

AIR EMISSION PERMIT NO. 16100013-004

IS ISSUED TO

Brown Printing Company-Division of Gruner & Jahr

BROWN PRINTING COMPANY - WASECA DIVISION

2300 Brown Avenue
Waseca, Waseca County, MN 56093

The emission units, control equipment and emission stacks at the stationary source authorized in this permit are as described in the following permit application(s):

| Permit Type | Application Date | Permit Issuance | Action Number |
|---------------------------------|------------------|-----------------|---------------|
| Total Facility Operating Permit | 04/14/1995 | 1/13/03 | -001 |
| Major Amendment | 02/02/2005 | 6/24/05 | -002 |
| Moderate Amendment | 09/30/2005 | 3/2/06 | -003 |
| Major Amendment | 05/12/2006 | See below | -004 |

This permit authorizes the Permittee to operate and modify the stationary source at the address listed above unless otherwise noted in Table A. The Permittee must comply with all the conditions of the permit. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Permit Type: Federal; Pt 70/Limits to Avoid NSR

Issue Date: February 5, 2007

Expiration: 01/13/2008

All Title I Conditions do not expire.

Richard J. Sandberg, Manager
Air Quality Permits Section
Industrial Division

for Brad Moore
Commissioner
Minnesota Pollution Control Agency

TABLE OF CONTENTS

Notice to the Permittee

Permit Shield

Facility Description

Table A: Limits and Other Requirements

Table B: Submittals

Appendix I: VOC and HAP Calculation Methods

Appendix II: Listed Insignificant Activities

Appendix III: Emission Units' Numbering

Appendix IV: Summary of the Maximum Impressions and Design Air Flow Rates

Appendix V: Regenerative Thermal Oxidizer's Flow Rate versus Residence Time

NOTICE TO THE PERMITTEE:

Your stationary source may be subject to the requirements of the Minnesota Pollution Control Agency's (MPCA) solid waste, hazardous waste, and water quality programs. If you wish to obtain information on these programs, including information on obtaining any required permits, please contact the MPCA general information number at:

| | |
|--------------------|----------------|
| Metro Area | 651-296-6300 |
| Outside Metro Area | 1-800-657-3864 |
| TTY | 651-282-5332 |

The rules governing these programs are contained in Minn. R. chs. 7000-7105. Written questions may be sent to: Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

Questions about this air emission permit or about air quality requirements can also be directed to the telephone numbers and address listed above.

PERMIT SHIELD:

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Subject to the limitations of Minn. R. 7007.1800 and 7017.0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

FACILITY DESCRIPTION:

Total Facility

Brown Printing (Facility) is a commercial printing facility. The Facility consists of heatset web offset printing presses, dryers, and pollution control equipment. The Facility also has several activities that qualify as insignificant activities under Minn. R. 7007.1300, subp. 3 (see Appendix II of the permit for a list).

In 1999, the Facility took permit limits to avoid major source classification for New Source Review (40 CFR § 52.21) and the National Emissions Standards for Hazardous Air Pollutants program (40 CFR pt. 63). These limits are carried forward into this permit. The Facility is a major source under the federal operating permits program (40 CFR pt. 70).

The permit contains requirements that limit emissions of Volatile Organic Compounds (VOC), Hazardous Air Pollutants (HAP), and combustion pollutants.

Major Amendment -002

This permit action authorizes the following changes to the current Title V permit:

- 1) Increases the overall facility's impressions cap from 1,300,391.7 to 1,900,000 impressions per hour.
- 2) Authorizes the usage of CE 008 to production status, as opposed to only backup status. In addition, GP 003 is eliminated and the requirements are transferred to CE 008.
- 3) Changes the requirement of establishing the maximum number of presses allowed to feed into one oxidizer from a number of presses to oxidizer number to the design intake flow of the oxidizers.
- 4) Assigns a combustion chamber temperature and residence time curve for CE 009 and CE 010.
- 5) GP 007 is eliminated and the emission units are transferred to GP 006.

The overall VOC and HAP emission limits and compliance demonstration requirements remain.

The permit also continues to authorize the following changes at the Facility:

- 1) addition of new boilers (EU 030, EU 033)
- 2) modification and replacement of existing printing press emissions units
- 3) addition of one new press (EU 029)
- 4) emission units that:
 - i) qualify as an insignificant activity listed under Minn. R. 7007.1300, subp. 2
 - ii) qualify as an insignificant modification under Minn. R. 7007.1250, subs. 1 and 2
 - iii) do not violate any other requirements found in this permit

Moderate Amendment -003

The primary propose of this amendment action is authorize the additional waste paper concentrator recycling system (EU 034) and related fabric filter equipment (CE 011).

Major Amendment -004

This permit action authorizes the following changes to the current Title V permit:

- 1) Places PM/PM10 limits of 0.010 gr/dcsf emission limit to the existing waste paper recycling fabric filters in GP 008.

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Brown Printing Co - Waseca Division

Permit Number: 16100013 - 004

Table A contains limits and other requirements with which your facility must comply. The limits are located in the first column of the table (What To do). The limits can be emission limits or operational limits. This column also contains the actions that you must take and the records you must keep to show that you are complying with the limits. The second column of Table A (Why to do it) lists the regulatory basis for these limits. Appendices included as conditions of your permit are listed in Table A under total facility requirements.

Subject Item: Total Facility

| What to do | Why to do it |
|--|---|
| This permit establishes limits on the facility to keep it a minor source under the New Source Review and the NESHAP program. The Permittee cannot make any change at the source that would make the source a major source under New Source Review or the NESHAP program until a permit amendment has been issued. This includes changes that might otherwise qualify as insignificant modifications and minor or moderate amendments. | Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 63.2 |
| The Permittee shall not begin construction of any single project or projects that are connected or phased which will cause a total increase in actual emissions of greater than 99 tons per year for any criteria pollutant without first getting a permit amendment to authorize the project. Connected and phased have meanings as defined in Minn. R. 4410.022, subs. 9b and 60. The Permittee shall not begin construction of any other project which is listed in Minn. R. 4410.4300 or Minn. R. 4410.4400 without first getting a permit amendment to authorize the project. Such projects may require the completion of an Environmental Assessment Worksheet or an Environmental Impact Statement prior to the amendment being issued. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act. | Minn. R. 4410.4300 and Minn. R. 4410.4400 |
| Annual Report: due 30 days after the end of each calendar year following the Permit issuance. The Permittee shall submit an annual report by January 31 that describes the changes made at the facility during the previous calendar year using the latest MPCA application forms. The report shall document: 1) the VOC and HAP 12-month rolling sum calculations for the previous calendar year, 2) the total facility fuel consumption capacity, and 3) the total facility impressions capacity. The report shall be submitted with the annual Compliance Certification listed in Table B. As part of the Annual Report, the Permittee shall verify and certify that the facility has maintained minor source status for New Source Review and Part 63. | Minn. R. 7007.0800, subp. 2 |
| Equipment Labeling and Inventory: The Permittee shall permanently affix a unique number to each emissions unit for tracking purposes. The numbers shall correlate the unit to the appropriate EU and GP numbers used in this permit. The number can be affixed by placard, stencil, or other means. The number shall be maintained so that it is readable and visible at all times from a safe distance. The Permittee shall maintain a written list of all emission units on-site. The list shall correlate the units to the numbers used in this permit (EU, GP, and CE). The Permittee shall update the list to include any new, replaced, or modified equipment prior to making the pre-authorized change. | Minn. R. 7007.0800, subp. 2 |
| STANDARD REQUIREMENTS | hdr |
| Fuel Type: Natural gas or liquified propane gas (LPG) only. This total facility limit applies to, but is not limited to, all press dryers, thermal oxidizers, the chiller, space heaters, air make-up units, boilers, and gas-fired insignificant activities. | Title I Condition: To avoid classification as a major source or modification under 40 CFR 52.21 |
| Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and shall include a preventative maintenance program for that equipment, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment, and the records kept to demonstrate plan implementation. For the regenerative thermal oxidizers, the O & M plan shall include the manufacturer's maintenance manual. | Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J) |
| Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C. | Minn. R. ch. 7017 |
| Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same unit. | Minn. R. 7017.2025 |

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Brown Printing Co - Waseca Division

Permit Number: 16100013 - 004

| | |
|---|--|
| <p>Performance Test Notifications and Submittals:</p> <p>Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements.</p> <p>Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy: due 105 days after each Performance Test</p> | <p>Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2</p> |
| <p>Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).</p> | <p>Minn. R. 7007.0800, subp. 4(D)</p> |
| <p>Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.</p> | <p>Minn. R. 7007.0800, subp. 4(D)</p> |
| <p>Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.</p> | <p>Minn. R. 7011.0020</p> |
| <p>Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3.</p> <p>At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.</p> | <p>Minn. R. 7019.1000, subp. 3</p> |
| <p>Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2.</p> <p>At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.</p> | <p>Minn. R. 7019.1000, subp. 2</p> |
| <p>Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.</p> | <p>Minn. R. 7019.1000, subp. 1</p> |
| <p>Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description:</p> <ol style="list-style-type: none"> 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation. | <p>Minn. R. 7019.1000, subp. 1</p> |
| <p>Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.</p> | <p>Minn. R. 7019.1000, subp. 4</p> |
| <p>Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.</p> | <p>Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)</p> |

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-3

02/05/07

Facility Name: Brown Printing Co - Waseca Division

Permit Number: 16100013 - 004

| | |
|--|---|
| Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150. | Minn. R. 7011.0150 |
| Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed. | Minn. R. 7007.1150 through Minn. R. 7007.1500 |
| Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H). | Minn. R. 7007.1400, subp. 1(H) |
| Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350 subp. 2), including records of the emissions resulting from those changes. | Minn. R. 7007.0800, subp. 5(B) |
| Record keeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A). | Minn. R. 7007.0800, subp. 5(C) |
| Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act. | Minn. R. 7030.0010 - 7030.0080 |
| The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16. | Minn. R. 7007.0800, subp. 16 |
| Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A). | Minn. R. 7007.0800, subp. 9(A) |
| Emission Inventory Report: due 91 days after end of each calendar year following permit issuance (April 1). To be submitted on a form approved by the Commissioner. | Minn. R. 7019.3000 through Minn. R. 7019.3010 |
| Emission Fees: due 60 days after receipt of an MPCA bill. | Minn. R. 7002.0005 through Minn. R. 7002.0095 |

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Brown Printing Co - Waseca Division

Permit Number: 16100013 - 004

Subject Item: GP 001 Press Limits

- Associated Items:**
- EU 001 Web Offset Press 1221
 - EU 002 Web Offset Press 1219
 - EU 003 Web Offset Press 1211
 - EU 004 Web Offset Press 1212
 - EU 005 Web Offset Press 1213
 - EU 006 Web Offset Press 1214
 - EU 007 Web Offset Press 1222
 - EU 008 Web Offset Press 1216
 - EU 009 Web Offset Press 1217
 - EU 010 Web Offset Press 1218
 - EU 024 Web Offset Press 1220
 - EU 027 Web Offset Press 1223
 - EU 028 Web Offset Press 1224
 - EU 029 Web Offset Press 1225 (future)

| What to do | Why to do it |
|---|---|
| A. LIMITS | hdr |
| <p>Volatile Organic Compounds: less than or equal to 232.5 tons/year using 12-month Rolling Sum to be calculated, by the last day of each month, for the previous 12-month period as described in Appendix I. This includes all non-combustion VOC emissions including from all inks, pressrooms, prep areas, and bindery chemicals.</p> <p>All emission units included in GP 001 as allowed in this permit shall be included in this calculation. VOC contents for each VOC-containing material shall be determined as described under the Material Content requirement in GP 001. The calculation of VOCs used may be taken into account recovered/recycled VOCs as described under the Waste Credit requirement in GP 001.</p> | <p>Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000</p> |
| <p>HAPs - Total: less than or equal to 22.1 tons/year using 12-month Rolling Sum to be calculated, by the last day of each month, for the previous 12-month period as described in Appendix I. This includes all non-combustion HAP emissions including from all inks, pressrooms, prep areas, and bindery chemicals.</p> <p>All emission units included in GP 001 as allowed in this permit shall be included in this calculation. HAP contents for each HAP-containing material shall be determined as described under the Material Content requirement in GP 001. The calculation of HAPs used may take into account recovered/recycled HAPs as described under the Waste Credit requirement in GP 001.</p> | <p>Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 63.2</p> |
| <p>HAP-Single: less than or equal to 9.0 tons/year using 12-month Rolling Sum to be calculated, by the last day of each month, for the previous 12-month period. This includes all non-combustion HAP emissions including from all inks, pressrooms, prep areas, and bindery chemicals.</p> <p>All emission units included in GP 001 as allowed in this permit shall be included in this calculation. HAP contents for each HAP-containing material shall be determined as described under the Material Content requirement in GP 001. The calculation of HAP usage may take into account recovered/recycled HAPs as described under the Waste Credit requirement in GP 001.</p> | <p>Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 63.2</p> |
| <p>The total facility's web offset press capacity shall not exceed 1,900,000 impressions per hour. One impression is defined to cover a maximum area of 22 3/4 inches by 38 inches (6.0 sq. ft.).</p> | <p>Minn. R. 7007.0800, subp. 2</p> |

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Brown Printing Co - Waseca Division

Permit Number: 16100013 - 004

| | |
|--|---|
| <p>Pre-Authorized Changes: The Permittee may 1) modify the listed emission units, 2) replace the listed emission units with emission units similar to those listed in GP 001, or 3) add a Web Offset Press #1225, provided VOC and HAP emissions are tracked and calculated as specified in this permit, and all other permit conditions are met. Emissions from all presses and dryers must be controlled with control equipment meeting the requirements of either CE 008 or GP 004. See GP 002 for further pre-authorized changes for press operations.</p> <p>If a proposed change triggers an applicable requirement that is not contained in this permit, the change must go through the appropriate procedures in Minn. R. ch. 7007.</p> | <p>Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 63.2</p> |
| <p>B. MONITORING</p> | <p>hdr</p> |
| <p>Monthly Recordkeeping -- VOC Emissions</p> <p>By the last day of each month, the Permittee shall calculate and record the following:</p> <ol style="list-style-type: none"> 1) The total purchase of each VOC-containing material for the previous calendar month using the material record of purchases. The record of purchases is to be compiled, during the course of the month, as the material shipments are delivered to the Permittee. This record shall also include the VOC contents of each material as determined by the Material Content requirement of this permit. 2) The VOC emissions for the previous month using the formulas specified in Appendix I of this permit. 3) The 12-month rolling sum VOC emissions for the previous 12-month period by summing the monthly VOC emissions data for the previous 12 months. | <p>Minn. R. 7007.0800, subps. 4 and 5</p> |
| <p>Monthly Recordkeeping -- HAP Emissions. By the last day of the month, the Permittee shall calculate and record the following:</p> <ol style="list-style-type: none"> 1) The total purchase of each HAP-containing material used in the previous calendar month using the material record of purchases. The record of purchases is to be compiled, during the course of the month, as the material shipments are delivered to the Permittee. This record shall also include the individual and total HAP contents of each HAP-containing material used in the previous month, as determined by the Material Content requirement of this permit. 2) The total and individual HAP emissions for the previous month using formulas specified in Appendix I of this permit. 3) The 12-month rolling sum total and individual HAP emissions for the previous 12-month period by summing the monthly emissions data for the previous 12 months. | <p>Minn. R. 7007.0800, subps. 4 and 5</p> |
| <p>Material Content: VOC and HAPs contents in materials shall be determined by the Material Safety Data Sheet (MSDS) provided by the supplier for each material used. If a material content range is given on the MSDS, the highest number in the range shall be used in all compliance calculations. Other alternative methods approved by the MPCA may be used to determine the VOC and HAPs contents. The Commissioner reserves the right to require the Permittee to determine the VOC and/or HAP contents of any material, according to EPA or ASTM reference methods. If an EPA or ASTM reference method is used for material content determination, the data obtained shall supercede the MSDS.</p> | <p>Minn. R. 7007.0800, subps. 4 and 5</p> |
| <p>Waste Credit: If the Permittee elects to obtain credit for HAPs and/or VOC shipped in waste materials, the Permittee shall either use item 1 or 2 to determine the VOC and/or total and individual HAP content for each credited shipment.</p> <ol style="list-style-type: none"> 1) The Permittee shall analyze a composite sample of each waste shipment to determine the weight content of VOC, total HAP, and each individual HAP, excluding water. 2) The Permittee may use supplier data for raw materials to determine the VOC and total and individual HAP contents of each waste shipment, using the same content data used to determine the content of raw materials. If the waste contains several materials, the content of mixed waste shall be assumed to be the lowest VOC and total and individual HAP content of any of the materials. | <p>Minn. R. 7007.0800, subps. 4 and 5</p> |
| <p>The Permittee shall record and maintain the capacity of the maximum number of impressions per hour for the total facility. Whenever a change is made to a press capacity, the maximum number of impressions per hour in the total facility shall be updated. This record shall be kept on-site.</p> <p>If the total facility actual VOC usage exceeds 95% of the 232.5 (220.8) ton per 12-month rolling sum, then the Permittee shall record the actual number of impressions used facility-wide each day.</p> | <p>Minn. R. 7007.0800, subp. 2</p> |

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Brown Printing Co - Waseca Division

Permit Number: 16100013 - 004

| | |
|--|---|
| <p>Recordkeeping of Changes: Prior to making any pre-authorized change pertaining to the web offset presses, the Permittee shall document that the proposed change meets the criteria listed in this permit and is, therefore, pre-authorized. This document shall include, at a minimum, 1) the new press is a web offset heat press; 2) the VOC and HAP emissions can be calculated in Appendix I; 3) the total facility impression and fuel consumption limits will not be exceeded; and 4) the unit will be controlled as specified in GP 002. The Permittee shall maintain this documentation on-site. This requirement does not apply to the addition of EU 027, EU 028, and EU 029.</p> | <p>Minn. R. 7007.0800, subps. 4 and 5</p> |
|--|---|

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-7

02/05/07

Facility Name: Brown Printing Co - Waseca Division

Permit Number: 16100013 - 004

Subject Item: GP 002 Press Operations**Associated Items:** CE 008 Thermal Oxidizer

CE 009 Regenerative Thermal Oxidizer

CE 010 Regenerative Thermal Oxidizer

SV 014 Thermal Oxidizer

SV 017 Regenerative Thermal Oxidizer

SV 018 Regenerative Thermal Oxidizer

| What to do | Why to do it |
|---|---|
| The Permittee shall control the emissions from the Press operations (presses and dryers) with control devices described by either 1) CE 008 or 2) GP 004, at all times that the given press is operating. | Title I Condition: Limit to avoid major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2 |

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Brown Printing Co - Waseca Division
 Permit Number: 16100013 - 004

Subject Item: GP 004 Regenerative Thermal Oxidizers

Associated Items: CE 009 Regenerative Thermal Oxidizer
 CE 010 Regenerative Thermal Oxidizer
 SV 017 Regenerative Thermal Oxidizer
 SV 018 Regenerative Thermal Oxidizer

| What to do | Why to do it |
|---|---|
| These requirements apply to each individual control device listed in GP 004 (i.e., CE 009 and CE 010). | hdr |
| LIMITS | hdr |
| The Permittee shall operate and maintain the control equipment such that it achieves a destruction efficiency for Volatile Organic Compounds: greater than or equal to 98 percent control efficiency. This requirement also applies to the HAPs. | Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2 |
| The Permittee shall operate and maintain the appropriate number of regenerative thermal oxidizer(s), any time, that any process equipment controlled by the regenerative thermal oxidizer(s) is in operation. | Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2 |
| Each regenerative thermal oxidizer (CE 009 and CE 010) shall be in operation for Web Offset Presses with an adjustable intake flow rate. During normal production or backup mode operations, either the CE 009 or CE 010 maximum intake flow rate shall not exceed 25,000 SCFM. In other words, the sum of the individual press exhaust flow rates into CE 009 cannot exceed the CE 009 design intake flow of 25,000 SCFM. The individual press design flow rates are found in Appendix IV of the additional Appendix material. | Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2 |
| Temperature: greater than or equal to 1600 degrees F using 3-hour Rolling Average in the Combustion Chamber unless a new minimum must be set pursuant to Minn. R. 7017.2025, subp. 3, based on the average temperature recorded during the most recent MPCA approved performance test where compliance for VOC emissions was demonstrated. If the three-hour rolling average temperature drops below the minimum temperature limit, the VOC used during that time shall be considered uncontrolled until the minimum temperature limit is once again achieved. This shall be reported as a deviation. | Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2 |
| The Permittee shall retain a minimum retention time, as provided by the manufacturer's warranty, in each regenerative thermal that is controlling press operations. The manufacturer's warranty parameters are found in Appendix V of the additional Appendix material. | Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2 |
| MONITORING | hdr |
| Monitoring Equipment: The Permittee shall install and maintain thermocouples to conduct temperature monitoring required by this permit. The monitoring equipment must be installed, in use, and properly maintained whenever operation of the monitored control equipment is required. | Minn. R. 7007.0800, subp. 4 |
| The Permittee shall maintain and operate a thermocouple monitoring device that continuously indicates and records the combustion chamber temperature of the thermal oxidizer. The monitoring device shall have a margin of error less than the greater of +/- 0.75 percent of the temperature being measured or +/- 2.5 degrees Celsius. The recording device shall also calculate the three-hour rolling average combustion chamber temperature. | Minn. R. 7007.0800, subps. 4 and 5 |
| The Permittee shall maintain a continuous hard copy readout or computer disk file of the temperature readings of each thermal oxidizer during oxidizer operation for the combustion chamber. Measurements shall be taken no less frequently than once every fifteen minutes. Measurements taken during each hour shall be averaged to determine the 1-hour average temperature. Once each hour, the Permittee shall take the average of the previous three 1-hour temperature averages to determine the 3-hour rolling average temperature. | Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2; Minn. R. 7007.0800, subps. 4 and 5 |
| Daily Monitoring: The Permittee shall physically check the temperature recording device at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. | Minn. R. 7007.0800, subps. 4 and 5 |
| Inspections: The Permittee shall conduct inspections in accordance to the manufacturer's maintenance manual maintenance checklist. The Permittee shall maintain a written record of the quarterly, semi-annual, and annual inspections and any corrective actions taken resulting from the inspection. | Minn. R. 7007.0800, subps. 4, 5, and 14 |
| Annual Calibration: The Permittee shall calibrate the temperature monitor at least annually and shall maintain a written record of the calibration and any action resulting from the calibration. | Minn. R. 7007.0800, subps. 4, 5, and 14 |

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-9

02/05/07

Facility Name: Brown Printing Co - Waseca Division

Permit Number: 16100013 - 004

| | |
|---|--|
| <p>For periods when the regenerative thermal oxidizer is operated above the minimum combustion chamber temperature, the Permittee shall use either one of the following when completing calculations as required elsewhere in this permit:</p> <p>a. The overall control efficiency limit specified in this permit for this equipment (98%); or</p> <p>b. The overall control efficiency determined during the most recent MPCA approved performance test. If the tested efficiency is less than the efficiency limit in this permit, the Permittee must use the tested value in all calculations until the efficiency is demonstrated to be above the permit limit through a new test.</p> | <p>Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2; Minn. R. 7007.0800, subps. 4 and 5</p> |
| <p>Corrective Actions: If the temperature is below the minimum specified by this permit or if the regenerative thermal oxidizer or any of its components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible.</p> <p>Corrective actions shall return the temperature to at least the permitted minimum and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the regenerative thermal oxidizer. The Permittee shall keep a record of the type and date of any corrective action taken.</p> | <p>Minn. R. 7007.0800, subps. 4, 5, and 14</p> |
| <p>The Permittee shall operate and maintain the regenerative thermal oxidizer in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.</p> | <p>Minn. R. 7007.0800, subp. 14</p> |

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-10

02/05/07

Facility Name: Brown Printing Co - Waseca Division

Permit Number: 16100013 - 004

Subject Item: GP 005 Direct Heating Equipment**Associated Items:** CE 008 Thermal Oxidizer

CE 009 Regenerative Thermal Oxidizer

CE 010 Regenerative Thermal Oxidizer

SV 014 Thermal Oxidizer

SV 017 Regenerative Thermal Oxidizer

SV 018 Regenerative Thermal Oxidizer

| What to do | Why to do it |
|---|-----------------------------------|
| These requirements apply to each individual control device listed in GP 005 (i.e., CE 008, CE 009 and CE 010). | hdr |
| Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. This applies separately to each piece of direct heating equipment. | Minn. R. 7011.0610, subp. 1(A)(1) |
| Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. This applies separately to each piece of direct heating equipment. | Minn. R. 7011.0610, subp. 1(A)(2) |

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-11

02/05/07

Facility Name: Brown Printing Co - Waseca Division

Permit Number: 16100013 - 004

Subject Item: GP 006 Indirect Heating Equipment**Associated Items:** EU 019 Boiler A
EU 020 Boiler B
EU 030 Boiler C
EU 033 Boiler D
SV 009 Boiler A
SV 010 Boiler B
SV 016 Boiler D
SV 019 Boiler C

| What to do | Why to do it |
|--|-----------------------------|
| These requirements apply to each individual boiler listed in GP 006 (i.e., EU 019, EU 020, EU 030, and EU 033). | hdr |
| Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input | Minn. R. 7011.0515, subp. 1 |
| Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. | Minn. R. 7011.0515, subp. 2 |

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Brown Printing Co - Waseca Division

Permit Number: 16100013 - 004

Subject Item: GP 008 Paper Waste Recycling Fabric Filters

- Associated Items:**
- CE 004 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
 - CE 005 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
 - CE 006 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
 - CE 007 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
 - CE 011 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
 - EU 015 Paper Waste Recycling System
 - EU 016 Paper Waste Recycling System
 - EU 017 Paper Waste Recycling System
 - EU 018 Paper Waste Recycling System
 - EU 034 Paper Waste Recycling System
 - SV 005 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
 - SV 006 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
 - SV 007 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
 - SV 008 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
 - SV 020 Fabric Filter - Low Temperature

| What to do | Why to do it |
|--|---|
| These requirements apply to each individual control equipment. | hdr |
| The Permittee shall follow the manufacturer's specifications for the operation and maintenance of the fabric filters. | Minn. R. 7007.0800, subp. 2 |
| Total Particulate Matter: less than or equal to 0.010 grains/dry standard cubic foot of exhaust gas. | Minn. R. 7007.0800, subp. 2 (This also satisfies Minn. R. 7011.0715, subp. 1(A).) |
| Particulate Matter < 10 micron: less than or equal to 0.010 grains/dry standard cubic foot of exhaust gas. | Minn. R. 7007.0800, subp. 2 |
| Opacity: less than or equal to 20 percent | Minn. R. 7011.0715, subp. 1(B) |
| The Permittee shall operate and maintain the fabric filter at all times that any emission unit controlled by the fabric filter is in operation. | Minn. R. 7007.0800, subp. 2 |
| Visible Emissions: Once each day of operation that any GP 008 fabric filter is venting externally, the Permittee shall check the outlet of each operating fabric filter during daylight hours for any visible emissions (VEs). If inclement weather prohibits a VE check, the Permittee shall observe and record the pressure drop across each operating fabric filter. | Minn. R. 7007.0800, subp. 4 |
| Pressure Drop Monitoring: The Permittee shall monitor and record the pressure drop, for each fabric filter, once every seven days of operation (while venting externally). | Minn. R. 7007.0800, subps. 4 & 5 |
| Install and operate a pressure differential monitoring guage for determining the pressure drop across the baghouse. Pressure Drop: greater than or equal to 0.5 inches of water column and less than or equal to 6.0 inches of water column. | Minn. R. 7007.0800, subp. 2 |

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-13

02/05/07

Facility Name: Brown Printing Co - Waseca Division

Permit Number: 16100013 - 004

| | |
|--|---|
| <p>Recordkeeping of visible emissions monitoring: The Permittee shall keep a daily record (when each fabric filter is venting externally) that contains, at a minimum, the following information for each fabric filter unit:</p> <ol style="list-style-type: none">1) Printed name of observer;2) Signature of observer;3) Date and time of observation;4) Are there any visible emissions observed from the fabric filters? ("yes" or "no")5) Stack/Vent ID number for each "yes";6) Description of investigation and corrective actions completed for each "yes";7) Weather conditions (approximate temperature, cloud cover, wind, precipitation, etc.). <p>or</p> <ol style="list-style-type: none">1) Pressure drop (for days when VE observations are not taken). | Minn. R. 7007.0800, subp. 5 |
| <p>Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:</p> <ul style="list-style-type: none">- visible emissions or dust accumulations are observed;- pressure drops outside the permitted range specified under this subject item; or,- the fabric filter or any of its components are found during the inspections to need repair. <p>Corrective actions shall eliminate visible emissions or dust accumulations, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record, on-site, of the type and date of any corrective action taken for each filter.</p> | Minn. R. 7007.0800, subp. 4, 5, and 14 |
| <p>Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components in accordance with the manufacturer's specifications. The Permittee shall maintain a written record of these inspections.</p> | Minn. R. 7007.0800, subps. 4, 5, and 14 |

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-14

02/05/07

Facility Name: Brown Printing Co - Waseca Division

Permit Number: 16100013 - 004

Subject Item: GP 009 Total Facility Fuel Consumption Capacity

| What to do | Why to do it |
|--|-----------------------------------|
| Total Facility Fuel Consumption Capacity: less than or equal to 210.0 million Btu's/hour. This applies to, but is not limited to, all press dryers, thermal oxidizers, the chiller, space heaters, air make-up units, boilers, and gas-fired insignificant activities. | Minn. R. 7007.0800, subp. 2 |
| The Permittee shall record and maintain the total facility capacity of the gas-fired units in millions of Btu's per hour. Whenever a change is made to a gas-fired unit, this capacity value shall be updated. This record shall be kept on-site. | Minn. R. 7007.0800, subp. 4 and 5 |

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-15

02/05/07

Facility Name: Brown Printing Co - Waseca Division

Permit Number: 16100013 - 004

Subject Item: EU 026 Chiller Unit**Associated Items:** SV 015 Chiller Unit

| What to do | Why to do it |
|--|--------------------------------|
| Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. | Minn. R. 7011.0715, subp. 1(A) |
| Opacity: less than or equal to 20 percent | Minn. R. 7011.0715, subp. 1(B) |
| Fuel Usage: Natural gas only, by design. | Minn. R. 7005.0100, subp. 35a |

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Brown Printing Co - Waseca Division

Permit Number: 16100013 - 004

Subject Item: CE 008 Thermal Oxidizer

- Associated Items:**
- EU 001 Web Offset Press 1221
 - EU 002 Web Offset Press 1219
 - EU 003 Web Offset Press 1211
 - EU 004 Web Offset Press 1212
 - EU 005 Web Offset Press 1213
 - EU 006 Web Offset Press 1214
 - EU 007 Web Offset Press 1222
 - EU 008 Web Offset Press 1216
 - EU 009 Web Offset Press 1217
 - EU 010 Web Offset Press 1218
 - EU 024 Web Offset Press 1220
 - EU 027 Web Offset Press 1223
 - EU 028 Web Offset Press 1224
 - EU 029 Web Offset Press 1225 (future)
 - GP 002 Press Operations
 - GP 005 Direct Heating Equipment

| What to do | Why to do it |
|---|---|
| LIMITS | hdr |
| The Permittee shall operate and maintain the control equipment such that it achieves a destruction efficiency of Volatile Organic Compounds: greater than or equal to 98 percent control efficiency for CE 008. This requirement also applies to the HAPs. | Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2 |
| The Permittee shall operate and maintain the appropriate number of thermal oxidizer(s), any time, that any process equipment controlled by the thermal oxidizer(s) is in operation. | Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2 |
| CE 008 shall be in operation for Web Offset Presses with an adjustable intake flow rate controlled by other oxidizers (e.g. CE 009 and CE 010). During normal production or backup mode operations, the CE 008 maximum intake flow rate shall not exceed 21,000 SCFM. In other words, the sum of the individual press exhaust flow rates into CE 008 cannot exceed the CE 008 design intake flow of 21,000 SCFM. The individual press design flow rates are found in Appendix IV of the additional Appendix material. | Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2 |
| A. MONITORING SCENARIOS | hdr |
| Temperature: greater than or equal to 1300 degrees F using 3-hour Rolling Average in the Combustion Chamber unless a new minimum must be set pursuant to Minn. R. 7017.2025, subp. 3, based on the average temperature recorded during the most recent MPCA approved performance test where compliance for VOC emissions was demonstrated. If the three-hour rolling average temperature drops below the minimum temperature limit, the VOC used during that time shall be considered uncontrolled until the minimum temperature limit is once again achieved. This shall be reported as a deviation. | Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2 |
| The Permittee shall retain a minimum retention time of 0.7 seconds when controlling press emissions. | Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2 |
| MONITORING | hdr |
| Monitoring Equipment: The Permittee shall install and maintain thermocouples to conduct temperature monitoring required by this permit. The monitoring equipment must be installed, in use, and properly maintained whenever operation of the monitored control equipment is required. | Minn. R. 7007.0800, subp. 4 |

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Brown Printing Co - Waseca Division

Permit Number: 16100013 - 004

| | |
|---|--|
| <p>The Permittee shall maintain and operate a thermocouple monitoring device that continuously indicates and records the combustion chamber temperature of the thermal oxidizer. The monitoring device shall have a margin of error less than the greater of +/- 0.75 percent of the temperature being measured or +/- 2.5 degrees Celsius. The recording device shall also calculate the three-hour rolling average combustion chamber temperature.</p> | <p>Minn. R. 7007.0800, subps. 4 and 5</p> |
| <p>The Permittee shall maintain a continuous hard copy readout or computer disk file of the temperature readings of each thermal oxidizer during oxidizer operation for the combustion chamber. Measurements shall be taken no less frequently than once every fifteen minutes. Measurements taken during each hour shall be averaged to determine the 1-hour average temperature. Once each hour, the Permittee shall take the average of the previous three 1-hour temperature averages to determine the 3-hour rolling average temperature.</p> | <p>Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2; Minn. R. 7007.0800, subps. 4 and 5</p> |
| <p>Daily Monitoring: The Permittee shall physically check the temperature recording device at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection.</p> | <p>Minn. R. 7007.0800, subps. 4 and 5</p> |
| <p>Inspections: The Permittee shall conduct inspections in accordance to the manufacturer's recommended maintenance schedule checklist. The Permittee shall maintain a written record of the weekly, monthly, quarterly, and semi-annual and any corrective actions taken resulting from the inspection.</p> | <p>Minn. R. 7007.0800, subps. 4, 5, and 14</p> |
| <p>Annual Calibration: The Permittee shall calibrate the temperature monitor at least annually and shall maintain a written record of the calibration and any action resulting from the calibration.</p> | <p>Minn. R. 7007.0800, subps. 4, 5, and 14</p> |
| <p>For periods when the thermal oxidizer is operated above the minimum combustion chamber temperature, the Permittee shall use either one of the following when completing calculations as required elsewhere in this permit: a. The overall control efficiency limit specified in this permit for this equipment (98% for CE 008); or b. The overall control efficiency determined during the most recent MPCA approved performance test. If the tested efficiency is less than the efficiency limit in this permit, the Permittee must use the tested value in all calculations until the efficiency is demonstrated to be above the permit limit through a new test.</p> | <p>Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2; Minn. R. 7007.0800, subps. 4 and 5</p> |
| <p>Corrective Actions: If the temperature is below the minimum specified by this permit or if the thermal oxidizer or any of its components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall return the temperature to at least the permitted minimum and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the thermal oxidizer. The Permittee shall keep a record of the type and date of any corrective action taken.</p> | <p>Minn. R. 7007.0800, subps. 4, 5, and 14</p> |
| <p>The Permittee shall operate and maintain the thermal oxidizer in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.</p> | <p>Minn. R. 7007.0800, subp. 14</p> |
| <p>PERFORMANCE TESTING</p> | <p>hdr</p> |
| <p>Performance Test: due 180 days after 06/30/2005 (-002) for VOC destruction efficiency of CE 008. (Performance test conducted on 10/5/05 and test results received by MPCA on 11/16/05.)</p> | <p>Minn. R. 7017.2020, subp. 1</p> |

TABLE B: SUBMITTALS

B-1 02/05/07

Facility Name: Brown Printing Co - Waseca Division
Permit Number: 16100013 - 004

Table B lists most of the submittals required by this permit. Please note that some submittal requirements may appear in Table A or, if applicable, within a compliance schedule located in Table C. Table B is divided into two sections in order to separately list one-time only and recurrent submittal requirements.

Each submittal must be postmarked or received by the date specified in the applicable Table. Those submittals required by parts 7007.0100 to 7007.1850 must be certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21. Other submittals shall be certified as appropriate if certification is required by an applicable rule or permit condition.

Send any application for a permit or permit amendment to:

AQ Permit Technical Advisor
Industrial Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Also, where required by an applicable rule or permit condition, send to the Permit Technical Advisor notices of:

- accumulated insignificant activities,
- installation of control equipment,
- replacement of an emissions unit, and
- changes that contravene a permit term.

Unless another person is identified in the applicable Table, send all other submittals to:

AQ Compliance Tracking Coordinator
Industrial Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Send submittals that are required to be submitted to the U.S. EPA regional office to:

Mr. George Czerniak
Air and Radiation Branch
EPA Region V
77 West Jackson Boulevard
Chicago, Illinois 60604

Send submittals that are required by the Acid Rain Program to:

U.S. Environmental Protection Agency
Clean Air Markets Division
1200 Pennsylvania Avenue NW (6204N)
Washington, D.C. 20460

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

B-2 02/05/07

Facility Name: Brown Printing Co - Waseca Division

Permit Number: 16100013 - 004

| What to send | When to send | Portion of Facility Affected |
|---|---|------------------------------|
| Application for Permit Reissuance | due 180 days before expiration of Existing Permit | Total Facility |
| Computer Dispersion Modeling Information | due 1096 days after 06/30/2005 . Submit modeling data as specified in MPCA guidance for Modeling Information Requests (for NOx). This modeling information is for data collection purposes, no modeling analysis is required at this time. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act. | Total Facility |
| Performance Test Notification (written) | due 30 days before Performance Test for CE 008. | CE008 |
| Performance Test Plan | due 30 days before Performance Test for CE 008. | CE008 |
| Performance Test Report - Microfiche Copy | due 105 days after Performance Test for CE 008. | CE008 |
| Performance Test Report | due 45 days after Performance Test for CE 008. | CE008 |
| Testing Frequency Plan | due 60 days after Performance Test (for CE 008). The testing frequency for subsequent performance tests will be based on the MPCA guidance that is in effect at the time of the Performance test, and changes may be agreed between the Agency and Permittee. Test frequency parameters may be proposed in the written Performance Test Notification or Test Plan, and reviewed during the Performance Test Pre-test Meeting. | CE008 |

TABLE B: RECURRENT SUBMITTALS

B-3 02/05/07

Facility Name: Brown Printing Co - Waseca Division

Permit Number: 16100013 - 004

| What to send | When to send | Portion of Facility Affected |
|------------------------------|--|-------------------------------------|
| Semiannual Deviations Report | due 30 days after end of each calendar half-year starting 01/13/2003 . The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. If no deviations have occurred, the Permittee shall submit the report stating no deviations. | Total Facility |
| Compliance Certification | due 31 days after end of each calendar year starting 01/13/2003 (for the previous calendar year). To be submitted on a form approved by the Commissioner, both to the Commissioner and to the US EPA regional office in Chicago. This report covers all deviations experienced during the calendar year. | Total Facility |

APPENDIX MATERIAL

Facility Name: Brown Printing Co - Waseca Division

Permit Number: 16100013-004

Appendix I –VOC/HAP Calculation Methods

VOC Calculation Methods

The Permittee shall calculate monthly VOC emissions as follows:

$$\text{VOC (tons)} = A + B + C + D + E + F + G - H$$

A = VOC emissions, in tons, from ink usage

$$A = [(U1 \times V1 \times (1-R) \times (1-DE)) + (U2 \times V2 \times (1-R) \times (1-DE)) + \dots]/2000$$

U# = amount of each VOC-containing material ink purchased in the previous month, in pounds
V# = weight percent VOC in U#, as a fraction (e.g. 10% is 0.10)
R = weight fraction of ink retained in the product, 0.20
DE = destruction efficiency of the applicable control system.

B = VOC emissions, in tons, from fountain solution usage that is carried over to the dryer

$$B = [(U1 \times V1 \times (CA) \times (1-DE)) + (U2 \times V2 \times (CA) \times (1-DE)) + \dots]/2000$$

U# = amount of each VOC-containing fountain solution purchased in the previous month, in pounds
V# = weight percent VOC in U#, as a fraction (e.g. 10% is 0.10)
CA = carryover of fountain solution to the dryer, 0.70
DE = destruction efficiency of the applicable control system.

C = VOC emissions, in tons, from fountain solution usage that is not carried over to the dryer

$$C = [(U1 \times V1 \times (1-CA)) + (U2 \times V2 \times (1- CA)) + \dots]/2000$$

U# = amount of each VOC-containing fountain solution purchased in the previous month, in pounds
V# = weight percent VOC in U#, as a fraction (e.g. 10% is 0.10)
CA = carryover of fountain solution to the dryer, 0.70.

D = VOC emissions, in tons, from automatic blanket wash that is carried over to the dryer

$$D = [(U1 \times V1 \times (CA) \times (1-DE)) + (U2 \times V2 \times (CA) \times (1-DE)) + \dots]/2000$$

U# = amount of each VOC-containing automatic blanket wash solution purchased in the previous month, in pounds
V# = weight percent VOC in U#, as a fraction (e.g. 10% is 0.10)
CA = carryover of automatic blanket wash to the dryer, 0.40.

DE = destruction efficiency of the applicable control system.

E = VOC emissions, in tons, from automatic blanket wash that is not carried over to the dryer

$$E = [(U1 \times V1 \times (1-CA)) + (U2 \times V2 \times (1-CA)) + \dots]/2000$$

U# = amount of each VOC-containing automatic blanket wash solution purchased in the previous month, in pounds

V# = weight percent VOC in U#, as a fraction (e.g., 10% is 0.10)

CA = carryover of automatic blanket wash to the dryer, 0.40.

F = VOC emissions, in tons, from manual wash solution

$$F = [(U1 \times V1 \times (CA)) + (U2 \times V2 \times (CA)) + \dots]/2000$$

U# = amount of each VOC-containing manual wash solution purchased in the previous month, in pounds

V# = weight percent VOC in U#, as a fraction (e.g., 10% is 0.10)

CA = weight fraction of wash solution remaining in rags as waste, 0.50.

G = VOC emissions, in tons, from all other VOC-containing materials

$$G = [(U1 \times V1) + (U2 \times V2) + \dots]/2000$$

U# = amount of each VOC-containing purchased in the previous month, in pounds

V# = weight percent VOC in U#, as a fraction.

H = the amount of VOC shipped in waste, other than rags, in pounds

$$H = [(W1 \times V1) + (W2 \times V2) + \dots]/2000$$

W# = amount, in pounds, of each VOC-containing waste shipped in the previous month. If the Permittee chooses to not take credit for waste shipments, this parameter would be zero.

V# = weight percent VOC in W#, as a fraction (e.g., 10% is 0.10).

Total and Individual HAP Calculation Methods

The Permittee shall calculate monthly emissions of each individual HAP and total HAP, separately, as follows:

$$\text{Pollutant (tons)} = A + B + C + D + E + F + G - H$$

Pollutant = each individual HAP and total HAP

A = pollutant emissions, in tons, from ink usage

$$A = [(U1 \times V1 \times (1-R) \times (1-DE)) + (U2 \times V2 \times (1-R) \times (1-DE)) + \dots]/2000$$

U# = amount of each HAP-containing material ink purchased in the previous month, in pounds

V# = weight percent of pollutant in U#, as a fraction (e.g., 10% is 0.10)

R = weight fraction of ink retained in the printed material until drying, 0.20

DE = destruction efficiency of the applicable control system.

B = pollutant emissions, in tons, from fountain solution usage that is carried over to the dryer

$$B = [(U1 \times V1 \times (CA) \times (1-DE)) + (U2 \times V2 \times (CA) \times (1-DE)) + \dots]/2000$$

U# = amount of each HAP-containing fountain solution purchased in the previous month, in pounds

V# = weight percent of pollutant in U#, as a fraction (e.g., 10% is 0.10)

CA = carryover of fountain solution to the dryer, 0.70

DE = destruction efficiency of the applicable control system.

C = pollutant emissions, in tons, from fountain solution usage that is not carried over to the dryer

$$C = [(U1 \times V1 \times (1-CA)) + (U2 \times V2 \times (1-CA)) + \dots]/2000$$

U# = amount of each HAP-containing fountain solution purchased in the previous month, in pounds

V# = weight percent of pollutant in U#, as a fraction (e.g., 10% is 0.10)

CA = carryover of fountain solution to the dryer, 0.70.

D = pollutant emissions, in tons, from automatic blanket wash that is carried over to the dryer

$$D = [(U1 \times V1 \times (CA) \times (1-DE)) + (U2 \times V2 \times (CA) \times (1-DE)) + \dots]/2000$$

U# = amount of each HAP-containing automatic blanket wash solution purchased in the previous month, in pounds

V# = weight percent of pollutant in U#, as a fraction (e.g., 10% is 0.10)

CA = carryover of automatic blanket wash to the dryer, 0.40.

DE = destruction efficiency of the applicable control system.

E = pollutant emissions, in tons, from automatic blanket wash that is not carried over to the dryer

$$E = [(U1 \times V1 \times (1-CA)) + (U2 \times V2 \times (1-CA)) + \dots]/2000$$

U# = amount of each HAP-containing automatic blanket wash solution purchased in the previous month, in pounds

V# = weight percent of pollutant in U#, as a fraction (e.g., 10% is 0.10)

CA = carryover of automatic blanket wash to the dryer, 0.40.

F = pollutant emissions, in tons, from manual wash solution

$$F = [(U1 \times V1 \times (CA)) + (U2 \times V2 \times (CA)) + \dots]/2000$$

U# = amount of each HAP-containing manual wash solution purchased in the previous month, in pounds

V# = weight percent of pollutant in U#, as a fraction (e.g., 10% is 0.10)

CA = weight fraction of wash solution remaining in rags as waste, 0.50.

G = pollutant emissions, in tons, from all other HAP-containing materials

$$G = [(U1 \times V1) + (U2 \times V2) + \dots] / 2000$$

U# = amount of each HAP-containing purchased in the previous month, in pounds

V# = weight percent of pollutant in U#, as a fraction (e.g., 10% is 0.10).

H = the amount of HAP shipped in waste, other than rags, in pounds

$$H = [(W1 \times V1) + (W2 \times V2) + \dots] / 2000$$

W# = amount, in pounds, of each HAP-containing waste shipped in the previous month.

If the Permittee chooses to not take credit for waste shipments, this parameter would be zero.

V# = weight percent of pollutant in W#, as a fraction (e.g., 10% is 0.10).

APPENDIX II – INSIGNIFICANT ACTIVITIES

Insignificant Activities and General Applicable Requirements

The table below lists the insignificant activities that are currently at the Facility and their associated general applicable requirements.

| Minn. R. 7007.1300, subp. | Rule Description of the Activity | General Applicable Requirement |
|----------------------------------|---|--|
| 3(A) | Fuel use: space heaters fueled by natural gas or propane. | Minn. R. 7011.0515 (PM and opacity) |
| 3(D)(2) | Equipment venting PM/PM ₁₀ inside a building, provided that emissions from the equipment are filtered through an air cleaning system and vented inside of the building 100% of the time. (maintenance shop equipment) | Minn. R. 7011.0715 (PM and opacity) |
| 3(I) | Individual emissions units at a stationary source, each of which have a PTE of the following pollutants in amounts less than: 2 tpy of CO and 1 tpy each of NO _x , SO ₂ , PM/PM ₁₀ , VOC, and ozone. (i.e., gluing operations) | Minn. R. 7011.0715 (PM and opacity) |

Under Minn. R. 7007.1250, subp. 1(A), the Permittee may add insignificant activities to the stationary source throughout the term of the permit without getting permit amendments. Certain exclusions apply and are listed in Minn. R. 7007.1250, subp. 2. In addition, this permit specifically prohibits the Permittee from making any modifications that would make the source major under NSR. The following table is a listing of the insignificant activities that the Permittee is somewhat likely to add and their associated applicable requirements.

| Minn. R. 7007.1300, subp. | Rule Description of the Activity | General Applicable Requirement(s) |
|----------------------------------|--|--|
| 3(H)(5) | Blueprint copiers and photographic processes; | Minn. R. 7011.0110 (opacity) |
| 3(H)(4) | Brazing, soldering or welding equipment. | Minn. R. 7011.0715 (PM and opacity) |
| 3(H)(8) | Cleaning operations: alkaline/phosphate cleaners and associated cleaners. | Minn. R. 7011.0715 (PM and opacity) |
| 3(K) | Infrequent use of spray paint equipment for routine housekeeping or plant upkeep activities not associated with primary production processes at the stationary source. | Minn. R. 7011.0715 (PM and opacity) |

APPENDIX III - Web Offset Heat Press Description

| EU | SV | CE | GP | Emission Unit Description |
|-----|-----|-----|---------------|--------------------------------|
| 001 | | | 001 | Web Offset press 1221 |
| 002 | | | 001 | Web Offset press 1219 |
| 003 | | | 001 | Web Offset press 1211 |
| 004 | | | 001 | Web Offset press 1212 |
| 005 | | | 001 | Web Offset press 1213 |
| 006 | | | 001 | Web Offset press 1214 |
| 007 | | | 001 | Web Offset press 1222 |
| 008 | | | 001 | Web Offset press 1216 |
| 009 | | | 001 | Web Offset press 1217 |
| 010 | | | 001 | Web Offset press 1218 |
| 011 | 001 | 001 | 002, 003, 005 | Thermal Oxidizer (removed) |
| 012 | 002 | 002 | 002, 003, 005 | Thermal Oxidizer (removed) |
| 013 | 003 | 003 | 002, 003, 005 | Thermal Oxidizer (removed) |
| 014 | 004 | | | Waste Incinerator (shut down) |
| 015 | 005 | 004 | 008 | Paper Waste Recycling System |
| 016 | 006 | 005 | 008 | Paper Waste Recycling System |
| 017 | 007 | 006 | 008 | Paper Waste Recycling System |
| 018 | 008 | 007 | 008 | Paper Waste Recycling System |
| 019 | 009 | | 006 | Boiler A |
| 020 | 010 | | 006 | Boiler B |
| 021 | 011 | | | Press Room "Fugitives" |
| 022 | 012 | | | Bindery "Fugitives" |
| 023 | 013 | | | Prep Area "Fugitives" |
| 024 | | | 001 | Web Offset press 1220 |
| 025 | 014 | 008 | 002, 003, 005 | Thermal Oxidizer |
| 026 | 015 | | | Chiller Unit |
| 027 | | | 001 | Web Offset press 1223 |
| 028 | | | 001 | Web Offset press 1224 |
| 029 | | | 001 | Web Offset press 1225 (future) |
| 030 | 016 | | 007 | Boiler C |
| 031 | 017 | 009 | 002, 004, 005 | Regenerative Thermal Oxidizer |
| 032 | 018 | 010 | 002, 004, 005 | Regenerative Thermal Oxidizer |
| 033 | 019 | | 007 | Boiler D |

* Web Offset presses emit into a common header. From the common header, the emissions discharge through the thermal oxidizers. Hence, a specific SV and CE is not assigned.

Appendix IV – Summary of the Maximum Impressions and Design Air Flow Rates

| Emission Unit No. | Press No. | | Maximum Impressions No. | Design Flow Rate (SCFM) |
|--------------------------|------------------|--------|--------------------------------|--------------------------------|
| EU-001 | 1221 | Single | 44,333.3 | 1,980 |
| EU-002 | 1219 | Double | 114,000. | 4,857 |
| EU-003 | 1211 | Double | 101,333.3 | 4,086 |
| EU-004 | 1212 | Double | 114,000. | 4,597 |
| EU-005 | 1213 | Double | 139,333.3 | 5,616 |
| EU-006 | 1214 | Single | 44,333.3 | 1,831 |
| EU-007 | 1222 | Double | 139,333.3 | 5,619 |
| EU-008 | 1216 | Double | 139,333.3 | 5,175 |
| EU-009 | 1217 | Single | 40,058.3 | 1,831 |
| EU-010 | 1218 | Double | 139,333.3 | 5,175 |
| EU-024 | 1220 | Double | 285,000. | 12,143 |
| EU-027 | 1223 | Double | 194,160 | 8,122 |
| EU-028 | 1224 | Double | 194,160 | 8,122 |
| EU-029 | 1225 | Double | 194,160 | 8,122 |
| | | | | |
| Totals | | | 1,900,000 | 74,452 |
| | | | | |

Appendix V – Regenerative Thermal Oxidizer Flow Rate versus Residence Time

Combustion chamber volume: 687 ft³

| Flow rate | | Residence time (sec) |
|-----------|---------------|-------------------------|
| SCFM | ACFM @ 1600 F | |
| 6,000 | 23,321 | 1.77 |
| 7,000 | 27,208 | 1.52 |
| 8,000 | 31,094 | 1.33 |
| 9,000 | 34,981 | 1.18 |
| 10,000 | 38,868 | 1.06 |
| 11,000 | 42,755 | 0.96 |
| 12,000 | 46,642 | 0.88 |
| 13,000 | 50,528 | 0.82 |
| 14,000 | 54,415 | 0.76 |
| 15,000 | 58,302 | 0.71 |
| 16,000 | 62,189 | 0.66 |
| 17,000 | 66,075 | 0.62 |
| 18,000 | 69,962 | 0.59 |
| 19,000 | 73,849 | 0.56 |
| 20,000 | 77,736 | 0.53 |
| 21,000 | 81,623 | 0.51 |
| 22,000 | 85,509 | 0.48 |
| 23,000 | 89,396 | 0.46 |
| 24,000 | 93,283 | 0.44 |
| 25,000 | 97,170 | 0.42 |

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 16100013-004

This Technical Support Document (TSD) is intended for all parties interested in the permit and to meet the requirements that have been set forth by the federal and state regulations (40 CFR § 70.7(a)(5) and Minn. R. 7007.0850, subp. 1). The purpose of this document is to provide the legal and factual justification for each applicable requirement or policy decision considered in the preliminary determination to issue the permit.

1. General Information

1.1. Applicant and Stationary Source Location:

| Applicant/Address | Stationary Source/Address (SIC Code: 2752) |
|--|---|
| Brown Printing Company, Waseca Division 2300 Brown Avenue P.O. Box 1549 Waseca, MN 55093-0517 | Same as Owner/Operator |
| Contact: Allan Rose Phone: (507) 835-0368 | |

1.2. Description of the Facility

Brown Printing is a commercial printing facility. Since 1963, this facility has been in operation. The stationary source currently consists of eleven web offset printing presses, press dryers, and pollution control equipment. The main sources of emissions are Volatile Organic Compounds (VOC) and Hazardous Air Pollutant (HAP). The facility also has several activities that qualify as insignificant activities under Minn. R. 7007.1300, subp. 3.

Emissions from all the heat web offset presses are controlled by one thermal oxidizer and two regenerative thermal oxidizers. Common ductwork (headers) allows any combination of the three oxidizers to control any operating combination of presses.

The facility is non-major for all Prevention of Significant Deterioration (PSD) and HAP pollutants. The facility has taken the VOC and HAP limits to remain non-major. The other unlimited criteria pollutant emissions are below PSD thresholds.

1.3 Description of the Activities Allowed by this Permit Action

The previous permit amendment (-003) authorized an additional paper concentrator recycling system (EU 034) and related air pollution control equipment (CE 011) into GP 008. The previous permit actions used the Minnesota Industrial Process Equipment Rule (IPER) for the recycling system units' PM/PM10 limits. This resulted in an overall facility PTE slightly below the PSD major source threshold (i.e., 244.3 tpy). In this amendment action, more restrictive limits are being placed on the GP 008 equipment. These limits will be based on manufacturer's guarantee for the baghouses (i.e., 0.010 gr/dscf). The new limited PTE will be lower than the IPER based limited PTE. This would have been done on the previous amendment. But due to the project's time constraints, a major amendment would have not allowed the facility to stay on its schedule.

1.4. Facility Emissions:

Table 1. Total Facility Potential to Emit Summary Prior to Permit Action -004:

| EU # | SV # | Emission Unit Description | PM tpy | PM ₁₀ tpy | SO ₂ tpy | NO _x tpy | CO tpy | VOC tpy | Pb tpy | Single HAP tpy | All HAPs tpy |
|------|------|---------------------------|--------|----------------------|---------------------|---------------------|--------|---------|--------|----------------|--------------|
| | | Combustion | 6.6 | 6.6 | 0.53 | 140.7 | 73.58 | 4.82 | - | 1.58 | 1.65 |
| | | Paper Waste | 237.7 | 237.7 | | | | | | | |
| | | Press Operations | | | | | | 847.1 | | 28.88 | 40.96 |
| | | Total (unlimited) | 244.3 | 244.3 | 0.53 | 140.7 | 73.58 | 851.9 | - | 30.46 | 42.61 |

| | PM tpy | PM ₁₀ tpy | SO ₂ tpy | NO _x Tpy | CO Tpy | VOC tpy | Pb tpy | Single HAP tpy | All HAPs tpy |
|---|---------|----------------------|---------------------|---------------------|--------|---------|--------|----------------|--------------|
| Decrease in Facility Limited Potential Emissions due to -004 Paper Waste Limits | - 205.4 | - 205.4 | | | | | | | |
| Total Facility Limited Potential Emissions (after -004) | 38.85 | 38.85 | 0.53 | 140.7 | 73.58 | 232.5 | - | 9.0 | 22.1 |
| 2003 Press Operation Actual Emissions** (combustion, paper waste not included) | 5 | 5 | 0 | 14 | 5 | 121 | 0 | 5.05 | 7.25 |

Table 2. Facility (TF) and Permit Classification

| Classification (put x in appropriate box) | Major/Affected Source | *Synthetic Minor | *Minor |
|---|---|---------------------------|--|
| Prevention of Significant Deterioration | | VOC, NO _x , CO | SO ₂ , PM, PM ₁₀ |
| Part 70 Permit Program | VOC, PM ₁₀ , NO _x | | |
| Part 63 National Emissions Standards for Hazardous Air Pollutants (NESHAPs) | | X | |

* Refers to potential emissions that are less than those specified as major by 40 CFR § 52.21, 40 CFR pt. 51 Appendix S, 40 CFR pt. 70, and 40 CFR pt. 63.

** It is noted that the facility would be a minor for NO_x and CO if it had not taken the facility fuel consumption limit. In other words, the limit was not taken to be non-major for PSD. Existing and projected emissions are not of the magnitude to exceed the PSD thresholds.

2. Regulatory and/or Statutory Basis

New Source Review

The Facility has existing limits (VOC, HAPS, fuel usage) to avoid major source classification for New Source Review (40 CFR § 52.21) program. The facility remains an existing non-major source under New Source Review regulations. No new changes are authorized by this permit. The purpose of this permit action is to reduce the limited PM/PM10 PTE from 244.3 tpy to 38.85 tpy.

Part 70 Permit Program

The facility remains a major source under the Part 70 permit program.

New Source Performance Standards (NSPS)

There are no New Source Performance Standards applicable to the operations at this facility.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

The printing and publishing NESHAP does not apply, since they are not a flexographic printer (as defined in 40 CFR § 63.822(a)).

Minnesota State Rules

Portions of the facility are subject to the following Minnesota Standards of Performance:

- Minn. R. 7011.0515 Standards of Performance for New Indirect Heating Equipment
- Minn. R. 7011.0610 Standards of Performance for Fossil-Fuel-Burning Direct Heating Equipment
- Minn. R. 7011.0715 Standards of Performance for Post-1969 Industrial Process Equipment

Table 3 gives a summary of the significant sources of emissions and the applicable regulations and standards.

Table 3. Regulatory Overview of Units Affected by the Permit Amendment

| EU, GP, or SV | Applicable Regulations | Comments: |
|---|-------------------------------|--|
| GP 008 (Waste Paper Recycling System Units) | Minn. R. 7011.0715 | Standards of Performance for Post 1969 Industrial Process Equipment. |

3. Technical Information

3.1. Waste Paper Recycling

The following discussion is taken out of the -003 Technical Support Document:

Brown Printing has an existing paper recycling system. A diagram is found as Attachment 2. It consists of two concentrators which collect paper trim from the various presses. Each concentrator emits air through a baghouse. After the concentrators, the paper waste flows into a cyclone. The cyclones emit either air through a second baghouse or paper waste into a baler.

In the Title V permit issuance, Brown did not provide a loading rate or emission factor for these four baghouse units. The MPCA applied emissions based on Industrial Process Equipment Rule. Minn. R. 7011.0715. This resulted in a PM PTE of 184.4 tpy. This value was unreasonably high for the control equipment. The MPCA then used a 0.01gr/dscf value for its calculations. The permit was issued without a permit restriction reflecting the 0.01 gr/dcsf value. Accordingly, the correct PTE for the existing four units is 184.4, not the 24.8 tpy based on the 0.01 gr/dcsf. This error is corrected in this permit action (-003). In addition, incorrect air flows were also entered into Delta for two of the existing baghouses. The correct values, taken from Attachment 2, are entered into Delta as part of this permit action (-003).

Brown proposes to add an additional paper waste concentrator (EU 034) with a baghouse (CE 011). After the new concentrator, the paper waste will flow into the 2 existing cyclones. This is illustrated in Attachment 3. Again, Brown did not provide a loading rate or emission factor for the new concentrator. The MPCA applied emissions based on Industrial Process Equipment Rule. Minn. R. 7011.0715. This resulted in a PM PTE of 53.31 tpy. Brown has supplied a manufacturer statement providing that the manufacturer guarantees a 0.01gr/dscf value for the new baghouse. This is found in attachment 4.

To meet the construction timeline, Brown wants to keep this permit action (-003), as a moderate amendment. Accordingly, the Industrial Process Equipment rule is the basis of the new baghouse PTE. The overall PM/PM₁₀ facility PTE is less than 250 tpy. Hence, a limit is not necessary for this permit action. Brown is intending to submit a major amendment in the near future to take a limit that reflects the 0.01 gr/dscf manufacturer guarantee.

In addition, visible emission checks and pressure drop readings of the baghouse were incorporated in this permit action to address Periodic Monitoring requirements.

This permit action (-004) places the above described PM/PM₁₀ limits (0.010 gr/dscf) on the baghouses (GP 008).

Calculations of Potential to Emit

The calculations are found in the Delta spreadsheet labeled “calculations.”

3.4 Periodic Monitoring

In accordance with the Clean Air Act, it is the responsibility of the owner or operator of a facility to have sufficient knowledge of the facility to certify that the facility is in compliance with all applicable requirements.

In evaluating the monitoring included in the permit, the MPCA considers the following:

- The likelihood of violating the applicable requirements;
- Whether add-on controls are necessary to meet the emission limits;
- The variability of emissions over time;
- The type of monitoring, process, maintenance, or control equipment data already available for the emission unit;
- The technical and economic feasibility of possible periodic monitoring methods; and
- The kind of monitoring found on similar units elsewhere.

Table 4 summarizes the periodic monitoring requirements for those emission units for which the monitoring required by the applicable requirement is nonexistent or inadequate.

Table 4. Periodic Monitoring

| Emission Unit or Group | Requirement (basis) | Additional Monitoring | Discussion |
|--|--|------------------------------|--|
| GP 008 (Waste Paper Recycling System) | PM: ≤ 0.30 gr/dscf, unless required to further . . . Opacity: ≤ 20 % (Minn. R. 7011.0715) | None | The Industrial Process Equipment Rule is very conservative. For example, the new baghouse has an IPER value of 0.071 gr/dscf where as the manufacturer guarantee has a value of 0.01 gr/dscf. Hence, it is unlikely that the IPER will be violated. In addition, the baghouses will be subject to visible emission checks and weekly pressure drop readings. |
| GP 008 (Waste Paper Recycling System) | PM/PM10: ≤ 0.010 gr/dscf | None | The baghouses remain subject to the existing visible emission checks and weekly pressure drop readings. |

3.3 Insignificant Activities

There are no insignificant activities associated with this amendment.

3.4 Comments Received

Document the official start/end dates of EPA's review period if they are different than the default (i.e., start of the notice + 45 days) and explain why the EPA review period is different.

Document whether or not EPA agreed that we could go ahead and issue the permit prior to the end of their official review period by stating how and when this was communicated (or by attaching e-mails/letters).

Public Notice Period: <start date> - <end date>

EPA 45-day Review Period: <start date> - <end date>

If comments were received during the public notice period from the public or if comments are received from EPA, they should be described briefly here, as well as any changes made to the permit as a result of the comments. Generally, the comment letters should also be provided as attachments to the TSD.

Comments were <not> received from the public during the public notice period. <The comments received did <not> include adverse comments on any applicable requirements of the permit. Changes to the permit were <not> made as a result of the comments. *Provide summary of changes.* >

