

**AIR EMISSION PERMIT NO. 12300486-002
IS ISSUED TO**

Southern Bag Corporation

HOOD FLEXIBLE PACKAGING
3075 Long Lake Road
St. Paul, Ramsey County, Minnesota 55113

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

Permit Type	Application Date
Total Facility Operating Permit	3/3/95
Major Permit Amendment	1/8/98

This permit authorizes the Permittee to operate and modify the stationary source at the address listed above unless otherwise noted in Table A. The Permittee must comply with all the conditions of the permit and with all general conditions listed in Minn. R. 7007.0800, subp. 16, and all standard permit requirements listed in 40 CFR § 70.6(a) which are incorporated by reference. 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 as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Permit Type: Federal ; Part 70

Issue Date: July 15, 1998

Expiration:
All Title I Conditions do not expire.

Michael J. Sandusky
Division Manager
Air Quality Division

for Peder A. Larson
Commissioner
Minnesota Pollution Control Agency

TRW:lao

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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	(612)296-6300
Outside Metro Area	1-800-657-3864
TTY	(612)282-5332

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

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

PERMIT SHIELD:

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Any requirements which have been determined not to apply are listed in Table A of this permit.

The permit shield, however does not apply to: Minn. R. ch. 7030 (Noise Pollution Control).

FACILITY DESCRIPTION:

Hood Flexible Packaging (formerly known as Sengewald, USA Inc.) produces printed plastic bags and sheets. The bags are formed from plastic bead feedstock which is heated and blown into a large bubble which is then cooled and rolled into a sheet. The rolls of plastic are then printed on with one of the four flexographic printing presses at the facility. After being printed, the rolls of plastic are formed into bags by one of the eleven bag forming lines. The sources of air emissions at the facility are the four printing presses and their associated dryers.

Currently the facility has two presses that vent to a catalytic oxidizer and two that are uncontrolled. The construction authorized with this permit allows a new press to be installed in place of one of the uncontrolled presses. This new press will be vented to the oxidizer so that three of the four presses at the facility will be controlled by the oxidizer after construction is completed.

The facility currently operates under a permit that requires the facility to track its inventory of inks and solvents so that it can calculate its volatile organic compound emissions based on a mass balance approach. This permit will utilize an approach that is similar.

TABLE A: LIMITS AND OTHER REQUIREMENTS

07/15/98

Facility Name: Hood Flexible Packaging

Permit Number: 12300486 - 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
FACILITY VOC LIMIT AND RECORDKEEPING	hdr
<p>Volatile Organic Compounds: less than or equal to 240 tons/year calculated on a 12 month rolling sum basis. Previous records at the facility will be used for the first eleven months after permit issuance. The Permittee shall maintain a record of the 12 month rolling sum at the facility for a period of 5 years from the date it was generated.</p>	Title I Condition: limit taken to avoid classification as a major source under 40 CFR Section 52.21
<p>Monitoring: The Permittee is required to complete monthly VOC emission calculations and 12 month rolling sum calculations by the 15th day of each month for the preceding month.</p>	Minn R. 7007.0800, subp. 4
<p>Recordkeeping: VOC emissions from the facility will be calculated monthly by; 1) determining the VOC use and then, 2) taking the control efficiency into consideration for the emission units which are controlled. If the control equipment is bypassed or not operating, a control efficiency of 0% shall be used for those periods.</p>	Title I Condition: limit taken to avoid classification as a major source under 40 CFR Section 52.21
<p>Recordkeeping: 1) the total facility VOC use for each month shall be determined as follows;</p> $U = U_i + U_s$ $U_i = 0.70(V_i)$ $U_s = 1(V_1s + A_s - V_2s)$ <p>where,</p> <p>U = total facility VOC use per month (lb VOC/mo) U_i = total facility VOC use per month from inks (lb VOC/mo) U_s = total facility VOC use per month from solvents (lb VOC/mo) 0.70 = worst case VOC content of the inks (wt %) V_i = total volume of inks sent to the four presses for the month (lb ink) 1 = VOC content of the solvents (100 %) V_{1s} = total volume of solvents at the facility at the start of the month (lb solvent) A_s = all additions of solvents received for the month (lb solvent) V_{2s} = total volume of solvents at the facility at the end of the month (lb solvent)</p>	Minn R. 7007.0800, subp. 5
<p>Recordkeeping: 2) the VOC emissions for the facility shall be determined each month as follows;</p> $E = (P_1/P_t)U + (1-CE)U((P_2 + P_3 + P_4)/P_t)$ $P_1 = EF_1(h_1)$ $P_2 = EF_2(h_2)$ $P_3 = EF_3(h_3)$ $P_4 = EF_4(h_4)$ $P_t = P_1 + P_2 + P_3 + P_4$ <p>where,</p> <p>E = total facility VOC emissions, reflecting control equipment operation P₁ = potential emissions of press number 1 (lb VOC/mo) P₂ = potential emissions of press number 2 (lb VOC/mo) P₃ = potential emissions of press number 3 (lb VOC/mo) P₄ = potential emissions of press number 4 (lb VOC/mo) P_t = potential emissions of all four presses (lb VOC/mo) U = total facility VOC use (lb VOC/mo), see previous requirement CE = control efficiency of the catalytic oxidizer (61%) (continued)</p>	Minn R. 7007.0800, subp. 5
<p>Recordkeeping: 2) continued</p> <p>EF₁ = press specific emission factor for press 1 (31 lb VOC/hr) EF₂ = press specific emission factor for press 2 (39 lb VOC/hr) EF₃ = press specific emission factor for press 3 (45 lb VOC/hr) EF₄ = press specific emission factor for press 4 (52 lb VOC/hr) h₁ = hours press 1 ran for the month (hr/mo) h₂ = hours press 2 ran for the month (hr/mo) h₃ = hours press 3 ran for the month (hr/mo) h₄ = hours press 4 ran for the month (hr/mo)</p>	Minn R. 7007.0800, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

07/15/98

Facility Name: Hood Flexible Packaging

Permit Number: 12300486 - 001

Recordkeeping: Once each month: 1) take and record the reading from the hour meter on each press, and 2) calculate the number of hours each press was operated for the month.	Minn R. 7007.0800, subp. 5
GENERAL TOTAL FACILITY REQUIREMENTS	hdr
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. Include in the plan corrective actions to be taken if the destruction efficiency of the catalyst is less than 95%, as indicated by the testing of a sample of the catalyst.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Monitoring Equipment: Install or make needed repairs to monitoring equipment within 60 days of issuance of the permit if monitoring equipment is not installed and operational on the date the permit is issued.	Minn. R. 7007.0800, subp. 4(D)
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
Shutdowns: 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. At the time of notification, notify the Commissioner of the cause of the shutdown and the estimated duration. Notify the Commissioner again when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdowns: 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. At the time of notification or as soon as possible thereafter, the permittee shall also inform the Commissioner of the cause of the breakdown and the estimated duration. Notify the Commissioner again 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
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)
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)
Record keeping: 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)

TABLE A: LIMITS AND OTHER REQUIREMENTS

07/15/98

Facility Name: Hood Flexible Packaging

Permit Number: 12300486 - 001

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 strip-chart 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 federally enforceable.	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: Upon presentation of credentials and other documents as may be required by law, allow the Agency, or its representative, to enter the Permittee's premises to have access to and copy any records required by this permit, to inspect at reasonable times (which include any time the source is operating) any facilities, equipment, practices or operations, and to sample or monitor any substances or parameters at any location.	Minn. R. 7007.0800, subp. 9(A)
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

07/15/98

Facility Name: Hood Flexible Packaging

Permit Number: 12300486 - 001

Subject Item: CE 001 Catalytic Afterburner w/Heat Exchanger**Associated Items:** EU 002 Press 10DF8CNC

EU 003 Press 34DF

EU 004 Press 34DF8CNC

What to do	Why to do it
EMISSION LIMITS	hdr
Control Efficiency: greater than or equal to 61% (control efficiency is calculated as 64% capture efficiency multiplied by the destruction efficiency demonstrated during the most recent performance test)	Title I Condition: limit taken to avoid classification as a major source under 40 CFR Section 52.21
General: Route all emissions from EU 002, EU 003, and EU 004 to the catalytic oxidizer at all times except for emergencies.	Title I Condition: limit taken to avoid classification as a major source under 40 CFR Section 52.21
TEMPERATURE AND MONITORING REQUIREMENTS	hdr
Temperature: greater than or equal to 550 degrees F as measured at the inlet to, and outlet of, the catalyst bed until a new minimum is set pursuant to Minn. R. 7017.2025, subp. 3, based on the average temperature recorded during the most recent performance test where compliance for VOC emissions was demonstrated.	Title I Condition: limit taken to avoid classification as a major source under 40 CFR Section 52.21
Monitoring: The Permittee shall install the necessary monitoring equipment for measuring the recording the temperature as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the process is in operation.	Title I Condition: limit taken to avoid classification as a major source under 40 CFR Section 52.21
Monitoring QA/QC: Conduct a test of the inlet and outlet temperature monitors at least annually. The temperature monitor must be within +/- 5 degrees Fahrenheit of the reference temperature monitor.	Minn. R. 7007.0800, subp. 4
STACK TESTING REQUIREMENTS	hdr
Initial Performance Test: due 180 days after Initial Startup of new press 10DF8CNC (EU002) to measure VOC destruction efficiency	Title 1 Condition: limit taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Initial Performance Test	Minn. R. 7017.2030, subp. 4
CATALYST SAMPLING AND ANALYSIS	hdr
Sample Analysis: due before end of each 24 months following Permit Issuance of catalytic oxidizer operation. The Company must send a sample of the catalyst to a laboratory, as designated by the manufacturer, to test the catalyst's destruction efficiency. For test results showing a destruction efficiency of less than 95%, follow the corrective actions contained in the facility operation and maintenance plan.	Title I Condition: limit taken to avoid classification as a major source under 40 CFR Section 52.21
RECORDKEEPING/REPORTING REQUIREMENTS	hdr
Control Equipment Bypasses: Record the date and time of each catalytic oxidizer bypass period.	Title I Condition: limit taken to avoid classification as a major source under 40 CFR Section 52.21
Control Equipment Bypasses: Report all catalytic oxidizer bypasses in the facility's semiannual deviation report.	Minn. R. 7007.0800, subp. 6
Recordkeeping: The Permittee shall maintain either a continuous hard copy readout of the inlet and outlet temperatures, or maintain a hard copy of manual readings taken at least every 15 minutes.	Title I Condition: limit taken to avoid classification as a major source under 40 CFR Section 52.21
Recordkeeping: The Permittee shall maintain records of the catalyst bed temperatures and catalyst destruction efficiency tests at the facility for a period of 5 years from the time the records were created.	Title I Condition: limit taken to avoid classification as a major source under 40 CFR Section 52.21

TABLE B: SUBMITTALS

07/15/98

Facility Name: Hood Flexible Packaging
Permit Number: 12300486 - 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

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

07/15/98

Facility Name: Hood Flexible Packaging

Permit Number: 12300486 - 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
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup of new press 10DF8CNC (EU002)	EU002
Performance Test Notification (written)	due 30 days before Initial Performance Test	CE001
Performance Test Plan	due 30 days before Initial Performance Test	CE001
Performance Test Report	due 45 days after Initial Performance Test	CE001

TABLE B: RECURRENT SUBMITTALS

07/15/98

Facility Name: Hood Flexible Packaging

Permit Number: 12300486 - 001

What to send	When to send	Portion of Facility Affected
Report	due before end of each calendar month following Sample Analysis . Include in this report the results of the catalyst destruction efficiency test.	CE001
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 occurred, the Permittee shall submit the report stating no deviations.	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 U.S. EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility
Emissions 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.	Total Facility

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 12300486-002

This Technical Support Document (TSD) is for all the interested parties of the permit. The purpose of this document is to set forth the legal and factual basis for the permit conditions, including references to the applicable statutory or regulatory provisions.

1. General Information

1.1. Applicant and Stationary Source Location:

Owner and Operator Address and Phone Number (list both if different)	Facility Address (SIC Code: 3081/2759)
Southern Bag Corporation P.O. Box 2310 25 Woodgreen Place Madison, MS 39110	Hood Flexible Packaging 3080 Long Lake Road St. Paul, Minnesota 55113 Ramsey County

1.2. Description of the facility

Hood Flexible Packaging (formerly known as Sengewald, USA Inc.) produces printed plastic bags and sheets. The bags are formed from plastic bead feedstock which is heated and blown into a large bubble which is then cooled and rolled into a sheet. The rolls of plastic are then printed on with one of the four flexographic printing presses at the facility. After being printed, the rolls of plastic are formed into bags by one of the eleven bag forming lines. The sources of air emissions at the facility are the four printing presses and their associated dryers.

Currently the facility has two presses that vent to a catalytic oxidizer and two that are uncontrolled. The construction authorized with this permit allows a new press to be installed in place of one of the uncontrolled presses. This new press will be vented to the oxidizer so that three of the four presses at the facility will be controlled by the oxidizer after construction is completed.

The facility currently operates under a permit that requires the facility to track its inventory of inks and solvents so that it can calculate its Volatile Organic Compound (VOC) emissions based on a mass balance approach.

No comments were received on this permit, either from the U.S. Environmental Protection Agency (EPA) or the public.

1.3 Description of any changes allowed with this permit issuance

Replacing one of the printing presses with a new one.

1.4 Description of all amendments issued since the issuance of the last total facility permit and to be included in the Part 70 Permit.

Permit Number and Issuance Date	Action Authorized
12300486-001 (2779-94-OT-1) October 31, 1994	Total Facility Permit

1.5. Facility Emissions:

Table 1. Total Facility Potential to Emit Summary:

EU #	SV#	Emission Unit Description	PM tpy	PM ₁₀ tpy	SO ₂ tpy	NO _x tpy	CO tpy	VOC tpy	Pb tpy	Single HAP tpy	All HAP tpy
		Printing Presses						240		0	0
		Dryers	< 1	< 1	< 1	4.1	1.0	< 1	< 1	0	0

	PM tpy	PM ₁₀ tpy	SO ₂ tpy	NO _x tpy	CO tpy	VOC tpy	Pb tpy	Single HAP tpy	All HAP tpy
Total Facility Limited Potential Emissions	< 1	< 1	< 1	4.1	1.0	240	< 1	0	0
Total Facility Actual Emissions	< 1	< 1	< 1	1.5	< 1	180	< 1	0	0

Table 2. Facility and Permit Classification

Classification (put x in appropriate box)	Major/Affected Source	*Synthetic Minor	*Minor
PSD (VOC)		X	
NAAR (CO)			X
Part 70 Permit Program (VOC)	X		

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

2. Regulatory and/or Statutory Basis

Summary Regulatory and/or Statutory Basis of the Emission or operational Limit

Regulatory Overview of Facility

EU, GP, or SV #	Applicable Regulations	Comments:
Facility	Limit taken to avoid major source status under 40 CFR § 52.21	VOC less than or equal to 240 tons per year

3. Technical Information

The only pollutant emitted in a significant amount at this facility is VOC. The Permittee tracks its VOC emissions by monitoring the use of VOC-containing materials. This is accomplished through direct measurement and the use of a mass balance approach. Under the mass balance approach, the amount of materials used in a process can be calculated from measurements of the total volume of VOC containing materials at the start and end of each month, and the volume of any additional materials received. All VOC used at the facility is assumed to be emitted.

Materials used at the facility that contain VOC are the solvents and inks. The solvents are used in the facility's presses to thin the inks and also for cleanup. These solvents are stored both outside the facility in bulk tanks and inside in barrels. The total facility monthly solvent use is calculated based on the mass balance approach. The inks are stored in individual containers in an ink storage room. The amount of ink taken to each press is measured directly by an in-house ink service each time ink is taken from the ink storage room. Every month, the total ink used at the facility can be calculated by adding up the individual amounts measured by the ink service. Based on the use calculations for both the inks and solvents (and a knowledge of the VOC content of these materials), the total VOC use at the facility will be known for each month. In the emission calculations the Permittee doesn't account for the VOC contained in waste shipped off-site (even though it would be to their advantage) because it is deemed too time intensive to do so.

The next step is to determine the fraction of the total VOC used for the month that was used in the three presses which are controlled so that the control efficiency of the oxidizer can be accounted for. Instead of simply assuming 3/4 of the total VOC used for the month is controlled, a more rigorous approach is utilized based on the physical differences between the presses. An equation which calculates the potential emissions of each press based on the differing physical factors affecting emissions at each press (e.g. maximum web speeds and web widths) is used for this purpose. The result of this equation is an emission factor for each press in units of pounds VOC per hour (see the attachment for the full development of the emission factors). Using these emission factors, along with the hours each press was run for the month (determined from hour meters on each press), the potential emissions of each press can be calculated.

Now the total monthly VOC use for the facility can be partitioned to each press in proportion to the monthly potential emissions of each press. Once the total monthly VOC use is partitioned to each press, the control efficiency can be used for the three presses that are controlled. The equations in the permit express these relationships mathematically. The Permittee must keep the total facility VOC emissions below 240 tons per year based on a monthly rolling sum. Historical records show that the facility typically has actual emissions of about 180 tons per year.

The catalytic oxidizer used at the facility is connected electronically to the controllers of the presses so that if the temperature in the catalyst bed drops below the minimum, the presses will be automatically shut down. The oxidizer also has a bypass stack but the damper is locked out and is only used in the case of emergency maintenance. Under such a scenario the proper notifications would be made to the agency.

The printing inks and solvents do not contain any listed hazardous air pollutants, so the facility is not subject to 40 CFR pt. 63, subp. KK - National Emission Standards for the Printing and Publishing Industry (see attached material safety data sheets).

4. Conclusion

Based on the information provided by the Hood Flexible Packaging, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 12300486-002 and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Trent Wickman, Rhonda Land, Bob Berg, Dave Vaaler, Steve Sommer

Attachment: Emission calculations and supporting documents (MSDS)