

AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION
ONE NATIONAL LIFE DRIVE, MAIN BUILDING, 2nd FLOOR
MONTPELIER, VERMONT 05620-3522

FACT SHEET
(August 2012)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO
DISCHARGE TO WATERS OF THE UNITED STATES

NPDES NO: VT0000248
PERMIT NO: 3-1136
PROJECT ID NO: NS94-0007

NAME AND ADDRESS OF APPLICANT:

FiberMark North America, Inc.
161 Wellington Ave
Brattleboro, VT 05302

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

same as above

RECEIVING WATER: Connecticut River

CLASSIFICATION: Class B. Class B waters are suitable for bathing and recreation, irrigation and agricultural uses; good fish habitat; good aesthetic value; acceptable for public water supply with filtration and disinfection.

I. Proposed Action, Type of Facility, and Discharge Location

The above named applicant applied on April 4, 2011 to the Vermont Department of Environmental Conservation for renewal of the permit to discharge into the designated receiving water. At this time the Department has made a tentative decision to reissue the discharge permit. The facility is engaged in the non-integrated production of specialty pressboard. The discharge is treated process wastewater from the manufacturing process.

II. Description of Discharge

A quantitative description of the discharge in terms of significant effluent parameters is based on state and federal laws and regulations, the discharge permit application, and the recent self-monitoring data.

The complete application, draft permit, and other information used in the development of this permit are on file and may be inspected at the VTDEC, Watershed Management Division, One National Life Drive, Main Building, 2nd Floor, Montpelier, VT. Copies will be made at a cost based on the current Secretary of State Official Fee Schedule for

Copying Public Records from 8:00 AM to 4:30 PM, Monday through Friday. The draft permit and fact sheet may also be viewed on the Division's website at <http://www.anr.state.vt.us/dec/waterq/ww/htm/notices.htm>

III. Limitations and Conditions

The effluent limitations of the permit, the monitoring requirements, and any implementation schedule (if required), may be found on the following pages of the permit:

Effluent Limitations:	Page 2 of 14
Monitoring Requirements:	Pages 2 and 3 of 14

IV. Permit Basis and Explanation of Effluent Limitation Derivation

Process and Facility Background:

FiberMark North America, Inc. ("FiberMark") owns and operates the FiberMark paperboard mill located on the Connecticut River in Brattleboro, Vermont. The facility is a non-integrated mill primarily involved in the production of 10 - 15 different grades of specialty paperboard.

Water from the manufacturing process is pumped from the Connecticut River. It passes through sand filters prior to entering the manufacturing facility. Backwash water from the cleaning of the sand filters is pumped to the wastewater treatment facility.

The wastewater treatment system consists of primary clarification followed by an 8.3 million gallon aerated stabilization basin. The treated effluent is discharged via a diffuser into the Connecticut River. Primary clarifier sludge was previously dewatered on a vacuum filter and screw press. In 1999 hydraulic curtains (floating baffles extending to and anchored to the lagoon floor) were installed in the treatment lagoon in order to provide 'staged' treatment and to minimize the potential for short-circuiting. Also at that time, a new screw press for sludge dewatering was installed in series after the existing vacuum filter. In 2007, an Aris-Andritz belt press for sludge dewatering was installed replacing the existing vacuum filter/screw press combination sludge processor. The sludge is trucked to Vermont landfills for daily cover.

The 7Q10 flow of the Connecticut River used for calculation purposes for this permit is 1079 CFS. The design flow of the facility is 2.0 MGD (3.10 CFS). The instream waste concentration (IWC) is 0.003. For purposes of certain metals calculations, a hardness of 40 mg/l for the Connecticut River was used.

Description of Effluent Limitations and Monitoring Requirements:

EPA categorical standards, 40 CFR Part 430 and the associated Development Document for the Pulp, Paper, and Paperboard Industry, are based on both the pulping or furnish process and the products, or grades, manufactured at a given facility. The furnish is a combination of purchased wastepaper, recycled finishing wastepaper, and purchased pulp, and the primary products are specialty paperboard grades.

Flow - The effluent flow limitation for S/N 001 remains at 2.0 MGD, monthly average, representing the facility's design flow. The facility maintains a continuous discharge.

Biochemical Oxygen Demand (BOD₅) and Total Suspended Solids (TSS) – FiberMark is subject to 40 CFR Part 430, Subparts J (Secondary Fiber Non-Deink) and L (Paperboard from Purchased Pulp) and uses secondary fiber and pulp in about equal percentages. Further, FiberMark uses both corrugated and non-corrugated furnish (Subpart J) in about equal percentages. The calculated categorical limits are based on past production practices, present trends, or projected increases in production that are within the control of the facility and are likely to be realized.

Calculated categorical effluent limits for the Subpart J non-corrugating medium furnish subdivision:

	<u>monthly average</u>	<u>daily maximum</u>
BOD	429 lbs/day	858 lbs/day
TSS	715 lbs/day	1430 lbs/day

Calculated categorical effluent limits for the Subpart J corrugating medium furnish subdivision:

	<u>monthly average</u>	<u>daily maximum</u>
BOD	801 lbs/day	1630 lbs/day
TSS	1316 lbs/day	2631 lbs/day

Calculated categorical effluent limits for the Subpart L paperboard from purchased pulp subdivision:

	<u>monthly average</u>	<u>daily maximum</u>
BOD	1030 lbs/day	1859 lbs/day
TSS	800 lbs/day	1659 lbs/day

Production rates for the years 2006 through 2011 are similar, though slightly lower than previous years' production rates (143 tpd average for the years 2001 – 2005) and are as follows:

2006 - 141.8 tpd
 2007 - 136.0 tpd
 2008 - 136.3 tpd
 2009 - 137.2 tpd
 2010 - 136.3 tpd
 2011 - 132.9 tpd

Calculations using the results in the two subparts (including the 50/50 corrugating/non-corrugating division under Subpart J) indicate that the BOD and TSS effluent limitations that would be appropriate for this facility at a production rate of 143 tpd would be as follows:

BOD, monthly average – **822 lbs/day**
BOD, daily max – 1552 lbs/day

TSS, monthly average – 908 lbs/day
TSS, daily maximum – 1844 lbs/day

The current permit limits are as follows:

BOD, monthly average – **858 lbs/day**
BOD, daily max – 1048 lbs/day

TSS, monthly average – 813 lbs/day
TSS, daily maximum – 1684 lbs/day

The anti-backsliding provision in the Clean Water Act, (40 CFR Part 122.44(l), *Reissued Permits*) requires that when a facility is substantially in compliance with current limits, less stringent limits may not be applied to a discharge. Based on monitoring data, the facility has remained consistently in compliance with the current limits for BOD, daily max as well as TSS, monthly average and daily max. Consequently the limits remain as previously permitted. However, the effluent limit for BOD, monthly average will be reduced from 858 to 822 lbs/day which according to the recent self-monitoring results, FiberMark will be able to consistently meet.

The weekly monitoring frequency for both BOD and TSS remains unchanged from the previous permit.

pH - The pH limitation remains at 6.5 - 8.5 Standard Units as specified in Section 3-01 B.9. in the Vermont Water Quality Standards. Monitoring remains at daily.

Turbidity – The previous permit established a 200 foot mixing zone and contained a turbidity limitation of 120 NTU for S/N 001 where the water quality standard of 10 NTU would be met at the end of the mixing zone. This was approved following a 2006 dilution study conducted by Phoenix Environmental Engineers for the permittee. That study concluded that FiberMark could discharge up to 400 NTU and still meet the limit of 10 NTU at the end of a 200 foot mixing zone. At that time, the Department made a determination that based on FiberMark's existing self-monitoring data, a limit of 120 NTU would be appropriate for an effluent limit at the point of discharge.

FiberMark is requesting that the turbidity mixing zone be maintained for the next permit period. Self-monitoring turbidity results during the previous three years (2009 through 2011) indicate that the range of values is from 19 to 106 NTU. The proposed permit retains the 120 NTU permit limit and weekly monitoring.

Total Nitrogen and Total Phosphorus - Vermont DEC is currently in the process of proposing scientifically based nitrogen and phosphorus criteria for lakes and wadeable streams for review by USEPA. In support of this effort the Department is including requirements in discharge permits to monitor discharges for both total nitrogen and total phosphorus. Once adopted the criteria will be used to determine the potential of discharges to cause or contribute to eutrophication and adversely impact the aquatic biota downstream of the discharge. Monitoring is required monthly.

Toxicity Testing - 40 CFR Part 122.44(d)(1) requires the Department to assess whether the discharge causes, has the reasonable potential to cause, or contribute to an excursion above any narrative or numeric water quality criteria. Whole Effluent Toxicity testing is being required in accordance with the 1994 Vermont Toxic Discharge Control Strategy for S/N 001. The intent of the WET testing is to confirm the effluent does not have the potential to cause an instream toxic impact. WET testing was conducted by FiberMark in June 2007, 2008, 2009, 2010, and 2011. Those results indicated that this discharge did not have the potential to cause an instream toxic impact.

The proposed permit includes three rounds of WET testing. The first test, an acute/chronic two-species test must be completed in June 2013. Subsequent testing includes acute testing only in January 2015 and in June 2016. In addition, a toxic pollutant scan (metals) is required to be completed on the S/N 001 discharge on the same days that the WET samples are collected.

If the results of these tests indicate a reasonable potential to cause an instream toxic impact, the Department may require additional WET testing, establish a WET limit, or require a Toxicity Reduction Evaluation.

A second discharge point (S/N 002), is comprised of uncontaminated river water from two river water pumps located in a pump house that continuously leak seal water which flows back to the Connecticut River. The approximate flow is 5 gpm. As with the previous permit, no monitoring is proposed for this discharge.

V. Procedures for Formulation of Final Determinations

The public comment period for receiving comments on this draft permit is from August 27 through September 26, 2012 during which time interested persons may submit their written views on the draft permit. All written comments received by 4:30 PM on September 26, 2012 will be retained by the Department and considered in the formulation of the final determination to issue, deny or modify the draft permit. The period of comment may be extended at the discretion of the Department.

Written comments should be sent to:

Vermont Agency of Natural Resources
Department of Environmental Conservation
One National Life Drive, Main Building, 2nd Floor
Montpelier VT 05620-3522

Comments may also be faxed to: 802-490-6182 or submitted by e-mail using the e-mail comment provisions included at <http://www.anr.state.vt.us/dec/waterq/ww/htm/notices.htm>

Any interested person or groups of persons may request or petition for a public hearing with respect to this draft permit. Any such request or petition for a public hearing shall be filed within the public comment period described above and shall indicate the interest of the party filing such request and the reasons why a hearing is warranted.

The Department will hold a hearing if there is significant public interest in holding such a hearing. Any public hearing brought in response to such a request or petition will be held in

the geographical area of the proposed discharge or other appropriate area, at the discretion of the Department and may, as appropriate, consider related groups of draft permits. Any person may submit oral or written statements and data concerning the draft permit at the public hearing. The Department may establish reasonable limits on the time allowed for oral statements and may require the submission of statements in writing. All statements, comments, and data presented at the public hearing will be retained by the Department and considered in the formulation of the final determination to issue, deny, or modify the draft permit.



Google earth



FiberMark 0007E

Water Quality Metals Criteria Calculation			
Discharge:	<i>Fibermark</i>		
Receiving Water:	<i>CT River</i>		
Instream Hardness	40.000		
Calculated Instream Water Quality Standard ug/l			
		Acute	Chronic
Cadmium		1.40	0.55
Chromium (III)		819.91	97.73
Copper		7.48	5.40
Lead		25.43	0.99
Nickel		653.14	72.62
Silver		0.84	na
Zinc		53.84	48.76
Stream Flow CFS			1079.00
Effluent Flow MGD	(Design)		2.000
Instream Waste Concentration			0.0029
Permitted Discharge Concentration ug/l			
		Acute	Chronic
Cadmium		487.66	193.07
Chromium		286571.82	34157.74
Copper		2612.90	1888.81
Lead		8888.34	346.37
Nickel		228283.65	25383.24
Silver		293.37	na
Zinc		18817.45	17043.77
Permitted Discharge in Mass (lbs/day)			
		Acute	Chronic
Cadmium		8.13	3.22
Chromium		4780.02	569.75
Copper		43.58	31.51
Lead		148.26	5.78
Nickel		3807.77	423.39
Silver		4.89	na
Zinc		313.88	284.29

5/14/2012

**Agency of Natural Resources
Department of Environmental Conservation**

**Watershed Management Division
Building 10 North
802-338-4816**

MEMORANDUM

To: Pete LaFlamme, Director, WSMD

From: Neil Kamman, Manager, Monitoring, Assessment and Planning Program

Cc: Rick Levey, MAPP
Carol Carpenter, Wastewater Program

Date: August 3, 2012

Subject: MAPP Evaluation of the Reasonable Potential Determination for the FiberMark North America, Inc. Facility

The Monitoring, Assessment and Planning Program(MAPP) has completed evaluation of the draft permit limits for the FiberMark North America, Inc. (FiberMark) facility in Brattleboro, Vermont, following the draft procedure outlining the Wastewater Management Section and MAPP roles and responsibilities that was prepared during 2010. This memo provides MAPPs concurrence with the permit limits set forth by the draft permit for FiberMark prepared by the Wastewater Management Section.

Facility:

FiberMark North America Facility
Permit No.3-1136
NPDES No. VT0000248

General Considerations:

FiberMark North America, Inc. ("FiberMark") owns and operates the FiberMark paperboard mill located on the Connecticut River in Brattleboro, Vermont. The facility is a non-integrated mill primarily involved in the production of 10 - 15 different grades of specialty paperboard. Process water is pumped from the Connecticut River. It passes through sand filters prior to entering the manufacturing facility. Backwash water from the cleaning of the sand filters is pumped to the wastewater treatment facility. The wastewater treatment system consists of primary clarification followed by an 8.3 million gallon aerated stabilization basin prior to a diffuser into the Connecticut River at discharge S/N001. Primary clarifier sludge is dewatered on a vacuum filter and screw press and trucked to Vermont landfills where it is used for daily cover.

A second discharge point (S/N 002), is comprised of uncontaminated river water from two river water pumps located in a pump house that continuously leak seal water which flows back to the Connecticut River. The approximate flow is 5 gpm. As with the previous permit, no monitoring is proposed for this discharge.

Hydrology for FiberMark North America facility used in this evaluation:

Design Flow: 2.0 MGD =3.10 CFS

7Q10 = 1079 CFS

LMM = 3025 CFS

IWC-7Q10 = 0.003 (<1%)

IWC-LMM= 0.001 (<1%)

Receiving Water:

Connecticut River, Brattleboro, VT

Facility Location: Lat. 42.8903941 Long. 072.5481203 (NAD 27)

WQD Ambient Chemistry Data for the Connecticut River- Brattleboro below FiberMark:

There is ambient chemistry data available from NHDES Ambient River Monitoring Network station 07-CNT located below FiberMark by RT 9 Bridge in Chesterfield, NH. This station is approximately 0.5 miles below FiberMark. TP values from 1997– 2000 (n=5) ranged from .008 - .014 mg/L, TN values (n=4) ranged from 0.18 -0.23 mg/L for the same period.

Target analyte metals (Al, Cu, Pb, and Zn) were also screened from 1992 – 2000 (n=5). Al values ranged from <.05 - .105 mg/L, Cu values did not exceed the detection limit of 0.002 mg/L. Pb values ranged from .003 - .011 mg/L and Zn values ranged from <.02 - .0091 mg/L. Pb values did exceed the aquatic biota chronic criteria of .0010 mg/L (hardness = 40 mg/L-CaCO₃), however flow data and additional ancillary parameters such as turbidity that would facilitate understanding the reason behind this exceedance were not available for more complete interpretation. To ensure that the facility is not discharging Pb in concentrations that would cause or contribute to an exceedance of Pb in the receiving water, MAPP recommends the inclusion of priority pollutant screening that would occur co-incident with WET testing (see below).

Biological Assessments:

The receiving waters of this warm water moderate gradient reach are non-wadeable; as such biological assessments have not been conducted above or below the outfall.

Total Nitrogen and Total Phosphorus:

Vermont DEC is currently in the process of proposing scientifically based nitrogen and phosphorus criteria for lakes and wadeable streams for review by the USEPA. In support of this effort the Department is including requirements in discharge permits to monitor discharges for both total nitrogen and total phosphorus. Once adopted the criteria will be used to determine the potential of discharges to cause or contribute to eutrophication and adversely impact the aquatic biota downstream of the discharge. Monitoring is required monthly.

Toxicity Testing:

40 CFR Part 122.44(d)(1) requires the Department to assess whether the discharge causes, has the reasonable potential to cause, or contribute to an excursion above any narrative or numeric water quality criteria. Whole Effluent Toxicity testing is being required in accordance with the 1994 Vermont Toxic Discharge Control Strategy for S/N 001. The intent of the WET testing is to confirm that the effluent does not have the potential to cause an instream toxic impact. WET testing was conducted by FiberMark in June 2007, 2008, 2009, 2010. Those results indicated that this discharge did not have the potential to cause an instream toxic impact. Confirmation that those findings are still valid is required by the Vermont Toxic Discharge Control Strategy at permit renewal. As such, the proposed permit includes three rounds of WET testing. The first test, an acute/chronic two-species test must be completed in June 2013.

Subsequent testing includes acute testing only in January 2015 and 2016. If the results of these tests indicate a reasonable potential to cause an instream toxic impact, the Department may require additional WET testing, establish a WET limit, or require a Toxicity Reduction Evaluation.

Conclusion:

After review of all available information it has been determined that there is not a reasonable potential for the discharge to cause or contribute to a water quality violation, and as such, the development of a WQBEL's will not be necessary. Given the very high dilution (IWC @7Q10< 1%) MAPP has concluded that this discharge will not cause, have a reasonable potential to cause, or contribute to an instream toxic impact or instream excursion above the water quality criteria. With regard to P and N monitoring requirements, MAPP concurs. With regard to Pb, MAPP recommends the addition of a priority metals screen in conjunction with WET testing. With regard to S/N002, MAPP concurs that no monitoring is necessary for this discharge. However, we recommend that regular maintenance inspections be performed at the pump house to verify that no contamination of this waste stream is possible.