INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

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: September 6, 2005

RE: Corrugated Supplies Company Indiana, LLC

FROM: Paul Dubenetzky
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 1/10/05

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

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

September 6, 2005

Mr. Dave Roberts
Corrugated Supplies Company Indiana, LLC
2100 Summit Street
New Haven, IN 46774

Re: Registered Construction and Operation Status,
003-21644-00076

Dear Mr. Roberts:

The application from Corrugated Supplies Company Indiana, LLC, received on August 12, 2005, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following stationary corrugated paper manufacturing plant, to be located at 2100 Summit Street, New Haven, IN 46774 is classified as registered:

(a) one (1) corrugation line, designated as C1, constructed in 2005, which manufactures corrugated laminar composite paper from paper stock at maximum throughput of 56,000 pounds of corrugated paper per hour, with scrap paper collected by one (1) scrap paper separator and baler, and with particulate emissions controlled and one (1) baghouse, identified as CE1, with a control efficiency of 99%, and a maximum design grain loading of less than or equal to 0.014 grain per actual cubic foot of outlet air, when operated at gas flow rates of thirty-two thousand (32,000) actual cubic feet per minute (acfm), venting to the indoors;

(b) one (1) starch storage silo, designated as SS, constructed in 2005, having a maximum storage capacity of 100,000 pounds, a maximum input rate of 25,000 pounds per hour, and a maximum output rate of 1,715 pounds per hour, with particulate emissions controlled by a filter system with a control efficiency of 99%, venting to the indoors;

(c) miscellaneous equipment, constructed in 2005, for manufacturing corn starch glue at a maximum capacity of 6,399 pounds of corn starch glue per hour, including, but not limited to, equipment used to store, convey, mix, and process corn starch, carrier starch, borax, water, Aquaseal water proofer, sodium hydroxide, and corn starch glue, venting to the indoors;

(d) two (2) natural gas-fired steam boilers, designated as B1 and B2, each constructed in 2005, each rated at 11.82 MMBtu/hr, and exhausting to stacks S1 and S2, respectively;

(e) forty (40) natural gas-fired space heaters, constructed in 2005, with a total combined heat input capacity of 0.2 MMBtu/hr.

The following conditions shall be applicable:

(a) 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:

(1) 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.

(2) 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.

(b) Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source 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.

(c) Pursuant to 326 IAC 6-3-2(e)(2), the particulate emissions from the corrugation line shall not exceed 38.2 pounds per hour when operating at a process weight rate equal to 28 tons of corrugated paper per hour (56,000 pounds of corrugated paper per hour).

Interpolation of the data in the table in 326 IAC 6-3-2(e)(2) for the process weight rates up to sixty thousand (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 hourly potential particulate matter emissions from the corrugation line are estimated to be 3.42 pounds per hour (15.0 tons per year), which is less than the 326 IAC 6-3-2 allowable hourly rate of 38.2 pounds per hour. Therefore, compliance with 326 IAC 6-3 is expected.

(d) Pursuant to 326 IAC 6-2-3, particulate matter emissions from these faclities shall be limited by the following equation:

$Pt = 1.09/Q^{0.26}$ where Pt = Pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input; and
Q = Total source maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input.

Pursuant to this rule, the particulate emissions from the 11.82 MMBtu/hr natural gas-fired steam boilers, B1 and B2, shall each not exceed 0.479 lb/MMBtu, based on a total source maximum operating capacity of 23.64 MMBtu/hr.

This registration is the first registration 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

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. If you have any questions on this matter, please contact Nathan C. Bell, OAQ, 100 North Senate Avenue, Indianapolis, Indiana, 46206, at 317-234-3350 or at 1-800-451-6027 (ext 43350).

Sincerely,

Origin signed by

Nysa L. James, Section Chief
Permits Branch
Office of Air Quality

ncb

cc: File - Allen County
Allen County Health Department
Air Compliance - Patrick Burton
Permit Tracking
Compliance Data Section
Administrative and Development

Registration
Annual Notification

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

Company Name:	Corrugated Supplies Company Indiana, LLC
Address:	2100 Summit Street, New Haven, IN 46774
City:	New Haven
Authorized individual:	Dave Roberts
Phone #:	(708) 458-5525
Registration #:	003-21644-00076

I hereby certify that Corrugated Supplies Company Indiana, LLC is still in operation and is in compliance with the requirements of Registration 003-21644-00076.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name: **Corrugated Supplies Company Indiana, LLC**
Source Location: **2100 Summit Street, New Haven, IN 46774**
County: **Allen**
SIC Code: **2679 (Manufacturing of Converted Paper & Paperboard Products, NEC)**
Application No.: **003-21644-00076**
Reviewer: **Nathan C. Bell**

On August 12, 2005, the Office of Air Quality (OAQ) received an application from Corrugated Supplies Company Indiana, LLC relating to the operation of a stationary corrugated paper manufacturing plant.

New Emission Units and Pollution Control Equipment

The application includes information relating to the construction and operation of the following:

(a) one (1) corrugation line, designated as C1, constructed in 2005, which manufactures corrugated laminar composite paper from paper stock at maximum throughput of 56,000 pounds of corrugated paper per hour, with scrap paper collected by one (1) scrap paper separator and baler, and with particulate emissions controlled and one (1) baghouse, identified as CE1, with a control efficiency of 99%, and a maximum design grain loading of less than or equal to 0.014 grain per actual cubic foot of outlet air, when operated at gas flow rates of thirty-two thousand (32,000) actual cubic feet per minute (acfm), venting to the indoors;

(b) one (1) starch storage silo, designated as SS, constructed in 2005, having a maximum storage capacity of 100,000 pounds, a maximum input rate of 25,000 pounds per hour, and a maximum output rate of 1,715 pounds per hour, with particulate emissions controlled by a filter system with a control efficiency of 99%, venting to the indoors;

(c) miscellaneous equipment, constructed in 2005, for manufacturing corn starch glue at a maximum capacity of 6,399 pounds of corn starch glue per hour, including, but not limited to, equipment used to store, convey, mix, and process corn starch, carrier starch, borax, water, Aquaseal water proofer, sodium hydroxide, and corn starch glue, venting to the indoors;

(d) two (2) natural gas-fired steam boilers, designated as B1 and B2, each constructed in 2005, each rated at 11.82 MMBtu/hr, and exhausting to stacks S1 and S2, respectively;

(e) forty (40) natural gas-fired space heaters, constructed in 2005, with a total combined heat input capacity of 0.2 MMBtu/hr.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Existing Approvals

No previous air approvals have been issued to this source.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (^oF)
S1	natural gas-fired steam boiler B1	33	2.17	2,650	500
S2	natural gas-fired steam boiler B2	33	2.17	2,650	500

Recommendation

The staff recommends to the Commissioner that the application be approved as a registration. 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 August 12, 2005.

Emission Calculations

(a) Corrugation Line Particulate Emissions

The corrugation line will generate PM and PM10 emissions due to trimming of the corrugated paper. The following calculations estimate the unrestricted potential emissions and the estimated emissions after controls.

(1) Potential Emissions Before Controls:

Based on process knowledge, the source estimates that trimming of the corrugated paper will potentially generate 3,425 pounds of scrap paper per hour. To estimate PM/PM10 emissions, it is assumed that approximately 1% of the scrap paper will be composed of dust particles generated by the cutting blade and that only 10% of the dust generated could be potentially emitted as particulate matter (PM/PM10) air emissions. Based on 8,760 hours of operation per year, the potential to emit (PTE) of particulate matter (PM/PM10) from the corrugation line before controls are as follows:

(3,425 lb paper/hr)*(0.01)*(0.1)*(8,760 hr/yr)*(ton/2000 lb) = **15.0 tons/yr PM/PM10**

(2) Potential Emissions After Controls:

The particulate (PM/PM10) emissions from the corrugation line will be controlled by one baghouse with a control efficiency of 99%. The PTE of particulate matter (PM/PM10) after controls is calculated as follows:

(15.0 tons/yr PM/PM10)*(1 - 0.99) = **0.15 tons/yr PM/PM10**

(b) Starch Storage Silo Particulate Emissions

The starch storage silo loading and unloading will generate PM and PM10 emissions. The following calculations determine the unrestricted potential emissions and the estimated emissions after controls.

(1) Potential Emissions Before Controls:

To estimate particulate (PM/PM10) emissions from the starch storage silo, emission factors for Starch Manufacturing, Starch Storage Bin (SCC #3-02-014-07) from EPA's Factor Information Retrieval (FIRE) Data System Version 6.25 were used.

PM Emission Factor = 1.40E-03 pounds of PM per ton of starch stored

Based on a maximum starch storage output rate of 1,715 pounds per hour, and assuming 8,760 hours of starch usage per year, the total amount of starch potentially stored during one year is as follows:

(1715 lb starch/hr)*(8760 hr/yr)*(ton/2000 lb) = **7511.7 tons of starch stored per year**

Assuming potential emission of PM equals PM10, the PTE of particulate matter (PM/PM10) from the starch storage silo before controls is as follows:

(0.0014 lb PM/ton starch)*(7511.7 ton starch/yr)*(ton/2000 lb) = **0.0053 tons/yr PM/PM10**

(2) Potential Emissions After Controls:

The particulate (PM/PM10) emissions from the starch storage silo will be controlled by a filter system with a control efficiency of 99%. The PTE of particulate matter (PM/PM10) after controls is calculated as follows:

0.0053 tons/yr PM/PM10 * (1 - 0.99) = **0.00005 tons/yr PM/PM10**

(c) See Appendix A of this TSD for detailed emissions calculations for the glue operation and natural gas-fired combustion sources (Appendix A, pages 1 through 3).

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit (PTE) 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/year)
PM	15.20
PM-10	15.80
SO_2	0.06
NO_x	10.44
VOC	0.82
CO	8.77

HAPs	Potential To Emit (tons/year)
Benzene	negligible
Dichlorobenzene	negligible
Formaldehyde	0.25
n-Hexane	0.19
Toluene	negligible
Lead	negligible
Cadmium	negligible
Chromium	negligible
Manganese	negligible
Nickel	negligible
TOTAL HAPs	**0.44**

(a) The PTE (as defined in 326 IAC 2-1.1-1(16)) of regulated criteria pollutants are less than twenty-five (25) tons per year, but the PTE of particulate matter (PM or PM-10) is greater than five (5) tons per year and/or the PTE of all other regulated criteria pollutants are greater than ten (10) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.5. A registration will be issued.

(b) The PTE (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

County Attainment Status

The source is located in Allen County.

Pollutant	Status
PM10	Attainment or Unclassifiable
PM2.5	Attainment or Unclassifiable
SO_2	Attainment
NO_2	Attainment or Unclassifiable
1-Hour Ozone	Attainment or Unclassifiable
8-Hour Ozone	Basic Nonattainment
CO	Attainment or Unclassifiable
Lead	Attainment or Unclassifiable

(a) 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 standard. Allen County has been designated as basic nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for nonattainment new source review.

(b) 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.

(c) Allen County has been classified as attainment or unclassifiable for all the other regulated 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 for the source section.

(d) 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

New Source PSD and Emission Offset 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	0.35
PM-10	0.94
SO_2	0.06
NO_x	10.44
VOC	0.82
CO	8.77
Worst Single HAP	0.25
Combination HAPs	0.44

(a) This new source is not a major PSD stationary source 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. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

(b) This new source is not a Emission Offset major stationary source because no regulated nonattainment pollutant is emitted at a rate of 100 tons per year or greater. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the 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/year.

This status is based on the potential to emit calculations of the source (see Appendix A).

Federal Rule Applicability

(a) This source is not subject to the requirements of 326 IAC 12 or 40 CFR 60, Subpart D (60.40 through 60.46), Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971, because each of the fossil-fuel-fired (including natural gas, petroleum, and coal) steam generating units at this source has a heat input rate less than 250 million Btu per hour (MMBtu/hr).

(b) This source is not subject to the requirements of 326 IAC 12 or 40 CFR 60, Subpart Da (60.40a through 60.49a), Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978, because each of the fossil-fuel-fired (including natural gas, petroleum, and coal either alone or in combination with any other fuel) steam generating units at this source has a heat input rate less than 250 million Btu per hour (MMBtu/hr) and this source does not produce steam for the purpose of generating and supplying electrical power to any utility power distribution system for sale.

(c) This source is not subject to the requirements of 326 IAC 12 or 40 CFR 60, Subpart Db (60.40b through 60.49b), Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, because each of the steam generating units at this source has a heat input rate less than 100 million Btu per hour (MMBtu/hr).

(d) This source is not subject to the requirements of 326 IAC 12 or 40 CFR 60, Subpart Dc (60.40c through 60.48c), Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, because each of the steam generating units at this source has a heat input rate less than or equal to 10 million Btu per hour (MMBtu/hr).

(e) This source is not subject to the requirements of 326 IAC 12 or 40 CFR 60, Subpart BB (60.280 through 60.285), Standards of Performance for Kraft Pulp Mills, because this source is not a kraft pulp mill as defined by 40 CFR 60.281.

(f) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.

(g) This source is not subject to the requirements of 326 IAC 20-33-1 or 40 CFR 63, Subpart S, (63.440 through 63.459), NESHAPs for the Pulp and Paper Industry, because this source is not a major source of HAPs as defined at 40 CFR 63.2.

(h) This source is not subject to the requirements of 326 IAC 20-65-1 or 40 CFR Part 63, Subpart JJJJ (63.3280 through 63.3420), NESHAPs for for Paper and Other Web Coating, because this source is not a major source of HAPs as defined at 40 CFR 63.2.

(h) This source is not subject to the requirements of 40 CFR 63, Subpart DDDDD, (63.7480 through 63.7575), NESHAPs for Industrial, Commercial, and Institutional Boilers and Process Heaters, because the source is not a major source of HAPs as defined at 40 CFR 63.2.

(i) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 20 and 40 CFR Part 61, 63) included in the permit for this source.

State Rule Applicability - Entire Source

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

This source was constructed after the applicability date of August 7, 1977, however, it is not one of the 28 listed source categories defined in 326 IAC 2-2-1(y)(1), no major modifications were done to this source, and the uncontrolled potential to emit of all attainment regulated pollutants is less than 250 tons per year. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.

326 IAC 2-3 (Emission Offset)

The requirements of 326 IAC 2-3 (Emission Offset) apply to major sources or major modifications constructed in an area designated as non-attainment. The uncontrolled potential to emit of VOC and NOx are each less than 100 tons per year. Therefore, the requirements of 326 IAC 2-3 (Emission Offset) are not applicable.

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

The requirements of 326 IAC 2-4.1 are not applicable to this source, since the potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year.

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting), because it is located in Allen County, it is not required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, and it does not emit lead into the ambient air at levels equal to or greater than five (5) tons per year.

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 this 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 Limitations)

Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source 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.

State Rule Applicability - Individual Facilities

326 IAC 8-1-6 (VOC rules: General Reduction Requirements for New Facilities)

The requirements of 326 IAC 8-1-6 are not applicable, since each of the emission units at this source does not have the potential to emit greater than twenty-five (25) tons of VOCs per year.

State Rule Applicability - Corrugation Line

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

The requirements of 326 IAC 6-3 are applicable to the corrugation line at this source. Pursuant to 326 IAC 6-3-2(e)(2), the particulate emissions from the corrugation line shall not exceed 38.2 pounds per hour when operating at a process weight rate equal to 28 tons of corrugated paper per hour (56,000 pounds of corrugated paper per hour).

Interpolation of the data in the table in 326 IAC 6-3-2(e)(2) for the process weight rates up to sixty thousand (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 hourly potential particulate matter emissions from the corrugation line are estimated to be 3.42 pounds per hour (15.0 tons per year), which is less than the 326 IAC 6-3-2 allowable hourly rate of 38.2 pounds per hour. Therefore, compliance with 326 IAC 6-3 is expected.

State Rule Applicability - Corn Starch Glue Operation

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

Pursuant to 326 IAC 6-3-1(b)(14), each of the emission units associated with the corn starch glue operation is exempt from the requirements of 326 IAC 6-3, because the potential particulate emissions are less than five hundred fifty-one thousandths (0.551) pound per hour.

326 IAC 8-2 (Volatile Organic Compounds; Surface Coating Emission Limitations)

The corn starch glue operation is not subject to the requirements of 326 IAC 8-2, because this facility, which will be constructed after July 1, 1990, has actual VOC emissions of less than fifteen (15) pounds per day before add-on controls.

State Rule Applicability - Starch Storage Silo

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

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

State Rule Applicability – Natural Gas Combustion Sources

326 IAC 4-2-2 (Incinerators)

The natural gas-fired space heaters and boilers are not incinerators, as defined by 326 IAC 1-2-34, since they do not burn waste sustances. Therefore, these ovens are not subject to 326 IAC 4-2-2.

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

(a) The natural gas-fired space heaters are not subject to 326 IAC 6-2 as they are not sources of indirect heating.

(b) The natural gas-fired steam boilers, B1 and B2, are subject to the requirements of 326 IAC 6-2-3, since they are each sources of indirect heating, and were constructed after September 21, 1983. Pursuant to this rule, particulate matter emissions from these faclities shall be limited by the following equation:

$Pt = 1.09/Q^{0.26}$ where Pt = Pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input; and
Q = Total source maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input.

Pursuant to this rule, the particulate emissions from the 11.82 MMBtu/hr natural gas-fired steam boilers, B1 and B2, shall each not exceed 0.479 lb/MMBtu, based on a total source maximum operating capacity of 23.64 MMBtu/hr.

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

(a) Pursuant to 326 IAC 6-3-1(b)(1), each of the natural gas-fired steam boilers, B1 and B2, are exempt from the requirements of 326 IAC 6-3, because they each are sources of indirect heating.

(b) Pursuant to 326 IAC 6-3-1(b)(14), each of the natural gas-fired space heaters are exempt from the requirements of 326 IAC 6-3, because they each have a potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

326 IAC 7-1 (Sulfur dioxide emission limitations: applicability)

The natural gas-fired steam boilers, B1 and B2, are each not subject to the requirements of 326 IAC 7-1, because the potential and the actual emissions are less than twenty-five (25) tons per year and ten (10) pounds per hour respectively.

Conclusion

The operation of this source shall be subject to the conditions of the attached registration, No 003-21644-00076.

Appendix A: Emissions Calculations
Emission Summary

Company Name: Corrugated Supplies Company Indiana, LLC
Address City IN Zip: 2100 Summit Street, New Haven, IN 46774
Permit Number: 003-21644
Plt ID: 003-00076
Reviewer: Nathan C. Bell
Date: August 30, 2005

	Uncontrolled Potential Emissions (tons/year)					
	Emissions Generating Activity					
Category	Pollutant	Corrugation Line	Glue Operations	Starch Silo	Natural Gas Combustion	**TOTAL**
Criteria Pollutants	PM	15.00	0	5.3E-03	0.20	15.20
	PM10	15.00	0	5.3E-03	0.79	15.80
	SO2				0.06	0.06
	NOx				10.44	10.44
	VOC		0.24		0.57	0.82
	CO				8.77	8.77
Hazardous Air Pollutants	Benzene				2.2E-04	2.2E-04
	Dichlorobenzene				1.3E-04	1.3E-04
	Formaldehyde		0.24		7.8E-03	0.25
	n-Hexane				0.19	0.19
	Toluene				3.6E-04	3.6E-04
	Lead				5.2E-05	5.2E-05
	Cadmium				1.1E-04	1.1E-04
	Chromium				1.5E-04	1.5E-04
	Manganese				4.0E-05	4.0E-05
	Nickel				2.2E-04	2.2E-04
	Totals	**0**	**0**		**0.20**	**0.44**
					Worse Case HAP	**0.25**

Total emissions based on rated capacity at 8,760 hours/year.

	Controlled Potential Emissions (tons/year)					
	Emissions Generating Activity					
Category	Pollutant	Corrugation Line	Glue Operations	Starch Silo	Natural Gas Combustion	**TOTAL**
Criteria Pollutants	PM	0.15	0	5.3E-05	0.20	0.35
	PM10	0.15	0	5.3E-05	0.79	0.94
	SO2				0.06	0.06
	NOx				10.44	10.44
	VOC		0.24		0.57	0.82
	CO				8.77	8.77
Hazardous Air Pollutants	Benzene				2.2E-04	2.2E-04
	Dichlorobenzene				1.3E-04	1.3E-04
	Formaldehyde		0.24		7.8E-03	0.25
	n-Hexane				0.19	0.19
	Toluene				3.6E-04	3.6E-04
	Lead				5.2E-05	5.2E-05
	Cadmium				1.1E-04	1.1E-04
	Chromium				1.5E-04	1.5E-04
	Manganese				4.0E-05	4.0E-05
	Nickel				2.2E-04	2.2E-04
	Totals	**0**	**0**		**0.20**	**0.44**
					Worse Case HAP	**0.25**

Total emissions based on rated capacity at 8,760 hours/year.

Appendix A: Emissions Calculations
Glue Operation

Company Name: Corrugated Supplies Company Indiana, LLC
Address City IN Zip: 2100 Summit Street, New Haven, IN 46774
Permit Number: 003-21644
Plt ID: 003-00076
Reviewer: Nathan C. Bell
Date: August 30, 2005

Volatile Organic Comounds (VOC) and Particulate Matter (PM)

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water + Non-VOCs	Weight % Solids	Weight % VOCs	Volume % Water + Non-VOCs	Volume % Solids	Potential Material Usage (gal/lb paper)	Maximum Capacity (lb paper/hr)	Maximum Usage (gal/day)	Maximum Usage (lb/hr)	Pounds VOC per gallon of coating less water and non-VOCs	Pounds VOC per gallon of coating	Potential VOC (lb/hr)	Potential VOC (lb/day)	Potential VOC (ton/yr)	Particulate Matter Potential (lb/hr)	Particulate Matter Potential (ton/yr)	lb VOC per gal solids	Transfer Efficiency
Aquaseal W-150	9.67	55.0%	54.5%	45.0%	0.5%	63.8%	36.2%	2.03E-05	56000	27.28	11.00	0.13	0.05	0.05	1.3	0.24	0	0	0.134	100%

Hazardous Air Pollutants (HAPs)

Material	Density (Lb/Gal)	Maximum Usage (gal/day)	Weight % Formaldehyde	Formaldehyde Emissions (tons/yr)
Aquaseal W-150	9.67	27.28	0.5%	0.24

METHODOLOGY

Maximum Usage (gal/day) = Potential Paint Usage (gallons/unit) * maximum capacity (units/hour) * 24 hours/day

Maximum Usage (lbs/hr) = Maximum Usage (gal/day) * Density (lb/gal) / (24 hr/day)

Pounds of VOC per Gallon Coating less Water and non-VOCs = (Density (lb/gal) * Weight % VOCs) / (1-Volume % water and non-VOCs)

Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % VOCs)

Potential VOC Pounds per Hour = Maximum Usage (lbs/hr) * Weight % VOCs

Potential VOC Pounds per Day = Potential VOC (lb/hr) * (24 hr/day)

Potential VOC Tons per Year = Potential VOC (lb/day) * (365 days/yr) * (1 ton/2000 lbs)

Particulate Potential Tons per Year = Density (lbs/gal) * Maximum Usage (gal/day) * (Weight % Solids) * (1-Transfer efficiency) *(365 days/yr) *(1 ton/2000 lbs)

Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % VOCs) / (Volume % solids)

HAPS emission rate (tons/yr) = Density (lb/gal) * Maximum Usage (gal/day) * Weight % HAP * 365 days/yr * 1 ton/2000 lbs

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Corrugated Supplies Company Indiana, LLC
Address City IN Zip: 2100 Summit Street, New Haven, IN 46774
Permit Number: 003-21644
Plt ID: 003-00076
Reviewer: Nathan C. Bell
Date: August 30, 2005

				Pollutant	PM*	PM10*	SO2	NOx**	VOC	CO
				Emission Factor (lb/MMCF)	1.9	7.6	0.6	100	5.5	84.0
			Combined		Potential Emission tons/yr					
		Unit Heat	Total Heat	Potential						
	Number	Input Capacity	Input Capacity	Throughput						
Emission Unit	of Units	MMBtu/hr	MMBtu/hr	MMCF/yr	PM*	PM10*	SO2	NOx**	VOC	CO
Boiler B1	1	11.82	11.8	103.54	0.098	0.393	0.031	5.177	0.285	4.349
Boiler B2	1	11.82	11.8	103.54	0.098	0.393	0.031	5.177	0.285	4.349
Space Heaters	40	NA	0.20	1.75	1.7E-03	0.007	0.001	0.088	0.005	0.074
Totals	**42**		**23.8**		**0.20**	**0.79**	**0.06**	**10.44**	**0.57**	**8.77**

Pollutant	Benzene	DCB	Formaldehyde	Hexane	Toluene	Pb	Cd	Cr	Mn	Ni
Emission Factor (lb/MMCF)	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
	Potential Emission tons/yr									
Emission Unit	Benzene	DCB	Formaldehyde	Hexane	Toluene	Pb	Cd	Cr	Mn	Ni
Radiant Heaters	1.1E-04	6.2E-05	3.9E-03	0.093	1.8E-04	2.6E-05	5.7E-05	7.2E-05	2.0E-05	1.1E-04
Radiant Heaters	1.1E-04	6.2E-05	3.9E-03	0.093	1.8E-04	2.6E-05	5.7E-05	7.2E-05	2.0E-05	1.1E-04
Radiant Heaters	1.8E-06	1.1E-06	6.6E-05	0.002	3.0E-06	4.4E-07	9.6E-07	1.2E-06	3.3E-07	1.8E-06
Totals	**2.2E-04**	**1.3E-04**	**7.8E-03**	**0.188**	**3.6E-04**	**5.2E-05**	**1.1E-04**	**1.5E-04**	**4.0E-05**	**2.2E-04**

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
The five highest organic and metal HAPs emission factors are provided above. Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Methodology

Potential Throughput (MMCF) = Combined Total Heat Input Capacity (MMBtu/hr) * 8,760 hrs/yr * 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF) / 2,000 lb/ton
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu, MMCF = 1,000,000 Cubic Feet of Gas

Abbreviations

PM = Particulate Matter	NOx = Nitrous Oxides	DCB = Dichlorobenzene	Cr = Chromium
PM10 = Particulate Matter (<10 um)	VOC - Volatile Organic Compounds	Pb = Lead	Mn = Manganese
SO2 = Sulfur Dioxide	CO = Carbon Monoxide	Cd = Cadmium	Ni = Nickel