Permit Fact Sheet

General Information

Permit Number	WI-0061441-04-0
Permittee Name and Address	WI ELECTRIC POWER CO CONCORD STATION N 8914 County Hwy E Watertown WI 53094
Permitted Facility Name and Address	WI Electric Power Co Concord Station N 8914 COUNTY HWY E, WATERTOWN, WISCONSIN
Permit Term	January 01, 2024 to December 31, 2028
Discharge Location	Jefferson County: Outfall 001 is located on the west bank of the Rock River, approximately 2 miles south (upstream) of the City of Watertown. Outfall 001 is located 43 degrees, 10 minutes, 6.2508 seconds North and 88 degrees, 40 minutes, 59.9844 seconds West.
Receiving Water	Rock River in Middle Rock River of Rock River (upper) in Jefferson County
Stream Flow ($Q_{7,10}$)	7-Q_{10} = 7.2 cfs, 7-Q_2 = 34 cfs
Stream Classification	Warm water sport fish community, non-public water supply.
Discharge Type	Existing, continuous (Outfall 001), intermittent (Outfall 003)

Facility Description

WI Electric Power Co Concord Station (WE Concord) is a peak load natural gas-fired combustion turbine power plant serving peak demand throughout the year. The days and hours of operation are highly variable. The plant is located in the SW ¼ SE ¼ of Section 11, T8N-R15E in the town of Watertown in Jefferson County. WE Concord consists of four combustion turbine-generators that use natural gas as the primary fuel with low sulfur diesel fuel as an emergency backup. The summer capacity of the plant is 386 megawatts, while the winter capacity is 400 megawatts.

WE Concord takes water from an on-site high capacity well for plant processes, producing purified water for the nitrogen oxides (NOx) control system. The wet NOx control system involves injection of purified water into the combustion process to control temperature and NOx emissions. The injected water is purified by disposable filters, reverse osmosis and continuous electrodeionization (CEDI).

Outfall 001 discharges wastewater from oil/water separator and reverse osmosis system. Since the inlet air cooling system was taken out of service, this outfall no longer contains cooling coil condensate.

Outfall 002 is comprised of reverse osmosis water and/or demineralized groundwater. The multimedia backwash was eliminated from Outfall 002 in June 2023. The maximum discharge from the mobile reverse osmosis system is 1,500 gpd, and the maximum discharge from the mobile demineralizers is 3,000 gpd. Outfall 002 discharges to a drainage ditch approximately 1200 feet from Outfall 001 at the west bank of the Rock River. The effluent reportedly infiltrates to groundwater before reaching the Rock River and does not reach the Rock River during normal operating conditions.

Outfall 003 is comprised of discharge from the oil/water separator from the inlet cooling building, evaporative condenser blowdown, and ice water storage tank discharge. The system consists of two 2.5-million-gallon ice water storage tanks, cooling coils and a mechanical refrigeration system and was used to increase the summer peaking capability of the units. The inlet air cooling system was drained and taken out of service indefinitely in November 2009. The system may be

placed back into service in the future, if electrical system demand warrants it; however, there are no plans to reactivate this system during the next permit term. When the outfall was active, it discharged to a drainage ditch approximately 500 feet from Outfall 001 at the west bank of the Rock River which reportedly infiltrates to groundwater before reaching the Rock River and does not reach the Rock River during normal operating conditions.

This facility is not subject to categorial limits because the generation of power does not utilize steam.

Substantial Compliance Determination

After a desk top review of all discharge monitoring reports, compliance schedule items, and a site visit on March 16, 2023, this facility has been found to be in substantial compliance with their current permit.

Compliance determination made by Ashley Brechlin on March 14, 2023.

Sample Point Descriptions

Sample Point Designation		
Sample Point Number	**Discharge Flow, Units, and Averaging Period**	**Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)**
001	42,563 gpd (2024)	Effluent: Representative samples of the combined discharge shall be collected at the sampling manhole prior to discharge to the Rock River. The combined discharge includes, depending on operations, Reverse Osmosis concentrate (RO reject), flush water (well and demineralized water), CEDI reject (partially demineralized groundwater) and wastewater from the oil/water separator. Excess inlet air cooling coil condensate is also discharged when the chiller system is in operation.
002	1,397 gpd (2024)	Effluent: Partially demineralized groundwater discharge to the drainage ditch which follows a 1200 foot drainage course and normally infiltrates before reaching the Rock River. Flow estimated based on residual volume in trailer or pump runtime/capacity during fire protection testing and well flushing.
003	Inactive	Effluent: Representative samples of the combined discharge shall be collected from the outlet located at the fence line which discharges to a drainage ditch that travels 500 feet before joining the 1200 ft ditch servicing Outfall 002 to the Rock River or at representative alternative locations. The combined discharge includes evaporative condenser blowdown, wastewater from the oil/water separator from the inlet cooling building and possible drainage of the ice water storage tank (if maintenance is necessary). THIS OUTFALL IS INACTIVE. THE PERMITTEE SHALL NOTIFY THE DEPARTMENT PRIOR TO RE-ACTIVATING THE INLET AIR COOLING SYSTEM (CHILLER SYSTEM). Flow calculated based on total of calculated flow rate and discharge time for each process stream. Grab samples collected from discharge sample tap under the ice water storage tanks.

Permit Requirements

1 Surface Water - Monitoring and Limitations

1.1 Sample Point Number: 001- 12 Inch Concrete Pipe Outlet

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Estimated	
pH Field	Daily Max	9.0 su	Monthly	Grab	
pH Field	Daily Min	6.0 su	Monthly	Grab	
Oil & Grease (Hexane)	Monthly Avg	15 mg/L	Quarterly	Grab	
BETX, Total		ug/L	Once	Grab	Once in 2027.
PAHs		ug/L	Once	Grab	Once in 2027.
Suspended Solids, Total		mg/L	Monthly	Grab	See TMDL section.
Suspended Solids, Total		lbs/day	Monthly	Calculated	See TMDL section.
Phosphorus, Total		mg/L	Monthly	Grab	See TMDL section.
Phosphorus, Total		lbs/day	Monthly	Calculated	See TMDL section.
Temperature Maximum	Daily Max	120 deg F	3/Week	Grab	Monitoring and limits effective only if Inlet Air Cooling System is active.

Changes from Previous Permit

Effluent limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit. See additional explanation of limits under "Explanation of Limits and Monitoring Requirements" below.

- **Flow-** The units for measuring flow rate in outfall 001 were changed from gpd to MGD. The sample frequency for flow has been changed 'daily; for eDMR reporting purposes.
- **BETX and PAH-** Required sampling year updated.

Explanation of Limits and Monitoring Requirements

Refer to the WQBEL memo for WI Electric Power Co - Concord Station (WPDES Permit No. WI-0061441) for the detailed calculations, prepared by the Water Quality Bureau dated Aprl 9, 2025 and amended 5/6/2025 used for this reissuance.

Monitoring Frequencies- The Monitoring Frequencies for Individual Wastewater Permits guidance (April 12, 2021) recommends that standard monitoring frequencies be included in individual wastewater permits based on the size and type of the facility, in order to characterize effluent quality and variability, to detect events of noncompliance, and to ensure consistency in permits issued across the state. Guidance and requirements in administrative code were considered when

determining the appropriate monitoring frequencies for pollutants that have final effluent limits in effect during this permit term.

Expression of Limits- In accordance with the federal regulation 40 CFR 122.45(d) and s. NR 205.065, Wis. Adm. Code, limits in this permit are to be expressed as daily maximum and monthly average limits whenever practicable.

TSS & TP: Phosphorus and Total Suspended Solids are limited by the water quality-based narrative interim limits that require the permittee to operate the facility in accordance with the approved plans for optimizing removal of phosphorus and total suspended solids. The Rock River TMDL, as approved by EPA on September 28, 2011, calls for a total reduction of 16% for both phosphorus and total suspended solids along Reach 28. Upon the next permit reissuance, these narrative interim limits should be re-evaluated to determine if numeric phosphorus and total suspended solids limits are necessary. Additional technology-based limits for TSS apply, see TBEL for detailed explanation.

Temperature: The Intake Air Cooling System is inactive at the time of permit reissuance. Only when this system is in operation, temperature sampling and limits apply at Outfall 001. No temperature sampling is required unless the Intake Air Cooling System is operational. The permittee is required to notify the department if this system is restarted. Sample frequency has been set to 3/week, the standard frequency for manual temperature monitoring, sampling is only required if/when the Intake Air Cooling System is in operation.

1.2 Sample Point Number: 002- Drainage Ditch

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

Changes from Previous Permit

Effluent limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit. See additional explanation of limits under "Explanation of Limits and Monitoring Requirements" below.

- **Flow-** The sample type changed to 'estimated'.

Explanation of Limits and Monitoring Requirements

Refer to the WQBEL memo for WI Electric Power Co - Concord Station (WPDES Permit No. WI-0061441) for the detailed calculations, prepared by the Water Quality Bureau dated April 9, 2025 and amended 5/6/2025 used for this reissuance.

1.3 Sample Point Number: 003- Combined Outlet (003)

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Calculated	
pH Field	Daily Max	9.0 su	Monthly	Grab	
pH Field	Daily Min	6.0 su	Monthly	Grab	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Oil & Grease (Hexane)	Monthly Avg	15 mg/L	Quarterly	Grab	
Halogen, Total Residual as Cl2	Daily Max	38 mg/L	5/Week	Grab	
BETX, Total		ug/L	Once	Grab	
PAHs		ug/L	Once	Grab	
Suspended Solids, Total		mg/L	Monthly	Grab	
Suspended Solids, Total		lbs/day	Monthly	Calculated	
Phosphorus, Total		mg/L	Monthly	Grab	See TMDL section.
Phosphorus, Total		lbs/day	Monthly	Calculated	See TMDL section.
Temperature Maximum	Daily Max	120 deg F	3/Week	Grab	
Time		hours	Daily	Calculated	Report the cumulative number of hours discharge occurred from the ice water storage system and the evaporative condenser blowdown for the 24-hr period.

Changes from Previous Permit

Effluent limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit. See additional explanation of limits under "Explanation of Limits and Monitoring Requirements" below.

- **Flow-** The sample frequency and type updated.

Explanation of Limits and Monitoring Requirements

Refer to the WQBEL memo for WI Electric Power Co - Concord Station (WPDES Permit No. WI-0061441) for the detailed calculations, prepared by the Water Quality Bureau dated April 9, 2025 and amended 5/6/2025, used for this reissuance.

Monitoring Frequencies- The Monitoring Frequencies for Individual Wastewater Permits guidance (April 12, 2021) recommends that standard monitoring frequencies be included in individual wastewater permits based on the size and type of the facility, in order to characterize effluent quality and variability, to detect events of noncompliance, and to ensure consistency in permits issued across the state. Guidance and requirements in administrative code were considered when determining the appropriate monitoring frequencies for pollutants that have final effluent limits in effect during this

permit term. Monitoring for new parameters included in this outfall to reflect the required monitoring and limits for this type of outfall for a steam electric facility.

Expression of Limits- In accordance with the federal regulation 40 CFR 122.45(d) and s. NR 205.065, Wis. Adm. Code, limits in this permit are to be expressed as daily maximum and monthly average limits whenever practicable.

TSS & TP: Phosphorus and Total Suspended Solids are limited by the water quality-based narrative interim limits that require the permittee to operate the facility in accordance with the approved plans for optimizing removal of phosphorus and total suspended solids. The Rock River TMDL, as approved by EPA on September 28, 2011, calls for a total reduction of 16% for both phosphorus and total suspended solids along Reach 28. Upon the next permit reissuance, these narrative interim limits should be re-evaluated to determine if numeric phosphorus and total suspended solids limits are necessary. Additional technology-based limits for TSS apply, see TBEL for detailed explanation.

Halogen, Total Residual as Cl2: If the permittee uses this outfall sampling and limits apply. Monitoring is at 5/week due the toxicity of chlorine. If the permittee shows levels of chorine that are consistent and not of concern a reduction may be considered, however due to the variable nature of chlorine and toxicity 5/week is a standard frequency.

Temperature: Sample frequency has been set to 3/week, the standard frequency for manual temperature monitoring, sampling is only required if/when the Intake Air Cooling System is in operation.

Additives: Use restrictions on additives were not assessed during permit reissuance because Outfall 003 is inactive. The permittee must submit a request for approval of all additives, except for sulfuric acid and sodium bisulfate prior to use (activation) and discharge at Outfall 003 in order to assess if any use restrictions are required. This request shall be submitted to the department at least 90 days prior to activation of Outfall 003.

2 Schedules

2.1 Outfall 003 Reactivation

Required Action	Due Date
Operation Evaluation Report: In the event that Outfall 003 is reactivated, the permittee shall submit an operational evaluation report. The report shall include an evaluation of collected effluent data, possible source reduction measures, and operational improvements to optimize removal of total phosphorus and total suspended solids. The report shall contain a schedule for implementation of the measures and improvements.-The report is due one year after reactivation of the Inlet Air Cooling System	
Annual Progress Reports: An annual progress report is required, however the department may waive the progress report(s) if the approved operational evaluation report concludes the permittee is currently implementing all necessary measures or if the permittee has completed all necessary measures for optimizing removal of phosphorus and total suspended solids. These annual reports are due each year upon activation of Outfall 003.	
Additives Use Review: In the event that Outfall 003 is reactivated, submit request for approval of all additives, except for sulfuric acid and sodium bisulfate prior to use (activation) and discharge at Outfall 003 in order to assess if any use restrictions are required. This request shall be submitted to the department at least 90 days prior to activation of Outfall 003.	

Explanation of Schedule

These schedules are continued from the current WPDES permit. These schedules are specific to the reactivation of Outfall 003 for phosphorus optimization and approval of additives used when Outfall 003 is in operations. Tthe permittee has already completed phosphorus optimization for the discharge from Outfall 001.

Other Comments

None

Attachments

Water Quality Based Effluent Limits dated April 9, 2025

Justification Of Any Waivers From Permit Application Requirements

No waivers requested or granted as part of this permit reissuance.

Prepared By: Jennifer Jerich, Wastewater Specialist

Date: 4/11/2025

Revisions post Fact Check: 5/6/2025, editorial corrections made for clarity and consistency between documents.

Revisions post Public Notice:

CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: April 9, 2025; amended May 6, 2025 to correct WET category in response to comment

TO: Jennifer Jerich – SCR/Horicon

FROM: Sarah Luck – SCR/Fitchburg

SUBJECT: Water Quality-Based Effluent Limitations for WI Electric Power Co Concord Station
WPDES Permit No. WI-0061441-04-0

This is in response to your request for an evaluation of the need for water quality-based effluent limitations (WQBELs) using chapters NR 102, 104, 105, 106, 207, 210, 212, and 217 of the Wisconsin Administrative Code (where applicable), for the discharge from WI Electric Power Co Concord Station (WE Concord) in Jefferson County. This industrial facility discharges to the Rock River, located in the Sinissippi Lake Watershed (UR08) in the Upper Rock River Basin. This discharge does not have an assigned wasteload allocation in the Rock River TMDL (which was approved by EPA on 09/28/2011) but is within the TMDL area. The evaluation of the permit recommendations is discussed in more detail in the attached report.

Based on our review, the following recommendations are made on a chemical-specific basis:

Outfall 001:

Parameter	Daily Maximum	Daily Minimum	Weekly Average	Monthly Average	Footnotes
Flow Rate					1,2
TSS					2,3
pH	9.0 s.u.	6.0 s.u.			2
Oil & Grease				15 mg/L	2,4
BETX, Total					1,2
PAHs					1,2
Phosphorus					2,3
Temperature	120°F				2,5

Footnotes:

1. Monitoring only.
2. No changes from the current permit.
3. Phosphorus and total suspended solids (TSS) are limited by the narrative limits that require the permittee to operate the facility in accordance with the approved plans for optimizing removal of phosphorus and total suspended solids. The Rock River TMDL calls for a total reduction of 16% for both phosphorus and total suspended solids along Reach 28. The permittee shall monitor phosphorus and TSS during periods of active discharge.
4. Additional limits to comply with the expression of limits requirements in ss. NR 106.07 and NR 205.065(7), Wis. Adm. Code, are not required since the monthly average limit is not a water quality-based effluent limitation based on fish and aquatic life protection, human health, or wildlife protection that is calculated under s. NR 106.06, Wis. Adm. Code.
5. This limit applies since the Inlet Air Cooling system discharges to Outfall 001.

Outfall 002:

Parameter	Daily Maximum	Daily Minimum	Weekly Average	Monthly Average	Footnotes
Flow Rate					1

Footnote:

1. Monitoring only.

Outfall 003:

Parameter	Daily Maximum	Daily Minimum	Weekly Average	Monthly Average	Footnotes
Flow Rate					1,2
TSS					4
pH	9.0 s.u.	6.0 s.u.			2
Oil & Grease				15 mg/L	2,3
Halogens, Total as Residual Chlorine	38 µg/L				2
BETX, Total					1,2
PAHs					1,2
Phosphorus					4
Temperature	120°F				2
Additives					5

Footnotes:

1. Monitoring only.
2. No changes from the current permit.
3. Additional limits to comply with the expression of limits requirements in ss. NR 106.07 and NR 205.065(7), Wis. Adm. Code, are not required since the limit is not a water quality-based effluent limitation based on fish and aquatic life protection, human health, or wildlife protection that is calculated under s. NR 106.06, Wis. Adm. Code.
4. Phosphorus and total suspended solids (TSS) are limited by the narrative interim limits that require the permittee to operate the facility in accordance with the approved plans for optimizing removal of phosphorus and total suspended solids. The Rock River TMDL calls for a total reduction of 16% for both phosphorus and total suspended solids along Reach 28.
5. All additives, except for sulfuric acid and sodium bisulfate, would need to be reviewed and approved prior to use and discharge at Outfall 003 in order to assess if any use restrictions are required.

No WET testing at any of the outfalls is required because information related to the discharge indicates low risk for toxicity.

The recommended limits meet the expression of limits requirements in ss. NR 106.07 and NR 205.065(7), Wis. Adm. Code, at each outfall, and additional limits are not required.

No technology-based effluent limits in accordance with ch. NR 290, Wis. Adm. Code, are needed for any of the outfalls since those limits only apply to facilities that use steam to produce power and WI Electric Power Co Concord Station consists of four combustion turbine generators which use natural gas as the primary fuel and ultra low-sulfur diesel fuel as an emergency backup.

Please consult the attached report for details regarding the above recommendations. If there are any questions or comments, please contact Sarah Luck (Sarah.Luck@wisconsin.gov) or Diane Figiel (Diane.Figiel@wisconsin.gov).

Attachments (4) – Narrative, Site Map, Limit Calculations for Outfall 003, and WET Recommendation Memo

PREPARED BY: Sarah Luck _____ Date: May 6, 2025

Sarah Luck
Water Resources Engineer

E-cc: Ashley Brechlin, Wastewater Engineer – SCR/Fitchburg
Lisa Creegan, Regional Wastewater Supervisor – SCR/Fitchburg
Diane Figiel, Water Resources Engineer – WY/3
Kari Fleming, Environmental Toxicologist – WY/3
Nate Willis, Wastewater Engineer – WY/3

Attachment #1

Water Quality-Based Effluent Limitations for
WI Electric Power Co Concord Station

WPDES Permit No. WI-0061441-04-0

PART 1 – BACKGROUND INFORMATION

Facility Description

WI Electric Power Co Concord Station (WE Concord) is a peak load natural gas-fired combustion turbine power plant serving peak demand throughout the year. The days and hours of operation are highly variable. The plant is located in the SW ¼ SE ¼ of Section 11, T8N-R15E in the town of Watertown in Jefferson County. WE Concord consists of four combustion turbine-generators that use natural gas as the primary fuel with low sulfur diesel fuel as an emergency backup. The summer capacity of the plant is 386 megawatts, while the winter capacity is 400 megawatts.

WE Concord takes water from an on-site high capacity well for plant processes, producing purified water for the nitrogen oxides (NOx) control system. The wet NOx control system involves injection of purified water into the combustion process to control temperature and NOx emissions. The injected water is purified by disposable filters, reverse osmosis and continuous electrodeionization (CEDI).

Outfall 001 discharges wastewater from oil/water separator and reverse osmosis system. Since the inlet air cooling system was taken out of service, this outfall no longer contains cooling coil condensate.

Outfall 002 is comprised of reverse osmosis water and/or demineralized groundwater. The multimedia backwash was eliminated from Outfall 002 in June 2023. The maximum discharge from the mobile reverse osmosis system is 1,500 gpd, and the maximum discharge from the mobile demineralizers is 3,000 gpd. Outfall 002 discharges to a drainage ditch approximately 1200 feet from Outfall 001 at the west bank of the Rock River. The effluent reportedly infiltrates to groundwater before reaching the Rock River and does not reach the Rock River during normal operating conditions.

Outfall 003 is comprised of discharge from the oil/water separator from the inlet cooling building, evaporative condenser blowdown, and ice water storage tank discharge. The system consists of two 2.5-million-gallon ice water storage tanks, cooling coils and a mechanical refrigeration system and was used to increase the summer peaking capability of the units. The inlet air cooling system was drained and taken out of service indefinitely in November 2009. The system may be placed back into service in the future, if electrical system demand warrants it; however, there are no plans to reactivate this system during the next permit term. When the outfall was active, it discharged to a drainage ditch approximately 500 feet from Outfall 001 at the west bank of the Rock River which reportedly infiltrates to groundwater before reaching the Rock River and does not reach the Rock River during normal operating conditions.

Attachment #2 is a map of the area showing the approximate location of Outfall 001, Outfall 002, and Outfall 003.

Existing Permit Limitations

The current permit, which expired on December 31, 2023, includes the following effluent limitations and monitoring requirements.

Outfall 001:

Parameter	Daily Maximum	Daily Minimum	Weekly Average	Monthly Average	Footnotes
Flow Rate					1
TSS					2
pH	9.0 s.u.	6.0 s.u.			3
Oil & Grease				15 mg/L	-
BETX, Total					1
PAHs					1
Phosphorus					2
Temperature	120 °F				1

Footnotes:

1. Monitoring only.
2. Phosphorus and total suspended solids are limited by the narrative interim limits that require the permittee to operate the facility in accordance with the approved plans for optimizing removal of phosphorus and total suspended solids. The Rock River TMDL calls for a total reduction of 16% for both phosphorus and total suspended solids along Reach 28.
3. These limitations are not being evaluated as part of this review. Because the water quality criteria (WQC), reference effluent flow rates, and receiving water characteristics have not changed, limitations for these water quality characteristics do not need to be reevaluated at this time.

Outfall 002:

Parameter	Daily Maximum	Daily Minimum	Weekly Average	Monthly Average	Footnotes
Flow Rate					1

Footnotes:

1. Monitoring only.

Outfall 003:

Discussed in Attachment #3.

Receiving Water Information

Outfall 001 – Discharge to the Rock River

- Name: Rock River
- Waterbody Identification Code (WBIC): 788800
- Classification used in accordance with chs. NR 102 and 104, Wis. Adm. Code: Warm Water Sport Fish (WWSF) community, non-public water supply.
- Low flows used in accordance with chs. NR 106 and 217, Wis. Adm. Code: The following 7-Q_{10} and 7-Q_2 values are from the USGS Rock River Station in Watertown
  - 7-Q_{10} = 7.2 cfs (cubic feet per second)
  - 7-Q_2 = 34 cfs

Harmonic Mean Flow = 82 cfs using a drainage area of 938 mi^2
The Harmonic Mean has been estimated based on average flow and the 7-Q_{10} using an equation from U.S. EPA's *Technical Support Document for Water Quality-Based Toxics Control* (March 1991, EPA/505/2-90-001, pgs. 88-89). The drainage area was estimated using the USGS StreamStats watershed delineation tool.

- Hardness = 320 mg/L as $CaCO_3$. This value represents the geometric mean of data (n=7) from WET testing done by Watertown Wastewater Treatment Facility from 2019 through 2024. Although Watertown WWTF is located downstream of WE Concord, the hardness values from Watertown WWTF are consistent with previous hardness values used in limit calculations.
- % of low flow used to calculate limits in accordance with s. NR 106.06(4)(c)5., Wis. Adm. Code: 25%
- Source of background concentration data: Background metals concentrations were measured as Total Recoverable from the Rock River at Waupun. Chloride data measured from the Rock River at the Milwaukee Street Bridge in Watertown is used as a background concentration for chloride. The geometric mean of the chloride concentration at this location was 62.7 mg/L from 7/30/01 to 2/15/18.
- Multiple dischargers: There are many dischargers to the Rock River, however they are not in the immediate vicinity and the mixing zones do not overlap. Therefore, the other dischargers do not impact this evaluation. The outfall for the Watertown Wastewater Treatment Facility is located approximately six miles downstream.
- Impaired water status: The Rock River is listed as impaired for phosphorus and total suspended solids and has an EPA-approved TMDL to address these impairments in the watershed.

<u>Outfall 002 – Discharge to the drainage ditch</u>

- Name: Drainage ditch to the Rock River
- Waterbody Identification Code (WBIC): None
- Classification used in accordance with chs. NR 102 and 104, Wis. Adm. Code: Default Warm Water Sport Fish (WWSF) community, non-public water supply. Discharge is to a 1200-ft drainage course that, under normal discharge conditions, infiltrates before reaching the Rock River.
- Low flows used in accordance with chs. NR 106 and 217, Wis. Adm. Code:
  7-Q_{10} = 0 cfs (cubic feet per second)
  7-Q_2 = 0 cfs
- Hardness = 397 mg/L as $CaCO_3$. Effluent hardness is used in place of receiving water because there is no receiving water flow upstream of the discharge.
- % of low flow used to calculate limits in accordance with s. NR 106.06(4)(c)5., Wis. Adm. Code: Not applicable where the receiving water low flows are zero.
- Source of background concentration data: Background concentrations are not included because they don't impact the calculated WQBEL when the receiving water low flows are equal to zero.
- Multiple dischargers: Discharge from Outfall 003 discharges to the drainage ditch approximately 500 feet upstream of Outfall 002. However, since discharge has not occurred from Outfall 003 since 2009, impacts from Outfall 003 are not considered in this evaluation.
- Impaired water status: Approximately 1200 ft downstream, the Rock River is listed as impaired for phosphorus and total suspended solids and has an EPA-approved TMDL to address these impairments in the watershed.

Effluent Information

<u>Outfall 001 – Discharge to the Rock River</u>

- Flow rate:
  Maximum annual average = 0.054 MGD (Million Gallons per Day) – excluding zero-flow days.

For reference, the actual average flow from January 2019 through September 2024 was 0.036 MGD (excluding days with zero reported flow).

- Hardness = 1,232 mg/L as $CaCO_3$. This value represents the geometric mean of four samples collected between September and November 2022 as reported on the permit application.
- Acute dilution factor used in accordance with s. NR 106.06(3)(c), Wis. Adm. Code: Not applicable – this facility does not have an approved Zone of Initial Dilution (ZID).
- Water source: Private well.
- Additives: The permit application lists one water quality conditioner, Hypersperse MDC700, which is for scale control. Hypersperse MDC700 has since been replaced by American Water Chemicals (AWC) A-112 which was reviewed and approved by the Department on July 23, 2024; this additive does not need to be reevaluated at this time.
- Effluent characterization: This facility is categorized as a secondary industry, so the permit application required effluent sample analyses for a limited number of common pollutants, as specified in s. NR 200.065, Table 1, Wis. Adm. Code, primarily metal substances plus ammonia, chloride, and hardness.
- Effluent data for substances for which a single sample was analyzed is shown in the tables in Part 2 below, in the column titled "MEAN EFFL. CONC.". Otherwise, substances with multiple effluent data are shown in the tables below or in their respective parts in this evaluation.

Copper Effluent Data from Outfall 001

Sample Date	Copper (µg/L)
09/13/2022	<1.9
10/06/2022	<3.4
10/26/2022	<3.4
11/10/2022	<3.4

"<" means that the pollutant was not detected at the indicated level of detection.

The following table presents the average concentrations and loadings at Outfall 001 from January 2019 through November 2024 for all parameters with limits in the current permit to meet the requirements of s. NR 201.03(6), Wis. Adm. Code:

Parameter Averages with Limits

	Average Measurement
pH field	7.4 s.u.
Oil & Grease*	0.32 mg/L
Temperature**	-

* Results below the level of detection (LOD) were included as zeroes in calculation of average.

** The facility was only required to monitor temperature if the Inlet Air Cooling System was activated, which it was not during the permit term.

<u>Outfall 002 – Discharge to the drainage ditch</u>

- Flow rate:

  Maximum annual average = 0.011 MGD (Million Gallons per Day) – excluding zero-flow days. For reference, the actual average flow from January 2019 through September 2024 was 0.0071 MGD (excluding days with zero reported flow).
- Hardness = 397 mg/L as $CaCO_3$. This value represents the geometric mean of four samples collected

between September and November 2022 as reported on the permit application.

- Acute dilution factor used in accordance with s. NR 106.06(3)(c), Wis. Adm. Code: Not applicable – this facility does not have an approved Zone of Initial Dilution (ZID).
- Water source: Private well.
- Additives: None.
- Effluent characterization: This facility is categorized as a secondary industry, so the permit application required effluent sample analyses for a limited number of common pollutants, as specified in s. NR 200.065, Table 1, Wis. Adm. Code, primarily metal substances plus ammonia, chloride, hardness, and phosphorus.
- Effluent data for substances for which a single sample was analyzed is shown in the tables in Part 2 below, in the column titled "MEAN EFFL. CONC.". Otherwise, substances with multiple effluent data are shown in the tables below or in their respective parts in this evaluation.

Copper Effluent Data from Outfall 002

Sample Date	Copper (µg/L)
09/13/2022	11.4
10/06/2022	<3.4
10/26/2022	14.5
11/10/2022	<3.4
Average	6.5

"<" means that the pollutant was not detected at the indicated level of detection. The mean concentration was calculated using zero in place of the non-detected results.

PART 2 – WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR TOXIC SUBSTANCES – EXCEPT AMMONIA NITROGEN

Permit limits for toxic substances are required whenever any of the following occur:

1. The maximum effluent concentration exceeds the calculated limit (s. NR 106.05(3), Wis. Adm. Code)
2. If 11 or more detected results are available in the effluent, the upper 99th percentile (or P_{99}) value exceeds the comparable calculated limit (s. NR 106.05(4), Wis. Adm. Code)
3. If fewer than 11 detected results are available, the mean effluent concentration exceeds 1/5 of the calculated limit (s. NR 106.05(6), Wis. Adm. Code)

Acute Limits based on 1-Q_{10}

Daily maximum effluent limitations for toxic substances are based on the acute toxicity criteria (ATC), listed in ch. NR 105, Wis. Adm. Code. Previously daily maximum limits for toxic substances were calculated as two times the ATC. However, changes to ch. NR 106, Wis. Code, (September 1, 2016) require the Department to calculate acute limitations using the same mass balance equation as used for other limits along with the 1-Q_{10} receiving water low flow to determine if more restrictive effluent limitations are needed to protect the receiving stream from discharges which may cause or contribute to an exceedance of the acute water quality standards. The mass balance equation is provided below.

$$\text{Limitation} = \frac{(WQC)\,(Qs + 1 - f\ \ Qe) - (Qs - f\,Qe)\,(Cs)}{Qe}$$

Where:

WQC =Acute toxicity criterion or secondary acute value according to ch. NR 105, Wis. Adm.

Code.

Qs = average minimum 1-day flow which occurs once in 10 years (1-day Q_{10})
if the 1-day Q_{10} flow data is not available = 80% of the average minimum 7-day flow which occurs once in 10 years (7-day Q_{10}).

Qe = Effluent flow (in units of volume per unit time) as specified in s. NR 106.06(4)(d), Wis. Adm. Code.

f = Fraction of the effluent flow that is withdrawn from the receiving water, and

Cs = Background concentration of the substance (in units of mass per unit volume) as specified in s. NR 106.06(4)(e), Wis. Adm. Code.

If the receiving water is effluent dominated under low stream flow conditions, the 1-Q_{10} method of limit calculation produces the most stringent daily maximum limitations and should be used while making reasonable potential determinations. This is not the case for WE Concord, and the limits are set based on two times the acute toxicity criteria.

The following tables list the calculated WQBELs for this discharge along with the results of effluent sampling. All concentrations are expressed in terms of micrograms per Liter (µg/L , except for hardness and chloride (mg/L).

Outfall 001 – Discharge to the Rock River

Daily Maximum Limits based on Acute Toxicity Criteria (ATC)

RECEIVING WATER FLOW = 5.8 cfs, (1-Q_{10} (estimated as 80% of 7-Q_{10})), as specified in s. NR 106.06(3)(bm), Wis. Adm. Code.

SUBSTANCE	REF. HARD.* mg/L	ATC	MAX. EFFL. LIMIT**	1/5 OF EFFL. LIMIT	MEAN EFFL. CONC.
Chlorine		19.0	38.1	7.61	<10
Arsenic		340	679.6	135.9	7.2
Cadmium	457	58.9	117.8	23.6	<0.15
Chromium	301	4446	8891.7	1778	<1.0
Copper	495	70.2	140.4	28.1	<3.4
Lead	356	365	729.3	145.9	<0.24
Nickel	268	1080	2160.6	432	2.2
Zinc	333	345	689.4	137.9	91.1
Chloride (mg/L)		757	1514.0	303	221

* The indicated hardness may differ from the effluent hardness because the effluent hardness exceeded the maximum range in ch. NR 105, Wis. Adm. Code, over which the acute criteria are applicable. In that case, the maximum of the range is used to calculate the criterion.

* * The 2 × ATC method of limit calculation yields a more restrictive limit than consideration of ambient concentrations and 1-Q_{10} flow rates per the changes to s. NR 106.07(3), Wis. Adm. Code, effective 09/01/2016.

Weekly Average Limits based on Chronic Toxicity Criteria (CTC)

RECEIVING WATER FLOW = 1.8 cfs (¼ of the 7-Q_{10}), as specified in s. NR 106.06(4)(c), Wis. Adm. Code

SUBSTANCE	REF. HARD.* mg/L	CTC	MEAN BACK-GRD.	WEEKLY AVE. LIMIT	1/5 OF EFFL. LIMIT	MEAN EFFL. CONC.
Chlorine		7.28		164.12	32.82	<10
Arsenic		152.2		3431	686.2	7.2

Attachment #1

SUBSTANCE	REF. HARD.* mg/L	CTC	MEAN BACK-GRD.	WEEKLY AVE. LIMIT	1/5 OF EFFL. LIMIT	MEAN EFFL. CONC.
Cadmium	175	3.82		86.12	17.2	<0.15
Chromium	301	325.75		7343	1468.7	<1.0
Copper	320	28.00		631.2	126.24	<3.4
Lead	320	86.16		1942.3	388.5	<0.24
Nickel	268	120.18		2709	541.9	2.2
Zinc	320	332.88		7504	1500.8	91.1
Chloride (mg/L)		395	62.7	7554	1510.8	221

* The indicated hardness may differ from the receiving water hardness because the receiving water hardness exceeded the maximum range in ch. NR 105, Wis. Adm. Code, over which the chronic criteria are applicable. In that case, the maximum of the range is used to calculate the criterion.

Monthly Average Limits based on Wildlife Criteria (WC)
The effluent characterization did not include any effluent sampling results for substances for which Wildlife Criteria exist.

Monthly Average Limits based on Human Threshold Criteria (HTC)
RECEIVING WATER FLOW = 20.6 cfs (¼ of Harmonic Mean), as specified in s. NR 106.06(4), Wis. Adm. Code.

SUBSTANCE	HTC	MO'LY AVE. LIMIT	1/5 OF EFFL. LIMIT	MEAN EFFL. CONC.
Cadmium	370	91714	18342.8	<0.15
Chromium (+3)	3818000	946389409	189277882	<1.0
Lead	140	34703	6940.5	<0.24
Nickel	43000	10658655	2131731	2.2

Monthly Average Limits based on Human Cancer Criteria (HCC)
RECEIVING WATER FLOW = 20.6 cfs (¼ of Harmonic Mean), as specified in s. NR 106.06(4), Wis. Adm. Code.

SUBSTANCE	HCC	MEAN BACK-GRD.	MO'LY AVE. LIMIT	1/5 OF EFFL. LIMIT	MEAN EFFL. CONC.
Arsenic	13.3	0.00	3296.7	659.35	7.2

In addition to evaluating the need for limits for each individual substance for which HCC exist, s. NR 106.06(8), Wis. Adm. Code, requires the evaluation of the cumulative cancer risk. Because no effluent limits are needed based on HCC, determination of the cumulative cancer risk is not needed per s. NR 106.06(8), Wis. Adm. Code.

Outfall 002 – Discharge to the drainage ditch
Daily Maximum Limits based on Acute Toxicity Criteria (ATC)
RECEIVING WATER FLOW = 0 cfs

SUBSTANCE	REF. HARD.* mg/L	ATC	MAX. EFFL. LIMIT**	1/5 OF EFFL. LIMIT	MEAN EFFL. CONC.
Chlorine		19.0	19.0	3.81	-

Attachment #1

SUBSTANCE	REF. HARD.* mg/L	ATC	MAX. EFFL. LIMIT**	1/5 OF EFFL. LIMIT	MEAN EFFL. CONC.
Arsenic		340	339.8	68.0	4.2
Cadmium	397	50.2	50.2	10.0	<0.15
Chromium	301	4446	4445.8	889	<1.0
Copper	397	57.0	57.0	11.4	6.5
Lead	356	365	364.7	72.9	0.93
Nickel	268	1080	1080.3	216	1.3
Zinc	333	345	344.7	68.9	15.9
Chloride (mg/L)		757	757.0	151	62.1

* The indicated hardness may differ from the effluent hardness because the effluent hardness exceeded the maximum range in ch. NR 105, Wis. Adm. Code, over which the acute criteria are applicable. In that case, the maximum of the range is used to calculate the criterion.
* * Per the changes to s. NR 106.07(3), Wis. Adm. Code, effective 09/01/2016 consideration of ambient concentrations and 1-Q_{10} flow rates yields a more restrictive limit than the 2 × ATC method of limit calculation.

Weekly Average Limits based on Chronic Toxicity Criteria (CTC)
RECEIVING WATER FLOW = 0 cfs

SUBSTANCE	REF. HARD.* mg/L	CTC	WEEKLY AVE. LIMIT	1/5 OF EFFL. LIMIT	MEAN EFFL. CONC.
Chlorine		7.28	7.28	1.46	-
Arsenic		152.2	152	30.4	4.2
Cadmium	175	3.82	3.82	0.8	<0.15
Chromium	301	325.75	326	65.2	<1.0
Copper	397	33.70	33.7	6.74	6.5
Lead	356	95.51	95.5	19.1	0.93
Nickel	268	120.18	120	24.0	1.3
Zinc	333	344.68	345	68.9	15.9
Chloride (mg/L)		395	395	79.0	62.1

* The indicated hardness may differ from the receiving water hardness because the receiving water hardness exceeded the maximum range in ch. NR 105, Wis. Adm. Code, over which the chronic criteria are applicable. In that case, the maximum of the range is used to calculate the criterion.

Monthly Average Limits based on Wildlife Criteria (WC)
The effluent characterization did not include any effluent sampling results for substances for which Wildlife Criteria exist.

Monthly Average Limits based on Human Threshold Criteria (HTC)
RECEIVING WATER FLOW = 0 cfs

SUBSTANCE	HTC	MO'LY AVE. LIMIT	1/5 OF EFFL. LIMIT	MEAN EFFL. CONC.
Cadmium	370	370	74.0	<0.15
Chromium (+3)	3818000	3818000	763600	<1.0
Lead	140	140	28.0	0.93

Attachment #1

SUBSTANCE	HTC	MO'LY AVE. LIMIT	1/5 OF EFFL. LIMIT	MEAN EFFL. CONC.
Nickel	43000	43000	8600	1.3

Monthly Average Limits based on Human Cancer Criteria (HCC)
RECEIVING WATER FLOW = 0 cfs

SUBSTANCE	HCC	MO'LY AVE. LIMIT	1/5 OF EFFL. LIMIT	MEAN EFFL. CONC.
Arsenic	13.3	13.3	2.66	**4.2**

In addition to evaluating the need for limits for each individual substance for which HCC exist, s. NR 106.06(8), Wis. Adm. Code, requires the evaluation of the cumulative cancer risk. Because no effluent limits are needed based on HCC, determination of the cumulative cancer risk is not needed per s. NR 106.06(8), Wis. Adm. Code.

Conclusions and Recommendations
Based on a comparison of the effluent data and calculated effluent limitations, **effluent limitations are required for chlorine at Outfall 001 and 002 and arsenic at Outfall 002.**

Total Residual Chlorine – The facility reported a result of 90 µg/L on 10/06/22 at Outfall 001 and 23 µg/L on 10/06/22 at Outfall 002 for total residual chlorine (TRC) on the permit application. These results triggered the need for chlorine limits at the outfalls. However, in an email to the Department on 01/24/25, the facility stated there was no known source of TRC and stated the results were likely invalid "due to either a contaminated instrument probe or the field sampling crew not following the method to properly calibrate the meter in the field." The facility then collected an additional sample from Outfall 001 on 1/30/25 which came back as <10 µg/L; a new sample was not able to be taken from Outfall 002 "because the multimedia filters have been removed and the facility is not currently operating a mobile demineralizer" per the facility in their 01/24/25 correspondence. Given there is no known source for TRC and given the non-detect sample result using correct sampling procedures, **no TRC effluent limits are needed at either Outfall 001 or Outfall 002.**

Arsenic (Outfall 002) – A single arsenic sample was sampled on 09/13/22. This value (4.2 µg/L) exceeds 1/5th of the human cancer criteria (13.3 µg/L) which is used to determine the need to include a limit per s. NR 106.05(6), Wis. Adm. Code. However, due to the intermittent and infrequent nature of the discharge, long term impacts associated with arsenic are not expected to be present. Therefore, **no monthly average limit nor additional monitoring for arsenic at Outfall 002 is required.**

PFOS and PFOA – The need for PFOS and PFOA monitoring is evaluated in accordance with s. NR 106.98(2), Wis. Adm. Code. Based on the type of discharge, **PFOS and PFOA monitoring is not recommended.** The Department may reevaluate the need for sampling at the next permit reissuance if new information becomes available that suggests PFOS or PFOA may be present in the discharge.

PART 3 – POLY-AROMATIC HYDROCARBONS (PAH) LIMITATIONS

Point source wastewater discharges containing PAH compounds are regulated using the performance-based limitation. The current permit has a limit of 0.1 µg/L for the sum of the PAH group of 10. The 2015 guidance document *PAH Group of 10 Calculation Using Toxicity Equivalent Factors* specifies the following performance-based limits:

Compound	Limit µg/L
Benzo(a)pyrene	0.1
Naphthalene	70
Group of 10 PAHs	0.1

The following compounds are regulated together as the group of 10 PAHs:

1. Benzo(a)anthracene
2. Benzo(b)fluoranthene
3. Benzo(k)fluoranthene
4. Benzo(g,h,i)perylene
5. Chrysene
6. Dibenzo(a,h)anthracene
7. Fluoranthene
8. Indeno(1,2,3-cd)pyrene
9. Phenanthrene
10. Pyrene

Benzo(a)pyrene is the most toxic of the PAH compounds. Because of this, the toxicity for the other compounds is calculated relative to benzo(a)pyrene with a Toxicity Equivalent Factor (TEF). The TEFs are used in the summation of the PAH group of 10 compounds concentrations. To calculate the concentration of the PAH group of 10, multiply the concentration of each PAH compound by the corresponding TEF value and sum the results. The table below summarized the TEFs for each of the 10 compounds.

Toxicity Equivalent Factors

PAH Compounds	TEF-Toxicity Equivalent Factor
Benzo(a)anthracene	0.1
Benzo(b)fluoranthene	0.1
Benzo(g,h,i)perylene	0.01
Benzo(k)fluoranthene	0.01
Chrysene	0.001
Dibenzo(a,h)anthracene	1
Fluoranthene	0.001
Indeno(1,2,3-cd)pyrene	0.1
Phenanthrene	0.001
Pyrene	0.001

WE Concord was required to collect one PAH sample at Outfall 001 on 10/06/22. The result came back as a non-detect; therefore, there is no reasonable potential to exceed the limits for Benzo(a)pyrene,

Naphthalene, or the group of 10 PAHs. **Monitoring is recommended to continue in the reissued permit to determine if limits are needed in the next permit.**

PART 3 – WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR AMMONIA NITROGEN

The State of Wisconsin promulgated revised water quality standards for ammonia nitrogen in ch. NR 105, Wis. Adm. Code, effective March 1, 2004 which includes criteria based on both acute and chronic toxicity to aquatic life. Given the fact that WE Concord does not currently have ammonia nitrogen limits, the need for limits is evaluated at this time. Four samples each for ammonia nitrogen were taken at Outfall 001 and Outfall 002 from 09/13/2022 to 11/10/2022.

Outfall 001 Ammonia Nitrogen Effluent Data

Sample Date	Ammonia Nitrogen (mg/L)
09/13/2022	2.6
10/06/2022	5.2
10/26/2022	4.8
11/10/2022	1.6
Average	3.6

Outfall 002 Ammonia Nitrogen Effluent Data

Sample Date	Ammonia Nitrogen (mg/L)
09/13/2022	1.2
10/06/2022	1.3
10/26/2022	1.5
11/10/2022	0.52
Average	1.1

The concentrations are all below any of the applicable criteria or acute water quality-based effluent limits for the receiving water. Therefore, **no water quality-based effluent limits or monitoring for ammonia are recommended in the reissued permit for either Outfall 001 or Outfall 002.**

PART 4 – PHOSPHORUS

Technology-Based Effluent Limit
Subchapter II of Chapter NR 217, Wis. Adm. Code, requires industrial facilities that discharge greater than 60 pounds of total phosphorus per month to comply with a 12-month rolling average limit of 1.0 mg/L, or an approved alternative concentration limit.

Since WE Concord does not currently have an existing technology-based limit, the need for this limit in the reissued permit is evaluated. The data demonstrates that the monthly average phosphorus loading is less than 60 lbs/month, which is the threshold for industries in accordance with s. NR 217.04(1)(a)2, Wis. Adm. Code, and therefore **no technology-based limit is required for either Outfall 001 or Outfall 002.**

Attachment #1

Average Mass Total Phosphorus Loading at Outfall 001

Month	Phosphorus Concentration (mg/L)	Total Effluent Flow (Million Gallons)	Calculated Mass (lbs/month)
December 2023	0.16	0.17	0.23
January 2024	0.31	1.04	2.7
February 2024	0.052	0.29	0.13
March 2024	0.082	0.33	0.22
April 2024	0.12	0.41	0.41
May 2024	0.25	1.87	3.9
June 2024	0.22	1.64	3.0
July 2024	0.20	1.69	2.9
August 2024	0.60	1.81	9.1
September 2024	0.041	3.89	1.3
October 2024	0.091	1.23	0.94
November 24	0.13	0.48	0.52
Average			**2.1**

Total P (lbs/month) = Monthly average (mg/L) × total flow (MG/month) × 8.34 (lbs/gallon)
Where total flow is the sum of the actual (not design) flow (in MGD) for that month

Three total phosphorus samples were collected at Outfall 002 and were similarly low as those at Outfall 001, and therefore there is no expectation that Outfall 002 would exceed 60 lbs/month loading threshold. The sample results are reported under the heading "Effluent Data" on the next page.

In addition, the need for a WQBEL for phosphorus must be considered.

Water Quality-Based Effluent Limits (WQBELs)

Outfall 001

Revisions to administrative rules regulating phosphorus took effect on December 1, 2010. These rule revisions include additions to s. NR 102.06, Wis. Adm. Code, which establish phosphorus standards for surface waters. Subchapter III of NR 217, Wis. Adm. Code, establishes procedures for determining WQBELs for phosphorus, based on the applicable standards in ch. NR 102, Wis. Adm. Code.

The Department has developed a TMDL for the Upper and Lower Rock River Basins. The U.S. EPA approved the Rock River TMDL on September 28, 2011. The document, along with the referenced appendices can be found at: https://dnr.wisconsin.gov/topic/TMDLs/RockRiver/index.html.

WE Concord is located in Watertown on Reach 28 of the Rock River from Mile 249 to Oconomowoc River. The phosphorus load reduction target for treatment facilities in this reach is unspecified, but the total reduction for the reach is 16% (reduction target for nonpoint sources and MS4s in Reach 28). The Rock River TMDL established a baseline for point source discharges at 1.0 mg/L. The previous WQBEL calculated an annual mass limit of 25 lbs/year based on a 16% reduction and a flow rate of 0.01 MGD. The discharge rate has increased to a maximum annual average of 0.054 MGD which would result in a greater annual mass limit. Estimated annual total phosphorus mass data is summarized in the table below, although it should be noted phosphorus was only monitored on a monthly basis.

Attachment #1

Annual Total Phosphorus Effluent Mass Data

	lbs/yr
2019	10
2020	10
2021	13
2022	27
2023	9.1
2024	25

- Annual Discharge: sum of total monthly discharges for the calendar year.
- Total Monthly Discharge: monthly average concentration (mg/L) x total flow for the month (MG/month) x 8.34.

Despite the higher flow rates, the effluent data demonstrates discharge is usually less than 25 lbs/yr, and therefore there is no reasonable potential for a numeric phosphorus limit at this time, although the need for a numeric phosphorus limit will be reevaluated at the next permit issuance. **It is recommended that the permit contain language similar to the following (along with appropriate phosphorus monitoring) for Outfall 001:**

> "The plant shall monitor phosphorus during periods of active discharge and operate the facility in accordance with a phosphorus optimization plan."

This language is believed to be sufficiently protective of local and downstream water quality. Upon the next permit reissuance, this decision should be reevaluated to determine if numeric phosphorus limits are necessary.

Section NR 217.16, Wis. Adm. Code, states that the Department may include a TMDL-derived water quality-based effluent limit (WQBEL) for phosphorus in addition to, or in lieu of, a s. NR 217.13, Wis. Adm. Code, WQBEL in a WPDES permit. Since the Rock River Basin TMDL was developed to protect and improve the water quality of phosphorus impaired waters within the basin and the discharge from WE Concord flows directly into the Rock River, which is classified as phosphorus impaired, the TMDL-based limit can be included in the WPDES permit absent the s. NR 217.13, Wis. Adm. Code, WQBEL. The narrative limit specified above is believed to be protective of local and downstream water quality because:

a) the facility is a very small, non-continuous discharge,
b) the TMDL Reach where the facility discharges was not given a specific reduction target, and
c) these phosphorus reductions are above and beyond those specified in the TMDL for Reach 28 compared to the baseline established for the TMDL.

<u>Outfall 002</u>

Discharge from Outfall 002 is comprised solely of reverse osmosis water and/or demineralized groundwater, and discharges to a drainage ditch approximately 1200 feet from the Rock River on an intermittent basis. Furthermore, when discharge is occurring, the effluent reportedly infiltrates to groundwater before reaching the Rock River. Due to these factors, **a narrative limit and monitoring during periods of discharge for phosphorus are not recommended at Outfall 002** since it is likely a "pass through system" meaning that the discharge is not contributing phosphorus beyond what is present in the intake. **Sampling for the next permit application is recommended, however.**

Effluent Data

The following tables summarize effluent total phosphorus monitoring data from Outfall 001 and Outfall 002.

Total Phosphorus Effluent Data at Outfall 001

	mg/L	lbs/day
1-day P_{99}	1.6	0.73
4-day P_{99}	0.86	0.41
30-day P_{99}	0.46	0.19
Mean	0.29	0.10
Std	0.33	0.16
Sample size	67	67
Range	0.02 - 1.3	0 - 0.731
Date range	January 2019 through November 2024	

Total Phosphorus Effluent Data at Outfall 002

(from the permit application)

Sample Date	mg/L
09/13/2022	0.098
10/6/2022	0.063
4/6/2023	0.026
Average	**0.062**

PART 5 –TOTAL SUSPENDED SOLIDS

Outfall 001

The Rock River TMDL also has wasteload allocations (WLA) for total suspended solids (TSS). For an industrial discharge, the limits for TSS must be expressed as a daily maximum and monthly average. The current permit includes a narrative TSS limit and monitoring for Outfall 001.

Similar to phosphorus, the TSS load reduction target for treatment facilities in Reach 28 is unspecified, but the total reduction for the reach is 16% (reduction target for nonpoint sources and MS4s in Reach 28). **It is recommended that the permit contain language similar to the following (along with appropriate TSS monitoring):**

> "The plant shall monitor for TSS during periods of active discharge and operate the facility in accordance with a TSS optimization plan."

This language is believed to be sufficiently protective of local and downstream water quality. Upon the next permit reissuance, this decision should be reevaluated to determine if numeric TSS limits are necessary.

Outfall 002

Discharge from Outfall 002 is comprised solely of reverse osmosis water and/or demineralized groundwater, and discharges to a drainage ditch approximately 1200 feet from the Rock River on an intermittent basis. Furthermore, when discharge is occurring, the effluent reportedly infiltrates to groundwater before reaching the Rock River. Due to these factors, **a narrative limit and monitoring during periods of discharge for TSS are not recommended at Outfall 002**. **Sampling for the next permit application is recommended, however.**

Effluent Data

The following tables summarize effluent total suspended solids monitoring data from Outfall 001 and Outfall 002.

Total Suspended Solids Effluent Data at Outfall 001

	mg/L	lbs/day
1-day P_{99}	38	14.6
4-day P_{99}	21	8.6
30-day P_{99}	10	3.7
Mean	5.2	1.6
Std	8.9	3.6
Sample size	69 (15 ND)	69
Range	<1 - 39	0 - 23.5
Date range	January 2019 through November 2024	

"<" means that the pollutant was not detected at the indicated level of detection. The mean concentration was calculated using zero in place of the non-detected (ND) results.

Total Suspended Solids Effluent Data at Outfall 002

(from the permit application)

Sample Date	mg/L
09/13/2022	2

PART 6 – WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR THERMAL

Surface water quality standards for temperature took effect on October 1, 2010. These regulations are detailed in chs. NR 102 (Subchapter II – Water Quality Standards for Temperature) and NR 106 (Subchapter V – Effluent Limitations for Temperature) of the Wisconsin Administrative Code. Daily maximum and weekly average temperature criteria are available for the 12 different months of the year depending on the receiving water classification.

Outfall 001 – Discharge to the Rock River

Due to the amount of upstream flow available for dilution in the limit calculation (Qs:Qe >20:1), the lowest calculated limitation is 120°F (s. NR 106.55(6)(a), Wis. Adm. Code). WE Concord last monitored effluent temperature from February 2014 through May 2018. The highest reported temperature was 74°F. Since the highest measured daily effluent temperature was below 120°F, there is no reasonable potential for WE Concord to exceed thermal criteria. However, **a continuation of the limitation of 120°F as a daily maximum (year-round) for temperature at Outfall 001 is recommended** for the reissued permit since the Inlet Air Cooling System discharges to Outfall 001.

Outfall 002 – Discharge to the drainage ditch

Due to the infrequent discharge nature of Outfall 002, and the fact that during normal operation the effluent reportedly infiltrates to groundwater before reaching the Rock River, **no thermal limitations or monitoring are needed for Outfall 002.**

Attachment #1

PART 7 – WHOLE EFFLUENT TOXICITY (WET)

WET testing is used to measure, predict, and control the discharge of toxic materials that may be harmful to aquatic life. In WET tests, organisms are exposed to a series of effluent concentrations for a given time and effects are recorded. Decisions below related to the selection of representative data and the need for WET limits were made according to ss. NR 106.08 and 106.09, Wis. Adm. Code. WET monitoring frequency and toxicity reduction evaluation (TRE) recommendations were made using the best professional judgment of staff familiar with the discharge after consideration of the guidance in the *Whole Effluent Toxicity (WET) Program Guidance Document* (2022).

- Acute tests predict the concentration that causes lethality of aquatic organisms during a 48 to 96-hour exposure. To assure that a discharge is not acutely toxic to organisms in the receiving water, WET tests must produce a statistically valid LC_{50} (Lethal Concentration to 50% of the test organisms) greater than 100% effluent, according to s. NR 106.09(2)(b), Wis. Adm Code.

- Chronic testing is usually not recommended where the ratio of the 7-Q_{10} to the effluent flow exceeds 100:1. For the WE Concord, that ratio is approximately 133:1. **With this amount of dilution, there is believed to be little potential for chronic toxicity effects in the Rock River associated with the discharge from the WE Concord, so the need for chronic WET testing at Outfall 001 will not be considered further**.

- According to the *State of Wisconsin Aquatic Life Toxicity Testing Methods Manual* (s. NR 219.04, Table A, Wis. Adm. Code), a synthetic (standard) laboratory water may be used as the dilution water and primary control in acute WET tests, unless the use of different dilution water is approved by the Department prior to use. The primary control water must be specified in the WPDES permit.

The WET checklist was developed to help DNR staff make recommendations regarding WET limits, monitoring, and other related permit conditions. The checklist indicates whether acute and chronic WET limits are needed, based on requirements specified in s. NR 106.08, Wis. Adm. Code. The checklist steps the user through a series of questions, assesses points based on the potential for effluent toxicity, and suggests monitoring frequencies based on points accumulated during the checklist analysis. As toxicity potential increases, more points accumulate, and more monitoring is recommended to ensure that toxicity is not occurring. A summary of the WET checklist analysis completed for this permittee is shown in the table below. Staff recommendations based on best professional judgment are provided below the summary table. For guidance related to reasonable potential and the WET checklist, see Chapter 1.3 of the WET Guidance Document: https://dnr.wisconsin.gov/topic/Wastewater/WET.html.

WET Checklist Summary for Outfall 001

	Acute
AMZ/IWC	Not Applicable. **0 Points**
Historical Data	Data not available in past 5 years. **5 Points**
Effluent Variability	Little variability, no violations or upsets, consistent operations. **0 Points**
Receiving Water Classification	WWSF **5 Points**

Attachment #1

	Acute
Chemical-Specific Data	Reasonable potential for limits for chlorine based on ATC. Ammonia nitrogen, arsenic, chloride, chlorine, nickel, and zinc detected. Additional Compounds of Concern: None. **8 Points**
Additives	No biocides and one water quality conditioner added. Permittee has proper P chemical SOPs in place? Not in use/not applicable. **1 Point**
Discharge Category	Power Generation (natural gas or low sulfur diesel) **5 Points**
Wastewater Treatment	Primary Treatment Only **8 Points**
Downstream Impacts	No impacts known. **0 Points**
Total Checklist Points:	**32 Points**
Recommended Monitoring Frequency (from Checklist):	3 tests during permit term.
Limit Required?	No
TRE Recommended? (from Checklist)	No

The WET Checklist and *WET Program Guidance Document* were created to help staff complete a thorough WET analysis, but there are times when the recommendations given may not be appropriate for the given situation. As explained in the memo from Kari Fleming, DNR Environmental Toxicologist, dated October 15, 2018 (shown in Attachment #4), the WET Checklist was designed to evaluate process waters from a continuous municipal or industrial discharge, not intermittent discharges of stormwater, oil/water separator, or RO water. The standard WET Checklist doesn't fit this discharge situation and best professional judgment (BPJ) should be used to determine if WET testing is appropriate. In addition, the discharges occur only intermittently and for short periods of time which causes the potential for impacts from toxicity to be extremely low. Also, the periodic unpredictable nature of the current discharge would make getting a representative sample for the Acute WET test improbable. Considering all of these factors, **WET testing is not recommended for either Outfall 001 or Outfall 002.** Please refer to Attachment #4 for the specifics of using BPJ in this situation.

PART 8 – ADDITIVE REVIEW

The permit application lists one water quality conditioner, Hypersperse MDC700, which is for scale control, is discharged at Outfall 001. Hypersperse MDC700 has since been replaced by **American Water Chemicals (AWC) A-112 and was reviewed and approved by the Department on July 23, 2024; this additive does not need to be reevaluated at this time.**

Attachment #2

Site Map

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

WI Electric Power Co Concord Station

Legend: (some map layers may not be displayed)

- Surface Water Outfalls
- 24K Lakes and Open Water
- 24K Streams and Rivers
- City or Village
- County Boundaries

Major Roads

- State Highway

County and Local Roads

- County HWY
- Local Road
- Railroads

Notes:

Outfall 001 discharges to the Rock River; Outfall 002 discharges to a drainage ditch to the Rock River. No longer to scale.

Service Layer Credits:
EN Basic Basemap WTM Ext: , Permits & Determinations: WI DNR Bureau of Watershed Management

Map projection: NAD 1983 HARN Wisconsin TM

N

Map: 0 3,000 6,000 Feet
0 1,000 2,000 Meters

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Attachment #3
Water Quality-Based Effluent Limitations for
WI Electric Power Co - Concord Station

Outfall 003

PART 1 – BACKGROUND INFORMATION

The inlet air cooling system was drained and taken out of service indefinitely in November 2009 and so Outfall 003 is an inactive outfall. There is some interest from the facility, however, to reactivate this outfall at a later date if there is an increase in energy demand. Therefore, limits for Outfall 003 were evaluated using the maximum design flow from Outfall 003 and previously collected data from the Outfall during periods of active discharge.

It is strongly recommended that these limits be reevaluated prior to reactivating the discharge to ensure these limits are sufficiently protective of the drainage ditch (immediate receiving water) and downstream at the Rock River, and to account for updated discharge information and additive use.

Existing Permit Limitations
The current permit includes the following effluent limitations for Outfall 003. It is assumed that the reference effluent flow rates will not change at Outfall 003 upon reactivation.

Outfall 003

Parameter	Daily Maximum	Daily Minimum	Monthly Average	Footnotes
Flow Rate				1
Oil & Grease			15 mg/L	-
pH	9.0 s.u.	6.0 s.u.		-
Temperature	120 ºF			-
Halogens, Total Residual as Cl_2	38 µg/L			-
BETX, Total				1
PAH				1
TSS				2
Total Phosphorus				2
Additive – GE Betz Continuum	45 mg/L			3
Additive – GE Betz Spectrus	0.7 mg/L			4

Footnotes:
1. Monitoring only.
2. The permittee shall monitor total suspended solids (TSS) and phosphorus during periods of active discharge. The facility shall be operated in accordance with the approved operational evaluation report for optimizing removal of TSS and total phosphorus.
3. Limitation applies if discharge occurs for 48 consecutive hours from the ice water storage system and/or evaporative condenser blowdown.
4. Limitation applies if discharge occurs for 48 consecutive hours from the ice water storage system.

Receiving Water Information

- Name: Drainage ditch to the Rock River
- Waterbody Identification Code (WBIC): None
- Classification used in accordance with chs. NR 102 and 104, Wis. Adm. Code: Default Warm Water Sport Fish (WWSF) community, non-public water supply. Discharge travels approximately 500 feet in a drainage course that, under normal discharge conditions, infiltrates before reaching the Rock River.
- Low flows used in accordance with chs. NR 106 and 217, Wis. Adm. Code:
  $7\text{-}Q_{10}$ = 0 cubic feet per second (cfs)
  $7\text{-}Q_2$ = 0 cfs
- Hardness = 330 mg/L as $CaCO_3$. This value represents the geometric mean of data from 05/10/2005-11/28/2006.
- % of low flow used to calculate limits in accordance with s. NR 106.06(4)(c)5., Wis. Adm. Code: Not applicable where the receiving water low flows are zero.
- Source of background concentration data: Background concentrations are not included because they don't impact the calculated WQBEL when the receiving water low flows are equal to zero.
- Multiple dischargers: Discharge from Outfall 002 discharges to the drainage ditch approximately 500 feet downstream of Outfall 003.
- Impaired water status: Approximately 1200 feet downstream, the Rock River is listed as impaired for phosphorus and total suspended solids and has an EPA-approved TMDL to address these impairments in the watershed.

Effluent Information

- Flow rate:
  Annual average = 0.84 MGD
  This value represents a theoretical maximum discharge rate based on the maximum flow from the oil/water separator from the inlet cooling building, the evaporative condensers and ice water storage tank.
- Hardness = 1200 mg/L as $CaCO_3$. This value represents the geometric mean of data collected with WET samples from 07/24/2002-07/26/2005. These data are available in SWAMP.
- Water Source: Groundwater
- Additives: See Part 7.

PART 2 – WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR TOXIC SUBSTANCES – EXCEPT AMMONIA NITROGEN

The following tables list the water quality-based effluent limitations for this discharge along with the results of testing effluent samples. All concentrations are expressed in term of micrograms per Liter (µg/L), except for the Hardness values and the Chloride values. Following the table, permit recommendations are made where appropriate, based on a comparison between the effluent concentrations and the calculated limits pursuant to ss. NR 106.04 and 106.05. **Only acute toxicity was considered due to the intermittent, non-continuous nature of the discharge.**

Daily Maximum Limits based on Acute Toxicity Criteria (ATC):

RECEIVING WATER FLOW = 0 cfs

SUBSTANCE	REF. HARD.* mg/L	ATC	MAX. EFFL. LIMIT**	1/5 OF EFFL. LIMIT	MEAN EFFL. CONC.
Arsenic		339.80	339.80	68.0	0.011
Copper	495	70.18	70.18	14.0	11.1
Lead	356	364.66	364.66	72.9	1.4
Zinc	333	344.68	344.68	68.9	<3.6
Mercury		0.83	0.83	0.33	0.0015
Chloride - mg/L		757	757	303	260

* The indicated hardness may differ from the effluent hardness because the effluent hardness exceeded the maximum range in ch. NR 105 over which the acute criteria are applicable. In that case, the maximum of the range is used to calculate the criterion.

* * Per the changes to s. NR 106.07(3), Wis. Adm. Code, effective 09/01/2016 consideration of ambient concentrations and 1-Q_{10} flow rates yields a more restrictive limit than the 2 × ATC method of limit calculation.

Conclusions and Recommendations

Based on a comparison of the effluent data and calculated effluent limitations, **no effluent limitations are needed at outfall 003.**

PART 3 – WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR AMMONIA NITROGEN

Daily Maximum Limits based on Acute Toxicity Criteria (ATC):

Daily maximum limitations are based on acute toxicity criteria, which are a function of the effluent pH and the receiving water classification. The acute toxicity criterion (ATC) for ammonia is calculated using the following equation.

$$\text{ATC in mg/L} = [A \div (1 + 10^{(7.204 - pH)})] + [B \div (1 + 10^{(pH - 7.204)})]$$

Where:

A = 0.411 and B = 58.4 for a warm water Sport fishery, and
pH (s.u.) = that characteristic of the effluent.

A value of 7.9 s.u. is believed to represent the maximum reasonably expected pH, and therefore most appropriate for determining daily maximum limitations for ammonia nitrogen. This value is an assumed value based on previously submitted data available in SWAMP. Substituting a value of 7.9 into the equation above yields an ATC = 10.13 and a computed daily maximum limit of 10 mg/L. **Since the mean of the data, shown in the table below, is less than 1/5th of the calculated limit, a daily maximum ammonia nitrogen limit is not required at Outfall 003** in accordance with s. NR 106.05(6)(a), Wis. Adm. Code.

Ammonia Nitrogen Effluent Data

Sample Date	Ammonia (mg/L)
05/11/05	0.51
05/24/05	0.43
07/27/05	0.43

Attachment #3

Sample Date	Ammonia (mg/L)
05/17/06	<0.20
Mean*	0.34

*"<" means that the pollutant was not detected at the indicated level of detection. The mean concentration was calculated using zero in place of the non-detected result.

Weekly Average & Monthly Average Limits based on Chronic Toxicity Criteria (CTC):
The concentrations of ammonia nitrogen data are all below any of the applicable criteria or calculated chronic water quality-based effluent limits for the receiving water. Therefore, **no weekly or monthly average limits for ammonia are recommended at Outfall 003.**

Conclusions and Recommendations:
In summary, neither acute nor chronic ammonia limits are recommended for Outfall 003.

PART 4 –PHOSPHORUS AND TOTAL SUSPENDED SOLIDS

Limited historical effluent data is available for outfall 003, shown in the table below.

Phosphorus and TSS Effluent Data

Sample Date	Phosphorus (mg/L)	TSS (mg/L)
05/11/2005	0.36	<1
05/24/2005	0.59	
07/27/2005	<0.15	
05/17/2006	<0.13	
Mean*	0.24	<1

*"<" means that the pollutant was not detected at the indicated level of detection. The mean concentration was calculated using zero in place of the non-detected result.

Without adequate data to characterize phosphorus and TSS concentrations in the effluent **narrative limits are recommended for Outfall 003 consistent with the recommendations for Outfall 001 and Outfall 002**. See Attachment #1 for a discussion of these narrative limits.

PART 5 – THERMAL

The need for calculating temperature limitations is based upon the designated use of the receiving water and the ratio of stream flow to effluent flow as specified in s. NR 106.55(6)(a)(1)). A temperature limit of 120°F is recommended for Outfall 003 since the discharge is to a 600-foot drainage ditch which infiltrates to groundwater before reaching the Rock River. This limit would be protective of both the ditch based on criteria in s. 102.245(3)(a) and the downstream Rock River given the dilution ratio discussed for Outfall 001.

In accordance with s. NR 106.56(12), Wis. Adm. Code, when representative effluent temperature data is not available at the time of permit reissuance, the proposed permit shall include effluent temperature monitoring (for at least one year), water quality-based effluent limits for temperature, and a compliance schedule to meet the temperature limits. At this time, there is no representative daily maximum temperature data for the discharge, so a **limitation of 120°F as a daily maximum (year-round) for**

temperature is recommended for the reissued permit if discharge were to occur.

PART 6 – WHOLE EFFLUENT TOXICITY

WET testing is used to measure, predict, and control the discharge of toxic materials that may be harmful to aquatic life. In WET tests, organisms are exposed to a series of effluent concentrations for a given time and effects are recorded. The need for **WET testing should be evaluated at the next permit issuance if the facility reactivates Outfall 003.**

PART 7 – ADDITIVES

WE Concord potentially uses a total of seven additives at Outfall 003, as shown in the table below.

Additive Name	Manufacturer	Purpose of Additive	Intermittent or Continuous Feed	Frequency of Use		Estimated Effluent Concentration (mg/L)
				Months per/yr	Days/ week	
Used in Evaporative Condensers:						
Sulfuric Acid	Millport Enterprises Inc.	pH control	Intermittent	4	0-7	N/A
Continuum AEC 3138	Suez	Antiscalant	Intermittent	4	0-7	100-120
Spectrus OX1200	Suez	Biofouling control	Intermittent	4	0-7	0-0.038
Spectrus OX103	Suez	Biofouling control	Intermittent	4	0-7	0-0.038
Sodium Bisulfate	Suez	Dehalogenation	Intermittent	4	0-7	6
Used in Closed Ice Water Loop						
Corrshield OR4400	Suez	Corrosion and deposit control	Intermittent	4	0-7	N/A – closed loop
Spectrus NX1100	Suez	Biofouling control	Intermittent	4	0-7	N/A – closed loop

All additives, except for sulfuric acid and sodium bisulfate, would need to be reviewed and approved by the Department prior to use and discharge at Outfall 003 in order to assess if any use restrictions are required.

CORRESPONDENCE/MEMORANDUM — **State of Wisconsin**

DATE: October 15, 2018

TO: Brenda Howald – SCR

FROM: Kari Fleming, Environmental Toxicologist – WY/3

SUBJECT: Whole Effluent Toxicity (WET) Testing Recommendation for WI Electric Power Co – Concord Station, WPDES Permit No. WI-0061441

This is in response to your request for a review of the WET testing recommendations presented in the water quality-based effluent limits (WQBEL) memo dated October 1, 2018, for the WI Electric Power Co – Concord Station Plant. In the WQBEL memo, three acute WET tests are recommended during the next permit term. This recommendation was based on point totals generated by the WET Checklist.

I have reviewed the WQBEL memo and underlying WET Checklist and it is my opinion that best professional judgment should be used to modify this WET recommendation. The point total generated in the Checklist resulted from points given for industrial category (5 points), a lack of secondary treatment (8 points), and a lack of WET data from the last permit term (5 points). The WET Checklist was designed to evaluate the most common discharge condition, that is, process wastewaters being discharged on a continuous basis. The WET Checklist does not fit this site's specific discharge conditions. This discharge does not contain a process wastewater, but rather a mix of stormwater, waters from a reverse osmosis system and (occasionally) waters from a filter backwash. Secondary treatment is not typically required for these types of wastewater. This, plus the fact that the discharge occurs intermittently and only for short periods of time causes the potential for adverse impacts to the receiving water due to effluent toxicity to be extremely low.

As noted in the WET guidance, staff should use their best professional judgment to determine whether monitoring frequencies given by the Checklist are appropriate. It is my opinion that in this case, the three acute WET tests recommended by the Checklist are not appropriate. Due to the very low potential for toxicity impacts from this discharge, WET testing is not necessary during this permit term. If discharge conditions change in the future, this decision should be revisited.

If there are any questions about this recommendation, please feel free to contact me at (608) 267-7663 or Kari.Fleming@wisconsin.gov.