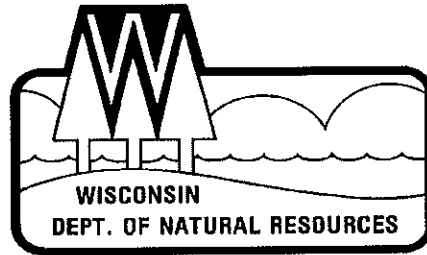


**Appendix E**  
**WPDES Discharge Permit Conditions**

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# **SUBSTANTIVE REQUIREMENTS OF A WPDES PERMIT**

*STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES*

## **Penta Wood Superfund Site**

is authorized under the substantive requirements of Chapter 283, Wisconsin Statutes, to discharge from a facility located West of Siren in the Town of Daniels, Burnet County  
to

Groundwaters of the St. Croix River Basin

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

Dated: September 2000  
Modified: November 2007

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# 1 Influent Requirements

## 1.1 Sampling Point(s)

| Sampling Point Designation |   |
|----------------------------|---|
| Sampling Point Number      | Sampling Point Location, Waste Type/Sample Contents and Treatment Description (as applicable) |
| 701                        | Contaminated groundwater influent to the treatment train                                      |

## 1.2 Monitoring Requirements

The permittee shall comply with the following monitoring requirements.

### 1.2.1 Sampling Point 701 - Influent to GW treatment train

| Monitoring Requirements and Limitations |            |                 |                  |             |       |
|---|------------|-----------------|------------------|-------------|-------|
| Parameter                               | Limit Type | Limit and Units | Sample Frequency | Sample Type | Notes |
| Pentachlorophenol                       |            | µg/L            | Quarterly        | Grab        |       |

#### 1.2.1.1 Influent Monitoring and Percent Removal of Pollutants

Influent monitoring for pentachlorophenol shall be performed on grab samples to document pollutant removal efficiency (%). The sampling frequency shall be initially upon startup and then monthly thereafter except as otherwise approved by the Department in consultation with U.S. EPA. Influent monitoring may also be required for additional pollutants based on further determination of optimum indicator parameters of treatment system performance. The influent sample point shall be prior to treatment unless otherwise approved by the Department. A reduction in the frequency of influent monitoring or an alternate plan for documenting and reporting treatment system performance may be approved in a letter by the Department in consultation with U.S. EPA

## 2 Land Treatment Requirements

### 2.1 Sampling Point(s)

The discharge(s) shall be limited to the waste type(s) designated for the listed sampling point(s).

| Sampling Point Designation |  |
|----------------------------|--|
| Sampling Point Number      | Sampling Point Location, Waste Description/Sample Contents and Treatment Description (as applicable)         |
| 001                        | Treated groundwater after the activated carbon treatment system prior to discharge to the infiltration basin |

### 2.2 Monitoring Requirements and Limitations

The following monitoring requirements and limitations shall be complied with.

#### 2.2.1 Sampling Point (Outfall) 001 - Treated Groundwater Discharge

| Monitoring Requirements and Limitations |            |                 |                  |             |   |
|---|------------|-----------------|------------------|-------------|---|
| Parameter                               | Limit Type | Limit and Units | Sample Frequency | Sample Type | Notes   |
| Flow Rate                               |            | gpd             | Daily            | Continuous  |   |
| pH Field                                |            | su              | Quarterly        | Grab        | Monthly monitoring is required for the first quarter. Monitoring not required after 12/31/2007. |
| Suspended Solids, Total                 |            | mg/L            | Quarterly        | Grab        | Monthly monitoring is required for the first quarter. Monitoring not required after 12/31/2007. |
| Chloride                                |            | mg/L            | Quarterly        | Grab        |   |
| Diesel Range Organics                   |            | mg/L            | Monthly          | Grab        |   |
| Total Organic Carbon                    |            | mg/L            | Monthly          | Grab        | Monitoring not required after 12/31/2007.   |
| 1,3,5-Trimethybenzene                   |            | µg/L            | Quarterly        | Grab        | Monthly monitoring is required for the first quarter. Monitoring not required after 12/31/2007. |
| 1,2,4-Trimethybenzene                   |            | µg/L            | Quarterly        | Grab        | Monthly monitoring is required for the first quarter. Monitoring not required after 12/31/2007. |

| Monitoring Requirements and Limitations |             |                 |                  |             |  |
|---|-------------|-----------------|------------------|-------------|--|
| Parameter                               | Limit Type  | Limit and Units | Sample Frequency | Sample Type | Notes  |
| Trimethylbenzene, Total                 |             | µg/L            | Quarterly        | Grab        | Monthly monitoring is required for the first quarter. Monitoring not required after 12/31/2007.                                  |
| Dioxin (2,3,7,8 TCDD)                   | Monthly Avg | 0.000003 µg/L   | Annual           | Grab        | Monthly monitoring is required for the first quarter. Thereafter monitoring shall be annual.                                     |
| Pentachlorophenol                       | Monthly Avg | 0.1 µg/L        | Weekly           | Grab        |  |
| Phenol                                  |             | µg/L            | Annual           | Grab        | Monitoring is required monthly until 12/31/2007 and annually thereafter.   |
| Naphthalene                             | Monthly Avg | 8.0 µg/L        | Monthly          | Grab        |  |
| Benzene                                 | Monthly Avg | 0.5 µg/L        | Annual           | Grab        | Monthly monitoring is required for the first year. Quarterly monitoring is required until 12/31/2007 and annually thereafter.    |
| Ethylbenzene                            |             | µg/L            | Annual           | Grab        | Monthly monitoring is required for the first quarter. Quarterly monitoring is required until 12/31/2007 and annually thereafter. |
| Toluene                                 |             | µg/L            | Annual           | Grab        | Monthly monitoring is required for the first quarter. Quarterly monitoring is required until 12/31/2007 and annually thereafter. |
| Xylene                                  |             | µg/L            | Annual           | Grab        | Monthly monitoring is required for the first quarter. Quarterly monitoring is required until 12/31/2007 and annually thereafter. |
| Arsenic, Total Recoverable              | Monthly Avg | 5.0 µg/L        | Quarterly        | Grab        | Monthly monitoring is required for the first year  |
| Copper, Total Recoverable               |             | µg/L            | Quarterly        | Grab        | Monthly monitoring is required for the first quarter   |

| <b>Monitoring Requirements and Limitations</b> |                   |                        |                         |                      |  |
|--|-------------------|------------------------|-------------------------|----------------------|--|
| <b>Parameter</b>                               | <b>Limit Type</b> | <b>Limit and Units</b> | <b>Sample Frequency</b> | <b>Sample Type</b>   | <b>Notes</b>   |
| Zinc, Total Recoverable                        |                   | µg/L                   | Quarterly               | Grab                 | Monthly monitoring is required for the first quarter   |
| Iron, Total Recoverable                        |                   | µg/L                   | Quarterly               | Grab                 |  |
| Manganese, Total Recoverable                   |                   | µg/L                   | Quarterly               | Grab                 |  |
| Acid Extractables                              |                   |                        | Annual                  | 24-Hr Flow Prop Comp | As specified in ch. NR 215.03 (2), Wis. Adm. Code. Monitoring not required after 12/31/2007. |
| Dioxins & Furans (all congeners)               |                   |                        | Annual                  | 24-Hr Flow Prop Comp | As specified in ch. NR 106.16, Wis. Adm. Code. Monitoring not required after 12/31/2007.     |

### **2.2.1.1 Provisions for Requesting an Increase in Effluent Limits Which Are Based on NR 140 Groundwater Standards (PALs)**

Effluent limits in the table in 1.2.1 above which are based on NR 140 Wis. Adm. Code Groundwater Standards (PALs) may be increased only if approved in a letter by the Department in consultation with U.S. EPA. An increase in these effluent limits based on NR 140 PALs may be requested by submittal of a report presenting a rationale and supporting documentation. The rationale for increased limits may include but not be limited to: satisfaction of applicable substantive provisions in NR 140 relating to requirements for granting increases above PALs; supporting ground water monitoring data; documentation of efficient treatment system operation; evaluation of the technical feasibility and cost effectiveness of treatment alternatives to meet PALs; documentation of treatment of pollutants in the soil and groundwater; and pollutant discharge levels to the infiltration gallery and variability of influent and effluent quality.

### **2.2.1.2 Provisions for Adding Effluent Limits for Additional Pollutants Based on NR 140 Groundwater Standards**

Limits based on NR 140 Groundwater Standards may be added if determined to be necessary for pollutants monitored in the table above or additional pollutants detected in the discharge.

### **2.2.1.3 Additional Monitoring During Startup**

More frequent monitoring than specified in the Table 1.2.1 above shall be performed during startup as follows. Monitoring for pollutants in the table above must be performed upon initiating startup of discharge from the treatment train. Thereafter, monitoring shall be monthly for one year for pollutants with limits and monthly for 3 months for pollutants without limits, as indicated in the table notes above. Additional startup monitoring is specified in a startup monitoring plan by CH2M Hill engineering consultants.

### **2.2.1.4 Provisions for Requesting a Reduction in Effluent Monitoring Frequency**

The frequency effluent monitoring after startup is specified in the table above unless otherwise approved in a letter from the Department in consultation with U.S. EPA. A reduction in the frequency of effluent monitoring may be requested by submittal of a report presenting the complete rationale and documentation for a reduced monitoring frequency including

but not limited to: documentation of pollutant levels in the discharge well below effluent limits; limited potential for breakthrough of influent pollutants through the treatment units; influent pollutant levels below levels of analytical detection; and consideration of variability of influent and effluent quality. Additional effluent monitoring may be specified for operations and maintenance by CH2M Hill engineering consultants.

#### **2.2.1.5 Continuing Evaluation of Monitoring Data and the Need to Modify Effluent Limits**

The Department will review information submitted to satisfy discharge monitoring requirements and groundwater monitoring results. If the Department determines that additional monitoring and/or limits are required to protect the waters of the state, the Department will propose appropriate changes to effluent limits and monitoring requirements in consultation with U.S. EPA.

#### **2.2.1.6 Evaluation of Discharge Requirements for Reported Noncompliance**

Requirements for reporting noncompliance to the Department's Northern Region within 24 hours of becoming aware of noncompliance are specified in the standard requirements of this document. Upon receipt of documentation of noncompliance with effluent limits, the Department in consultation with U.S. EPA, will review all relevant submitted information to determine whether these requirements for discharge should be modified to include one or more of the following:

- a revision to the monitoring frequencies established; and/or
- a modification of the limits in the Table above; and/or
- an order under the Superfund Program to reduce or cease discharge to the infiltration basin and/or
- a schedule of compliance for actions needed to evaluate and implement measures to satisfy these limits; and/or
- other appropriate actions as determined by U.S. EPA, in consultation with the Department.



### 3 Standard Requirements

Note (Standard requirements apply as substantive requirements of WPDES permit even though references to permit and permittee and statutes and administrative codes have not been changed).

**NR 205, Wisconsin Administrative Code (Conditions for Industrial Dischargers):** The conditions in ss. NR 205.07(1) and NR 205.07(3), Wis. Adm. Code, are included by reference in this permit. The permittee shall comply with all of these requirements. Some of these requirements are outlined in the Standard Requirements section of this permit. Requirements not specifically outlined in the Standard Requirement section of this permit can be found in ss. NR 205.07(1) and NR 205.07(3).

### 3.1 Reporting and Monitoring Requirements

#### 3.1.1 Monitoring Results

Monitoring results obtained during the previous month shall be summarized and reported on a Department Wastewater Discharge Monitoring Report Form or in an agreed to format such as electronic submittal. This report form is to be returned to the Department no later than the date indicated on the form. The original and one copy of the Wastewater Discharge Monitoring Report Form shall be submitted to your DNR regional office. A copy of the Wastewater Discharge Monitoring Report Form shall be retained by the permittee. A copy shall also be submitted to the State Superfund Project Manager for this site.

If the permittee monitors any pollutant more frequently than required by this permit, the results of such monitoring shall be included on the Wastewater Discharge Monitoring Report Form.

The permittee shall comply with all limits for each parameter regardless of monitoring frequency. For example, monthly, weekly, and/or daily limits shall be met even with monthly monitoring. The permittee may monitor more frequently than required for any parameter.

Monitoring reports shall be signed by a principal executive officer, a ranking elected official, or other duly authorized representative.

#### 3.1.2 Water Quality Sampling and Testing Procedures

Sampling and laboratory testing procedures shall be performed in accordance with Chapters NR 218 and NR 219, Wis. Adm. Code and shall be performed by a laboratory certified or registered in accordance with the requirements of ch. NR 149, Wis. Adm. Code. Groundwater sample collection and analysis shall be performed in accordance with ch. NR 140, Wis. Adm. Code. The analytical methodologies used shall enable the laboratory to quantitate all substances for which monitoring is required at levels below the effluent limitation. If the required level cannot be met by any of the methods available in NR 219, Wis. Adm. Code, then the method with the lowest limit of detection shall be selected. Additional test procedures may be specified in this permit.

#### 3.1.3 Recording of Results

For each effluent measurement or sample taken, the permittee shall record the following information:

- the date, exact place, method and time of sampling or measurements;
- the individual who performed the sampling or measurements;
- the date the analysis was performed;
- the individual who performed the analysis;
- the analytical techniques or methods used; and

- the results of the analysis.

### **3.1.4 Reporting of Monitoring Results**

The permittee shall use the following conventions when reporting effluent monitoring results:

- 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 mg/L, report the effluent concentration as < 0.1 mg/L.
- Effluent concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified.
- For 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. However, if the effluent limitation is less than the limit of detection, the department may substitute a value other than zero for results less than the limit of detection, after considering the number of monitoring results that are greater than the limit of detection and if warranted when applying appropriate statistical techniques.

### **3.1.5 Records Retention**

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least 3 years from the date of the sample, measurement, report or application, except for sludge management forms and records, which shall be kept for a period of at least 5 years.

### **3.1.6 Other Information**

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or correct information to the Department.

## **3.2 System Operating Requirements**

### **3.2.1 Noncompliance Notification**

- The permittee shall report the following types of noncompliance by a telephone call to the Department's regional office (Spooner) within 24 hours after becoming aware of the noncompliance;
  - any noncompliance which may endanger health or the environment;
  - any violation of an effluent limitation resulting from an unanticipated bypass;
  - any violation of an effluent limitation resulting from an upset; and
  - any violation of a maximum discharge limitation for any of the pollutants listed by the Department in the permit.
- A written report describing the noncompliance shall also be submitted to the Department's regional office within 5 days after the permittee becomes aware of the noncompliance. On a case-by-case basis, the Department may waive the requirement for submittal of a written report within 5 days and instruct the permittee to submit the written report with the next regularly scheduled monitoring report. In either case, the written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times;

the steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance; and if the noncompliance has not been corrected, the length of time it is expected to continue.

- The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

### **3.2.2 Unscheduled Bypassing**

Any unscheduled diversion or bypass of wastewater at the treatment works or collection system is prohibited except in the following cases:

- an inadvertent bypass resulting from equipment damage or temporary power interruption;
- an unavoidable bypass necessary to prevent loss of life or severe property damage; or
- a bypass of excessive storm drainage or runoff which would damage any facilities necessary for compliance with the effluent limitations and prohibitions of the permit.

In the event of an unscheduled bypass, the permittee shall immediately notify the Department regional office by telephone within 24 hours after an occurrence. In addition, the permittee shall notify the Department by letter within 5 days after each such unscheduled diversion or unscheduled bypass. The written notification shall at a minimum include reasons for such unscheduled bypass including dates, length of bypass and steps taken or planned to correct and eliminate such occurrences.

### **3.2.3 Scheduled Bypassing**

Any construction or normal maintenance which results in a bypass of wastewater from a treatment system is prohibited unless authorized by the Department in writing. If the Department determines that there is significant public interest in the proposed action, the Department may schedule a public hearing or notice a proposal to approve the bypass. Each request shall specify the following minimum information:

- proposed date of bypass;
- estimated duration of the bypass;
- estimated volume of the bypass;
- alternatives to bypassing; and
- measures to mitigate environmental harm caused by the bypass.

### **3.2.4 Proper Operation and Maintenance**

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

### **3.2.5 Spill Reporting**

The permittee shall notify the Department in accordance with ch. NR 706 (formerly NR 158), Wis. Adm. Code, in the event that a spill or accidental release of any material or substance results in the discharge of pollutants to the waters of the state at a rate or concentration greater than the effluent limitations established in this permit, or the spill or

accidental release of the material is unregulated in this permit, unless the spill or release of pollutants has been reported to the Department in accordance with s. NR 205.07 (1)(s), Wis. Adm. Code.

### **3.2.6 Planned Changes**

In accordance with ss. 283.31(4)(b) and 283.59, Stats., the permittee shall report to the Department any facility expansion, production increase or process modifications which will result in new, different or increased discharges of pollutants. The report shall either be a new permit application, or if the new discharge will not violate the effluent limitations of this permit, a written notice of the new, different or increased discharge. The notice shall contain a description of the new activities, an estimate of the new, different or increased discharge of pollutants and a description of the effect of the new or increased discharge on existing waste treatment facilities. Following receipt of this report, the Department may modify this permit to specify and limit any pollutants not previously regulated in the permit.

### **3.2.7 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.

## **4 Summary of Reports Due**

All submittals required shall be submitted to the Northern Region - Spooner, 810 W. Maple Street, Spooner, WI 54801-1255, except as follows. Report forms (in agreed upon format as electronic document submittal or edmr) shall be submitted to the address printed on the report form (or appropriate electronic address). Copies of monitoring reports (in agreed upon format) shall also be submitted to U.S. EPA Region 5 (site project manager).