



WPDES PERMIT

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
**PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE
ELIMINATION SYSTEM**

City of Peshtigo

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility
located at

N1890 Harbor Road, Peshtigo, Wisconsin
to

**the Peshtigo River (Water Body Identification Code number 515500), in the Lower Peshtigo River Watershed
(GB07), of the Green Bay Basin, in Marinette County**

in accordance with the effluent limitations, monitoring requirements and other conditions set
forth in this permit.

The permittee shall not discharge after the date of expiration. If the permittee wishes to continue to discharge after this expiration date an application shall be filed for reissuance of this permit, according to Chapter NR 200, Wis. Adm. Code, at least 180 days prior to the expiration date given below.

State of Wisconsin Department of Natural Resources
For the Secretary

By _____
Richard Sachs
Wastewater Specialist

Date Permit Signed/Issued

PERMIT TERM: EFFECTIVE DATE - April 01, 2010

EXPIRATION DATE - June 30, 2014

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1 Influent Requirements

1.1 Sampling Point(s)

| Sampling Point Designation | |
|----------------------------|--|
| Sampling Point Number | Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable) |
| 701 | Influent - Representative samples shall be collected from the influent flume in the metering building. |

1.2 Monitoring Requirements

The permittee shall comply with the following monitoring requirements.

1.2.1 Sampling Point 701 - Influent

| Monitoring Requirements and Limitations | | | | | |
|---|------------|-----------------|------------------|----------------------|--|
| Parameter | Limit Type | Limit and Units | Sample Frequency | Sample Type | Notes |
| Flow Rate | | MGD | Daily | Continuous | |
| BOD ₅ , Total | | mg/L | 5/Week | 24-Hr Flow Prop Comp | |
| Suspended Solids, Total | | mg/L | 5/Week | 24-Hr Flow Prop Comp | |
| Mercury, Total Recoverable | | ng/L | Quarterly | 24-Hr Flow Prop Comp | See Section 1.2.1.1 for mercury monitoring requirements. |

1.2.1.1 Mercury Monitoring

The permittee shall collect and analyze all mercury samples according to the data quality requirements of ss. NR 106.145(9) and (10), Wisconsin Administrative Code. The limit of quantitation (LOQ) used for the effluent and field blank shall be less than 1.3 ng/L, unless the samples are quantified at levels above 1.3 ng/L. The permittee shall collect at least one mercury field blank for each set of mercury samples (a set of samples may include combinations of intake, influent, effluent or other samples all collected on the same day). The permittee shall report results of samples and field blanks to the Department on Discharge Monitoring Reports.

2 In-Plant Requirements

2.1 Sampling Point(s)

| Sampling Point Designation | |
|----------------------------|---|
| Sampling Point Number | Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable) |
| 111 | Field Blank Effluent: Sample point for reporting analysis results of field blanks collected using standard sample handling procedures for grab type effluent samples for Total Recoverable Mercury at sample point 001. |

2.2 Monitoring Requirements and Limitations

The permittee shall comply with the following monitoring requirements and limitations.

2.2.1 Sampling Point 111 - Field Blank - Effluent

| Monitoring Requirements and Limitations | | | | | |
|---|------------|-----------------|------------------|-------------|--|
| Parameter | Limit Type | Limit and Units | Sample Frequency | Sample Type | Notes |
| Mercury, Total Recoverable | | ng/L | Quarterly | Blank | See Section 2.2.1.1 for mercury monitoring requirements. |

2.2.1.1 Mercury Monitoring

The permittee shall collect and analyze all mercury samples according to the data quality requirements of ss. NR 106.145(9) and (10), Wisconsin Administrative Code. The limit of quantitation (LOQ) used for the effluent and field blank shall be less than 1.3 ng/L, unless the samples are quantified at levels above 1.3 ng/L. The permittee shall collect at least one mercury field blank for each set of mercury samples (a set of samples may include combinations of intake, influent, effluent or other samples all collected on the same day). The permittee shall report results of samples and field blanks to the Department on Discharge Monitoring Reports.

3 Surface Water Requirements

3.1 Sampling Point(s)

| Sampling Point Designation | |
|----------------------------|---|
| Sampling Point Number | Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable) |
| 001 | Effluent - Representative samples shall be collected at the overflow from the chlorine contact tank. |
| 601 | Peshtigo River - Sample point for reporting water quality characteristics of the Peshtigo River. Monitoring and reporting under this sample point is voluntary on the part of the permittee and is not required by this permit. This sample point has been included in the event the permittee wishes to collect data to determine the levels of mercury in the discharge from outfall 001 that may be attributable to the intake water withdrawn from the Peshtigo River water by Badger Paper Mills, Inc. |

3.2 Monitoring Requirements and Effluent Limitations

The permittee shall comply with the following monitoring requirements and limitations.

3.2.1 Sampling Point (Outfall) 001 - Effluent

| Monitoring Requirements and Effluent Limitations | | | | | |
|--|----------------|-----------------|------------------|----------------------|---|
| Parameter | Limit Type | Limit and Units | Sample Frequency | Sample Type | Notes |
| BOD ₅ , Total | Weekly Avg | 45 mg/L | 5/Week | 24-Hr Flow Prop Comp | |
| | Monthly Avg | 30 mg/L | | | |
| Suspended Solids, Total | Weekly Avg | 45 mg/L | 5/Week | 24-Hr Flow Prop Comp | |
| | Monthly Avg | 30 mg/L | | | |
| pH Field | Daily Min | 6.0 su | 5/Week | Grab | |
| | Daily Max | 9.0 su | | | |
| Phosphorus, Total | Monthly Avg | 1.0 mg/L | 5/Week | 24-Hr Flow Prop Comp | |
| Fecal Coliform | Geometric Mean | 400 #/100 ml | Weekly | Grab | Applies May 1 - September 30, each year. |
| Chlorine, Total Residual | Daily Max | 38 µg/L | Daily | Grab | Applies May 1 - September 30, each year. |
| Mercury, Total Recoverable | Daily Max | 11 ng/L | Quarterly | Grab | Alternative effluent limit. See Section 3.2.1.2 for mercury monitoring requirements and Section 5.1 for pollutant minimization program implementation requirements. |
| Nitrogen, Ammonia (NH ₃ -N) Total | | mg/L | Monthly | 24-Hr Flow Prop Comp | Monitoring required July, 2012 - June, 2013. |

| Monitoring Requirements and Effluent Limitations | | | | | |
|---|-------------------|------------------------|-------------------------|----------------------|--|
| Parameter | Limit Type | Limit and Units | Sample Frequency | Sample Type | Notes |
| Acute WET | | TU _a | See Listed Qtr(s) | 24-Hr Flow Prop Comp | See Section 3.2.1.3 for WET testing schedule and requirements. |
| Chronic WET | | rTU _c | | | |

3.2.1.1 Applicable Mass Limits for Total Residual Chlorine

The applicable mass limit for Total Residual Chlorine is 1.4 lb/day pounds per day (daily maximum).

3.2.1.2 Mercury Monitoring

The permittee shall collect and analyze all mercury samples according to the data quality requirements of ss. NR 106.145(9) and (10), Wisconsin Administrative Code. The limit of quantitation (LOQ) used for the effluent and field blank shall be less than 1.3 ng/L, unless the samples are quantified at levels above 1.3 ng/L. The permittee shall collect at least one mercury field blank for each set of mercury samples (a set of samples may include combinations of intake, influent, effluent or other samples all collected on the same day). The permittee shall report results of samples and field blanks to the Department on Discharge Monitoring Reports.

3.2.1.3 Whole Effluent Toxicity (WET) Testing

Primary Control Water: Grab sample collected from the Peshtigo River upstream and out of the influence of the permittee’s discharge and any other known discharge – unless the use of a different control water source is approved by the Department prior to use.

In-stream Waste Concentration (IWC): 15%

Dilution series: At least five effluent concentrations and dual controls must be included in each test.

- **Acute:** 100, 50, 25, 12.5, 6.25% and any additional selected by the permittee.
- **Chronic:** 100, 30, 10, 3, 1% and any additional selected by the permittee.

WET Testing Frequency: Tests are required during the following calendar quarters.

- **Acute:**
 - July 1, 2010 – September 30, 2010
 - January 1, 2011 – March 31, 2011
 - April 1, 2012 – June 30, 2012
 - October 1, 2013 – December 31, 2013
- **Chronic:**
 - July 1, 2010 – September 30, 2010
 - January 1, 2011 – March 31, 2011
 - April 1, 2012 – June 30, 2012
 - October 1, 2013 – December 31, 2013

Reporting: The permittee shall report test results on the Discharge Monitoring Report form, and also complete the "Whole Effluent Toxicity Test Report Form" (Section 6, "State of Wisconsin Aquatic Life Toxicity Testing Methods Manual, 2nd Edition"), for each test. The original, complete, signed version of the Whole Effluent Toxicity Test Report Form shall be sent to the Biomonitoring Coordinator, Bureau of Watershed Management, 101 S. Webster St.,

P.O. Box 7921, Madison, WI 53707-7921, within 45 days of test completion. The original Discharge Monitoring Report (DMR) form and one copy shall be sent to the contact and location provided on the DMR by the required deadline.

Determination of Positive Results: An acute toxicity test shall be considered positive if the Toxic Unit - Acute (TU_a) is greater than 1.0 for either species. The TU_a shall be calculated as follows: If $LC_{50} \geq 100$, then $TU_a = 1.0$. If LC_{50} is < 100 , then $TU_a = 100 \div LC_{50}$. A chronic toxicity test shall be considered positive if the Relative Toxic Unit - Chronic (rTU_c) is greater than 1.0 for either species. The rTU_c shall be calculated as follows: If $IC_{25} \geq IWC$, then $rTU_c = 1.0$. If $IC_{25} < IWC$, then $rTU_c = IWC \div IC_{25}$.

Additional Testing Requirements: Within 90 days of a test which showed positive results, the permittee shall submit the results of at least 2 retests to the Biomonitoring Coordinator on "Whole Effluent Toxicity Test Report Forms". The retests shall be completed using the same species and test methods specified for the original test (see the Standard Requirements section herein).

3.2.2 Sampling Point 601 - Peshtigo River

| Parameter | Units | Sample Frequency | Sample Type | Notes |
|----------------------------|-------|------------------|-------------|--|
| Mercury, Total Recoverable | ng/L | Per Occurrence | Grab | Voluntary monitoring of the Peshtigo River, see Section 3.2.2.1. |

3.2.2.1 Peshtigo River Mercury Monitoring

The permittee may monitor and report the results of mercury samples collected from the Peshtigo River to determine the levels of mercury in the discharge from outfall 001 that may be attributable to the intake water withdrawn from the Peshtigo River water by Badger Paper Mills, Inc. The limit of quantitation (LOQ) shall be less than 1.3 ng/L, unless the samples are quantified at levels above 1.3 ng/L. The permittee shall collect at least one mercury field blank for each set of mercury samples (a set of samples may include combinations of intake, influent, effluent or other samples all collected on the same day). The permittee shall report results of samples and field blanks to the Department on Discharge Monitoring Reports.

4 Land Application Requirements

4.1 Sampling Point(s)

The discharge(s) shall be limited to land application of the waste type(s) designated for the listed sampling point(s) on Department approved land spreading sites or by hauling to another facility.

| Sampling Point Designation | |
|----------------------------|---|
| Sampling Point Number | Sampling Point Location, Waste Type/Sample Contents and Treatment Description (as applicable) |
| 005 | Liquid Sludge - Representative samples of the aerobically digested, gravity thickened liquid shall be collected from the sludge storage tank after complete mixing. |

4.2 Monitoring Requirements and Limitations

The permittee shall comply with the following monitoring requirements and limitations.

4.2.1 Sampling Point (Outfall) 005 - Liquid Sludge

| Monitoring Requirements and Limitations | | | | | |
|---|--------------|-----------------|------------------|-------------|-------|
| Parameter | Limit Type | Limit and Units | Sample Frequency | Sample Type | Notes |
| Solids, Total | | Percent | Quarterly | Composite | |
| Arsenic Dry Wt | High Quality | 41 mg/kg | Quarterly | Composite | |
| | Ceiling | 75 mg/kg | | | |
| Cadmium Dry Wt | High Quality | 39 mg/kg | Quarterly | Composite | |
| | Ceiling | 85 mg/kg | | | |
| Copper Dry Wt | High Quality | 1,500 mg/kg | Quarterly | Composite | |
| | Ceiling | 4,300 mg/kg | | | |
| Lead Dry Wt | High Quality | 300 mg/kg | Quarterly | Composite | |
| | Ceiling | 840 mg/kg | | | |
| Mercury Dry Wt | High Quality | 17 mg/kg | Quarterly | Composite | |
| | Ceiling | 57 mg/kg | | | |
| Molybdenum Dry Wt | Ceiling | 75 mg/kg | Quarterly | Composite | |
| Nickel Dry Wt | High Quality | 420 mg/kg | Quarterly | Composite | |
| | Ceiling | 420 mg/kg | | | |
| Selenium Dry Wt | High Quality | 100 mg/kg | Quarterly | Composite | |
| | Ceiling | 100 mg/kg | | | |
| Zinc Dry Wt | High Quality | 2,800 mg/kg | Quarterly | Composite | |
| | Ceiling | 7,500 mg/kg | | | |
| Radium 226 Dry Wt | | pCi/g | Quarterly | Composite | |
| Nitrogen, Total Kjeldahl | | Percent | Quarterly | Composite | |
| Nitrogen, Ammonium (NH ₄ -N) Total | | Percent | Quarterly | Composite | |
| Phosphorus, Total | | Percent | Quarterly | Composite | |

| Monitoring Requirements and Limitations | | | | | |
|---|--------------|-----------------|------------------|-------------|---|
| Parameter | Limit Type | Limit and Units | Sample Frequency | Sample Type | Notes |
| Phosphorus, Water Extractable | | % of Tot P | Quarterly | Composite | |
| Potassium, Total Recoverable | | Percent | Quarterly | Composite | |
| PCB Total Dry Wt | High Quality | 10 mg/kg | Once | Composite | See Sections 4.2.1.4 and 6.4.6 for PCB monitoring requirements. |
| | Ceiling | 50 mg/kg | | | |

| Other Sludge Requirements | |
|---|------------------|
| Sludge Requirements | Sample Frequency |
| List 3 Requirements – Pathogen Control: The requirements in List 3 shall be met prior to land application of sludge. | Quarterly |
| List 4 Requirements – Vector Attraction Reduction: The vector attraction reduction shall be satisfied prior to, or at the time of land application as specified in List 4. | Quarterly |

4.2.1.1 List 2 Analysis

If the monitoring frequency for List 2 parameters is more frequent than "Annual" then the sludge may be analyzed for the List 2 parameters just prior to each land application season rather than at the more frequent interval specified.

4.2.1.2 Changes in Feed Sludge Characteristics

If a change in feed sludge characteristics, treatment process, or operational procedures occurs which may result in a significant shift in sludge characteristics, the permittee shall reanalyze the sludge for List 1, 2, 3 and 4 parameters each time such change occurs.

4.2.1.3 Sludge Which Exceeds the High Quality Limit

Cumulative pollutant loading records shall be kept for all bulk land application of sludge which does not meet the high quality limit for any parameter. This requirement applies for the entire calendar year in which any exceedance of Table 3 of s. NR 204.07(5)(c), is experienced. Such loading records shall be kept for all List 1 parameters for each site land applied in that calendar year. The formula to be used for calculating cumulative loading is as follows:

$$[(\text{Pollutant concentration (mg/kg)} \times \text{dry tons applied/ac}) \div 500] + \text{previous loading (lbs/acre)} = \text{cumulative lbs pollutant per acre}$$

When a site reaches 90% of the allowable cumulative loading for any metal established in Table 2 of s. NR 204.07(5)(b), the Department shall be so notified through letter or in the comment section of the annual land application report (3400-55).

4.2.1.4 Sludge Analysis for PCBs

The permittee shall analyze the sludge for Total PCBs one time during 2011. The results shall be reported as "PCB Total Dry Wt". Either congener-specific analysis or Aroclor analysis shall be used to determine the PCB concentration. The permittee may determine whether Aroclor or congener specific analysis is performed. Analyses shall be performed in accordance with Table EM in s. NR 219.04, Wis. Adm. Code and the conditions specified in

Standard Requirements of this permit. PCB results shall be submitted by January 31, following the specified year of analysis.

4.2.1.5 Lists 1, 2, 3, and 4

| List 1 TOTAL SOLIDS AND METALS | |
|--|--|
| See the Monitoring Requirements and Limitations table above for monitoring frequency and limitations for the List 1 parameters | |
| Solids, Total (percent) | |
| Arsenic, mg/kg (dry weight) | |
| Cadmium, mg/kg (dry weight) | |
| Copper, mg/kg (dry weight) | |
| Lead, mg/kg (dry weight) | |
| Mercury, mg/kg (dry weight) | |
| Molybdenum, mg/kg (dry weight) | |
| Nickel, mg/kg (dry weight) | |
| Selenium, mg/kg (dry weight) | |
| Zinc, mg/kg (dry weight) | |
| Radium-226, pCi/g (dry weight) | |

| List 2 NUTRIENTS | |
|--|--|
| See the Monitoring Requirements and Limitations table above for monitoring frequency for the List 2 parameters | |
| Solids, Total (percent) | |
| Nitrogen Total Kjeldahl (percent) | |
| Nitrogen Ammonium (NH ₄ -N) Total (percent) | |
| Phosphorus Total as P (percent) | |
| Phosphorus, Water Extractable (as percent of Total P) | |
| Potassium Total Recoverable (percent) | |

| List 3 PATHOGEN CONTROL FOR CLASS B SLUDGE | | |
|---|-------------------------|-----------|
| The permittee shall implement pathogen control as listed in List 3. The Department shall be notified of the pathogen control utilized and shall be notified when the permittee decides to utilize alternative pathogen control. | | |
| The following requirements shall be met prior to land application of sludge. | | |
| Parameter | Unit | Limit |
| Fecal Coliform * | MPN/gTS or CFU/gTS | 2,000,000 |
| OR, ONE OF THE FOLLOWING PROCESS OPTIONS | | |
| Aerobic Digestion | Air Drying | |
| Anaerobic Digestion | Composting | |
| Alkaline Stabilization | PSRP Equivalent Process | |
| * The Fecal Coliform limit shall be reported as the geometric mean of 7 discrete samples on a dry weight basis. | | |

List 4

VECTOR ATTRACTION REDUCTION

The permittee shall implement any one of the vector attraction reduction options specified in List 4. The Department shall be notified of the option utilized and shall be notified when the permittee decides to utilize an alternative option.

One of the following shall be satisfied prior to, or at the time of land application as specified in List 4.

| Option | Limit | Where/When it Shall be Met |
|-------------------------------|---|-----------------------------------|
| Volatile Solids Reduction | ≥38% | Across the process |
| Specific Oxygen Uptake Rate | ≤1.5 mg O ₂ /hr/g TS | On aerobic stabilized sludge |
| Anaerobic bench-scale test | <17 % VS reduction | On anaerobic digested sludge |
| Aerobic bench-scale test | <15 % VS reduction | On aerobic digested sludge |
| Aerobic Process | >14 days, Temp >40°C and Avg. Temp > 45°C | On composted sludge |
| pH adjustment | >12 S.U. (for 2 hours) and >11.5 (for an additional 22 hours) | During the process |
| Drying without primary solids | >75 % TS | When applied or bagged |
| Drying with primary solids | >90 % TS | When applied or bagged |
| Equivalent Process | Approved by the Department | Varies with process |
| Injection | - | When applied |
| Incorporation | - | Within 6 hours of application |

4.2.1.6 Daily Land Application Log

| Daily Land Application Log | | |
|---|--|-------------------------|
| Discharge Monitoring Requirements and Limitations | | |
| <p>The permittee shall maintain a daily land application log for biosolids land applied each day when land application occurs. The following minimum records must be kept, in addition to all analytical results for the biosolids land applied. The log book records shall form the basis for the annual land application report requirements.</p> | | |
| Parameters | Units | Sample Frequency |
| DNR Site Number(s) | Number | Daily as used |
| Outfall number applied | Number | Daily as used |
| Acres applied | Acres | Daily as used |
| Amount applied | As appropriate * /day | Daily as used |
| Application rate per acre | unit */acre | Daily as used |
| Nitrogen applied per acre | lb/acre | Daily as used |
| Method of Application | Injection, Incorporation, or surface applied | Daily as used |

* gallons, cubic yards, dry US Tons or dry Metric Tons

5 Schedules of Compliance

5.1 Mercury Pollutant Minimization Program

As a condition of reissuance of this permit with an alternative mercury effluent limitation, the permittee shall implement a Mercury Pollutant Minimization Program, as required under ch. NR 106.145(7) Wis. Admin. Code.

| Required Action | Date Due |
|--|------------|
| Implementation and Annual Status Report: The permittee shall implement the Mercury Pollutant Minimization Program, as submitted to the Department on February 18, 2009, and shall submit an annual progress report on mercury source reduction efforts by the due date. | 12/31/2010 |
| Installation and Maintenance of Amalgam Separators: The permittee shall require the installation of amalgam separators - and an on-going program to maintain those separators - in all dental facilities in its service area by the due date | 06/30/2011 |
| Implementation and Annual Status Report: The permittee shall implement the Mercury Pollutant Minimization Program, as submitted to the Department on February 18, 2009, and shall submit an annual progress report on mercury source reduction efforts by the due date. | 12/31/2011 |
| Implementation and Annual Status Report: The permittee shall implement the Mercury Pollutant Minimization Program, as submitted to the Department on February 18, 2009, and shall submit an annual progress report on mercury source reduction efforts by the due date. | 12/31/2012 |
| Implementation and Annual Status Report: The permittee shall implement the Mercury Pollutant Minimization Program, as submitted to the Department on February 18, 2009, and shall submit an annual progress report on mercury source reduction efforts by the due date. | 12/31/2013 |

6 Standard Requirements

NR 205, Wisconsin Administrative Code: The conditions in ss. NR 205.07(1) and NR 205.07(2), Wis. Adm. Code, are included by reference in this permit. The permittee shall comply with all of these requirements. Some of these requirements are outlined in the Standard Requirements section of this permit. Requirements not specifically outlined in the Standard Requirement section of this permit can be found in ss. NR 205.07(1) and NR 205.07(2).

6.1 Reporting and Monitoring Requirements

6.1.1 Monitoring Results

Monitoring results obtained during the previous month shall be summarized and reported on a Department Wastewater Discharge Monitoring Report. The report may require reporting of any or all of the information specified below under 'Recording of Results'. This report is to be returned to the Department no later than the date indicated on the form. When submitting a paper Discharge Monitoring Report form, the original and one copy of the Wastewater Discharge Monitoring Report Form shall be submitted to the return address printed on the form. A copy of the Wastewater Discharge Monitoring Report Form or an electronic file of the report shall be retained by the permittee.

All Wastewater Discharge Monitoring Reports submitted to the Department should be submitted using the electronic Discharge Monitoring Report system. Permittees who may be unable to submit Wastewater Discharge Monitoring Reports electronically may request approval to submit paper DMRs upon demonstration that electronic reporting is not feasible or practicable.

If the permittee monitors any pollutant more frequently than required by this permit, the results of such monitoring shall be included on the Wastewater Discharge Monitoring Report.

The permittee shall comply with all limits for each parameter regardless of monitoring frequency. For example, monthly, weekly, and/or daily limits shall be met even with monthly monitoring. The permittee may monitor more frequently than required for any parameter.

An Electronic Discharge Monitoring Report Certification sheet shall be signed and submitted with each electronic Discharge Monitoring Report submittal. This certification sheet, which is not part of the electronic report form, shall be signed by a principal executive officer, a ranking elected official or other duly authorized representative and shall be mailed to the Department at the time of submittal of the electronic Discharge Monitoring Report. The certification sheet certifies that the electronic report form is true, accurate and complete. Paper reports shall be signed by a principal executive officer, a ranking elected official, or other duly authorized representative.

6.1.2 Sampling and Testing Procedures

Sampling and laboratory testing procedures shall be performed in accordance with Chapters NR 218 and NR 219, Wis. Adm. Code and shall be performed by a laboratory certified or registered in accordance with the requirements of ch. NR 149, Wis. Adm. Code. Groundwater sample collection and analysis shall be performed in accordance with ch. NR 140, Wis. Adm. Code. The analytical methodologies used shall enable the laboratory to quantitate all substances for which monitoring is required at levels below the effluent limitation. If the required level cannot be met by any of the methods available in NR 219, Wis. Adm. Code, then the method with the lowest limit of detection shall be selected. Additional test procedures may be specified in this permit.

6.1.3 Recording of Results

The permittee shall maintain records which provide the following information for each effluent measurement or sample taken:

- the date, exact place, method and time of sampling or measurements;

- the individual who performed the sampling or measurements;
- the date the analysis was performed;
- the individual who performed the analysis;
- the analytical techniques or methods used; and
- the results of the analysis.

6.1.4 Reporting of Monitoring Results

The permittee shall use the following conventions when reporting effluent monitoring results:

- Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 0.1 mg/L, report the pollutant concentration as < 0.1 mg/L.
- Pollutant concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified.
- For the purposes of reporting a calculated result, average or a mass discharge value, the permittee may substitute a 0 (zero) for any pollutant concentration that is less than the limit of detection. However, if the effluent limitation is less than the limit of detection, the department may substitute a value other than zero for results less than the limit of detection, after considering the number of monitoring results that are greater than the limit of detection and if warranted when applying appropriate statistical techniques.

6.1.5 Compliance Maintenance Annual Reports

Compliance Maintenance Annual Reports (CMAR) shall be completed using information obtained over each calendar year regarding the wastewater conveyance and treatment system. The CMAR shall be submitted by the permittee in accordance with ch. NR 208, Wis. Adm. Code, by June 30, each year on an electronic report form provided by the Department.

In the case of a publicly owned treatment works, a resolution shall be passed by the governing body and submitted as part of the CMAR, verifying its review of the report and providing responses as required. Private owners of wastewater treatment works are not required to pass a resolution; but they must provide an Owner Statement and responses as required, as part of the CMAR submittal.

A separate CMAR certification document, that is not part of the electronic report form, shall be mailed to the Department at the time of electronic submittal of the CMAR. The CMAR certification shall be signed and submitted by an authorized representative of the permittee. The certification shall be submitted by mail. The certification shall verify the electronic report is complete, accurate and contains information from the owner's treatment works.

6.1.6 Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least 3 years from the date of the sample, measurement, report or application. All pertinent sludge information, including permit application information and other documents specified in this permit or s. NR 204.06(9), Wis. Adm. Code shall be retained for a minimum of 5 years.

6.1.7 Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or correct information to the Department.

6.2 System Operating Requirements

6.2.1 Noncompliance Notification

- The permittee shall report the following types of noncompliance by a telephone call to the Department's regional office within 24 hours after becoming aware of the noncompliance:
 - any noncompliance which may endanger health or the environment;
 - any violation of an effluent limitation resulting from an unanticipated bypass;
 - any violation of an effluent limitation resulting from an upset; and
 - any violation of a maximum discharge limitation for any of the pollutants listed by the Department in the permit, either for effluent or sludge.
- A written report describing the noncompliance shall also be submitted to the Department's regional office within 5 days after the permittee becomes aware of the noncompliance. On a case-by-case basis, the Department may waive the requirement for submittal of a written report within 5 days and instruct the permittee to submit the written report with the next regularly scheduled monitoring report. In either case, the written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; the steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance; and if the noncompliance has not been corrected, the length of time it is expected to continue.

NOTE: Section 292.11(2)(a), Wisconsin Statutes, requires any person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance to notify the Department of Natural Resources **immediately** of any discharge not authorized by the permit. The discharge of a hazardous substance that is not authorized by this permit or that violates this permit may be a hazardous substance spill. To report a hazardous substance spill, call DNR's 24-hour HOTLINE at **1-800-943-0003**

6.2.2 Flow Meters

Flow meters shall be calibrated annually, as per s. NR 218.06, Wis. Adm. Code.

6.2.3 Raw Grit and Screenings

All raw grit and screenings shall be disposed of at a properly licensed solid waste facility or picked up by a licensed waste hauler. If the facility or hauler are located in Wisconsin, then they shall be licensed under chs. NR 500-536, Wis. Adm. Code.

6.2.4 Sludge Management

All sludge management activities shall be conducted in compliance with ch. NR 204 "Domestic Sewage Sludge Management", Wis. Adm. Code.

6.2.5 Prohibited Wastes

Under no circumstances may the introduction of wastes prohibited by s. NR 211.10, Wis. Adm. Code, be allowed into the waste treatment system. Prohibited wastes include those:

- which create a fire or explosion hazard in the treatment work;
- which will cause corrosive structural damage to the treatment work;
- solid or viscous substances in amounts which cause obstructions to the flow in sewers or interference with the proper operation of the treatment work;
- wastewaters at a flow rate or pollutant loading which are excessive over relatively short time periods so as to cause a loss of treatment efficiency; and
- changes in discharge volume or composition from contributing industries which overload the treatment works or cause a loss of treatment efficiency.

6.2.6 Unscheduled Bypassing

Any unscheduled bypass or overflow of wastewater at the treatment works or from the collection system is prohibited, and the Department may take enforcement action against a permittee for such occurrences under s. 283.89, Wis. Stats., unless:

- The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
- The permittee notified the Department as required in this Section.

Whenever there is an unscheduled bypass or overflow occurrence at the treatment works or from the collection system, the permittee shall notify the Department within 24 hours of initiation of the bypass or overflow occurrence by telephoning the wastewater staff in the regional office as soon as reasonably possible (FAX, email or voice mail, if staff are unavailable).

In addition, the permittee shall within 5 days of conclusion of the bypass or overflow occurrence report the following information to the Department in writing:

- Reason the bypass or overflow occurred, or explanation of other contributing circumstances that resulted in the overflow event. If the overflow or bypass is associated with wet weather, provide data on the amount and duration of the rainfall or snow melt for each separate event.
- Date the bypass or overflow occurred.
- Location where the bypass or overflow occurred.
- Duration of the bypass or overflow and estimated wastewater volume discharged.
- Steps taken or the proposed corrective action planned to prevent similar future occurrences.
- Any other information the permittee believes is relevant.

6.2.7 Scheduled Bypassing

Any construction or normal maintenance which results in a bypass of wastewater from a treatment system is prohibited unless authorized by the Department in writing. If the Department determines that there is significant public interest in the proposed action, the Department may schedule a public hearing or notice a proposal to approve the bypass. Each request shall specify the following minimum information:

- proposed date of bypass;
- estimated duration of the bypass;

- estimated volume of the bypass;
- alternatives to bypassing; and
- measures to mitigate environmental harm caused by the bypass.

6.2.8 Ammonia Limit Not Needed - Continue to Optimize Removal of Ammonia

Applying the procedures in s. NR 106.05, Wis. Adm. Code, to ammonia data that is representative of the current operations of the wastewater treatment plant resulted in a determination that ammonia effluent limits are not necessary in this permit. Pursuant to NR 106.33, throughout the term of this permit, the wastewater treatment plant shall continue to be operated in a manner that optimizes the removal of ammonia within the design capabilities of the wastewater treatment plant.

6.2.9 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit. The wastewater treatment facility shall be under the direct supervision of a state certified operator as required in s. NR 108.06(2), Wis. Adm. Code. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training as required in ch. NR 114, Wis. Adm. Code, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

6.3 Surface Water Requirements

6.3.1 Permittee-Determined Limit of Quantitation Incorporated into this Permit

For pollutants with water quality-based effluent limits below the Limit of Quantitation (LOQ) in this permit, the LOQ calculated by the permittee and reported on the Discharge Monitoring Reports (DMRs) is incorporated by reference into this permit. The LOQ shall be reported on the DMRs, shall be the lowest quantifiable level practicable, and shall be no greater than the minimum level (ML) specified in or approved under 40 CFR Part 136 for the pollutant at the time this permit was issued, unless this permit specifies a higher LOQ.

6.3.2 Appropriate Formulas for Effluent Calculations

The permittee shall use the following formulas for calculating effluent results to determine compliance with average limits and mass limits:

Weekly/Monthly average concentration = the sum of all daily results for that week/month, divided by the number of results during that time period.

Weekly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the week.

Monthly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the month.

6.3.3 Visible Foam or Floating Solids

There shall be no discharge of floating solids or visible foam in other than trace amounts.

6.3.4 Percent Removal

During any 30 consecutive days, the average effluent concentrations of BOD₅ and of total suspended solids shall not exceed 15% of the average influent concentrations, respectively. This requirement does not apply to removal of total suspended solids if the permittee operates a lagoon system and has received a variance for suspended solids granted under NR 210.07(2), Wis. Adm. Code.

6.3.5 Fecal Coliforms

The limit for fecal coliforms shall be expressed as a monthly geometric mean.

6.3.6 Seasonal Disinfection

Disinfection shall be provided from May 1 through September 30 of each year. Monitoring requirements and the limitation for fecal coliforms apply only during the period in which disinfection is required. Whenever chlorine is used for disinfection or other uses, the limitations and monitoring requirements for residual chlorine shall apply. A dechlorination process shall be in operation whenever chlorine is used.

6.3.7 Whole Effluent Toxicity (WET) Monitoring Requirements

In order to determine the potential impact of the discharge on aquatic organisms, static-renewal toxicity tests shall be performed on the effluent in accordance with the procedures specified in the "*State of Wisconsin Aquatic Life Toxicity Testing Methods Manual, 2nd Edition*" (PUB-WT-797, November 2004) as required by NR 219.04, Table A, Wis. Adm. Code). All of the WET tests required in this permit, including any required retests, shall be conducted on the *Ceriodaphnia dubia* and fathead minnow species. Receiving water samples shall not be collected from any point in contact with the permittee's mixing zone and every attempt shall be made to avoid contact with any other discharge's mixing zone.

6.3.8 Whole Effluent Toxicity (WET) Identification and Reduction

Within 60 days of a retest which showed positive results, the permittee shall submit a written report to the Biomonitoring Coordinator, Bureau of Watershed Management, 101 S. Webster St., PO Box 7921, Madison, WI 53707-7921, which details the following:

- A description of actions the permittee has taken or will take to remove toxicity and to prevent the recurrence of toxicity;
- A description of toxicity reduction evaluation (TRE) investigations that have been or will be done to identify potential sources of toxicity, including some or all of the following actions:
 - (a) Evaluate the performance of the treatment system to identify deficiencies contributing to effluent toxicity (e.g., operational problems, chemical additives, incomplete treatment)
 - (b) Identify the compound(s) causing toxicity
 - (c) Trace the compound(s) causing toxicity to their sources (e.g., industrial, commercial, domestic)
 - (d) Evaluate, select, and implement methods or technologies to control effluent toxicity (e.g., in-plant or pretreatment controls, source reduction or removal)
- Where corrective actions including a TRE have not been completed, an expeditious schedule under which corrective actions will be implemented;
- If no actions have been taken, the reason for not taking action.

The permittee may also request approval from the Department to postpone additional retests in order to investigate the source(s) of toxicity. Postponed retests must be completed after toxicity is believed to have been removed.

6.4 Land Application Requirements

6.4.1 Sludge Management Program Standards And Requirements Based Upon Federally Promulgated Regulations

In the event that new federal sludge standards or regulations are promulgated, the permittee shall comply with the new sludge requirements by the dates established in the regulations, if required by federal law, even if the permit has not yet been modified to incorporate the new federal regulations.

6.4.2 General Sludge Management Information

The General Sludge Management Form 3400-48 shall be completed and submitted prior to any significant sludge management changes.

6.4.3 Sludge Samples

All sludge samples shall be collected at a point and in a manner which will yield sample results which are representative of the sludge being tested, and collected at the time which is appropriate for the specific test.

6.4.4 Land Application Characteristic Report

Each report shall consist of a Characteristic Form 3400-49 and Lab Report, unless approval for not submitting the lab reports has been given. Both reports shall be submitted by January 31 following each year of analysis.

The permittee shall use the following convention when reporting sludge monitoring results: Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 1.0 mg/kg, report the pollutant concentration as < 1.0 mg/kg .

All results shall be reported on a dry weight basis.

6.4.5 Calculation of Water Extractable Phosphorus

The permittee shall use the following formula to calculate and report Water Extractable Phosphorus:

Water Extractable Phosphorus (% of Total P) =

$$[\text{Water Extractable Phosphorus (mg/kg, dry wt)} \div \text{Total Phosphorus (mg/kg, dry wt)}] \times 100$$

6.4.6 Monitoring and Calculating PCB Concentrations in Sludge

When sludge analysis for "PCB, Total Dry Wt" is required by this permit, the PCB concentration in the sludge shall be determined as follows.

Either congener-specific analysis or Aroclor analysis shall be used to determine the PCB concentration. The permittee may determine whether Aroclor or congener specific analysis is performed. Analyses shall be performed in accordance with the following provisions and Table EM in s. NR 219.04, Wis. Adm. Code.

- EPA Method 1668 may be used to test for all PCB congeners. If this method is employed, all PCB congeners shall be delineated. Non-detects shall be treated as zero. The values that are between the limit of detection and the limit of quantitation shall be used when calculating the total value of all congeners. All results shall be added together and the total PCB concentration by dry weight reported. **Note:** It is recognized that a number of the congeners will co-elute with others, so there will not be 209 results to sum.

- EPA Method 8082A shall be used for PCB-Aroclor analysis and may be used for congener specific analysis as well. If congener specific analysis is performed using Method 8082A, the list of congeners tested shall include at least congener numbers 5, 18, 31, 44, 52, 66, 87, 101, 110, 138, 141, 151, 153, 170, 180, 183, 187, and 206 plus any other additional congeners which might be reasonably expected to occur in the particular sample. For either type of analysis, the sample shall be extracted using the Soxhlet extraction (EPA Method 3540C) (or the Soxhlet Dean-Stark modification) or the pressurized fluid extraction (EPA Method 3545A). If Aroclor analysis is performed using Method 8082A, clean up steps of the extract shall be performed as necessary to remove interference and to achieve as close to a limit of detection of 0.11 mg/kg as possible. Reporting protocol, consistent with s. NR 106.07(6)(e), should be as follows: If all Aroclors are less than the LOD, then the Total PCB Dry Wt result should be reported as less than the highest LOD. If a single Aroclor is detected then that is what should be reported for the Total PCB result. If multiple Aroclors are detected, they should be summed and reported as Total PCBs. If congener specific analysis is done using Method 8082A, clean up steps of the extract shall be performed as necessary to remove interference and to achieve as close to a limit of detection of 0.003 mg/kg as possible for each congener. If the aforementioned limits of detection cannot be achieved after using the appropriate clean up techniques, a reporting limit that is achievable for the Aroclors or each congener for the sample shall be determined. This reporting limit shall be reported and qualified indicating the presence of an interference. The lab conducting the analysis shall perform as many of the following methods as necessary to remove interference:

| | |
|------------------------|---|
| 3620C – Florisil | 3611B - Alumina |
| 3640A - Gel Permeation | 3660B - Sulfur Clean Up (using copper shot instead of powder) |
| 3630C - Silica Gel | 3665A - Sulfuric Acid Clean Up |

6.4.7 Land Application Report

Land Application Report Form 3400-55 shall be submitted by January 31, following each year non-exceptional quality sludge is land applied. Non-exceptional quality sludge is defined in s. NR 204.07(4), Wis. Adm. Code.

6.4.8 Other Methods of Disposal or Distribution Report

The permittee shall submit Report Form 3400-52 by January 31, following each year sludge is hauled, landfilled, incinerated, or when exceptional quality sludge is distributed or land applied.

6.4.9 Approval to Land Apply

Bulk non-exceptional quality sludge as defined in s. NR 204.07(4), Wis. Adm. Code, may not be applied to land without a written approval letter or Form 3400-122 from the Department unless the Permittee has obtained permission from the Department to self approve sites in accordance with s. NR 204.06 (6), Wis. Adm. Code. Analysis of sludge characteristics is required prior to land application. Application on frozen or snow covered ground is restricted to the extent specified in s. NR 204.07(3) (1), Wis. Adm. Code.

6.4.10 Soil Analysis Requirements

Each site requested for approval for land application must have the soil tested prior to use. Each approved site used for land application must subsequently be soil tested such that there is at least one valid soil test in the four years prior to land application. All soil sampling and submittal of information to the testing laboratory shall be done in accordance with UW Extension Bulletin A-2100. The testing shall be done by the UW Soils Lab in Madison or Marshfield, WI or at a lab approved by UW. The test results including the crop recommendations shall be submitted to the DNR contact listed for this permit, as they are available. Application rates shall be determined based on the crop nitrogen recommendations and with consideration for other sources of nitrogen applied to the site.

6.4.11 Land Application Site Evaluation

For non-exceptional quality sludge, as defined in s. NR 204.07(4), Wis. Adm. Code, a Land Application Site Request Form 3400-053 shall be submitted to the Department for the proposed land application site. The Department will evaluate the proposed site for acceptability and will either approve or deny use of the proposed site. The permittee may obtain permission to approve their own sites in accordance with s. NR 204.06(6), Wis. Adm. Code.

6.4.12 Class B Sludge: Fecal Coliform Limitation

Compliance with the fecal coliform limitation for Class B sludge shall be demonstrated by calculating the geometric mean of at least 7 separate samples. (Note that a Total Solids analysis must be done on each sample). The geometric mean shall be less than 2,000,000 MPN or CFU/g TS. Calculation of the geometric mean can be done using one of the following 2 methods.

Method 1:

$$\text{Geometric Mean} = (X_1 \times X_2 \times X_3 \dots \times X_n)^{1/n}$$

Where X = Coliform Density value of the sludge sample, and where n = number of samples (at least 7)

Method 2:

$$\text{Geometric Mean} = \text{antilog}[(X_1 + X_2 + X_3 \dots + X_n) \div n]$$

Where X = log₁₀ of Coliform Density value of the sludge sample, and where n = number of samples (at least 7)

Example for Method 2

| Sample Number | Coliform Density of Sludge Sample | log ₁₀ |
|---------------|-----------------------------------|-------------------|
| 1 | 6.0 x 10 ⁵ | 5.78 |
| 2 | 4.2 x 10 ⁶ | 6.62 |
| 3 | 1.6 x 10 ⁶ | 6.20 |
| 4 | 9.0 x 10 ⁵ | 5.95 |
| 5 | 4.0 x 10 ⁵ | 5.60 |
| 6 | 1.0 x 10 ⁶ | 6.00 |
| 7 | 5.1 x 10 ⁵ | 5.71 |

The geometric mean for the seven samples is determined by averaging the log₁₀ values of the coliform density and taking the antilog of that value.

$$(5.78 + 6.62 + 6.20 + 5.95 + 5.60 + 6.00 + 5.71) \div 7 = 5.98$$

$$\text{The antilog of } 5.98 = 9.5 \times 10^5$$

6.4.13 Class B Sludge - Vector Control: Incorporation

Class B sludge shall be incorporated within 6 hours of surface application, or as approved by the Department.

6.4.14 Land Application of Sludge Which Contains Elevated Levels of Radium-226

When contributory water supplies exceed 2 pci per liter of Radium 226, monitoring for Radium 226 in sludge is required. Sludge containing Radium 226 shall be land applied in accordance with the requirements in s. NR 204.07(3)(n), Wis. Adm. Code.

7 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

| Description | Date | Page |
|--|---|------|
| Mercury Pollutant Minimization Program -Implementation and Annual Status Report | December 31, 2010 | 10 |
| Mercury Pollutant Minimization Program -Installation and Maintenance of Amalgam Separators | June 30, 2011 | 10 |
| Mercury Pollutant Minimization Program -Implementation and Annual Status Report | December 31, 2011 | 10 |
| Mercury Pollutant Minimization Program -Implementation and Annual Status Report | December 31, 2012 | 10 |
| Mercury Pollutant Minimization Program -Implementation and Annual Status Report | December 31, 2013 | 10 |
| Compliance Maintenance Annual Reports (CMAR) | by June 30, each year | 12 |
| General Sludge Management Form 3400-48 | prior to any significant sludge management changes | 17 |
| Characteristic Form 3400-49 and Lab Report | by January 31 following each year of analysis | 17 |
| Land Application Report Form 3400-55 | by January 31, following each year non-exceptional quality sludge is land applied | 18 |
| Report Form 3400-52 | by January 31, following each year sludge is hauled, landfilled, incinerated, or when exceptional quality sludge is distributed or land applied | 18 |
| Wastewater Discharge Monitoring Report | no later than the date indicated on the form | 11 |

Report forms shall be submitted to the address printed on the report form. Any facility plans or plans and specifications for municipal, industrial, industrial pretreatment and non industrial wastewater systems shall be submitted to the Bureau of Watershed Management, P.O. Box 7921, Madison, WI 53707-7921. All other submittals required by this permit shall be submitted to:

Northeast Region - Peshtigo, 101 N. Ogden Road, P.O. Box 208, Peshtigo, WI 54157