



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Matthew J. Frank, Secretary

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August 28, 2009

Ms. Tinka Hyde, Director, Water Division
U.S. EPA, Region V
77 W. Jackson Boulevard
Chicago, IL 60604

Subject: Request for Approval of a Variance from Water Quality Standards
Receiving Stream: The Chippewa River in Eau Claire County
Permittee: Cascades Tissue Group Wisconsin Inc. – WPDES Permit No. WI-0003077-08

Dear Ms. Hyde:

In accordance with s. 283.15 of the Wisconsin Statutes and Chapter 40, Part 131 of the Code of Federal Regulations, the Department requests U.S. EPA, Region V to approve a water quality standards variance for the above-referenced discharge. The water quality criterion for which the permittee is seeking a variance is contained in chapter NR 105, Wisconsin Administrative Code.

To assist your staff during their review, relevant background information pertaining to this variance is attached to this letter. The proposed permit and variance was publicly noticed on June 5, 2009. The comment period has now ended. No comments were received from the public.

We are committed to working with the permittee during the term of this variance to find a solution that will lead to full compliance with the applicable water quality standard. Conditions on the variance, to be included in the WPDES permit, specify actions to be taken by the permittee and timetables for those actions.

We appreciate your consideration of this request. Should you have further questions regarding this matter, please contact Jim Schmidt at (608) 267-7658.

Sincerely,

Todd L. Ambs, Administrator
Division of Water

Attachment

e-cc

Russ Rasmussen - WT/3
Jeff Brauer – WT/3
Margaret Hoefler – LC/5
Jim Schmidt – WT/3

Bruce Baker - AD/8
Diane Figiel – WT/3
Robert Masnado - WT/3
David Pfeifer - EPA, Region V



**BACKGROUND INFORMATION REGARDING WATER QUALITY STANDARDS
VARIANCE**

Receiving Stream: **The Chippewa River within the Lower Chippewa River Basin in Eau Claire County.**

Receiving Stream Classification: **Warm Water Sport Fishery, non-public water supply.**

Permittee Name: **Cascades Tissue Group Wisconsin Inc.**

WPDES Permit No. : **WI-0003077-08.**

Facility Name: **Cascades Tissue**

Substance: **Total Recoverable Mercury.**

Criterion: **1.3 ng/L (wildlife).**

Water Quality Based Permit Limit: **9.1 ng/L as a daily maximum based on maintaining background levels**

Permit Limit Based on Variance: **12 ng/L as a daily maximum.**

Duration of Variance: **From the effective date of the permit reissuance through the end of the permit term (06/30/2014).**

Department Rationale for Approving Variance: **See Attached Document.**

Conditions to be Included in WPDES Permit Reissuance:
See Draft Permit being sent to EPA in Electronic Format.

List of Supporting Documents Attached:

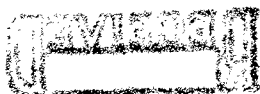
Justification for Alternative Mercury Effluent Limitation – Dated August 27, 2009

Certification from DNR Chief Legal Council – Dated August 27, 2009

~~Little Rapids~~ Environmental Impacts Evaluation – Dated August 27, 2009

Cascades Tissue - jws 9/8/09
Documents Being Sent Electronically to David Pfeifer

- **Environmental Impacts Evaluation for Mercury Variance Requests in Wisconsin (05/23/06 Draft)**
- **Public Notice of Intent to Reissue the Permit and Approve a Variance**
- **Draft Permit and Fact Sheet**
- **Water Quality Based Effluent Limitation Evaluation Document**
- **Draft Notice of Final Determination**





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August 27, 2009

Ms. Tinka Hyde, Director Water Division
USEPA, Region V
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Certification Statement for Approval of a Variance to Water Quality Standards
Cascades Tissue Group – Eau Claire
WPDES Permit No. WI-0003077-08

Dear Ms. Hyde:

The Wisconsin Department of Natural Resources is proposing a variance to water quality standards used to establish effluent limitations for mercury at the above-named facility.

EPA has recently informed Department staff that pursuant to §§ 40 CFR Part 131.21 and 131.6, the Department must submit a certification statement to EPA for each variance approved in the state. The statement must certify that the variance to a water quality standard was approved in accordance with state law.

Accordingly, I hereby certify that the mercury variance for the Cascades Tissue facility in Eau Claire was reviewed and approved by Department staff in accordance with procedures in subchapter III of chapter NR 106, Wis. Adm. Code. The application for this variance was submitted on June 30, 2008 and the department public noticed its intent to reissue the permit and grant the mercury variance on June 5, 2009 in accordance with Wis. Stat §§ 283.15(3) and 283.39.

If you have any questions regarding the variance approval, please contact Jim Schmidt at (608) 267-7658.

Sincerely,

Michael Lutz
General Counsel
Director, Bureau of Legal Services

cc Jim Schmidt – WT/3
Jeff Brauer – WT/3
David Pfeifer - EPA, Region V

Alternative Effluent Limitation for Mercury

August 27, 2009

Introduction: Pursuant to NR 105 & 106, Wis. Adm. Code, a water quality-based daily maximum effluent limit of 9.1 ng/L is applicable to the treated process wastewater discharge via outfall 001 from the Cascades Tissue Eau Claire paper mill. This limit is based on the 99th upper percentile value calculated from intake data collected between January 2002 and May 2008 (24 results). The mean intake concentration was approximately 2.8 ng/L, which exceeded the NR wildlife criterion of 1.3 ng/L and the human threshold criterion of 1.5 ng/L. Since Cascades Tissue draws its water from the river, the effluent limit is based on background levels and, in effect, represents no allowable net addition. Over that same period, the effluent averaged 3.9 ng/L, but 10 of the 24 effluent results were lower than the corresponding intake levels. This indicates a significant portion of the mercury discharged is a result of high intake levels, but there is still a slight addition currently occurring within the facility.

As part of its application for permit reissuance, Cascades Tissue requested an alternative effluent limit. As discussed below, the Department proposes to grant an alternative effluent limit of 12 ng/L daily maximum. Such an alternative effluent limit represents a variance from water quality standards as authorized by s. 283.15, Wis. Stats.

Derivation of an Alternative Effluent Limit for Mercury: Pursuant to s. NR 106.145 (5)(a), an alternative effluent limit for the outfall 001 mercury level shall equal the upper 99th percentile of representative daily discharge concentrations of total recoverable mercury as calculated pursuant to s. NR 106.05 (4) (a). The Department's July 1, 2008 water quality-based effluent limitations memo provides such a value as the one-day P99 of 12.1 ng/L.

Granting of an Alternative Effluent Limit for Mercury: Pursuant to s. NR 106.145 (6), the Department proposes to grant Cascades Tissue an alternative effluent limit of 12 ng/L (the P99 value rounded to two significant figures) expressed as a daily maximum limit. The Department has reviewed the mill's application for an alternative effluent limit, including an update to the mill's mercury pollutant minimization program (PMP), and concludes that information supplied supports the establishment of an alternative effluent limit. The Department further concludes that requiring the Cascades Tissue mill to meet the water quality standard for mercury would result in substantial and widespread adverse social and economic impacts, which is consistent with the findings of s. NR 106.145 (1). The Department considers treating a large volume of effluent to meet a daily maximum water quality limit of 9.1 ng/L to be technically and economically infeasible. Cascades Tissue has directed efforts towards mercury minimization and reduced use of paper process chemicals that may contain trace amounts of mercury since 2001. There has been a 50% reduction in sulfuric acid use by the facility and a comparable reduction in discharge of the trace mercury amounts frequently found in industrial grade sulfuric acid. Also, the caustic supply was converted to membrane grade (the lowest mercury trace contaminant grade available) and the use of caustic in the mill has been reduced by 45%. The proposed permit mercury compliance schedule requires the facility to identify other potentially significant sources of mercury to the facility, such as leachate from the paper sludge landfill and the raw wastepaper supply, and to continue to evaluate additional feasible mercury pollutant minimization opportunities.

Cascades Tissue and the Department have reached agreement on an alternative effluent limit of 12 ng/L expressed as a daily maximum and the continuation of the mill's mercury pollutant minimization program plan (PMP) as proposed in the public noticed permit. The proposed PMP meets the requirements of s. NR 106.145 (7) and the proposed permit requires the mill to report each year on the progress of the PMP. The proposed permit requires monthly mercury monitoring of the mill's treated process wastewater discharge subject to the data quality requirements of ss. NR 106.146 (9) and (10).

Water Quality Antidegradation: The Department concludes that Wisconsin's water quality antidegradation requirements, ch. NR 207, Wis. Adm. Code, are not applicable to the proposed alternative effluent limit for mercury. Antidegradation requirements are not applicable to this initial imposition of an effluent limit and the Cascades Tissue mill will not be allowed to increase the loading of mercury to the Chippewa River.

Environmental Effects of Granting an Alternative Effluent Limit for Mercury: The Department concludes that implementing the proposed alternative effluent limit for mercury will not result in increased risk to human health or the environment. The proposed alternative effluent limit is equivalent to the Cascades Tissue current discharge of mercury, which is only slightly greater than the mercury amounts currently found in the Chippewa River at Eau Claire. The discharge of mercury by the mill in its treated effluent (Sampling Point 001) has a P99 value of 12 ng/L compared to a P99 value of 9 ng/L for the intake water withdrawn by the mill from the Chippewa River. Most of the mercury discharged from outfall 001 is due to mercury in the river water taken into the facility and discharged with the process wastewater. Cascades Tissue has committed to mercury pollutant minimization activities to achieve further reduction in the mercury discharge to the Chippewa River. These PMP activities will include continued evaluation of ways to minimize the wastewater contribution from trace mercury levels in the process chemicals, the mercury contribution from landfill leachate, and investigation into the mercury contribution from the wastepaper recycled by the facility.

Approval of the proposed mercury variance limitation for the Cascades Tissue - Eau Claire treated wastewater discharge should result in no reduction in the existing use of the Chippewa River at Eau Claire and should not have a significant impact to bald eagles or other listed species that occur within the State of Wisconsin. The proposed permit places a daily maximum limitation on the existing discharge of mercury from Cascades Tissue and requires pollution prevention efforts during the permit term. The goal of mercury pollutant minimization program is to reduce the mercury discharge levels down to river water intake levels or less if possible. No significant impact to the fisheries, other aquatic life, and wildlife in the immediate area of the discharge from Outfall 001 is expected for the duration of this water quality variance (5 years).

The Department concludes that Cascades Tissue has met the requirements of s. NR 106.145, Wisconsin Administrative Code and s. 283.15, Wisconsin Statutes. The Department further concludes that requiring the Cascades Tissue mill to meet the 9 ng/L water quality standard for mercury at this time would result in substantial and widespread adverse social and economic impacts. **The Department therefore proposes to grant the variance for mercury.**

**Justification for Alternative Mercury Effluent Limitation
Under S. NR 106.145, Wisconsin Administrative Code**

Date – August 27, 2009

Permittee – Cascades Tissue Group Wisconsin

Application Submitted – June 30, 2008. The application concludes that the Cascades Tissue Eau Claire Mill Treatment Plant meets the findings in s. NR 106.145(1), Wisconsin Administrative Code.

Variance to water quality standards – An alternative mercury effluent limitation under s. 106.145 represents a variance to water quality standards authorized by s. 283.15, Wis. Stats.

Rationale:

S. NR 106.145(1) outlines several findings that justify expediting variances for mercury. More specifically:

a) The Department considers treating these large volumes to produce effluent with even lower concentrations to be technically and economically infeasible. This opinion is based in part on the document titled “Assessing the Economic Impacts of the Proposed Ohio EPA Water Rules on the Ohio Economy”, dated April 24, 1997 and prepared by Ohio Environmental Protection Agency, Division of Surface Water and Foster Wheeler Environmental Corporation and DRI/McGraw-Hill in support of Amended and New Rules in OAC Chapters 3745-1, -2, and -33.

b) Following the promulgation of EPA Method 1631 in October 2002, the Eau Claire mill was required to generate low-level mercury data on samples of its effluent. Those data now available demonstrate that levels necessary to meet the water quality based effluent limitations are not being achieved with the current treatment facility that is properly operated and maintained.

The Department has reviewed the application for an alternative mercury effluent limitation (AMEL). The information supplied in the application supports the establishment of an AMEL. The permittee and the Department have reached agreement on an AMEL of 12 ng/L (expressed as a daily maximum) and implementation of the pollutant minimization program (PMP).

The Department concludes that Cascades Tissue has met the requirements of s. NR 106.145, Wisconsin Administrative Code and s. 283.15, Wisconsin Statutes. The Department further concludes that requiring the Eau Claire mill to meet the water quality standard for mercury would result in the potential for substantial and widespread adverse social and economic impacts in the Eau Claire area. The Department therefore proposes to grant the variance for mercury.

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