogen through the treatment plant as well as nitrogen reporting requirements. The Total Nitrogen loading will be calculated by the addition of the components nitrite and nitrate nitrogen and total kjeldahl nitrogen. The permittee shall attach a sheet to each month's DMR to show all effluent data results for phosphorus or any component of total nitrogen for sampling that is conducted that is greater than the frequency required by this permit.

6. The permittee shall conduct chronic whole effluent toxicity (WET) tests on samples collected during the second week of January, April, July and October of each year. The permittee shall test the daphnid, *Ceriodaphnia dubia*, only. Toxicity testing reporting is due the last day of the month following the month of the test. For example, the January toxicity test result shall be submitted no later than February 28th. The testing schedule is summarized in the table below. The test must be performed in accordance with test procedures and protocols specified in **Attachment A** of this permit and conducted during normal operating conditions.

Test Dates: Second Week in	**Submit Results by**:	**Test Species**	**LC_{50} Limit**	**Chronic Limit: C-NOEC**
January April July October	February 28th May 31st August 31st November 30th	Ceriodaphnia dubia (daphnid)	≥ 100 %	Report %

7. LC50 is the concentration of the effluent which causes mortality to 50% of the test organisms. Therefore, a 100% limit means that a sample of 100% effluent (no dilution) shall cause no more than 50% mortality rate. C-NOEC is the chronic no observed effect concentration, which is defined as the lowest effluent concentration at which no chronic effects exist.

8. If toxicity test(s) using receiving water as diluent show the receiving water to be toxic or unreliable, the permittee shall follow procedures outlined in **Attachment A, Section IV,** of this permit in order to obtain permission to use an alternate dilution water. In lieu of individual approvals for alternate dilution water required **in Attachment A**, the permittee may use the EPA New England guidance document entitled Self-Implementing Alternative Dilution Water Guidance ("Guidance Document") to obtain automatic approval of an alternate dilution water, including the appropriate species for use with that water. If the Guidance Document is revoked, the permittee shall revert to obtaining approval as outlined in **Attachment A.** The Guidance Document is included as Attachment G of the DMR Instructions on EPA's website at http://www.epa.gov/region1/enforcement/water/dmr.html and is not intended as a direct attachment to this permit. Any modification or revocation to the Guidance Document will be transmitted to the permittee as part of the annual DMR instruction package. However, at any time, the permittee may choose to contact EPA New England directly using the approach outlined in **Attachment A.**

9. For each WET test, the permittee shall report on the appropriate DMR, the concentrations of the total recoverable aluminum, cadmium, copper, lead, nickel, and zinc found in the 100 percent effluent sample. The analytical result for total aluminum in the 100% effluent sample may be used to satisfy the monitoring requirement for that month. All these aforementioned chemical parameters shall be determined to at least the minimum quantification levels shown in **Attachment A** on page 4 of 7, or as amended. Also, the permittee should note that all chemical parameter results must still be reported in the appropriate WET test report.

Part I.A. (continued):

2. Toxics Control

   a. The permittee shall not discharge any pollutant or combination of pollutants in toxic amounts.

   b. Any toxic components of the effluent shall 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.

3. Numerical Effluent Limitations for Toxicants

   EPA or MassDEP may use the results of the chemical analyses 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 Part 122.

4. The permittee shall not add chemicals (i.e. disinfectant agents, detergents, emulsifiers, etc.) to the collection and treatment system without prior approval from EPA and MassDEP. The permittee shall notify EPA and MassDEP at the addresses in Part I.E. when it proposes to add or replace any bio-remedial agents including microbes to the collection and treatment system.

5. All existing manufacturing, commercial, mining, and silvicultural 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 (l 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) Any other notification level established by the Director in accordance with 40 CFR §122.44(f).

b. That any activity has occurred or will occur which could 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 CFR §122.21(g)(7); or

(4) Any other notification level established by the Director in accordance with 40 CFR §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.

B. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfall listed in Part I A.1 of this permit. Discharges of wastewater from any other point sources not authorized by this permit shall be reported in accordance with Part II Standard Conditions Section D.1.e.(1) of this permit (Twenty-four hour reporting).

C. SPECIAL CONDITIONS AND REQUIREMENTS

The permittee shall optimize its biological treatment system and operate its treatment plant in order to minimize the discharge of nitrogen and phosphorus. The permittee shall not add any compounds containing nitrogen or phosphorus to its treatment system without prior approval of EPA and MassDEP.

D. REOPENER CLAUSE

1. This permit shall be modified, or alternately, revoked and reissued, to comply with any applicable standard or limitation promulgated or approved under sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:

   a. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
   b. Controls any pollutants not limited in the permit.

2. If the permittee resumes higher levels of paper production, the permit may be reopened to calculate effluent limits appropriate for such higher levels of production. The permittee shall notify EPA and MassDEP as far in advance as feasible of pending production increases in order for the Agencies to determine whether a permit modification is necessary and to provide time to issue such a modification.

E. MONITORING AND REPORTING

1. **For a period of one year 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, a web-based tool that allows permittees to electronically submit discharge monitoring reports (DMRs) and other required reports via a secure internet connection. **Beginning no later than one year after the effective date of the permit**, the permittee shall begin reporting using NetDMR, unless the facility is able to demonstrate a reasonable basis that precludes the use of NetDMR for submitting DMRs and reports. Specific requirements regarding submittal of data and reports in hard copy form and for submittal using NetDMR are described below:

a. Submittal of Reports Using NetDMR

NetDMR is accessed from: http://www.epa.gov/netdmr. **Within one year of the effective date of this permit**, the permittee shall begin submitting DMRs and reports required under this permit electronically to EPA using NetDMR, unless the facility 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").

DMRs shall be submitted electronically to EPA 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 attachment 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 shall continue to send hard copies of reports other than DMRs to MassDEP until further notice from MassDEP.

b. Submittal of NetDMR Opt-Out Requests

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 (OES04-1)
Boston, MA 02109-3912

and

Massachusetts Department of Environmental Protection
Surface Water Discharge Permit Program
627 Main Street, 2nd Floor
Worcester, Massachusetts 01608

c. Submittal of Reports in Hard Copy Form

Monitoring results shall be summarized for each calendar month and reported on separate hard copy Discharge Monitoring Report Form(s) (DMRs) postmarked no later than the 15th day of the month following the completed reporting period. All reports required under this permit shall be submitted as an attachment to the DMRs. Signed and dated originals of the DMRs, and all other reports or notifications required herein or in Part II shall be submitted to the Director at the following address:

U.S. Environmental Protection Agency
Water Technical Unit (OES04-SMR)
5 Post Office Square - Suite 100
Boston, MA 02109-3912

Duplicate signed copies of all reports or notifications required above shall be submitted to the State at the following address:

MassDEP – Western Region
Bureau of Waste Prevention (Industrial)
436 Dwight Street
Springfield, MA 01103

Duplicate signed copies of all reports or notifications required above, with the exception of DMRs, shall be submitted to the State at the following address:

Massachusetts Department of Environmental Protection
Division of Watershed Management
Surface Water Discharge Permit Program
627 Main Street, 2nd Floor
Worcester, Massachusetts 01608

Any verbal reports, if required in Parts I and/or II of this permit, shall be made to both EPA-New England and to MassDEP.

F. STATE PERMIT CONDITIONS

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

2. This authorization also incorporates the state water quality certification issued by MassDEP under § 401(a) of the Federal Clean Water Act, 40 C.F.R. 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.

3. 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.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION I
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

FACT SHEET

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES PURSUANT TO THE CLEAN WATER ACT (CWA)

NPDES PERMIT NO. MA0001716

DATE OF PUBLIC NOTICE: August 8, 2012 – September 6, 2012

NAME AND ADDRESS OF APPLICANT:

MeadWestvaco Corporation
501 South 5th Street
Richmond, VA 23219

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

MW Custom Papers, LLC
Laurel Mill
Pleasant Street
South Lee, MA 01260

RECEIVING WATER: Housatonic River (Segment MA21-19)

RECEIVING WATER CLASSIFICATION: Class B (Warm Water Fishery)

LATITUDE: 42E 16' 40" N **LONGITUDE**: 73E 16' 00" W

SIC CODE: 2621 – Paper Manufacturing (Specialty Papers)

Contents

I. Proposed Action, Type of Facility and Discharge Location

MW Custom Papers, LLC, the "Permittee", is engaged in the manufacture of decorative and overlay papers for laminates used in furniture, flooring, countertops, and cabinets. This facility has been referred to historically as the "Laurel Mill". The company also produces specialty grades of paper for various industrial and automotive applications. The products are produced from purchased pulp with an average historical production rate of up to 55 tons per day in 2005. In its permit reapplication, the permittee noted a production figure of 23.1 tons per day (TPD). However, since January of 2009, the average production rate has been less than 1 TPD.

The permittee has applied to the U.S. Environmental Protection Agency (EPA) for reissuance of its National Pollutant Discharge Elimination System (NPDES) permit to discharge treated wastewater to the Housatonic River via Outfall 001. The current permit ("2005 Permit") was issued on June 21, 2005, and expired five years from the effective date (August 21, 2010). EPA received a completed permit renewal application from the applicant dated February 19, 2010. Since the permit renewal application was deemed timely and complete by EPA, the permit has been administratively continued pursuant to 40 CFR § 122.6.

II. Description of Treatment System and Discharges

Water for the papermaking process is drawn from the Housatonic River, currently at the rate of 0.40 MGD, but historically at the rate of 1.5 MGD. This water is treated with alum, disinfected with bleach and passed through sand filters before it is used. Potable water purchased from the Town of Lee is used for sanitary systems and limited manufacturing usage. The discharge to the Housatonic River currently consists of treated process wastewater from papermaking operations, miscellaneous equipment and pump seal water, water softener backwash water, vacuum pump water, non-contact cooling water, filter backwash water, and storm water from roof drains. In addition, landfill leachate from an adjacent landfill is also sent to the wastewater treatment plant (WWTP). This capped landfill contains by-products previously generated at the facility. The facility is currently not discharging boiler blowdown but may do so in the future. Therefore, boiler blowdown is included as a component of the wastewater stream. All sanitary wastewater is discharged to the Town of Lee sewer system and treated at Lee's Wastewater Treatment Facility. See Figure 1 for the location of the facility and Figure 2 for the water balance and treatment system employed at the facility.

Process wastewater from the paper manufacturing operations as well as the other wastewaters noted above, are collected and treated by the permittee at its onsite wastewater treatment facility. The system consists of a primary clarifier, flow equalization tank, rotating biological contactors, secondary clarifier and flocculation clarifiers. Sludge is dewatered in a belt filter press and is composted off-site at Bondi Island (Springfield) by a company called Cover Technologies, Inc. A summary of recent Discharge Monitoring Reports (DMRs) data may be found in Tables 1 and

2. These data comprise the period between January 2009 and December 2011, which is referred to as the "monitoring period" in this fact sheet.

III. Receiving Water Description

The Housatonic River originates from tributaries in the Towns of Peru, Windsor, and Hinsdale, Massachusetts, and flows in a southerly direction through the Towns of Lenox, Lee, Stockbridge, and Great Barrington prior to flowing into the State of Connecticut and eventually into Long Island Sound. The Facility discharges through Outfall 001 to the Housatonic River segment MA21-19, which is 19.9 miles long. This segment of the Housatonic River begins at the outlet of Woods Pond in Lee/Lenox and ends at the Risingdale impoundment dam in Great Barrington[1] and is classified as Class B (warm water fishery)[2], by the Massachusetts Department of Environmental Protection (MassDEP) under the Commonwealth of Massachusetts Surface Water Quality Standards (SWQS).[3] Class B waters are described in the SWQS (314 CMR 4.05(3)(b)) as "designated as a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. Where designated in 314 CMR 4.06, they shall be suitable as a source of public water supply with appropriate treatment ("Treated Water Supply"). Class B waters shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. These waters shall have consistently good aesthetic value."

A warm water fishery is defined in the MA SWQS as "waters in which the maximum mean monthly temperature generally exceeds 68° F (20° C) during the summer months and are not capable of sustaining a year-round population of cold water stenothermal aquatic life" (314 CMR §4.02).[3]

According to the *Housatonic River Watershed 2002 Water Quality Assessment Report (MassDEP, 2007)*,[1] this segment is generally not meeting its designated uses as identified in the water quality standards. The following table, reproduced from the Water Quality Assessment Report, further identifies the status and impairments for each designated use:

[1] Housatonic River Watershed 2002 Water Quality Assessment Report, http://www.mass.gov/dep/water/resources/21wqar07.pdf
[2] http://www.mass.gov/dep/water/laws/tblfig.pdf
[3] http://www.mass.gov/dep/service/regulations/314cmr04.pdf

Designated Uses		Status
Aquatic Life		IMPAIRED Cause: PCBs in whole fish and sediment, elevated total phosphorus in upper 9.2 miles of segment Source: inappropriate waste disposal from General Electric Site for PCB contamination Suspected source: Nutrient inputs from point sources (municipal and industrial) and non-point source runoff exacerbated by impoundments and other upstream sources
Fish Consumption		IMPAIRED Cause: PCBs Source: inappropriate waste disposal from General Electric Site
Primary Contact		IMPAIRED Upper 9.2 mile reach Cause: Objectionable algal growth Source: Unknown Suspected source: Nutrient inputs from point sources (municipal and industrial) and non-point source runoff exacerbated by impoundments and other upstream sources SUPPORT lower 10.7 mile reach
Secondary Contact		IMPAIRED Upper 9.2 mile reach Cause: Objectionable algal growth Source: Unknown Suspected source: Nutrient inputs from point sources (municipal and industrial) and non-point source runoff exacerbated by impoundments and other upstream sources SUPPORT lower 10.7 mile reach
Aesthetics		IMPAIRED Upper 9.2 mile reach Cause: Objectionable algal growth Source: Unknown Suspected source: Nutrient inputs from point sources (municipal and industrial) and non-point source runoff exacerbated by impoundments and other upstream sources SUPPORT lower 10.7 mile reach

Sections 305(b) and 303(d) of the CWA require that States complete a water quality inventory and develop a list of impaired waters. Section 303(d) of the CWA requires States to identify those water bodies that are not expected to meet surface water quality standards after the implementation of technology-based controls, and as such, require the development of a Total Maximum Daily Load (TMDL) for each pollutant that is prohibiting a designated use(s) from being attained. In Massachusetts, these two evaluations have been combined into an Integrated List of Waters. The integrated list format provides the status of all assessed waters in a single, multi-part list.

Housatonic River Segment MA21-19 is listed on the *Final Massachusetts Year 2010 Integrated List of Waters*[4] as a Category 5 waterbody: "Waters requiring a TMDL." The pollutants and conditions contributing to this impairment are as follows:

- Excess Algal Growth;
- Polychlorinated biphenyls;
- Phosphorus (Total); and
- PCB in Fish Tissue.

[4] http://www.mass.gov/dep/water/resources/10list3.pdf

MassDEP is required under the CWA to develop a TMDL for a waterbody once it is identified as impaired. A TMDL is essentially a pollution budget designed to restore the health of a water body. A TMDL first identifies the source(s) of the pollutant from direct and indirect discharges in order to next determine the maximum amount of pollutant (including a margin of safety) that can be discharged to a specific water body while maintaining water quality standards for designated uses. It then outlines a plan to meet the goal. No TMDLs have been drafted or finalized for the Housatonic River watershed. However, a Waste Load Allocation (WLA) was conducted as described in the MassDEP's publication *The Housatonic River – 1975 Part-D Water Quality Management Plan,* whose results still form the basis for recommended water quality based Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS) limits.

In this 1975 document, the MassDEP identified dissolved oxygen violations in many segments of the river. In order to eliminate these WQS violations, the MassDEP sought to establish effluent limitations for each NPDES permitted discharge to the river. A preliminary WLA for the Housatonic River was conducted using the Streeter-Phelps equation, whose outputs are the maximum allowable loadings for each segment of the river. It was determined from a 1969 water quality survey that the river was impacted mainly due to organic loadings from point source discharges, which typically dictates dissolved oxygen as the parameter to be modeled. This analysis formulates an expression of the material balance which exists in a stream after the discharge of waste material at a single point. The specific instream effects of a discharge may be analyzed using material balances as well as the relationship between upstream loadings and discharge loadings. The final product of this type of analysis is the determination of the maximum allowable loadings for each segment and the degree of treatment required to meet water quality goals. The load allocations derived for the Laurel Mill facility were 410 lbs/day for BOD and 480 lbs/day for TSS. These were revised in MassDEP's publication *The Housatonic River – 1981 Water Quality Management Plan* to 434 lbs/day for BOD and 256 lbs/day for TSS. Therefore, these potentially represent the appropriate water quality based limits for this permit. However, these values will be compared to the existing permit limits and the calculated technology based limits in order to determine the appropriate permit limits.

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 other permit requirements are described below.

V. Permit Basis: Statutory and Regulatory Authority

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. 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. EPA is required to consider technology and water quality-based requirements as well as all limitations and requirements in the existing permit when developing permit limits.

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.

EPA established minimum control technology requirements for the paper industry in the form of effluent limitation guidelines (ELGs) promulgated under *40 CFR 430 - Pulp, Paper, and Paperboard Point Source Category.* The facility is most closely categorized by 40 CFR 430, Subpart K - "Fine and Lightweight Papers from Purchased Pulp Subcategory". The permittee has reported that the raw material breakdown at the facility is 90% cellulose (wood fiber) with the remaining 10% being a variable mixture of kevlar and other fillers. The following are the limits that apply for this discharge as wood fiber (cellulose) makes up the majority of the raw pulp used:

Subpart K

Limits for non-integrated mills where fine paper is produced from purchased pulp—wood fiber

Pollutant or pollutant property	Pounds per 1,000 lb of product		
	Continuous dischargers		Non-continuous dischargers (annual average)
	Maximum for any 1 day	Average of daily values for 30 consecutive days	
BOD5	8.2	4.25	2.4
TSS	11.0	5.9	3.2
pH	([1])	([1])	([1])

[1]Within the range of 5.0 to 9.0 at all times.

Up to 10,000 gallons per day (gpd) of landfill leachate from an on-site, closed landfill is captured and directed to the permittee's wastewater treatment plant. There are technology based guidelines promulgated for the "Landfills Point Source Category" at 40 CFR 445. These guidelines apply to both active and closed landfills and cover discharges of landfill wastewater, which includes landfill leachate. This landfill is classified as a Resource Conservation and Recovery Act (RCRA) Subtitle D Non-Hazardous Waste Landfill according to the permittee. Therefore, Subpart B of 40 CFR 445 would apply to this discharge of landfill leachate. However, in the Development Document for this Landfill Point Source Category (EPA-821-R-99-019 – January 2000), it is noted that this rule does not apply to wastewater discharges generated at a landfill that is associated with an industrial or commercial operation -- so called "captive" landfills -- in most circumstances. The landfill on this site had previously received waste from this facility and EPA has determined that these ELGs do not apply to this facility.

In general, the statutory deadline for non-POTW, 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, 1989 (see 40 CFR §125.3(a)(2)). Compliance schedules and deadlines not in accordance with the statutory provisions of the CWA cannot be authorized by a NPDES permit.

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 effluent monitoring requirements have been established to yield data representative of the discharges under the authority of Section 308(a) of the CWA, according to regulations set forth at 40 CFR § 122.41(j), 122.44(i) and 122.48. The monitoring program in the permit specifies routine sampling and analysis which will provide continuous information on the reliability and effectiveness of the installed pollution abatement equipment. The approved analytical procedures are to be found in 40 CFR 136 unless other procedures are explicitly required in the permit.

Water Quality-Based Requirements

Water quality-based limitations are required in NPDES permits when EPA and the State determine that effluent limits more stringent than technology-based limits are necessary to maintain or achieve state or federal water quality standards (WQS). See Section 301(b)(1)(C) of the CWA.

Receiving water requirements are established according to numerical and narrative standards adopted under state law for each water quality classification. When using chemical-specific numeric criteria to develop permit limits, both the acute and chronic aquatic-life criteria, expressed in terms of maximum allowable in-stream pollutant concentration, are used. Acute

aquatic-life criteria are considered applicable to daily time periods (maximum daily limit) and chronic aquatic-life criteria are considered applicable to monthly time periods (average monthly limit). Chemical-specific limits are allowed under 40 CFR § 122.44(d)(1) and are implemented under 40 CFR § 122.45(d).

A facility's design flow is used when deriving constituent limits for daily and monthly time periods as well as weekly periods where appropriate. Also, the dilution provided by the receiving water is factored into this process where appropriate. Narrative criteria from the state's water quality standards are often used to limit toxicity in discharges where (a) a specific pollutant can be identified as causing or contributing to the toxicity but the state has no numeric standard; or (b) toxicity cannot be traced to a specific pollutant.

EPA regulations require NPDES permits to contain effluent limits more stringent than technology-based limits where more stringent limits are necessary to maintain or achieve state or federal WQS. The permit must address any pollutant or pollutant parameter (conventional, non-conventional, toxic and whole effluent toxicity) that is or may be discharged at a level that causes or has "reasonable potential" to cause or contribute to an excursion above any water quality criterion. See 40 CFR Section 122.44(d)(1). An excursion occurs if the projected or actual instream concentration exceeds the applicable criterion. In determining reasonable potential, EPA considers (a) existing controls on point and non-point sources of pollution; (b) pollutant concentration and variability in the effluent and receiving water as determined from the permit application, monthly Discharge Monitoring Reports (DMRs), and State and Federal Water Quality Reports; (c) sensitivity of the species to toxicity testing; (d) known water quality impacts of processes on wastewater; and, where appropriate, (e) dilution of the effluent in the receiving water.

WQS consist of three parts: (a) beneficial designated uses for a water body or a segment of a water body; (b) numeric and/or narrative water quality criteria sufficient to protect the assigned designated use(s); and (c) antidegradation requirements to ensure that once a use is attained it will not be degraded. The MA SWQS, 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 conditions of the permit reflect the goal of the CWA and EPA to achieve and then to maintain WQS.

As noted earlier, the MassDEP has established a WLA for BOD and TSS. This allocation continues to serve as a basis for water quality based limits for these parameters.

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 anti-backsliding 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.

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 does not believe that the MassDEP is required to conduct an antidegradation review regarding this permit reissuance.

State Certification

Under Section 401 of the CWA, EPA is required to obtain certification from the state in which the discharge is located that all water quality standards or other applicable requirements of state law, in accordance with Section 301(b)(1)(C) of the CWA, are satisfied. EPA permits are to include any conditions required in the state's certification as being necessary to ensure compliance with state water quality standards or other applicable requirements of state law. See CWA Section 401(a) and 40 CFR §124.53(e). Regulations governing state certification are set out at 40 CFR §124.53 and §124.55. EPA regulations pertaining to permit limits based upon water quality standards and state requirements are contained in 40 CFR §122.44(d).

VI. Explanation of Permit's Effluent Limitations

Flow and Dilution Factor

For the purposes of evaluating flow and dilution calculations, the current average flow of 0.4 million gallons per day (MGD) will be used for this permit, which replaces the 1.6 MGD figure used in the 2005 permit. Although the facility has discharged an average of 0.3 MGD since January of 2009, production and flow may again approach the higher historical value of 1.5 MGD during this permit term. For purposes of calculating appropriate dilution factors for this draft permit, the maximum flow rate of 2.5 MGD, which was used in the last permit, has been

changed to 1.0 MGD, also to reflect current conditions. Since the only draft permit limits that are dependent on flow are those for aluminum and since the permittee has been discharging consistently at the lower flow of 0.4 MGD during the last 3 years, the flow will remain a monitor only parameter in this permit. However, if flows increase in the future to the point where other water quality based limits dependent on flow have a reasonable potential to be violated, then flow limits and limits on such parameters may be established.

Water quality-based effluent limitations are established based on a calculated dilution factor derived from the available dilution in the receiving water at the point of discharge. Massachusetts water quality standards require that the available effluent dilution be calculated based upon the 7Q10 flow of the receiving water (314 CMR 4.03(3)(a)). The 7Q10 flow is the mean low flow over seven consecutive days, occurring every ten years. Use of the 7Q10 flow allows for the calculation of the available dilution under critical flow (worst-case) conditions, which in turn results in the derivation of conservative water quality-based effluent limitations.

The dilution factors for the existing permitted used the average monthly and maximum daily flows of 1.6 and 2.5 MGD, respectively, and were calculated to be 23 and 15, respectively. During the last 3 years, the flows have been reduced significantly. The permittee has indicated on Figure 2 that the average effluent flow is now 0.4 MGD. From the DMR data, the daily maximum flow is approximated at 1.0 MGD. According to the United States Geological Survey (USGS), the 7Q10 flow at the USGS gage located on the Housatonic River in Great Barrington, MA (USGS Gage No. 01197500) is 69 cfs and the drainage area (DA) of the gage is 282 square miles.[5] The drainage area between the Facility's outfall and the USGS gauging station is estimated at 42 square miles.

The proportion of the 7Q10 flow at the point of discharge to the 7Q10 flow at the USGS Gage Station (#01197500), Great Barrington, is in the same proportion as the respective drainage areas. Therefore, the calculated 7Q10 and dilution factors for the facility are as follows:

Drainage Area (Gage Station #01197500)	282 square miles
Drainage Area (below outfall to Station)	42 square miles
Net Drainage Area @ outfall (Laurel Mill)	240 square miles

7Q10@ Gage Station = 69 cubic feet per second (cfs)

7Q10@ outfall = 7Q10@ gage station / DA @ Gage Station x DA @ outfall

7Q10@ outfall = 69 cfs X (240 square miles/282 square miles) = **59 cfs**

Average effluent flow: 0.4 MGD = **0.62 cfs** ; Daily maximum flow: 1.0 MGD = **1.55 cfs**

[5] http://streamstats.usgs.gov/gagepages/HTML/01197500.htm

Because this facility draws its process water from the Housatonic River and its tributaries and returns the same volume to the Housatonic River, the dilution factor is simply the river flow divided by the discharge flow.

Dilution Factor = River 7Q10 / Discharge
Average Flow Dilution Factor = 59 cfs / 0.62 cfs = **95**
Daily maximum Dilution Factor = 59 / 1.55 = **38**

BOD and TSS

In order to determine the appropriate BOD and TSS limits in this permit, EPA assessed the current makeup of the wastewater. Based on current operations at the facility, the average effluent flow is 0.4 MGD, with about 75% of that flow, or 0.3 MGD, comprised of filter house backwash and overflow water from the filter house. Papermaking wastewater comprises about 5% of the total flow entering the WWTP, or about 0.01 MGD. The remainder of flow that is directed to the WWTP is comprised of miscellaneous flows as noted on Figure 2. Since there is a relatively small amount of BOD in the intake water from the Housatonic River, EPA believes that it is appropriate to continue to base the BOD effluent limits on the technology based ELGs. For TSS, although the intake water is filtered, the permittee discharges filter backwash water to Outfall 001. Therefore, EPA believes it is appropriate to base the TSS effluent limits on a combination of ELGs and secondary treatment requirements, since this is essentially a secondary treatment plant. Under previous operating conditions, the papermaking wastewater comprised closer to 50% of the overall flow being treated at the WWTP.

The raw material breakdown for products produced at the facility is 90% cellulose (wood fiber) and 10% is a variable mixture of kevlar and other fillers. The effluent categorical limits in 40 CFR 430, Subpart K - “Fine and Lightweight Papers from Purchased Pulp Subcategory” provide separate categorical limits for wood fiber pulp that most closely characterizes the production at this facility.

BOD: The permittee listed the average production rate as 23.1 tons/day in its Form 2C application. However, for the last 3 calendar years, the production rate has averaged less than 1 ton/day, which is the production rate used below.

Average Monthly Technology Based Limit:

Wood fiber: 4.25 lbs/1000 lbs. * 1 ton/day * 2000 lbs/ton = **8.5 lbs/day**

This would be the limit based on current production. The existing monthly average BOD permit limit of 400 lbs/day is a limit that was a technology-based limit established in the 2000 permit and based on a production rate of 47 TPD. As mentioned earlier in the discussion of the WLA, the limit based on water quality is 434 lbs/day.

Maximum Daily Technology Based Limit:

Wood fiber: 8.2 lbs/1000 lbs * 1 ton/day * 2000 lbs/ton = **16.4 lbs/day**

This would be the maximum daily limit based on production. To ensure compliance with the water quality standards, the maximum daily limit in the 2000 permit was set at 50% above the monthly average WLA figure of 434 lbs/day (434 * 1.5 = 651). There was no specific maximum daily allocation established for BOD in the 1975 WLA.

For this draft permit, since there is not believed to be any appreciable amount of BOD in the intake water, the BOD limits will be established as calculated above, as the majority of effluent BOD is expected to be derived from the papermaking process.

TSS: The monthly average TSS limit in the 2005 permit was 200 lbs/day. This limit was originally established in the 1987 permit and was based on treatment plant records for the period of 1984 thorough 1986 and is best characterized as a technology based limit. The 1987 permit also had a provision that the monthly average TSS limit could be stepped up with production rate increases above 40 TPD. At that time, this limit was more stringent than the WLA limit of 390 lbs/day and the categorical limit. In the 2005 permit, the TSS monthly average limit could be stepped up in increments of 5 TPD, up to a maximum effluent limit of 250 lbs/day, based on a production rate of 50 TPD. The limit based on the technology based categorical standards was less stringent, calculated to be 473 lbs/day. As mentioned earlier, the permittee is producing less than one ton per day currently and that figure will be used for purposes of calculating the appropriate technology based limits as shown below:

Average Monthly Technology Based Limit:

Wood fiber: 5.9 lbs/1000 lbs * 1 ton/day * 2000 lbs/ton = **11.8 lbs/day**

The existing maximum daily TSS limit of 384 lbs/day was set 50% higher than the monthly average wasteload allocation of 256 lbs/day to ensure compliance with the water quality standards. The limit based on the technology based categorical standards was less stringent, calculated to be 912 lbs/day. The corresponding technology-based maximum daily limit for the average production rate of 1 ton/day is calculated as follows:

Maximum Daily Technology Based Limit:

Wood fiber: 11.0 lbs/1000 lbs * 1 ton/day * 2000 lbs/ton = **22 lbs/day**

The current daily maximum limit of 384 lbs/day was derived from the monthly average wasteload allocation, and would be best characterized as a water quality based limit. There was no specific maximum daily allocation established for TSS in the 1975 WLA or the revised WLA in 1981. However, this WLA was based on past levels of production at the facility and does not apply to current levels of production.

The permittee's wastewater treatment facility may be characterized as a secondary treatment facility, because it employs treatment processes characteristic of secondary treatment, such as influent screening, clarification, biological treatment, and sludge removal. As such, it is appropriate in this case, to use the secondary treatment regulations to determine the TSS effluent limits instead of the technology based ELGs since the majority of water being treated is not from papermaking operations. At this time, it was determined that a weighted average TSS limit (based on 5% papermaking wastewater and 95% filtered water and other miscellaneous discharges) was not necessary, since 5% of the calculated TSS limits based on the ELGs above would result in the ELG contribution being less than 1 pound per day.

Therefore, until the papermaking wastewater becomes a greater percentage of the total water treated at the facility, the TSS limits in this permit will be established as follows, based on the secondary treatment requirements set forth at 40 CFR §133.102(a)(1) and (2). There regulations state that the 30-day average concentration of TSS shall not exceed 30 mg/l. In addition, 40 CFR §122.45(f) requires mass limitations for TSS in NPDES permits. The monthly average mass limit for TSS in this draft permit is calculated as follows:

Mass Limitation (lbs/day) = C x DF x 8.34

Where: C = Concentration limit; DF = Design flow of the facility, in MGD
8.34 = Factor to convert effluent concentration in mg/l and design flow in MGD to lbs/day.

Average Monthly Mass Limit = 0.4 MGD x 30 mg/l x 8.34 = **100 lbs/day**

The daily maximum limit is calculated to be proportional to the monthly average limit and by using the current daily maximum flow of 1.0 MGD as follows:

Daily Maximum Mass Limit = 1.0 MGD x 30 mg/l x 8.34 = **250 lbs/day**

The draft permit limits are more stringent than the existing limits, which were based on a combination of water quality and technology based ELGs. As discussed earlier, the previous limits, which were based on significantly higher production figures, are not applicable to the current production levels. Therefore, the draft permit limits have been established at 100 lbs/day for the monthly average and 250 pounds per day for the daily maximum.

If production at this facility is expected to increase to higher levels, this permit may be reopened to calculate BOD and TSS limits which would be consistent with such levels of production and based more proportionally on the papermaking ELGs. The permittee shall notify EPA and MassDEP as soon as it knows that it will be increasing production rates above the current rates, so that EPA and MassDEP may reopen this permit if necessary to adjust any permit limits accordingly. See Part I.D.2 of the permit.

Temperature

The Massachusetts SWQS stipulate that the temperature for Class B warm water fisheries shall not exceed 83 ^{o}F and that the rise in temperature due to a discharge shall not exceed 5 ^{o}F. The *1997/1998 Housatonic River Assessment Report* (MassDEP, 2000) indicates that this facility's effluent occasionally violated its temperature limit of 90 ^{o}F at that time. The prior fact sheet had indicated that documents in the permit file accredited those violations to high intake (i.e. river) temperature. The DMR data for the last 3 years shows no violations of the 90 ^{o}F limit, with a high value of 79 ^{o}F, recorded twice. Since 2006, the highest effluent temperature value has been as 88 ^{o}F, recorded in June of 2007.

In order to determine whether discharging at the current effluent temperature limit would likely result in the violation of the instream temperature standard of 83 ^{o}F, a MassDEP temperature survey was reviewed. The results of this survey were published in the MassDEP's report "Housatonic River Watershed – 2002 Water Quality Assessment Report". In Appendix H of this report, the MassDEP presented the results of instream temperature sampling conducted at 4 locations in the watershed, including one location on the Housatonic River in South Lee, downstream of this facility. A continuous temperature sampler recorded the river temperature every 15 minutes during the period of July 25, 2002 to August 28, 2002. The results showed a temperature range of 19.2 – 27 ^{o}F, or about 66.5 – 81 ^{o}F. Assuming this high instream temperature of 81 ^{o}F and an effluent temperature of 90 ^{o}F, the following equation estimates the downstream temperature in the Housatonic River after mixing with the effluent :

$$\{(1.55 \text{ cfs} * 90\ ^{o}\text{F}) + ((59 \text{ cfs} – 1.55 \text{ cfs}) * 81\ ^{o}\text{F})\} / 59 \text{ cfs} = \text{downstream T}$$
$$\{140 + 4653\} / 59 = \mathbf{81.2\ ^{o}F}$$

Because the calculated rise in temperature is 0.2 ^{o}F, the discharge would not likely cause an exceedence of the water quality criteria based on the historical instream temperature data that is available. Therefore, the temperature limit of 90 ^{o}F is maintained as in the current permit. The

2005 permit had required that the effluent temperature be taken between 10:00 AM and 2:00 P.M. This time period was established based on a comment on the draft permit that the sample should be taken when the highest temperature of the week was expected. Footnote 1 on Page 3 of the draft Permit requires that, "a routine sampling program shall be developed in which samples are taken at the same location, approximately the same time, and the same days of every month". This condition is required to achieve representative sampling for all parameters, including temperature. Therefore, the requirement to sample for temperature during a certain time period has been eliminated.

Nutrients

Nutrients, such as phosphorus and nitrogen, are necessary for the growth of aquatic plants and animals to support a healthy ecosystem. In excess, however, nutrients can contribute to fish disease, brown tide, algae blooms and low dissolved oxygen (DO). Excessive nutrients, generally phosphorus in freshwater and nitrogen in salt water, stimulate the growth of algae and aquatic plants, which could start a chain of events detrimental to the health of an aquatic ecosystem. When these plants and algae decay, this generates strong odors and often results in lower dissolved oxygen levels in the river. This could in turn impair the benthic habitat as fish and shellfish are deprived of oxygen, while excessive algae and foul smells could decrease aesthetic value by affecting swimming and recreational uses.

It has been documented that most reaches of the Housatonic River suffer from eutrophication, a condition caused primarily by excessive nutrients entering the river. The instream nutrients prevent attainment of the designated uses as defined in the Massachusetts SWQS. These uses include habitat for fish, other aquatic life, and wildlife, and for primary and secondary contact recreation. There are several applicable water quality criteria which are not being met in the Housatonic River due to nutrient discharges and resulting eutrophication. They include numeric water quality criteria (e.g., dissolved oxygen), and narrative water quality criteria including aesthetics (314 C.M.R. § 4.05(5)(a)), bottom pollutants and alterations (314 C.M.R. § 4.05(5)(b)), and nutrients 314 C.M.R. § 4.05(5)(c)).

Total Phosphorus

As discussed above in Part III of this Fact Sheet, this segment of the Housatonic River is identified in the *Final Massachusetts Year 2010 Integrated List of Waters* as requiring a TMDL for phosphorus, and excess algal growth. In addition, Lake Lillinonah, a 1,600-acre impoundment of the Housatonic River located over 50 miles downstream in Connecticut (Southbury and Bridgewater abut the east bank, Newtown, Brookfield, and New Milford abut the west bank), is included as a 303(d) waterbody on the State of Connecticut's *2008 Integrated Water Quality Report to Congress.*[6] The 2008 report identified chlorophyll-*a*, excess algal growth, and nutrient/euthrophication biological indicators as causing an impairment of

6 http://www.ct.gov/dep/lib/dep/water/water_quality_management/305b/2008_final_ct_integratedwqr.pdf

recreational uses in Lake Lillinonah, which suggests that the effects of upstream nutrient sources are accumulating and being observed in downstream impoundments on the Housatonic River.

The impacts of high levels of phosphorus include violations of the minimum dissolved oxygen criteria, high levels of chlorophyll *a*, and high levels of macrophyte and periphyton growth. The relationship between high levels of phosphorus and eutrophication, as measured by chlorophyll *a*, periphyton, macrophyte, and dissolved oxygen levels is well documented in scientific literature, including in guidance developed by EPA to address nutrient over-enrichment. *See Nutrient Criteria Technical Guidance Manual – Rivers and Streams*, July 2000 (EPA-822-B-00-002).

In the absence of a numeric criterion for phosphorus, EPA looks to nationally recommended criteria and other technical guidance documents. *See* 40 CFR 122.44(d)(1)(vi)(B). EPA has produced several guidance documents which contain recommended total phosphorus criteria for receiving waters. The *1986 Quality Criteria for Water* ("Gold Book") recommends that, in order to control eutrophication, in-stream phosphorus concentrations are no greater than 50 ug/l in any stream entering a lake or reservoir, 100 ug/l for any stream not discharging directly to lakes or impoundments, and 25 ug/l within a lake or reservoir. The Housatonic River below the MW Custom Papers facility encounters a series of impoundments before crossing the Connecticut border.

In 2001, EPA released Ecoregional Nutrient Criteria, established as part of an effort to reduce problems associated with excess nutrients in water bodies in specific areas of the country. The published ecoregion-specific criteria represent conditions in waters minimally impacted by human activities, and are thus representative of water without cultural eutrophication. This facility is within Ecoregion VIII, classified as "Nutrient Poor, Largely Glaciated Upper Midwest and Northeast". Recommended criteria for this ecoregion is found in *Ambient Water Quality Criteria Recommendations, Information Supporting the Development of State and Tribal Nutrient Criteria, Rivers and Streams in Nutrient Ecoregion VIII,* (December, 2001, EPA 822-B-01-015). The recommended aggregate total phosphorus criterion for this ecoregion is 10 ug/l.

The MA SWQS at 314 CMR § 4.00 do not contain numerical criteria for total phosphorus. They include a narrative criterion for nutrients at 314 CMR 4.05(5)(c), which provides that nutrients "[s]hall not exceed the site specific limits necessary to control accelerated or cultural eutrophication." They also include a requirement that "[a]ny 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 ... shall be provided with the most appropriate treatment as determined by the Department, including, where necessary, highest and best practicable treatment (HBPT) for POTWs and BAT for non-POTWs, to remove such nutrients to ensure protection of existing and designated uses." See 314 CMR 4.05. MassDEP has interpreted the "highest and best practicable treatment" requirement in its standards as requiring an effluent limit of 0.2 mg/l (200 ug/l) for phosphorus.

In order to determine whether this permittee's discharge of total phosphorus is contributing to the water quality impairment, EPA is applying the Gold Book criteria (0.1 mg/l) because it was developed from an effects-based approach rather than the reference conditions-based approach used in the derivation of the ecoregional criteria. The effects-based approach is preferred in this case because it is more directly associated with an impairment of a designated use (i.e., recreation). The effects-based approach provides a threshold value above which water quality impairments are likely to occur. It applies empirical observations of a causal variable (i.e., phosphorus) and a response variable (i.e., algal growth) associated with impairment of designated uses. Reference-based values are statistically derived from a comparison within a population of rivers in the same ecoregional class. They are a quantitative set of river characteristics (physical, chemical, and biological) that represent minimally impacted conditions.

The monthly data from the DMR summary for the past 3 years shows phosphorus levels up to 0.56 mg/l, including some non-detectable readings, with an average effluent concentration of 0.06 mg/l. Although many of the effluent samples were below the 0.1 mg/l level, the instream, or background concentrations of phosphorus need to be considered when determining whether this discharge is causing or contributing to the current impairment of the receiving water.

The most recent instream water quality data for this receiving water may be found in the *Housatonic River Watershed 2002 Water Quality Assessment Report (MassDEP 2007*). Instream samples were collected and analyzed on 4 separate occasions for total phosphorus concentrations at 2 locations upstream of the permittee's facility (Lee and Lenox) as well as at 2 downstream locations. These values were as follows:

Instream Concentration of Total Phosphorus (mg/l)

Sampling Station and Location	May 2002	June 2002	July 2002 *	Sept. 2002
19A – Lenox	0.04, 0.05	0.09, 0.08	0.162, 0.151	0.188, 0.190
19C – Lee	0.25	0.18	0.319	0.504
19E – Stockbridge	0.04	0.07	0.108	0.092
20A – Great Barrington	0.05	0.08	0.086	0.081

* The July 2002 samples had a blank contamination of 0.014 mg/l

Instream flow data collected by two USGS gauges (No. 01197000, East Branch Housatonic River at Coltsville, MA and No. 01197500, Housatonic River near Great Barrington) as well as precipitation data collected by the Massachusetts Department of Conservation and Recreation (DCR) precipitation gauges near the USGS gauges show no correlation between precipitation and streamflow before or during the 2002 sampling events, and that flows were relatively close to the 7Q10 flows for these stations (Housatonic River Watershed 2002 Water Quality Assessment Report, Appendix B (MassDEP 2007)). Therefore, the data are representative of instream conditions during critical flow periods.

Of the four stations sampled within this segment of the receiving water in 2002, samples collected approximately 300 feet downstream from the Lee WWTF outfall (Station 19C) had the highest concentration of total phosphorus on each of the sampling dates. The data collected at this station also suggest that the Gold Book instream total phosphorus criteria of 0.1 mg/l is being exceeded in the receiving water, as the average value at Station 19C was 0.31 mg/l. Phosphorus contributions from upstream municipal point sources could explain the 0.31 mg/l background instream total phosphorus concentration, as they have been implicated as suspected sources of nutrient inputs to the river in both the Housatonic River Watershed 2002 Water Quality Assessment Report (MassDEP 2007) and in the State of Connecticut's 2006 Integrated Water Quality Report to Congress (CT DEP 2006). It is also possible that conditions in Woods Pond, a highly eutrophic impoundment located upstream from this facility in Lenox, is negatively affecting downstream water quality and may have contributed to ambient conditions (i.e., elevated background concentrations of phosphorus), and therefore may have affected the high total phosphorus concentrations detected in samples collected by MassDEP in 2002 downstream from the Lee WWTF (Housatonic River Watershed 2002 Water Quality Assessment Report, Appendix B (MassDEP 2007)).

Upstream of the MW Custom Papers facility, the Housatonic River receives discharges of treated effluent from three Wastewater Treatment Plants (WWTPs). A very stringent seasonal total phosphorus limit of 0.1 mg/l has been established for the Pittsfield WWTP that was issued in 2010. Since this facility is the largest municipal discharger on the river with a design flow of 17 MGD, it is expected that this limit will result in a significant decrease in phosphorus loadings to the river over time. The NPDES permit for the Lenox WWTP was issued in 2007 with a year round phosphorus limit of 1.0 mg/l and the NPDES permit was issued for Lee in 2008 with a seasonal limit of 0.2 mg/l. In addition, more stringent phosphorus limits are anticipated to be included in future permits for facilities that discharge to the Housatonic River in the effort to control eutrophication in the river to address the ongoing impairment.

By considering a reduction in phosphorus inputs from upstream sources due to more stringent permit limits since the 2002 instream sampling and the fact more than half of the instream samples were already below the criterion of 0.1 mg/l, it is expected that the downstream receiving water will meet this criterion, due to the relatively minor loading from the MW Custom Papers discharge, which is considerably lower now due to decreased production at the facility. Based on the available effluent monitoring results and limited instream data that likely does not represent decreased upstream phosphorus loadings, EPA concludes that there is no reasonable potential for this discharge to contribute to the water quality impairment for phosphorus, and no phosphorus limit has been established at this time. The continuation of weekly phosphorus sampling is required due to the non-attainment for this segment of the Housatonic River, the continued presence of total phosphorus in the discharge, and the variability of past results. Future monitoring results and assessment efforts on the Housatonic River may necessitate permit limits. This permit requires the optimization of treatment plant operation for the removal of phosphorus.

Nitrogen

The 2005 Permit required reporting of the daily maximum concentrations of Total Kjeldahl Nitrogen, Nitrate-Nitrogen, Nitrite-Nitrogen, and Ammonia. The Draft Permit proposes monthly reporting of the maximum daily effluent concentrations as well as masses of Total Nitrogen, Total Kjeldahl Nitrogen, Total Ammonia Nitrogen, Nitrate-Nitrogen, and Nitrite- Nitrogen. The rationale for this change is explained below.

Total Nitrogen

In December 2000, the Connecticut Department of Environmental Protection (CT DEP) completed a Total Maximum Daily Load (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% reduction from the baseline total nitrogen loading estimated in the TMDL.

The baseline total nitrogen point source loadings estimated for the Connecticut, Housatonic, and Thames River watersheds were 21,672 lbs/day, 3,286 lbs/day, and 1,253 lbs/day respectively (see Exhibit 1). The estimated current point source total nitrogen loadings for the Connecticut, Housatonic, and Thames Rivers respectively are 13,836 lbs/day, 2,151 lbs/day, and 1,015 lbs/day, based on recent data and including all POTWs in the watershed. Exhibit 1 below summarizes the estimated baseline loadings, TMDL target loadings, and estimated current loadings:

Exhibit 1: Long Island Sound TMDL
Nitrogen Baseline Loadings, Targets, and Current Loadings

Basin	Baseline Loading[1] (lbs/day)	TMDL Target[2] (lbs/day)	Current Loading[3] (lbs/day)
Connecticut River	21,672	16,254	13,836
Housatonic River	3,286	2,464	2,151
Thames River	1,253	939	1,015
Totals	26,211	19,657	17,002

1. Estimated loading from TMDL, (see Appendix 3 to CT DEP "Report on Nitrogen Loads to Long Island Sound", April 1998)
2. Reduction of 25% from baseline loading
3. Estimated current loading from 2004 – 2005 DMR data

The TMDL target of a 25 percent aggregate reduction from baseline loadings is currently being met. The estimated loading for this facility used in the above analysis was 80.1 lbs/day, based upon a Total Nitrogen concentration of 6.4 mg/l and the average flow of 1.5 MGD (6.4 mg/L * 1.5 MGD * 8.34), as indicated in the facility's 2004 through 2005 DMRs. Since that time, the facility's monthly average flow has dropped from 1.5 MGD to 0.4 MGD, while the total nitrogen discharged has averaged 2.4 mg/l, as shown in Exhibit 2 below.

Exhibit 2: Summary of Nitrogen Results (mg/L) from January 2009 to December 2011

	Nitrogen, total Kjeldahl	Nitrogen, nitrate total (as N)	Nitrogen, nitrite total (as N)	Nitrogen, Total
Lowest Monthly Value	ND	ND	ND	ND
Highest Monthly Value	2.3	4.3	0.01	6.6
Average	0.71	1.4	0.0013	2.1

* All values are presented as monthly average minimum.

Therefore, this more recent data would indicate a mass loading closer to 7.0 lbs/day (2.1 mg/l * 0.4 MGD * 8.34). However, this production rate and corresponding effluent flow may be increased up to 1.5 MGD during this permit term. The permittee has stated that it does not intentionally add nutrients to its wastewater treatment process. Since the permittee does not use nitrogen compounds in its treatment system, most of the nitrogen in the effluent presumably comes from the water that is withdrawn from the Housatonic River, which contains nitrogen from upstream publicly owned treatment works (POTWs) facilities, other industrial facilities, and non-point sources.

The agencies intend to periodically update the estimate of all out-of-basin total nitrogen loads and may incorporate total nitrogen limits in future permit modifications or reissuances as may be necessary to address increases in discharge loads, a revised TMDL, or other new information that may warrant the incorporation of numeric permit limits. There have been significant efforts by the New England Interstate Water Pollution Control Commission (NEIWPCC) work group and others since completion of the 2000 TMDL, which are anticipated to result in revised wasteload allocations for in-basin and out-of-basin facilities. Although not a permit requirement, it is strongly recommended that any treatment system upgrades or modifications that are envisioned for Laurel Mill consider alternatives for further enhancing nitrogen reduction. Therefore, EPA is not establishing a nitrogen limit at this time, but is continuing the monthly monitoring requirement for nitrogen in this draft permit.

pH

It had been previously determined that the Housatonic River has sufficient buffering capacity so that the stream biota will not be affected if the pH varies from the state standard range of 6.5 – 8.3 s.u. In consideration of this, the previous permit had established a limited pH range of 6.0 – 9.0 s.u. This determination is still considered adequate, given the dilution of 38 times for the daily maximum flow of the plant that was calculated earlier. An examination of the effluent data shows discharge pH ranging from 6.8 to 8.3 standard units. Therefore, the pH range of 6.0 - 9.0 s.u. of the existing permit remains in the draft permit.

Aluminum

Aluminum compounds are used in the wastewater treatment process and aluminum is routinely detected in the effluent. During the monitoring review period, total aluminum averaged 3.0 mg/l with high values of 18 and 15.9 mg/l. The fact sheet accompanying the 2005 permit had determined that the effluent aluminum levels did not have a reasonable potential to violate the instream WQS for aluminum. The 2005 permit eliminated the previous limit of 2.2 mg/l based on this determination.

The chronic water quality criterion for aluminum is 87 ug/l and the acute criterion is 750 ug/l as listed in *National Recommended Water Quality Criteria: 2002* (EPA-822-R-02-047). The applicable water quality based limits would be calculated as follows based on the dilution factors calculated earlier:

Chronic limit: 0.087 * 95 = **8.3 mg/l** Acute limit: 0.750 * 38 = **28 mg/l**

The recent monitoring data for aluminum indicate that there is a reasonable potential to violate the chronic, but not the acute WQS. Therefore, the aluminum limit of 8.3 mg/l as a monthly average has been established in the permit with a monthly monitoring frequency with a monitor only requirement for the daily maximum concentration.

Total Residual Chlorine

The facility has reported the continued presence of total residual chlorine in its discharge. Chlorine can be extremely toxic to aquatic life. Effluent limits are based on water quality criteria for total residual chlorine (TRC) which are specified in EPA water quality criteria established pursuant to Section 304(a) of the Clean Water Act. The most recent EPA recommended criteria are found in *National Recommended Water Quality Criteria*: 2002 (EPA-822-R-02-047). The fresh water aquatic life criteria for TRC are 11 ug/l (0.011 mg/l) for protection from chronic toxicity and 19 ug/l (0.019 mg/l) for protection from acute toxicity. The 7Q10 dilution multiplied by the chronic and acute criteria provides the appropriate TRC limits as shown below:

Chronic limit: 0.011 mg/l * 95 = **1.0 mg/l** Acute limit: 0.019 mg/l * 38 = **0.72 mg/l**

For the DMR reporting period, TRC has averaged 0.04 mg/l, with high values of 0.2 and 0.41 mg/l. The recent monitoring data for TRC would indicate that there is no reasonable potential to violate WQS, although there are occasional high readings. Therefore, the weekly TRC monitoring requirement has been maintained in the draft permit and TRC limits may be established in the future if monitoring shows increasing levels which could have a reasonable potential to violate WQS.

Whole Effluent Toxicity

Whole effluent toxicity (WET) testing is conducted to assess whether certain effluents are discharged in a combination which produces a toxic amount of pollutants in a receiving water. Toxicity testing is used in conjunction with pollutant specific control procedures to control the discharge of toxic pollutants.

Sections 402(a)(2) and 308(a) of the Clean Water Act provide EPA and the States the legal basis for establishing toxicity testing requirements and toxicity-based permit limits in NPDES permits. Section 308 specifically describes biological monitoring methods as techniques which may be used to carried out the objectives of the Act. Under certain narrative State water quality standards and Sections 301, 303, and 402 of the Clean Water Act, EPA and the States may establish toxicity-based limits to implement the narrative "no toxics in toxic amounts".

The regulations at 40 CFR Part 122.44(d)(ii) state, "When determining whether a discharge causes, has the reasonable potential to cause, or contribute to an instream excursion above a narrative or numeric criteria within a State water quality standard, the permitting authority shall use procedures which account for existing controls on point and nonpoint sources of pollution ... (including) the sensitivity of the species to toxicity testing ..." The EPA and DEP believe that the complexity of the wastewater from this discharge is such that toxicity testing and limitations are required to evaluate and address any water quality impacts.

The past 3 years of WET testing shows that LC50 limit of 100% has been achieved in all occasions for the daphnid, *Ceriodaphnia dubia*. For the chronic no observed effect concentration (C-NOEC), which is a monitor only parameter, the levels have been mostly 100% for the daphnid with the exception of 2 results with a C-NOEC value of 50%. The quarterly WET testing requirement will remain with the LC50 limit of 100% along with the C-NOEC monitoring requirement.

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 Service (NMFS) if EPA's actions or proposed actions that it funds, permits, or undertakes, may adversely impact any essential fish habitat, such as: waters and substrate

necessary to fish for spawning, breeding, feeding or growth to maturity (16 U.S.C. § 1802(10)). "Adversely impact" means any impact which reduces the quality and/or quantity of EFH (50 C.F.R. § 600.910(a)). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

Essential fish habitat is only designated for species for which federal fisheries management plans exist (16 U.S.C. §1855(b)(1)(A)). EFH designations for New England were approved by the U.S. Department of Commerce on March 3, 1999. The Housatonic River in the vicinity of this discharge is not covered by the EFH designation for riverine systems and thus EPA has determined that EFH consultation with NMFS is not required.

VIII. Endangered Species Act (ESA)

Section 7(a) of the Endangered Species Act (ESA) of 1973, as amended 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 insure 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. NMFS typically administers Section 7 consultations for marine species and anadromous fish.

EPA has reviewed the listing of federal endangered or threatened species of fish, wildlife, and plants to see if any such listed species might potentially be impacted by the reissuance of this NPDES permit and has not found any such listed species. Therefore, EPA does not need to formally consult with NMFS or USFWS in regard to the provisions of the ESA. During the public comment period, EPA has provided a copy of the Draft Permit and Fact Sheet to both NMFS and USFWS.

Other Conditions

The remaining conditions of the permit are based on the NPDES regulations, 40 CFR Parts 122 though 125, and consist primarily of management requirements common to all permits.

IX. Monitoring and Reporting

The permit's monitoring requirements have been established to yield data representative of the facility's pollutant discharges under the authority of Sections 308(a) and 402(a)(2) of the CWA and consistent with 40 C.F.R. §§ 122.41 (j), 122.43(a), 122.44(i) and 122.48. The monitoring program in the permit specifies routine sampling and analysis which will provide ongoing,

representative information on the levels of regulated constituents in the wastewater discharge streams. The approved analytical procedures are found in 40 C.F.R. Part 136 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. Timely reporting is essential for the regulatory agencies to expeditiously assess compliance with permit conditions.

The Draft Permit includes new provisions related to DMR submittals to EPA and the State. The Draft Permit requires that, no later than one year 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 one year 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 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 C.F.R. § 122.41 and § 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 attachment 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 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 have otherwise been required to begin using NetDMR. Opt-outs become effective upon

the date of written approval by EPA and are valid for twelve (12) months. 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.

X. State Certification Requirements

EPA may not issue a permit unless the Massachusetts Department of Environmental Protection (MassDEP) certifies that the effluent limitations included in the permit are stringent enough to assure that the discharge will not cause the receiving water to violate State Water Quality Standards. The MA DEP has reviewed the draft permit and advised EPA that the limitations are adequate to protect water quality. EPA has requested permit certification by the State pursuant to 40 CFR §124.53 and expects the draft permit will be certified.

XI. Public Comment Period, Public Hearing, and Procedures the 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 public comment period, to George Papadopoulos, U.S. EPA, Office of Ecosystem Protection**,** Industrial Permits Branch, Mailcode OEP 06-1, 5 Post Office Square, Suite 100, Boston, Massachusetts 02109-3912. 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 shall state the nature of the issues proposed to be raised in the hearing. A public meeting may be held if the criteria stated in 40 C.F.R. § 124.12 are satisfied. In reaching a final decision on the Draft Permit, the 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 any public hearings, if such hearings are held, the 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. Within 30 days following the notice of the Final Permit decision, any interested person may submit a petition for review of the permit to EPA’s Environmental Appeals Board consistent with 40 C.F.R. § 124.19.

XII. EPA and MassDEP Contacts

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 the EPA and MassDEP contacts below:

George Papadopoulos, Industrial Permits Branch
5 Post Office Square - Suite 100 - Mailcode OEP 06-1
Boston, MA 02109-3912
Telephone: (617) 918-1579 FAX: (617) 918-0579

Kathleen Keohane, Massachusetts Department of Environmental Protection
Division of Watershed Management, Surface Water Discharge Permit Program
627 Main Street, 2nd Floor, Worcester, Massachusetts 01608
Telephone: (508) 767-2856 FAX: (508) 791-4131

July 20, 2012
Date

Stephen S. Perkins, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency

Figure 1 – Facility Location

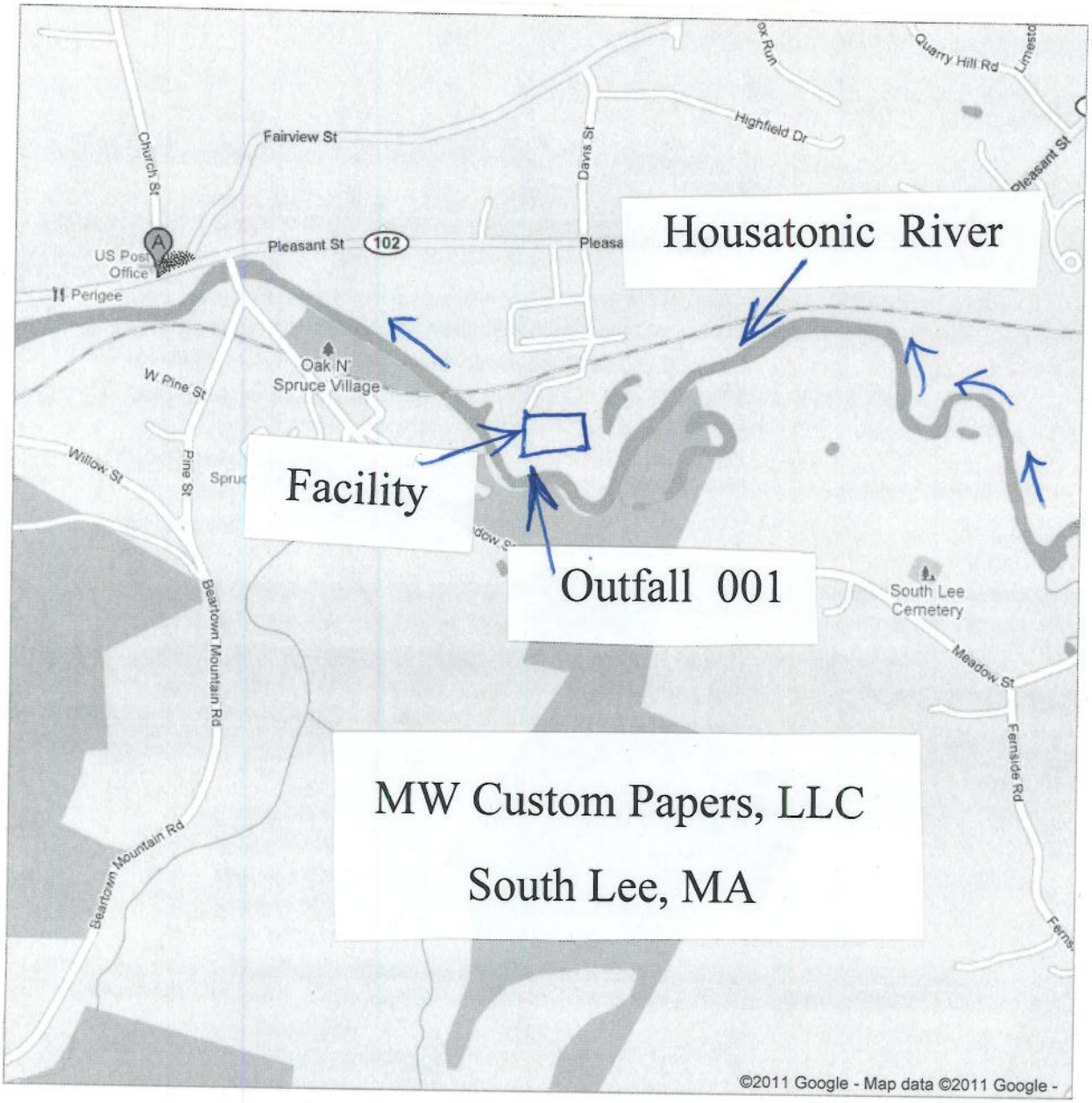

Figure 2

NPDES Permit Renewal
Typical Water Balance
MW Custom Papers, LLC
Laurel Mill

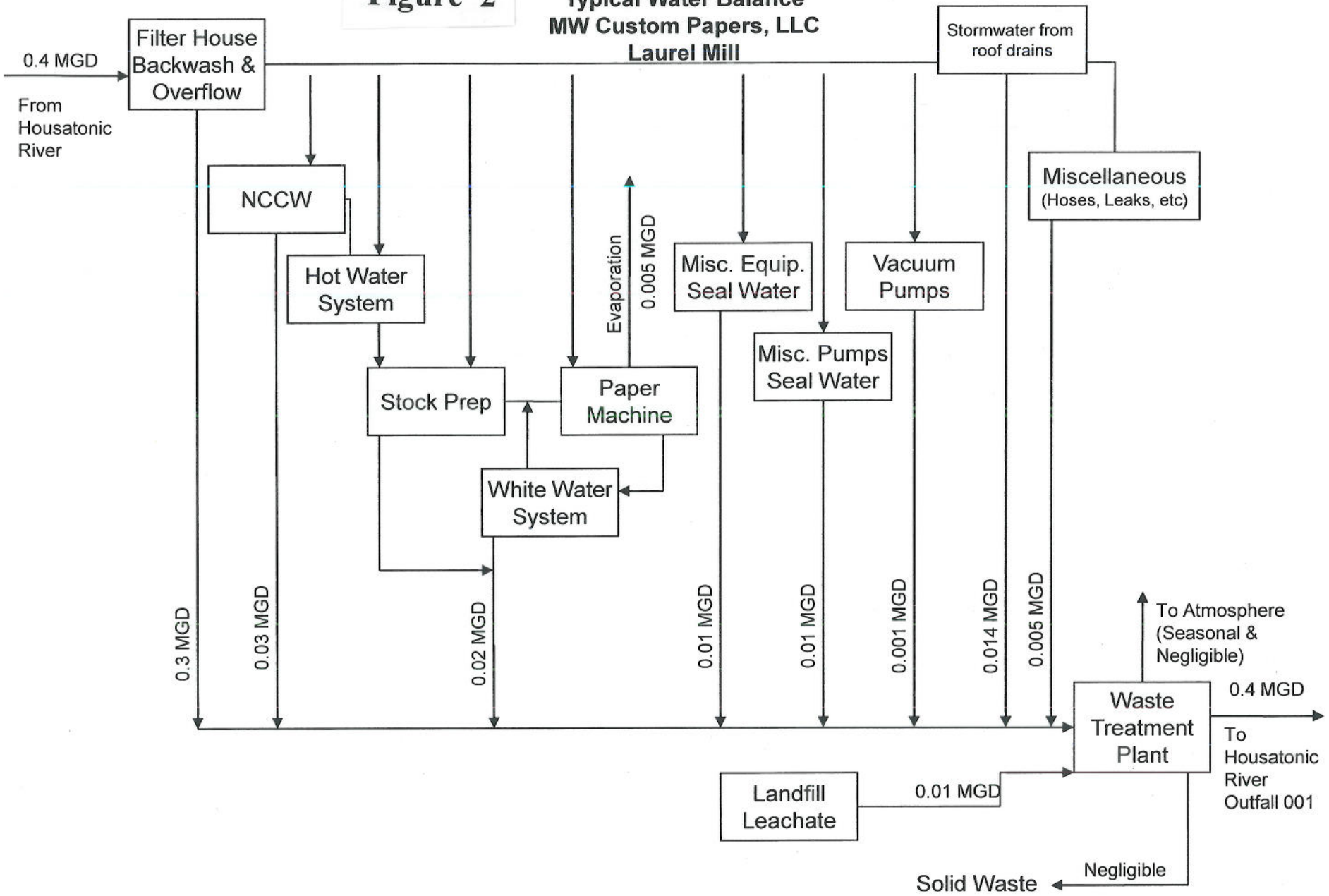

Table 1 - Discharge Monitoring Report Results – Outfall 001

Year: 2009 **MW Custom Papers (MA0001716)**

MONTH	Flow MGD	BOD #/day	TSS #/day	Temp, Effluent	Aluminum Total, mg/l	pH, s.u.	Production tons/day	TRC, mg/l
January	0.2/0.3	3/5	24/40	52 ^{o}F	0.63	8.1 – 8.2	0.01/0.06	0.06/0.07
February	0.2/0.4	2/3	13/25	56	1.1	8.0 – 8.2	0.01/0.13	0.06/0.09
March	0.2/0.3	3/5	17/25	50	1.6	7.9 – 8.1	0/0.04	0.01/0.04
April	0.2/0.2	2/2	9/15	53	0.8	7.3 – 8.2	0/0.02	0.01/0.02
May	0.3/0.6	3/3	8/20	63	1.7	7.2 – 8.0	0.01/0.05	0.02/0.04
June	0.2/0.5	3/4	9/20	69	1.4	7.9 – 8.0	0.2/0.2	0.02/0.06
July	0.3/1.1	2/3	19/63	73	2.4	7.7 – 8.0	0.02/0.5	0.05/0.1
August	0.2/0.3	2/3	17/25	74	1.3	7.0 – 7.8	0.2/0.2	0.02/0.04
September	0.3/0.5	3/7	48/214	68	4.14	7.6 – 7.7	0.25/0.25	0.02/0.04
October	0.2/0.3	3/5	25/132	58	5.8	7.4 – 7.7	0.06/0.25	0.04/0.07
November	0.2/0.3	NA	82/209	52	15.9	7.1 – 7.7	0.03/0.25	0.02/0.07
December	0.25/0.3	2.6/3	53/118	44	6.8	7.3 – 7.9	0.08/0.25	0.03/0.07

Table 1 Discharge Monitoring Report Results

Year: 2010

MONTH	Flow MGD	BOD #/day	TSS #/day	Temp, Effluent	Aluminum Total, mg/l	pH, s.u.	Production tons/day	TRC, mg/l
January	0.3/0.6	3/5	50/125	42 ^{o}F	11	7.1 – 7.3	0.01/0.25	0.06/0.2
February	0.5/0.7	4/5	50/115	39	1.3	7.1 – 7.5	0.03/0.25	0.01/0.02
March	0.6/1.3	8/15	-------	56	1.6	6.8 – 7.3	0.05/0.25	0.02/0.03
April	0.5/2.2	9/15	29/55	56	1.1	7.4 – 7.7	0.1/0.25	0.02/0.03
May	0.2/0.4	3/5	11/18	76	0.73	7.5 – 7.8	0.05/0.2	0.07/0.12
June	0.2/0.4	2/8	11/25	78	0.86	7.1 – 7.6	0.04/0.25	0.04/0.08
July	0.3/0.4	5/13	42/60	79	2.6	7.5 – 8.1	0.07/0.25	0.12/0.16
August	0.3/0.4	3/5	28/88	76	1.9	7.4 – 7.8	0.06/0.25	0.05/0.09
September	0.3/1.1	5/8	106/288	72	18	7.4 – 7.6	0.06/0.25	0.08/0.12
October	0.3/0.4	5/10	102/320	61	2.5	7.3 – 7.5	0.04/0.25	0.05/0.08
November	0.3/0.3	3/5	41/103	50	5.5	7.0 – 7.5	0.04/0.25	0.04/0.07
December	0.36/0.6	5/13	40/96	43	0.96	7.4 – 7.8	0.03/0.25	0.13/0.41

Table 1 Discharge Monitoring Report Results

Year: 2011

MONTH	Flow MGD	BOD #/day	TSS #/day	Temp, Effluent	Aluminum Total, mg/l	pH, s.u.	Production tons/day	TRC, mg/l
January	0.4/0.5	3/4	27/60	44 °F	0.94	7.7 – 8.3	0.08/0.25	0.04/0.1
February	0.4/0.5	5/10	39/107	44	0.71	7.7 – 8.0	0.03/0.25	0.07/0.2
March	0.4/0.9	5/8	20/30	47	0.56	7.5 – 8.0	0.06/0.25	0.02/0.04
April	0.4/0.5	7/20	31/83	57	0.63	6.9 – 7.7	0.06/0.25	0.03/0.05
May	0.3/0.4	5/10	35/73	74	4.8	7.0 – 7.5	0.08/0.25	0.02/0.05
June	0.3/0.5	3/5	23/48	72	2	7.6 – 8.3	0.1/0.25	ND/0.01
July	0.4/0.5	3/5	19/33	79	1.7	8.1 – 8.3	0.03/0.25	0.06/0.16
August	0.4/0.4	7/35	24/50	77	0.7	7.9 – 8.2	0.09/0.25	0.05/0.08
September	0.4/0.4	4/7	19/35	71	0.82	7.9 – 8.3	0.1/0.25	0.02/0.04
October	0.3/0.5	3/3	16/45	64	0.76	7.8 – 8.1	0.06/0.25	0.04/0.07
November	0.4/0.6	3/4	17/27	54	1.5	7.5 – 8.2	0.05/0.25	0.02/0.04
December	0.31/0.4	4/8	18/33	49	2.1	7.3 – 8.1	0.03/0.25	ND/ND

Table 1 Discharge Monitoring Report Results

Year: 2009 **Page 4**

MONTH	Nitrate N, mg/l	Nitrite N, mg/l	TKN, mg/l	NH3 mg/l	Phosphorus, Total, mg/l	WET-LC50,%	WET-NOEC,%
January	2.9	ND	ND	ND	0.03/0.1	100	100
February	1.8	ND	ND	ND	0.11/0.18	--------	--------
March	4.35	ND	ND	ND	0.03/0.1	--------	--------
April	1.8	ND	ND	ND	0.08/0.16	100	100
May	.99	ND	ND	ND	0.03/0.11	--------	--------
June	1.1	ND	ND	ND	ND	--------	--------
July	1.39	ND	.6	ND	0.04/0.14	100	100
August	1.91	ND	ND	ND	0.11/0.43	--------	--------
September	2.1	ND	.9	ND	0.07/0.14	--------	--------
October	1.17	ND	1.7	ND	0.07/0.15	100	100
November	2.1	ND	1.6	ND	0.15/0.36	--------	--------
December	1.6	ND	1	ND	0.05/0.16	--------	--------

Table 1 Discharge Monitoring Report Results

Year: 2010 **Page 5**

MONTH	Nitrate N, mg/l	Nitrite N, mg/l	TKN, mg/l	NH3 mg/l	Phosphorus, Total, mg/l	WET-LC50,%	WET-NOEC,%
January	.89	ND	1.4	.15	0.07/0.28	100	100
February	1	ND	1.05	.17	ND	--------	--------
March	.92	ND	.8	.36	ND	--------	--------
April	.71	ND	1	.71	0.03/0.11	100	100
May	.72	ND	.7	.15	ND	--------	--------
June	.5	ND	.7	ND	ND	--------	--------
July	1.27	ND	.5	ND	0.15/0.35	100	100
August	1.6	ND	.5	ND	0.05/0.15	--------	--------
September	ND	ND	2.3	ND	0.33/0.56	--------	--------
October	3.7	ND	1.2	ND	0.14/0.21	100	50
November	1.1	ND	1.34	ND	0.15/0.26	--------	--------
December	1.7	ND	1.3	.25	ND	--------	--------

Table 1 Discharge Monitoring Report Results

Year: 2011 **Page 6**

MONTH	Nitrate N, mg/l	Nitrite N, mg/l	TKN, mg/l	NH3 mg/l	Phosphorus, Total, mg/l	WET-LC50,%	WET-NOEC,%
January	.93	ND	.6	.13	ND	100	100
February	1.2	ND	.7	.11	ND	--------	--------
March	1.7	ND	.8	.23	ND	--------	--------
April	.86	.01	ND	.29	ND	100	50
May	.6	.01	1.2	.3	0.07/0.13	--------	--------
June	.77	ND	1.5	ND	0.09/0.16	--------	--------
July	.65	ND	ND	ND	0.07/0.2	100	100
August	1.1	ND	ND	ND	0.07/0.08	--------	--------
September	1.1	.01	ND	ND	0.04/0.08	--------	--------
October	1.9	ND	ND	ND	ND	100	25
November	.85	.01	1.1	.2	0.04/0.06	--------	--------
December	.73	.01	1	.31	0.06/0.12	--------	--------

Table 2 - Outfall 001 DMR Data Summary Data [1]

MW Custom Papers, LLC - MA0001716

Parameter	Monthly Average [2]	Maximum Values [3]	Permit Violations [4]
Flow, MGD	Range: 0.2 - 2.2		---
BOD_5, lbs/day	3.9	35, 20	0
TSS, lbs/day	32	320, 288	0
pH, standard units	Range: 6.8 - 8.3		0
Aluminum, Total, mg/l	3.0	18, 15.9	---
Total Residual Chlorine, mg/l	0.04	0.41, 0.20	---
Temperature, effluent, ^oF	Range: 42 - 79		0
Total Phosphorus, mg/l	0.06	0.56, 0.43	---
Ammonia Nitrogen, mg/l	0.09	0.71, 0.36	---
Nitrogen, Total Kjeldahl, mg/l	0.71	2.3, 1.7	---
Nitrite Nitrogen, mg/l	0.0013	0.01, 0.01	---
Nitrate Nitrogen, mg/l	1.4	4.3, 3.7	---
Production, tons/day	0.05	0.5, 0.25	---
LC50, daphnid,%	100	100 [5]	0
NOEL, daphnid, %	92	50, 50 [5]	---

1. Discharge Monitoring Report data for the period of January 2009 to December 2011.

2. This value is the average of the monthly averages during the reporting period.

3. These are the maximum values during the reporting period.

4. Value provided only if parameter was limited in the permit.

5. These are the low values during the reporting period.

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
COMMONWEALTH OF MASSACHUSETTS
1 WINTER STREET
BOSTON, MASSACHUSETTS 02108

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF ECOSYSTEM PROTECTION
REGION I
BOSTON, MASSACHUSETTS 02109

JOINT PUBLIC NOTICE OF A DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE INTO THE WATERS OF THE UNITED STATES UNDER SECTION 301 AND 402 OF THE CLEAN WATER ACT (THE "ACT"), AS AMENDED, AND REQUEST FOR STATE CERTIFICATION UNDER SECTION 401 OF THE ACT.

DATE OF NOTICE: August 8, 2012

PERMIT NUMBER: **MA0001716**

PUBLIC NOTICE NUMBER: MA-016-12

NAME AND MAILING ADDRESS OF PERMITTEE:

MeadWestvaco Corporation
501 South 5th St.
Richmond, VA 23219-0501

NAME AND ADDRESS OF THE FACILITY WHERE DISCHARGE OCCURS:

MW Custom Papers, LLC
Pleasant Street
South Lee, MA 01260

RECEIVING WATER: **Housatonic River (Segment MA21-19)**

PREPARATION OF THE DRAFT PERMIT:

The U.S. Environmental Protection Agency, (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) have cooperated in the development of a permit for the above identified facility. The effluent limits and permit conditions imposed have been drafted to assure that State Water Quality Standards and provisions of the Clean Water Act will be met. EPA has formally 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:

A fact sheet or a statement of basis (describing the type of facility; type and quantities of wastes; a brief summary of the basis for the draft permit conditions; and significant factual, legal and policy questions considered in preparing this draft permit) and the draft permit may be obtained at no cost at: http://www.epa.gov/region1/npdes/draft_permits_listing_ma.html or by writing or calling EPA's contact person named below:

George Papadopoulos, US EPA
5 Post Office Square
Suite 100 (OEP 06-1)
Boston, MA 02109-3912
Telephone: (617) 918-1579

The administrative record containing all documents relating to this draft permit is on file and 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 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 **September 6, 2012**, to the U.S. EPA, George Papadopoulos, 5 Post Office Square, Suite 100, Mailcode OEP 06-1, Boston, Massachusetts 02109-3912. Any person, prior to such date, may submit a request in writing to EPA and the MassDEP for a public hearing to consider this draft permit. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least forty five days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. 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 AND APPEALS:

Following the close of the comment period, and after a public hearing, if such hearing is held, 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. Within 30 days following the notice of the final permit decision any interested person may submit petition to the Environmental Appeals Board to reconsider or contest the final decision.

David Ferris, Director
MASACHUSETTS WASTE WATER PROGRAM
MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION

Stephen S. Perkins, Director
OFFICE OF ECOSYSTEM PROTECTION
ENVIRONMENTAL PROTECTION AGENCY