



# WPDES PERMIT

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

**WPL - Nelson Dewey Generating Station**

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility  
located at  
NWQ Section 19, T3N, R5W - Cassville, Wisconsin  
to

**Mississippi River and the Groundwater of the Grant-Platte River Basin**

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 \_\_\_\_\_  
Susan Sylvester  
Director, Bureau of Water Quality

\_\_\_\_\_  
Date Permit Signed/Issued

**PERMIT TERM: EFFECTIVE DATE - July 01, 2016**

**EXPIRATION DATE - June 30, 2021**

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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	Mississippi River cooling water intake structure requirements.
703	Sample point for establishing background/ambient river temperature.
704	Sample point for establishing background/ambient river pH.
705	Sample point for establishing background/ambient river mercury.

## 1.2 Monitoring Requirements

The permittee shall comply with the following monitoring requirements.

### 1.2.1 Sampling Point 701 - Cooling water intake structure

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Estimated	

#### 1.2.1.1 Cooling Intake Water Description

The permittee shall at all times properly operate and maintain all water intake facilities. The permittee shall give advance notice to the Department of any planned changes in the location, design, operation, or capacity of the intake structure. The permittee is authorized to use the cooling water intake system which consists of the following:

- The circulating water pumps, service water pumps, and the traveling screens are located in the base on the main exhaust stack. This space is connected to the river by a 120-foot long flume.
- The pumps are protected by two, 10-foot wide, 28-foot high, 3/8-inch mesh, traveling screens. The through-screen velocity at design intake rate is estimated to be 1.9 feet per second (1.9 fps).
- Maximum design intake flow rate is 81 MGD. Prior to any repowering or other significant change to the use of the intake structure all submittals and approvals required by 40 CFR 125 Subpart J must be obtained.
- Approximately 0.7% of flow is used exclusively for cooling purposes.
- The design intake flow through velocity is 0.46 fps. This is the velocity at the river bank where river water enters the flume.
- There is no emergency intake.
- Withdrawals at the intake are expected to cease when warm weather occurs in 2016.

### **1.2.1.2 Water Intake BTA Determination**

The cooling water intake, as described above in Subsection 1.2.1.1, represents BTA for minimizing adverse environmental impact in accordance with the requirements in section 283.31 (6) Wis. Stats., and section 316 (b) of the Clean Water Act.

Note: This is a BTA determination based on the Department's February 2, 2009 guidance for evaluating cooling water intake structures using best professional judgment (BPJ). Because there is very little use of the intake water for cooling, the intake is not subject to the new federal regulations for existing facilities in 40 CFR 125.94 through 125.99 (40 CFR 125.91). The intake must meet requirements of 316(b) established by the Department on a case-by-case, BPJ basis.

### **1.2.1.3 Future BTA**

BTA determinations for entrainment and impingement mortality at cooling water intake structures will be made in each permit reissuance, in accordance with 40 CFR §125.90-98. In subsequent permit reissuance applications, the permittee shall provide all the information required in 40 CFR §122.21(r). Exemptions from some application requirements are possible in accordance with 40 CFR §125.95(c) and §125.98(g), where information already submitted is sufficient. If desired, a request for reduced application material requirements must be submitted at least 2 years and 6 months prior to permit expiration. Past submittals and previously conducted studies may satisfy some or all of the application material requirements.

Note: The Department is in the process of promulgating ch. NR 111, Wis. Adm. Code, on cooling water intake structures. The objective of ch. NR 111 is to incorporate federal requirements for cooling water intake structures into the state's administrative code. If ch. NR 111 is promulgated prior to the expiration of this permit, the permittee may be subject to ch. NR 111 application requirements for the next permit reissuance.

### **1.2.1.4 Monitoring**

#### **1.2.1.4.1 Biological Studies**

No studies are specified in this permit.

#### **1.2.1.4.2 Compliance Monitoring Requirements**

##### **1.2.1.4.2.1 Impingement Mortality**

Not applicable.

##### **1.2.1.4.2.2 Entrainment Mortality**

Not applicable.

##### **1.2.1.4.2.3 Visual or Remote Inspections**

The permittee shall on an annual basis conduct visual inspection or employ a remote monitoring device during periods when the cooling water intake is in operation.

#### **1.2.1.4.3 Reporting Requirements**

##### **1.2.1.4.3.1 Discharge Monitoring Reports**

Include monitoring for flow.

**1.2.1.4.3.2 Annual Certification Statement and Report**

By March 1 of each year submit an annual certification for the previous year signed by the authorized representative with information on the following:

- (a) Water intake structure technologies are being maintained and operated as set forth in this permit, or a justification to allow a modification of the practices. Include a summary of the inspections required under paragraph 1.2.1.4.2.3 Visual or Remote Inspections.
- (b) If there are substantial modifications to the operation of any unit that impacts the cooling water withdrawals or operation of the water intake structure, provide a summary of those changes.
- (c) If the information contained in the previous year’s annual certification is still applicable, the certification may simply state as such.

**1.2.1.5 Intake Screen Discharges and Removed Substances**

Floating debris and accumulated trash collected on the cooling water intake trash rack shall be removed and disposed of in a manner to prevent any pollutant from the material from entering the waters of the State pursuant to s. NR 205.07 (3) (a), Wis. Adm. Code. The permittee may discharge backwash from the traveling water screens and discharge to the river. These backwashes may contain fine materials that originated from the intake water source (sand, silt, small vegetation or aquatic life).

**1.2.1.6 Endangered Species Act**

Nothing in this permit authorizes take for the purpose of a facility’s compliance with the Endangered Species Act. Refer to 40 CFR §125.98 (b) (1) and (2).

**1.2.2 Sampling Point 703 - Influent Temperature**

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Temperature		deg F	Daily	Grab	Daily grab if withdrawal occurs.

**1.2.3 Sampling Point 704 - Background pH**

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
pH Field		su	Monthly	Grab	Sample on the same day that pH is sampled at outfall 002. Monthly sample frequency should discharge occur.

### 1.2.4 Sampling Point 705 - Background mercury

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Mercury, Total Recoverable		ng/L	Monthly	Grab	Sample on the same day that mercury is sampled at outfall 002. Monthly sample frequency should discharge occur.

#### 1.2.4.1 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)
102	Water is pumped from the WPDES pond system to the east end of the slag pond. The pump house is north of Pond 2 and consists of two pumps.

### 2.2 Monitoring Requirements and Limitations

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

#### 2.2.1 Sampling Point 102 - Pump from WPDES to slag pond

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Suspended Solids, Total	Daily Max	50 mg/L	Weekly	Grab	Weekly sample frequency should discharge occur.

### 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 water for noncontact cooling. No chlorination or other water additives are part of the wastewater. These will be reduced or eliminated as retirement is implemented.
002	Outfall is primarily composed of once-through non-contact cooling water (service water) associated with bearing seal water cooling, sluicing of slag from each boiler, facility floor drain system, water treatment plant water (demin., reverse osmosis, multi-media filter) from two (2) deep wells, WPDES Pond System (Outfall 005), and storm water runoff associated with the closed landfill, plant grounds, coal pile runoff and new package boiler (5,000 gpd). These will be reduced or eliminated as retirement is implemented.
003	Intake screen deicing (redirected condenser cooling water). These will be reduced or eliminated as retirement is implemented.
004	Intake screen washing (recirculated river water). These will be reduced or eliminated as retirement is implemented.

#### 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 - Condenser Cooling Water

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Temperature Maximum	Daily Max	120 deg F	Daily	Grab	Daily grab should a withdrawal occur.
Flow Rate		MGD	Daily	Estimated	
Temperature Average	Weekly Avg	104 deg F	Weekly	Calculated	Applicable only in month of June.

##### 3.2.1.1 Effluent Temperature Monitoring

Temperature may be collected via grab daily should discharge occur.

##### 3.2.2 Sampling Point (Outfall) 002 - Slag Pond

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Suspended Solids, Total	Daily Max	100 mg/L	Monthly	Grab	Monthly sample frequency should discharge occur.
Suspended Solids, Total	Monthly Avg	30 mg/L	Monthly	Grab	Monthly sample frequency should discharge occur.

<b>Monitoring Requirements and Effluent Limitations</b>					
<b>Parameter</b>	<b>Limit Type</b>	<b>Limit and Units</b>	<b>Sample Frequency</b>	<b>Sample Type</b>	<b>Notes</b>
Oil & Grease (Hexane)	Daily Max	20 mg/L	Monthly	Grab	Monthly sample frequency should discharge occur.
Oil & Grease (Hexane)	Monthly Avg	15 mg/L	Monthly	Grab	Monthly sample frequency should discharge occur.
pH Field	Daily Max	9.0 su	Monthly	Grab	pH monitoring is not required when background/ambient river pH exceeds 9.0 s.u. Monthly sample frequency should discharge occur.
pH Field	Daily Min	6.0 su	Monthly	Grab	pH monitoring is not required when background/ambient river pH exceeds 9.0 s.u. Monthly sample frequency should discharge occur.
Mercury, Total Recoverable	Daily Max	4.68 ng/L	Monthly	Grab	Refer to the Pollutant Minimization Plan requirements of section 5. Monthly sample frequency should discharge occur.
Aluminum, Total Recoverable		mg/L	Annual	Grab	Annual sample frequency should discharge occur.
Barium, Total Recoverable		mg/L	Annual	Grab	Annual sample frequency should discharge occur.
Boron, Total Recoverable		mg/L	Annual	Grab	Annual sample frequency should discharge occur.
Iron, Total Recoverable		mg/L	Annual	Grab	Annual sample frequency should discharge occur.
Magnesium, Total Recoverable		mg/L	Annual	Grab	Annual sample frequency should discharge occur.
Manganese, Total Recoverable		mg/L	Annual	Grab	Annual sample frequency should discharge occur.

### 3.2.2.1 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.

**3.2.2.2 Polychlorinated Biphenyls**

There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

**3.2.3 Sampling Point (Outfall) 003 - Deice water**

<b>Monitoring Requirements and Effluent Limitations</b>					
<b>Parameter</b>	<b>Limit Type</b>	<b>Limit and Units</b>	<b>Sample Frequency</b>	<b>Sample Type</b>	<b>Notes</b>
Flow Rate		MGD	Monthly	Estimated	

**3.2.4 Sampling Point (Outfall) 004 - Intake screen washing**

<b>Monitoring Requirements and Effluent Limitations</b>					
<b>Parameter</b>	<b>Limit Type</b>	<b>Limit and Units</b>	<b>Sample Frequency</b>	<b>Sample Type</b>	<b>Notes</b>
Flow Rate		MGD	Monthly	Estimated	

## 4 Land Treatment Requirements

### 4.1 Sampling Point(s)

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

<b>Sampling Point Designation</b>	
<b>Sampling Point Number</b>	<b>Sampling Point Location, Waste Description/Sample Contents and Treatment Description (as applicable)</b>
005	Seepage ponds receiving various wastewaters. WPDES ponds (1, 2 and 3) and slag pond. Total 1.52 MGD infiltration equal to hydraulic conductivity of 1.699 10e-4 cm <sup>2</sup> /sec per 2015 report.

#### 4.1.1 Seepage Ponds Management

Outfall 005 is a series of seepage ponds that receives the following waste streams: coal pile runoff; non-contact equipment cooling water; demineralizer/reverse osmosis reject waters; boiler blowdown; air heater wash waters; and boiler wash water. The discharge from the seepage ponds to the slag pond is regulated at sample point 102 (refer to section 2 of the permit). The portion of the seepage ponds wastewater volume which discharges, via seepage, to the groundwater is regulated by this section of the permit, and is designated as outfall 005.

The current Department-approved seepage ponds management plan is the BT2, Inc. document, dated June 21, 1999. As discussed in the management plan, if the ponds' treatment capacity is compromised as a result of solids deposition, the permittee shall evaluate solids removal options to restore treatment capacity.

This permit does not authorize any waste streams other than the aforementioned to be discharged into the seepage ponds without prior approval from the Department. The permittee shall submit, for Department approval, proposed modifications to the management plan.

## 5 Schedules

### 5.1 Mercury Pollutant Minimization Program

As a condition of the variance to the water quality based effluent limitation(s) for mercury granted in accordance with s. NR 106.145(6), Wis. Adm. Code, the permittee shall perform the following actions.

Required Action	Due Date
<p><b>Annual Mercury Progress Reports:</b> Submit an annual mercury progress report. The annual mercury progress report shall:</p> <p>Indicate which mercury pollutant minimization activities or activities outlined in the approved Pollutant Minimization Plan have been implemented;</p> <p>Include an analysis of trends in monthly and annual total effluent mercury concentrations based on mercury sampling; and</p> <p>Include an analysis of how influent and effluent mercury varies with time and with significant loading of mercury such as loads from activities, procedures or operations at the facility.</p> <p>The first annual mercury progress report is to be submitted by the Due Date.</p>	06/30/2017
<b>Annual Mercury Progress Report #2:</b> Submit a mercury progress report as defined above.	06/30/2018
<b>Annual Mercury Progress Report #3:</b> Submit a mercury progress report as defined above.	06/30/2019
<b>Annual Mercury Progress Report #4:</b> Submit a mercury progress report as defined above.	06/30/2020
<p><b>Final Mercury Report:</b> Submit a final report documenting the success in reducing mercury concentrations in the effluent, as well as the anticipated future reduction in mercury sources and mercury effluent concentrations. The report shall summarize mercury pollutant minimization activities that have been implemented during the current permit term and state which, if any, pollutant minimization activities from the approved pollutant minimization plan were not pursued and why. The report shall include an analysis of trends in monthly and annual total effluent mercury concentrations based on mercury sampling during the current permit term. The report shall also include an analysis of how influent and effluent mercury varies with time and with significant loading of mercury such as loads from activities, procedures or operations at the facility.</p> <p>Additionally, the report shall include a proposed variance limit and pollutant minimization activities for negotiations with the department if the permittee intends to seek a renewed mercury variance per s. NR 106.145, Wis. Adm. Code, for the reissued permit.</p>	06/30/2021
<b>Annual Mercury Reports After Permit Expiration:</b> In the event that this permit is not reissued on time, the permittee shall continue to submit annual mercury reports each year covering pollutant minimization activities implemented and mercury concentration trends.	

### 5.2 Annual Certification Statement and Report for Intake

The permittee shall submit an annual certification statement as set forth in the permit.

Required Action	Due Date
<b>Submit report:</b> As specified in permit condition 1.2.1.4.3.2 for the preceding calendar year.	03/01/2017
<b>Submit report:</b> As specified in permit condition 1.2.1.4.3.2 for the preceding calendar year.	03/01/2018
<b>Submit report:</b> As specified in permit condition 1.2.1.4.3.2 for the preceding calendar year.	03/01/2019

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<b>Submit report:</b> As specified in permit condition 1.2.1.4.3.2 for the preceding calendar year.	03/01/2020
<b>Submit report:</b> As specified in permit condition 1.2.1.4.3.2 for the preceding calendar year.	03/01/2021

## 6 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).

### 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. A copy of the Wastewater Discharge Monitoring Report Form or an electronic file of the report shall be retained by the permittee.

Monitoring results shall be reported on an electronic discharge monitoring report (eDMR). The eDMR shall be certified electronically by a principal executive officer, a ranking elected official or other duly authorized representative. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

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.

#### 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 purposes of calculating NR 101 fees, the 2 mg/l lower reporting limits for BOD<sub>5</sub> and Total Suspended Solids shall be considered to be limits of quantitation
- 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 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.

### **6.1.6 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.

## **6.2 System Operating Requirements**

### **6.2.1 Noncompliance Reporting**

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 a 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 as directed at the end of this permit 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.

A scheduled bypass approved by the Department under the 'Scheduled Bypass' section of this permit shall not be subject to the reporting required under this section.

**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 Bypass

Except for a controlled diversion as provided in the 'Controlled Diversions' section of this permit, any bypass is prohibited and the Department may take enforcement action against a permittee for such occurrences under s. 283.89, Wis. Stats. The Department may approve a bypass if the permittee demonstrates all the following conditions apply:

- 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 or adequate back-up equipment, retention of untreated wastes, reduction of inflow and infiltration, 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 preventative maintenance. When evaluating feasibility of alternatives, the department may consider factors such as technical achievability, costs and affordability of implementation and risks to public health, the environment and, where the permittee is a municipality, the welfare of the community served; and
- The bypass was reported in accordance with the 'Noncompliance Reporting' section of this permit.

### 6.2.3 Scheduled Bypass

Whenever the permittee anticipates the need to bypass for purposes of efficient operations and maintenance and the permittee may not meet the conditions for controlled diversions in the 'Controlled Diversions' section of this permit, the permittee shall obtain prior written approval from the Department for the scheduled bypass. A permittee's written request for Department approval of a scheduled bypass shall demonstrate that the conditions for unscheduled bypassing are met and include the proposed date and reason for the bypass, estimated volume and duration of the bypass, alternatives to bypassing and measures to mitigate environmental harm caused by the bypass. The department may require the permittee to provide public notification for a scheduled bypass if it is determined there is significant public interest in the proposed action and may recommend mitigation measures to minimize the impact of such bypass.

### 6.2.4 Controlled Diversions

Controlled diversions are allowed only when necessary for essential maintenance to assure efficient operation provided the following requirements are met:

- Effluent from the wastewater treatment facility shall meet the effluent limitations established in the permit. Wastewater that is diverted around a treatment unit or treatment process during a controlled diversion shall be recombined with wastewater that is not diverted prior to the effluent sampling location and prior to effluent discharge;
- A controlled diversion may not occur during periods of excessive flow or other abnormal wastewater characteristics;
- A controlled diversion may not result in a wastewater treatment facility overflow; and
- All instances of controlled diversions shall be documented in wastewater treatment facility records and such records shall be available to the department on request.

### **6.2.5 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.

### **6.2.6 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.

### **6.2.7 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.

### **6.2.8 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.

## **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 concentration limits and mass limits and total load limits:

**Weekly/Monthly/Six-Month/Annual Average Concentration** = the sum of all daily results for that week/month/six-month/year, divided by the number of results during that time period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

**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.

**Six-Month 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 six-month period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

**Annual 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 entire year.

**Total Monthly Discharge:** = monthly average concentration (mg/L) x total flow for the month (MG/month) x 8.34.

**Total Annual Discharge:** = sum of total monthly discharges for the calendar year.

**12-Month Rolling Sum of Total Monthly Discharge:** = the sum of the most recent 12 consecutive months of Total Monthly Discharges.

### 6.3.3 Effluent Temperature Requirements

**Weekly Average Temperature** – The permittee shall use the following formula for calculating effluent results to determine compliance with the weekly average temperature limit (as applicable): Weekly Average Temperature = the sum of all daily maximum results for that week divided by the number of daily maximum results during that time period.

**Cold Shock Standard** – Water temperatures of the discharge shall be controlled in a manner as to protect fish and aquatic life uses from the deleterious effects of cold shock. ‘Cold Shock’ means exposure of aquatic organisms to a rapid decrease in temperature and a sustained exposure to low temperature that induces abnormal behavior or physiological performance and may lead to death.

**Rate of Temperature Change Standard** – Temperature of a water of the state or discharge to a water of the state may not be artificially raised or lowered at such a rate that it causes detrimental health or reproductive effects to fish or aquatic life of the water of the state.

### 6.3.4 Energy Emergency Events

The Department will use enforcement discretion whenever there are exceedances of effluent temperature limitations for the electric generating facility during an energy emergency warning or when an energy emergency event has been declared under a Federal Energy Regulatory Commission order (Standard EOP-002, North American Electric Reliability Corporation).

### 6.3.5 Visible Foam or Floating Solids

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

### 6.3.6 Surface Water Uses and Criteria

In accordance with NR 102.04, Wis. Adm. Code, surface water uses and criteria are established to govern water management decisions. Practices attributable to municipal, industrial, commercial, domestic, agricultural, land

development or other activities shall be controlled so that all surface waters including the mixing zone meet the following conditions at all times and under all flow and water level conditions:

- a) Substances that will cause objectionable deposits on the shore or in the bed of a body of water, shall not be present in such amounts as to interfere with public rights in waters of the state.
- b) Floating or submerged debris, oil, scum or other material shall not be present in such amounts as to interfere with public rights in waters of the state.
- c) Materials producing color, odor, taste or unsightliness shall not be present in such amounts as to interfere with public rights in waters of the state.
- d) Substances in concentrations or in combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant or aquatic life.

### **6.3.7 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.

## 7 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Mercury Pollutant Minimization Program -Annual Mercury Progress Reports	June 30, 2017	10
Mercury Pollutant Minimization Program -Annual Mercury Progress Report #2	June 30, 2018	10
Mercury Pollutant Minimization Program -Annual Mercury Progress Report #3	June 30, 2019	10
Mercury Pollutant Minimization Program -Annual Mercury Progress Report #4	June 30, 2020	10
Mercury Pollutant Minimization Program -Final Mercury Report	June 30, 2021	10
Mercury Pollutant Minimization Program -Annual Mercury Reports After Permit Expiration	See Permit	10
Annual Certification Statement and Report for Intake -Submit report	March 1, 2017	10
Annual Certification Statement and Report for Intake -Submit report	March 1, 2018	10
Annual Certification Statement and Report for Intake -Submit report	March 1, 2019	10
Annual Certification Statement and Report for Intake -Submit report	March 1, 2020	11
Annual Certification Statement and Report for Intake -Submit report	March 1, 2021	11
Wastewater Discharge Monitoring Report	no later than the date indicated on the form	12

Report forms shall be submitted electronically in accordance with the reporting requirements herein. Any facility plans or plans and specifications for municipal, industrial, industrial pretreatment and non industrial wastewater systems shall be submitted to the Bureau of Water Quality, P.O. Box 7921, Madison, WI 53707-7921. All other submittals required by this permit shall be submitted to:  
Central Office, 101 South Webster Street, P.O. Box 7921, Madison, WI 53707-7921