



WPDES PERMIT

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

Wisconsin Electric Power Company

Oak Creek Power Plant & Elm Road Generating Station

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility
located at
11060 S. Chicago Road, Oak Creek, Wisconsin
to
Lake Michigan

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 

Jason Knutson, P.E.
Wastewater Section Chief, Bureau of Water Quality

3/31/2020
Date Permit Signed/Issued

PERMIT TERM: EFFECTIVE DATE - October 01, 2019
EFFECTIVE DATE OF MODIFICATION - October 01, 2023

EXPIRATION DATE - September 30, 2024

TABLE OF CONTENTS

1 INFLUENT REQUIREMENTS - COOLING WATER INTAKE STRUCTURE (CWIS)	1
1.1 SAMPLING POINT(S)	1
1.2 MONITORING REQUIREMENTS AND BTA DETERMINATIONS	1
1.2.1 <i>Sampling Point 901 - Intake Structure</i>	1
1.2.2 <i>Sampling Point 902 - Emergency Intake</i>	1
1.3 COOLING WATER INTAKE STRUCTURE STANDARD REQUIREMENTS	3
1.3.1 <i>Future BTA for Cooling Water Intake Structure</i>	3
1.3.2 <i>Impingement Mortality Monitoring</i>	3
1.3.3 <i>Visual or Remote Inspections</i>	3
1.3.4 <i>Reporting Requirements for Cooling Water Intake</i>	4
1.3.5 <i>Intake Screen Discharges and Removed Substances</i>	5
1.3.6 <i>Endangered Species Act</i>	5
2 IN-PLANT REQUIREMENTS	6
2.1 SAMPLING POINT(S)	6
2.2 MONITORING REQUIREMENTS AND LIMITATIONS	6
2.2.1 <i>Sampling Point 105 - 003 UNIT 5 BAH and FAH</i>	6
2.2.2 <i>Sampling Point 106 - 004 UNIT 6 BAH and FAH</i>	6
2.2.3 <i>Sampling Point 107 - FGD Wastewater</i>	7
2.2.4 <i>Sampling Point 108 - ERGS Demin. Regen. WW</i>	8
2.2.5 <i>Sampling Point 109 - ERGS Blowdown, Water Treatment</i>	8
2.2.6 <i>Sampling Point 171 - Coal Pile Runoff to Treatment</i>	9
2.2.7 <i>Sampling Point 110 - ERGS Treated Process WW</i>	9
3 SURFACE WATER REQUIREMENTS	10
3.1 SAMPLING POINT(S)	10
3.2 MONITORING REQUIREMENTS AND EFFLUENT LIMITATIONS	11
3.2.1 <i>Sampling Point (Outfall) 001 - OCPP DEICING LINE</i>	11
3.2.2 <i>Sampling Point (Outfall) 003 - UNIT 5 OCPP CONDENSER/OTHER</i>	11
3.2.3 <i>Sampling Point (Outfall) 004 - UNIT 6 OCPP CONDENSER/OTHER</i>	12
3.2.4 <i>Sampling Point (Outfall) 005 - UNIT 7 OCPP CONDENSER/OTHER</i>	14
3.2.5 <i>Sampling Point (Outfall) 006 - UNIT 8 OCPP CONDENSER/OTHER</i>	15
3.2.6 <i>Sampling Point (Outfall) 007 - OCPP WWTP</i>	17
3.2.7 <i>Sampling Point (Outfall) 008 - STORM WATER AND COAL PILE RUNOFF</i>	19
3.2.8 <i>Sampling Point (Outfall) 010 - OCPP EMERGENCY OVERFLOW</i>	19
3.2.9 <i>Sampling Point (Outfall) 012 - OCPP SCREEN BACKWASH</i>	19
3.2.10 <i>Sampling Point (Outfall) 013 - ERGS CONDENSER/OTHER</i>	20
3.2.11 <i>Sampling Point (Outfall) 014 - Coal Storage Runoff</i>	22
3.2.12 <i>Sampling Point (Outfall) 015 - Limestone/gypsum area runoff</i>	23
3.2.13 <i>Sampling Point (Outfall) 907 - SUM OF MASS ERGS, OCPP</i>	23
3.2.14 <i>Sampling Point 606 - Background Mercury and Arsenic</i>	24
3.2.15 <i>Sampling Point 605 - Background for Temperature</i>	24
3.2.16 <i>Sampling Point 604 - Unit 6 OCPP Influent FAH & BAH</i>	24
3.2.17 <i>Sampling Point 603 - Unit 5 OCPP Influent FAH & BAH</i>	24
4 SCHEDULES	25
4.1 COMPLIANCE WITH FEDERAL ELG FOR FGD	25
4.2 COMPLIANCE WITH FEDERAL ELG FOR BOTTOM ASH TRANSPORT WATER	25
4.3 ARSENIC POLLUTANT MINIMIZATION PROGRAM	25
4.4 POLLUTANT MINIMIZATION PLAN FOR MERCURY	27
5 STANDARD REQUIREMENTS	30
5.1 REPORTING AND MONITORING REQUIREMENTS	30

5.1.1 Monitoring Results	30
5.1.2 Sampling and Testing Procedures	30
5.1.3 Recording of Results	30
5.1.4 Reporting of Monitoring Results	31
5.1.5 Records Retention	31
5.1.6 Other Information	31
5.1.7 Reporting Requirements – Alterations or Additions	31
5.2 SYSTEM OPERATING REQUIREMENTS	32
5.2.1 Noncompliance Reporting	32
5.2.2 Bypass	32
5.2.3 Scheduled Bypass	32
5.2.4 Controlled Diversions	33
5.2.5 Proper Operation and Maintenance	33
5.2.6 Operator Certification	33
5.2.7 Spill Reporting	33
5.2.8 Planned Changes	33
5.2.9 Duty to Halt or Reduce Activity	34
5.3 SURFACE WATER REQUIREMENTS	34
5.3.1 Permittee-Determined Limit of Quantitation Incorporated into this Permit	34
5.3.2 Appropriate Formulas for Effluent Calculations	34
5.3.3 Effluent Temperature Requirements	34
5.3.4 Visible Foam or Floating Solids	35
5.3.5 Surface Water Uses and Criteria	35
5.3.6 Total Residual Chlorine Requirements (When De-Chlorinating Effluent)	36
5.3.7 Compliance with Phosphorus Limitation	36
5.3.8 Additives	37
5.3.9 Whole Effluent Toxicity (WET) Monitoring Requirements	37
5.3.10 Whole Effluent Toxicity (WET) Identification and Reduction	37
5.3.11 Reopener Clause	37
6 SUMMARY OF REPORTS DUE	39

1 Influent Requirements - Cooling Water Intake Structure (CWIS)

1.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)
901	Offshore wedgewire screen system.
902	Emergency Intake: Intake structure at the intake channel used when intake is inoperable or anticipated inoperable due to clogging by frazil ice or other debris or for essential maintenance.

1.2 Monitoring Requirements and BTA Determinations

The permittee shall comply with the following monitoring requirements.

1.2.1 Sampling Point 901 - Intake Structure

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

1.2.1.1 CWIS - Authority to Operate

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 offshore cooling water intake system.

1.2.1.2 Cooling Water Intake BTA (Best Technology Available) Determination

The Department has determined that the intake structure is BTA for the new facility (Elm Road Generating Station) and is interim BTA for the existing facility (Oak Creek Power Plant).

The offshore cooling water intake represents BTA for minimizing adverse environmental impact in accordance with the requirements in section s. 283.31 (6), Wis. Stats., and section 316(b) of the Clean Water Act, and subpart I of 40 CFR 125, for the new facility (Elm Road Generating Station).

The offshore cooling water intake represents interim BTA for minimizing adverse environmental impact in accordance with the requirements in section s. 283.31 (6), Wis. Stats., and section 316(b) of the Clean Water Act, and subpart J of 40 CFR 125, for the existing facility (Oak Creek Power Plant).

1.2.2 Sampling Point 902 - Emergency Intake

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

1.2.2.1 Authority to Operate and Use Limitations

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 emergency onshore cooling water intake structure is authorized for use but has use restrictions as listed below. Monitoring and reporting are required.

The permittee shall only operate the emergency intake with the intake screens in the offshore intake structure are inoperable, or anticipated to be inoperable, due to clogging by frazil ice or other debris or for essential maintenance (e.g., damage repair, screen cleaning, lift pump repairs, cleaning or repairs of the on-shore forebays and pump houses). The Department shall be notified in writing within 5 days after any use of the emergency intake system. If at any time that the emergency cooling water intake structure at the intake channel is used with the gates open and the lift pumps in-service, as described in the permittee's December 1, 2006 letter, if the combined flow of the lift pumps exceed the combined OCPP circulating water (CW)pumps and results in a net discharge through the gates to the lake, such flow through the surface gates will not constitute use of the emergency intake. The permittee shall submit to the Department an Annual Certification Statement and Report (see section 1.3.4.1) which summarizes all of the following:

- 1) Monitoring of Flow Direction. During gates-open operation of the lift pumps, a monitoring plan will be implemented to assure that excess flow is always available to provide the necessary net flow outward to the lake as described above. This plan will consist of the following elements:
 - a) A flow monitoring device will be placed at each of the five OCPP dikewall gates that will clearly display the flow direction.
 - b) Regular rounds by roving operators will include the inspection of these flow devices to verify flow direction.
 - c) If conditions change or are expected to change, increased monitoring of flow direction will be performed to assure that excess flow still exists. Changes in conditions include; changes to damper positions, pumps in or out of service at ERGS or OCPP, changes in lake level or forebay levels.
- 2) Operating Response. Loss of excess flow will be verified by observing a reversal in flow direction at the dikewall gates. Excess flow will be easier to monitor and verify with greater flow rates. If a complete loss of excess flow is discovered or anticipated, or if excess flow cannot be verified, operators have a variety of options available for recovery as listed below. The permittee shall keep records of any of the following operating responses:
 - a) Start idle OCPP Lift Pump to provide increased excess flow.
 - b) Shut down operating OCPP CW Pump to decrease consumption of CW flow and increase excess flow.
 - c) Throttle OCPP condenser tailpipe dampers to decrease CW consumption in smaller increments.
 - d) Throttle dikewall gates to decrease the area of the exiting excess flow, and increase the velocity through the gate, making monitoring and detection easier.
 - e) Recirculation of OCPP CW (ice melt operations) to the west side of the dikewall to provide greater excess flow.
- 3) Administrative Controls. Normally, taking CW pumps in or out of service or changing damper position is done at the discretion of the Control Operator. During the gates-open operation phase, changes to plant configuration that affect CW flow will be performed only after consulting with the Shift Supervisor, and will require greater frequency of monitoring flow direction, to assure that the changes do not create a complete loss of excess flow. In addition, communications will be required from the control room operators at ERGS, so that operators at OCPP can respond to expected changes in flow rate that will affect the capacity of the OCPP Lift

Pumps. The permittee shall keep records of any of the above consults, greater frequency of monitoring, communications or other similar steps.

4) Reporting. In the event that excess flow is lost for a period of more than one hour, the permittee will provide notification to the DNR within 5 days of the incident.

1.2.2.2 BTA Determination

The emergency cooling water intake is included as a component of the water intake system technologies, and is also considered to be BTA (and interim BTA). Because of its limited use on an emergency basis, its environmental impact is minimized.

1.2.2.3 Monitoring and Reporting

The permittee shall notify the Department within 5 days after any use of the emergency cooling water intake system. The date and the duration during which the intake is open shall be monitored and reported. The permittee shall provide notification to the DNR field contact.

1.3 Cooling Water Intake Structure Standard Requirements

The following requirements and provisions apply to all water intake structures identified as sampling points in subsection 1.1.

1.3.1 Future BTA for Cooling Water Intake Structure

BTA determinations for entrainment and impingement mortality at cooling water intake structures will be made in each permit reissuance, in accordance with 40 CFR §125.80-98.

For the next permit reissuance application, the permittee shall provide all the information required in 40 CFR 122.21(r). Exemptions from some permit application requirements for existing facilities may be requested in accordance with 40 CFR §125.95(c) and §125.98(g), where information already submitted is sufficient. If an exemption is 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.

1.3.2 Impingement Mortality Monitoring

Two years of biweekly impingement mortality monitoring is required if and only if the permittee elects to comply with the impingement mortality BTA standard using a compliance option other than those listed in 40 CFR 125.94(c) (1-4).

1.3.3 Visual or Remote Inspections

The permittee shall conduct a visual inspection or employ a remote monitoring device during periods when the cooling water intake is in operation. The inspection shall evaluate if the intakes are maintained and operated to function as designed.

The offshore intake shall be maintained as follows:

The offshore CWIS will be inspected twice a year to assess clogging. Divers will inspect the CWIS annually after the winter season in late April/early May to assess screen damage. If clogged, the divers will use high pressure water spray equipment to remove any accumulated algae, mussels, moss, or other debris. Divers will also identify any changes in the material condition of the CWIS. Any repairs will be made as soon as practicable on an as needed basis. Divers will inspect the lakebed to verify that the rip-rap remains covered with sand.

Cleaning the screens is expected to take one week and will be accomplished by divers using high pressure spray equipment. These cleanings do not require the intake structure to be removed from service and can be accomplished safely during normal operations. High pressure cleaning will be conducted as needed in early June and October.

Visual Inspections – The permittee shall conduct visual inspections of the offshore intake screens and rip-rap around the offshore intake structure and record any surface occlusion and scouring of rip-rap. These inspections shall occur by direct observation or through the use of remote-control video equipment. Visual inspections shall be performed as follows:

- once each month for the months of September through May;
- two times each month during the months of June, July and August;

For visual inspections, the date of the inspection shall be recorded, and if weather or other unsafe or hazardous conditions exist for persons conducting the inspections, the permittee shall document conditions that preclude any inspection from taking place.

The permittee shall report the number, species and size of fish observed as impinged on the screens. An estimate of total impingement may be provided based on the observation of not less than four screens.

During the months of September through May, the permittee shall, at least once per week, visually observe and record information on the relative amount and type of organisms and other material in the OCPP intake forebay and the ERGS pump house. This visual observation may be conducted coincident to the entrainment sampling required by this permit. Such visual observations shall be coordinated with and compared to the water level measurements required under the Velocity Monitoring section of this permit to determine the potential for impingement on the intake screens. If, at any time, this visual observation indicates that the intake screens may be clogged or otherwise blocked, the permittee shall schedule a visual inspection of the screens as soon as possible and report this information to the Department within 5 days of its occurrence.

Velocity and Flow Monitoring

Once per quarter the permittee shall calculate velocity based on the cooling water intake pump performance and the combined flow-through area of the wedge-wire screens. The reported cooling water intake flow will be based on pump performance. Flow will be determined by use of the pump curves for the OCPP lift station pumps and ERGS circulating water pumps. The total developed head (TDH) for the OCPP lift station pumps shall be directly measured by subtracting the suction forebay level from the discharge forebay level leading to the OCPP Units 5-8 circulating water pumps. For the ERGS units, each circulating water pump is equipped with a discharge pressure gauge. The suction forebay level will be subtracted from the pump discharge pressure after it is converted to elevation head (in feet). This equals the total developed head required (in feet) to lift the water from the suction to the pump discharge. For both the OCPP and ERGS pumps, there is a TDH vs. flow curve developed that shall be used to obtain the combined intake flow rate.

Intake Water Level Monitoring

The water levels in the OCPP intake forebay and the ERGS pump house shall be continuously monitored. Any occurrence of water levels that indicate the screens may be clogged with debris, frazil ice and or other material shall be reported to the Department within 5 days of such occurrence. The water level monitoring data shall be retained by the permittee for not less than 5 years from the date of collection and shall be available for Department inspection upon request. If, at any time, these water level measurements indicate that the intake screens may be clogged or otherwise blocked, the permittee shall schedule a visual inspection of the screens as soon as possible and report this information to the Department within 5 days of its occurrence.

1.3.4 Reporting Requirements for Cooling Water Intake

The permittee shall adhere to the reporting requirements listed below:

1.3.4.1 Annual Certification Statement and Report

Submit an Annual Certification Statement and Report signed by the authorized representative with information on the following, no later than January 31st for the previous year:

- Certification that water intake structure technologies are being maintained and operated as set forth in this permit, or a justification and request for a modification of the practices. Include a summary of the required Visual or Remote Inspections.
- 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.
- If the information contained in the previous year's annual certification is still applicable, the certification may simply state as such.
- Compliance monitoring results for impingement mortality and entrainment characterization.
- Quarterly through-screen velocity documentation.
- A summary of the information collected about the use of the emergency onshore cooling water intake structure as required by section 1.2.2.1

1.3.5 Intake Screen Discharges and Removed Substances

Floating debris and accumulated trash collected on the cooling water intake trash rack and any other screens 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, except that backwashes may contain fine materials that originated from the intake water source such as sand, silt, small vegetation or aquatic life.

1.3.6 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).

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)
105	Generator Unit 5 bottom ash and fly ash hydrovactor effluent which discharges from Outfall 003.
106	Generator Unit 6 bottom ash and fly ash hydrovactor effluent which discharges from Outfall 004.
107	FGD wastewater treatment system effluent prior to combining with any other waste stream.
108	Discharge from the ERGS demineralizer regeneration waste line prior to combining with any other waste stream.
109	ERGS Unit 1 boiler blowdown and/or ERGS Unit 2 boiler blowdown and/or ERGS water treatment ultrafiltration reject/backwash and RO first pass.
171	Coal pile runoff that enters the OCPP WWTP or the ERGS WWTP
110	ERGS site wastewater treatment system effluent prior to combining with any other waste stream including FGD wastewater. Flows to the WWTP include low volume waste sources, nonchemical metal cleaning wastes, coal pile runoff, and limestone & gypsum area runoff.

2.2 Monitoring Requirements and Limitations

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

2.2.1 Sampling Point 105 - 003 UNIT 5 BAH and FAH

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	2/Month	Total Daily	
Suspended Solids, Total		mg/L	2/Month	24-Hr Flow Prop Comp	
Suspended Solids (Net)	Daily Max	100 mg/L	2/Month	Calculated	
Suspended Solids (Net)	Monthly Avg	30 mg/L	2/Month	Calculated	

2.2.2 Sampling Point 106 - 004 UNIT 6 BAH and FAH

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	2/Month	Total Daily	
Suspended Solids, Total		mg/L	2/Month	24-Hr Flow Prop Comp	

Suspended Solids (Net)	Daily Max	100 mg/L	2/Month	Calculated	
Suspended Solids (Net)	Monthly Avg	30 mg/L	2/Month	Calculated	

2.2.3 Sampling Point 107 - FGD Wastewater

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Total Daily	
Arsenic, Total Recoverable	Daily Max	11 µg/L	Weekly	24-Hr Flow Prop Comp	This limit expires on 12/14/2023
Arsenic, Total Recoverable	Daily Max	18 µg/L	Weekly	24-Hr Flow Prop Comp	This limit becomes effective on 12/14/2023
Arsenic, Total Recoverable	Monthly Avg	8.0 µg/L	Weekly	24-Hr Flow Prop Comp	
Mercury, Total Recoverable	Daily Max	0.103 µg/L	Weekly	Grab	This limit becomes effective on 12/14/2023.
Mercury, Total Recoverable	Daily Max	0.788 µg/L	Weekly	Grab	This limit expires on 12/14/2023
Mercury, Total Recoverable	Monthly Avg	0.356 µg/L	Weekly	Grab	This limit expires on 12/14/2023
Mercury, Total Recoverable	Monthly Avg	0.034 µg/L	Weekly	Grab	This limit becomes effective on 12/14/2023.

Suspended Solids, Total	Daily Max	100 mg/L	Weekly	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	30 mg/L	Weekly	24-Hr Flow Prop Comp	
Suspended Solids, Total		lbs/day	Weekly	Calculated	
Oil & Grease (Hexane)	Daily Max	20 mg/L	Weekly	Grab	
Oil & Grease (Hexane)	Monthly Avg	15 mg/L	Weekly	Grab	
Oil & Grease (Hexane)		lbs/day	Weekly	Calculated	
Nitrogen, Nitrite + Nitrate Total	Daily Max	4 mg/L	Weekly	Grab	This limit becomes effective on 12/14/2023.
Nitrogen, Nitrite + Nitrate Total	Monthly Avg	3 mg/L	Weekly	Grab	This limit becomes effective on 12/14/2023.
Selenium, Total Recoverable	Daily Max	70 µg/L	Weekly	Grab	This limit becomes effective on 12/14/2023.
Selenium, Total Recoverable	Monthly Avg	29 µg/L	Weekly	Grab	This limit becomes effective on 12/14/2023.

2.2.4 Sampling Point 108 - ERGS Demin. Regen. WW

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Total Daily	
Mercury, Total Recoverable		ng/L	Quarterly	Grab	
Suspended Solids, Total		lbs/day	Weekly	Calculated	
Oil & Grease (Hexane)	Daily Max	20 mg/L	Weekly	Grab	
Oil & Grease (Hexane)	Monthly Avg	15 mg/L	Weekly	Grab	
Oil & Grease (Hexane)		lbs/day	Weekly	Calculated	
Suspended Solids, Total	Daily Max	100 mg/L	Weekly	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	30 mg/L	Weekly	24-Hr Flow Prop Comp	

2.2.5 Sampling Point 109 - ERGS Blowdown, Water Treatment

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	2/Month	Total Daily	
Suspended Solids, Total	Daily Max	100 mg/L	2/Month	Grab	
Suspended Solids, Total	Monthly Avg	30 mg/L	2/Month	Grab	
Suspended Solids, Total		lbs/day	2/Month	Calculated	
Oil & Grease (Hexane)	Daily Max	20 mg/L	Annual	Grab	
Oil & Grease (Hexane)	Monthly Avg	15 mg/L	Annual	Grab	
Oil & Grease (Hexane)		lbs/day	Annual	Calculated	
Suspended Solids, Total		lbs/day	2/Month	Calculated	

2.2.6 Sampling Point 171 - Coal Pile Runoff to Treatment

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

2.2.6.1 Runoff Volume Estimate

The permittee shall report daily the coal pile runoff volume that discharges into the OCPP or ERGS wastewater treatment system. The volume shall be based on the coal pile runoff basin pump capacity multiplied by the time this pump is in operation.

2.2.7 Sampling Point 110 - ERGS Treated Process WW

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Total Daily	
Mercury, Total Recoverable		ug/L	Weekly	Grab	
Suspended Solids, Total	Daily Max	100 mg/L	Weekly	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	30 mg/L	Weekly	24-Hr Flow Prop Comp	
Suspended Solids, Total		lbs/day	Weekly	Calculated	
Arsenic, Total Recoverable		ug/L	Weekly	24-Hr Flow Prop Comp	
Oil & Grease (Hexane)	Daily Max	20 mg/L	Weekly	Grab	
Oil & Grease (Hexane)	Monthly Avg	15 mg/L	Weekly	Grab	
Oil & Grease (Hexane)		lbs/day	Weekly	Calculated	

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	Alternative cooling water outfall for Unit 5 (outfall 003) and to recirculate effluent from Units 5-7 (outfalls 003, 004 and 005) back into the water intake channel to prevent ice.
003	Unit 5 condenser noncontact once through cooling water, equipment heat exchangers using noncontact once through cooling water, boiler water surge tank, drip tank, fire protection system drains, bottom ash hydrovactor water discharges, fly ash hydrovactor water dischargers (back-up system), boiler blowdown (alternate route), and storm water from plant roof drains.
004	Unit 6 condenser noncontact once through cooling water, equipment heat exchangers using noncontact once through cooling water, boiler water surge tank, drip tank, fire protection system drains, bottom ash hydrovactor water discharges, fly ash hydrovactor water dischargers (back-up system), and storm water from plant roof drains.
005	Unit 7 condenser noncontact once through cooling water, plus other process flows equipment heat exchangers using noncontact once through cooling water, fire protection system drains and storm water from plant roof drains.
006	Unit 8 condenser noncontact once through cooling water, equipment heat exchangers using noncontact once through cooling water, WPDES pump station emergency overflow, fire protection system drains and storm water from plant roof drains.
007	Oak Creek wastewater treatment system effluent. Treated process wastewater includes low volume waste sources, bottom ash transport water, coal pile runoff, limestone & gypsum area runoff, nonchemical metal cleaning wastes, former north plant area drainage, equipment heat exchangers using noncontact once through cooling water, Unit 7&8 surge tank drain and overflow, storm water runoff and landfill leachate
008	Storm water runoff from: open lands (no exposure) west of ERGS; and coal pile runoff basin emergency spillway overflow.
010	Dock pump station emergency overflow.
012	Water intake traveling screen backwash.
013	ERGS Unit 1 and Unit 2 condenser noncontact once through cooling water, discharge of treated wastewater from ERGS WWTP (sample points 107 and 110), discharges from water treatment equipment and boiler blowdown (sample points 108 and 109), equipment heat exchangers using noncontact once through cooling water and fire protection system drains.
014	Storm water runoff from coal pile and materials handling area
015	Stormwater runoff from limestone and gypsum storage areas
907	Sum of mass for 108, 109, 110, and 007
606	Background monitoring for mercury and arsenic
605	Background monitoring for temperature.
604	Generator Unit 6 fly ash and bottom ash hydrovactor influent. Intake water sample used to determine the net discharge of pollutants from Outfall 004.
603	Generator Unit 5 fly ash and bottom ash hydrovactor influent. Intake water sample used to determine the net discharge of pollutants from Outfall 003

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 - OCPP DEICING LINE

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

3.2.2 Sampling Point (Outfall) 003 - UNIT 5 OCPP CONDENSER/OTHER

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Calculated	
pH Field	Daily Max	9.0 su	Weekly	Grab	
pH Field	Daily Min	6.0 su	Weekly	Grab	
Temperature Average		deg F	Daily	Continuous	
Temperature Maximum		deg F	Daily	Continuous	
Heat	Daily Avg	1,500 MBTU/hr	Daily	Calculated	
Mercury, Total Recoverable		ng/L	Quarterly	Grab	
Acute WET		TU _a	See Listed Qtr(s)	24-Hr Comp	Sample once during the permit term. See WET section 3.2.2.2.
Chronic WET		TU _c	See Listed Qtr(s)	24-Hr Comp	Sample once during the permit term. See WET section 3.2.2.2.
Phosphorus, Total	Monthly Avg	0.2 mg/L	Monthly	24-Hr Flow Prop Comp	

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 Whole Effluent Toxicity (WET) Testing

Primary Control Water: Lab water is allowed in acute tests. Lake Michigan water shall be used for chronic tests.

Instream Waste Concentration (IWC): 9.1%

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:

Acute tests shall be conducted once per permit term quarter timed with other acute tests in order to collect seasonal information about the discharge. Tests are required during the following quarters.

- **Acute:** 3rd quarter 2020

Acute WET testing shall continue after the permit expiration date (until the permit is reissued) in accordance with the WET requirements specified for the last full calendar year of this permit. For example, the next test would be required in 3rd quarter 2025.

Chronic tests shall be conducted on the same schedule as acute.

Testing: WET testing shall be performed during normal operating conditions. Permittees are not allowed to turn off or otherwise modify treatment systems, production processes, or change other operating or treatment conditions during WET tests.

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 Water Quality, 101 S. Webster St., P.O. Box 7921, Madison, WI 53707-7921, within 45 days of test completion. The Discharge Monitoring Report (DMR) form shall be submitted electronically 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: $TU_a = 100 \div LC_{50}$. A chronic toxicity test shall be considered positive if the Toxic Unit - Chronic (TU_c) is greater than 11 for either species. The TU_c shall be calculated as follows: $TU_c = 100 \div IC_{25}$.

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 90-day reporting period shall begin the day after the test which showed a positive result. The retests shall be completed using the same species and test methods specified for the original test (see the Standard Requirements section herein).

3.2.3 Sampling Point (Outfall) 004 - UNIT 6 OCPP CONDENSER/OTHER

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Calculated	
pH Field	Daily Max	9.0 su	Weekly	Grab	
pH Field	Daily Min	6.0 su	Weekly	Grab	
Temperature Average		deg F	Daily	Continuous	
Temperature Maximum		deg F	Daily	Continuous	
Heat	Daily Avg	1,500 MBTU/hr	Daily	Calculated	

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Mercury, Total Recoverable		ng/L	Quarterly	Grab	
Acute WET		TU _a	See Listed Qtr(s)	24-Hr Comp	Sample once during the permit term. See WET section 3.2.3.2.
Chronic WET		TU _c	See Listed Qtr(s)	24-Hr Comp	Sample once during the permit term. See WET section 3.2.3.2.
Phosphorus, Total	Monthly Avg	0.2 mg/L	Monthly	24-Hr Flow Prop Comp	

3.2.3.1 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.

3.2.3.2 Whole Effluent Toxicity (WET) Testing

Primary Control Water: Lab water is allowed in acute tests. Lake Michigan water shall be used for chronic tests.

Instream Waste Concentration (IWC): 9.1%

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:

Acute tests shall be conducted once per permit term quarter timed with other acute tests in order to collect seasonal information about the discharge. Tests are required during the following quarters.

- **Acute:** 4th quarter 2020

Acute WET testing shall continue after the permit expiration date (until the permit is reissued) in accordance with the WET requirements specified for the last full calendar year of this permit. For example, the next test would be required in 4th quarter 2025.

Chronic tests shall be conducted on the same schedule as acute.

Testing: WET testing shall be performed during normal operating conditions. Permittees are not allowed to turn off or otherwise modify treatment systems, production processes, or change other operating or treatment conditions during WET tests.

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 Water Quality, 101 S. Webster St., P.O. Box 7921, Madison, WI 53707-7921, within 45 days of test completion. The Discharge Monitoring Report (DMR) form shall be submitted electronically 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: $TU_a = 100 \div LC_{50}$. A chronic toxicity test shall be considered positive if the Toxic Unit - Chronic (TU_c) is greater than 11 for either species. The TU_c shall be calculated as follows: $TU_c = 100 \div IC_{25}$.

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 90-day reporting period shall begin the day after the test which showed a positive result. The retests shall be completed using the same species and test methods specified for the original test (see the Standard Requirements section herein).

3.2.4 Sampling Point (Outfall) 005 - UNIT 7 OCPP CONDENSER/OTHER

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Calculated	
pH Field	Daily Max	9.0 su	Weekly	Grab	
pH Field	Daily Min	6.0 su	Weekly	Grab	
Temperature Average		deg F	Daily	Continuous	
Temperature Maximum		deg F	Daily	Continuous	
Heat	Daily Avg	1,700 MBTU/hr	Daily	Calculated	
Mercury, Total Recoverable		ng/L	Quarterly	Grab	
Acute WET		TU _a	See Listed Qtr(s)	24-Hr Comp	Sample once during the permit term. See WET section 3.2.4.2.
Chronic WET		TU _c	See Listed Qtr(s)	24-Hr Comp	Sample once during the permit term. See WET section 3.2.4.2.
Phosphorus, Total	Monthly Avg	0.2 mg/L	Monthly	24-Hr Flow Prop Comp	

3.2.4.1 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.

3.2.4.2 Whole Effluent Toxicity (WET) Testing

Primary Control Water: Lab water is allowed in acute tests. Lake Michigan water shall be used for chronic tests.

Instream Waste Concentration (IWC): 9.1%

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:

Acute tests shall be conducted once per permit term quarter timed with other acute tests in order to collect seasonal information about the discharge. Tests are required during the following quarters.

- **Acute:** 1st quarter 2021

Acute WET testing shall continue after the permit expiration date (until the permit is reissued) in accordance with the WET requirements specified for the last full calendar year of this permit. For example, the next test would be required in 1st quarter 2025.

Chronic tests shall be conducted on the same schedule as acute.

Testing: WET testing shall be performed during normal operating conditions. Permittees are not allowed to turn off or otherwise modify treatment systems, production processes, or change other operating or treatment conditions during WET tests.

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 Water Quality, 101 S. Webster St., P.O. Box 7921, Madison, WI 53707-7921, within 45 days of test completion. The Discharge Monitoring Report (DMR) form shall be submitted electronically 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: $TU_a = 100 \div LC_{50}$. A chronic toxicity test shall be considered positive if the Toxic Unit - Chronic (TU_c) is greater than 11 for either species. The TU_c shall be calculated as follows: $TU_c = 100 \div IC_{25}$.

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 90-day reporting period shall begin the day after the test which showed a positive result. The retests shall be completed using the same species and test methods specified for the original test (see the Standard Requirements section herein).

3.2.5 Sampling Point (Outfall) 006 - UNIT 8 OCPP CONDENSER/OTHER

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Calculated	
pH Field	Daily Max	9.0 su	Weekly	Grab	
pH Field	Daily Min	6.0 su	Weekly	Grab	
Temperature Average		deg F	Daily	Continuous	

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Temperature Maximum		deg F	Daily	Continuous	
Heat	Daily Avg	1,700 MBTU/hr	Daily	Calculated	
Mercury, Total Recoverable		ng/L	Quarterly	Grab	
Acute WET		TU _a	See Listed Qtr(s)	24-Hr Comp	Sample once during the permit term. See WET section 3.2.5.2.
Chronic WET		TU _c	See Listed Qtr(s)	24-Hr Comp	Sample once during the permit term. See WET section 3.2.5.2.
Phosphorus, Total	Monthly Avg	0.2 mg/L	Monthly	24-Hr Flow Prop Comp	

3.2.5.1 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.

3.2.5.2 Whole Effluent Toxicity (WET) Testing

Primary Control Water: Lab water is allowed in acute tests. Lake Michigan water shall be used for chronic tests.

Instream Waste Concentration (IWC): 9.1%

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:

Acute tests shall be conducted once per permit term quarter timed with other acute tests in order to collect seasonal information about the discharge. Tests are required during the following quarters.

- **Acute:** 2nd quarter 2022

Acute WET testing shall continue after the permit expiration date (until the permit is reissued) in accordance with the WET requirements specified for the last full calendar year of this permit. For example, the next test would be required in 2nd quarter 2025.

Chronic tests shall be conducted on the same schedule as acute.

Testing: WET testing shall be performed during normal operating conditions. Permittees are not allowed to turn off or otherwise modify treatment systems, production processes, or change other operating or treatment conditions during WET tests.

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 Water Quality, 101 S. Webster St., P.O. Box 7921, Madison, WI 53707-7921, within 45 days of test completion. The Discharge Monitoring Report (DMR) form shall be submitted electronically 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: $TU_a = 100 \div LC_{50}$. A chronic toxicity test shall be considered positive if the Toxic Unit - Chronic (TU_c) is greater than 11 for either species. The TU_c shall be calculated as follows: $TU_c = 100 \div IC_{25}$.

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 90-day reporting period shall begin the day after the test which showed a positive result. The retests shall be completed using the same species and test methods specified for the original test (see the Standard Requirements section herein).

3.2.6 Sampling Point (Outfall) 007 - OCPP WWTP

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Total Daily	
Suspended Solids, Total	Daily Max	100 mg/L	Weekly	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	30 mg/L	Weekly	24-Hr Flow Prop Comp	
Suspended Solids, Total		lbs/day	Weekly	Calculated	
Oil & Grease (Hexane)	Daily Max	20 mg/L	Weekly	Grab	
Oil & Grease (Hexane)	Monthly Avg	15 mg/L	Weekly	Grab	
Oil & Grease (Hexane)		lbs/day	Weekly	Calculated	
pH Field	Daily Max	9.0 su	Weekly	Grab	
pH Field	Daily Min	6.0 su	Weekly	Grab	
Mercury, Total Recoverable	Daily Max	3.7 ng/L	Quarterly	Grab	
Phosphorus, Total	Monthly Avg	0.4 mg/L	Monthly	24-Hr Flow Prop Comp	
Arsenic, Total Recoverable	Daily Max	1.2 µg/L	Monthly	24-Hr Flow Prop Comp	
Acute WET		TU _a	See Listed Qtr(s)	24-Hr Comp	Sample annually in rotating quarters. See WET section 3.2.6.3.
Chronic WET		TU _c	See Listed Qtr(s)	24-Hr Comp	Sample annually in rotating quarters. See WET section 3.2.6.3.

3.2.6.1 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.

3.2.6.2 Implement Pollutant Minimization Plan

For outfall 007, this permit contains a variance from a water quality-based effluent limit (WQBEL) for mercury granted in accordance with s. NR 106.145, Wis. Adm. Code. As conditions of this variance, the permittee shall (a) maintain effluent quality at or below the effluent limitation specified in the table above, (b) implement the mercury pollutant minimization measures in the Pollutant Minimization Plan as listed in the schedule.

For outfall 007, this permit contains a variance from a water quality-based effluent limit (WQBEL) for arsenic granted in accordance with s. 283.15, Wis. Stats. As conditions of this variance, the permittee shall (a) maintain effluent quality at or below the effluent limitation specified in the table above, (b) implement an investigation as defined in s. 283.15(5)(c)2., Wis. Stats., as listed in the schedule.

3.2.6.3 Whole Effluent Toxicity (WET) Testing

Primary Control Water: Lab water is allowed in acute tests. Lake Michigan water shall be used for chronic tests.

Instream Waste Concentration (IWC): 9.1%

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:

Acute tests shall be conducted annually during the following quarters.

- **Acute:** 3rd quarter 2020, 4th quarter 2021, 1st quarter 2022, 2nd quarter 2023, and 3rd quarter 2024

Acute WET testing shall continue after the permit expiration date (until the permit is reissued) in accordance with the WET requirements specified for the last full calendar year of this permit. For example, the next test would be required in 4th quarter 2025.

Chronic test shall be conducted on the same schedule as acute.

Testing: WET testing shall be performed during normal operating conditions. Permittees are not allowed to turn off or otherwise modify treatment systems, production processes, or change other operating or treatment conditions during WET tests.

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 Water Quality, 101 S. Webster St., P.O. Box 7921, Madison, WI 53707-7921, within 45 days of test completion. The Discharge Monitoring Report (DMR) form shall be submitted electronically 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: $TU_a = 100 \div LC_{50}$. A chronic toxicity test shall be considered positive if the Toxic Unit - Chronic (TU_c) is greater than 11 for either species. The TU_c shall be calculated as follows: $TU_c = 100 \div IC_{25}$.

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 90-day reporting period shall begin the day after the test which showed a positive result. The retests shall be completed using the same species and test methods specified for the original test (see the Standard Requirements section herein).

3.2.7 Sampling Point (Outfall) 008 - STORM WATER AND COAL PILE RUNOFF

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		gal/month	Per Occurrence	Estimated	
Suspended Solids, Total	Daily Max	50 mg/L	Per Occurrence	Grab	See section 3.2.7.1 of permit.

3.2.7.1 ELG Applicability

Any discharge from facilities designed, constructed, and operated to treat the volume of coal pile runoff which is associated with an event that is not in excess of a 10-year, 24 hour rainfall event is subject to the limitation of 50 mg/L maximum concentration for total suspended solids.

3.2.8 Sampling Point (Outfall) 010 - OCPP EMERGENCY OVERFLOW

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		gal/month	Per Occurrence	Estimated	

3.2.8.1 Contaminated Storm Water

There shall be no discharge of contaminated storm water runoff bypassed through this outfall except under circumstances described in standard conditions for System Operating Requirements. Stormwater can be contaminated by coal tracking, dust from stockpiles, and when rusty or other equipment is exposed to precipitation.

3.2.9 Sampling Point (Outfall) 012 - OCPP SCREEN BACKWASH

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

3.2.9.1 Macroinvertebrate Control for OCPP

The permittee may not apply chlorine at the OCPP to control macroinvertebrates unless and until the Department approves of the permittee's macroinvertebrate management plan. If the permittee receives written approval from the Department to apply chlorine at the OCPP, the permittee may apply chlorine in accordance with the approved plan and the any conditions in the approval.

3.2.10 Sampling Point (Outfall) 013 - ERGS CONDENSER/OTHER

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Calculated	
Mercury, Total Recoverable	Daily Max	2.3 ng/L	Weekly	Grab	
Mercury, Total Recoverable	Monthly Avg	1.3 ng/L	Weekly	Grab	
Mercury, Total Recoverable	Monthly Avg	0.012 lbs/day	Weekly	Calculated	
Temperature Average		deg F	Daily	Continuous	
Temperature Maximum		deg F	Daily	Continuous	
Heat	Daily Avg	6,200 MBTU/hr	Daily	Calculated	
Chlorine, Total Residual	Daily Max	200 µg/L	Daily	Grab	
Chlorine, Total Residl Discharge Time	Daily Max	120 min/day	Daily	Total Daily	
pH Field	Daily Max	9.0 su	Weekly	Grab	
pH Field	Daily Min	6.0 su	Weekly	Grab	
Acute WET		TU _a	See Listed Qtr(s)	24-Hr Flow Prop Comp	Sample annually in rotating quarters. See WET section 3.2.10.4.
Chronic WET		TU _c	See Listed Qtr(s)	24-Hr Flow Prop Comp	Sample annually in rotating quarters. See WET section 3.2.10.4.
Arsenic, Total Recoverable		µg/L	Monthly	24-Hr Flow Prop Comp	See section 3.2.10.6.
Phosphorus, Total	Monthly Avg	0.2 mg/L	Monthly	24-Hr Flow Prop Comp	

3.2.10.1 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.

3.2.10.2 Total Residual Chlorine Limitations

There shall be no discharge of free available chlorine or total residual chlorine for more than 2 hours per unit per day nor shall the chlorine concentration be greater than 0.20 mg/L at any time. The time of chlorine discharge may be reported as being equivalent to the time of chlorine addition or, alternatively, as the time that detectable levels of chlorine, using the analysis methods specified in this permit's "Chlorine Compliance and Analysis Methods" Standard Condition, are present in the cooling water discharge. The time of chlorine discharge shall be monitored and summed for each day that chlorine is added to the condenser cooling water system.

3.2.10.3 Chlorine Sampling Procedure

One grab sample for total residual chlorine shall be collected during the period when the chlorine discharge of each chlorination event is the greatest. The discharge monitoring reported value shall be the maximum of the chlorination events for that day. A continuous monitor may be used to determine the greatest value and length of chlorine discharge as long as it duplicates the accuracy of a NR 219 approved method.

3.2.10.4 Whole Effluent Toxicity (WET) Testing

Primary Control Water: Lab water is allowed in acute tests. Lake Michigan water shall be used for chronic tests.

Instream Waste Concentration (IWC): 9.1%

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:

Acute tests shall be conducted annually during the following quarters.

- **Acute:** 3rd quarter 2020, 4th quarter 2021, 1st quarter 2022, 2nd quarter 2023, and 3rd quarter 2024

Acute WET testing shall continue after the permit expiration date (until the permit is reissued) in accordance with the WET requirements specified for the last full calendar year of this permit. For example, the next test would be required in 4th quarter 2025.

Chronic test shall be conducted on the same schedule as acute.

Testing: WET testing shall be performed during normal operating conditions. Permittees are not allowed to turn off or otherwise modify treatment systems, production processes, or change other operating or treatment conditions during WET tests.

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 Water Quality, 101 S. Webster St., P.O. Box 7921, Madison, WI 53707-7921, within 45 days of test completion. The Discharge Monitoring Report (DMR) form shall be submitted electronically 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: $TU_a = 100 \div LC_{50}$. A chronic toxicity test shall be considered positive if the Toxic Unit - Chronic (TU_c) is greater than 11 for either species. The TU_c shall be calculated as follows: $TU_c = 100 \div IC_{25}$.

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 90-day reporting period shall begin the day after the test which showed a positive result. The retests shall be completed using the same species and test methods specified for the original test (see the Standard Requirements section herein).

3.2.10.5 ERGS Macroinvertebrate Control

The permittee shall not apply chlorine to control macroinvertebrates. The permittee may employ thermal treatments to control macroinvertebrates, subject to the conditions of this section. The permittee shall indicate on the Discharge Monitoring Reports the periods in which thermal treatment is used. The permittee shall adhere to the following treatment protocol:

- Treatments may be conducted between late spring and late summer during the zebra mussel growth period.
- Treatments shall not be conducted more than three times per year.
- Each generating unit shall be thermally treated separately (i.e., simultaneous treatment of both units is prohibited).
- Treatments shall take place only when all cooling water pumps available are operating consistent with good plant operation.
- The treatment period shall not exceed a maximum of five hours.
- The discharge temperature from outfall 013 shall not exceed 85F.
- The maximum allowable temperature increase, measured at outfall 013 relative to background, shall be 25F.
- A cool-down sequence shall be employed following the thermal treatment; there shall be no sudden drops of temperature at outfall 013.

3.2.10.6 Effluent Limitations Based on Elevated Background Concentrations

The permittee shall not contribute to a statistically significant increase in arsenic intake concentration, as determined by comparing to the concentration of arsenic in the effluent (sample point 013) and intake water (sample point 606). The values of representative effluent and background concentrations for arsenic shall be statistically (P not greater than 0.01) determined using a 30-day basis (i.e. a 30-day P99) and using data for the previous five calendar years. The upper 99th percentile of 30-day average (30-day P99) discharge concentration of the substance shall be determined using the methodology specified in s. NR 106.05(5), Wis. Adm. Code. Compliance with this requirement shall be evaluated annually. The permittee shall recalculate the respective 30-day P99 values on an annual basis and submit as an annual report.

3.2.10.7 Reopener Clause

This clause authorizes modification or revocation and reissuance of the permit if new information indicates the permittee contributes to a statistically significant increase in arsenic intake substance concentration.

3.2.11 Sampling Point (Outfall) 014 - Coal Storage Runoff

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		gpd	Daily	Estimated	
Suspended Solids, Total	Daily Max	50 mg/L	Daily	Grab	See section 3.2.11.1 of permit.

3.2.11.1 ELG Applicability

Any untreated discharge from facilities designed, constructed, and operated to treat the volume of coal pile runoff which is associated with a 10-year, 24 hour rainfall event may not be subject to the limitations of 50 mg/L maximum concentration for total suspended solids.

3.2.11.2 ERGS Emergency Overflows

There shall be no discharge from outfall 014 for rainfall events less than the 10-year, 24-hour storm. Monitoring requirements for outfall 014 are applicable only when there is runoff resulting from a storm event exceeding a 10-year, 24-hour storm. Under these circumstances, runoff may be discharged without treatment, and the discharge from these outfalls shall be considered an emergency overflow. The permittee shall report any such overflows in accordance with the procedures of standard conditions for System Operating Requirements.

3.2.12 Sampling Point (Outfall) 015 - Limestone/gypsum area runoff

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		gpd	Daily	Estimated	
Suspended Solids, Total			Daily	Grab	

3.2.12.1 ERGS Emergency Overflows

There shall be no discharge from outfall 015 for rainfall events less than the 10-year, 24-hour storm. Monitoring requirements for outfall 015 are applicable only when there is runoff resulting from a storm event exceeding a 10-year, 24-hour storm. Under these circumstances, runoff may be discharged without treatment, and the discharge from these outfalls shall be considered an emergency overflow. The permittee shall report any such overflows in accordance with the procedures of standard conditions for System Operating Requirements.

3.2.13 Sampling Point (Outfall) 907 - SUM OF MASS ERGS, OCPP

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Suspended Solids, Total	Daily Max	7,205 lbs/day	Daily	Calculated	
Suspended Solids, Total	Monthly Avg	1,351 lbs/day	Daily	Calculated	
Oil & Grease (Hexane)	Daily Max	1,441 lbs/day	Weekly	Calculated	
Oil & Grease (Hexane)	Monthly Avg	675 lbs/day	Weekly	Calculated	

3.2.13.1 Calculations

Where data is not available for a daily calculation, the permittee shall use the data from the most recent sample results.

3.2.13.2 Calculated Discharge for Outfall 907

The sum of the masses of suspended solids and oil & grease from sample points 107, 108, 109, 110, and 007 shall be limited in accordance with the table and reported as outfall 907.

3.2.14 Sampling Point 606 - Background Mercury and Arsenic

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Mercury, Total Recoverable		ng/L	Quarterly	Grab	
Arsenic, Total Recoverable		µg/L	Monthly	24-Hr Flow Prop Comp	

3.2.14.1 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.

3.2.15 Sampling Point 605 - Background for Temperature

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Temperature Average		deg F	Daily	Continuous	

3.2.16 Sampling Point 604 - Unit 6 OCPP Influent FAH & BAH

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Suspended Solids, Total		mg/L	2/Month	24-Hr Comp	

3.2.17 Sampling Point 603 - Unit 5 OCPP Influent FAH & BAH

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Suspended Solids, Total		mg/L	2/Month	24-Hr Comp	

4 Schedules

4.1 Compliance with Federal ELG for FGD

Required Action	Due Date
Compliance with Federal ELG for FGD: Permittee shall comply with the applicable federal ELG requirements for FGD wastewater no later than 12/31/2023 or by the earlier of 36 months from the effective date of a new ELG rulemaking or the applicability dates for FGD wastewater. Since new ELG rules became effective 12/14/2020, the "compliance date" is 12/14/2023.	12/14/2023

4.2 Compliance with Federal ELG for Bottom Ash Transport Water

Required Action	Due Date
BATW Handling System: WE OCER has completed installation of the selected BATW Handling System for units 7 & 8. Facility ceased discharge of BATW in May 2021 & mechanical drag systems (compact submerged conveyors) were placed in service in June 2021. Sections 4.2, 4.3, and 4.4 of WPDES Permit No. WI-0000914-08-1 required the new technology to be installed by December 31, 2021. The project was completed prior to the permit deadline.	12/31/2021

4.3 Arsenic Pollutant Minimization Program

Required Action	Due Date
Annual Arsenic Progress Report: The permittee shall submit to the Department an annual progress report that shall discuss which arsenic pollutant minimization measures have been implemented during the period from the permit effective date to December 31, 2019. The report shall include an analysis of trends in monthly, quarterly, and annual total intake and effluent arsenic concentrations and mass discharge of arsenic based on sampling and flow data. The report shall provide an update on the permittee's: (1) progress in implementing pollutant minimization measures, operational improvements, and facility modifications to optimize reductions in arsenic discharges and, (2) status of evaluating the feasible alternatives for meeting arsenic WQBELs. Note that the monthly average interim limitation of 1.2 ug/L remains enforceable until new enforceable limits are established at the next permit reissuance or modification. The first annual progress report is to be submitted by the Date Due.	12/31/2019
Annual Arsenic Progress Report #2: Submit a progress report as defined above for the previous calendar year. Repurpose: The progress report shall also include an evaluation on whether to repurpose relatively new wastewater treatment equipment from Pleasant Prairie Power Plant after it retires in 2018 to further reduce arsenic concentrations at OCPP Outfall 007. Equipment that will be evaluated include the ultrafiltration membranes, multi-media filters, and other ancillary equipment.	12/31/2020
Annual Arsenic Progress Report #3: Submit a progress report as defined above for the previous calendar year. The permittee shall also perform the following actions and include the evaluation and/or progress of implementation the identified actions in the annual report.	12/31/2021

<p>1. Bottom Ash: Continue to evaluate bottom ash handling technologies for OCPP Units 7 & 8 including but not limited to: a dry bottom ash handling system, a recirculating BATW closed loop system, or a reuse system (e.g., in the FGD system). If an EPA rulemaking identifies a different BAT technology, that technology shall also be included in the evaluation. The selected technology shall be that which results in the lowest mass loading of (i.e. highest attainable condition for) mercury and arsenic to the receiving water. If the permittee demonstrates to the department that two or more technologies will result in comparable reductions in loading of mercury and arsenic and receives written department concurrence, the permittee may implement either technology. If the technology that would result in the greatest reduction in arsenic and mercury is infeasible for technical reasons and the department concurs with this determination in writing, the permittee may implement the technology expected to achieve the next greatest reduction in mercury and arsenic loading.</p> <p>Begin activities to design, engineer, and conduct pilot tests (if needed) of the selected BATW technology. If the project is reviewable under ch. NR 108, Wis. Adm. Code, plans and specifications must be submitted to the department for plan review, and construction of the project may not commence until the Department has approved the project plans. Implement the selected BATW solution at Units 7 & 8 by 12/31/2021. This requirement is a separate requirement from the requirement in section 4.2, and it will not be extended or changed based on the content or date of promulgation of the federal ELG. If construction authorization from the Public Service Commission is required prior to commencement of construction, the permittee must notify the department in writing and must seek this approval no later than 90 days after the effective date of this permit. If this authorization is required, the due date for this action shall be 24 months after construction authorization is granted or June 30, 2022, whichever is earlier. If construction authorization is not required, the due date for this action is December 31, 2021.</p> <p>2. FGD Implementation: Begin activities to expeditiously plan, design, procure, and install equipment to meet the FGD limits established in EPA’s forthcoming regulation on the ELG.</p> <p>3. Arsenic Treatment: Conduct an updated Evaluation of Treatment Technologies for Arsenic Removal at Outfall 007. This would be an update to the CH2M evaluation conducted in 2013 (and included in the arsenic variance application) to determine whether there are better, more cost-effective technologies available at the time of submittal. The evaluation would also address whether it is cost-effective to segregate and treat individual wastewaters. Updated cost estimates would be provided for feasible technologies.</p>	
<p>Annual Arsenic Progress Report #4: Submit a progress report as defined above for the previous calendar year. The permittee shall also evaluate and/or implement the following activities and include the evaluation and/or progress of implementation in the annual report.</p> <p>1. FGD: Review the treatment technology evaluations for FGD wastewater treatment (e.g., evaporation, zero valent iron, and biological treatment) to help decide which technology to pursue at OCER. Conduct a pilot test, as needed, using the candidate treatment technology. Evaluate the impacts to arsenic reduction.</p> <p>2. Bench Scale: Conduct bench-scale studies to test feasible technology alternative(s) that could be employed upstream of Outfall 007.</p>	12/31/2022
<p>Annual Arsenic Progress Report #5: Submit a progress report as defined above for the previous calendar year. Fuel Source Evaluation: Short-term Evaluation: Conduct an analysis of arsenic content of the current coal source and other available coal sources. Include a discussion of how differences in arsenic content of coal may impact effluent concentrations at Outfall 007. Long-term Evaluation: Describe the design life/expected remaining useful life of the generating units currently in operation. Discuss any plans, considerations, or potential plans for abandonment or repurposing of the units to use alternative fuel sources that may result in lower arsenic discharges via Outfall 007. Propose</p>	12/31/2023

actions that will be taken to consider arsenic loading as a part of future decision making on long-term planning for fuel sources.	
Final Arsenic Report: Submit a final report documenting the success in reducing arsenic concentrations in the effluent, as well as any anticipated future reduction in arsenic sources and arsenic effluent concentrations. The report shall summarize arsenic pollutant minimization activities that have been implemented during the current permit term and state which, if any, pollutant minimization activities were not pursued and why. The report shall also include a trend analysis on effluent data for arsenic at outfall 013. Additionally, if the permittee intends to seek to re-apply for an arsenic variance per s. 283.15, Wis. Stats for the reissued permit, a detailed pollutant minimization plan outlining the pollutant minimization activities proposed for the upcoming permit term should be submitted along with the final report.	03/31/2024
Annual Arsenic Progress Reports After Permit Expiration: In the event that this permit is not reissued on time, the permittee shall continue to submit annual arsenic progress reports each year covering pollutant minimization activities implemented and arsenic data trends. The report is due no later than January 31 for the previous year's activities.	

4.4 Pollutant Minimization Plan for Mercury

Required Action	Due Date
<p>Annual Mercury Progress Report: The permittee shall submit to the Department an annual progress report that shall discuss which mercury pollutant minimization measures have been implemented during the period from the permit effective date to December 31, 2019. The report shall include an analysis of trends in monthly, quarterly, and annual total intake and effluent mercury concentrations and mass discharge of mercury based on sampling and flow data. The report shall provide an update on the permittee's: (1) progress in implementing pollutant minimization measures, operational improvements, and facility modifications to optimize reductions in mercury discharges and, (2) status of evaluating the feasible alternatives for meeting mercury WQBELs.</p> <p>Note that the monthly average interim limitation of 3.7 ng/L remains enforceable until new enforceable limits are established at the next permit reissuance or modification. The first annual progress report is to be submitted by the Date Due.</p>	12/31/2019
<p>Annual Mercury Progress Report #2: Submit a progress report as defined above for the previous calendar year.</p> <p>1. Source Identification: The first step will be to identify wastewaters that are potential sources of mercury influent to the Oak Creek Power Plant (OCPP) wastewater treatment facility. Following the source identification step, some of these wastewaters will be sampled and analytical work will be completed using the EPA 1631 low level mercury method. Based on the results of the sampling and analysis work, options for pollution prevention and wastewater treatment will be evaluated. Approaches to reduce mercury via source elimination or reduction will be evaluated to determine costs and cost-effectiveness.</p> <p>2. Repurpose: The progress report shall also include an evaluation on whether to repurpose relatively new wastewater treatment equipment from Pleasant Prairie Power Plant after it retires in 2018 to further reduce mercury concentrations at OCPP Outfall 007. Equipment that will be evaluated include the ultrafiltration membranes, multi-media filters, and other ancillary equipment.</p>	12/31/2020

<p>Annual Mercury Progress Report #3: Submit a progress report as defined above for the previous calendar year. The permittee shall also perform the following actions and include the evaluation and/or progress of implementation the identified actions in the annual report.</p> <p>1. Bottom Ash: Continue to evaluate bottom ash handling technologies for OCPP Units 7 & 8 including but not limited to: a dry bottom ash handling system, a recirculating BATW closed loop system, or a reuse system (e.g., in the FGD system). If an EPA rulemaking identifies a different BAT technology, that technology shall also be included in the evaluation. The selected technology shall be that which results in the lowest mass loading of (i.e. highest attainable condition for) mercury and arsenic to the receiving water. If the permittee demonstrates to the department that two or more technologies will result in comparable reductions in loading of mercury and arsenic and receives written department concurrence, the permittee may implement either technology. If the technology that would result in the greatest reduction in arsenic and mercury is infeasible for technical reasons and the department concurs with this determination in writing, the permittee may implement the technology expected to achieve the next greatest reduction in mercury and arsenic loading.</p> <p>Begin activities to design, engineer, and conduct pilot tests (if needed) of the selected BATW technology. If the project is reviewable under ch. NR 108, Wis. Adm. Code, plans and specifications must be submitted to the department for plan review, and construction of the project may not commence until the Department has approved the project plans. Implement the selected BATW solution at Units 7 & 8 by 12/31/2021. This requirement is a separate requirement from the requirement in section 4.2, and it will not be extended or changed based on the content or date of promulgation of the federal ELG. If construction authorization from the Public Service Commission is required prior to commencement of construction, the permittee must notify the department in writing and must seek this approval no later than 90 days after the effective date of this permit. If this authorization is required, the due date for this action shall be 24 months after construction authorization is granted or June 30, 2022, whichever is earlier. If construction authorization is not required, the due date for this action is December 31, 2021.</p> <p>28</p> <p>2. FGD Implementation: Begin activities to expeditiously plan, design, procure, and install equipment to meet the FGD limits established in EPA’s forthcoming regulation on the ELG.</p> <p>3. Mercury Treatment: Conduct an updated Evaluation of Treatment Technologies for Mercury Removal at Outfall 007. This would be an update to determine whether there are better, more cost-effective technologies available at the time of submittal. The evaluation would also address whether it is cost-effective to segregate and treat individual wastewaters. Updated cost estimates would be provided for feasible technologies.</p>	12/31/2021
<p>Annual Mercury Progress Report #4: Submit a progress report as defined above for the previous calendar year. The permittee shall also evaluate and/or implement the following activities and include the evaluation and/or progress of implementation in the annual report.</p> <p>1. FGD: Review the treatment technology evaluations for FGD wastewater treatment (e.g., evaporation, zero valent iron, and biological treatment) to help decide which technology to pursue at OCER. Conduct a pilot test, as needed, using the candidate treatment technology. Evaluate the impacts to mercury reduction.</p> <p>2. Bench Scale: Conduct bench-scale studies to test feasible technology alternative(s) that could be employed upstream of Outfall 007.</p>	12/31/2022
<p>Annual Mercury Progress Report #5: Submit a progress report as defined above for the previous calendar year. Fuel Source Evaluation: Short-term Evaluation: Conduct an analysis of mercury content of the current coal source and other available coal sources. Include a discussion of how</p>	12/31/2023

<p>differences in mercury content of coal may impact effluent concentrations at Outfall 007. Long-term Evaluation: Describe the design life/expected remaining useful life of the generating units currently in operation. Discuss any plans, considerations, or potential plans for abandonment of the units or repurposing of the units to use alternative fuel sources that may result in lower mercury discharges via Outfall 007. Propose actions that will be taken to consider mercury loading as a part of future decision making on long-term planning for fuel sources.</p>	
<p>Final Mercury Report: Submit a final report documenting the success in reducing mercury concentrations in the effluent, as well as any 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 were not pursued and why. The report shall also include a trend analysis on effluent data for mercury at outfall 013. Additionally, if the permittee intends to seek to re-apply for a mercury variance per s. 283.15, Wis. Stats for the reissued permit, a detailed pollutant minimization plan outlining the pollutant minimization activities proposed for the upcoming permit term should be submitted along with the final report.</p>	03/31/2024
<p>Annual Mercury Progress Reports After Permit Expiration: In the event that this permit is not reissued on time, the permittee shall continue to submit annual mercury progress reports each year covering pollutant minimization activities implemented and mercury data trends. The report is due no later than January 31 for the previous year's activities.</p>	

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. 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 responsible executive or officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. 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.

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 purposes of calculating NR 101 fees, the 2 mg/l lower reporting limits for BOD₅ 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.

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 or electronic data records 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.

5.1.7 Reporting Requirements – Alterations or Additions

The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is only required when:

- The alteration or addition to the permitted facility may meet one of the criteria for determining whether a facility is a new source.
- The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification requirement applies to pollutants which are not subject to effluent limitations in the existing permit.
- The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use of disposal sites not reported during the permit application process nor reported pursuant to an approved land application plan. Additional sites may not be used for the land application of sludge until department approval is received.

5.2 System Operating Requirements

5.2.1 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.**

5.2.2 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.

5.2.3 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.

5.2.4 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.

5.2.5 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. 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.

5.2.6 Operator Certification

The wastewater treatment facility shall be under the direct supervision of a state certified operator. In accordance with s. NR 114.53, Wis. Adm. Code, every WPDES permitted treatment plant shall have a designated operator-in-charge holding a current and valid certificate. The designated operator-in-charge shall be certified at the level and in all subclasses of the treatment plant, except laboratory. Treatment plant owners shall notify the department of any changes in the operator-in-charge within 30 days. Note that s. NR 114.52(22), Wis. Adm. Code, lists types of facilities that are excluded from operator certification requirements (i.e. private sewage systems, pretreatment facilities discharging to public sewers, industrial wastewater treatment that consists solely of land disposal, agricultural digesters and concentrated aquatic production facilities with no biological treatment).

5.2.7 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.

5.2.8 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.

5.2.9 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 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.

5.3.3 Effluent Temperature Requirements

The permittee shall use the following formula for calculating the heat addition from the OCPP condenser cooling water outfalls 003, 004, 005 and 006:

The permittee is authorized to use the EtaPRO power plant performance evaluation software to determine the daily average heat addition from the condensers for OCPP Units 5-8 that discharge to the outfalls listed above. This

program is used to determine the difference in the enthalpy (a measure of heat content, “H”) of the steam at the condenser inlet and outlet. The heat transferred to the cooling water discharged to each outfall is equal to the difference in enthalpy (ΔH) of the steam between the condenser inlet (H_{in}) and outlet (H_{out}) for each of the OCPP units. The daily average heat addition shall be expressed in million British thermal units per hour (MMBTU/hr). When the generating unit is on-line, the daily average flow rate for each outfall shall be calculated as follows:

$$\text{Heat discharge (MMBTU/hr)} = \Delta H = H_{in} - H_{out}$$

$$\text{Flow} = \Delta H \text{ (MMBTU/hr)} / \Delta T \times 0.3475$$

Where: Flow = average daily cooling water flow rate in million gallons per day (mgd).

ΔT is the average daily difference between background (Lake Michigan) and condenser outlet water box temperature, in degrees Fahrenheit (F) and 0.3475 is a conversion factor.

When a generating unit is offline, but the circulating water pumps are in operation, the condenser flow rate shall be estimated using the technique described in the Plans for Monitoring Heat Output from the Oak Creek Power Plant submitted by the permittee on June 29, 2005.

The permittee shall use the following formula for calculating the heat addition from the ERGS condenser water outfall 013:

$$\text{Heat addition in on British thermal units per hour (MMBTU/hr)} = \text{Flow} \times \Delta T \times 0.3475$$

Where: Flow = average daily cooling water flow rate in million gallons per day (mgd).

ΔT is the average daily difference between background (Lake Michigan) and condenser outlet water box temperature, in degrees Fahrenheit (F) and 0.3475 is a conversion factor.

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.

5.3.4 Visible Foam or Floating Solids

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

5.3.5 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.

5.3.6 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.

5.3.7 Compliance with Phosphorus Limitation

Compliance with the concentration limitation for phosphorus shall be determined as a rolling twelve-month average and shall be calculated as follows:

First, determine the pounds of phosphorus for an individual month by multiplying the average of all the concentration values for phosphorus (in mg/L) for that month by the total flow for the month in Million Gallons times the conversion factor of 8.34.

Then, the monthly pounds of phosphorus determined in this manner shall be summed for the most recent 12 months and inserted into the numerator of the following equation.

$$\text{Average concentration of P in mg/L} = \frac{\text{Total lbs of P discharged (most recent 12 months)}}{\text{Total flow in MG (most recent 12 months)} \times 8.34}$$

The compliance calculation shall be performed each month with a reported discharge volume after substituting data from the most recent month(s) for the oldest month(s). A calculated value in excess of the concentration limitation will be considered equivalent to a violation of a monthly average.

5.3.8 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.

5.3.9 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.

5.3.10 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 Water Quality, 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.

5.3.11 Reopener Clause

Pursuant to s. 283.15(11), Wis. Stat. and 40 CFR 131.20, the Department may modify or revoke and reissue this permit if, through the triennial standard review process, the Department determines that the terms and conditions of this permit need to be updated to reflect the highest attainable condition of the receiving water.

6 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Compliance with Federal ELG for FGD -Compliance with Federal ELG for FGD	December 14, 2023	26
Compliance with Federal ELG for Bottom Ash Transport Water -BATW Handling System	December 31, 2021	26
Arsenic Pollutant Minimization Program -Annual Arsenic Progress Report	December 31, 2019	26
Arsenic Pollutant Minimization Program -Annual Arsenic Progress Report #2	December 31, 2020	26
Arsenic Pollutant Minimization Program -Annual Arsenic Progress Report #3	December 31, 2021	26
Arsenic Pollutant Minimization Program -Annual Arsenic Progress Report #4	December 31, 2022	27
Arsenic Pollutant Minimization Program -Annual Arsenic Progress Report #5	December 31, 2023	28
Arsenic Pollutant Minimization Program -Final Arsenic Report	March 31, 2024	28
Arsenic Pollutant Minimization Program -Annual Arsenic Progress Reports After Permit Expiration	See Permit	28
Pollutant Minimization Plan for Mercury -Annual Mercury Progress Report	December 31, 2019	28
Pollutant Minimization Plan for Mercury -Annual Mercury Progress Report #2	December 31, 2020	28
Pollutant Minimization Plan for Mercury -Annual Mercury Progress Report #3	December 31, 2021	29
Pollutant Minimization Plan for Mercury -Annual Mercury Progress Report #4	December 31, 2022	29
Pollutant Minimization Plan for Mercury -Annual Mercury Progress Report #5	December 31, 2023	30
Pollutant Minimization Plan for Mercury -Final Mercury Report	March 31, 2024	30
Pollutant Minimization Plan for Mercury -Annual Mercury Progress Reports After Permit Expiration	See Permit	30
Wastewater Discharge Monitoring Report	no later than the date indicated on the form	30

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:

Southeast Region, 2300 N Dr ML King Drive, Milwaukee, WI 53212