

\*\* Only changes made as part of this modification (-09-1) have been included in this fact sheet for more information consult the fact sheet for the previous version of the permit (-09-0)\*\*

## Permit Fact Sheet

### General Information

Permit Number:	WI-0042765-09-1
Permittee Name:	Wisconsin Public Service Corp
Address:	2491 Old Hwy 51
City/State/Zip:	Kronenwetter, WI 54455
Discharge Location:	Seven miles south of Wausau; outfalls on the east bank of the Wisconsin River roughly 0.75 -1.25 miles downstream of the I39/US Hwy 51 bridge  Lat: 44° 51' 20.16" Long: -89° 39' 37.80"
Receiving Water:	Wisconsin River
StreamFlow (Q <sub>7,10</sub> ):	1076 cfs
Stream Classification:	Warm Water Sport Fish (WWSF) community and non-public water supply

### Facility Description

Historically this facility has been covered via two separate WPDES permits; one covering wastewater discharges associated with Weston units 1&2 (WI-0003131) and one covering wastewater discharges associated with Weston units 3&4 (WI-0042765).

The Wisconsin Public Service (WPS) Corporation - Weston Power Plant is located on the eastern shore of the Wisconsin River near Rothschild, about 7 miles south of Wausau, Wisconsin. Historically the facility consisted of four coal fired steam electric generating units and two combustion engines. However; there have been recent changes at the facility that have resulted in a change of operation of two of the coal fired generating units. On March 7, 2013, WPS entered a consent decree with EPA over alleged violations of the clean air act and subsequently were required to makes changes to various plant operations. In June of 2015, under terms of the consent decree, Weston electric generating unit 1 was retired. Unit 1 was a coal-fired steam electric power plant which was retired as of 6/1/15. Unit 2 was retired on 2/7/23. Unit 3 is a coal-fired stream electric power plant with a rated capacity of 337 MW. And Unit 4 is a supercritical pulverized coal unit with a nominal capacity of 500 MW. Units 3 and 4 operate on a more frequent basis and are considered “base load” generating units, supplying electricity to the grid. Unit 4 is the newest unit, installed in 2008 with an electric generator that uses clean coal technologies.

The Weston Power Plant draws surface water from the Wisconsin River via one intake structure and utilizes three deep wells on site. A river water intake clarification system for Units 3 and 4, added in 2008, has allowed the water recycle rate to be increased in the cooling towers. The river clarification system consists of clarifiers that use coagulant, flocculant, hypochlorite, and caustic to reduce iron, manganese, organics and other particulates into the system.

Wastewater from the Weston Unit 3 and 4 are discharged to the Wisconsin River via Outfalls 002, 004, and 005.

Sanitary wastewater from units 3 and 4 is sent to a publicly owned treatment works.

### Substantial Compliance Determination

After a desk top review of all discharge monitoring reports, CMARs, land app reports, compliance schedule items, and a site visit on 3/22/2023, this facility has been found to be in substantial compliance with their current permit.

<b>Sample Point Designation</b>		
<b>Sample Point Number</b>	<b>Discharge Flow, Units, and Averaging Period</b>	<b>Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)</b>
701		INTAKE: River water intake sampling point for Wisconsin River supply for Weston units 3 and 4.
002		EFFLUENT: Wastewater discharge to the Wisconsin River that is a combination of the process wastewater discharges from sample points 112, 102, 103, 104, and 105
004		EFFLUENT: River water discharged while backwashing the water intake traveling screens for intake 701.
005		EFFLUENT: Discharge of once-through noncontact cooling water to the Wisconsin River. Water discharged at this outfall consists of water from miscellaneous uses in the power plant, such as air conditioning, pump cooling, and air compressor cooling. The discharge also includes overflow from the surge tank which supplies cooling tower make-up water.
201		Water discharged as part of hydrant flushing, hydroexcavation, outside building wash water, and equipment wash water.
102		IN PLANT: Discharge from the metal wastewater treatment pond that includes wastewaters from boiler water acid/caustic demineralizer regeneration, reverse osmosis membrane cleaning, and non-chemical metal surface cleaning that are equalized and treated for metals precipitation, suspended solids removal and pH control
103		IN PLANT: Discharge from the Weston 3 low volume wastewater pond that includes quench water from the ash handling system, stormwater, floor & equipment drain water, and reverse osmosis reject water from groundwater (treated to supply the boiler), that is equalized, treated to remove solids and adjusted for pH control.
104		IN PLANT: The blowdown discharge from the Weston 3 recycled water, condenser cooling tower system to control the concentration of dissolved solids
105		IN PLANT: The blowdown discharge from the Weston 4 recycled water, condenser cooling tower system to control the concentration of dissolved solids
109		BLANK: Effluent field blank sample needed to check for contamination of samples collected from outfall 002
112		IN PLANT: Discharge from the coal pile runoff containment/detention pond that is treated for metals precipitation, suspended solids removal and pH control.

# 1 Influent – Cooling Water Intake Structure - Proposed Monitoring

## Sample Point Number: 701- INTAKE WATER FOR UNITS 3 & 4

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Mercury, Total Recoverable		ng/L	Monthly	Grab	See Mercury Monitoring section for more details
Flow Rate		MGD	Daily	Continuous	
Intake Water Used Exclusively For Cooling		% Flow	Annual	Estimated	
Phosphorus, Total		mg/L	Weekly	24-Hr Flow Prop Comp	

### Changes from Previous Permit

No changes from previous permit.

# 2 Inplant - Monitoring and Limitations

## Sample Point Number: 102- METAL TREATMENT WASTEWATER

Monitoring Requirements and 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	3/Week	24-Hr Comp	
Suspended Solids, Total	Monthly Avg	30 mg/L	3/Week	24-Hr Comp	
Oil & Grease (Hexane)	Daily Max	20 mg/L	Weekly	Grab	
Oil & Grease (Hexane)	Monthly Avg	15 mg/L	Weekly	Grab	
Iron, Total Recoverable	Daily Max	1.0 mg/L	Weekly	24-Hr Comp	
Iron, Total Recoverable	Monthly Avg	1.0 mg/L	Weekly	24-Hr Comp	

<b>Monitoring Requirements and Limitations</b>					
<b>Parameter</b>	<b>Limit Type</b>	<b>Limit and Units</b>	<b>Sample Frequency</b>	<b>Sample Type</b>	<b>Notes</b>
Copper, Total Recoverable	Daily Max	1.0 mg/L	Weekly	24-Hr Comp	
Copper, Total Recoverable	Monthly Avg	1.0 mg/L	Weekly	24-Hr Comp	
pH (Minimum)	Daily Min	4.0 su	Daily	Continuous	See the Continuous pH Monitoring section below.
pH (Maximum)	Daily Max	11 su	Daily	Continuous	See the Continuous pH Monitoring section below.
pH Total Exceedance Time Minutes	Monthly Total	446 minutes	Daily	Continuous	See the Continuous pH Monitoring section below.
pH Exceedances Greater Than 60 Minutes	Monthly Total	0 Number	Daily	Continuous	See the Continuous pH Monitoring section below.
pH (Continuous)			Daily	Continuous	See "Continuous pH Monitoring" below for pH limits and allowed excursions

### **Changes from Previous Permit:**

No changes from previous permit.

### **Sample Point Number: 103- Low Volume Wastewater**

<b>Monitoring Requirements and Limitations</b>					
<b>Parameter</b>	<b>Limit Type</b>	<b>Limit and Units</b>	<b>Sample Frequency</b>	<b>Sample Type</b>	<b>Notes</b>
Flow Rate		MGD	Daily	Total Daily	
Suspended Solids, Total	Daily Max	100 mg/L	3/Week	24-Hr Comp	
Suspended Solids, Total	Monthly Avg	30 mg/L	3/Week	24-Hr Comp	
Oil & Grease (Hexane)	Daily Max	20 mg/L	Weekly	Grab	
Oil & Grease (Hexane)	Monthly Avg	15 mg/L	Weekly	Grab	
pH (Minimum)	Daily Min	4.0 su	Daily	Continuous	See the Continuous pH Monitoring section below.
pH (Maximum)	Daily Max	11 su	Daily	Continuous	See the Continuous pH

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
					Monitoring section below.
pH Total Exceedance Time Minutes	Monthly Total	446 minutes	Daily	Continuous	See the Continuous pH Monitoring section below.
pH Exceedances Greater Than 60 Minutes	Monthly Total	0 Number	Daily	Continuous	See the Continuous pH Monitoring section below.
pH (Continuous)			Daily	Continuous	See "Continuous pH Monitoring" below for pH limits and allowed excursions

**Changes from Previous Permit:**

No changes from previous permit.

**Sample Point Number: 104- COOLING TOWER 3 BLOWDOWN; 105- COOLING TOWER 4 BLOWDOWN**

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Total Daily	
Chlorine, Variable Limit		ug/L	Daily	Calculated	See Total Residual Chlorine Limits section below
Chlorine, Total Residual	Daily Max - Variable	ug/L	Daily	Grab	See Chlorine Sampling Procedure section below
Chlorine, Total Residual Discharge Time	Daily Max	120 min/day	Daily	See Permit	See Time of Chlorine Discharge section below
pH (Maximum)	Daily Max	9.0 su	Daily	Grab	
pH (Minimum)	Daily Min	6.0 su	Daily	Grab	

**Changes from Previous Permit:**

No changes from previous permit.

### Sample Point Number: 109- EFFLUENT FIELD BLANK

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

#### Changes from Previous Permit:

No changes from previous permit.

### Sample Point Number: 112- TREATED COAL PILE RUNOFF

100					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Total Daily	
Suspended Solids, Total	Daily Max	50 mg/L	3/Week	24-Hr Comp	
pH (Minimum)	Daily Min	4.0 su	Daily	Continuous	
pH (Maximum)	Daily Max	11 su	Daily	Continuous	
pH Total Exceedance Time Minutes	Monthly Total	446 minutes	Daily	Continuous	
pH Exceedances Greater Than 60 Minutes	Monthly Total	0 Number	Daily	Continuous	
pH (Continuous)			Daily	Continuous	See "Continuous pH Monitoring" below for pH limits and allowed excursions

#### Changes from Previous Permit:

No changes from previous permit.

## 3 Surface Water - Monitoring and Limitations

### Sample Point Number: 002- UNIT 3/4 PROCESS WATER

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

<b>Monitoring Requirements and Limitations</b>					
<b>Parameter</b>	<b>Limit Type</b>	<b>Limit and Units</b>	<b>Sample Frequency</b>	<b>Sample Type</b>	<b>Notes</b>
Maximum					
Mercury, Total Recoverable	Daily Max	11 ng/L	Monthly	Grab	This is an interim limit. See mercury monitoring section below for more information.
Copper, Total Recoverable	Daily Max	47 ug/L	Quarterly	Composite	
Copper, Total Recoverable	Monthly Avg	47 ug/L	Quarterly	Composite	
Copper, Total Recoverable	Daily Max	1.5 lbs/day	Quarterly	Calculated	
Hardness, Total as CaCO <sub>3</sub>		mg/L	Annual	24-Hr Comp	
Acute WET		TUa	See Listed Qtr(s)	24-Hr Flow Prop Comp	See WET Testing section below for listed quarters and more information.
Phosphorus, Total		mg/L	Weekly	24-Hr Comp	See TMDL section below for more information.
Phosphorus, Total		lbs/day	Weekly	Calculated	See TMDL section below for more information.
Phosphorus, Total		lbs/month	Monthly	Calculated	Calculate the total monthly mass of phosphorus discharged and report on the last day of the month on the DMR. See TMDL section below for more information.
Phosphorus, Total		lbs/yr	Monthly	Calculated	Calculate the 12-month rolling sum of total monthly mass of phosphorus discharged and report on the last day of the month on the DMR. See TMDL section below.
PFOS		ng/L	Monthly	Grab	Monitoring only. See PFOS/PFOA Minimization Plan Determination of Need schedule.
PFOA		ng/L	Monthly	Grab	Monitoring only. See PFOS/PFOA Minimization

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
					Plan Determination of Need schedule.

### Changes from Previous Permit

pH – Monitoring and Limitations removed.

### Explanation of Limits and Monitoring Requirements

#### pH

The previous version of this permit contained new pH limits of 9.0 maximum and 6.0 minimum at this outfall. The added limits were added in error and were unnecessary due to the pH limits already being applied at the internal sample points for all waste streams that contribute to this outfall. Antibacksliding and antidegradation requirements in ch. NR 207, Wis. Adm. Code, do not apply since these limits were added in error.

### Sample Point Number: 004- UNIT3&4 SCREEN BACKWASH WATER

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

### Changes from Previous Permit

No changes from previous permit.

### Sample Point Number: 005- NCCW TO WIS RIVER

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Temperature Maximum		deg F	Weekly	Continuous	
Chlorine, Total Residual	Daily Max	200 ug/L	Daily	Grab	This limit applies when discharges containing chlorine last 120 minutes or less.
Chlorine, Total Resdl Discharge Time	Daily Max	120 min/day	Daily	Record of Addition	See Time of Chlorine Discharge section below
Flow Rate		MGD	Daily	Total Daily	
Mercury, Total		ng/L	Quarterly	Grab	



Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Recoverable					

### Changes from Previous Permit

No changes from previous permit.

## 4 Land Application - Sludge/By-Product Solids (industrial only)

### Sample Point Number: 201- OUTSIDE WATER USE

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

### Changes from Previous Permit:

No changes from previous permit.

## 5 Schedules

### 5.1 PFOS/PFOA Minimization Plan Determination of Need

Required Action	Due Date
<p>Report on Effluent Discharge: Submit a report on effluent PFOS and PFOA concentrations and include an analysis of trends in monthly and annual average PFOS and PFOA concentrations. This analysis should also include a comparison to the applicable narrative standard in s. NR 102.04(8)(d), Wis. Adm. Code.</p> <p>This report shall include all additional PFOS and PFOA data that may be collected including any influent, intake, in-plant, collection system sampling, and blank sample results.</p>	07/01/2025
<p>Report on Effluent Discharge and Evaluation of Need: Submit a final report on effluent PFOS and PFOA concentrations and include an analysis of trends in monthly and annual average PFOS and PFOA concentrations of data collected over the last 24 months. The report shall also provide a comparison on the likelihood of the facility needing to develop a PFOS/PFOA minimization plan.</p> <p>This report shall include all additional PFOS and PFOA data that may be collected including any influent, intake, in-plant, collection system sampling, and blank sample results.</p> <p>The permittee shall also submit a request to the department to evaluate the need for a PFOS/PFOA minimization plan.</p> <p>If the Department determines a PFOS/PFOA minimization plan is needed based on a reasonable</p>	07/01/2026

<p>potential evaluation, the permittee will be required to develop a minimization plan for Department approval no later than 90 days after written notification was sent from the Department. The Department will modify or revoke and reissue the permit to include PFOS/PFOA minimization plan reporting requirements along with a schedule of compliance to meet WQBELs. Effluent monitoring of PFOS and PFOA shall continue as specified in the permit until the modified permit is issued.</p> <p>If, however, the Department determines there is no reasonable potential for the facility to discharge PFOS or PFOA above the narrative standard in s. NR 102.04(8)(d), Wis. Adm. Code, no further action is required and effluent monitoring of PFOS and PFOA shall continue as specified in the permit.</p>	
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## 5.2 Annual Certification Statements and Reports for Intake Structure

Required Action	Due Date
Submit Annual Certification Statement and Report #1:	01/31/2025
Submit Annual Certification Statement and Report #2:	01/31/2026
Submit Annual Certification Statement and Report #3:	01/31/2027
Submit Annual Certification Statement and Report #4:	01/31/2028
Submit Annual Certification Statement and Report #5:	01/31/2029
Ongoing Annual Certification Statements and Reports: Continue to submit Annual Certification Statements and Reports until permit reissuance has been completed.	

## 5.3 Mercury Pollutant Minimization Program

Required Action	Due Date
<p>Annual Mercury Progress Reports: Submit an annual mercury progress report related to the pollutant minimization activities for the previous year. The annual mercury progress report shall:</p> <p>Indicate which mercury pollutant minimization activities or activities outlined in the Pollutant Minimization Program Plan have been implemented and state which, if any, activities from the Pollutant Minimization Program Plan were not pursued and why;</p> <p>Include an assessment of whether each implemented pollutant minimization activity appears to be effective or ineffective at reducing pollutant discharge concentrations and identify actions planned for the upcoming year;</p> <p>Identification of barriers that have limited program effectiveness and adjustments to the program that will be implemented during the next year to help address these barriers;</p> <p>Include an analysis of trends in total effluent mercury concentrations based on mercury sampling; and</p> <p>Include an analysis of how influent and effluent mercury varies with time and with significant loading of mercury.</p> <p>The first annual mercury progress report is to be submitted by the Due Date.</p>	01/31/2025
Annual Mercury Progress Report #2: Submit a mercury progress report, related to the pollutant	01/31/2026

minimization activities for the previous year, as defined above.	
Annual Mercury Progress Report #3: Submit a mercury progress report, related to the pollutant minimization activities for the previous year, as defined above.	01/31/2027
Annual Mercury Progress Report #4: Submit a mercury progress report, related to the pollutant minimization activities for the previous year, as defined above.	01/31/2028
<p>Final Mercury Report: Submit a final report documenting the success in reducing mercury concentrations in the effluent, as well as the anticipated future reduction in mercury sources and mercury effluent concentrations.</p> <p>The report shall:</p> <p>Summarize mercury pollutant minimization activities that have been implemented during the current permit term and state which, if any, activities from the Pollutant Minimization Program Plan were not pursued and why;</p> <p>Include an assessment of which pollutant minimization activities appear to have been effective or ineffective. Evaluate any needed changes to the pollutant reduction strategy accordingly;</p> <p>Identification of barriers that have limited program effectiveness and adjustments to the program that will be implemented during the next variance term (if applicable) to help address these barriers;</p> <p>Include an analysis of trends in mercury concentrations based on sampling and data during the current permit term; and</p> <p>Include an analysis of how influent and effluent mercury varies with time and with significant loadings of mercury.</p> <p>If the permittee intends to reapply for a mercury variance per s. NR 106.145, Wis. Adm. Code, for the reissued permit, a detailed Pollutant Minimization Program Plan outlining the pollutant minimization activities proposed for the upcoming permit term shall be submitted along with the final report. An updated pollutant minimization plan shall:</p> <p>Include an explanation of why or how each pollutant minimization activity will result in reduced discharge of the target pollutant;</p> <p>Evaluate any new available information on pollutant sources, timing, and concentration to update the mass balance assumptions and expected sources of the pollutant, and</p> <p>Identify any information needs that would help to better determine pollutant sources and make plans to collect that information.</p>	01/31/2029
Annual Mercury Reports After Permit Expiration: In the event that this permit is not reissued by the date the permit expires, the permittee shall continue to submit annual mercury reports for the previous year following the due date of Annual Mercury Progress Reports listed above. Annual Mercury Progress reports shall include the information as defined above.	

## **Explanation of Schedules**

**~~"Enter brief explanation of all schedules above"~~**

~~As stated above, NR 106 Subchapter VIII—Permit Requirements for PFOS and PFOA Dischargers became effective on August 1, 2022. S. NR 106.98, Wis. Adm. Code, specifies steps to generate data in order to determine the need for reducing PFOS and PFOA in the discharge. Data generated per the effluent monitoring requirements will be used to determine the need for developing a PFOS/PFOA minimization plan. As part of the schedule, the permittee is required to submit two annual Reports on Effluent Discharge.~~

~~If the Department determines that a minimization plan is needed, the permit will be modified or revoked/reissued to include additional requirements.~~

**Attachments:**

**Expiration Date:**

~~Enter Date~~ 06/30/2029 (unchanged)

Prepared By: Sawyer Hanson Wastewater Engineer

Date: **Enter Date**

Notice of modification was published in the **[Enter name of publication]** , **[Enter address of publication]** .