

**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),

**Hollingsworth & Vose Company
112 Washington Street
East Walpole, MA 02032**

Is authorized to discharge from the facility located at

**Hollingsworth & Vose Company
219 Townsend Road
West Groton, MA 01472**

To receiving water named

**Squannacook River (MA81-19)
Hydrological Basin Code No. 0107004**

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit will become effective on the first day of the calendar month immediately following sixty days after signature.

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

This permit supersedes the permit issued on January 12, 2004 and modified March 7, 2005.

This permit consists of 7 pages in Part I, including effluent limitations and monitoring requirements, Attachment A: “Freshwater Chronic and Modified Acute Toxicity Test Procedure and Protocol” and 25 pages in Part II Standard Conditions.

Signed this 31st day of March, 2011

/S/SIGNATURE ON FILE

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 of the permit, the permittee is authorized to discharge treated stormwater, treated laboratory process water, and treated paper production process water, consisting of backwash water from multimedia filters, wash water from pulpers, blowdown condensate from boilers, and excess water from paper machines savealls, from Outfall 001 to the Squannacook River. Such discharge shall be limited and monitored by the permittee as specified below.

Effluent Characteristic		Effluent Limit		Monitoring Requirement ¹	
Parameter	Units	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Flow ²	MGD	Report	Report	Continuous ³	Recorder
Biochemical Oxygen Demand (BOD ₅)	lbs/day	240	480	1/Week	Composite ⁴
Total Suspended Solids (TSS)	lbs/day	570	1140	1/Week	Composite ⁴
pH ⁵	SU	6.0-8.3 (See I.A.3 Page 4)		1/Day	Grab
Zinc, Total	ug/l	152	152	1/Month ¹⁰	Composite ⁴
Whole Effluent Toxicity (WET)^{8, 9, 11}	%	Acute LC ₅₀ ⁶ ≥ 100% Chronic NOEC ⁷ ≥ 60%		4/Year	Composite ⁴
Hardness ⁸	mg/l	Report		4/Year	Composite ⁴
Total Residual Chlorine ⁸	mg/l	Report		4/Year	Grab
Alkalinity ⁸	mg/l	Report		4/Year	Composite ⁴
pH ⁸	s.u.	Report		4/Year	Grab
Specific Conductance ⁸	µmhos/cm	Report		4/Year	Composite ⁴
Total Solids ⁸	mg/l	Report		4/Year	Composite ⁴
Total Dissolved Solids ⁸	mg/l	Report		4/Year	Composite ⁴
Ammonia ⁸	mg/l	Report		4/Year	Composite ⁴
Total Organic Carbon ⁸	mg/l	Report		4/Year	Composite ⁴
Total Cadmium ⁸	mg/l	Report		4/Year	Composite ⁴
Total Lead ⁸	mg/l	Report		4/Year	Composite ⁴
Total Copper ⁸	mg/l	Report		4/Year	Composite ⁴
Total Zinc ⁸	mg/l	Report		4/Year ¹⁰	Composite ⁴
Total Nickel ⁸	mg/l	Report		4/Year	Composite ⁴
Total Aluminum ^{8,12}	mg/l	Report		4/Year	Composite ⁴

Footnotes on Page 3

Footnotes:

1. The final effluent from Outfall 001 shall be sampled year-round for all parameters, at the point of discharge from the outlet of the final clarifier and prior to mixing with the river or any other discharges from the paper mill. Samples taken in compliance with the monitoring requirements specified above shall be representative of all waste streams and taken prior to entering the receiving water. All samples shall be tested using the analytical methods found in 40 CFR §136 or the alternative methods approved by EPA in accordance with the procedures in 40 CFR §136.
2. Report maximum and minimum daily rates and total flow for each operating date.
3. The flow shall be continuously measured and recorded using a flow meter and totalizer.
4. A twenty-four (24) hour composite sample will consist of at least twenty-four grab samples taken during one consecutive twenty-four (24) hour period.
5. Required for State Certification.
6. The LC_{50} is the concentration of effluent which causes mortality to 50% of the test organisms.
7. C-NOEC (chronic – no observed effect concentration) is defined as the highest concentration of toxicant or effluent to which organisms are exposed in a life cycle or partial life cycle test which causes no adverse effect on growth, survival, or reproduction at a specific time of observation as determined from hypothesis testing where the test results exhibit a linear dose response relationship. Where the test results do not exhibit a linear dose-response relationship, however, the permittee must report the lowest concentration where there is no observable effect. The 60% or greater limit is defined as a sample which is composed of 60% or greater effluent, the remainder of which is dilution water.
8. The permittee shall conduct chronic and modified acute toxicity tests four times per year. The chronic test may be used to calculate the acute LC_{50} at the forty-eight (48) hour exposure interval. The permittee shall only test the daphnid, *Ceriodaphnia dubia*. Toxicity test samples shall be collected during the second week of the months of March, June, September and December. The test results shall be submitted by the last day of the month following the completion of the test. Quarterly results are each to be reported April 30, July 31, October 30 and January 31. The tests must be performed in accordance with test procedures and protocols specified in **Attachment A** of this permit. After submitting one-year and a minimum of four consecutive sets of WET test results, all of which demonstrate compliance with WET permit limits, the permittee may request a reduction in the WET testing requirements. The permittee is required to continue testing at the frequency specified in the permit until notice is received by certified mail from EPA that the WET testing requirements have been changed.
9. 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 Section IV. DILUTION WATER of **Attachment A** in order to obtain permission to use alternate dilution water. In lieu of individual approvals for alternate dilution water required in **Attachment A**, EPA has developed a Self-Implementing Alternative Dilution Water Guidance document entitled, “Guidance Document,” which may be used to obtain automatic approval of alternate dilution water, including the appropriate species for use with that water. If this Guidance Document is revoked, the permittee shall revert to obtaining approval as outlined in **Attachment A**. The “Guidance Document” is included in Attachment G of

the *NPDES Permit Program Instructions for the Discharge Monitoring (DMR) Forms* available at <http://www.epa.gov/region1/enforcementandassistance/dmr.html> and is not intended as a direct attachment to this permit.

10. WET monitoring may be used for metal monitoring.
11. Whole Effluent Toxicity Testing (WET) testing will be conducted with the effluent and the receiving water, as described in Part IV “Dilution Water” of the Freshwater Chronic and Modified Acute Toxicity Test Procedure and Protocol. A map of the sampling location from which dilution water for WET testing is drawn is required.
12. Report aluminum concentration at a weekly frequency when aluminum chemical addition is used. During weeks when no tests are performed, enter “NODI 9” on the monthly discharge monitoring reports (DMRs).

Part I.A. (continued)

2. The discharges either individually or in combination shall not cause a violation of State Water Quality Standards of the receiving waters.
3. The pH of the effluent shall not be less than 6.0 SU or greater than 8.3 SU at any time unless these values are exceeded as a result of natural causes.
4. The discharge shall not cause objectionable discoloration of the receiving waters.
5. The discharge shall not contain a visible oil sheen, foam or floating solids at any time.
6. The results of sampling for any parameter above its required frequency must also be reported.
7. The discharge shall not contain materials in concentrations or combinations which are hazardous or toxic to human health and aquatic life of the receiving surface waters or which would impair the uses designated by its classification.
8. The discharge shall not impart color, taste, turbidity, toxicity, radioactivity or other properties which cause those waters to be unsuitable for the designated uses and characteristics ascribed to their use.
9. Notwithstanding specific conditions of this permit, the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.
10. EPA may modify this permit in accordance with EPA regulations in 40 Code of Federal Regulations (CFR) Parts 122.62 and 122.63 to incorporate more stringent effluent limitations, increase the frequency of analyses, or impose additional sampling and analytical requirements.
11. All existing manufacturing, commercial, mining and silvicultural dischargers must notify the Director as soon as they know or have reason to believe (40 CFR §122.42):
 - a. That any activity has occurred or will occur which would result in the discharge, on a routine basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
 - i. One hundred micrograms per liter (100 ug/l);

- ii. 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 one milligram per liter (1.00 mg/l) for antimony;
 - iii. 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
 - iv. 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 would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
- i. Five hundred micrograms per liter (500 µg/l);
 - ii. One milligram per liter (1.00 mg/l) for antimony;
 - iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7).
 - iv. 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.

12. 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.

13. Numerical Effluent Limitations for Toxicants

EPA or MassDEP may use the results of the toxicity tests and 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 §122.

B. UNAUTHORIZED DISCHARGES

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

C. REOPENER CLAUSES

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:

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

D. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report Form(s) postmarked no later than the 15th day of the month following the effective date of the permit. Signed and dated originals of these, and all other reports required herein, shall be submitted to EPA at the following address:

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

Signed and dated Discharge Monitoring Report Form(s) and all other reports required by this permit shall also be submitted to the State at the following addresses:

Massachusetts Department of Environmental Protection
Central Regional Office
Bureau of Waste Prevention
627 Main Street
Worcester, MA 01608

And

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

E. STATE PERMIT CONDITIONS

1. This discharge permit is issued jointly by the EPA and the MassDEP under Federal and state law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Commissioner of the MassDEP pursuant to M.G.L. Chapters 21, 43.

2. Each Agency shall have the independent right to enforce the terms and conditions of this permit. Any modification, suspension or revocation of this permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of this permit

as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this permit is declared, invalid, illegal or otherwise issued in violation of State law such permit shall remain in full force and effect under Federal law as a National Pollutant Discharge Elimination System (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.