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"),

Wausau Paper Printing & Writing, LLC

is authorized to discharge from a facility located at

10 Mechanic Street
Groveton, New Hampshire 03582

to receiving waters named

Connecticut River and Upper Ammonoosuc River (Hydrologic Unit Code 01080101)

in accordance with effluent limitations, monitoring requirements and other conditions set forth in the permit issued on September 14, 2005 except as set forth herein in bold italics and listed as follows:

Pages 2, 4, 5, 6, and 12 are changed to reflect the following:

> The monitoring and reporting requirements for turbidity in Parts I.A.1 and A.3 have been revised, a new turbidity sampling frequency reopener condition has been added as Part I.G.3, and a new Bench Scale Turbidity Testing Procedure has been added as Attachment B. The effluent limitations for flow in Parts I.A.3 and conditions in I.G have been revised and the TRC effluent limitations and monitoring requirements in Part I.A.3 have been eliminated.

This permit action modifies the permit issued on September 14, 2005, which became effective on May 18, 2006, with certain contested conditions stayed pending appeal. This permit modification only affects the permit conditions identified in the preceding paragraph.

This permit modification shall become effective on the first day of the calendar month immediately following 60 days after signature.

This permit modification does not affect the expiration date of the permit. The original permit stated, "This permit and the authorization to discharge expires at midnight, (5) five years from the effective date". The permit became effective on May 18, 2006. Therefore, the original permit and this permit modification expire at midnight, May 18, 2011.

Signed this 9th day of May, 2007

/S/ SIGNATURE ON FILE

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Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency (EPA)
Region I
Boston, Massachusetts

Part I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through the expiration date the permittee is authorized to discharge treated wastewater effluent from outfall serial number 017 (wastewater treatment plant) to the Connecticut River. This wastewater includes process wastewaters, non-contact cooling water, boiler blowdown, and the storm water that formerly discharged from Outfall 003. This discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	Discharge Limitations: Average Monthly	Discharge Limitations: Maximum Daily	Monitoring Requirements: Measurement Frequency	Monitoring Requirements: Sample Type
Flow; mgd [1]			Continuous	Recorder
Total Phosphorous; mg/L			1/Week	24-Hour Composite
pH Range; Standard Units [2]		6.5 to 8.0	Continuous	Recorder
Whole Effluent Toxicity				
LC50 [3]; Percent	See Part I.A.4			24-Hour Composite
C-NOEC [4];Percent	See Part I.A.4			24-Hour Composite
Escherichia coli [5]; Colonies per 100 ml	100	8.5	1/Week	Grab
Benzo(b)Fluoranthene [6]; ug/L	Report	Report	4/Year	Grab
Ammonia-Nitrogen as N; mg/L			1/Month	24-Hour Composite
Nitrite plus Nitrate Nitrogen; mg/L			1/Month	24-Hour Composite
Total Kjeldahl Nitrogen; mg/L			1/Month	24-Hour Composite
Aluminum; mg/L			1/Month	Grab
During the period November 1 - April 30				
BOD; lbs/day	3,400		4/Year	24-Hour Composite
TSS; lbs/day	4,470		4/Year	24-Hour Composite
Temperature; ^{0}F		7.5	Continuous	Recorder
During the period May 1 - October 31		2.0		
BOD; lbs/day	72	5,100	78	24-Hour Composite
TSS; lbs/day	2,750	6,830		24-Hour Composite
Temperature; ^{0}F	3,610	Report	Continuous	Recorder
		Report		
		Report		
During the period June 1 - October 31				
Turbidity (Effluent)[7, 14]; NTU	90	4,125	97	
Turbidity, Upstream [8, 14]; NTU		5,520		
		Report	3/Week	***2/Month*** ***Grab***
		Report	3/Week	***2/Month*** ***Grab***
			3/Week	
			3/Week	
		Report		
		Report		
		Report		

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Discharge from the mixing chamber to the outlet pipe leading to the Connecticut River, unless otherwise specified.

See Pages 5 and 6 for an Explanation of the Superscripts.

Part I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

3. During the period beginning on the effective date and lasting through the expiration date the permittee is authorized to discharge from outfall serial number 018 (sand filter backwash water) to the Upper Ammonoosuc River. These discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Maximum Daily		Type
Flow; mgd [1]	***1.5***	Report	Continuous	Measurement
TSS; mg/L	Report	Report	2/Week	Grab
pH Range; Standard Units [2]	6.5 to 8.0		Recorder	Grab
Aluminum; mg/L		Report	1/Month	Grab
Polymer Treated Filter Backwash Study	See Part I.B.			
During the period June 1 - October 31			Frequency	
Turbidity (Effluent)[12, 14]; NTU	***Report***	***Report***	***2/Month***	***Grab*** [15]
Turbidity, Upstream [13, 14]; NTU	***Report***	***Report***	***2/Month***	***Composite Grab***

Samples taken in compliance with the monitoring requirements specified above shall be taken at a location that provides a representative analysis of the discharge, unless otherwise specified.

See Pages 5 and 6 for an Explanation of the Superscripts.

EXPLANATION OF SUPERSCRIPTS TO PARTS I.A.1, A.2, AND A.3 on pages 2, 3 AND 4:

1. The effluent flow shall be continuously measured and recorded using a flow meter and totalizer.

2. State of New Hampshire certification Requirement; see Part I.E.1.a.

3. Acute toxicity tests shall follow the protocols in Attachment A. LC50 is the concentration of wastewater (effluent) causing mortality to 50 percent of the test organisms. The "100 percent" limit is defined as a sample which is composed of 100 percent effluent (See A.1 and A.3 on Page 2 and 4 of Part I and Attachment A of Part I). The limit is considered to be a maximum daily limit.

4. Chronic toxicity tests shall follow the protocols in Attachment A. C-NOEC is defined as the chronic no observed effect concentration which is the highest concentration of 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 where the test results (growth, survival and/or reproduction) exhibit a linear dose-response relationship. The "5.6 percent or greater" limit is defined as a sample which is composed of 5.6 percent effluent, the remainder being dilution water. (See A.1 and A.5 on Page 2 and 6 of Part I and Attachment A of test results do not exhibit a linear dose-response relationship, report the lowest effluent concentration where there is no observable effect.

5. The effluent from Outfall 017 shall be analyzed for Escherichia coli during the first 12 month period this permit is effective. The average monthly value for Escherichia coli shall be determined by calculating the geometric mean and the result reported. Escherichia coli shall be tested using test methods 9221-B.1 and 9221-F found in Standard Methods for the Examination of Water and Wastewater, 19th or subsequent Edition(s) or test method 1103.1 found in Test Methods for Escherichia coli and Enterococci in Water by the Membrane Filter Procedure, EPA /600/4-85/076 as amended by test method 9213 D.3. found in Standard Methods for the Examination of Water and Wastewater, 19th or subsequent Edition(s) as approved in 40 CFR 136.

6. The effluent from Outfall 017 shall be analyzed for Benzo(b)Fluoranthene using 40 CFR §136, Appendix A, Method 625 during the first 12 month period this permit is effective. The reportable concentration is based on the minimum level (ML) which is defined as 10 ug/L for this permit. This ML value may be reduced using a minor permit modification as more sensitive test methods are approved by EPA and the State. Any value below 10 ug/L shall be reported as NON-DETECT.

7. ***The effluent turbidity measurements shall be taken within the same 24-hour period as the Connecticut River turbidity measurements to obtain concurrent turbidity measurements.***

8. ***The permittee shall measure the turbidity of the Connecticut River at a sampling site located upstream of the facility and selected to represent the naturally occurring conditions in the Connecticut River prior to mixing with any discharge from the facility. Within 30 days of the effective date of the final permit modification, the permittee shall submit in writing the location of the upstream sampling site to the EPA and New Hampshire Department of Environmental Services (NHDES) for review and approval. Turbidity sampling shall commence at the selected upstream sampling site and shall continue unless written notice providing a different sampling site is received from EPA or the NHDES.***

9. The pH of the discharge shall be in the range of 6.5 to 8.0 Standard Units (S.U.) unless the upstream ambient pH in the Upper Ammonoosuc River is outside of this

range and is not altered by the facilities discharge or activities. If the permittee's discharge pH is lower than 6.5 S.U. the permittee may demonstrate compliance by showing that the discharge pH was either: (a) higher than, or (b) no more than 0.5 S.U. lower than the ambient upstream river water pH. If the permittee's discharge pH is higher than 8.0 S.U. the permittee may demonstrate compliance by showing that the discharge pH is either: (a) lower than, or (b) no more than 0.5 S.U. higher than the upstream river water pH. Sampling of upstream river water pH necessary to demonstrate compliance must be collected on the same day as the discharge pH. State of New Hampshire certification Requirement.

10. Discharge Event is the total number of days a discharge occurs during the month. The No Discharge Indicator Code (NODI) is entered on the monthly Discharge Monitoring Report (DMR) when there is no discharge.

11. During the first 12 month period this permit is effective, the measurement frequency is 2/Week. After this 12 month period, the measurement frequency is 2/Month.

12. The effluent turbidity measurements shall be taken within the same 24-hour period as the Upper Ammonoosuc River turbidity measurements to obtain concurrent turbidity measurements. If there is no discharge from Outfall 018 during the month, the upstream turbidity sampling in the Upper Ammonoosuc River is not required for that month.

13. The permittee shall measure the turbidity of the Upper Ammonoosuc River at a sampling site located upstream of the facility and selected to represent the naturally occurring conditions in the Upper Ammonoosuc River prior to mixing with any discharge from the facility. Within 30 days of the effective date of the final permit modification, the permittee shall submit in writing the location of the upstream sampling site to the EPA and NHDES for review and approval. Turbidity sampling shall commence at the selected upstream sampling site and shall continue unless written notice providing a different sampling site is received from EPA or the NHDES.

14. The permittee shall conduct turbidity testing of the discharges from Outfalls 017 and 018 following the procedures in Attachment B (Bench Scale Turbidity Testing Procedure) at the 2/Month measurement frequency. The turbidity testing results shall be reported as an attachment to the monthly DMR. If the discharge turbidity value for any Outfall effluent sample is less than 10 NTU, further turbidity testing (Bench Scale Turbidity Testing Procedure) for this particular Outfall sample is not required. If a discharge from Outfall 018 does not occur during the month, testing with the Bench Scale Turbidity Testing Procedure is not required for that month.

15. ***The composite sample is obtained throughout a representative backwash event of one sand filter bed. The composite sample consists of a series of grab samples collected during the sand filter bed backwash event.***

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Continued)

4. The permittee shall conduct acute and chronic toxicity tests on effluent samples from Outfall 017 using two species, Daphnid (Ceriodaphnia dubia) and Fathead Minnow (Pimephales promelas) following the protocol in **Attachment A** (Freshwater Chronic Toxicity Test Procedure and Protocol dated December 1995). This test protocol includes the procedure to calculate an LC50 at the end of 48 hours for the two species.

incorporate revised effluent limitations for the oxygen demanding pollutants, and to include additional limitations based on the Total Maximum Daily Load (TMDL) study or other pollution control or abatement measures developed by the NHDES or EPA concerning the Dissolved Oxygen and Aluminum water quality criteria exceedances in the Moore Reservoir impoundment

3. The permittee may submit a written request to the EPA requesting a permit modification to reduce the turbidity sampling frequency, or to eliminate the turbidity sampling requirement entirely, after completion of a minimum of 20 sampling events. A turbidity sampling event consists of the complete set of effluent and upstream receiving water sampling results, and bench scale testing results.

4. The results from this TMDL study or the other identified actions, and the pollutant specific monitoring data are considered "New Information" and the permit may be modified as provided in 40 Code of Federal Regulations (CFR) §122.62(a)(2).

ATTACHMENT B

Bench Scale Turbidity Testing Procedure

I. General Requirements

The permittee shall conduct turbidity testing of the discharges from Outfalls 017 and 018 in accordance with the Bench Scale Testing Procedure described below. The turbidity test results shall be reported as described in Section IV.

II. Bench Scale Turbidity Testing Procedure For Outfall 017

1. The effluent and the upstream Connecticut River samples are collected as specified in Part I.A.1 of the permit. These samples are also used to conduct the Bench Scale Turbidity Testing.

2. Combine the Outfall 017 effluent sample and the upstream Connecticut River sample to obtain the 1.0 dilution value sample. The volumes of the Connecticut River and effluent to prepare the sample for the Bench Scale Turbidity Procedure are calculated using the following equation:

   River Flow = 17.7 (Dilution Value) (Effluent Flow) - Effluent Flow

   where:
   Dilution Value is 1.0.
   Effluent Flow is the predetermined effluent volume such as 20 milliliters.
   River Flow is the sample volume of the Connecticut River to combine with the effluent sample for the turbidity analysis.

   The volumes of the Connecticut River and effluent to prepare the sample are provided in Table 1.

Table 1. Bench Scale Turbidity Testing Sample Volumes for Outfall 017

Dilution Value	Volume of Outfall 017 Effluent Sample (ml)	Volume of Connecticut River Sample (ml)
1.0	20	334

3. Measure and record the turbidity in Nephelometric Turbidity Units (NTUs) for the 1.0 dilution value.

III. Bench Scale Turbidity Testing Procedure For Outfall 018

1. The effluent and the upstream Upper Ammonoosuc River samples are collected as specified in Part I.A.3 of the permit. These samples are also used to conduct the Bench Scale Turbidity Testing.

2. *Combine the Outfall 018 effluent sample and the upstream Upper Ammonoosuc River sample to obtain the 1.0 dilution value sample. The volumes of the Upper Ammonoosuc River and effluent to prepare the sample for the Bench Scale Turbidity Procedure are calculated using the following equation:*

River Flow = 19.1 (Dilution Value) (Effluent Flow)

where:
Dilution Value is 1.0.
Effluent Flow is the predetermined effluent volume such as 20 milliliters.
River Flow is the sample volume of the Upper Ammonoosuc River to combine with the effluent sample for the turbidity analysis.

The volumes of the Upper Ammonoosuc River and effluent to prepare the samples are provided in Table 2.

Table 2. Bench Scale Turbidity Testing Sample Volumes for Outfall 018

Dilution Value	Volume of Outfall 018 Effluent Sample (ml)	Volume of Upper Ammonoosuc River Sample (ml)
1.0	10	191

3. *Measure and record the turbidity in Nephelometric Turbidity Units (NTUs) for the 1.0 dilution value.*

IV. Bench Scale Turbidity Test Reporting

The turbidity test results are reported for Outfalls 017 and 018 and will include the following:

- *Description of the sample collection process and the site description.*
- *Any observations of test or site conditions affecting the test results.*
- *Report the turbidity readings as follows:*

Turbidity Range, NTU	Report to the Nearest NTU
0-1.0	0.05
1-10	0.1
10-40	1
40-100	5
100-400	10
400-1000	50
>1000	100

- Tabulation of the turbidity results with the dilution value indicated and the results provided for each set of outfall and receiving water samples collected during the month.