

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"),

Monadnock Paper Mills, Inc.

is authorized to discharge from a facility located at

117 Antrim Road  
Bennington, New Hampshire 03442

to receiving water named

Contoocook River (Hydrologic Code; 01070003)

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

This permit shall become effective ... (see \* below).

This permit and the authorization to discharge expire at midnight  
... (see \*\* below).

This permit supersedes the permit issued on October 23, 2000.

This permit consists of Part I, (12-pages), including effluent  
limitations and monitoring requirements; Attachment A (9-pages),  
WET testing requirements; and Part II (25-pages), including General  
Conditions and Definitions.

Signed this            day of

Stephen S. Perkins, Director  
Office of Ecosystem Protection  
U.S. Environmental Protection Agency  
New England Region  
Boston, Massachusetts

\* The permit shall become effective on the first day of the calendar month  
immediately following 60 days after signature.

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

## PART I.

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through expiration date, the Permittee is authorized to discharge treated wastewater (process water from paper manufacturing process) from Outfall Serial Number 001 into the Contoocook River. Such discharges shall be limited and monitored by the Permittee as specified below. Samples taken in compliance with the monitoring requirements specified below shall be taken at Outfall 001 after the treatment system but prior to discharge into the Contoocook River at a point that provides a representative analysis of the effluent.

| Effluent Characteristic                             | Discharge Limitations                |               | Monitoring Requirements |                       |
|---|--------------------------------------|---------------|-------------------------|-----------------------|
|   | Average Monthly                      | Maximum Daily | Measurement Frequency   | Sample Type           |
| Flow, MGD   | 1.0                                  | 1.3           | Continuous              | Recorder <sup>1</sup> |
| BOD <sub>5</sub> , lbs/day<br>December 1 - March 31 | 400 lbs/day                          | 500 lbs/day   | 1/Week                  | Grab                  |
| BOD <sub>5</sub> , lbs/day<br>April 1 - November 30 | 300 lbs/day                          | 400 lbs/day   | 1/Week                  | Grab                  |
| TSS <sup>2</sup> , lb/day                           | 300 lbs/day                          | 400 lbs/day   | 1/Week                  | Grab                  |
| TSS <sup>3</sup> , lb/day                           | 315 lbs/day                          | 420 lbs/day   | 1/Week                  | Grab                  |
| Total Recoverable Aluminum, mg/l                    | 0.83                                 | 5.5           | 2/Month                 | Grab                  |
| Total Phosphorous, mg/l                             | Report                               | Report        | 2/Month                 | Grab                  |
| pH <sup>4,5</sup>                                   | Range: 6.5 - 8.0 (See PART I.D.1.a.) |               | 1/Day                   | Grab                  |

(Note: See page 5 - 7 for explanation of superscripts.)

## PART I. (Continued)

| Effluent Characteristic                           | Discharge Limitations | Monitoring Requirement |                   |
|---|-----------------------|------------------------|-------------------|
|   |                       | Measurement Frequency  | Sample Type       |
| Whole Effluent Toxicity                           |                       |                        |                   |
| LC50 <sup>6,7,8</sup> ; in percent                | ≥100%                 | 2/Year                 | 24-Hour Composite |
| C-NOEC <sup>7,8,9</sup> ; in percent              | Report                | 2/Year                 | 24-Hour Composite |
| Ammonia Nitrogen as Nitrogen <sup>10</sup> ; mg/l | Report                | 2/Year                 | 24-Hour Composite |
| Hardness <sup>10</sup> ; mg/l                     | Report                | 2/Year                 | 24-Hour Composite |
| Total Recoverable Aluminum <sup>10</sup> ; mg/l   | Report                | 2/Year                 | 24-Hour Composite |
| Total Recoverable Cadmium <sup>10</sup> ; mg/l    | Report                | 2/Year                 | 24-Hour Composite |
| Total Recoverable Chromium <sup>10</sup> ; mg/l   | Report                | 2/Year                 | 24-Hour Composite |
| Total Recoverable Copper <sup>10</sup> ; mg/l     | Report                | 2/Year                 | 24-Hour Composite |
| Total Recoverable Nickel <sup>10</sup> ; mg/l     | Report                | 2/Year                 | 24-Hour Composite |
| Total Recoverable Lead <sup>10</sup> ; mg/l       | Report                | 2/Year                 | 24-Hour Composite |
| Total Recoverable Zinc <sup>10</sup> ; mg/l       | Report                | 2/Year                 | 24-Hour Composite |

(Note: See page 5 - 7 for explanation of superscripts.)

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. During the period beginning on the effective date and lasting through expiration date, the Permittee is authorized to discharge treated wastewater (solutions used for well redevelopment) from Outfall Serial Number 002 into the Contoocook River. Such discharges shall be limited and monitored by the Permittee as specified below. Samples taken in compliance with the monitoring requirements specified below shall be taken from the sedimentation/neutralization tank prior to discharging the treated contents of that tank.

| Effluent Characteristic                     | Discharge Limitations                | Monitoring Requirements        |             |
|---|--------------------------------------|--------------------------------|-------------|
|   |                                      | Measurement Frequency          | Sample Type |
| Flow <sup>11</sup> , GPD                    | Maximum<br>225,600                   | As Required                    | Estimate    |
| TSS, lb/day                                 | 50                                   | Per Discharge <sup>12</sup>    | Grab        |
| pH <sup>4,5</sup>                           | Range: 6.5 - 8.0 (See PART I.D.1.a.) | Per Discharge <sup>12</sup>    | Grab        |
| Total Phosphorous, mg/l                     | Report                               | Per Discharge <sup>12</sup>    | Grab        |
| Total Residue Chlorine <sup>13</sup> , mg/l | Report                               | Per Discharge <sup>12,13</sup> | Grab        |
| Turbidity, NTU                              | Report                               | Per Discharge <sup>12</sup>    | Grab        |

(Note: See page 5 - 7 for explanation of superscripts.)

## EXPLANATION OF SUPERSCRIPTS TO PART I.A.1. ON PAGE 2-3 AND PART I.A.2. ON PAGE 4.

- (1) Effluent discharge shall be monitored by a continuous recording flow meter containing a totalizer at a location representative of actual discharge of Outfall 001.
- (2) The applicable TSS limit when the paper production level at the facility is less than or averages 105 tons/day (t/d) based on the presently installed paper making machinery. The No Discharge Code (NODI) is entered on the monthly Discharge Monitoring Report (DMR) when the production level averages or is more than 105 t/d and the alternate TSS limits in No. 3 apply.
- (3) The applicable TSS limit when the paper production level at the facility is more than or averages 105 t/d based on an upgrade of the facility's paper making machinery paper production capacity. The No Discharge Code (NODI) is entered on the monthly Discharge Monitoring Report (DMR) when the production level is less than or averages 105 t/d and the alternate TSS limits in No. 2 apply.
- (4) Refer to Section I.D. for specific reporting requirements. The pH of the effluent shall not be less than 6.5 nor greater than 8.0 at any time, unless in compliance with conditions specified in PART I.D.1.(a).
- (5) This is a State Certification requirement.
- (6) LC50 is the concentration of wastewater (effluent) causing mortality to 50 percent (%) of the test organisms. The "100% limit" is defined as a sample which is composed of 100% effluent (See A.1 on Page 2 of Part 1 and Attachment A of Part 1). Therefore, a 100% or greater limit means that a sample of 100% effluent shall cause no greater than a 100% mortality rate in that effluent sample. The limit is considered to be a maximum daily limit.
- (7) The Permittee shall conduct chronic (and modified acute) survival and reproduction WET tests on effluent samples using two species, Daphnid (Ceriodaphnia dubia) and Fathead Minnow (Pimephales promelas) following the protocol listed in Attachment A (Freshwater Chronic and Modified Acute Toxicity Test Procedure and Protocol dated December 1995). Toxicity test samples shall be collected and tests completed two (2) times per year during the calendar quarters ending March 31<sup>st</sup> and September 30<sup>th</sup>. Toxicity test results are to be submitted by the 15<sup>th</sup> day of the month following the end of the quarter tested.
- (8) This permit shall be modified, or alternatively, revoked and reissued to incorporate additional toxicity testing requirements, including chemical specific limits, if the results

of the WET tests indicate the discharge exceeds any State water quality criterion. Results from these toxicity tests are considered "New Information" and the permit may be modified as provided in 40 CFR Section 122.62(a)(2).

- (9) 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 (growth, survival, and/or reproduction) exhibit a linear dose-response relationship. However, where the test results do not exhibit a linear dose-response relationship, report the lowest concentration where there is no observable effect. See Attachment A (VII. TOXICITY TEST DATA ANALYSIS) on page A-9 for additional clarification.
- (10) For each WET test the Permittee shall report on the appropriate Discharge Monitoring Report (DMR) the concentrations of Ammonia Nitrogen as Nitrogen, Hardness, and Total Recoverable Aluminum, Cadmium, Chromium, Copper, Lead, Nickel and Zinc found in the 100 percent effluent sample. All these aforementioned chemical parameters shall be determined to at least the Minimum Quantification Level (MLs) shown in Attachment A on page A-8, or as amended. The Permittee should also note that all chemical parameter results must still be reported in the appropriate WET test toxicity report.
- (11) Flow from the sedimentation/neutralization tank may be estimated by calculations or referencing pump curves.
- (12) A sample shall be taken directly from the sedimentation/neutralization tank prior to discharging the treated contents of that tank. The tank's contents shall be well mixed before taking that sample.
- (13) Total Residual Chlorine shall be measured using any one of the following three methods listed in a. through c.:
  - a. Standard Methods [18th or subsequent Edition(s) as approved in 40 CFR Part 136], No. 4500-C1 G.
  - b. Standard Methods [18th or subsequent Edition(s) as approved in 40 CFR Part 136], No. 4500-C1 F.
  - c. Standard Methods [18th or subsequent Edition(s) as approved in 40 CFR Part 136], No. 4500-C1 D

The limit at which compliance/noncompliance determinations for Total

Residual Chlorine (TRC) will be based, is the chemical Minimum Quantification Level (ML). For this permit the ML for Total Residual Chlorine is 0.020 mg/l (20.0 ug/l). This value may be reduced by permit modification as more sensitive test methods are approved by the EPA and the NHDES-WD. Any Total Residual Chlorine value below 0.020 mg/l will be reported as zero (non-detect).

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Continued)

3. The discharges from Outfall 001 and 002 shall not cause the turbidity of the receiving water to exceed naturally occurring conditions by 10 Nephelometric Turbidity Units (NTU).
4. The Permittee shall conduct acute and chronic toxicity tests on effluent samples 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.

The Permittee may use alternate dilution water for the chronic toxicity tests with either two or three controls as provided below:

- (a) Initial toxicity tests using the receiving water as the control are or would be invalid because the receiving water shows toxicity.
- (b) If the alternate dilution water is a laboratory water that does not require an adjustment to simulate the water chemistry of the receiving water as described in this Part, then two controls are required (1. lab water and 2. site water).
- (c) If the alternate dilution water is a lab water that is adjusted to simulate the water chemistry of the receiving water as described in this Part, then three controls are required (1. alternate dilution site water or the adjusted lab water, 2. lab water, and 3. site water).

The alternate dilution water must be of a known quality with water quality characteristics such as organic carbon, total suspended solids, pH, specific conductivity, alkalinity and hardness similar to that of the Contoocook River. It is recommended that the Permittee screen the alternate dilution water for suitability prior to toxicity testing.

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

6. The discharge shall be adequately treated to insure that the surface water remains free from pollutants in concentrations or combinations that settle to form harmful deposits, float as foam, debris, scum or other visible pollutants. It shall be adequately treated to insure that the surface waters remains free from pollutants which produce odor, color, taste or turbidity in the receiving waters which is not naturally occurring and would render the receiving water unsuitable for its designated uses.
7. The Permittee shall not discharge into the receiving water any pollutant or combination of pollutants in toxic amounts.
8. The Permittee shall not utilize nor discharge pentachlorophenol or trichlorophenol.
9. 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  $\mu\text{g}/\text{l}$ );
    - (2) Two hundred micrograms per liter (200  $\mu\text{g}/\text{l}$ ) for acrolein and acrylonitrile; five hundred micrograms per liter (500  $\mu\text{g}/\text{l}$ ) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1  $\text{mg}/\text{l}$ ) 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) and New Hampshire regulations.
  - (b) That any activity has occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
    - (1) Five hundred micrograms per liter (500  $\mu\text{g}/\text{l}$ );

- (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) and New Hampshire regulations.
- (c) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.
10. This permit shall be modified, or alternatively, 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.
- The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.
11. All sediment shall be cleaned from the sedimentation/neutralization tank prior to filling that tank for further treatment of well redevelopment chemical solutions.
12. Well redevelopment shall not be conducted between the dates of October 1 - May 31.
13. Any discharge of the sedimentation/neutralization tank shall cause no erosion of the banks of the Contoocook River. The Permittee shall digitally photograph the banks of the Contoocook River where the discharge of the sedimentation/neutralization tank may enter the River. These photographs shall be taken prior to discharging the treated contents of that tank. If discharges from the sedimentation/neutralization tank enter the Contoocook River, the Permittee shall digitally photograph the River's bank at the point(s) of entry after the discharge flow has stopped. These photographs shall be submitted to EPA, Water Technical Unit, and NHDES in accordance with Part I.C.

B. SPECIAL LOW FLOW CONDITION

1. The Permittee shall not discharge wastewater when actions by the

Permittee (i.e temporary diversions of flow, permanent removal of water, temporary storage of water) reduce the flow in the Contoocook River to a flow less than the 7Q10 low flow value or further reduce flows already less than the 7Q10 low flow value. The 7Q10 low flow in the area of the facility is 16.5 cfs.

2. In response to Part I.B.1, the Permittee shall first verbally notify within 24-hours and then within 5-days detail by letter to the EPA, Water Technical Unit, and NHDES when the Contoocook River flow is less than 7Q10 as a result of the Permittee's actions and the days when there is no discharge from Outfall 001. If this event occurs for more than one day, a verbal report shall be made each day and the written report submitted after the occurrence has ended.

C. MONITORING AND REPORTING

Monitoring results obtained during the previous one 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 completed reporting period. The first report is due on the 15th day of the month following the effective date of the permit.

Signed and Dated original DMRs and all other reports required herein or in Part II shall be submitted to the Director at the following address:

U.S. Environmental Protection Agency  
Region 1  
Water Technical Unit (SEW)  
P.O. Box 8127  
Boston, Massachusetts 02114-8127

Duplicate signed copies of all reports and information required herein shall be submitted to the State at:

New Hampshire Department of Environmental Services  
Water Division  
Wastewater Engineering Bureau  
29 Hazen Drive, P.O. Box 95  
Concord, New Hampshire 03302-0095

All verbal reports or notifications shall be made to both EPA and NHDES.

D. STATE PERMIT CONDITIONS

1. The Permittee shall comply with the following condition which is included as State Certification requirements.

- (a) The pH range of 6.5-8.0 Standard Units (S.U.) must be achieved in the final effluent unless the Permittee can demonstrate to NHDES-WD: (1) that the range should be widened due to naturally occurring conditions in the receiving water or (2) that the naturally occurring receiving water pH is not significantly altered by the Permittee's discharge. The scope of any demonstration project must receive prior approval from NHDES-WD. In no case, shall the above procedure result in pH limits less restrictive than 6.0-9.0 S.U.
- (b) This NPDES Discharge Permit is issued by the EPA under Federal and State law. Upon final issuance by the EPA, the NHDES-WD may adopt this permit, including all terms and conditions, as a State permit pursuant to RSA 485-A:13. 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 the Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation.

#### E. SPECIAL CONDITIONS

##### Whole Effluent Toxicity Test Frequency Adjustment

The Permittee may submit a written request to the EPA requesting a reduction in the frequency (to not less than once per year) of required toxicity testing, after completion of a minimum of four (4) successive toxicity tests of effluent, all of which must be valid tests and demonstrate compliance with the permit limit(s) for whole effluent toxicity. Until written notice is received by certified mail from the EPA indicating that the Whole Effluent Toxicity Testing requirement has been changed, the Permittee is required to continue testing at the frequency specified in the respective permit.

##### pH Limit Adjustment

The Permittee may submit a written request to the EPA requesting a change in the permitted pH limit range. The revised pH range, though, cannot be less restrictive than 6.0 to 8.0 Standard Units. The Permittee's written request must include the State's approval letter containing an original signature (no copies). The State's letter shall state that the Permittee has demonstrated to the State's satisfaction that as long as discharges to the receiving water from a specific outfall are within a specific numeric pH range the naturally occurring receiving water pH will be unaltered. That letter must specify for each outfall the associated numeric pH limit range. Until written notice is

received by certified mail from the EPA indicating the pH limit range has been changed, the Permittee is required to meet the permitted pH limit range in the respective permit.

F. REOPENER CLAUSE

This Permit maybe modified, or alternatively, revoked and reissued to reflect new information developed by the NHDES or EPA during a Total Maximum Daily Load (TMDL) Study of the Contoocook River evaluating the impact of the oxygen demanding pollutants and nutrients on the dissolved oxygen levels in this River.

DRAFT