

RECEIVED DEC 23 1992



Carroll D. Besadny
Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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CC J.E. Murphy
G.D. Schurtz
R. Sinclair
J.D. Tygean
J.R. Huckstorn

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

IN REPLY REFER TO: 3430

LAWRENCE E MERCANDO
VICE PRESIDENT
FLAMBEAU MINING CO
105 WEST LAKE AVENUE
LADYSMITH WI 54848

P. Kent
J.B. Wood
Permit Manual

11-8-71.4

SUBJECT: Modification of WPDES Permit No. WI-0047376-1

Dear Mr. Mercando:

The request for modification of Wisconsin Pollutant Discharge Elimination System (WPDES) Permit No. WI-0047376-1, initiated by the Department of Natural Resources on August 5, 1992, has been processed. This modification will incorporate revised water quality based effluent limits by the Bureau of Water Resources Management based on the April 15, 1992, Supplemental Environmental Impact Statement. The modifications include reduction in limits for nickel and cadmium, application of mass limits for nickel, cadmium, chromium (total or +3), and lead as weekly averages, and increased frequency of whole effluent toxicity testing.

The permit, which is attached, replaces the original permit issued on January 14, 1991. Please replace the original permit with the attached modified permit. All discharges from this facility and actions or reports relating thereto shall be in accordance with the terms and conditions of the original permit, as modified.

The conditions of this modification were determined using the permit application, information from your WPDES permit file, comments received during the public notice period, and Wis. Adm. Codes NR 200, NR 203, NR 205, NR 207, NR 102, NR 105, and NR 106.

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 reports and forms and instructions for completing them will be mailed to you under separate cover within sixty days.

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, Wis. Stats., by submitting an application to: C. D. Besadny, Secretary, Department of Natural Resources, P.O. Box 7921, Madison, Wisconsin, 53707 within 30 days after the

date of modification of this permit. Within 30 days of receipt of your application, 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, which will include a 30 day comment period. A tentative decision on your application 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 discharges 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, precludes 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 WPDES permit program has been approved by the Administrator of the U.S. Environmental Protection Agency pursuant to Section 402(b) of the Federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. Section 1342 (b)). The terms and conditions of this permit are accordingly subject to enforcement under Sections 147.21 and 147.29, Wis. Stats., and Section 309 of the Federal Act (33 U.S.C. Section 1319).

The Department has the authority under Chapters 147 and 160, Wis. Stats., to establish effluent limitations, monitoring requirements, and other permit conditions for discharges to groundwaters and surface waters of the State. The Department also has the authority to issue, reissue, modify, suspend or revoke WPDES permits under Chapter 147, Wis. Stats. Wis. Adm. Code Chapters

NR 200, NR 203, NR 205, NR 207, NR 102, NR 105, and NR 106 have been adopted by the Department pursuant to this statutory 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 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 DEC 22 1992

MJK:tsb

Enclosures

cc: Northwest District - Bob Gothblad
Northwest District (Park Falls) - Jim Hansen
EA/6 - Robert Ramharter
SW/3 - Larry Lynch
Jim Hutchison, P.E
Foth & Van Dyke
2737 S. Ridge Road
P.O. Box 19012
Green Bay, WI 54307-9012

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

Kennecott Corporation

is permitted to discharge from a facility located in the Town of Grant,
south of

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, September 30, 1995.

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
Mary Jo Kopecky, Director
Bureau of Wastewater Management

Modified: DEC 22 1992

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALL 002

- (1) During the period beginning on the date of signature and lasting until September 30, 1995, the permittee is authorized to discharge treated wastewaters from the following sources: 1) water from the open pit mine before the exposure of Type II waste rock, 2) runoff from the Type I waste rock storage area (low sulfur), and 3) runoff from other areas that has not contacted either the high sulfur waste rock or the ore, through Outfall 002 (settling pond effluent).
- (2) This discharge shall be limited and monitored by the permittee as specified below.
- (a) There shall be no discharge of floating solids or visible foam in other than trace amounts.
- (b) Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location: Outfall 002 (settling pond effluent), prior to discharge to the Flambeau River.

EFFLUENT CHARACTERISTIC	EFFLUENT LIMITATIONS				MONITORING REQUIREMENTS	
	Daily Maximum	Monthly Average	Weekly Average(3)	Weekly Average Mass Limit	Sample Frequency	Sample Type
Flow - (MGD)	-	-	-	---	Daily	Continuous
Total Suspended Solids	30 mg/L	20 mg/L	-	-	Daily	Composite (4)
Aluminum ⁵	1500 ug/L	-	-	-	(6)	Composite (4)
Arsenic ⁵	730 ug/L	-	-	-	(6)	Composite (4)
Beryllium	-	0.67 lb/day ⁷	-	-	(6)	Composite (4)
Cadmium ^{5,8}	79.8 ug/L	50 ug/L	7.1 ug/L	0.046 lb/day ⁷	(9)	Composite (4)
Chromium, Total (or +3) ^{5,8}	5400 ug/L	-	980 ug/L	6.4 lb/day ⁷	(6)(9)	Composite (4)
Chromium (+6) ⁵	28 ug/L	-	-	-	(6)	Grab (4)
Copper ^{5,8}	58 ug/L	-	-	-	(9)	Composite (4)
Lead ^{5,8}	590 ug/L	-	140 ug/L	0.89 lb/day ⁷	(9)	Composite (4)
Mercury ¹⁰	-	0.002 ug/L	-	-	(9)	Composite (4)
Nickel ^{5,8}	445 ug/L	-	156 ug/L	1.0 lb/day ⁷	(6)(9)	Composite (4)
Selenium ⁵	120 ug/L	-	-	-	(6)	Composite (4)
Silver ^{5,8}	6.6 ug/L	-	-	-	(6)	Composite (4)
Zinc ^{5,8}	300 ug/L	-	-	-	(6)	Composite (4)
pH (standard units)	(11)	-	-	-	Daily	Grab
Hardness, mg/L as CaCO ₃	-	-	-	-	Quarterly	Composite (4)
Effluent Toxicity	-	-	-	-	(12)	(12)
Water Treatment Additives (lbs or gallons)	-	-	-	-	Monthly	Record of Addition (13)

- (3) If the monitoring frequency is insufficient to allow calculation of a weekly average, this limitation shall be considered a daily maximum. If the permittee monitors this or any pollutant more frequently than required by this permit, the results shall be recorded and reported in accordance with Part II, 15 of this permit.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - OUTFALL 002 (con't)

- (4) A representative composite sample shall be collected during the hours of discharge. If the sample is not collected throughout the entire time of discharge, the sample type and the hours of discharge shall be recorded on the Discharge Monitoring Report (DMR).
- (5) Measurement in the "total recoverable" form is acceptable where such a test is available.
- (6) In the permit application, the effluent was not analyzed for the substances listed below. Under this permit, the first twelve analyses shall be collected on no less than a monthly basis over a minimum of nine months. The results will be used to determine the need for continuing monitoring and effluent limitations at this outfall. If the substance is consistently not detected using the analytical method specified below, or is consistently detected at a concentration at or below the level of concern listed below, no additional monitoring for the substance will be required under Part I, A. In addition, the effluent limitation for that substance contained in Part I, A, listed above will not be in effect. If the substance is consistently detected at a concentration exceeding the level of concern, the effluent limitation shown above will become effective. Monitoring shall continue on no less than a monthly frequency. If the parameter is subject to mass limits, additional sampling may be required as described in (7) below.

<u>Substance*</u>	<u>Level of Concern**</u>	<u>Analytical Method***</u>
Aluminum	300 ug/L	202.2
Arsenic	146 ug/L	206.2, 206.3
Beryllium	20 ug/L	210.2
Chromium, Total (or +3)	196 ug/L	218.1, 218.2, or 200.7
Chromium (+6)	7 ug/L	218.4
Nickel	31.2 ug/L	249.1, 249.2
Selenium	23 ug/L	70.2, 270.3
Silver	1.3 ug/L	72.2
Zinc	60 ug/L	289.1, 289.2

* Measurement in the "total recoverable" form is acceptable where such a test is available.
 ** As listed in the table or "None detected", if the value in the table is exceeded by the limit of detection of the analytical method.
 *** Suggested EPA test method.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - OUTFALL 002 (con't)

- (7) The permittee shall report both the concentration and the mass of this substance at this outfall for this parameter calculated by the following formula:

$$\text{Mass loading (lb/day)} = \text{concentration (ug/L)} \times \text{flow (MGD)} \times .008345 \text{ (lb-L/ug-MG)}$$

The mass limits shall be applied to the sum of the loadings to the Flambeau River through Outfalls 001 and 002. This mass limitation is based on the weekly average concentration limit for this metal, except for beryllium, which is based on the monthly average concentration, at the design flow of the wastewater treatment plant of 780,000 gallons per day, or 0.78 MGD. Once discharge begins at Outfall 001, if a discharge occurs concurrently at both outfalls during the same 24 hour period, a sample shall be collected at both outfalls to determine the total mass for this metal in the combined discharge.

- (8) The limitation is based on a proposed effluent hardness of 152 ppm (as CaCO₃). If the measured hardness is substantially different, the permit may be modified to reflect the changes in the effluent limitation for this metal.
- (9) The sample frequency for this parameter shall be no less than monthly until the effluent sample is collected at Outfall 001 for completion of the 2C NPDES Application, after which the frequency shall be no less than twice a month and subject to sampling whenever both outfalls discharge during the same 24 hour period, as described in condition (7) above.
- (10) Additional instructions for the determination of compliance with the limitations for this substance are contained in Part I, D.
- (11) The range for pH shall be 6.0 to 9.0 standard units.
- (12) Sample collection, effluent toxicity testing, and evaluation shall be conducted according to the requirements contained in Part I, E.
- (13) The permittee shall report the total amount of each water treatment additive used for the month and furnish a record of daily addition.
- (14) Additional treatment shall be provided for the effluent at this outfall if the limitations listed in Part I, A, cannot be met.
- (15) If an analysis of effluent data indicates a trend of increasing effluent concentrations for copper, cadmium, lead, or chromium, the permittee shall conduct tests of the solubility of solids or other tests determined to be appropriate following discussions with the permittee and the Department.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - OUTFALL 002 (con't)

- (16) Runoff from the lined Type II (high sulfur) waste rock storage area shall not be discharged at Outfall 002.
- (17) The permittee shall notify the Department when the storage of Type II waste rock begins and when ore shipping begins.

SPECIAL CONDITIONS

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALL 003

- (1) During the period beginning on the date of signature and lasting until September 30, 1995, the permittee is authorized to discharge treated wastewaters from the following sources: 1) water from the open pit mine before the exposure of Type II waste rock, 2) runoff from the Type I waste rock storage area (low sulfur), and 3) runoff from other areas that has not contacted either the high sulfur waste rock or the ore, through Outfall 003 to wetlands for the purpose of flow augmentation.
- (2) This discharge shall be limited and monitored by the permittee as specified below.
- (a) There shall be no discharge of floating solids or visible foam in other than trace amounts.
- (b) Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location: Outfall 003 prior to discharge to the wetlands and following the settling ponds.

EFFLUENT CHARACTERISTIC	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS		
	Daily Minimum	Daily Maximum	Monthly Average	Weekly Average(3)	Sample Frequency	Sample Type
Flow - (MGD)	-	-	-	-	Daily	Estimated (8)
pH (standard units)	6.0 s.u.	9.0 s.u.	-	-	Daily	Grab
Total Suspended Solids	-	30 mg/L	20 mg/L	-	Daily	Composite (4)
Aluminum ⁵	-	1500 ug/L	-	-	Monthly	Composite (4)
Arsenic ⁵	-	730 ug/L	-	-	Monthly	Composite (4)
Beryllium	-	-	100 ug/L	-	Monthly	Composite (4)
Cadmium ^{5,6}	-	79.8 ug/L	50 ug/L	7.1 ug/L	Monthly	Composite (4)
Chromium, Total (or +3) ^{5,6}	-	5400 ug/L	-	980 ug/L	Monthly	Composite (4)
Chromium (+6) ⁵	-	28 ug/L	-	-	Monthly	Grab (4)
Copper ^{5,6}	-	50 ug/L	-	-	Monthly	Composite (4)
Lead ^{5,6}	-	590 ug/L	-	140 ug/L	Monthly	Composite (4)
Mercury ⁷	-	-	0.002 ug/L	-	Monthly	Composite (4)
Nickel ^{5,6}	-	445 ug/L	-	156 ug/L	Monthly	Composite (4)
Selenium ⁵	-	120 ug/L	-	-	Monthly	Composite (4)
Silver ^{5,6}	-	6.6 ug/L	-	-	Monthly	Composite (4)
Zinc ^{5,6}	-	300 ug/L	-	-	Monthly	Composite (4)
Hardness, mg/L as CaCO ₃	-	-	-	-	Quarterly	Composite (4)

- (3) If the monitoring frequency is insufficient to allow calculation of a weekly average, this limitation shall be considered a daily maximum. If the permittee monitors this or any pollutant more frequently than required by this permit, the results shall be recorded and reported in accordance with Part II, 15 of this permit.
- (4) The same sample may be reported as for Outfall 002.

SPECIAL CONDITIONS

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALL 003 (con't)

- (5) Measurement in the "total recoverable" form is acceptable where such a test is available.
- (6) The limitation is based on a proposed effluent hardness of 152 ppm (as CaCO_3). If the measured hardness is substantially different, the permit may be modified to reflect the changes in the effluent limitation for this metal.
- (7) Additional instructions for the determination of compliance with the limitations for this substance are contained in Part I, D.
- (8) According to NR 218 Method and Manner of Sampling, "estimated" sample flow measurement means "a reasonable approximation of the average daily flow based on water balance, an uncalibrated weir", or any of the more complex methods described in s. NR 218.05 (1) and (3) (a) and (b).
- (9) This discharge may be discontinued if the Department finds that the wetlands are being significantly deteriorated by the application of this discharge.

SPECIAL CONDITIONS

C. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALL 001

- (1) During the period beginning on the date of signature and lasting until September 30, 1995, the permittee is authorized to discharge the following treated wastewaters: groundwater seepage from underneath surge and run-off pond liners, runoff from the ore crushing area, the Type II waste rock area, and the ore hauling roads; and water from the open pit that has contacted high sulfur waste rock through outfall serial number 001 (wastewater treatment plant effluent).
- (2) This discharge shall be limited and monitored by the permittee as specified below.
- (a) There shall be no discharge of floating solids or visible foam in other than trace amounts.
- (b) Samples taken in compliance with the monitoring requirements specified below shall be taken at the following locations: (1) Outfall 001, following the wastewater treatment process but before entrance into the Flambeau River for sulfide and dissolved oxygen, (2) Outfall 001, following the wastewater treatment process but before contact with the rip-rapped outfall channel to the Flambeau River for all other parameters

EFFLUENT CHARACTERISTIC	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS		
	Weekly Average(4)	Daily Maximum	Monthly Average	Weekly Average Mass Limit	Sample Frequency	Sample Type
Flow - (MGD)	-	-	-	-	Daily	Continuous
Total Suspended Solids	-	30 mg/L	20 mg/L	-	Daily	24-hr composite
Aluminum ⁵	-	1500 ug/L	-	-	(7)	24-hr composite
Arsenic ⁵	-	730 ug/L	-	-	(7)	24-hr composite
Beryllium	-	-	0.67 lb/day ⁸	-	(7)	24-hr composite
Cadmium ^{5,6}	7.1 ug/L	79.8 ug/L	50 ug/L	0.046 lb/day ⁸	3X Weekly	24-hr composite
Chromium, Total(or +3) ^{5,6}	980 ug/L	5400 ug/L	-	6.4 lb/day ⁸	(7)	24-hr composite
Chromium (+6) ⁵	-	28 ug/L	-	-	(7)	Grab
Copper ^{5,6}	-	50 ug/L	-	-	3X Weekly	24-hr composite
Lead ^{5,6}	140 ug/L	590 ug/L	-	0.89 lb/day ⁸	Weekly	24-hr composite
Mercury ⁹	-	-	0.002 ug/L	-	Weekly	24-hr composite
Nickel ^{5,6}	156 ug/L	445 ug/L	-	1.0 lb/day ⁸	(7)	24-hr composite
Selenium ⁵	-	120 ug/L	-	-	(7)	24-hr composite
Silver ^{5,6}	-	6.6 ug/L	-	-	(7)	24-hr composite
Zinc ^{5,6}	-	300 ug/L	-	-	(7)	24-hr composite
pH (standard units) ¹¹	-	9.0 s.u.	-	-	Daily	Continuous
Total Dissolved Solids (mg/L) -	-	-	-	-	Monthly	24-hr composite
Dissolved Oxygen ¹⁰	-	5 mg/L(min.)	-	-	Daily	Grab
Hardness, mg/L as CaCO ₃	-	-	-	-	Quarterly	24-hr composite
Effluent Toxicity	-	-	-	-	(12)	(12)
Water Treatment Additives	-	-	-	-	(13)	(13)
Sulfide ¹⁴	-	-	-	-	3X Weekly	Grab

- (3) In the permit application, the effluent was not analyzed for the substances listed in Application Form 2C. The permittee shall analyze the first representative discharge of treated wastewater at

SPECIAL CONDITIONS

C. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALL 001 (con't)

this outfall for all of the parameters that are required in EPA Form 2C for ore mining industries. This data will be used to determine the need for modification of the permit to include revisions to the monitoring requirements and effluent limitations listed above.

- (4) If the monitoring frequency is insufficient to allow calculation of a weekly average, this limitation shall be considered a daily maximum. If the permittee monitors this or any pollutant more frequently than required by this permit, the results shall be recorded and reported in accordance with Part II, 15 of this permit.
- (5) Measurement in the "total recoverable" form is acceptable where such a test is available.
- (6) The limitations are based on a proposed effluent hardness of 152 ppm (as CaCO₃). If the measured hardness is substantially different, the permit may be modified to reflect the changes in the effluent limitation for this metal.
- (7) In the first twelve analyses of the treated effluent conducted on a weekly frequency, if this substance is not consistently detected using the analytical method specified below, or is consistently detected at a concentration at or below the level of concern, no additional monitoring for the substance will be required unless indicated by a demonstration of effluent toxicity. In addition, the effluent limitation for that substance contained in Part I, B, listed above, will not be effective. If the first twelve reported concentrations of the substance do not consistently meet the concentration criteria described above, the effluent limitation shown above shall be effective. Monitoring shall continue on no less than a monthly basis.

<u>Substance*</u>	<u>Level of Concern**</u>	<u>Analytical Method***</u>
Aluminum	300 ug/L	202.2
Arsenic	146 ug/L	206.2, 206.3
Beryllium	20 ug/L	210.2
Chromium, Total (or +3)	196 ug/L	218.1, 218.2, or 200.7
Chromium (+6)	7 ug/L	218.4
Nickel	31.2 ug/L	249.1, 249.2
Selenium	23 ug/L	270.2, 270.3
Silver	1.3 ug/L	272.2
Zinc	60 ug/L	289.1, 289.2

* Measurement in the "total recoverable" form is acceptable where such a test is available.
 ** As listed in the table or "None detected", if the value in the table is exceeded by the limit of detection of the analytical method.
 *** Suggested EPA test method.

SPECIAL CONDITIONS

C. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALL 001 (con't)

- (8) The mass limit for this metal applies to the sum of the discharges at Outfalls 001 and 002 during the same twenty-four period. If a discharge occurs at both outfalls, samples shall be collected at both outfalls. To determine compliance, the concentration, flow, and mass loading at each outfall shall be calculated using the following formula:

$$\text{Mass loading (lb/day)} = \text{concentration (ug/L)} \times \text{flow (MGD)} \times .008345 \text{ (lb-L/ug-MG)}$$

The mass limits shall be applied to the sum of the loadings to the Flambeau River through Outfalls 001 and 002. This mass limitation is based on the weekly average concentration limit for this metal, except for beryllium, which is based on the monthly average concentration, at the design flow of the wastewater treatment plant of 780,000 gallons per day, or 0.78 MGD. Once discharge begins at Outfall 001, if a discharge occurs concurrently at both outfalls during the same 24 hour period, a sample shall be collected at both outfalls to determine the total mass for this metal in the combined discharge.

- (9) Additional instructions for the determination of compliance with the limitations for this substance are contained in Part I, D.
- (10) The daily minimum of the effluent at the point that it enters the receiving water shall be 5 mg/L of dissolved oxygen.
- (11) 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.
- (12) Sample collection, effluent toxicity testing, and evaluation shall be conducted according to the requirements contained in Part I, E.
- (13) Records of treatment additives shall be kept and made available for inspection by Department staff upon request.

SPECIAL CONDITIONS

C. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALL 001 (con't)

- (14) Detection of sulfide in the effluent or hydrogen sulfide gas from the wastewater treatment plant, using EPA test method 376.1, 376.2, or an alternative test method or sample type that has received written approval from the Department, shall be reported to the DNR.

SPECIAL CONDITIONS

D. DETERMINING COMPLIANCE WITH WATER QUALITY BASED EFFLUENT LIMITATIONS FOR TOXIC OR ORGANOLEPTIC SUBSTANCES

- (1) When a water quality based effluent limitation for a toxic or organoleptic substance is imposed as an average concentration, compliance with the limitation shall be determined as follows:
 - (a) 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, as defined in par. (2)(b). Be advised, however, that after considering the number of monitoring results that are greater than the limit of detection and applying appropriate statistical techniques pursuant to NR 106.07 (5), the Department may substitute a value other than 0 when determining compliance. Discharges resulting from a storm event greater than a 10 year, 24-hour storm event are exempt from the application of the statistical technique. All effluent concentrations equal to or greater than the limit of detection shall be used as measured; and
 - (b) The average effluent concentration is compared directly to the average concentration limitation to determine compliance.
- (2) Within 9 months of the date of permit issuance, the permittee shall determine and report to the Department the limits of detection and limits of quantitation as specified below. The Department may require the determination of the limits of detection and quantitation be repeated or improved if the reported values fall outside of the range of values normally reported by laboratories certified under ch. NR 149, Wis. Adm. Code, for wastewaters with similar characteristics.

Limits of detection and limits of quantitation determined as described below, unless required by the Department to be repeated or improved, will be considered by the Department to represent acceptable performance of the analytical technique by the permittee for the purpose of self-monitoring data when such self-monitoring data are used to assess compliance with limitations as specified in subsection (1) above. The foregoing in no way restricts the ability of any party, including the permittee, to achieve lower limits of detection and quantitation through proper application of analytical techniques identified below or approved by the Department and to assess compliance with limitations as specified in subsection (1) above.

- (a) Limits of detection and quantitation shall be determined for the following substances using the specified analytical test methods or any other test method which provides a method detection limit equal to or less than that specified below and is approved by the Department prior to use.

SPECIAL CONDITIONS

D. DETERMINING COMPLIANCE WITH WATER QUALITY BASED EFFLUENT LIMITATIONS FOR TOXIC OR ORGANOLEPTIC SUBSTANCES (con't)

Mercury using U.S. EPA Method 245.1 or 245.2 (MDL of 0.2 ug/L)

- (b) Limits of detection and limits of quantitation shall be determined as follows:
1. The limit of detection shall be derived by the procedure specified for method detection limits in the Code of Federal Regulation, Title 40, Part 136, Appendix B, and the limit of quantitation shall be set equal to 3.33 times the limit of detection. Other methods may be used if first approved by the Department.
 2. The sample matrix used shall consist of samples of effluent collected at Outfall 001, in accordance with Part I, C, and at Outfall 002; in accordance with Part I, A.
- (c) When reporting the limits of detection and quantitation to the Department, the permittee shall indicate which analytical test method was used, provide the results of the replicate analyses, and include pertinent calculations.
- (d) Following the initial determination of the limits of detection and quantitation under this section, the permittee shall report to the Department any consistent deviation from the values initially reported.
- (e) At least 90 days prior to changing analytical test methods or certified laboratories for any substance for which a limit of detection has been derived under this section, the permittee shall repeat the determination of the limits of detection and quantitation for that substance using the newer method or laboratory and report the results of the determination to the Department. Within 60 days of receipt of such a report the Department may require the determination of the limits of detection and quantitation be repeated or improved if the reported values fall outside of the range of values normally reported by laboratories certified under ch. NR 149, Wis. Adm. Code, for wastewaters with similar characteristics. If such a request is made by the Department, the permittee must receive written approval from the Department before making the change.
- (3) When monitoring is required for a toxic or organoleptic substance, the following information shall be reported on the Discharge Monitoring form (Form 3200-28);
- (a) Effluent concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of

SPECIAL CONDITIONS

D. DETERMINING COMPLIANCE WITH WATER QUALITY BASED EFFLUENT LIMITATIONS FOR TOXIC OR ORGANOLEPTIC SUBSTANCES (con't)

detection. For example, if a substance is not detected at a concentration of 0.1 $\mu\text{g/L}$, report the value as $<0.1 \mu\text{g/L}$.

- (b) Effluent concentrations equal to or greater than the limit of detection shall be reported as measured. In addition, the limit of quantitation shall be reported with all effluent concentrations equal to or greater than the limit of detection, but less than the limit of quantitation.
- (c) The permittee shall note on the Discharge Monitoring Report when compliance with a limitation is demonstrated in accordance with par. (1)(b).
- (d) When calculating an average effluent concentration or a mass discharge value the permittee shall also report the observed effluent concentrations.

SPECIAL CONDITIONS

E. EFFLUENT TOXICITY TESTING REQUIREMENTS, PROCEDURES, SCHEDULES, AND LIMITATIONS

- (1) Effluent Toxicity Testing Requirements: The permittee is required to perform effluent toxicity tests to determine the potential impact of the effluent discharge on aquatic organisms.
 - (a) Within 7 days of commencement of a discharge of treated wastewater effluent from outfall 001 to the Flambeau River, the permittee shall initiate an acute toxicity test battery using the procedure specified in subsection (2). Thereafter, the permittee shall conduct acute toxicity test batteries using the procedure specified in subsection (2) once each two months for thirty-six months. After the first thirty-six months, the permittee shall conduct acute toxicity test batteries using the procedure specified in subsection (2) once each four months for the remaining term of the permit.
 - (b) Pursuant to the effluent collection requirements specified for outfall 002 in subparagraph (2)(c)(2), the permittee shall initiate an acute toxicity test battery using the procedure specified in subsection (2). Thereafter, the permittee shall conduct acute toxicity test batteries using the procedure specified in subsection (2) once each subsequent two calendar month interval for thirty-six months. The requirement to conduct an acute toxicity test battery shall be waived for any two calendar month interval in which a discharge does not occur. After the first thirty-six months, the permittee shall conduct acute toxicity test batteries using the procedure specified in subsection (2) once each four months for the remaining term of the permit. The requirement to conduct an acute toxicity test battery shall be waived for any four calendar month interval in which a discharge does not occur.
 - (c) Should the permittee initiate any two acute toxicity test batteries for outfall 001 or 002 within a twelve month period that are determined to be positive pursuant to paragraph (5)(a), the permittee shall comply with the requirements of subsection (8) to meet an acute toxicity limitation. Upon completion of the schedule of compliance specified in subsection (8), the permittee shall conduct acute toxicity test batteries once each calendar month for the remaining term of the permit using the procedure specified in subsection (2) to determine compliance with the limitation. The requirement to conduct an acute toxicity test battery for compliance determination shall be waived for any calendar month in which a discharge does not occur.
 - (d) Within 7 days of commencement of a discharge of treated wastewater effluent from outfall 001 to the Flambeau River, the

SPECIAL CONDITIONS

E. EFFLUENT TOXICITY TESTING REQUIREMENTS, PROCEDURES, SCHEDULES, AND LIMITATIONS (con't)

permittee shall initiate a chronic toxicity test battery using the procedure specified in subsection (3). Thereafter, the permittee shall conduct chronic toxicity test batteries using the procedure specified in subsection (3) once each calendar year for the term of the permit between the months of June and September, except as required for any retesting required under subsection (6).

- (e) Should the permittee initiate any two chronic test batteries within a twelve month period that are determined to be positive pursuant to paragraph (5)(b), the permittee shall comply with the requirements of subsection (9) to meet a chronic toxicity limitation. Upon completion of the schedule of compliance specified in subsection (9), the permittee shall conduct chronic toxicity test batteries once each calendar month for the remaining term of the permit using the procedure specified in subsection (3) to determine compliance with the limitation. The requirement to conduct a chronic toxicity test battery for compliance determination shall be waived for any calendar month in which a discharge does not occur.
- (2) Acute Toxicity Test Battery Procedure: Each acute 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 acute toxicity test batteries shall be performed with the following control water treatments which have been collected within 72 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 outfall 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 having approximately the same characteristics (pH, hardness and alkalinity) as the receiving water.
 3. 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 (2)(f), the toxicity test shall be repeated for that test species.

SPECIAL CONDITIONS

E. EFFLUENT TOXICITY TESTING REQUIREMENTS, PROCEDURES, SCHEDULES, AND LIMITATIONS (con't)

- (b) Dilution Water: 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.
- (c) Effluent Collection: effluent samples shall be collected and used under the following conditions:
1. Outfall 001: Two composite samples of treated final effluent shall be collected during two separate, normal 24-hour operating periods as specified in Ch. NR 218.04(11) (Wis. Adm. Code).
 2. Outfall 002: A grab sample of treated final effluent shall be collected as specified in Ch. NR 218.04(10) (Wis. Adm. Code) during any discharge event which exceeds a duration of 1 hour during any calendar day unless the scheduled testing requirements of paragraphs (1)(b) or (1)(c) have previously been met for a specific period of time.
 3. Revisions to the requirements of subparagraphs (2)(c)1. or (2)(c)2. may be approved in writing by the Department, provided the permittee demonstrates to the Department, that an alternative sample collection protocol proposed by the permittee is equivalent based upon the results from at least three consecutive test batteries.
 4. Seventy-two (72) hours after completion of the sample collection shall be the maximum holding time prior to initial use of any effluent sample.
- (d) Effluent Treatments: all acute toxicity test batteries shall be performed with the following treatments:
1. Primary and secondary control water as specified in paragraph (2)(a).
 2. Treatments equal to 50% and 100% (v:v) effluent.
 3. If positive toxicity is demonstrated, as determined in paragraph (5)(a), for any acute toxicity test battery conducted pursuant to this WPDES permit, all subsequent acute toxicity test batteries shall be performed with effluent treatments equal to 50% and 100% (v:v) effluent as specified in subparagraph (2)(d)2. and additional treatments equal to 6.25%, 12.5%, and 25% (v:v).

SPECIAL CONDITIONS

E. EFFLUENT TOXICITY TESTING REQUIREMENTS, PROCEDURES, SCHEDULES, AND LIMITATIONS (con't)

4. Any additional treatments selected by the permittee of which all results shall be reported in accordance with subsection (7).
- (e) Test Duration and Renewal Frequency (Outfall 001): For effluent discharged from outfall 001, an acute toxicity test battery shall be performed for 48 and 96 hours for invertebrate and vertebrate test species, respectively, 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 paragraph (2)(c)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 paragraph (2)(c)1. Two additional renewals shall be made after 48 and 72 hours with the second of the two effluent samples collected as specified in paragraph (2)(c)1.
- (f) Test Duration and Renewal Frequency (Outfall 002): For effluent discharged from outfall 002, an acute toxicity test battery shall be performed for 48 and 96 hours for invertebrate and vertebrate test species, respectively, 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 two effluent samples collected on consecutive calendar days as specified in paragraph (2)(c)2.
 2. Vertebrate Test Organisms: a renewal shall be made after 24 hours of exposure with the first of the two effluent samples collected on consecutive calendar days as specified in paragraph (2)(c)2. Two additional renewals shall be made after 48 and 72 hours with the second of the two effluent samples collected on consecutive calendar days as specified in paragraph (2)(c)2. If consecutive daily samples cannot be collected, the fathead minnow toxicity test may be terminated after 48 hours of continuous exposure and the monitoring requirement specified in paragraph (1)(b) shall be met for that test period.
- (g) Test Species: all acute toxicity test batteries shall be performed with the following three freshwater species:

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E. EFFLUENT TOXICITY TESTING REQUIREMENTS, PROCEDURES, SCHEDULES, AND LIMITATIONS (con't)

1. *Ceriodaphnia dubia* and *Daphnia magna* which are less than 24 hours old.
 2. Fathead minnows (*Pimephales promelas*) between 20 and 60 days old, post-hatch (all organisms shall have hatched within 6 days of each other).
- (h) Miscellaneous: other needs or circumstances may justify modification of or substitution to the toxicity test battery procedures. Deviation from standard procedures, if necessary for the successful completion of the test battery, may be allowed if first approved by the Department.
- (3) Chronic Toxicity Test Battery Procedure: Each chronic toxicity test battery shall be performed following the procedures given in Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (Second Edition) (EPA/600/4-89/001) with the following exceptions, clarifications, and additions:
- (a) Control Water: all chronic toxicity test batteries shall be performed with the following control water treatments which have been collected within 72 hours of test initiation.
 1. Primary control water shall be a receiving water grab sample collected from the Flambeau River at a point that is upstream from the permittee's outfall; 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 having approximately the same characteristics (pH, hardness and alkalinity) as the receiving water.
 3. If, at any time, both the primary and secondary controls exhibit mortality exceeding 20% to a test species required by paragraph (3)(f), the toxicity test shall be repeated for that species.
 - (b) Dilution Water: 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.
 - (c) Effluent Collection: effluent samples shall be collected and used under the following conditions:
 1. Three composite samples of treated final effluent shall be collected during three separate, normal 24-hour

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E. EFFLUENT TOXICITY TESTING REQUIREMENTS, PROCEDURES, SCHEDULES, AND LIMITATIONS (con't)

- operating periods as specified in Ch. NR 218.04(11) (Wis. Adm. Code).
2. Revisions to the requirements of subparagraph (3)(c)1. may be approved in writing by the Department, provided the permittee demonstrates to the Department, that an alternative sample collection protocol proposed by the permittee is equivalent based upon the results from at least three consecutive test batteries.
 3. Seventy-two (72) hours after completion of the sample collection shall be the maximum holding time prior to initial use of any effluent sample.
- (d) Effluent Treatments: all chronic toxicity test batteries shall be performed with the following effluent treatments:
1. Primary and secondary control water as specified in paragraph (3)(a).
 2. Effluent treatments equal to the Instream Waste Concentration (IWC) = 1% and additional effluent treatments of 10%, 30%, 60%, and 100% (v:v) effluent.
 3. Any additional treatments selected by the permittee of which all results shall be reported in accordance with subsection (7).
- (e) Renewal Frequency: all test vessel solutions shall be renewed daily with samples collected as specified in paragraph (3)(c). Test organisms shall be exposed to each of the effluent samples for a minimum of 48 consecutive hours.
- (f) Test Species: all chronic toxicity test batteries shall be performed with the following freshwater species:
1. Fathead minnows (*Pimephales promelas*) less than 24 hours old.
 2. *Ceriodaphnia dubia* less than 24 hours old (all neonates used shall be released within the same 8 hour period).
- (g) Miscellaneous: other needs or circumstances may justify modification of or substitution to the toxicity test procedures. Deviation from standard procedures, if necessary for the successful completion of the test battery, may be allowed if first approved by the Department.

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E. EFFLUENT TOXICITY TESTING REQUIREMENTS, PROCEDURES, SCHEDULES, AND LIMITATIONS (con't)

- (4) Quality Assurance/Quality Control Plan Submittal: the permittee shall submit a quality assurance/quality control plan to the Department according to the following schedule:
- (a) No less than 45 days prior to conducting the first toxicity test required under subsection (1), the permittee shall submit a quality assurance/quality control plan for Department approval. This plan shall include standard operating procedures for all laboratory toxicity testing and detailed descriptions of the quality assurance practices that shall be followed for all aspects of wastewater toxicity testing, including wastewater sampling, handling, and transportation.
 - (b) The quality assurance/quality control plan submitted under paragraph (4)(a) shall be approved by the Department within 30 days of its receipt unless, within 30 days of its receipt, the Department finds that the plan is inadequate and specifies the basis for the inadequacy in writing.
 - (c) If the Department finds the plan is inadequate, the permittee shall, within 15 days of receiving written notification of the plan's inadequacy, submit to the Department a plan that has been revised to correct the inadequacies.
 - (d) All toxicity tests required by this permit shall be conducted according to the quality assurance/quality control plan approved by the Department.
- (5) Determination of Positive Test Results: if a toxicity test conducted pursuant to subsection (2) or (3) meets all conditions of the quality assurance/quality control plan approved in subsection (4), it shall be considered positive under any of the following circumstances:
- (a) Acute Toxicity Test: the results of an acute toxicity test performed as required by subsection (2) shall be considered positive if:
 - 1. Invertebrate test organism population mortality exceeds 50% after 48 hours of exposure to 100% (v:v) effluent; or
 - 2. Outfall 001: Vertebrate test organism population mortality exceeds 50% after 96 hours of exposure to 100% (v:v) effluent.
 - 3. Outfall 002: Vertebrate test organism population mortality exceeds 50% in the 100% effluent treatment at the time of test termination as provided in subparagraph (2)(f)2.

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E. EFFLUENT TOXICITY TESTING REQUIREMENTS, PROCEDURES, SCHEDULES, AND LIMITATIONS (con't)

- (b) Chronic Toxicity Test: the results of a chronic toxicity test performed as required by subsection (3) shall be considered positive if the 25% Inhibition Concentration (IC_{25}) is determined to be less than the instream waste concentration (IWC) of 1% final effluent. The IC_{25} shall be determined in the following manner:
1. The data set used for the analysis shall contain observations for the treatments specified in subsections (3)(d).
 2. Endpoints for each test treatment shall be calculated as follows:
 - a. *Ceriodaphnia dubia*: The total number of live neonates produced in all replicates excluding neonates produced in replicates subsequently lost to transfer or handling problems or replicates containing male organisms.
 - b. Fathead minnows: The total dry weight of surviving larvae in a replicate divided by the number of larvae used to initiate that replicate (excluding larvae lost due to transfer or handling problems).
 3. The IC_p analysis shall be conducted in accordance with the guidance provided in American Petroleum Institute Publication No. 4468 and U.S. EPA National Effluent Toxicity Assessment Center Technical Report No. 05-88. The "p" value shall be set equal to 25.
 4. The IC_{25} value, used to determine positive toxicity, shall be the linear interpolation estimate.
- (c) 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.
- (d) Notification of a Positive Result: if a test result is positive as defined by paragraph (5)(a) or (b), the permittee shall notify the Department in writing within 7 days of completing the test which resulted in the positive toxicity result.
- (6) Additional Testing Subsequent to a Positive Result:

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E. EFFLUENT TOXICITY TESTING REQUIREMENTS, PROCEDURES, SCHEDULES, AND LIMITATIONS (con't)

- (a) No later than 30 days after the date of termination of the test that yielded 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 shall be initiated within 14 days from the date of termination of the test that yielded the positive result.
 - (b) If an effluent discharge does not occur during the 30-day period specified in paragraph (6)(a), the 2 additional test batteries shall be conducted with effluent samples collected as specified in paragraphs (2)(c) or (3)(c) from subsequent, yet separate, discharge events.
 - (c) These additional test battery results shall include the information required under subsection (7).
- (7) Reporting of Toxicity Test Battery Results: Within 45 days of the conclusion of each toxicity test battery conducted under subsections (2) or (3), the permittee shall submit a copy of the report to both the Department of Natural Resources, Bureau of Wastewater Management, 101 S. Webster Street, P.O. Box 7921, Madison, WI 53707 and the Northwest District Headquarters, WPDES Permits Section, P.O. Box 309, Spooner, WI 54801. The report shall document the following information:
- (a) Effluent Samples: sampling point, collection dates and times, sample collection methods, and all pertinent biological, chemical, and physical data.
 - (b) Dilution Water: source, collection dates and times, sample collection methods, pretreatment information (if any), and all pertinent biological, chemical, and physical data.
 - (c) Test Methods: all specific conditions not described in the quality assurance/quality control plan approved under subsection (4).
 - (d) 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 (7)(a), (7)(b), and (7)(c).
 - (e) Reference toxicant data: submit control charts with each test as detailed in the approved quality assurance/quality control plan.

SPECIAL CONDITIONS

E. EFFLUENT TOXICITY TESTING REQUIREMENTS, PROCEDURES, SCHEDULES, AND LIMITATIONS (con't)

- (f) Output from statistical analyses used to determine positive toxicity.
 - (g) Process or Treatment Modifications: information concerning any changes in the processes or operating procedures at the production facilities or the treatment facilities that may have affected the test results.
- (8) Schedule of Compliance for Acute Toxicity Limitation: pursuant to subsection (1)(c), the permittee shall:
- (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 a modification of this permit to revise or to waive all or part of paragraphs (8)(c), (8)(d), and (8)(e). Notwithstanding the submittal of such a request, the permittee shall comply with paragraphs (8)(c), (8)(d), and (8)(e) by the dates established therein unless said paragraphs are revised through modification of this permit.
 - (c) Within 6 months, submit a toxicity reduction implementation plan including all specific actions identified in paragraph (8)(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 (8)(e) 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 (5)(a).

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E. EFFLUENT TOXICITY TESTING REQUIREMENTS, PROCEDURES, SCHEDULES, AND LIMITATIONS (con't)

- (9) Schedule of Compliance for Chronic Toxicity Limitation: pursuant to subsection (1)(d), the permittee shall:
- (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 a modification of this permit to revise or to waive all or part of paragraphs (9)(c), (9)(d), or (9)(e). Notwithstanding the submittal of such a request, the permittee shall comply with paragraphs (9)(c), (9)(d), and (9)(e) by the dates established therein unless said paragraphs are revised through modification of this permit.
 - (c) Within 6 months, submit a toxicity reduction implementation plan including all specific actions identified in paragraph (9)(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 (9)(c) and achieve compliance with the following effluent toxicity limitation: It is a violation of this permit to discharge wastewater which exhibits positive chronic toxicity as identified by paragraph (5)(b).

SPECIAL CONDITIONS

F. 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

GENERAL CONDITIONS

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 or manager;

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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.

GENERAL CONDITIONS

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.

GENERAL CONDITIONS

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 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 mg/L) for antimony;

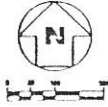
GENERAL CONDITIONS

- (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.

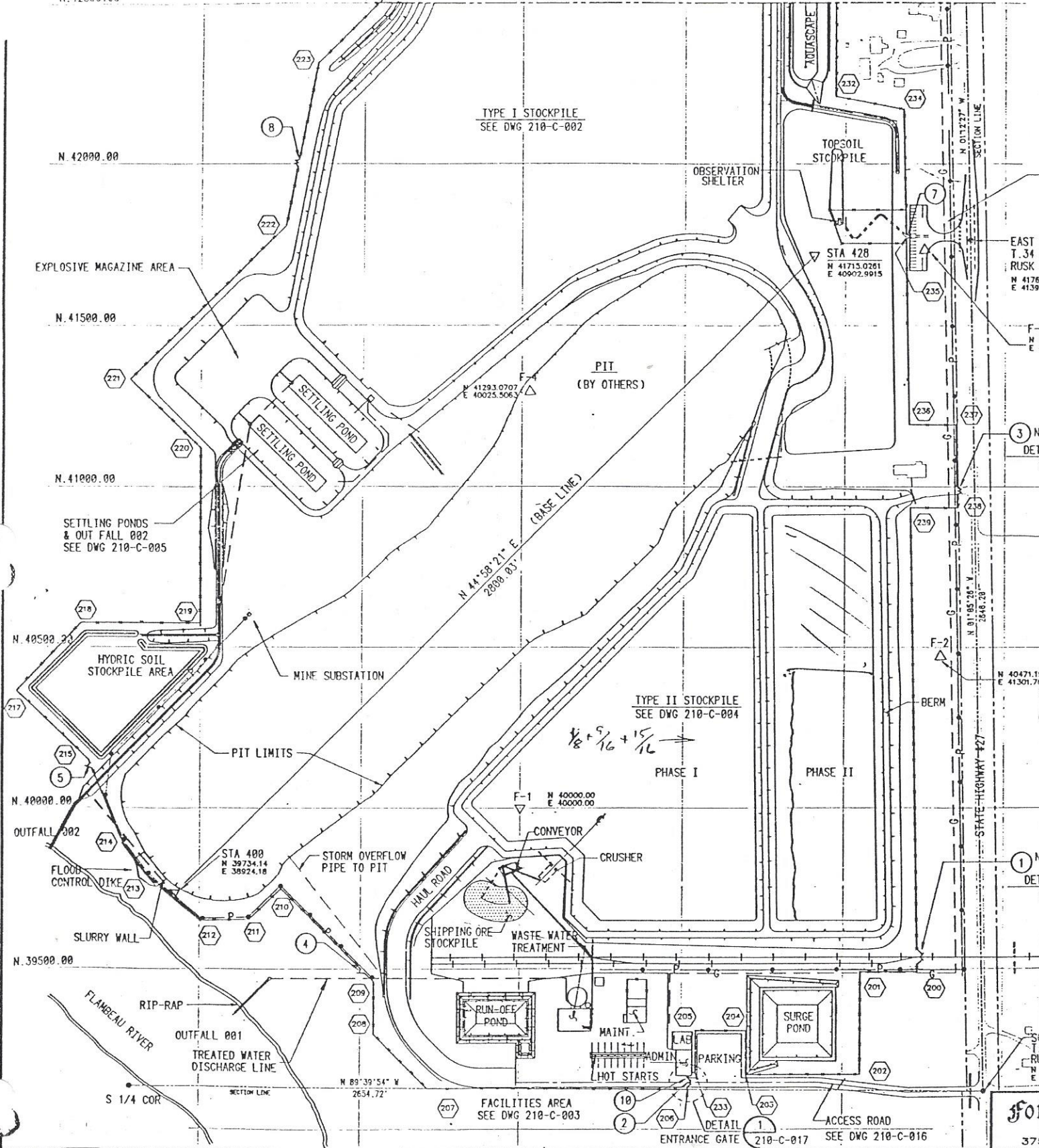
22. Duty to halt or reduce activity. Upon failure or impairment of treatment facility operation, the permittee shall, to the extent necessary to maintain compliance with its permit, curtail production or wastewater discharges or both until the treatment facility operations are restored or an alternative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

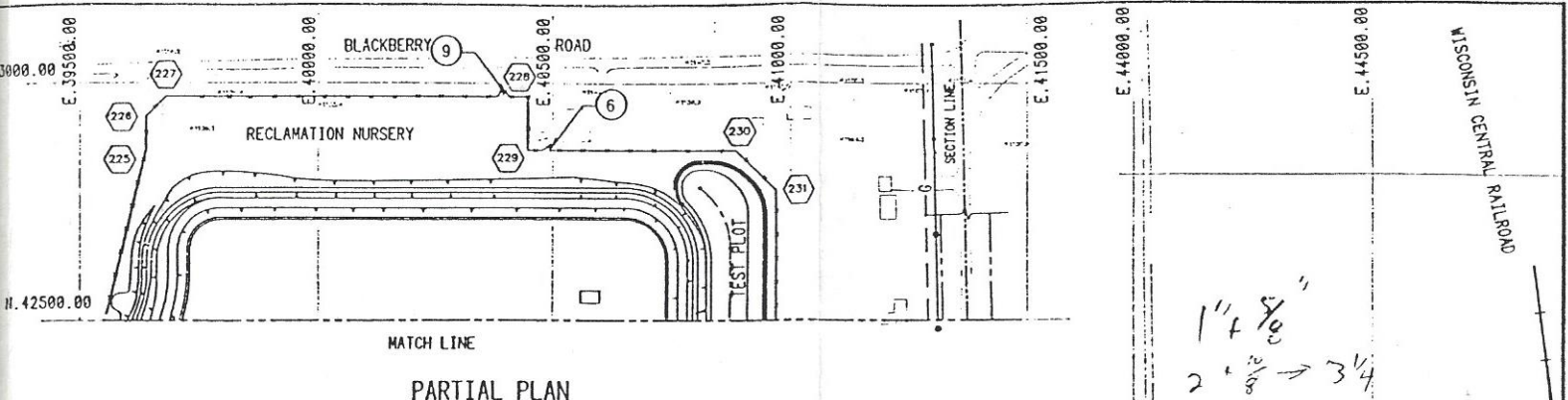
- a. The bypass is necessary to prevent loss of life, personal injury or severe property damage;
- b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes or maintenance during normal periods of equipment downtime; and
- c. 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.



N. 42500.00 E. 39500.00 E. 39500.00 E. 40000.00 (SEE PARTIAL PLAN) MATCH LINE E. 40500.00 E. 41000.00 E. 41500.00 N. 43000.00



CLASS	REFERENCES	DWG. NO	DESCRIPTION	NO	DATE	REVISIONS	BY	CHKD	ENCR	SPCL	NO	DATE	REVISIONS	BY	CHKD
		120-C-129	FENCE STD. DETAILS	8	5-8-91	FOR QUOTE-FENCING	JP	GLT	KJ						
		250-E-042	ELEC. GROUNDING DETAILS	0	6-21-91	FOR PERMIT-LINER	GLT								
		210-C-017	ACCESS ROAD SECTIONS AND DETAILS	0	7-18-91	FOR CONSTRUCTION	GLT	GD	RD	RR					
				1	8-27-91	FENCE REVISION & GENERAL REVISIONS	JP	GLT	LD	EX					



PARTIAL PLAN

VISITORS PARKING
SEE DWG. 210-C-018

1/4 COR. SEC. 9
N., R. 6 W.
CO. WIS.

33.08
2.01

41733.8779
41248.5930

NOTE 1 & 2
TAILS 5 & 7
250-E-042

975
878
NOTES (CONTINUED):

6. MINE PIT LIMITS AS SHOWN WERE GIVEN IN THE "UPDATED FEASIBILITY STUDY", BY PINCOCK ALLEN & HOLT INC., MARCH 9, 1989. PAH PROJECT NO. 502.34. FIG. 4-2, FINAL PIT DESIGN.

NOTE 1 & 2
TAILS 5 & 7
250-E-042

SOUTHEAST COR SEC. 9
34 N., R. 6 W.
CO. WIS.
33117.37
41442.38
JANSEN ROAD

GATE SCHEDULE

No.	TYPE	SIZE	LOCATION	NOTES
1	DBL. SWG	18 FT	¢ R.R. SPUR	V/ ELEC. GROUND
2	DBL. SWG	32 FT	¢ MAIN ACCESS ROAD	SEE DETAIL 1
3	DBL. SWG	24 FT	¢ NORTH ACCESS ROAD	V/ ELEC. GROUND
4	SGL. SWG	4 FT	45 LF FROM COR 209	V/ ELEC. GROUND
5	SGL. SWG	4 FT	20 LF FROM COR 215	V/ ELEC. GROUND
6	SGL. SWG	4 FT	40 LF FROM COR 229	
7	SGL. SWG	4 FT	20 LF FROM COR 235	
8	DBL. SWG	24 FT	¢ EXIST DIRT ROAD	
9	DBL. SWG	24 FT	50 LF FROM COR 228	
10	TRNSTL	-	AT LAB/ADMIN. BLDG	SEE DETAIL 1

NOTE: ELECTRICAL GROUNDING UNDER SEPARATE CONTRACT.

LEGEND

- ① DENOTES GATE
- 231 DENOTES FENCE COR
- ▷ DENOTES SURVEY CONTROL PT.

FENCE CORNER COORDINATES

200	N	39489.4772	213	N	39793.1405	227	N	42971.4700
	E	41234.9778		E	38843.6616		E	39681.4200
201	N	39489.4772	214	N	39884.4339	226	N	42971.4700
	E	41054.9621		E	38766.9846		E	40447.3100
202	N	39169.9470	215	N	40147.2173	229	N	42858.8700
	E	41054.9621		E	38681.2770		E	40447.3100
203	N	39169.9470	217	N	40365.3647	230	N	42858.8700
	E	40698.5528		E	38434.0398		E	40884.7943
204	N	39306.7910	218	N	40574.5173	231	N	42774.8638
	E	40698.5528		E	38634.8261		E	40968.8005
205	N	39306.7910	219	N	40574.5173	232	N	42211.3607
	E	40544.0245		E	39000.0000		E	40968.8005
206	N	39122.7629	220	N	41119.3828	233	N	39176.1738
	E	40520.0245		E	39000.0000		E	40544.0245
207	N	39127.4691	221	N	41334.0528	234	N	42170.2741
	E	38711.7149		E	38785.3380		E	41183.5554
208	N	39296.1954	222	N	41807.2384	235	N	41759.1218
	E	39543.0086		E	39258.5254		E	41192.0493
209	N	39459.0038	223	N	42314.5595	236	N	41192.3128
	E	38543.0086		E	38357.1385		E	41202.7758
210	N	39749.7763	224	N	42514.1421	238	N	40933.8128
	E	39252.2359		E	39558.7211		E	41207.6679
211	N	39653.1190	225	N	42858.7000	237	N	41192.3128
	E	39154.7620		E	39839.3700		E	41349.8022
212	N	39648.5957	226	N	42929.3900	238	N	40933.8128
	E	39007.6984		E	39639.3700		E	41254.6942

NOTES:

- 1- FOR FENCE AND GATE DETAILS REFER TO DWG 120-C-029.
- 2- FOR ELECTRICAL GROUNDING OF FENCE AND GATES REFER TO DWG. 250-E-003.
- 3- COORDINATES ARE REFERENCED TO AN EXISTING MINE GRID CONTROL PT F-1 = N 40000.00 AND E 40000.00, BEARINGS ARE BASED ON THE EXISTING MINE BASELINE N 44° 58' 21" E., AS ESTABLISHED AND VERIFIED BY LARRY GOTHAM R.L.S./P.E OF RUSK SURVEYING LTD. LADYSMITH, WISCONSIN.
- 4- BEARINGS AND DISTANCES ARE ALONG SECTION LINE.
- 5- CONSTRUCTION OF FENCE BETWEEN CORNERS 212 & 215, AND 232 & 234, AND 202 & 207, AND NORTH FROM 200 50 FT. SHALL BE TEMPORARY WITH "T" POSTS UNTIL CONSTRUCTION OF FACILITIES IS COMPLETED. GATES WILL NOT BE INSTALLED IN TEMPORARY FENCES.

rd, Bacon & Davis Utah, Inc.
ENGINEERS - CONSTRUCTORS
5 CHIPETA WAY SALT LAKE CITY, UTAH

CURRENT DRAWING STATUS		BY	DATE
PRELIMINARY OR PLANNING			
APPROVED FOR FINAL DESIGN			
IN FINAL DESIGN			
APPROVED FOR QUOTE/PURCH	EE	6-6-91	
APPROVED FOR CONSTRUCTION	EE	7-10-91	

FLAMBEAU PROJECT
LADYSMITH, WISCONSIN

FLAMBEAU MINING COMPANY
LADYSMITH, WISCONSIN
54848

FLAMBEAU MINE
FENCE/PLOT PLAN

MICROFILM	JOB
	18102
DRAWING NO.	REV.
210-C-001	1
DYSON DRAWING NO.	
SCALE	1"=200'