AIR EMISSION PERMIT NO. 05300384- 001
IS ISSUED TO

BANTA CATALOG
7401 Kilmer Lane
Maple Grove, Hennepin County, Minnesota 55369

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

Permit Application Type	Application Date
Total Facility Operating Permit	04/17/1995
Supplemental Submittal #1	06/27/2001
Supplemental Submittal #2	07/30/2001
Supplemental Submittal #3	09/04/2001

This permit authorizes the Permittee to operate, modify, and construct 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; Part 70/Limits to Avoid NSR and Part 63

Issue Date: December 27, 2001
Expiration: December 27, 2006
All Title I Conditions do not expire.

Michael J. Tibbetts
Program Manager
Major Facilities Section
Water, Land and Compliance Lead

for Karen A. Studders
Commissioner
Minnesota Pollution Control Agency

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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 the 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:

Banta Catalog (Facility) is a commercial printing facility. The Facility consists of heatset web offset lithographic printing presses, dryers, ink jet printers, 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).

The Facility took limits to avoid major source classification for New Source Review (40 CFR § 52.21) in an air emissions permit issued in 1991. These limits are carried forward and amended in this permit. This permit also includes limits to avoid major source classification under the National Emissions Standards for Hazardous Air Pollutants program (40 CFR pt. 63). 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, hazardous air pollutants, and combustion pollutants.

The permit also authorizes changes at the Facility: installation, replacement and reconfiguration of control equipment, and modification and replacement of existing emissions units.

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/27/01

Facility Name: Banta Catalog - Minneapolis

Permit Number: 05300384 - 001

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 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. 4410.0200 subps. 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
Total Facility Press Dryers and Control Equipment Capacity: less than or equal to 75.0 million Btu's/hour	Title I Condition: Limit to avoid classification as major source or modification under 40 CFR Section 52.21
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 emissions units on site. The list shall correlate the units to the numbers used in this permit (EU, GP, and CE) and shall include the data included in Appendix III of this permit. The Permittee shall update the list to include any replaced or modified equipment prior to making the pre-authorized change.	Minn. R. 7007.0800, subp. 2
Total Particulate Matter: less than or equal to 0.3 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 industrial process equipment. Specifically, it applies to each press and ink jet printer.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity . This applies separately to each piece of industrial process equipment. Specifically, it applies to each press and ink jet printer.	Minn. R. 7011.0715, subp. 1(B)
STANDARD REQUIREMENTS	hdr
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.	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

12/27/01

Facility Name: Banta Catalog - Minneapolis

Permit Number: 05300384 - 001

Performance Test Notifications and Submittals: Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements. 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	Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
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.	Minn. R. 7007.0800, subp. 4(D)
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.	Minn. R. 7011.0020
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. 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.	Minn. R. 7019.1000, subp. 3
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. 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.	Minn. R. 7019.1000, subp. 2
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.	Minn. R. 7019.1000, subp. 1
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: 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.	Minn. R. 7019.1000, subp. 1
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.	Minn. R. 7019.1000, subp. 4
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.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/27/01

Facility Name: Banta Catalog - Minneapolis

Permit Number: 05300384 - 001

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: Banta Catalog - Minneapolis

Permit Number: 05300384 - 001

Subject Item: **GP 001 Total Facility VOC Limits**

Associated Items:

EU 001 Web Offset Press 1
EU 002 Web Offset Press 2
EU 003 Web Offset Press 4
EU 004 Web Offset Press 5
EU 005 Web Offset Press 6
EU 006 Press 1 Dryers
EU 007 Press 2 Dryers
EU 008 Press 4 Dryers
EU 009 Press 5 Dryers
EU 010 Press 6 Dryer and emissions control
EU 011 Videojet inkjet printer
EU 012 Videojet inkjet printer
EU 013 Videojet inkjet printer
EU 014 Videojet inkjet printer
EU 015 Videojet inkjet printer
EU 016 Videojet inkjet printer
EU 017 Videojet inkjet printer
EU 018 Videojet inkjet printer
EU 019 Videojet inkjet printer
EU 020 Videojet inkjet printer
EU 021 Videojet inkjet printer
EU 022 Videojet inkjet printer
EU 023 Videojet inkjet printer
EU 024 Videojet inkjet printer
EU 025 Videojet inkjet printer
EU 026 Videojet inkjet printer
EU 027 Videojet inkjet printer
EU 028 Videojet inkjet printer
EU 029 Videojet inkjet printer
EU 030 Videojet inkjet printer
EU 031 Videojet inkjet printer
EU 032 Videojet inkjet printer
EU 033 Videojet inkjet printer
EU 034 Videojet inkjet printer
EU 035 Videojet inkjet printer
EU 036 Videojet inkjet printer
EU 037 Videojet inkjet printer
EU 038 Videojet inkjet printer
EU 039 Videojet inkjet printer
EU 040 Videojet inkjet printer
EU 041 Videojet inkjet printer
EU 042 Videojet inkjet printer
EU 043 Videojet inkjet printer
EU 044 Videojet inkjet printer
EU 045 Videojet inkjet printer

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/27/01

Facility Name: Banta Catalog - Minneapolis

Permit Number: 05300384 - 001

Associated Items: EU 046 Videojet inkjet printer
EU 047 Videojet inkjet printer
EU 048 Inkjet printer
EU 049 Inkjet printer
EU 050 Inkjet printer
EU 051 Inkjet printer
EU 052 Inkjet printer
EU 053 Inkjet printer
EU 054 Inkjet printer
EU 055 Inkjet printer
EU 056 Inkjet printer

What to do	Why to do it
A. LIMITS	hdr
Volatile Organic Compounds: less than or equal to 240 tons/year using 12-month Rolling Sum to be calculated by the 21st day of each month for the previous 12-month period as described later in this permit. This includes all non-combustion emissions of VOC other than those listed in Appendix II of this permit. 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 take into account recovered/recycled VOCs as described under the Waste Credit requirement in GP 001.	Title I Condition: Limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000
HAPs - Total: less than or equal to 23.5 tons/year using 12-month Rolling Sum to be calculated by the 21st day of each month for the previous 12-month period. This includes all non-combustion emissions of HAP other than those listed in Appendix II of this permit. 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.	Title I Condition: Limit to avoid major source classification under 40 CFR Section 63.2
HAP-Single: less than or equal to 9.0 tons/year using 12-month Rolling Sum to be calculated by the 21st day of each month for the previous 12-month period. This includes all non-combustion emissions of HAP other than those listed in Appendix II of this permit. 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.	Title I Condition: Limit to avoid major source classification under 40 CFR Section 63.2
Pre-Authorized Changes: The Permittee may modify listed emissions units and replace listed emissions units with emissions units similar to those listed in GP 001, 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 GP 004 or GP 005. See GP 003 for further pre-authorized changes for press operations. 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.	Title I Condition: Limit to avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 63.2
B. MONITORING	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/27/01

Facility Name: Banta Catalog - Minneapolis

Permit Number: 05300384 - 001

Material Usage Recordkeeping. For ink materials used at the presses: On each day of operation, the Permittee shall record and maintain the quantity of each ink material dispensed in the press operations. This shall be based on written usage logs and meter readings. For fountain and blanket wash solutions: The Permittee shall record the amount and type of solvent material, whenever material is dispensed. The log shall indicate if the material is fountain or blanket wash solution. Hand (manual) wash solutions: The Permittee shall record the amount and type of material each time material is dispensed. Other VOC and HAP-containing materials: The Permittee shall calculate, record, and maintain monthly usage records showing the quantity of each material used. This shall be based on either written usage logs, or purchase/delivery records.	Title I Condition: Monitoring for Limit to avoid classification as major source and modification under 40 CFR 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR 63.2; Minn. R. 7007.0800. subp. 4 and 5
Vapor Pressure Records: For materials used for either automatic or manual blanket wash, the Permittee shall keep a list of each material and its vapor pressure at 20 degrees centigrade. If the vapor pressure is unknown, the Permittee shall asssume that it is greater than 10 mmHg in the applicable permit calculations until such time that it is determined to be otherwise.	Minn. R. 7007.0800, subp. 4 and 5
Monthly Recordkeeping -- VOC Emissions. By the 21st of the month, the Permittee shall calculate and record the following: 1) The total usage of each VOC-containing material for the previous calendar month using the material usage records. 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.	Minn. R. 7007.0800, subp. 4 and 5
Monthly Recordkeeping - HAP Emissions. By the 21st of the month, the Permittee shall calculate and record the following: 1). The total usage of each HAP-containing material used in the previous calendar month using the material usage records. 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 the 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.	Minn. R. 7007.0800, subp. 4 and 5
Material Content: VOC and HAPs contents in materials shall be determined by either 1) a Material Safety Data Sheet (MSDS) or 2) a Letter of Certification, provided by the supplier for each material used. If a material content range is given, 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 supersede the MSDS.	Minn. R. 7007.0800, subp. 4 and 5
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. 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. 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.	Minn. R. 7007.0800, subp. 4 and 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/27/01

Facility Name: Banta Catalog - Minneapolis

Permit Number: 05300384 - 001

Subject Item: **GP 002 Direct Heating Equipment**

Associated Items: CE 001 Catalytic Afterburner w/Heat Exchanger

CE 002 Catalytic Afterburner w/Heat Exchanger

CE 003 Catalytic Afterburner w/Heat Exchanger

CE 004 Direct Flame Afterburner w/Heat Exchanger

CE 005 Direct Flame Afterburner w/Heat Exchanger

EU 006 Press 1 Dryers

EU 007 Press 2 Dryers

EU 008 Press 4 Dryers

EU 009 Press 5 Dryers

EU 010 Press 6 Dryer and emissions control

What to do	Why to do it
Fuel Type: natural gas or propane only, by design.	Minn. R. 7005.0100, subp. 35a
The Permittee shall keep records of fuel purchases for the Facility on a monthly basis.	Minn. R. 7007.0800, subp. 5
Total Particulate Matter: less than or equal to 0.3 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

Facility Name: Banta Catalog - Minneapolis

Permit Number: 05300384 - 001

Subject Item: **GP 003 Press Operations**

Associated Items: CE 001 Catalytic Afterburner w/Heat Exchanger

CE 002 Catalytic Afterburner w/Heat Exchanger

CE 003 Catalytic Afterburner w/Heat Exchanger

CE 004 Direct Flame Afterburner w/Heat Exchanger

CE 005 Direct Flame Afterburner w/Heat Exchanger

EU 001 Web Offset Press 1

EU 002 Web Offset Press 2

EU 003 Web Offset Press 4

EU 004 Web Offset Press 5

EU 005 Web Offset Press 6

EU 006 Press 1 Dryers

EU 007 Press 2 Dryers

EU 008 Press 4 Dryers

EU 009 Press 5 Dryers

EU 010 Press 6 Dryer and emissions control

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 GP 004 or 005 at all times that the given press is operating. The current control equipment configuration is documented in Appendix III of this permit. The Permittee may change the equipment configuration (e.g., vent Press 1 operations to a control device other than CE 001), may replace the control devices listed in Appendix III, or install additional control devices, so long as all press operation emissions are controlled, all control devices are described by either GP 004 or 005, and the dryer and control device capacity limit listed in the Total Facility section of this permit is met.	Title I Condition: Limit to avoid major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2
Notification of Control Equipment Changes: The Permittee shall submit a notification to the MPCA of any of the control equipment changes authorized under GP 003 of this permit. The nofitification shall be submitted at least 7 days prior to making the change, shall specify the affected emissions unit and control equipment numbers used in this permit, and shall include the updated control equipment data listed on MPCA Form GI-05A and the planned configuration on MPCA Form GI-05B (current data in Appendix III of this permit). The notification shall also specify the new total dryer and control equipment capacity in MMBTU/hr.	Minn. R. 7007.0800, subp. 2
Performance Test: due 180 days after Permit Issuance for VOC destruction efficiency of CE 003 controlling Press 5 operations (EUs 004 and 009).	Minn. R. 7017.2020, subp. 1
Performance Test: due 1,095 days after Permit Issuance for VOC destruction efficiency of either CE 001 or CE 004/005.	Minn. R. 7017.2020, subp. 1
Performance Test: due 1,460 days after Permit Issuance for VOC destruction efficiency of either CE 001 or CE 004/005, whichever one was not tested earlier.	Minn. R. 7017.2020, subp. 1
Performance Test Notification: due 30 days before each performance test.	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test.	Minn. R. 7017.2030, subp. 2 & 3
Performance Test Pretest Meeting: due 7 days before each performance test.	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test.	Minn. R. 7017.2035, subp. 1 & 2
Performance Test Report - Microfiche Copy: due 105 days after each performance test.	Minn. R. 7017.2035, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/27/01

Facility Name: Banta Catalog - Minneapolis

Permit Number: 05300384 - 001

Subject Item: **GP 004 Catalytic Oxidizers**

Associated Items: CE 001 Catalytic Afterburner w/Heat Exchanger

CE 002 Catalytic Afterburner w/Heat Exchanger

CE 003 Catalytic Afterburner w/Heat Exchanger

What to do	Why to do it
The requirements listed for GP 004 apply separately to each control device listed in GP 004 (i.e., CE 001, 002 and 003). This includes each new catalytic oxidizer added as allowed by GP 003.	Title I Condition: Limit to avoid major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2
A. MONITORING SCENARIOS	hdr
Monitoring Scenarios: The Permittee is authorized to install a new temperature monitoring system that will monitor the 3-hour rolling average temperatures on each catalytic oxidizer. Prior to installation of such a system, the Permittee shall comply with and monitor for the absolute minimum temperature limit listed under Scenario 1. After installation of the system, the Permittee shall comply with and monitor for the 3-hour rolling average temperature limit under Scenario 2.	Minn. R. 7007.0800, subp. 11
Notify: due 30 days after Equipment Installation. The Permittee shall notify the MPCA when the installation of the new temperature monitoring system is complete. The notification shall include the date that the Permittee switched to Monitoring Scenario 2.	Minn. R. 7007.0800, subp. 11
B. LIMITS APPLICABLE UNDER BOTH SCENARIOS	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 90 percent control efficiency	Title I Condition: Limit to avoid major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2
The Permittee shall operate and maintain each catalytic oxidizer any time that any process equipment controlled by the catalytic oxidizer is in operation.	Title I Condition: Limit to avoid major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2
C. SCENARIO 1	hdr
Temperature: greater than or equal to 650 degrees F absolute minimum at the inlet 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 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 major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2
D. SCENARIO 2	hdr
Temperature: greater than or equal to 650 degrees F as a three-hour rolling average at the inlet 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 average minimum temperature limit is once again achieved. This shall be reported as a deviation.	Title I Condition: Limit to avoid major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2
E. MONITORING	hdr
Monitoring Equipment: The Permittee shall install and maintain thermocouples for measuring the temperatures as required by this permit. The monitoring equipment must be installed, in use, and properly maintained whenever the monitored control equipment is required to be operated.	Minn. R. 7007.0800, subp. 4
The Permittee shall maintain and operate a thermocouple monitoring device that continuously indicates and records both the inlet and outlet temperatures of the catalytic 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. Under Scenario 2, the recording device shall also calculate the three-hour rolling average inlet temperature.	Minn. R. 7007.0800, subp. 4 and 5
The Permittee shall maintain a continuous hard copy readout or computer disk file of the inlet and outlet temperatures. Once operating under Scenario 2, the Permittee shall also maintain the calculated three-hour rolling average inlet temperature.	Title I Condition: Monitoring for limit to avoid major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2; Minn. R. 7007.0800, subp. 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.	Minn. R. 7007.0800, subp. 4 and 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Banta Catalog - Minneapolis

Permit Number: 05300384 - 001

Monthly Monitoring: At least once each month during normal operation, the Permittee shall record the temperature rise across the catalyst (outlet temp. - inlet temp.) while the process is running. If it is determined that the catalyst reactivity has been impaired, by comparison of the observed temperature rise to the past temperature rise records, the Permittee shall follow the corrective actions in the O & M Plan. The Permittee shall maintain written records of the monitoring and any corrective actions taken.	Minn. R. 7007.0800, subp. 4, 5, and 14
Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer specifications, the Permittee shall inspect the control equipment internal and external system components, including but not limited to the refractory, heat exchanger, and electrical systems. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection.	Minn. R. 7007.0800, subp. 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, subp. 4, 5, and 14
For periods when the catalytic oxidizer is operated above the minimum inlet temperature, the Permittee shall use either one of the following when completing calculations as required elsewhere in this permit: a. The destruction efficiency limit specified in this permit for this equipment (90%); o b. The destruction 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.	Title I Condition: Limit to avoid major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2; Minn. R. 7007.0800, subp. 4 and 5
Corrective Actions: If the temperature is below the minimum specified by this permit or if the catalytic 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 catalytic oxidizer. The Permittee shall keep a record of the type and date of any corrective action taken.	Minn. R. 7007.0800, subp. 4, 5, and 14
The Permittee shall operate and maintain the catalytic 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.	Minn. R. 7007.0800, subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/27/01

Facility Name: Banta Catalog - Minneapolis

Permit Number: 05300384 - 001

Subject Item: **GP 005 Thermal Oxidizers**

Associated Items: CE 004 Direct Flame Afterburner w/Heat Exchanger

CE 005 Direct Flame Afterburner w/Heat Exchanger

What to do	Why to do it
The requirements for GP 005 apply separately to each control device listed in GP 005 (i.e., CE 004 and CE 005). This includes each new thermal oxidizer added as allowed by GP 003.	Title I Condition: Limit to avoid major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2
A. MONITORING SCENARIOS	hdr
Monitoring Scenarios: The Permittee is authorized to install a new temperature monitoring system that will monitor the 3-hour rolling average temperatures on each thermal oxidizer. Prior to installation of such a system, the Permittee shall comply with and monitor for the absolute minimum temperature limit listed under Scenario 1. After installation of the system, the Permittee shall comply with and monitor for the 3-hour rolling average temperature limit under Scenario 2.	Minn. R. 7007.0800, subp. 11
Notify: due 30 days after Equipment Installation. The Permittee shall notify the MPCA when the installation of the new temperature monitoring system is complete. The notification shall include the date that the Permittee switched to Monitoring Scenario 2.	Minn. R. 7007.0800, subp. 11
B. LIMITS APPLICABLE UNDER BOTH SCENARIOS	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 90 percent control efficiency	Title I Condition: Limit to avoid major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2
The Permittee shall operate and maintain each thermal oxidizer any time that any process equipment controlled by the thermal oxidizer is in operation.	Title I Condition: Limit to avoid major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2
C. SCENARIO 1	hdr
Temperature: greater than or equal to 1200 degrees F absolute minimum at 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 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 major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2
D. SCENARIO 2	hdr
Temperature: greater than or equal to 1200 degrees F as a three-hour rolling average at 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 average minimum temperature limit is once again achieved. This shall be reported as a deviation.	Title I Condition: Limit to avoid major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2
E. 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. Under Scenario 2, the recording device shall also calculate the three-hour rolling average combustion chamber temperature.	Minn. R. 7007.0800, subp. 4 and 5
The Permittee shall maintain a continuous hard copy readout or computer disk file of the temperature readings. Once operating under Scenario 2, the Permittee shall also maintain the calculated three-hour rolling average temperatures for the combustion chamber.	Title I Condition: Monitoring for limit to avoid major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2; Minn. R. 7007.0800, subp. 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.	Minn. R. 7007.0800, subp. 4 and 5
Quarterly Inspections: At least once per calendar quarter, the Permittee shall inspect the control equipment internal and external system components, including but not limited to the refractory, heat exchanger, and electrical systems. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection.	Minn. R. 7007.0800, subp. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Banta Catalog - Minneapolis

Permit Number: 05300384 - 001

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, subp. 4, 5, and 14
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 destruction efficiency limit specified in this permit for this equipment (90%); o b. The destruction 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.	Title I Condition: Limit to avoid major source or modification under 40 CFR Section 52.21 and 40 CFR Section 63.2; Minn. R. 7007.0800, subp. 4 and 5
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.	Minn. R. 7007.0800, subp. 4, 5, and 14
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.	Minn. R. 7007.0800, subp. 14

TABLE B: SUBMITTALS

12/27/01

Facility Name: Banta Catalog - Minneapolis

Permit Number: 05300384 - 001

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:

Permit Technical Advisor
Permit Section
Air Quality 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:

Supervisor
Compliance Determination Unit
Air Quality 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

12/27/01

Facility Name: Banta Catalog - Minneapolis

Permit Number: 05300384 - 001

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility

TABLE B: RECURRENT SUBMITTALS

12/27/01

Facility Name: Banta Catalog - Minneapolis

Permit Number: 05300384 - 001

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Permit Issuance. 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 occured, the Permittee shall submit the report stating no deviations.	Total Facility
Annual Report	due 30 days after end of each calendar year following 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 the VOC and HAP 12-month rolling sum calculations for the previous calendar year. 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.	Total Facility
Compliance Certification	due 31 days after end of each calendar year following Permit Issuance (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 I
Facility Name: Banta Catalog
Permit Number: 05300384-001

VOC Calculation Methods

The Permittee shall calculate monthly VOC emissions using the formulas below. If the Permittee tracks material usage on a volume basis, the Permittee shall also record the necessary material density or VOC content in pounds/gallon, and perform the necessary conversions to calculate emissions in tons/month.

VOC (tons) = A + B + C + D + E + F + G – H

A = VOC emissions, in tons, from ink usage

A = [(U1 x V1 x (1-R) x (1-DE)) + (U2 x V2 x (1-R) x (1-DE)) + …..]/2000
U# = amount of each VOC-containing ink material used 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 material retained in 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 x V1 x (CA) x (1-DE)) + (U2 x V2 x (CA) x (1-DE)) + …..]/2000
U# = amount of each VOC-containing fountain solution used 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 x V1 x (1-CA)) + (U2 x V2 x (1-CA)) + …..]/2000
U# = amount of each VOC-containing fountain solution used 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 x V1 x (CA) x (1-DE)) + (U2 x V2 x (CA) x (1-DE)) + …..]/2000
U# = amount of each VOC-containing automatic blanket wash used 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. For materials that have a vapor pressure $\leq$ 10 mm Hg, CA = 0.40, for materials that have a vapor pressure > 10 mm Hg, CA = 0.
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 x V1 x (1-CA)) + (U2 x V2 x (1-CA)) + …..]/2000
U# = amount of each VOC-containing automatic blanket wash used 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. For materials that have a vapor pressure $\leq$ 10 mm Hg, CA = 0.40, for materials that have a vapor pressure > 10 mm Hg, CA = 0.

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

F = [(U1 x V1 x (CA)) + (U2 x V2 x (CA)) + …..]/2000
U# = amount of each VOC-containing manual wash solution used 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. For materials that have a vapor pressure $\leq$ 10 mm Hg, CA = 0.50, for materials that have a vapor pressure > 10 mm Hg, CA = 0.

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

G = [(U1 x V1) + (U2 x V2) + …..]/2000
U# = amount of each VOC-containing material used in the previous month, in pounds
V# = weight percent VOC in U#, as a fraction (e.g., 10 % is 0.10)

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

H = [(W1 x V1) + (W2 x V2) + …..]/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)

Waste may be credited at the individual variable level (e.g., A, B, C, etc.) or as a separate variable, H.

APPENDIX I
Facility Name: Banta Catalog
Permit Number: 05300384-001

Total and Individual HAP Calculation Methods

The Permittee shall calculate the monthly emissions of each individual HAP and total HAP, separately, using the formulas below. If the Permittee records material usage on a volume basis, the Permittee shall also record the necessary material density or HAP contents in pounds/gallon, and perform the necessary conversions to calculate emissions in tons/month.

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 x V1 x (1-R) x (1-DE)) + (U2 x V2 x (1-R) x (1-DE)) + …..]/2000
U# = amount of each HAP-containing ink material used 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 material retained in product, 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 x V1 x (CA) x (1-DE)) + (U2 x V2 x (CA) x (1-DE)) + …..]/2000
U# = amount of each HAP-containing fountain solution used 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 x V1 x (1-CA)) + (U2 x V2 x (1-CA)) + …..]/2000
U# = amount of each HAP-containing fountain solution used 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 x V1 x (CA) x (1-DE)) + (U2 x V2 x (CA) x (1-DE)) + …..]/2000
U# = amount of each HAP-containing automatic blanket wash used 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. For materials that have a vapor pressure $\leq$ 10 mm Hg, CA = 0.40, for materials that have a vapor pressure > 10 mm Hg, CA = 0.
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 x V1 x (1-CA)) + (U2 x V2 x (1-CA)) + …..]/2000
U# = amount of each HAP-containing automatic blanket wash used 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. For materials that have a vapor pressure $\leq$ 10 mm Hg, CA = 0.40, for materials that have a vapor pressure > 10 mm Hg, CA = 0.

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

F = [(U1 x V1 x (CA)) + (U2 x V2 x (CA)) + …..]/2000
U# = amount of each HAP-containing manual wash solution used 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. For materials that have a vapor pressure $\leq$ 10 mm Hg, CA = 0.50, for materials that have a vapor pressure > 10 mm Hg, CA = 0.

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

G = [(U1 x V1) + (U2 x V2) + …..]/2000
U# = amount of each HAP-containing material used 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 the specific HAP shipped in waste, other than rags, in tons

H = [(W1 x V1) + (W2 x V2) + …..]/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)

Waste may be credited at the individual variable level (e.g., A, B, C, etc.) or as a separate variable, H.

APPENDIX II
Facility Name: Banta Catalog
Permit Number: 05300384-001

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, kerosene, natural gas, or propane. *Banta has 37 space heaters with a total capacity of 17.746 MMBtu/hr*	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. *Banta has paper scrap generation and collection that is controlled and vented internally.*	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. *Banta has several gluing operations and 9 water-based ink jet units that qualify under this subpart.*	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(B)(1)	Infrared electric ovens	Minn. R. 7011.0110 (opacity)
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 and associated burners.	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
Facility Name: Banta Catalog
Permit Number: 05300384-001

Emissions Units Description from Delta

paper copy only

TECHNICAL SUPPORT DOCUMENT
For
BANTA CATALOG - MINNEAPOLIS
AIR EMISSION PERMIT NO. 05300384-001

This technical support document is for all the interested parties of the permit and to meet the requirements that have been set forth by the federal regulations and Minn. R. (40 CFR Section 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:

Owner Address	Facility Address (SIC Code: 2752)
Banta Corporation 225 Main Street Menasha, WI 54952	Banta Catalog 7401 Kilmer Ln Maple Grove, MN, Hennepin Cty Dennis Dickson, 763-315-8143

1.2. Description of the Facility

Banta Catalog is a commercial printing facility. The Facility consists of heatset web offset lithographic printing presses, dryers, ink jet printers, and pollution control equipment. The main sources of emissions are the press operations that have VOC emissions control equipment. The Facility also has several activities that qualify as insignificant activities under Minn. R. 7007.1300, subp. 3.

1.3 Permit History

Banta Catalog has an extensive air emissions permit history, with the first permit issued by the MPCA in 1985. Previous permits and their limits are listed in Attachment 4 of this TSD. The Facility was issued a total facility operating air emissions permit in 1991 that imposed limits on the Facility to avoid major source classification for New Source Review (40 CFR § 52.21). Those limits are amended and carried forward in this permit. The only other limits in the previous permit and its amendments are from Minnesota performance standards. Those limits are also carried forward and updated as necessary.

1.4 Description of any Changes Allowed with this Permit Issuance

This permit authorizes several changes that can occur during the life of the permit. Specifically, the permit authorizes the installation, replacement and reconfiguration of control equipment, and modification and replacement of the existing emissions units.

1.5 Facility Emissions

Table 1. Total Facility Potential to Emit Summary
See Attachment 2 of this TSD for more specifics

Pollutant	Presses and Inkjets (tpy)	Dryers and Oxidizers (tpy)	IAs (tpy)	Total Facility (tpy)
Particulate Matter (PM)	0	2.38	13.6	16.0
PM less than 10 microns (PM_{10})	0	2.38	13.6	16.0
Nitrogen Oxides (NO_x)	0	68.97	7.4	76.4
Sulfur Oxides (SO_x)	0	1.09	0.04	1.13
Volatile Organic Compounds (VOC)	240	1.82	1.31	243
Carbon Monoxide (CO)	0	26.3	6.22	32.5
Total HAPs	23.5	0.6	0.14	24.24

tpy = tons per year

Table 2. Facility and Permit Classification

Program	Major Source	*Synthetic Minor	*Minor
Prevention of Significant Deterioration		VOC	
Nonattainment Area Review	NA	NA	NA
Part 70 Permit Program	VOC		
Part 63 National Emissions Standards for Hazardous Air Pollutants (NESHAP)		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.

2. Regulatory and/or Statutory Basis

The Facility has taken limits to avoid major source classification for New Source Review (40 CFR § 52.21) and the NESHAP program (40 CFR pt. 63) but is a major source under the federal operating permits program (40 CFR pt. 70). While the Permittee is considered major for NESHAP program prior to this permit being issued, the printing and publishing NESHAP does not apply since they are not a flexographic printer (as defined in 40 CFR § 63.822(a)).

Table 3 gives a summary of the significant sources of emissions and the applicable regulations and standards. See Attachment 1 of this TSD for a complete listing of the permit limits and their basis.

Table 3. Regulatory Overview of Facility

Level*	Applicable Regulations	Comments:
TF	Minn. R. 4410.4300 and Minn. R. 4410.4400	EAW Triggers. The permit has a cap set at greater than 100 tons over current emissions. This language warns the Permittee that this rule still applies.
	40 CFR § 52.21	Prevention of Significant Deterioration (PSD). Limits taken to avoid major source classification under PSD for combustion emissions from the control equipment.
	Minn. R. 7011.0715	Standards of Performance for Post 1969 Industrial Process

Level*	Applicable Regulations	Comments:
		Equipment. This applies to the press operations and the inkjet printers and is listed here to simplify the permit.
GP 001 (Total Facility VOC Limits)	40 CFR § 52.21	Prevention of Significant Deterioration (PSD). Limits taken to avoid major source and modification classification under PSD for all noncombustion emissions of VOC. It is a rolling limit due to substantial and unpredictable variations in operation. This permit pre-authorizes the replacement and modification of the listed units. All emissions tracked under the caps.
	40 CFR § 63.2	National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Source Categories. Limits taken to avoid major source classification under the NESHAPs for both total and individual HAPs.
GP 002 (Dryers and Oxidizers)	Minn. R. 7011.0610	Standards of Performance for Direct Heating Equipment. Fuel limited to natural gas and propane only.
GP 003 (Press Operations)	40 CFR § 52.21 and 40 CFR § 63.2	PSD and NESHAPs. Limits taken to avoid major source and modification classification under PSD and NESHAP program. This includes a requirement to control emissions from press operations with pre-authorization to replace, reconfigure, or add control equipment meeting the requirements of the permit.
	Minn. R. ch. 7017	Minnesota Performance Testing Rule. Requirements to test specific oxidizers for VOC control efficiencies.
GP 004 (catalytic oxidizers)	40 CFR § 52.21 and 40 CFR § 63.2	PSD and NESHAPs. Control efficiency and other operating parameter requirements to limit VOC PTE to avoid major source classification under PSD (for future modifications) and NESHAP program.
GP 005 (thermal oxidizers)	40 CFR § 52.21 and 40 CFR § 63.2	PSD and NESHAPs. Control efficiency and other operating parameter requirements to limit VOC PTE to avoid major source classification under PSD (for future modifications) and NESHAP program.

*Level -- EU = emission unit, GP = group, TF = =total facility, SV = stack/vent, CE = control equipment

3. Technical Information

3.1. Pre-authorized Changes

As briefly described earlier, the permit pre-authorizes certain changes. The Permittee may modify or replace the existing equipment, and add, modify, or reconfigure the various air pollution control equipment, so long as all permit conditions are met.

While the permit allows the replacement or installation of certain equipment, it does not allow any changes that would trigger a new applicable requirement not contained in the permit. The permit sets 12-month rolling limits on VOC and HAP emissions, so annual VOC and HAP emissions cannot increase due to any of the pre-authorized changes. All applicable requirements and necessary monitoring are in the permit. The replacement of existing units with similar technology and capacity units, and the changing or

modification of existing units as specified in the permit, will not cause an emissions increase; so they are not modifications and can be made without the need for an amendment.

3.2. Potential to Emit Calculations

Attachment 2 to this TSD contains detailed spreadsheets and supporting information prepared by the MPCA. Selected calculations submitted by the Permittee are in Attachment 3.

Table 1 of this document summarizes the potential to emit for various HAPs. These HAPs and their PTEs are based on the current and projected coatings and formulations for this Facility. The Facility can change materials at any time, as long as the new materials continue to meet the various permit limits. While the numbers and chemicals in Table 1 are intended to project the various HAPs the Facility may emit, the Facility is not currently restricted to these coatings and formulations; therefore, the HAPs and PTEs of those HAPs may change after permit issuance.

Printing Operations
The Permittee completed calculations using the MPCA guidance for printers. The basic procedure is a mass balance approach assuming certain percentages of materials are captured by the dryer and vented to the control device. All calculations are based on worst-case material contents (e.g., highest VOC, highest HAPs). The controlled VOC emissions are not considered condensable particulate for applicability purposes. See documentation in Attachment 2 of this TSD.

InkJet Printers
These calculations are also based on a mass balance (e.g., machine capacity x maximum content) and are completed for each type of inkjet printer.

Combustion
These calculations are based on equipment capacity and EPA's published emissions factors for the fuels burned. The dryers and oxidizers only burn natural gas and propane.

3.3. Permit Calculations

Section 3.4 of this TSD explains the various monitoring required by the permit. For the VOC and HAP limits, this includes calculating actual emissions on a monthly basis. This involves using specified formulas from Appendix I of the permit. These formulas are based on MPCA guidance for calculating actual emissions from printers. Specifically, the calculations assume that 100% of inks are "carried over" to the dryer (i.e., capture efficiency) and therefore controlled, 70% of fountain solutions are captured, 40% of blanket wash (with certain vapor pressure restrictions) is captured, and 50% of manual wash solutions are assumed to stay in the waste rags shipped off site (with certain vapor pressure restrictions).

These same assumptions are used for the HAP calculations. While these assumptions might not apply to all 188 listed HAPs, they do apply to the HAPs used at printers – all are similar solvent materials used in the various wash solutions. The vapor pressure restrictions apply to the HAPs as well. In terms of the control efficiencies given for VOC

versus HAP, it was determined that due to the types of HAPs used at this facility, the VOC efficiency is representative of the HAP efficiency. Testing for specific HAP destruction efficiencies is not reasonable since they are small components of the vapor stream (e.g., only used in cleanup and a low percentage of those materials). See Attachment 2 of this TSD for more information about control credits.

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 for the remaining applicable requirements, the MPCA considered the following:

- the initial compliance method;
- the format of the applicable requirement;
- the likelihood of violating the applicable requirement;
- whether add-on controls are necessary to meet the emission limit;
- 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.

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. Emission Units Subject to Periodic Monitoring

EU/ GP/ CE	Emission limit (Basis)	Additional Monitoring	Discussion
Total Facility	Combustion Capacity $\leq$ 75 MMBtu/hr (limit to avoid NSR)	Recordkeeping and notifications (see GP 003), annual reporting of total capacity.	
VOC Limits: GP 001	VOC $\leq$ 240 tons per year, on a 12-month rolling basis (limit to avoid NSR) Individual HAP $\leq$ 9 tpy on a 12-month rolling basis (avoid NESHAP)	Recordkeeping: Daily records of coating usage; On-going MSDS records of coating contents; Monthly calculations of emissions.	Records can be generated on a daily basis for inks, based on meter readings. Records are generated whenever fountain and wash solutions are used, also from meter readings – sometimes this happens multiple times during the day and sometimes every couple days. The remaining materials are very low volume and will be based on monthly usage records.
GP 001 continued	Total HAP $\leq$ 23.5 tpy on a 12-month rolling basis (avoid NESHAP)		Credit can be taken for waste materials collected and shipped off-site (dispensed - waste = emissions). Since this is done at most monthly, calculating emissions more frequently than monthly would result in

EU/ GP/ CE	Emission limit (Basis)	Additional Monitoring	Discussion
			large spikes (while waste is accumulating) and dips (when waste is shipped) – resulting in possible paperwork violations and days with negative emissions. For these reasons, 12-month rolling limits are reasonable for this Facility. The VOC and total HAP limits are set low enough to account for the increased VOC and HAP emissions from the pre-authorized combustion sources.
	Modification and replacement of existing units	On-going record of any equipment that is replaced	Any replaced equipment must meet all the applicable requirements in the permit. If a changed unit would trigger a different requirement, the change cannot be made without an amendment. In addition, emissions must be tracked and calculated as required by the permit. The permit also requires that all units are labeled and inventoried (at TF level).
Direct Heating Equipment: GP 002	PM: $\leq$ variable depending on airflow Opacity: $\leq$ 20 % (Minn. R. 7011.0610)	None	All units use natural gas or propane; therefore, the likelihood of violating either of the emission limits is very small. The Permittee can demonstrate that these units will continue to operate such that emissions are well below the emission limits by only burning natural gas or propane. Since this is a permit condition, the semi-annual deviations report will document any deviations from this condition. Design based PTE for each unit, using AP-42, is 0.0072 compared to the rule limit of 0.4 lb/MMBtu.
	Limited to natural gas and propane, by design	Fuel purchase records.	
Press Operations: GP 003	Control requirement	See GP 004 and GP 005 for monitoring of controls	Testing requirements are listed at GP 003 since the Permittee can choose which units to test by the deadlines. Previously, Press 4 tested in compliance. Press 5 was below the current efficiency limit, but the test results are questionable. Therefore, the Press 5 operations must be tested first within 180 days of issuance. The remaining untested presses must be tested once during the permit term (one within 3 years and one within 4 years). There are no defined testing requirements for new controls in the permit. Currently,

EU/ GP/ CE	Emission limit (Basis)	Additional Monitoring	Discussion
			the Permittee has no plans to install new controls. With budgeting and planning constraints, any new controls could not likely be added until at least the third year of the permit. The MPCA will be notified as required by the permit. The MPCA can decide at that time whether or not to require testing, either by using our general authority or by re-opening the permit. This decision would be based on many factors, including which controls were replaced, the configuration and specifications of the new system, and the results of the testing required by the permit.
	Replacement, reconfiguration, and installation of additional controls	Recordkeeping and Notification	7-day notice prior to making a control equipment change as well as records and annual report of all changes made.
Catalytic Oxidizers: GP 004	VOC: Control Efficiency of 90% (limit to avoid NSR + NESHAP) Temperature limit $\geq$ 650 °F inlet	Temperature monitoring, Recordkeeping, O & M, inspections	Monitoring based on the Minnesota Performance Standard for Control Equipment is adequate to have a reasonable assurance of compliance. The permit allows two temperature monitoring scenarios. Currently, the Permittee does not have the capability to monitor the 3-hour rolling average temperature and must use the absolute minimum option (e.g., any temperature below the 3-hour tested average is considered a deviation). They plan to purchase software that will calculate the 3-hour averages during the next calendar year. When it is installed, the Permittee must notify the MPCA that they have begun monitoring the average temperatures.
Thermal Oxidizers: GP 005	VOC: Control Efficiency of 90% (limit to avoid NSR + NESHAP) Temperature limit $\geq$ 1200 °F at the combustion chamber	Temperature monitoring, Recordkeeping, O & M, inspections	Monitoring based on the Minnesota Performance Standard for Control Equipment is adequate to have a reasonable assurance of compliance. The temperature scenarios also apply to GP 005.

3.5. Deviations from Delta Guidance

In general, the permit meets the MPCA Delta Guidance for ordering and grouping of requirements. One area where this permit deviates slightly from Delta guidance is in the use of appendices. While appendices are fully enforceable parts of the permit, in general, any requirement that the MPCA thinks should be tracked (e.g., limits, submittals, etc.), should be in Table A or B. The main reason is that the appendices are word processing sections and are not part of the tracking system. Violation of the appendices can be enforced, but the computer system will not automatically generate the necessary enforcement notices or documents. Staff must generate these.

Appendix I contains the specific calculation procedures for VOC and HAP emissions. These procedures are too complex to enter into Delta and must go in an Appendix.

Appendix II is a listing of the Facility's Insignificant Activities and their applicable requirements. This is a fairly standard way to include these in the permit, since it is highly unlikely the MPCA would need to have these as trackable items in Delta.

Appendix III is a printout from Delta of the control equipment and emissions unit description, Forms GI-0BA and GI-05B. This documents the correlation of specific emissions units to specific control equipment. Delta does not show this data as part of the "associated items" in Table A of the permit.

Another area where the permit deviates from guidance is in the use of groups for requirements that apply to individual pieces of equipment. This is done in order to streamline the permit.

3.6. Insignificant Activities

The Permittee listed several current insignificant activities in the permit application and supplemental submittals, as noted in Table 5. The permit is required to include periodic monitoring for all emissions units, including insignificant activities, per EPA guidance. The insignificant activities at this Facility are only subject to general applicable requirements. Using the criteria outlined earlier in this TSD, the following table documents the justification why no additional periodic monitoring is necessary for the current insignificant activities, and likely future ones, that might be located at this site. See Attachment 2 of this TSD for PTE information for the insignificant activities.

Table 5. Insignificant Activities

Insignificant Activity	Currently on site? (Y/N)	General Applicable Emission limit	Discussion
Space heaters fueled by kerosene, natural gas or propane	Y	PM, variable depending on airflow Opacity $\leq$ 20% with exceptions (Minn. R. 7011.0610)	For these units based on the fuels used and published emissions factors, it is highly unlikely that they could violate the applicable requirement. These units are vented inside a building, so testing is not feasible.

Insignificant Activity	Currently on site? (Y/N)	General Applicable Emission limit	Discussion
Infrared electric ovens	N	Opacity ≤ 20% (Minn. R. 7011.0110)	While no emissions estimation method exists for these units, based on general knowledge of how they operate, it is highly unlikely that they could generate visible emissions. In addition, these units would be operated and vented directly into the building, so monitoring or testing is not feasible.
Processing operations that are controlled and vented inside 100% of the time	Y	PM, variable depending on airflow Opacity ≤ 20% (Minn. R. 7011.0715)	For these units, based on control equipment performance, it is highly unlikely that they could violate the applicable requirement. In addition, these units are operated and vented inside a building, so testing for PM or opacity is not feasible.
Brazing, soldering or welding equipment	N	PM, variable depending on airflow Opacity ≤ 20% (Minn. R. 7011.0715)	For these units, based on EPA published emissions factors, it is highly unlikely that they could violate the applicable requirement. In addition, these units are operated and vented inside a building, so testing for PM or opacity is not feasible.
Blueprint copiers and photographic processes	N	Opacity ≤ 20% (Minn. R. 7011.0110)	While no emissions estimation method exists for these units, based on general knowledge of how they operate, it is highly unlikely that they could generate visible emissions. In addition, these units would be operated and vented directly into the building, so monitoring or testing is not feasible.
Cleaning operations: alkaline/phosphate cleaners and associated cleaners and associated burners	N	PM, variable depending on airflow Opacity ≤ 20% (Minn. R. 7011.0610 + Minn. R. 7011.0715)	For these units, there are some factors available for the burners, but very little information regarding the cleaning operation itself. However, based on general knowledge of how they operate, it is highly unlikely that they could violate the applicable requirement or that testing would be feasible.
Infrequent use of spray paint equipment for routine housekeeping or plant upkeep activities	N	PM, variable depending on airflow or process weight rate Opacity ≤ 20% (Minn. R. 7011.0715)	While spray equipment will have the potential to emit particulate matter, these particular activities are those not associated with production, so they would be infrequent and usually occur outdoors. Testing or monitoring is not feasible.
Individual units that have potential emissions of less than 1 tpy of various criteria pollutants	Y	PM, variable depending on airflow Opacity ≤ 20% (Minn. R. 7011.0715)	These units consist of gluing and water-based inkjet printers. Neither is reasonably expected to generate particulate matter. It is highly unlikely that they could violate the applicable requirement. In addition, these units are operated and vented inside a building, so testing for PM or opacity is not feasible.

4. Conclusion

Based on the information provided by Banta Corporation, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 05300384-001 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Permit Team: Peggy Bartz, Permit Engineer; Bob Berg, Enforcement

Attachments:

1 CD-01 Forms
2 MPCA Emissions Calculations
3 Permittee's Calculations
4 Emission Units Description
5 Previous Air Permits
6 Comments and MPCA Response

ATTACHMENT 1
COMPLIANCE PLAN
(Form CD-01, paper copy only)

ATTACHMENT 2
MPCA EMISSIONS CALCULATIONS

ATTACHMENT 2
MPCA CALCULATIONS

This attachment contains the following spreadsheets:

Title	**Description**
PTE Summary	Summary of VOC and HAP PTEs from all spreadsheets.
Press Operations	Tables showing the VOC and HAP PTEs from these operations.
Inkjet Printers	PTE calculations for the various inkjet printers.
Combustion	PTE calculations for the dryers and oxidizers.
Insignificant Activities	PTE calculations as needed for these units.

ATTACHMENT 3
PERMITTEE'S CALCULATIONS
(paper copy only)

ATTACHMENT 4
FACILITY DESCRIPTION FROM DELTA
(paper copy only)

ATTACHMENT 5
AIR PERMIT HISTORY

ATTACHMENT 5
BANTA CATALOG – MPLS
AIR PERMIT HISTORY

Permit Number	Permit Type	Issuance Date	Activity	Limits	Increase	Conclusion
2032-85-OT-1	Total facility operating permit	April 24, 1985	install and operate a web offset press and dryers with pollution control equipment (2 heat exchanger-condensers w/demister)	Industrial process equipment rule, operate and maintain controls – throughputs are all listed in the permit	No TSD, so don't know. Estimated actual emissions are listed in permit as 16 tpy of VOC.	Minnesota rules limits are updated as needed.
Amendment 1 to 2032-85-OT-1	Amendment (no type listed)	July 10, 1985	Looks like an additional press and two dryers	no new limits (testing)	No TSD, so don't know.	NA
Amendment 2 to 2032-85-OT-1	Amendment	Dec. 6, 1989	install and operate a new web offset press and dryer with pollution control equipment (mfr. listed but not type)	no new limits (testing)	TSD says that existing controlled PTE is 50 tpy (both VOC and TSP). Increase of 25 tpy for each due to the mod (controlled).	NA
2032-91-OT-2	Total facility operating permit (no public notice)	February 8, 1991	no new stuff listed, 3 presses and 4 dryers total, but lists controls as afterburners	Synthetic minor for PSD. PM – 40.4 tpy from Point 1 (presses 1 & 2 and dryers) (statute citations) PM – 20.2 tpy from Point 2 (press 3 and dryer) VOC – 60.6 tpy from all units (52.21 cite) Ink Usage – 2575 tpy & 215 ton/month (says this gives you 60.6 tpy with controls) Clean-up solvent Usage – 22 tpy 1200 °F for afterburners, 92% control assumed in calcs	none – all existing units (total PTE is TSD is 77 tpy (clean-up after controls is listed as 16 tpy))	These limits were replaced by later permit.

ATTACHMENT 5
BANTA CATALOG – MPLS
AIR PERMIT HISTORY

Permit Number	Permit Type	Issuance Date	Activity	Limits	Increase	Conclusion
Amendment 1 to 2032-91-OT-2	Amendment (no public notice)	March 22, 1993	Installation of a temporary offset press (No. 5)and a new permanent press (No. 4) with catalytic oxidizer	IPE listed, VOC = 98 tpy rolling limit (statute and EAW citation), VOC capture and destruction testing required (no control temp. or eff. listed in permit)	Unrestricted increase is 221.5 tpy, with controls and limits, 98 tpy (for EAW avoidance). Total PTE now at 175 tpy.	These limits were replaced by later permit.
Amendment 2 to 2032-OT-91-2	Major Amendment (public notice)	July 6, 1994	Allows Press 5 to be permanent and controlled by CO from Press 3. Requires removal of Press No. 3.	Replaces VOC limits with new TFP limit of 248 tpy (after completion of EAW and letter of approval). Presses 1 & 2 (Pt. 1) controlled by CO with 650 °F inlet limit, Press 5 (now Pt. 2), Press 4 (Pt. 3); all CO's have 650 °F inlet limit and 0.3 sec retention time. Testing required for both capture and control at low and high loading. Deleted PM limits of 40.4 and 20.2.	Increase after limits is 73 tpy of VOC but EAW required due to removal of 98 tpy limit on specific mod.	These limits are replaced by new permit limits.
05300384-008	Major Amendment I/O (public notice)	April 2, 1996	Installation and operation of a press, two thermal oxidizers, and 16 ink jet printers	Minn. rule limits, Press 6 overall control at 90% , min temp at 1200 °F, ink waste tracking	Unlimited PTE of new units is 194 tpy. Limited by existing cap of 248, so no increase after limits.	These limits are replaced by new permit limits.

ATTACHMENT 6
COMMENTS AND MPCA RESPONSE

ATTACHMENT 6
COMMENTS AND MPCA RESPONSE

During the 30-day public comment period, the MPCA received one comment letter from the Permittee. The text from the comment letter is included below. The MPCA response to that comment is included after the Permittee's letter. This comment did not result in any changes to the draft permit.

COMMENT

Submitted via letter and e-mail dated October 26, 2001

"This written request for changes in the draft permit for Banta Catalog - Minneapolis is submitted because one item requested in Banta's letter and discussed in our phone conference (references (b) and (c)) remain unchanged. As pointed out in our previous communications, this condition is not physically possible to achieve.

Banta proposes the following change to the wording.

1. Table A: Limits And Other Requirements, Subject Item GP005, page A-11,C. Scenario 1:

   Temperature: greater than or equal to 1200 degrees F absolute minimum at the Combustion Chamber until a new minimum is set pursuant to Minn. R. 7017.2025, subp 3, based on the average temperature recorded during the most recent MPCA approved performance test where ***90 percent control efficiency*** ~~*compliance*~~ *for VOC emissions was demonstrated. If the temperature drops ...*

and Table A: Limits And Other Requirements, Subject Item GP005, page A-11, D. Scenario 2:

   Temperature: greater than or equal to 1200 degrees F as a three-hour rolling average at the Combustion Chamber until a new minimum is set pursuant to Minn. R. 7017.2025, subp 3, based on the average temperature recorded during the most recent MPCA approved performance test where ***90 percent control efficiency*** ~~*compliance*~~ *for VOC emissions was demonstrated. If the temperature drops ...*

   A compliance test as described in this section is to be run under the conditions of "worst case" or maximum ink. The limits determined by the compliance test and set by subp.3 specifically state that the unit cannot then exceed these *maximum* conditions. The percent control efficiency achieved during this test will be significantly higher than the minimum. Also, the temperature will be a high temperature that cannot be sustained as the minimum because the high ink volume provides a high fuel volume that causes a maximum, not minimum, combustion chamber temperature.

   Therefore the minimum set temperature cannot be tied to measurements made during a compliance test that utilizes maximum ink conditions - or really even average ink conditions. If the lowest (minimum) combustion chamber temperature is to be changed from 1200 degrees F based on an emissions test, that test must be one that measures the temperature under the conditions of minimum control efficiency.

If you have additional questions, please contact Robert Kohl at (920) 751-7534 or Dennis Dickson at (763) 315-8143."

RESPONSE

Sent via e-mail on October 30, 2001.

"Dennis, this e-mail is being sent to document our phone conversations regarding the comment letter you sent on October 26, 2001. I am using e-mail instead of a formal letter in order to expedite the processing of the draft permit. I will print this e-mail and put a copy in your file.

As we discussed, the permit language has already been revised somewhat from what was quoted in your letter. The language that appears twice on page A-11 is:

> *Temperature: greater than or equal to 1200 degrees F absolute minimum at the Combustion Chamber unless a new minimum is 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 temperature drops ...*

Note that the word "unless" replaced "until" as discussed in our phone conference during permit drafting. The change requested in your October letter is as follows:

> *....based on the average temperature recorded during the most recent MPCA approved performance test where **90 percent control efficiency** ~~compliance~~ for VOC emissions was demonstrated. If the temperature drops ...*

This change will not be made to the draft permit. It is not that the clarification you requested is not correct (the referenced VOC limit for which compliance will be demonstrated is the 90% VOC control efficiency), but rather that is not necessary and involves changing template language.

The only limit that applies to these devices is the control efficiency, so it is the only possible limit that could be referenced. In addition, the performance testing requirement specifically states that it is for the VOC efficiency. So while the change might be more clear, it is not necessary. The language is template and used in all oxidizer permits and making changes to tailor it to specific facilities is something the MPCA does not wish to do unless the language would be incorrect. Since that is not the case, the template language is adequate."