



Mitchell E. Daniels, Jr.  
Governor

Thomas W. Easterly  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
(800) 451-6027  
www.IN.gov/idem

TO: Interested Parties / Applicant

DATE: April 9, 2007

RE: International Paper Company / 003-23716-00347

FROM: Nisha Sizemore  
Chief, Permits Branch  
Office of Air Quality

### Notice of Decision: Approval - Registration

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures  
FN-REGIS.dot 03/23/06



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Indianapolis, Indiana 46204-2251  
(317) 232-8603  
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April 9, 2007

Scott Goodpaster  
International Paper Company  
3904 Ferguson Road  
Fort Wayne, Indiana 46809

Re: Registered Construction and Operation Status,  
003-23716-00347

Dear Mr. Goodpaster:

The application from International Paper Company received on October 3, 2006 has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following corrugated cardboard box manufacturing plant located at 3904 Ferguson Road, Fort Wayne, Indiana, is classified as registered:

- (a) One (1) natural gas-fired boiler, manufactured October 29, 1979 and installed in 2003, with a maximum heat input capacity of 20.922 MMBtu per hour, identified as Unit 1.
- (b) One (1) corrugator with a maximum potential line speed of 700 feet per minute, an equipment blank size of 98 inches, and a maximum throughput capacity of 343 thousand square feet per hour (MSF/hr), identified as Unit 2.
- (d) One (1) starch silo, with a maximum throughput capacity of 957 pounds of starch per hour, identified as Unit 5.
- (e) One (1) finishing department with a total maximum throughput capacity of 343 thousand square feet per hour (MSF/hr) consisting of the following units:
  - (1) One (1) diecutter, identified as unit 1311, constructed after November 1, 1980 and prior to July 1, 1990, with a maximum throughput capacity of 21.6 MSF/hr.
  - (2) One (1) diecutter, identified as unit 1301, constructed after November 1, 1980 and prior to July 1, 1990, with a maximum throughput capacity of 26.1 MSF/hr.
  - (3) One (1) diecutter, identified as unit 1302, constructed after November 1, 1980 and prior to July 1, 1990, with a maximum throughput capacity of 25.4 MSF/hr.
  - (4) One (1) flexographic/RSC (regular slotted container) printing press, identified as unit 1421, constructed after November 1, 1980 and prior to July 1, 1990, with a maximum throughput capacity of 18.7 MSF/hr.
  - (5) One (1) flexographic/RSC (regular slotted container) printing press, identified as unit 1431, constructed after November 1, 1980 and prior to July 1, 1990, with a maximum throughput capacity of 27.8 MSF/hr.
  - (6) One (1) flexographic/RSC (regular slotted container) printing press, identified as unit 1461, constructed after November 1, 1980 and prior to July 1, 1990, with a maximum throughput capacity of 26.5 MSF/hr.



- (7) One (1) flexographic/RSC (regular slotted container) printing press, identified as unit 1441, constructed in 2002, with a maximum throughput capacity of 197 MSF/hr.
- (c) One (1) waste paper handling system, with particulate emissions controlled by an integral cyclone having a flow rate of 29,300 cubic feet per minute and an outlet grain loading of 0.00815 grains per cubic foot, with a maximum throughput capacity of 343 thousand square feet per hour (MSF/hr), identified as Unit 3.

The following conditions shall be applicable:

- (1) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:
  - (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
  - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- (2) Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), the Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.
- (3) Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the boiler shall comply with a PM limit of 0.49 lb per MMBtu heat input.
- (4) Pursuant to 326 IAC 6-3-2, the allowable particulate emission rate from the waste paper handling system shall be less than 5.59 pounds per hour when operating at a process weight rate of 1.59 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (5) The integral cyclone shall be in operation at all times the waste paper handling system is in operation.

This registration is the third air approval issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

**Compliance Data Section  
Office of Air Quality  
100 North Senate Avenue  
Indianapolis, IN 46204-2251**

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Pursuant to Contract No. A305-5-65, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Stacie Enoch, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7895 to speak directly to Ms. Enoch. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, Indianapolis, Indiana, 46204-2251 or call (800) 451-6027, ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original signed by

Nisha Sizemore, Chief  
Permits Branch  
Office of Air Quality

ERG/SE

cc: File - Allen County  
Allen County Health Department  
Air Compliance - Patrick Burton  
Permit Tracking  
Compliance Data Section  
Office of Enforcement

## Registration Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3)

<b>Company Name:</b>	<b>International Paper Company</b>
<b>Address:</b>	<b>3904 Ferguson Road</b>
<b>City:</b>	<b>Fort Wayne</b>
<b>Authorized individual:</b>	<b>Ross Carolus</b>
<b>Phone #:</b>	<b>260-747-9111 ext 330</b>
<b>Registration #:</b>	<b>003-23716-00347</b>

I hereby certify that International Paper Company is still in operation and is in compliance with the requirements of Registration 003-23716-00347.

<b>Name (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

# Indiana Department of Environmental Management Office of Air Quality

## Technical Support Document (TSD) for a Registration

### Source Background and Description

Source Name: International Paper Company  
Source Location: 3904 Ferguson Road, Fort Wayne, Indiana 46809  
County: Allen  
SIC Code: 2653  
Operation Permit No.: 003-23716-00347  
Permit Reviewer: ERG/SE

The Office of Air Quality (OAQ) has reviewed an application from International Paper Company relating to the operation of a corrugated box manufacturing plant.

### History

This source was previously owned and operated by Wabash Fiber Box Company. International Paper Company purchased Wabash Fiber Box Company in April 1998.

### Unpermitted Emission Units and Pollution Control Equipment

The source consists of the following emission units:

- (a) One (1) natural gas-fired boiler, manufactured October 29, 1979 and installed in 2003, with a maximum heat input capacity of 20.922 MMBtu per hour, identified as Unit 1.
- (b) One (1) corrugator with a maximum potential line speed of 700 feet per minute, an equipment blank size of 98 inches, and a maximum throughput capacity of 343 thousand square feet per hour (MSF/hr), identified as Unit 2.
- (d) One (1) starch silo, with a maximum throughput capacity of 957 pounds of starch per hour, identified as Unit 5.
- (e) One (1) finishing department with a total maximum throughput capacity of 343 thousand square feet per hour (MSF/hr) consisting of the following units:
  - (1) One (1) diecutter, identified as unit 1311, constructed after November 1, 1980 and prior to July 1, 1990, with a maximum throughput capacity of 21.6 MSF/hr.
  - (2) One (1) diecutter, identified as unit 1301, constructed after November 1, 1980 and prior to July 1, 1990, with a maximum throughput capacity of 26.1 MSF/hr.
  - (3) One (1) diecutter, identified as unit 1302, constructed after November 1, 1980 and prior to July 1, 1990, with a maximum throughput capacity of 25.4 MSF/hr.
  - (4) One (1) flexographic/RSC (regular slotted container) printing press, identified as unit 1421, constructed after November 1, 1980 and prior to July 1, 1990, with a maximum throughput capacity of 18.7 MSF/hr.

- (5) One (1) flexographic/RSC (regular slotted container) printing press, identified as unit 1431, constructed after November 1, 1980 and prior to July 1, 1990, with a maximum throughput capacity of 27.8 MSF/hr.
  - (6) One (1) flexographic/RSC (regular slotted container) printing press, identified as unit 1461, constructed after November 1, 1980 and prior to July 1, 1990, with a maximum throughput capacity of 26.5 MSF/hr.
  - (7) One (1) flexographic/RSC (regular slotted container) printing press, identified as unit 1441, constructed in 2002, with a maximum throughput capacity of 197 MSF/hr.
- (c) One (1) waste paper handling system, with particulate emissions controlled by an integral cyclone having a flow rate of 29,300 cubic feet per minute and an outlet grain loading of 0.00815 grains per cubic foot, with a maximum throughput capacity of 343 thousand square feet per hour (MSF/hr), identified as Unit 3.

### Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) Operating Permit 02-01-81-0361 issued on March 3, 1977
- (b) Registration (no permit number assigned) issued on March 23, 1981

All conditions from previous approvals were incorporated into this permit except the following:

Registration issued on March 23, 1981

Condition: The condition in the registration stated "Emissions shall be at a level acceptable to 326 IAC 6-2, 6-3, 6-4, 7-1, and 10-1."

Reason not incorporated: 326 IAC 7-1 has been repealed. 326 IAC 7-1.1 replaces this rule. Since the potential to emit sulfur dioxide from each of the emission units is less than 25 tons per year, there are no applicable requirements for these units under Article 7. There are also no applicable requirements under Article 10 for the emission units at this source. Therefore, no requirements pursuant to 326 IAC 10-1 and 326 IAC 7 have been included in this registration.

### Air Pollution Control Justification as an Integral Part of the Process

The company has submitted the following justification such that the cyclone be considered as an integral part of the waste paper handling process:

- (a) The cyclone used in conjunction with the waste paper handling process is used to collect large pieces of scrap paper from process machinery. The source collects the large pieces of scrap paper to recycle for a profit. If the large scraps are not removed quickly from the machines, the machines will not be able to operate. The plant would not be able to operate without the cyclone.
- (b) The cost to install a new cyclone system identical to the one used at this source is \$640,000. The annualized cost is \$64,000 per year for an expected lifespan of 10 years. This is a conservative estimate, because the cyclone system is expected to last longer than 10 years without needing to be replaced. The estimated monthly maintenance cost of the cyclone system is \$1,000. The total monthly cost of the cyclone system and maintenance is estimated at \$6,333. International Paper sells the large pieces of scrap paper collected by the cyclone for an average of \$56,000 per month. Therefore, there is an overwhelming economic advantage to use the cyclone in conjunction with the waste paper handling system.

IDEM, OAQ has evaluated the justifications and agreed that the cyclone will be considered as an integral part of the waste paper handling process. Therefore, the permitting level will be determined using the potential to emit after the cyclone. Operating conditions in the proposed registration will specify that this cyclone shall operate at all times when the waste paper handling system is in operation.

### Enforcement Issue

- (a) IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled "Emission Units and Pollution Control Equipment."
- (b) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

### Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on October 3, 2006, with additional information received on December 4, 2006, December 18, 2006, and January 10, 2007.

### Emission Calculations

See Appendix A of this document for detailed emission calculations (pages 1 through 6).

### Potential to Emit of the Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential to Emit (tons/yr)
PM	9.43
PM-10	9.94
SO <sub>2</sub>	0.05
VOC	18.5
CO	7.55
NO <sub>x</sub>	8.98

HAPs	Potential to Emit (tons/yr)
Methanol	0.14
Glycol Ethers	0.30
Other HAPs	0.19
Total	0.63

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of all criteria pollutants are less than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.5. A registration will be issued.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-1.1-1(16)) of a

combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.5. A registration will be issued.

### County Attainment Status

The source is located in Allen County.

Pollutant	Status
PM-10	Attainment
PM 2.5	Attainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	Attainment
8-hour Ozone	Nonattainment
CO	Attainment
Lead	Attainment

**Note:** On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.

- (a) Allen County has been classified as unclassifiable or attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. See the State Rule Applicability - Entire Source section.
- (b) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Allen County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for nonattainment new source review. See the State Rule Applicability - Entire Source section.
- (c) Allen County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability-Entire Source section.
- (e) Fugitive Emissions  
 Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 or 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

### Source Status

Existing Source PSD, Part 70, or FESOP Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	9.43
PM-10	9.94
SO <sub>2</sub>	0.05
VOC	18.5
CO	7.55
NO <sub>x</sub>	8.98
Single HAP	0.30
Combination HAPs	0.63

- (a) This existing source is not a major stationary source under PSD because no attainment regulated pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories.
- (b) This existing source is not a major stationary source under Emission Offset because no nonattainment regulated pollutant is emitted at a rate of 100 tons per year or greater.
- (c) These emissions were based on the information provided in the application submitted by the company on October 3, 2006.

### **Part 70 Permit Determination**

#### 326 IAC 2-7 (Part 70 Permit Program)

This existing source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons per year.

This status is based on the application file submitted by the source.

### **Federal Rule Applicability**

- (a) The requirements of 40 CFR 60, Subpart D (New Source Performance Standards for Fossil-Fuel-Fired Steam Generators for Which Construction Commenced After August 17, 1971) are not included in this registration for this source, because the boiler has a maximum heat input rate that is less than 250 million Btu per hour.
- (b) The requirements of 40 CFR 60, Subpart Db (New Source Performance Standards for Industrial-Commercial-Institutional Steam Generating Units) are not included in this registration for this source, because the boiler has a maximum heat input rate that is less than 100 million Btu per hour.
- (c) The requirements of 40 CFR 60, Subpart Dc (New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units) are not included in this registration for this source, because it was manufactured before the June 9, 1989 applicability date for this rule. Maintenance was performed on this boiler in 2002 before it was installed at this source in 2003; however, the maintenance done did not cause an increase in the amount of any pollutant emitted, did not cause any new pollutant to be emitted, and the cost of the maintenance did not exceed 50 percent of the cost to construct a comparable new boiler. Therefore, this maintenance is not considered to be a modification or reconstruction as defined in 40 CFR 60.2 and 60.15.
- (d) The requirements of 40 CFR 63, Subpart KK (National Emission Standards for Hazardous Air Pollutants from the Printing and Publishing Industry) are not included in this registration for this source, because this source is a minor source of HAPs.
- (e) The requirements of 40 CFR 63, Subpart JJJJ (National Emission Standards for Hazardous Air Pollutants from Paper and Other Web Coating) are not included in this registration for this source, because it is not a major source of HAPs.

### **State Rule Applicability – Entire Source**

#### 326 IAC 2-2 (Prevention of Significant Deterioration)

This source was initially constructed in the 1980s in Allen County and did not have the potential to emit two hundred fifty (250) tons per year or greater of any regulated pollutant at the time of initial construction. There have not been any modifications since that time that caused the source to

become a major stationary source under PSD or that caused any significant emissions increase. This source still does not have the potential to emit greater than two hundred fifty (250) tons per year of any regulated pollutant. Therefore, the requirements of 326 IAC 2-2 are not applicable.

**326 IAC 2-3 (Emission Offset)**

This source was constructed in Allen County in the 1980s. Allen County was designated as nonattainment for the 8-hour ozone standard in June 2004. The potential to emit VOC from this source is less than twenty-five (25) tons per year; therefore, the requirements of 326 IAC 2-3 are not applicable.

**326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))**

This source was constructed prior to July 27, 1997 and is not a major source of HAPs. Therefore, the requirements of 326 IAC 2-4.1 are not applicable to any of the emission units at this source.

**326 IAC 2-6 (Emission Reporting)**

This source is located in Allen County, is not required to operate under a Part 70 permit, and emits less than five (5) tons per year of lead. Therefore, pursuant to 326 IAC 2-6-1(b), the source is only subject to additional information requests as provided in 326 IAC 2-6-5.

**326 IAC 5-1 (Opacity Limitations)**

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in the permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

**326 IAC 6-4 (Fugitive Dust Emissions)**

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

**326 IAC 6-5 (Fugitive Particulate Matter Emissions)**

This source is not a source of fugitive particulate matter emissions. Therefore, the requirements of 326 IAC 6-5 are not applicable.

**326 IAC 8-5-5 (Graphic Arts Operations)**

This source is located in Allen County and does not have the potential to emit twenty-five (25) tons or more per year of VOC. Therefore, none of the emission units at this source are subject to the requirements of 326 IAC 8-5-5.

**State Rule Applicability – Natural Gas-fired Boiler**

**326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)**

- (a) The boiler identified as BLR-1 is subject to 326 IAC 6-2-3 because it was installed at this source after September 21, 1983. Pursuant to 326 IAC 6-2-4(a), particulate emissions from this boiler should be calculated using the following equation:

$$P_t = \frac{1.09}{Q^{0.26}}$$

Where:

- $P_t$  = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu).
- $Q$  = total source operating capacity (1 boiler with a heat input of 20.9 MMBtu/hour)

$$P_t = \frac{1.09}{(20.9)^{0.26}} = 0.49 \text{ lbs/MMBtu}$$

Therefore, the boiler has a PM limit of 0.49 lb per MMBtu heat input. Based on the AP-42 emission factor of 1.9 lbs per MMscf (0.002 lb per MMBtu at a heating value of 1,020 MMBtu per MMscf), the boiler can comply with this limit.

**326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)**

Pursuant to 326 IAC 6-3-1(b)(1), the natural gas-fired boiler at this source is not subject to the requirements of 326 IAC 6-3 because it is a source of indirect heating.

**326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)**

The natural gas-fired boiler at this source is not subject to the requirements of 326 IAC 7-1.1, because it does not have a potential to emit twenty-five (25) tons per year or ten (10) pounds per hour of sulfur dioxide.

**State Rule Applicability – Corrugator**

**326 IAC 8-1-6 (New Facilities General Reduction Requirements)**

The corrugator does not have the potential to emit twenty-five (25) tons or more per year of VOC. Therefore, the corrugator is not subject to the requirements of 326 IAC 8-1-6.

**326 IAC 8-2 (Surface Coating Emission Limitations)**

The corrugator was constructed after November 1, 1980 and prior to July 1, 1990 in Allen County and does not have the potential to emit twenty-five (25) tons or more per year of VOC. Therefore, the corrugator is not subject to the requirements of 326 IAC 8-2.

**State Rule Applicability – Starch Silo**

**326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)**

The starch silo has potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour. Pursuant to 326 IAC 6-3-1(b)(14); the starch silo is exempt from the requirements of 326 IAC 6-3.

**State Rule Applicability – Finishing Department**

**326 IAC 8-1-6 (New Facilities General Reduction Requirements)**

None of the facilities in the finishing department have the potential to emit twenty-five (25) tons or more per year of VOC. Therefore, the emission units in the finishing department are not subject to the requirements of 326 IAC 8-1-6.

**326 IAC 8-2 (Surface Coating Emission Limitations)**

The facilities in the finishing department, with the exception of flexographic/RSC unit 1441, were constructed after November 1, 1980 and prior to July 1, 1990 in Allen County and do not have the potential to emit twenty-five (25) tons or more per year of VOC. The flexographic/RSC unit 1441 was constructed in 2002 in Allen County and does not have the potential to emit twenty-five (25) tons or more per year or actual emissions of fifteen (15) pounds or more per day. Therefore, none of the emission units in the finishing department are subject to the requirements of 326 IAC 8-2.

**State Rule Applicability – Waste Paper Handling System**

**326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)**

Pursuant to 326 IAC 6-3-2, the allowable particulate emission rate from the waste paper handling system shall be less than 5.59 pounds per hour when operating at a process weight rate of 1.59 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and  
P = process weight rate in tons per hour

The source will comply with this rule by using the integral cyclone at all times the waste paper handling system is in operation.

### **Conclusion**

The operation of this corrugated box manufacturing plant shall be subject to the conditions of the Registration 003-23716-00347.

**Appendix A: Emission Calculations  
Emissions From Natural Gas Combustion**

**Company Name:** International Paper Company  
**Address:** 3904 Ferguson Road, Fort Wayne, IN 46809  
**Registration:** 003-23716-00347  
**Reviewer:** ERG/SE  
**Date:** February 13, 2007

Total Heat Input Capacity MMBtu/hr 20.9
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Potential Throughput MMscf/yr 180
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Emission Factor (lbs/MMscf)	Pollutant						
	PM*	PM10*	SO <sub>2</sub>	NO <sub>x</sub> **	VOC	CO	HAPs
Potential to Emit (tons/yr)	0.17	0.68	0.05	8.98	0.49	7.55	0.17

\* PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM and combined.

\*\*Emission factor for NO<sub>x</sub> (Uncontrolled) = 100 lb/MMscf.

Emission factors are from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (7/98).

All Emission factors are based on normal firing.

**Methodology**

Potential Throughput (MMscf/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMscf/1,020 MMBtu

Potential to Emit (tons/yr) = Potential Throughput (MMscf/yr) x Emission Factor (lbs/MMscf) x 1 ton/2,000 lbs

**Appendix A: Emission Calculations  
Emissions From Corrugator**

**Company Name:** International Paper Company  
**Address:** 3904 Ferguson Road, Fort Wayne, IN 46809  
**Registration:** 003-23716-00347  
**Reviewer:** ERG/SE  
**Date:** February 13, 2007

Maximum Potential Line Speed  
 700 ft/min

Equipment Blank Size  
 98 in

Maximum Throughput Capacity  
 343 msf/hr

Product	Density (lb/gal)	Weight % VOC	Weight % Butadiene	Weight % Styrene	Weight % Methanol	Weight % Formaldehyde	Maximum Potential Usage (lb/msf)*	Potential to Emit VOC (tons/yr)	Potential to Emit Butadiene (tons/yr)	Potential to Emit Styrene (tons/yr)	Potential to Emit Methanol (tons/yr)	Potential to Emit Formaldehyde (tons/yr)
CC EZ Glide	8.38	1.00%	0.00%	0.00%	0.00%	0.00%	9.75E-03	0.15	0.00	0.00	0.00	0.00
CC Super Tac	8.38	0.10%	0.001%	0.04%	0.00%	0.00%	5.91E-03	0.01	8.88E-05	3.55E-03	0.00	0.00
NS Resin (Dacrez)	9.41	0.64%	0.00%	0.00%	1.00%	0.10%	9.19E-03	0.09	0.00	0.00	0.14	0.01
<b>Total</b>								<b>0.24</b>	<b>8.88E-05</b>	<b>3.55E-03</b>	<b>0.14</b>	<b>0.01</b>
								<b>Total HAPs</b>	<b>0.16</b>			

msf = 1,000 square feet

\*The usage data above was provided by the source and is the maximum potential usage of each material based on operating the corrugator at its maximum capacity.

**Methodology**

Maximum Throughput Capacity (msf/hr) = Equipment Blank Size (in) x 1 ft/12 in x Maximum Potential Line Speed (ft/min) x 60 min/hr x 1 msf/1,000 sf  
 Potential to Emit (tons/yr) = Maximum Throughput Capacity (msf/hr) x Usage (lb/msf) x Weight % VOC or HAP x 8,760 hrs/yr x 1 ton/2,000 lbs

**Appendix A: Emission Calculations  
Emissions From Finishing Processes**

**Company Name:** International Paper Company  
**Address:** 3904 Ferguson Road, Fort Wayne, IN 46809  
**Registration:** 003-23716-00347  
**Reviewer:** ERG/SE  
**Date:** February 13, 2007

**1. Additive**

Emission Unit	Emission Unit ID	Material	Density (lbs/gal)	Usage (lb/msf)	Maximum Throughput (msf/hr)	Weight % VOC	Weight % HAPs	Potential to Emit VOC (tons/yr)	Potential to Emit HAPs (tons/yr)
Diecutter	1311	ID-55	8.70	1.00E-03	21.6	0.34%	0.00%	3.26E-04	0.00
Diecutter	1301	ID-55	8.70	1.00E-03	26.1	0.34%	0.00%	3.26E-04	0.00
Diecutter	1302	ID-55	8.70	1.00E-03	25.4	0.34%	0.00%	3.26E-04	0.00
Flexo/RSC	1421	ID-55	8.70	1.00E-03	18.7	0.34%	0.00%	3.26E-04	0.00
Flexo/RSC	1431	ID-55	8.70	1.00E-03	27.8	0.34%	0.00%	3.26E-04	0.00
Flexo/RSC	1461	ID-55	8.70	1.00E-03	26.5	0.34%	0.00%	3.26E-04	0.00
Flexo/RSC	1441	ID-55	8.70	1.00E-03	197	0.34%	0.00%	3.26E-04	0.00
<b>Total</b>								<b>2.28E-03</b>	<b>0.00</b>

**2. Adhesive**

Emission Unit	Emission Unit ID	Material	Density (lbs/gal)	Usage (lb/msf)	Maximum Throughput (msf/hr)	Weight % VOC	Weight % HAPs	Potential to Emit VOC (tons/yr)	Potential to Emit HAPs (tons/yr)
Flexo/RSC	1421	Ultra-Set	9.20	0.03	18.7	0.10%	0.00%	2.41E-03	0.00
Flexo/RSC	1431	Ultra-Set	9.20	0.03	27.8	0.10%	0.00%	2.41E-03	0.00
Flexo/RSC	1461	Ultra-Set	9.20	0.03	26.5	0.10%	0.00%	2.41E-03	0.00
Flexo/RSC	1441	Ultra-Set	9.20	0.03	197	0.10%	0.00%	2.41E-03	0.00
<b>Total</b>								<b>9.64E-03</b>	<b>0.00</b>

**3. Ink**

Emission Unit	Emission Unit ID	Material	Density (lbs/gal)	Usage (lb/msf)	Maximum Throughput (msf/hr)	Weight % VOC	Weight % HAP (Glycol Ether)	Potential to Emit VOC (tons/yr)	Potential to Emit HAP (Glycol Ether) (tons/yr)
Diecutter	1311	Ink	10.4	1.00	21.6	1.18%	0.02%	1.11	0.02
Diecutter	1301	Ink	10.4	1.00	26.1	1.18%	0.02%	1.35	0.02
Diecutter	1302	Ink	10.4	1.00	25.4	1.18%	0.02%	1.31	0.02
Flexo/RSC	1421	Ink	10.4	1.00	18.7	1.18%	0.02%	0.97	0.02
Flexo/RSC	1431	Ink	10.4	1.00	27.8	1.18%	0.02%	1.44	0.02
Flexo/RSC	1461	Ink	10.4	1.00	26.5	1.18%	0.02%	1.37	0.02
Flexo/RSC	1441	Ink	10.4	1.00	197	1.18%	0.02%	10.2	0.17
<b>Total</b>								<b>17.7</b>	<b>0.30</b>

\*The usage above was provided by the source and is the estimated maximum potential usage of each material based on the maximum potential msf that the source could process.

**Methodology**

Potential to Emit (tons/yr) = Maximum Throughput (msf/hr) x Maximum Usage (lb/msf) x Weight % VOC or HAP x 8,760 hrs/yr x 1 ton/2,000 lbs

**Appendix A: Emission Calculations**  
**Emissions From Waste Paper Handling**

TSD Appendix A: Page 4 of 6

**Company Name:** International Paper Company  
**Address:** 3904 Ferguson Road, Fort Wayne, IN 46809  
**Registration:** 003-23716-00347  
**Reviewer:** ERG/SE  
**Date:** February 13, 2007

Emission Unit	Integral Control Device	Flow Rate (cfm)	Outlet Grain Loading (grains/cf)	PTE PM/PM10 After Control (tons/yr)
Waste Paper Handling	Cyclone	29,300	0.00815	8.97

The cyclone used in conjunction with the waste paper handling system is an integral control device; therefore, the potential to emit is calculated after the cyclone. See the TSD for a discussion of the integral determination.

**Appendix A: Emission Calculations  
Emissions From Starch Silo**

**Company Name:** International Paper Company  
**Address:** 3904 Ferguson Road, Fort Wayne, IN 46809  
**Registration:** 003-23716-00347  
**Reviewer:** ERG/SE  
**Date:** February 13, 2007

Maximum Throughput Rate (lbs starch/hr)	957
Maximum Holding Capacity (tons/yr)	4,192
*Emission Factor (lbs/ton)	1.40E-03
Potential to Emit PM/PM10 After Control (tons/yr)	2.93E-03
**Control Efficiency (%)	99.0%
Potential to Emit PM/PM10 Before Control (tons/yr)	0.29

\*Emission factor is from AP 42, Chapter 9.9.7, Table 9.9.7-1 for starch storage bins (SCC 3-02-014-07) [1/95]

\*\* The AP-42 emission factor is based on control by fabric filter. A control efficiency of 99.0% is assumed for a fabric filter in order to calculate the PTE before controls.

**Methodology**

Potential to emit PM/PM10 (tons/year) = Maximum holding capacity (tons/year) \* Emission Factor (lbs/ton) \* 1 ton/2000 lbs

**Appendix A: Emission Calculations  
Emissions Summary**

**Company Name:** International Paper Company  
**Address:** 3904 Ferguson Road, Fort Wayne, IN 46809  
**Registration:** 003-23716-00347  
**Reviewer:** ERG/SE  
**Date:** February 13, 2007

**Unlimited PTE (tons/yr)**

	PM	PM10	SO <sub>2</sub>	NOx	VOC	CO	HAPs
Natural Gas Combustion	0.17	0.68	0.05	8.98	0.49	7.55	0.17
Corrugator	-	-	-	-	0.24	-	0.16
Finishing	-	-	-	-	17.7	-	0.30
Waste Paper Handling	8.97	8.97	-	-	-	-	-
Starch Silo	0.29	0.29	-	-	-	-	-
<b>Total</b>	<b>9.43</b>	<b>9.94</b>	<b>0.05</b>	<b>8.98</b>	<b>18.5</b>	<b>7.55</b>	<b>0.63</b>