WPDES PERMIT

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM

Dairyland Power Cooperative Genoa

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility located at
S4651 State Road 35, Genoa, Wisconsin
to
the Mississippi River

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 _____
Russell Rasmussen
Director, Bureau of Watershed Management

_____
Date Permit Signed/Issued

PERMIT TERM: EFFECTIVE DATE - January 01, 2008 **EXPIRATION DATE - December 31, 2013**

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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	Intake evaluation and monitoring of screened water from the Mississippi River to be used for condenser cooling

1.2 Monitoring Requirements

The permittee shall comply with the following monitoring requirements.

1.2.1 Sampling Point 701 - Cooling Water Intake

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Mercury, Total Recoverable		ng/L	Monthly	Grab	

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.

1.2.1.2 Influent Mercury Sampling

The Department **highly recommends** that the permittee collect a monthly sample that is representative of the intake water from the river and have it analyzed for low level mercury to help determine the intake mercury contribution to the discharge. This permit does not **require** that the permittee report an influent mercury sample result for any month.

1.3 Cooling Water Intake System Evaluation

By December 31, 2008, the permittee shall submit (for Department review) a cooling water intake system evaluation that includes the information specified in part 1.3 of this permit.

1.3.1 Cooling Water Intake Source Water Physical Data

The permittee shall submit cooling water intake ***source water physical data*** that includes:

a) A narrative description and scaled drawings showing the physical configuration of all source water bodies used by the facility, including areal dimensions, depths, salinity and temperature regimes, and other documentation that supports a determination of the water body type where each cooling water intake structure is located;

b) Identification and characterization of the source waterbody's hydrological and geomorphological features, as well as the methods used to conduct any physical studies to determine the intake's area of influence within the waterbody and the results of such studies;

c) Locational maps showing all intake structures and effluent outfalls for the facility.

1.3.2 Cooling Water Intake Structure and Cooling System Data

The permittee shall submit cooling water intake structure and cooling system data that includes:

a) A narrative description of the configuration of each of the cooling water intake structures, where each is located in the water body and in the water column;

b) Latitude and longitude in degrees, minutes, and seconds for each of the cooling water intake structures;

c) A narrative description of the operation of each of the cooling water intake structures and cooling system, including design intake flows, daily hours of operation, any structural or operational controls currently used at the facility to reduce impingement mortality and/or entrainment, number of days of the year in operation and seasonal changes in operation of the system, if applicable;

d) A flow distribution and water balance diagram that includes all sources of water to the facility, recirculating flows, and discharges; and

e) Engineering drawings of the cooling water intake structure and the cooling system.

1.3.3 Cooling Water Intake Interaction with Source Water Biological Community

The permittee shall submit data needed to ***characterize the biological community*** in the vicinity of the cooling water intake structure and to ***characterize the operation*** of the cooling water intake structures. This supporting information must include data that is representative of current conditions. The information submitted must include:

a) Impingement Mortality and/or Entrainment Characterization Study. If the cooling water intake structure has a through-screen velocity that exceeds 0.5 fps, an Impingement Mortality Characterization Study must be submitted. If the facility has a capacity utilization rate of 15% or more and uses more than 5% of the mean annual flow of a river or Great Lake, an entrainment characterization study must be submitted. The purpose of these studies is to provide information to support a determination of current estimated impingement mortality and entrainment. The Impingement Mortality and/or Entrainment Characterization Study must include the following:

b) Taxonomic identifications of all life stages of fish, shellfish, and any species protected under Federal, State, or Tribal Law (including threatened or endangered species) that are in the vicinity of the cooling water intake structure(s) and are susceptible to impingement and entrainment;

c) A characterization of all life stages of fish, shellfish, and any species protected under Federal, State, or Tribal Law (including threatened or endangered species) identified pursuant to paragraph (3)(a)(i), including a description of the abundance and temporal and spatial characteristics in the vicinity of the cooling water intake structure(s), based on sufficient data to characterize annual, seasonal, and diel variations in impingement mortality and entrainment (e.g. , related to climate and weather differences, spawning, feeding and water column migration). These may include historical data that are representative of the current operation of the facility and of biological conditions at the site;

d) Documentation or estimation of the current impingement mortality and entrainment of all life stages of fish, shellfish, and any species protected under Federal, State, or Tribal Law (including threatened or endangered species) identified pursuant to paragraph (3)(a)(i) and an estimate of impingement mortality and entrainment of all such species and their life stages based upon representative impingement mortality and entrainment data. The documentation should include all data that are representative of the current operation of the facility and of biological conditions at the site. Impingement mortality and entrainment samples to support biological characterizations must be collected during periods of representative operational flows for the cooling water intake structure and the flows associated with the samples must be documented;

e) Documentation of any public participation or consultation with Federal or State agencies undertaken in planning for the collection, collection or analysis and presentation of the information required under this section; and

f) When the submitted information includes data collected using field studies conducted within the last 5 years, supporting documentation for such studies must include a description of all methods and quality assurance procedures for sampling, and data analysis including a description of the study area; taxonomic identification of sampled and evaluated biological assemblages (including all life stages of fish and shellfish); and sampling and data analysis methods. The sampling and/or data analysis methods you use must be appropriate for a quantitative survey and based on consideration of methods used in other biological studies performed within the same source water body. The study area should include, at a minimum, the area of influence of the cooling water intake structure.

1.3.4 Cooling Water System and Intake Structure Assessment

The permittee shall submit an ***assessment of the cooling water system and intake structure*** that includes:

a) A discussion of additional structural or operational actions that would further reduce environmental impacts caused by the cooling water intake.

b) A discussion or description of structural or operational actions that are planned to be implemented within the next 5 years to reduce adverse environmental impacts caused by the cooling water intake.

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)**
101	Process wastewater from Unit 3 (primarily boiler water demineralization wastewaters consisting of filter backwash, reverse osmosis reject water and ion exchange regeneration wastewater) prior to mixing with condenser cooling water. Metal cleaning wastes as described in NR 290.03(9) may not be discharged.
102	Field blank sample collected at the same time as the 001 effluent sample

2.2 Monitoring Requirements and Limitations

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

2.2.1 Sampling Point 101 - Unit 3 Process Wastewater

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Total Daily	
pH (Maximum)	Daily Max	11 su	Daily	Continuous	See pH paragraph below
pH (Minimum)	Daily Min	4.0 su	Daily	Continuous	See pH paragraph below
pH Exceedances Greater Than 60 Minutes	Daily Max	0 Number	Daily	Calculated	See pH paragraph below
pH Total Exceedance Time Minutes	Monthly Total	446 minutes	Daily	Calculated	See pH paragraph below
Suspended Solids, Total	Daily Max	100 mg/L	Daily	24-Hr Comp	
Suspended Solids, Total	Monthly Avg	30 mg/L	Daily	24-Hr Comp	
Mercury, Total Recoverable		ng/L	Monthly	Grab	
Mercury, Total Recoverable	Annual Total	7.0 grams/yr	Annual	Calculated	This limit is effective until December 31, 2010
Mercury, Total Recoverable	Annual Total	3.0 grams/yr	Annual	Calculated	This limit is effective on January 1, 2011
Oil & Grease (Hexane)	Daily Max	20 mg/L	Quarterly	Grab	
Oil & Grease (Hexane)	Monthly Avg	15 mg/L	Quarterly	Grab	

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.

2.2.1.2 Mercury Grams/year Calculation

Calculate the sample point 101 mercury grams per year by summing the grams/month for all months in the calendar year. The sample point mercury grams/month shall be calculated by multiplying the total monthly 101 discharge flow (in liters/month) times the sample point 101 average mercury sample results for the month.

2.2.1.3 Continuous pH Monitoring

Whenever continuous pH monitoring is specified, the permittee shall maintain the pH of this wastewater within the range of 6.0 to 9.0 s.u. except, pursuant to ss. NR 205.06 and NR 102.05(3)(h), Wis. Adm. Code, excursions from the limits are permitted subject to the following conditions.

The total time during which the pH values are outside the required range shall not exceed 446 minutes in any calendar month.

No individual excursion from the range shall exceed 60 minutes.

No individual excursions shall be outside the range of 4.0 to 11.0 s.u., inclusive.

On a daily basis, the permittee is required to report the total time the pH limits are exceeded and the number of times any individual excursion exceeds 60 minutes in duration or is outside the range of 4.0 to 11.0 s.u., inclusive.

2.2.2 Sampling Point 102 - Effluent Field Blank

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Mercury, Total Recoverable		µg/L	Monthly	Grab	

2.2.2.1 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)

The discharge(s) shall be limited to the waste type(s) designated for the listed sampling point(s).

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
001	Once-through condenser cooling water from units 2 & 3 that may contain relatively smaller amounts of process wastewater. Collect samples representative of the discharge prior to the Mississippi River
002	Unit 3 Intake De-icing Water
004	Unit 3 Trash Screen Wash Water
007	Unit 2 Intake De-icing Water
008	Unit 2 Trash Screen Wash Water
010	Discharge outfall for the overflow of coal pile runoff that exceeds the capacity of the perimeter containment berms

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 - Combined Cooling/Process WW

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Total Daily	
Temperature Maximum		deg F	Daily	Grab	
Acute WET		TU_a	Annual	24-Hr Comp	No annual test required in 2010
Chronic WET		rTU_c	Annual	24-Hr Comp	No annual test required in 2010
Mercury, Total Recoverable	Daily Max	12 ng/L	Monthly	Grab	

3.2.1.1 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.

3.2.1.2 Whole Effluent Toxicity (WET) Testing for Outfall 001

Primary Control Water: The Mississippi River

Instream Waste Concentration (IWC): 33%

Wastewater to Sample: If possible, the outfall 001 Whole Effluent Toxicity samples shall be collected during periods that include a discharge of process wastewater from sample point 101.

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, 75, 50, 25, 12.5% and any additional selected by the permittee.

WET Testing Frequency: Acute and Chronic tests are required in the following calendar quarters:

July through September, 2008

October through December, 2009

January through March, 2011

April through June, 2012

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).

3.2.1.3 Polychlorinated Biphenyls

The permittee shall manage polychlorinated biphenyl compounds (PCB's) used in the facility (such as in transformer fluid) so that PCB's are not added to the wastewater discharge.

3.2.1.4 Water Treatment Additive Use

The permittee shall maintain a monthly log recording use rates for all water chemical additives used to treat the intake water or the process wastewater discharged through outfall 001. The permittee may use the "planned changes" or "water treatment additives" standard conditions of this permit to notify the Department of proposed increases in the use of water treatment additives or the use of new water treatment additives.

3.2.1.5 Total Residual Chlorine Limitations

Neither free available chlorine nor total residual chlorine shall be discharged for more than 2 hours per unit per day, except when chlorinating for macro-invertebrate control (as allowed in s. NR 290.12(2)(c), Wisconsin Adm. Code) in

accordance with a Department approved macro-invertebrate management plan. For free available chlorine, the daily maximum limit for is 500 ug/L and the monthly average limit is 200 ug/L. The total residual chlorine limitation is 200 µg/L when chlorine is discharged for 160 minutes per day or less. If total residual chlorine is discharged for more than 160 minutes per day, the daily maximum limit is 38 µg/L.

3.2.1.6 Macro-Invertebrate Control

The permittee currently uses mechanical cleaning as the primary means of macro-invertebrate control for Genoa Units 2-3. Although Department approved thermal, chlorine dioxide and sodium bisulfite treatments have not been used in recent years, the permittee has requested that these treatments continue to be authorized. The Department is allowing these treatments, subject to the following conditions and limitations:

- During thermal treatments for macro-invertebrate control, the discharge temperature (outside the intake bays) shall not exceed 120^{o}F, the duration of a thermal discharge event shall not exceed five hours, and the thermal treatments shall be limited to twice annually and only during the months of April, May, June, September, and October.
- During chlorine, chlorine dioxide or bromine treatments for macro-invertebrate control, the permittee shall monitor continuously for dissolved oxygen and residual chlorine at all outfalls through which the treated water is discharged. A continuous monitor may be used to determine the peak value and length of halogen discharge as long as it duplicates the accuracy of a NR 219 approved method. Dissolved oxygen at the discharge outfall shall be maintained at or above 5.0 mg/L. The total residual chlorine limitation is 0.200 mg/L when halogens are discharged for 160 minutes per day or less. If total residual chlorine is discharged for more than 160 minutes per day, the daily maximum limit is 0.038 mg/L.
- During sodium metabisulfite treatments for macro-invertebrate control, the permittee shall monitor continuously for dissolved oxygen and pH at all outfalls through which the macro-invertebrate control wastewater is discharged. The discharge shall contain dissolved oxygen levels at or above 5.0 mg/L and pH levels at or above 6.0 std.units.
- The permittee shall, within 60 days of completion of the treatment, submit a report to the Department that describes the effectiveness of the macro-invertebrate treatment, the dissolved oxygen, pH and halogen levels of the discharge, and a description of any unusual aspects of the treatment event.

3.2.2 Sampling Point (Outfall) 002 - Unit 3 Intake De-icing

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Monthly	Estimated	

3.2.3 Sampling Point (Outfall) 004 - Unit 3 Screen Wash

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Monthly	Estimated	

3.2.3.1 Unit 2 and 3 Intake Screen Backwash Discharges

Trash and coarse debris accumulated on the condenser cooling (river) water intake screens shall be captured so it is not returned to the river with the intake screen backwash discharge. The captured material shall be stored and disposed of in a manner to prevent any pollutant from the materials from entering the waters of the State pusuant to s. NR 205.07(3)(a), Wis. Adm. Code. Fine debris, aquatic organisms and vegetation that cannot reasonably be sorted from living fish may be returned to surface waters.

3.2.4 Sampling Point (Outfall) 007 - Unit 2 Intake De-icing

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Monthly	Estimated	

3.2.5 Sampling Point (Outfall) 008 - Unit 2 Screen Wash

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Monthly	Estimated	

3.2.6 Sampling Point (Outfall) 010 - Overflow for coal pile runoff

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Estimated	
Suspended Solids, Total	Daily Max	50 mg/L	Daily	3-Grab Comp	Sample required on any day with a coal pile runoff discharge to the river
pH Field	Daily Max	9.0 su	Daily	Grab	Sample required on any day with a coal pile runoff discharge to the river
pH Field	Daily Min	6.0 su	Daily	Grab	Sample required on any day with a coal pile runoff discharge to the river

3.2.6.1 Three Grab Composite Sample

A representative composite sample of the wastewater discharge shall be created by combining at least three individual grab samples of equal volume taken at approximately equal intervals over an 8 hour period. There shall be at least 1 hour between individual grab samples. The permittee may collect a 24 hour composite sample in lieu of a 3-Grab Composite sample.

4 Schedules of Compliance

4.1 Cooling Water Intake System Evaluation

Required Action	Date Due
Submit the results of the cooling water intake system evaluation : By December 31, 2008, the permittee shall submit (for Department review) a cooling water intake system evaluation that includes the information specified in part 1.3 of this permit	12/31/2008

4.2 Mercury Pollutant Minimization Program

The permittee shall continue to implement a pollutant minimization program for mercury.

Required Action	Date Due
Update of the Mercury Pollutant Minimization Efforts: The permittee shall provide an update of mercury pollutant minimization efforts to date and a summary of the mercury discharge amounts for the year for sample point 101 and outfall 001. Special emphasis should be placed on evaluation of whether a low mercury sulfuric acid product is available for use in the low volume waste treatment system and whether a consistently low mercury caustic product can be procured.	03/31/2009
Update the Mercury Pollutant Minimization Efforts: The permittee shall provide an update of mercury pollutant minimization efforts to date and a summary of the mercury discharge amounts for the year. Provide a summary of the status of the project to potentially utilize process wastewaters in the wet scrubber system.	03/31/2010
Complete Efforts Needed to Meet the Sample Point 101 Mercury Grams/year Limit: The permittee shall complete actions necessary to comply with the sample point 101 annual grams/year mercury discharge limitation.	12/31/2010
Submit Annual Status Reports: The permittee shall submit to the Department an annual status report on the progress of the mercury reduction efforts as required by s. NR 106.145(7), Wis. Adm. Code. Submittal of an annual status report is required by March 31 each year. Note: If the permittee wishes to apply for an alternative mercury effluent limitation for the next permit, the mercury variance application is due with the application for permit reissuance by 6 months prior to permit expiration. The permittee should submit or reference the PMP plan as updated by the Annual Status Report or more recent developments as part of that application.	03/31/2011

5 Standard Requirements

NR 205, Wisconsin Administrative Code (Conditions for Industrial Dischargers): The conditions in ss. NR 205.07(1) and NR 205.07(3), 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(3).

5.1 Reporting and Monitoring Requirements

5.1.1 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 after July 1, 2008 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.

5.1.2 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.

5.1.3 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.

5.1.4 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.

5.1.5 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, except for sludge management forms and records, which shall be kept for a period of at least 5 years.

5.1.6 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.

5.2 System Operating Requirements

5.2.1 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.

- 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.

- The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

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**.

5.2.2 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.

5.2.3 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.

5.2.4 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.

5.2.5 Spill Reporting

The permittee shall notify the Department in accordance with ch. NR 706 (formerly NR 158), Wis. Adm. Code, in the event that a spill or accidental release of any material or substance results in the discharge of pollutants to the waters of the state at a rate or concentration greater than the effluent limitations established in this permit, or the spill or accidental release of the material is unregulated in this permit, unless the spill or release of pollutants has been reported to the Department in accordance with s. NR 205.07 (1)(s), Wis. Adm. Code.

5.2.6 Planned Changes

In accordance with ss. 283.31(4)(b) and 283.59, Stats., the permittee shall report to the Department any facility expansion, production increase or process modifications which will result in new, different or increased discharges of pollutants. The report shall either be a new permit application, or if the new discharge will not violate the effluent limitations of this permit, a written notice of the new, different or increased discharge. The notice shall contain a description of the new activities, an estimate of the new, different or increased discharge of pollutants and a description of the effect of the new or increased discharge on existing waste treatment facilities. Following receipt of this report, the Department may modify this permit to specify and limit any pollutants not previously regulated in the permit.

5.2.7 Duty to Halt or Reduce Activity

Upon failure or impairment of treatment facility operation, the permittee shall, to the extent necessary to maintain compliance with its permit, curtail production or wastewater discharges or both until the treatment facility operations are restored or an alternative method of treatment is provided.

5.3 Surface Water Requirements

5.3.1 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.

5.3.2 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.

5.3.3 Visible Foam or Floating Solids

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

5.3.4 Total Residual Chlorine Requirements (When De-Chlorinating Effluent)

Test methods for total residual chlorine, approved in ch. NR 219 - Table B, Wis. Adm. Code, normally achieve a limit of detection of about 20 to 50 micrograms per liter and a limit of quantitation of about 100 micrograms per liter. Reporting of test results and compliance with effluent limitations for chlorine residual and total residual halogens shall be as follows:

- Sample results which show no detectable levels are in compliance with the limit. These test results shall be reported on Wastewater Discharge Monitoring Report Forms as "< 100 µg/L". (Note: 0.1 mg/L converts to 100 µg/L)

- Samples showing detectable traces of chlorine are in compliance if measured at less than 100 µg/L, unless there is a consistent pattern of detectable values in this range. These values shall also be reported on Wastewater Discharge Monitoring Report Forms as "<100 µg/L." The facility operating staff shall record actual readings on logs maintained at the plant, shall take action to determine the reliability of detected results (such as re-sampling and/or calculating dosages), and shall adjust the chemical feed system if necessary to reduce the chances of detects.

- Samples showing detectable levels greater than 100 µg/L shall be considered as exceedances, and shall be reported as measured.

- To calculate average or mass discharge values, a "0" (zero) may be substituted for any test result less than 100 µg/L. Calculated values shall then be compared directly to the average or mass limitations to determine compliance.

5.3.5 Additives

In the event that the permittee wishes to commence use of a water treatment additive, or increase the usage of the additives greater than indicated in the permit application, the permittee must get a written approval from the Department prior to initiating such changes. This written approval shall provide authority to utilize the additives at the specific rates until the permit can be either reissued or modified in accordance with s. 283.53, Stats. Restrictions on the use of the additives may be included in the authorization letter.

5.3.6 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.

5.3.7 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 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Cooling Water Intake System Evaluation -Submit the results of the cooling water intake system evaluation	December 31, 2008	10
Mercury Pollutant Minimization Program -Update of the Mercury Pollutant Minimization Efforts	March 31, 2009	10
Mercury Pollutant Minimization Program -Update the Mercury Pollutant Minimization Efforts	March 31, 2010	10
Mercury Pollutant Minimization Program -Complete Efforts Needed to Meet the Sample Point 101 Mercury Grams/year Limit	December 31, 2010	10
Mercury Pollutant Minimization Program -Submit Annual Status Reports	March 31, 2011	10
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:
West Central Region, 1300 W. Clairemont Ave., P.O. Box 4001, Eau Claire, WI 54702-4001