

JANA  
Please make the  
necessary distribution



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor  
George E. Meyer, Secretary

Box 7921  
101 South Webster Street  
Madison, Wisconsin 53707-7921  
TELEPHONE 608-266-2621  
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CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

IN REPLY REFER TO: 3430

THOMAS R MYATT - GENERAL MANAGER  
FLAMBEAU MINING COMPANY - SUBSIDIARY OF KENNECOTT MINERAL COMPANY  
N4100 HIGHWAY 27  
LADYSMITH WI 54848

SUBJECT: WPDES Permit No. WI-0047376-2  
Flambeau Mining Company  
Ladysmith, WI

Dear Mr. Myatt:

Your application for issuance of a Wisconsin Pollutant Discharge Elimination System (WPDES) permit has been processed by this Department. The conditions of the attached permit number WI-0047376-2, were determined using the permit application, information from your WPDES permit file, comments received during the public notice period, and Wisconsin Administrative Codes Chapters NR 102, NR 105, NR 106, NR 140, NR 200, NR 203, NR 205, NR 207, NR 220, and NR 270.

The attached WPDES permit covers the discharge from the facility located at N1400 Highway 27 in Ladysmith, WI into the Flambeau River. All discharges from this facility and actions or reports relating thereto shall be in accordance with the terms and conditions of this permit.

In accordance with this permit, discharge monitoring report forms are required to be submitted by you to the Department on a periodic basis. Blank copies of these report forms and instructions for completing them will be mailed to you under separate cover.

The attached permit contains water quality based effluent limitations which are necessary to ensure that the water quality standards for the Flambeau River are met. You may apply for a variance from the water quality standard used to derive the limitations pursuant to s. 147.05, Wisconsin Statutes, by submitting an application to: George E. Meyer, Secretary, Department of Natural Resources, P.O. Box 7921, Madison, Wisconsin 53707 within 30 days after the date of issuance of this permit. Within 30 days of receipt of your application for variance, the Department will notify you of the



specific information you must provide to complete your application. Once your application is complete, the Department will issue a public notice of receipt of your application for variance, which will include a 30 day comment period. A tentative decision on your application for variance will be issued within 120 days after receipt of the complete application. A final decision on your application will be issued within 90 days of the expiration of the 30 day comment period provided in the notice of the tentative decision.

The final decision of the Department may be to approve your request for a variance, in whole or in part, or to deny the request. In order to obtain a variance, you must demonstrate by the greater weight of the credible evidence, at least one of the following:

1. Naturally occurring pollutant concentrations prevent the attainment of the standard.
2. Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the standard, unless these conditions may be compensated for by the discharge of sufficient volume of effluent without violating water conservation requirements.
3. Human caused conditions or sources of pollution prevent the attainment of the standard and cannot be remedied or would cause more environmental damage to correct than to leave in place.
4. Dams, diversions or other types of hydrologic modifications preclude the attainment of the standard, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the standard.
5. Physical conditions related to the natural features of the water body, such as the lack of proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses.
6. The standard, as applied to the permittee, will cause substantial and widespread adverse social and economic impacts in the area where the permittee is located.

The Department has the authority under Chapters 147 and 160, Wisconsin Statutes, to establish effluent limitations, monitoring requirements, and other permit conditions for discharges to groundwater and surface waters of the State. The Department also has the authority to issue, reissue, modify, suspend or revoke WPDES permits under Chapter 147, Wisconsin Statutes and has adopted Wis. Adm. Code Chapters NR 102, NR 105, NR 106, NR 140, NR 200, NR 203, NR 205, NR 207, NR 220, and NR 270 under this authority.

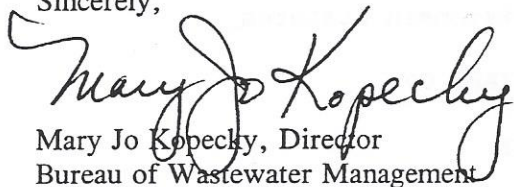
To challenge the reasonableness of or necessity for any term or condition of the attached permit, Section 147.20, Wis. Stats., and Chapter NR 203, Wis. Adm. Code require that you file a verified petition for review with the Secretary of the Department of Natural Resources within 60 days of the

Flambeau Mining Company  
WPDES Permit No. WI-0047376-2

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date of this letter. This notice is provided pursuant to Section 227.48, Wis. Stats., as renumbered by 1985 Wisconsin Act 182.

Sincerely,

  
Mary Jo Kopecky, Director  
Bureau of Wastewater Management

Dated: MAR 29 1996

MJK:TSB  
C:\PERMITS\FLAMBEAU\0047376.F

Enclosures

cc: NWD (Park Falls) - Jim Hansen

PERMIT TO DISCHARGE UNDER THE  
WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of Chapter 147, Wisconsin Statutes,

FLAMBEAU MINING COMPANY, SUBSIDIARY OF

KENNECOTT MINERALS COMPANY

is permitted to discharge from a facility located at,

N4100 HIGHWAY 27  
LADYSMITH, WISCONSIN 54848

to THE FLAMBEAU RIVER IN RUSK COUNTY

in accordance with the effluent limitations, monitoring requirements and other conditions set forth in this permit.

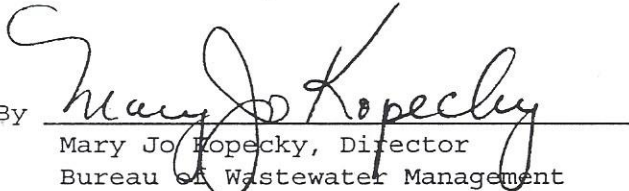
This permit shall become effective on the date of signature.

This permit to discharge shall expire at midnight, December 31, 2000.

The permittee shall not discharge after the date of expiration. If the permittee wishes to continue to discharge after this expiration date an application shall be filed for reissuance of this permit in accordance with the requirements of Chapter NR 200, Wis. Adm. Code, at least 180 days prior to this expiration date.

State of Wisconsin Department of Natural Resources  
For the Secretary

By

  
Mary Jo Kopecky, Director  
Bureau of Wastewater Management

Dated:

**MAR 29 1996**

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALLS 001, 002, 003, 004 AND SAMPLING 301

- (1) During the period beginning on the date of signature and lasting until September 30, 2000, the permittee is authorized to discharge the following wastewaters:

Through outfall 001; wastewater treatment plant effluent [(1) treated runoff from the ore crushing area, the Type II (high sulfur) waste rock area, and the ore hauling roads, (2) treated water from the open pit that has contacted high sulfur rock, (3) treated runoff from the Type I (low sulfur) waste rock area, and (4) treated water from lab sink drains and bucking room drain] to the Flambeau River.

Through sampling point 301; wastewater treatment plant effluent to the hydric soils stockpile.

Through outfall 002; settling pond effluent [(1) treated water from the open pit mine before exposure to Type II waste rock, (2) treated runoff from the Type I (low sulfur) waste rock storage area, and (3) as part of the mine reclamation process, stormwater runoff from areas that has contacted only overburden materials (defined for the purposes of this permit as topsoil and till)] and groundwater from interception wells surrounding the main pit to the Flambeau River.

Through outfall 003; settling pond effluent and groundwater from interception wells surrounding the main pit to the hydric soils stockpile.

Through outfall 004; groundwater from interception wells surrounding the main pit to wetlands for flow augmentation.

Discharges shall be limited and monitored by the permittee as specified below.

OUTFALL 001

Table 1

DAILY EFFLUENT LIMITATIONS					
EFFLUENT CHARACTERISTICS	CONCENTRATION LIMIT			MONITORING REQUIREMENTS	
	Daily <sup>(4)</sup> Minimum	Daily <sup>(5)</sup> Maximum (µg/l)	Monthly <sup>(6,7)</sup> Average	Sample Frequency	Sample Type
Flow	-	-	-	Daily	Continuous
Total Suspended Solids (TSS)	-	30 mg/l	20 mg/l	Daily	24-hr comp.
pH <sup>(8)</sup>	6 s.u.	9 s.u.	-	Daily	Continuous
Hardness	-	-	-	Monthly	24-hr comp.
Total Dissolved Solids (TDS)	-	-	-	Monthly	24-hr comp.
Dissolved oxygen (D.O.)	5 mg/l	-	-	Daily	Grab
Copper	-	42	-	3x/week	24-hr comp.
Zinc	-	250	-	Monthly	24-hr comp.
Mercury	-	-	2 ng/l	Quarterly	Grab
Water Treatment Additives	-	-	-	(10)	(10)
Whole Effluent Toxicity	-	-	-	(11)	(11)

(a) For outfall 001, a composite sample means a 24-hour flow proportional composite of the effluent.

(b) Reporting of the Total or Total Recoverable form is acceptable for the following substances; copper and zinc.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALLS 001, 002, 003, 004 AND SAMPLING POINT 301 (con't)

OUTFALL 002

Table 2

DAILY EFFLUENT LIMITATIONS					
EFFLUENT CHARACTERISTICS	CONCENTRATION LIMIT			MONITORING REQUIREMENTS	
	Daily <sup>(4)</sup> Minimum	Daily <sup>(5)</sup> Maximum (µg/l)	Monthly <sup>(6,7)</sup> Average (µg/l)	Sample Frequency	Sample Type
Flow	-	-	-	Daily	Continuous
Total Suspended Solids (TSS)	-	30 mg/l	20 mg/l	Daily	Composite
pH <sup>(8)</sup>	6 s.u.	9 s.u.	-	Daily	Grab
Hardness	-	-	-	Quarterly	Composite
Copper	-	42	-	Monthly	Composite
Zinc	-	250	-	Monthly	Composite
Mercury	-	-	2 ng/l	Monthly	Grab
Cadmium <sup>(9)</sup>	-	31	-	Monthly	Composite
Arsenic <sup>(9)</sup>	-	730	-	Monthly	Composite
Beryllium <sup>(9)</sup>	-	-	100 µg/l	Monthly	Composite
Chromium (+3) <sup>(9)</sup>	-	3400	-	Monthly	Composite
Chromium (+6) <sup>(9)</sup>	-	28	-	Monthly	Grab
Lead <sup>(9)</sup>	-	290	-	Monthly	Composite
Nickel <sup>(9)</sup>	-	280	-	Monthly	Composite
Selenium <sup>(9)</sup>	-	120	-	Monthly	Composite
Silver <sup>(9)</sup>	-	3.4	-	Monthly	Composite
Water Treatment Additives	-	-	-	(10)	(10)
Whole Effluent Toxicity	-	-	-	(11)	(11)

(a) For outfall 002, a composite sample means a flow-proportional representative sample collected during the hours of discharge.

(b) Monitoring for a given substance is waived for outfall 002 if a discharge does not occur through that outfall during the specified sample period.

(c) Reporting of the Total or Total Recoverable form is acceptable for the following substances; copper, zinc, cadmium, lead, nickel, and silver.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALLS 001, 002, 003, 004 AND SAMPLING POINT 301 (con't)

OUTFALL 003 AND SAMPLING POINT 301

Table 3

DAILY EFFLUENT LIMITATIONS					
EFFLUENT CHARACTERISTICS	CONCENTRATION LIMIT			MONITORING REQUIREMENTS	
	Daily Minimum <sup>(4)</sup>	Daily Maximum <sup>(5)</sup> (µg/l)	Monthly Average <sup>(6,7)</sup> (µg/l)	Sample Frequency	Sample Type
Flow	-	-	-	Daily	Estimate
Total Suspended Solids	-	30	20	Daily	Composite
pH	6	9	-	Daily	(c)
Copper	-	130	-	Monthly	Composite
Zinc	-	250	-	Monthly	Composite
Mercury	-	0.2	-	Monthly	Grab
Cadmium <sup>(9)</sup>	-	0.5	-	Monthly	Composite
Arsenic <sup>(9)</sup>	-	5	-	Monthly	Composite
Beryllium <sup>(9)</sup>	-	0.4	-	Monthly	Composite
Chromium (Total) <sup>(9)</sup>	-	10	-	Monthly	Composite
Lead <sup>(9)</sup>	-	1.5	-	Monthly	Composite
Nickel <sup>(9)</sup>	-	20	-	Monthly	Composite
Selenium <sup>(9)</sup>	-	10	-	Monthly	Composite
Silver <sup>(9)</sup>	-	10	-	Monthly	Composite
Water Treatment Additives	-	-	-	(10)	(10)

- (a) Flow shall be estimated for outfall 003 and sampling point 301 in accordance with ch. NR 218.05, Wis. Adm. Code.
- (b) For outfall 003, a composite sample means a three hour composite. A three hour composite consists of at least three grab samples of equal volume taken at one hour intervals during a normal operating day. For sampling point 301, a composite sample means a 24-hour flow proportional composite of the effluent.
- (c) pH sample type is a grab for outfall 003 and continuous for sampling point 301.
- (d) Monitoring for a given substance is waived for outfall 003 or sampling point 301 if a discharge does not occur through that outfall during the specified sample period.
- (e) Reporting of the Total or Total Recoverable form is acceptable for the following substances; copper, zinc, cadmium, lead, nickel, and silver.

OUTFALL 004

Table 4

DAILY EFFLUENT LIMITATIONS					
EFFLUENT CHARACTERISTICS	CONCENTRATION LIMIT			MONITORING REQUIREMENTS	
	Daily Minimum <sup>(4)</sup>	Daily Maximum <sup>(5)</sup> (µg/l)	Monthly Average <sup>(6,7)</sup> (µg/l)	Sample Frequency	Sample Type
Flow	-	-	-	Weekly	Estimate
Total Suspended Solids	-	30	20	Monthly	Composite
pH	6	9	-	Monthly	Grab

- (a) Average daily flow shall be estimated, in accordance with ch. NR 218.05, on at least a weekly basis.
- (b) For outfall 004, a composite sample means a three hour composite. A three hour composite consists of at least three grab samples of equal volume taken at one hour intervals during a normal operating day.
- (c) Monitoring for a given substance is waived for outfall 004 if a discharge does not occur through that outfall during the specified sample period.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALLS 001, 002, 003, 004 AND SAMPLING POINT 301 (con't)

- (2) Floating Solids and Foam: There shall be no discharge of floating solids or visible foam in other than trace amounts.
- (3) Sampling Requirements: For each outfall, samples taken in compliance with the monitoring requirements, shall be taken as follows:
  - (a) Outfall 001; Discharges from the treatment plant to the Flambeau River shall be monitored (1) following the wastewater treatment process but before entrance into the Flambeau River for dissolved oxygen, (2) following the wastewater treatment process but prior to contact with the rip-rapped outfall channel to the Flambeau River for all other parameters.
  - (b) Sampling point 301; Discharges from the treatment plant to the hydric soils stockpile shall be monitored following the wastewater treatment process but prior to mixing with other waste streams and discharge to the hydric soils stockpile. Applicable monitoring results from outfall 001 may be reported for discharges through sampling point 301 if sampling for outfall 001 coincides with discharges through sampling point 301.
  - (c) Outfall 002; prior to discharge to the Flambeau River.
  - (d) Outfall 003; prior to discharge to the hydric soils stockpile. For discharges of settling pond effluent to outfall 003, settling pond monitoring results from outfall 002 may be reported for discharges to outfall 003 if settling pond sampling coincides with discharges to outfall 003.
  - (e) Outfall 004; prior to discharge for use in wetland flow augmentation.
- (4) Daily Minimum Effluent Limitation: A minimum daily effluent limitation means a limitation which is to be compared with each single daily analysis. Compliance is achieved when the result of each analysis is equal to or greater than the minimum daily effluent limitation.
- (5) Daily Maximum Effluent Limitation: Daily maximum effluent limitation means the limitation placed on an effluent characteristic which is to be compared with each single daily analysis. Compliance is achieved when the result of each analysis is equal to or less than the maximum daily effluent limitation.
- (6) Monthly Average Limits: The monthly average effluent limitations are applicable and must be met even if a parameter is sampled only once during a calendar month. If the permittee monitors these or any pollutant more frequently than required by this permit, the



SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALLS 001, 002, 003, 004 AND SAMPLING POINT 301 (con't)

monitoring results shall be reported in accordance with Part II, paragraph 15.

- (7) Formula for Averaging Effluent Monitoring Results: For the purposes of determining compliance with effluent limitations that are expressed as a monthly average, discharge values shall be calculated by first summing all daily results for the month and then dividing the total by the number of results during that month.
- (8) pH: pH shall be grab sampled at outfalls 002, 003, and 004. For outfall 001 and sampling point 301, pursuant to ss. NR 205.06 and 102.03(4)(h), Wis. Adm. Code, the permittee shall maintain the pH of this wastewater at or within the limits of 6.0 to 9.0 standard units, except excursions from the limits are permitted subject to the following conditions:
  - (a) The total time during which the pH values are outside the required range shall not exceed 446 minutes in any calendar month.
  - (b) No individual excursion from the range shall exceed 60 minutes.
  - (c) No individual excursions shall be outside the range of 4.0 to 11.0 standard units (s.u.), inclusive.
  - (d) On a daily basis, the permittee is required to report the total time the pH limits are exceeded and the number of times any individual excursion exceeds 60 minutes in duration or is outside the range of 4.0 to 11.0 s.u., inclusive.
- (9) Monitoring for Outfalls 002, 003, and Sampling Point 301: Under this permit, the first twelve analyses shall be collected on no less than a monthly basis over a minimum of twelve months. Monthly monitoring for a given outfall or sampling point is waived if a discharge does not occur in a given month through that outfall or sampling point. The results will be used to determine the need for continued monitoring and effluent limitations at this outfall. If the substance is consistently not detected using the analytical method specified below, or is detected at a concentration at or below the level of concern listed in Table 4 for outfall 002 and Table 5 for outfall 003 and sampling point 301, no additional monitoring for the substance will be required and effluent limitations for that substance will not be in effect for that specified discharge point. If the substance is detected at a concentration exceeding the level of concern at a given discharge point, the respective effluent limitations in Table 2 or

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALLS 001, 002, 003, 004 AND SAMPLING POINT 301 (con't)

3 will remain in effect. Monitoring shall continue on no less than a monthly frequency.

Table 5 (Outfall 002)

Substance	Calculated Limit (µg/l)	Level of Concern (µg/l)	EPA Test Method
Cadmium	31	6.2	213.2
Arsenic	730	146	206.2, 206.3
Beryllium	100	20	210.3
Chromium (+3)	3400	672	218.1, 218.2, 200.7
Chromium (+6)	28	5.6	218.4
Lead	290	57.2	239.2
Nickel	280	55	200.7, 249.1, 249.2
Selenium	120	23	270.2, 270.3
Silver	3.4	0.68	272.2

Table 6 (Outfall 003 and sampling point 301)

Substance	Calculated Limit (µg/l)	Level of Concern (µg/l)	EPA Test Method
Cadmium	0.5	0.1	213.2
Arsenic	5	1	206.2, 206.3
Beryllium	0.4	0.08	210.3
Chromium (Total)	10	2	218.1, 218.2, 200.7
Lead	1.5	0.3	239.2
Nickel	20	4	200.7, 249.1, 249.2
Selenium	10	2	270.2, 270.3
Silver	10	2	272.2

- (10) Water Treatment Additives: Records of treatment additives shall be kept for each outfall and made available for inspection by Department staff upon request. In the event that the permittee wishes to commence use of a different water treatment additive, the permittee must request and receive written approval from the Department prior to initiating such changes.
- (11) Whole Effluent Toxicity Testing: It is a violation of this permit to discharge wastewater from outfall 001 (wastewater treatment plant discharge) which exhibits positive acute toxicity as identified by paragraph C.(4)(a). See sections B. and C. for details on whole effluent toxicity monitoring requirements and procedures.
- (12) Discharges from Groundwater Interception Wells: Discharges from the groundwater interception wells that do not come in contact with mining ores, waste rock, or mining processes can be discharged through outfalls 002, 003, or 004 with only monthly monitoring for TSS and pH. Discharge levels of pH and TSS shall meet the applicable effluent limitations specified in Table 2, 3, or 4. An estimate of the average daily flow shall be performed on at least a weekly basis. The discharge must meet the requirements

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALLS 001, 002, 003, 004 AND SAMPLING POINT 301 (con't)

outlined in subsection A.(14) in order to be discharged in accordance with this subsection.

- (13) Stormwater Discharges During Mine Reclamation: During the reclamation phase of the mining operation, discharges of stormwater runoff that have not contacted mining ores, waste rock other than overburden materials (topsoil and till), or other mining processes can be discharged through outfall 002 or 003 with only monthly monitoring for TSS and pH. Discharge levels of pH and TSS shall meet the applicable effluent limitations specified in Table 2 or 3. An estimate of the average daily flow shall be performed on at least a weekly basis. The discharge must meet the requirements outlined in subsection A.(14) in order to be discharged in accordance with this subsection.
- (14) Proposed Discharge Requirements: Discharges of groundwater from interception wells and stormwater runoff during mine reclamation, may be subject to reduced monitoring requirements and effluent limitations. To demonstrate that identified discharges are subject to the requirements specified in subsections A.(12) or A.(13), the permittee must submit a report covering the following information;
- (a) a characterization of the wastes to be discharged, including anticipated or actual pollutant levels (metals or other possible contaminants).
  - (b) a demonstration that the discharge does not require effluent limits based on applicable water quality based, categorical, or groundwater standards other than pH and TSS. If such a demonstration cannot be made, the permittee must treat the discharge at the wastewater treatment plant and discharge it in accordance with the complete requirements for outfall 001 or sampling point 301, whichever is applicable, or treat the discharge in the settling ponds and discharge it in accordance with the complete requirements for outfall 002 or 003, whichever is applicable.
  - (c) the permittee must receive written concurrence from the Department with the conclusions of the report and approval of the discharge prior to discharging such wastewaters. The Department shall issue its decision within 60 days of receipt of a complete report.
- (15) Determining Compliance with a Water Quality Based Effluent Limitation that is Less than the LOQ: To determine compliance with the limitation, the Department will apply s. NR 106.07(5), Wis. Adm. Code.
- (16) Reporting Monitoring Results: The permittee shall use the following conventions when reporting effluent monitoring results on the Discharge Monitoring Report No. 3200-28, or an approved alternate form:

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALLS 001, 002, 003, 004 AND SAMPLING POINT 301 (con't)

- (a) Effluent concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 0.1  $\mu\text{g}/\text{L}$ , report the effluent concentration as <0.1  $\mu\text{g}/\text{L}$ .
  - (b) For mercury, effluent concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported as observed and the limit of quantitation shall be specified.
  - (c) For the purposes of calculating an average or a mass discharge value, the permittee may substitute a 0 (zero) for any effluent concentration that is less than the limit of detection.
- (17) Type II Runoff: Untreated runoff from the lined Type II (high sulfur) waste rock storage area shall not be discharged through outfalls 002 or 003.
- (18) Hydric Soils: The discharge through outfall 003 to the hydric soils stockpile shall not result in overland flow of wastewater to the Flambeau River.

SPECIAL CONDITIONS

B. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

The permittee shall perform effluent toxicity tests to determine the potential impact of its effluent discharge on aquatic organisms. Tests shall be performed according to the procedures specified below.

- (1) DISCHARGE SAMPLE LOCATION: Outfall 001, following the wastewater treatment process but before contact with the riprapped outfall channel to the Flambeau River.

TEST FREQUENCY:

Acute Toxicity Tests: (1) Monthly from the date of signature until January 31, 1996.  
(2) Quarterly beginning February 1, 1996 and continuing for the term of the permit, with a minimum of 30 days between test initiation dates. Requirements in subsection B.(5) supercede this specified monitoring frequency.  
(Test results are due within 45 days of completing the test.)

- (2) DISCHARGE SAMPLE LOCATION: Outfall 002, following the discharge from the settling ponds but prior to discharge to the Flambeau River.

TEST FREQUENCY:

Acute Toxicity Tests: Quarterly from the date of signature for twelve months with a final test being performed in the final eighteen months of the scheduled term of the WPDES permit. Quarterly monitoring is waived if a discharge does not occur in a given quarter. However, the permittee is still required to continue testing on a quarterly basis until five tests have been completed, including a test in the final eighteen months of the scheduled term of the WPDES permit. Monitoring is also waived for discharges that consist solely of wastewaters that qualify for reduced monitoring requirements and effluent limitations specified in subsections A.(12) or A.(13). Less than five tests may be completed if discharge frequency does not allow that number of tests. Requirements in subsection B.(5) supercede this specified monitoring frequency.  
(Test results are due within 45 days of completing the test.)

- (3) EFFLUENT TREATMENTS:

Acute Toxicity Tests: 6.25%, 12.5%, 25%, 50%, and 100% (v/v) unmodified effluent.

SPECIAL CONDITIONS

B. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS (con't)

(4) TEST SPECIES:

Acute Toxicity Tests: *Ceriodaphnia dubia* and Fathead minnows (*Pimephales promelas*).

PRIMARY CONTROL WATER: Flambeau River

(5) Compliance Schedule for Whole Effluent Toxicity Test Failures:

For outfall 001, if each acute whole effluent toxicity test required for outfall 001 initiated through January 31, 1996, does not exhibit positive acute toxicity as identified by paragraph C.(4)(a), the whole effluent toxicity limitation specified in subsection A.(11) will no longer be applicable. However, if any subsequent test exhibits positive acute toxicity as identified by paragraph C.(4)(a), the permittee shall initiate the schedule of compliance outlined below. Upon completion of the compliance schedule outlined below, the permittee shall conduct acute toxicity test batteries once each calendar month for the remaining term of the permit. Monthly monitoring shall be waived for any calendar month in which a discharge does not occur.

For outfall 002, should the facility initiate any two acute toxicity test batteries within a twelve month period that exhibit positive acute toxicity as identified by paragraph C.(4)(a), the permittee shall initiate the schedule of compliance outlined below. Upon completion of the compliance schedule outlined below, the permittee shall conduct acute toxicity test batteries once each calendar month for the remaining term of the permit. Monthly monitoring shall be waived for any calendar month in which a discharge does not occur.

Compliance Schedule

- (a) Within 1 month, submit a plan describing the procedures to be used to determine the source(s) of the identified toxicity. This plan shall specify the analytical and toxicity testing procedures to be used to identify the processes, flow streams, or chemicals responsible for the effluent toxicity.
- (b) Within 3 months, investigate and evaluate wastewater treatment facilities, make a reasonable attempt to identify the source(s) of the toxicity, determine what actions can be taken to reduce or eliminate the toxicity, and submit a report to the Department presenting the results of the evaluation and any conclusions regarding all actions which could be implemented to control the toxicity. As part of this report, if the permittee demonstrates to the satisfaction of the Department that its discharge is no longer toxic, the permittee may request that the Department waive, by letter, all or part of paragraphs B.(5)(c), B.(5)(d), and B.(5)(e), except for the whole effluent

SPECIAL CONDITIONS

B. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS (con't)

toxicity limitation which cannot be waived by letter. Notwithstanding the submittal of such a request, the permittee shall comply with paragraphs B.(5)(c), B.(5)(d), and B.(5)(e) by the dates established therein.

- (c) Within 6 months, submit a toxicity reduction implementation plan including all specific actions identified in paragraph B.(5)(b) and the dates by which those actions will be implemented.
- (d) Within 9 months, submit a progress report identifying the actions taken to reduce the identified toxicity and any results available to date.
- (e) Within 13 months, complete all actions contained in the toxicity reduction implementation plan submitted under paragraph B.(5)(c) and achieve compliance with the following effluent toxicity limitation: It is a violation of this permit to discharge wastewater which exhibits positive acute toxicity as identified by paragraph C.(4)(a).

SPECIAL CONDITIONS

C. WHOLE EFFLUENT TOXICITY TEST PROCEDURES

- (1) Toxicity Test Battery Procedure: Each toxicity test battery shall be performed following the procedures given in Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms (Fourth Edition) (EPA/600/4-90-027) with the following exceptions, clarifications, and additions:
  - (a) Control Water: all test batteries shall be performed with the following control water treatments which have been collected within 48 hours of test initiation.
    1. Primary control water shall be a receiving water grab sample collected at a point that is upstream from the permittee's discharge in the Flambeau River; yet not in contact with any portion of the mixing zone of the permittee's or any other permittees' discharge.
    2. Secondary control water shall be uncontaminated surface water or standard dilution water.
  - (b) If at any time test organism population mortality exceeds 50% in undiluted effluent and both the primary and secondary controls exhibit mortality exceeding 10% to a test species required by paragraph C.(2)(d), the toxicity test shall be repeated for that test species.
  - (c) Dilution Water: preparation of effluent treatments requiring dilution shall be prepared using the primary control water unless the use of secondary control water is approved by the Department prior to use.
- (2) Acute Toxicity Test Battery Procedure:
  - (a) Effluent Collection: effluent samples shall be collected and used under the following conditions:
    1. Two flow-proportional composite samples of treated final effluent shall be collected during two separate, normal 24-hour operating periods as specified in ch. NR 218.04(12), Wis. Adm. Code, or an alternate method approved by the Department. For outfall 002, if discharge conditions do not allow for a composite sample to be taken, grab samples, collected as specified in ch. NR 218.04(10), may be used for either or both samples. All samples at outfall 002 shall be taken during discharge events that exceed a duration of 1 hour in a given calendar day.
    2. Revisions to the requirements of subparagraph C.(2)(a)1 may be approved in writing by the Department provided the permittee demonstrates that an alternative sample collection protocol proposed by the permittee is equivalent.



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C. WHOLE EFFLUENT TOXICITY TESTING PROCEDURES (con't)

3. The maximum holding time prior to initial use of any effluent sample shall be forty-eight (48) hours after completion of the sample collection.
- (b) Effluent Treatments: all acute toxicity test batteries shall be performed with the following treatments:
1. Primary and secondary control water as specified in paragraph C. (1) (a).
  2. Effluent treatments equal to 6.25%, 12.5%, 25%, 50% and 100% (v/v) unmodified effluent.
  3. Any additional treatments selected by the permittee of which all results shall be reported in accordance with subsection C. (6).
- (c) Test Duration and Renewal Frequency: an acute toxicity test battery shall be performed for 48 hours for invertebrate and 96 hours for vertebrate test species and all test vessel solutions shall be renewed daily as specified below:
1. Invertebrate Test Organisms: a renewal shall be made after 24 hours of exposure with the first of the two effluent samples collected as specified in subparagraph C. (2) (a)1.
  2. Vertebrate Test Organisms: a renewal shall be made after 24 hours of exposure with the first of the two effluent samples collected as specified in subparagraph C. (2) (a)1. Two additional renewals shall be made after 48 and 72 hours of exposure with the second of the two effluent samples collected as specified in subparagraph C. (2) (a)1. For outfall 002, if consecutive daily samples cannot be collected, the fathead minnow toxicity test shall continue using the initial sample as renewal water after 24, 48, and 72 hours of exposure.
- (d) Test Species: all acute toxicity test batteries shall be performed with the following freshwater species:
1. *Ceriodaphnia dubia* which are less than 24 hours old.
  2. Fathead minnows (*Pimephales promelas*) between 1 and 14 days old, post-hatch (all organisms shall have hatched within 6 days of each other).
- (3) Miscellaneous: other needs or circumstances may justify modification of or substitution to the toxicity test procedures. Deviation from standard procedures, if necessary for the

SPECIAL CONDITIONS

C. WHOLE EFFLUENT TOXICITY TESTING PROCEDURES (con't)

successful completion of the test battery, may be allowed if first approved by the Department.

- (4) Determination of Positive Test Results.
  - (a) Acute Toxicity Test: the results of an acute toxicity test performed as required by subsection C.(2) shall be considered positive if they meet the conditions listed in paragraphs C.(4)(a)1. or 2. and are confirmed as specified in paragraphs C.(4)(a)3. a. or b.:
    1. Invertebrate test organism population mortality exceeds 50% after 48 hours of exposure to 100% (v:v) effluent or
    2. Vertebrate test organisms population mortality exceeds 50% after 96 hours of exposure to 100% (v:v) effluent.
    3. If a test result is positive as defined in paragraphs C.(4)(a)1. or 2., the positive result for the respective test organism shall be confirmed if a statistical evaluation indicates the following:
      - a. Invertebrate test organism: 48-hour  $LC_{50}$  is less than 100% (v:v) effluent.
      - b. Vertebrate test organism: 96-hour  $LC_{50}$  is less than 100% (v:v) effluent.
  - (b) If, in the judgement of the Department, the methods used to determine positive test results are not deemed appropriate for a specific data set, empirical interpretation methods may be used.
  - (c) Notification of a Positive Result: if a test result is positive as defined by paragraph C.(4)(a), the permittee shall notify the Department in writing within 14 days of completing the test which resulted in the positive toxicity result.
- (5) Additional Testing Subsequent to a Positive Result:
  - (a) No later than 45 days after the date of termination of the test that yields the positive result, the permittee shall conduct and submit the results of at least 2 additional test batteries that are conducted in accordance with the subsection that gave a positive test result and any other information the permittee believes relevant. The first of these two additional batteries is to be initiated within 14 days from the date of written notification.

SPECIAL CONDITIONS

C. WHOLE EFFLUENT TOXICITY TESTING PROCEDURES (con't)

(b) These additional test results shall include the information required under subsection C.(6).

(6) Reporting of Toxicity Test Results: Within 45 days of the conclusion of each toxicity test battery conducted under subsections C.(2), the permittee shall submit to the Department of Natural Resources, P.O. Box 7921, 101 S. Webster St., Madison, WI 53707, a report which documents the following information:

- (a) Quality Assurance/Quality Control documentation: should include detailed descriptions of the quality assurance practices that were followed for all aspects of wastewater sampling, handling, and transportation.
- (b) Effluent Samples: sampling point, collection dates and times, sample collection methods, and all pertinent biological, chemical, and physical data.
- (c) Dilution Water: source, collection dates and times, sample collection methods, pretreatment information (if any), and all pertinent biological, chemical, and physical data.
- (d) Test Methods: all specific conditions relating to each test.
- (e) Results: all raw biological, chemical, and physical data (i.e., copies of bench sheets of affected organisms in each effluent treatment and control), and summary tables of biological, chemical, and physical data generated in paragraphs C.(6)(b), C.(6)(c), and C.(6)(d).
- (f) Reference toxicant data: submit control charts with each test.
- (g) Output from statistical analyses used to determine positive toxicity.
- (h) Process or Treatment Modifications: information concerning any changes in the manufacturing processes or operating procedures at the production facilities or the treatment facilities that may have affected the test results.

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D. OTHER SPECIAL CONDITIONS

(1) Reporting

(a) Monitoring reports and reports required by Sections 8, 17, 20, 21 and 23 of Part II of this permit shall be signed;

1. for a corporation by a principal executive officer of at least the level of Vice President or his duly authorized representative having overall responsibility for the operation of the facility for which this permit is issued,
2. for a partnership by a general partner, and
3. for a sole proprietorship by the proprietor, except that
4. in the case of reports required by Sections 17, 21 and 23, the individual required to sign in accordance with this subsection may authorize another individual to sign such reports in his absence.

(b) Monitoring results obtained during the previous month shall be summarized and reported on Discharge Monitoring Report Forms postmarked no later than the 15th day of the month following the completed reporting period. Duplicate signed copies of these reports and of all other reports required herein shall be submitted to the:

Wisconsin Department of Natural Resources  
Division for Environmental Quality (Permits)  
Northwest District Headquarters  
P.O. Box 309  
Spooner, WI 54801

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1. Duty to comply. The permittee shall comply with all conditions of the permit. Any permit noncompliance is a violation of the permit and is grounds for enforcement action, permit revocation or modification, or denial of a permit reissuance application.

2. Permit actions. As provided in s. 147.03, Stats., after notice and opportunity for a hearing the permit may be modified or revoked and reissued for cause. If the permittee files a request for a permit modification, revocation or reissuance, or a notification of planned changes or anticipated noncompliance, this action by itself does not relieve the permittee of any permit condition.

3. Property rights. The permit does not convey any property rights of any sort, or any exclusive privilege. The permit does not authorize any injury or damage to private property or any invasion of personal rights, or any infringement of federal, state or local laws or regulations.

4. Inspection and entry. The permittee shall allow an authorized representative of the Department, upon the presentation of credentials, to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records are required under the conditions of the permit;
- b. Have access to and copy, at reasonable times, any records that are required under the conditions of the permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under the permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance, any substances or parameters at any location.

5. Recording of results. For each effluent measurement or sample taken, the permittee shall record the following information.

- a. The date, exact place, method and time of sampling or measurements;
- b. The individual who performed the sampling or measurements;
- c. The date the analysis was performed;
- d. The individual who performed the analysis;
- e. The analytical techniques or methods used; and
- f. The results of the analysis.

6. Records retention. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least 3 years from the date of the sample, measurement, report or application. The Department may request that this period be extended by issuing a public notice to modify the permit to extend this period.

7. Signatory requirement. All applications, reports or information submitted to the Department shall be signed for a corporation by a responsible corporate officer including a president, secretary, treasurer, vice president

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or manager; and for a municipality by a ranking elected official; or other person authorized by one of the above and who has responsibility for the overall operation of the facility or activity regulated by the permit. The representative shall certify that the information was gathered and prepared under his or her supervision and based on inquiry of the people directly under his or her supervision that, to the best of his or her knowledge, the information is true, accurate and complete.

8. Compliance schedules. Reports of compliance or noncompliance with interim and final requirements contained in any compliance schedule of the permit shall be submitted in writing within 14 days after the schedule date, except that progress reports shall be submitted in writing on or before each schedule date for each report. Any report of noncompliance shall include the cause of noncompliance, a description of remedial actions taken and an estimate of the effect of the noncompliance on the permittee's ability to meet the remaining schedule dates.

9. Transfers. A permit is not transferable to any person except after notice to the Department. In the event of a transfer of control of a permitted facility, the prospective owner or operator shall file a new permit application and shall file a stipulation of permit acceptance with the Department's WPDES permit section. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and to reflect the requirements of ch. 147, Stats.

10. Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of the permit. The wastewater treatment facility shall be under the direct supervision of a state certified operator as required in s. NR 108.06(2). Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training as required in ch. NR 114 and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

11. Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any adverse impact on the waters of the state resulting from noncompliance with the permit.

12. Duty to provide information. The permittee shall furnish the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking or reissuing the permit or to determine compliance with the permit. The permittee shall also furnish the Department, upon request, copies of records required to be kept by the permittee.

13. Sampling procedures. Samples and measurements taken for the purpose of monitoring shall be representative of the volume and nature of the monitored discharge and shall be taken at points specified in the permit using sample types specified in the permit and the following procedures:

- a. For effluent flow measurement and sample collection - ch. NR 218.
- b. For groundwater sample collection and analysis - ch. NR 214.

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14. Test procedures. Monitoring shall be conducted according to test procedures listed in ch. NR 219, or any other test procedures specified in the permit.

15. Additional monitoring. If a permittee monitors any pollutant more frequently than required by the permit, using test procedures specified in ch. NR 219, the results of that monitoring shall be recorded and reported in accordance with this chapter. Results of this additional monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

16. Monitoring reports. The monitoring results shall be reported at the intervals specified in the permit. Monitoring results shall be summarized on forms designated by the Department.

17. Noncompliance notification.

- a. The permittee shall report the following types of noncompliance by a telephone call to the Department's district office within 24 hours after becoming aware of the noncompliance.

(1)

Any noncompliance which may endanger health or the environment.

(2)

Any violation of an effluent limitation resulting from an unanticipated bypass.

(3)

Any violation of an effluent limitation resulting from an upset.

(4)

Any violation of a maximum daily discharge limitation for those pollutants specifically designated in the permit to be reported within 24 hours.

- b. A written report describing the noncompliance reported in condition 17, part a. shall be submitted to the Department's district office within 5 days after the permittee becoming aware of the noncompliance. The Department may waive the written report on a case-by-case basis based on the oral report received within 24 hours. The written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; the steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance; and if the noncompliance has not been corrected, the length of time it is expected to continue.
- c. Reports of all noncompliance not required to be reported under condition 8 or condition 17, parts a. and b. shall be submitted with the monitoring reports required under condition 16. The reports shall contain all the information listed in condition 17, part b.

18. Removed substances. Solids, sludges, filter backwash or other pollutants removed from or resulting from treatment or control of wastewaters or intake waters shall be stored and disposed of in a manner to prevent any pollutant from the materials from entering the waters of the state. Land disposal of treatment plant solids and sludges shall be at a site or operation licensed by the Department under the provisions of the mining permit.

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19. Spill reporting. The permittee shall notify the Department in accordance with ch. NR 158, in the event that a spill or accidental release of any material or substance results in the discharge of pollutants to the waters of the state at a rate or concentration greater than the effluent limitations established in the permit, or the spill or accidental release of the material is unregulated in the permit, unless the spill or release of pollutants has been reported to the Department under condition 17.

20. Planned changes. In accordance with ss. 147.02(4)(b) and 147.14(1), Stats., the permittee shall report to the Department any facility expansion, production increase or process modifications which will result in new, different or increased discharges of pollutants. The report shall either be a new permit application, or if the new discharge will not violate the effluent limitations of the permit, a written notice of the new, different or increased discharge. The notice shall contain a description of the new activities, an estimate of the new, different or increased discharge of pollutants and a description of the effect of the new or increased discharge on existing waste treatment facilities. Following receipt of this report, the Department may modify the permit to specify and limit any pollutants not previously regulated in the permit.

21. Increased discharge of toxic pollutants.

a. 'Routine or frequent increase'. The permittee shall notify the Department in writing as soon as it knows or has reason to believe that any activity has occurred or will occur which would result, on a routine or frequent basis, in the discharge of any toxic pollutant which is not limited in the permit, if that discharge exceeds the highest of the following levels.

- (1) One hundred micrograms per liter (100  $\mu\text{g/L}$ );
- (2) Two hundred microgram per liter (200  $\mu\text{g/L}$ ) for acrolein and acrylonitrile; five hundred micrograms per liter (500  $\mu\text{g/L}$ ) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1  $\text{mg/L}$ ) for antimony;
- (3) Five times the maximum concentration value reported for that pollutant in the permit application; or
- (4) A notification level greater than the level in sections (1), (2), or (3) above, which the Department has included as a special condition to the permit.

b. 'Nonroutine or infrequent increase'. The permittee shall notify the Department in writing as soon as it knows or has reason to believe that any activity has occurred or will occur which would result, on a nonroutine or infrequent basis, in any discharge of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following levels.

- (1) Five hundred micrograms per liter (500  $\mu\text{g/L}$ );
- (2) One milligram per liter (1  $\text{mg/L}$ ) for antimony;



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- (3) Ten times the maximum concentration value reported for that pollutant in the permit application; or
- (4) A notification level greater than the level in sections (1), (2), or (3) above, which the Department has included as a special condition to the permit.

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

23. Bypass. The permittee may bypass waste treatment facilities if this is necessary for the essential maintenance of the facilities and if the bypass does not exceed permit effluent limitations. The permittee may also bypass if the bypass is due to runoff in excess of the 10 year, 24 hour rainfall event and the bypass is designated as a specific discharge point in the WPDES permit. All other bypasses of waste treatment facilities, including diversion of wastewater from land disposal systems to surface waters, are prohibited unless the following conditions are met:

- a. The bypass is necessary to prevent loss of life, personal injury or severe property damage;
- b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes or maintenance during normal periods of equipment downtime; and
- c. The permittee submitted written notice 10 days before the date of the bypass and the Department's district office wastewater supervisor had approved the bypass in writing prior to its occurrence; or
- d. In the event of an unanticipated bypass, the permittee notified the Department verbally within 24 hours and in writing within 5 days of each unanticipated bypass.