



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

TO: Interested Parties / Applicant
DATE: November 13, 2013
RE: Color Box LLC / 177-33499-00063
FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

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 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require 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, Suite N 501E, 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



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Michael R. Pence
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Commissioner

**Federally Enforceable State Operating Permit
OFFICE OF AIR QUALITY**

**Color-Box LLC - Richmond Division
1056 Industries Road
Richmond, IN 47374**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-8-11.1, applicable to those conditions

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

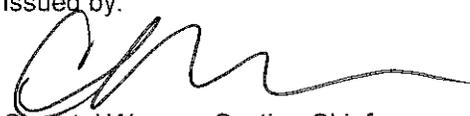
Operation Permit No.: F177-33499-00063	
Issued by:  Chrystal Wagner, Section Chief Permits Branch Office of Air Quality	Issuance Date: November 13, 2013 Expiration Date: November 13, 2018

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.4 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary lithographic printing source that prints shipping and display containers.

Source Address:	1056 Industries Rd, Richmond, IN 47374
General Source Phone Number:	(765) 966-7588
SIC Code:	2752 (Lithographic Printing) and 2653 (Corrugated and Solid Fiber Boxes)
County Location:	Wayne
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This source consists of the following emission units and pollution control devices:

- (a) Two (2) non-heatset offset lithographic printing presses, identified as Presses 2 and 3, each with a maximum line speed of 262.5 feet per minute and a maximum print width of 65 inches, and coating up to 6,500 paper sheets per hour, each exhausting to one (1) stack respectively identified as V2 and V3. Presses 2 and 3 were installed in 1999.
- (b) One (1) non-heatset offset sheet-fed lithographic printing press, identified as Press 4, installed in 2006, with a maximum line speed of 545 feet per minute and a maximum printing width of 64 inches, and coating up to 13,500 paper sheets per hour, exhausting at one (1) stack, identified as V4.
- (c) One (1) non-heatset offset lithographic printing press, identified as New Press 1, approved for construction in 2011 with a maximum line speed of 979.00 feet per minute and a maximum print width of 63.96 inches, and coating up to 15,000 paper sheets per hour, exhausting to stack V1.
- (d) One (1) continuous web heatset offset lithographic printing press, identified as web press, approved in 2013 for construction to replace existing Presses 2 and 3, with a maximum line speed of 1,500 feet per minute, maximum printing width of 75 inches equivalent to 562.5 MSF/hr (thousand square feet per hour), consisting of the following:
 - (1) Seven (7) printing stations with total maximum ink usage of 118 pounds per hour (lbs/hr).
 - (2) One (1) 7.0 million British thermal units per hour (MMBtu/hr) natural gas-fired two-burner ink dryer, each burner is rated at 3.5 MMBtu/hr.
 - (3) Two (2) coating stations with total maximum coating usage rate of 579 lbs/hr, and

- (4) One (1) 3.5 MMBtu/hr natural gas-fired coating dryer.

The ink dryer and the coating dryer will be controlled by one (1) 1.6 MMBtu/hr natural gas-fired thermal oxidizer, identified as TO-1.

- (e) One (1) pneumatic starch conveyance system, installed in 2001, processing up to 3,500 pounds starch per hour, and connected to the following equipment:
 - (1) One (1) starch silo, identified as S-1, with a storage capacity of 65 tons of starch, using a baghouse for particulate matter control, exhausting to one (1) stack, identified as EP #1; and
 - (2) One (1) starch kitchen (mixer), identified as S-2, using a filter sock for particulate matter control, and exhausting to the indoors through one (1) stack, identified as EP #2.
- (f) One (1) pneumatic scrap paper conveyance system using one (1) air separator/air screen, identified as S-3, installed in 2001, processing up to 5,000 pounds scrap paper per hour, using a cartridge filter for particulate control, exhausting to the indoors through one (1) stack identified as EP #4, and connected to the following equipment:
 - (1) One (1) corrugator, identified as C-1;
 - (2) One (1) laminator, identified as L-1;
 - (3) One (1) shredder, identified as SH-1; and
 - (4) Two (2) die cutters, identified as DC-1 and DC-3.

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

This source also includes the following insignificant activities:

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.
 - (1) One (1) natural gas fired steam generator, identified as B-1, installed in 2001, with a maximum heat input capacity of 6.2 million (MM) British thermal units (Btu) per hour, and exhausting to one stack identified as EP #3.
- (b) One (1) above ground storage tank with a capacity of 6,000 gallons, installed in 2001, storing laminating glue.
- (c) One (1) above ground storage tank with a capacity of 6,000 gallons, installed in 2004, storing aqueous coating.
- (d) One (1) scrap paper baler, identified as BA-1.

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

- (a) This permit, F177-33499-00063, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability [326 IAC 2-8-6] [IC 13-17-12]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability [326 IAC 2-8-4(4)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

- (a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:

- (1) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and
- (2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

The Permittee shall implement the PMPs.

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.12 Emergency Provisions [326 IAC 2-8-12]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly

signed, contemporaneous operating logs or other relevant evidence that describe the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to F177-33499-00063 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination
[326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
 - (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.16 Permit Renewal [326 IAC 2-8-3(h)]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
 - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the

document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) and (c) without a prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b)(1) and (c). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)(1) and (c).

- (b) Emission Trades [326 IAC 2-8-15(b)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(b).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(c)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.19 Source Modification Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ no later than thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-8-4(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM) and greenhouse gases (GHGs), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (4) The potential to emit greenhouse gases (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO₂ equivalent (CO₂e) emissions per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 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.

C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.6 Fugitive Dust Emissions [326 IAC 6-4]

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 (Fugitive Dust Emissions).

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

Testing Requirements [326 IAC 2-8-4(3)]

C.8 Performance Testing [326 IAC 3-6]

- (a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

C.10 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale. The analog instrument shall be capable of measuring values outside of the normal range.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

C.12 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.13 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

- (a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to normal or usual manner of operation.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall record the reasonable response steps taken.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.15 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following, where applicable:

- (AA) All calibration and maintenance records.
- (BB) All original strip chart recordings for continuous monitoring instrumentation.
- (CC) Copies of all reports required by the FESOP.

Records of required monitoring information include the following, where applicable:

- (AA) The date, place, as defined in this permit, and time of sampling or measurements.
- (BB) The dates analyses were performed.
- (CC) The company or entity that performed the analyses.
- (DD) The analytical techniques or methods used.
- (EE) The results of such analyses.
- (FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

- (b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.16 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

- (b) The address for report submittal is:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

C.17 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) Two (2) non-heatset offset lithographic printing presses, identified as Presses 2 and 3, each with a maximum line speed of 262.5 feet per minute and a maximum print width of 65 inches, and coating up to 6,500 paper sheets per hour, each exhausting to one (1) stack respectively identified as V2 and V3. Presses 2 and 3 were installed in 1999.
- (b) One (1) non-heat set offset sheet-fed lithographic printing press, identified as Press 4, installed in 2006, with a maximum line speed of 545 feet per minute and a maximum printing width of 64 inches, and coating up to 13,500 paper sheets per hour, exhausting at one (1) stack, identified as V4.
- (c) One (1) non-heat set offset lithographic printing press, identified as New Press 1, approved for construction in 2011, with a maximum line speed of 979.00 feet per minute and a maximum print width of 63.96 inches, and coating up to 15,000 paper sheets per hour, exhausting to stack V1.
- (d) One (1) continuous web heatset offset lithographic printing press, identified as web press, approved in 2013 for construction to replace existing Presses 2 and 3, with a maximum line speed of 1,500 feet per minute, maximum printing width of 75 inches equivalent to 562.5 MSF/hr (thousand square feet per hour), consisting of the following:
 - (1) Seven (7) printing stations with total maximum ink usage of 118 pounds per hour (lbs/hr).
 - (2) One (1) 7.0 million British thermal units per hour (MMBtu/hr) natural gas-fired two-burner ink dryer, each burner is rated at 3.5 MMBtu/hr.
 - (3) Two (2) coating stations with total maximum coating usage rate of 579 lbs/hr, and
 - (4) One (1) 3.5 MMBtu/hr natural gas-fired coating dryer.

The ink dryer and the coating dryer will be controlled by one (1) 1.6 MMBtu/hr natural gas-fired thermal oxidizer, identified as TO-1.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Volatile Organic Compounds (VOC) Minor Limitations [326 IAC 2-8-4] [326 IAC 2-2]

VOC emissions from printing presses, identified as Press 1, Press 2, Press 3, Press 4, Web Press in Section D.1(a) through (d) and Laminator, identified as L-1 in Section D.2(f)(2), shall be limited to less than a total of 99 tons per twelve consecutive month period, with compliance determined at the end of each month. This VOC limit excludes VOC emissions from insignificant activities; natural gas combustion from the ink dryer, coating dryer, steam generator and web press thermal oxidizer.

Compliance with this limit shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), not applicable.

D.1.2 Hazardous Air Pollutants (HAPs) Minor Limitations [326 IAC 2-8-4] [326 IAC 2-4.1-1]

- (a) The combined HAPs emissions from the entire source shall be limited to a total of less than twenty-five (25) tons per twelve consecutive month period with compliance determined at the end of each month.
- (b) Any single worst HAP from the entire source shall be limited to a total of less than ten (10) tons per twelve consecutive month period with compliance determined at the end of each month.

Compliance with these limits shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-4.1-1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable.

D.1.3 Volatile Organic Compound (VOC) BACT and Part 70 Avoidance Limit [326 IAC 8-1-6] [326 IAC 2-8]

- (a) The Permittee shall comply with the following limits for Press 4:
 - (1) The total volatile organic compounds (VOC) emissions from non-heatset offset lithographic printing press (Press 4), shall not exceed twenty-two (22) tons per twelve consecutive month period, with compliance determined at the end of each month.
 - (2) The VOC content of the ink/varnish shall not exceed 45.0% by weight; and
 - (3) The VOC flash off for the ink/varnish shall not exceed 5.0%.
 - (4) The VOC content of the aqueous coating shall not exceed 3.43% by weight.
- (b) The total VOC emissions from Press 1 shall not exceed twenty-two (22) tons per twelve consecutive month period, with compliance determined at the end of each month.

Compliance with the above limits shall render the requirements of 326 IAC 8-1-6 and 326 IAC 2-8 not applicable to Press 1 and Press 4.

D.1.4 Volatile Organic Compound (VOC) Best Available Control Technology (BACT) Requirements [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6, the BACT for Heatset Offset Lithographic Press, identified as Web Press shall be the following:

- (a) The VOC emissions from the Web Press ink dryer and coating dryer shall be controlled by a thermal oxidizer with a minimum destruction efficiency of ninety-eight percent (98%) or a VOC outlet concentration of 10 parts per million by volume (ppmv) as hexane, minus methane and ethane.
- (b) The VOC content of the fountain solution as applied shall be no greater than three percent (3%).
- (c) The VOC composite vapor pressure from all cleaning materials shall be less than ten millimeters of mercury (10 MM Hg) at 20°C.
- (d) Good work practices shall be performed; such as keeping solvent containers closed except when filling, draining or conducting cleaning operations, and keeping used shop towels in closed containers.

Compliance with the composite vapor pressure in (c) of this condition in conjunction with the good work practices in (d) of this condition would result in an emission reduction that is comparable to using cleaning materials that contain less than 30 weight percent VOC. This is based on the "Control Techniques Guidelines for Offset Lithographic Printing and Letterpress Printing" (EPA-453/R-06-002, September 2006).

- (e) The Web Press ink and coating dryers shall be operated under negative pressure.
- (f) The capture efficiencies used for reporting and compliance shall be based on the "Control Techniques Guidelines for Offset Lithographic Printing and Letterpress Printing" (EPA-453/R-06-002, September 2006) as follows:
 - (1) 100 percent (100%) capture, by weight, of the VOC in press ready inks;
 - (2) 70 percent (70%) capture, by weight, of the VOC in press ready fountain solutions; and
 - (3) 40 percent (40%) capture, by weight, of the VOC in press ready automatic cleaning solvents.

D.1.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan is required for the printing presses and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.1.6 Thermal Oxidizer

The exhaust from the ink and coating dryers of the web heatset offset lithographic printing press, identified as Web Press shall be vented to the thermal oxidizer, identified as TO-1 at all times when this web press is in operation.

D.1.7 Volatile Organic Compounds (VOC)

- (a) Compliance with the VOC content and usage limitations contained in Conditions D.1.1 through D.1.4 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer or vendor the copies of the "as supplied" and/or "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.
- (b) Compliance with the VOC limit and HAP limit in Condition D.1.1 and Condition D.1.2 shall be determined using the following equation:

Web press controlled by thermal oxidizer, TO-1:

$$E_n = U_n \times V_n / H_n \times F \times \{1 - (C_e/100) \times (D_e/100)\}$$

Presses without a thermal oxidizer

$$E_n = U_n \times V_n \times F$$

Total VOC or HAP Emissions from all presses

$$ET = E_n(\text{Press 1}) + E_n(\text{Press 2}) + E_n(\text{Press 3}) + E_n(\text{Press 4}) + E_n(\text{Web Press})$$

Where:

- ET = VOC or HAP emissions from all presses
- En = VOC or HAP emissions from each press
- Un = Total usage of each material from each press
- Vn/Hn= VOC or HAP content of each material from each press
- F = Flash off factor of each material from each press
- Ce = Capture efficiency for thermal oxidizer, TO-1
- De = Destruction efficiency for thermal oxidizer, TO-1

- (c) Compliance with the VOC composite vapor pressure in Condition D.1.4(c) shall be calculated using the following equation:

$$PP_c = \frac{\sum_{i=1}^n (W_i)(VP_i)/MW_i}{\frac{M_w}{MW_w} + \frac{W_e}{MW_e} + \sum_{i=1}^n \frac{W_i}{MW_i}}$$

Where:

- W_i = Weight of the "i"th VOC compound, in grams
- W_w = Weight of water, in grams
- W_e = Weight of exempt compound, in grams
- MW_i = Molecular weight of the "i"th VOC compound, in g/g-mole (gram/gram-mole)
- MW_w = Molecular weight of water, in g/g-mole
- MW_e = Molecular weight of exempt compound, in g/g-mole
- PP_c = VOC composite vapor pressure at 20 C, in mm Hg
- VP_i = Vapor pressure of the "i"th VOC compound at 20 C, in mm Hg

D.1.8 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

Within sixty (60) days after achieving maximum capacity but no later than one hundred eighty (180) days after startup of the web heatset offset lithographic printing press, identified as Web Press, the Permittee shall conduct a performance test to demonstrate compliance with Condition D.1.4(a) for the one (1) thermal oxidizer, identified as TO-1 utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of a valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition.

D.1.9 Thermal Oxidizer Temperature

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer, identified as TO-1, for measuring operating temperature. For purposes of this condition, continuous shall mean no less than once per fifteen (15) minutes. The output of this system shall be recorded as a three (3) hour average. From the date of issuance of this permit until the approved stack test results are available, the three (3) hour average operating temperature of the thermal oxidizer shall be maintained at a minimum temperature of 1600°F. Whenever the three (3) hour average temperature is below 1600°F until the three (3) hour average temperature established during the latest stack test, the Permittee shall take reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.
- (b) The Permittee shall determine the three (3) hour average temperature from the most recent valid stack test that demonstrates compliance with the limit in Condition D.1.4(a),

as approved by IDEM.

- (c) On and after the date the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the three (3) hour average temperature as observed during the compliant stack test.

The instruments used for determining the temperature shall comply with Section C – Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.

D.1.10 Parametric Monitoring

- (a) The Permittee shall achieve a negative air flow pressure in the Web Press ink and coating dryers as required in D.1.4(e) through either the following:
 - (1) A continuous monitor system with either an audible or visual alarm that sounds when a positive air flow is detected in the Web Press ink and coating dryers; or
 - (2) Interlocking the operation of the Web Press ink and coating dryers to the associated thermal oxidizer, identified as TO-1 which will shut down the Web Press when a positive air flow is detected in the ink and coating dryers.
- (b) Maintaining a negative air flow pressure across the Web Press dryer inlets and outlets shall yield the following capture efficiencies:
 - (1) 100 percent (100%) capture, by weight, of the VOC in press ready inks;
 - (2) 70 percent (70%) capture, by weight, of the VOC in press ready fountain solutions; and
 - (3) 40 percent (40%) capture, by weight, of the VOC in press ready automatic cleaning solvents.

The instruments used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months)

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)][326 IAC 2-6.1-5(a)(2)]

D.1.11 Record Keeping Requirements

- (a) To document the compliance status with Conditions D.1.1, D.1.2, D.1.3 and D.1.4, the Permittee shall maintain records for each printing press in accordance with (1) through (3) below. Records maintained for (1) through (3) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC and HAP emission limits respectively established in Conditions D.1.1, D.1.2, D.1.3 and D.1.4. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
 - (1) The amount and VOC and HAP content of each ink, coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents. Records shall indicate which materials and solvents are used for the ink/varnish, aqueous coating, blank wash, fountain solution, meter roll cleaner, and alcohol/ plate cleaner.

- (2) The total VOC and HAP usage for each month.
 - (3) The total VOC emitted for each compliance period.
 - (4) Continuous temperature records (on a three-hour average basis) for the thermal incinerator and the three-hour average temperature used to demonstrate compliance during the most recent compliant stack test.
 - (5) The Permittee shall maintain records indicating which approach in Condition D.1.10(a) is being used for each dryer to monitor negative air flow pressure in the dryers and when a positive air flow is detected.
- (b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

D.1.12 Reporting Requirements

A monthly summary of the information to document the compliance status with Conditions D.1.1, D.1.2 and D.1.3(a)(1) and (b) shall be submitted using the reporting forms located at the end of this permit, or their equivalent, no later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to reporting required by this condition.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (e) One (1) pneumatic starch conveyance system, installed in 2001, processing up to 3,500 pounds starch per hour, and connected to the following equipment:
 - (1) One (1) starch silo, identified as S-1, with a storage capacity of 65 tons of starch, using a baghouse for particulate matter control, exhausting to one (1) stack, identified as EP #1; and
 - (2) One (1) starch kitchen (mixer), identified as S-2, using a filter sock for particulate matter control, and exhausting to the indoors through one (1) stack, identified as EP #2.

- (f) One (1) pneumatic scrap paper conveyance system using one (1) air separator/air screen, identified as S-3, installed in 2001, processing up to 5,000 pounds scrap paper per hour, using a cartridge filter for particulate control, exhausting to the indoors through one (1) stack identified as EP #4, and connected to the following equipment:
 - (1) One (1) corrugator, identified as C-1;
 - (2) One (1) laminator, identified as L-1;
 - (3) One (1) shredder, identified as SH-1; and
 - (4) Two (2) die cutters, identified as DC-1 and DC-3.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate emission limitations, work practices, and control technologies), the following facilities shall be limited as follows:

FACILITY/ID	PROCESS WEIGHT RATE (TONS/HR)	PARTICULATE EMISSION LIMITATIONS (POUNDS/HOUR)
STARCH SILO S-1	1.75	5.96
STARCH KITCHEN S-2	1.75	5.96
AIR SEPARATOR/AIR SCREEN S-3	2.5	7.57

The above pounds per hour limitations were each 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

D.2.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan is required for the pneumatic starch and scrap paper conveyance systems and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.2.3 Particulate Control

In order to comply with condition D.2.1, the Permittee shall comply as follows:

- (a) The baghouse for particulate control shall be in operation and control emissions from the starch silo (S-1) at all times that the starch silo is in operation.
- (b) The filter sock for particulate control shall be in operation and control emissions from the starch kitchen (S-2) at all times that the starch kitchen is in operation.
- (c) The air separator/air screen with cartridge filter (S-3) for particulate control shall be in operation and control emission from the corrugator (C-1), laminator (L-1), shredder (SH-1) and the die cutters (DC-1 and DC-3) at all times that these facilities are in operation.

Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

D.2.4 Visible Emissions Notations

- (a) Daily visible emission notations of the pneumatic starch conveyance system transfer points, starch silo (S-1) stack exhaust (EP #1), starch kitchen mixer (S-2) stack exhaust (EP #2); and air separator/air screen (S-3) stack exhaust (EP #4) shall be performed during normal daylight operations during the transfer of starch to the storage silo and during the removal of starch from the storage silo to an alternate storage area when venting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps shall be considered a deviation from this permit.

D.2.5 Parametric Monitoring

- (a) The Permittee shall record the pressure drop across each baghouse used in conjunction with the starch silo (S-1) and starch kitchen (mixer), identified as S-2, at least once per day when the starch silo (S-1) or starch kitchen (mixer), identified as S-2, is in operation when venting to the atmosphere. When for any one reading, the pressure drop across each baghouse is outside the normal range of 0.5 and 5.0 inches of water or a range established during the latest stack test, the Permittee shall take a reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.
- (b) The Permittee shall record the pressure drop across the air separator/air screen filter (S-3) used in conjunction with the corrugator (C-1), laminator (L-1), shredder (SH-1) and the die cutters (DC-1 and DC-3), at least once per day when the corrugator (C-1), laminator (L-1), shredder (SH-1) and the die cutters (DC-1 and DC-3) are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the filter is outside the normal range of 0.5 and 5.0 inches of water or a range established during the latest stack test, the Permittee shall take a reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

The instrument used for determining the pressure in paragraphs (a) and (b) shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.2.6 Baghouse and Filter Inspections

An inspection shall be performed each calendar quarter of all bags controlling the starch silo (S-1), starch kitchen mixer (S-2) and the filters controlling the corrugator (C-1), laminator (L-1), shredder (SH-1) and die cutters (DC-1 and DC-3) connected to the air separator/air screen (S-3), when venting to the atmosphere. A baghouse and filter inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags and filters shall be replaced.

D.2.7 Broken or Failed Bag and Filter Detection

- (a) For a single compartment baghouse and filter controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced.
- (b) For a single compartment baghouse and filter controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit.

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirement [326 IAC 2-6.1-5(a)(2)]

D.2.8 Record Keeping Requirements

- (a) To document the compliance status with Condition D.2.4, the Permittee shall maintain records of visible emission notations of the starch silo (S-1) stack exhaust (i.e., stack EP #4) once per day when venting to the atmosphere. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (b) To document the compliance status with Condition D.2.5, the Permittee shall maintain records once per day of the pressure drop during normal operation when venting to the atmosphere. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g., the process did not operate that day).
- (c) Section C - General Record Keeping Requirements, contains the Permittee's obligations with regard to the records required by this condition.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: Color-Box LLC - Richmond Division
Source Address: 1056 Industries Rd, Richmond, Indiana 47374
FESOP Permit No.: F177-33499-00063

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify)_____
- Report (specify)_____
- Notification (specify)_____
- Affidavit (specify)_____
- Other (specify)_____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT**

Source Name: Color-Box LLC - Richmond Division
Source Address: 1056 Industries Rd, Richmond, Indiana 47374
FESOP Permit No.: F177-33499-00063

This form consists of 2 pages

Page 1 of 2

- This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
 - The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
SEMI- ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION**

Source Name: Color-Box LLC - Richmond Division
Source Address: 1056 Industries Rd, Richmond, Indiana 47374
FESOP Permit No.: F177-33499-00063

<input type="checkbox"/> Natural Gas Only <input type="checkbox"/> Alternate Fuel burned From: _____ To: _____
--

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
Signature:
Printed Name:
Title/Position:
Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH**

FESOP Quarterly Report

Source Name: Color-Box LLC - Richmond Division
Source Address: 1056 Industries Rd, Richmond, Indiana 47374
FESOP Permit No.: F177-33499-00063
Facility: Press 1, Press 2, Press 3, Press 4 and Web Press
Parameter: VOC emissions
Limit: Less than a total of 99 tons per twelve consecutive month period, with compliance determined at the end of each month. This VOC limit excludes VOC emissions from insignificant activities; natural gas combustion from ink dryer, coating dryer, steam generator and web press thermal oxidizer that does not require reporting.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE AND ENFORCEMENT BRANCH**

FESOP Quarterly Report

Source Name: Color-Box LLC - Richmond Division
 Source Address: 1056 Industries Rd, Richmond, Indiana 47374
 FESOP Permit No.: F177-33499-00063
 Facility: Entire Source
 Parameter: HAP emissions
 Limit: Less than 25 tons per twelve consecutive month period for combined HAPs and less than 10 tons per twelve consecutive month period for single HAP, with compliance determined at the end of each month.

YEAR: _____

Month	Column 1		Column 2		Column 1 + Column 2	
	This Month		Previous 11 Months		12 Month Total	
	Combined HAPs	Single HAP	Combined HAPs	Single HAP	Combined HAPs	Single HAP
1						
2						
3						

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.
 Deviation has been reported on: _____

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH**

FESOP Quarterly Report

Source Name: Color-Box LLC - Richmond Division
Source Address: 1056 Industries Rd, Richmond, Indiana 47374
FESOP Permit No.: F177-33499-00063
Facility: Press 1
Parameter: VOC emissions
Limit: Shall not exceed twenty-two (22) tons per twelve consecutive month period, with compliance determined at the end of each month

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH**

FESOP Quarterly Report

Source Name: Color-Box LLC - Richmond Division
Source Address: 1056 Industries Rd, Richmond, Indiana 47374
FESOP Permit No.: F177-33499-00063
Facility: Press 4
Parameter: VOC emissions
Limit: Shall not exceed twenty-two (22) tons per twelve consecutive month period, with compliance determined at the end of each month

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE AND ENFORCEMENT BRANCH
 FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Color-Box LLC - Richmond Division
 Source Address: 1056 Industries Rd, Richmond, IN 47374,, Indiana
 FESOP Permit No.: F177-33499-00063

Months: _____ **to** _____ **Year:** _____

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C- General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
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Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
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Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

**Indiana Department of Environmental Management
Office of Air Quality**

Technical Support Document (TSD) for a MSOP Transitioning to a
Federally Enforceable State Operating Permit (FESOP) with New Source
Review (NSR)

Source Description and Location

Source Name:	Color-Box, LLC - Richmond Division
Source Location:	1056 Industries Road, Richmond, Indiana 47374
County:	Wayne
SIC Code:	2752
Operating Permit No.:	F177-33499-00063
Permit Reviewer:	Aida DeGuzman

On August 6, 2013, the Office of Air Quality (OAQ) received an application from Color-Box, LLC relating to construction and operation of a new emission unit that will replace Presses 2 and 3. This modification requires the source transition from a Minor Source Operating Permit (MSOP) to a Federally Enforceable State Operating Permit (FESOP) for its lithographic printing source that prints shipping and display containers.

Existing Approvals

Since the issuance of the Minor Source Operating Permit No. 177-18637-00063, issued on August 20, 2004, the source has constructed or has been operating under the following approvals:

- (a) Notice-Only Change No. 177-19793-00063, issued on November 22, 2004;
- (b) Notice-Only Change No. 177-21888-00063, issued on November 16, 2005;
- (c) Minor Permit Revision No. 177-23533-00063, issued on October 5, 2006;
- (d) Minor Permit Revision No. 177-25316-00063, issued on December 27, 2007;
- (d) Notice-Only Change No. 177-27592-00063, issued on March 30, 2009;
- (e) Notice-Only Change No. 177-29703-00063, issued on October 19, 2010;
- (f) Minor Permit Revision No. 177-31239-00063, issued on December 27, 2011; and
- (g) Notice-Only Change No. 177-31360-00063, issued on January 27, 2012.

County Attainment Status

The source is located in Wayne County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.
¹ Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM _{2.5} .	

- (a) **Ozone Standards**
 Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) 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 NO_x emissions are considered when evaluating the rule applicability relating to ozone. Wayne County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) Wayne County has been classified as attainment for PM_{2.5}. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM_{2.5} emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct PM_{2.5} significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct PM_{2.5}, SO₂, and NO_x 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.
- (d) **Other Criteria Pollutants**
 Wayne County has been classified as attainment or unclassifiable in Indiana for all the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and VOC emissions are not counted toward determination of PSD applicability.

Background and Description of Permitted Emission Units and New Source Review

The Office of Air Quality (OAQ) has reviewed an application, submitted by Color-Box, LLC on August 5, 2013, relating to the construction of a new continuous web, heatset offset lithographic printing press that will replace two (2) existing sheet-fed, non-heatset offset lithographic printing presses, identified as Presses 2 and 3. The source will also transition from a MSOP to FESOP.

The source consists of the following permitted emission units:

- (a) Two (2) non-heatset offset lithographic printing presses, identified as Presses 2 and 3, each with a maximum line speed of 262.5 feet per minute and a maximum print width of 65 inches, and coating up to 6,500 paper sheets per hour, each exhausting to one (1) stack respectively identified as V2 and V3. Presses 2 and 3 were installed in 1999.

- (b) One (1) non-heatset offset sheet-fed lithographic printing press, identified as Press 4, installed in 2006, with a maximum line speed of 545 feet per minute and a maximum printing width of 64 inches, and coating up to 13,500 paper sheets per hour, exhausting at one (1) stack, identified as V4.
- (c) One (1) non-heatset offset lithographic printing press, identified as New Press 1, approved for construction in 2011 with a maximum line speed of 979.00 feet per minute and a maximum print width of 63.96 inches, and coating up to 15,000 paper sheets per hour, exhausting to stack V1.
- (d) One (1) pneumatic starch conveyance system, installed in 2001, processing up to 3,500 pounds starch per hour, and connected to the following equipment:
 - (1) One (1) starch silo, identified as S-1, with a storage capacity of 65 tons of starch, using a baghouse for particulate matter control, exhausting to one (1) stack, identified as EP #1; and
 - (2) One (1) starch kitchen (mixer), identified as S-2, using a filter sock for particulate matter control, and exhausting to the indoors through one (1) stack, identified as EP #2.
- (e) One (1) pneumatic scrap paper conveyance system using one (1) air separator/air screen, identified as S-3, installed in 2001, processing up to 5,000 pounds scrap paper per hour, using a cartridge filter for particulate control, exhausting to the indoors through one (1) stack identified as EP #4, and connected to the following equipment:
 - (1) One (1) corrugator, identified as C-1;
 - (2) One (1) laminator, identified as L-1;
 - (3) One (1) shredder, identified as SH-1; and
 - (4) Two (2) die cutters, identified as DC-1 and DC-3.
- (f) One (1) natural gas fired steam generator, identified as B-1, installed in 2001, with a maximum heat input capacity of 6.2 million (MM) British thermal units (Btu) per hour, and exhausting to one stack identified as EP #3.
- (g) One (1) above ground storage tank with a capacity of 6,000 gallons, installed in 2001, storing laminating glue.
- (h) One (1) above ground storage tank with a capacity of 6,000 gallons, installed in 2004, storing aqueous coating.
- (i) One (1) scrap paper baler, identified as BA-1.

The following is a list of the new emission units and pollution control device that will replace existing Presses 2 and 3:

- (a) One (1) continuous web heatset offset lithographic printing press, identified as web press, approved in 2013 for construction with a maximum line speed of 1,500 feet per minute, maximum printing width of 75 inches equivalent to 562.5 MSF/hr (thousand square feet per hour), consisting of the following:
 - (1) Seven (7) printing stations with total maximum ink usage of 118 pounds per hour (lbs/hr).
 - (2) One (1) 7.0 million British thermal units per hour (MMBtu/hr) natural gas-fired two-burner ink dryer, each burner is rated at 3.5 MMBtu/hr.
 - (3) Two (2) coating stations with total maximum coating usage rate of 579 lbs/hr, and
 - (4) One (1) 3.5 MMBtu/hr natural gas-fired coating dryer.

The ink dryer and the coating dryer will be controlled by one (1) 1.6 MMBtu/hr natural gas-fired thermal oxidizer, identified as TO-1.

Emission Units and Pollution Control Equipment Removed From the Source

The source has removed the following emission units:

- (a) One (1) in-line gluer, identified as G-1, with potential glue usage of fifty-five (55) tons per year;
- (b) One (1) die cutter, identified as DC-2.

Air Pollution Control Justification as an Integral Part of the Process

The following integral part of the process determination has been made for the source in MSOP No. 177-14208-00063, issued on May 10, 2001:

The company has submitted the following justification such that the Air Separator/Air Screen (identified as S-3) be considered as an integral part of the corrugator (C-1), laminator (L-1), shredder (SH-1) and die cutter 1 (DC-1) process.

- (a) The system referenced above has been designed to pneumatically convey trim scrap paper from various generation points at pieces of individual equipment to a central location. At this location the scrap is separated by the air separator/screen. The air is discharged inside the building for energy recovery and the paper scrap drops into a baler that bales the material for shipment to a paper mill for recycling. Without the scrap separation system the pneumatic conveyance of this material would not be feasible.
- (b) This system could not operate without a mechanical means to separate the scrap from the air stream. The primary purpose of the scrap system is efficient material handling not pollution control.

IDEM, OAQ evaluated the justifications and agreed that the air separator/air screen will be considered as an integral part of the corrugator (C-1), laminator (L-1), shredder (SH-1) and die cutter 1 (DC-1) process. Therefore, the permitting level will be determined using the potential to emit after the air separator/air screen. Operating conditions in the proposed permit will specify that this air separator/air screen shall operate at all times when the corrugator (C-1), laminator (L-1), shredder (SH-1) or die cutter 1 (DC-1) are in operation.

The company has also submitted the following justification such that the baghouse for the starch silo (S-1) and the baghouse for the starch kitchen (S-2) be considered as an integral part of the process.

- (a) The system referenced above has been designed to pneumatically convey powdered cornstarch from a bulk truck to our silo and from the silo to our starch kitchen. The cornstarch is used as a raw material in the adhesive mixture used in the corrugation process. The air is discharged from the silo vent to relieve the pressure and vent the air used to convey the material.
- (b) The primary purpose of the vent system is to relieve the pressure build-up in the silo associated with filling the silo.

IDEM, OAQ has evaluated the justifications and agreed that the baghouse for the starch silo (S-1) and the baghouse for the starch kitchen (S-2) will be considered as an integral part of the starch silo (S-1) and starch kitchen (S-2) process. Therefore, the permitting level will be determined using the potential to emit after the baghouses. Operating conditions in the proposed permit will specify that this baghouses shall operate at all times when the starch silo (S-1) and the starch kitchen (S-2) are in operation.

Enforcement Issues

There are no pending enforcement actions related to this modification.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – FESOP

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	3.41
PM10 ⁽¹⁾	3.85
PM2.5 ⁽¹⁾	3.85
SO ₂	0.05
NO _x	7.86
VOC	405.72
CO	6.60
GHGs as CO ₂ e	9,487.27

(1) Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10) and particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers (PM2.5), not particulate matter (PM), are each considered as a "regulated air pollutant".

HAPs	Potential To Emit (tons/year)
Glycol Ether	28.84
Hexane	0.14
Vinyl Acetate	3.47
* TOTAL HAPs	37.63

*Some of the individual HAPs were not calculated and identified, hence the discrepancy in total HAPs.

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of volatile organic compounds (VOC) are greater than one hundred (100) tons per year. The PTE of all other regulated criteria pollutants are each less than one hundred (100) tons per year. The source would have been subject to the provisions of 326 IAC 2-7. However, the source will be issued a New Source Construction Permit (326 IAC 2-5.1-3) and a Federally Enforceable State Operating Permit (FESOP) (326 IAC 2-8), because the source will limit emissions to less than the Title V major source threshold levels.
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of any single HAP is greater than ten (10) tons per year and the PTE of a combination of HAPs is greater than twenty-five (25) tons per year. Therefore, the source would have been subject to the provisions of 326 IAC 2-7. However, the source will be issued a New Source Construction Permit (326 IAC 2-5.1-3) and a FESOP (326 IAC 2-8), because the source will limit emissions of HAPs to less than the Title V major source threshold levels.
- (c) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) greenhouse gases (GHGs) is less than the Title V subject-to-regulation threshold of one hundred thousand (100,000) tons of CO₂ equivalent (CO₂e) emissions per year.

PTE of the Entire Source After Issuance of the FESOP

The table below summarizes the potential to emit of the entire source after issuance of this FESOP, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this FESOP, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

CONTROLLED/LIMITED SOURCE-WIDE PTE (TONS/YEAR)											
	ID	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	GHGs CO ₂ e	VOC	Total HAPs	Single HAP
New Emission Unit											
Web Press, Heatset Offset Lithographic	Web Press	--	--	--	--	--	--	--	14.18	0.66	0.54 Glycol ether
Natural gas combustion (ink dryer, coating dryer and thermal oxidizer)		0.10	0.39	0.39	0.03	5.20	4.36	6,273	0.29	0.10	0.09 Hexane
Existing Emission Units											
Steam Generator		0.05	0.20	0.20	0.02	2.66	2.24	3,214.27	0.15	5.02E-02	0.05 Hexane
Scrap System	B-1	2.51	2.51	2.51	--	--	--	--	--	--	--
Starch Silo & Transfer	S-1	0.75	0.75	0.75	--	--	--	--	--	--	--
Laminator	L-1	--	--	--	--	--	--	--	8.76	5.56	3.47 Vinyl

CONTROLLED/LIMITED SOURCE-WIDE PTE (TONS/YEAR)											
	ID	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	GHGs CO _{2e}	VOC	Total HAPs	Single HAP acetate
*Press 1 (printing and solvent cleanup operations)	Press 1	--	--	--	--	--	--	--	22.00	0.28	0.28
Press 2 (printing and solvent cleanup operations)	Press 2	--	--	--	--	--	--	--	16.06	1.70	0.87 Glycol ether
Press 3 (printing and solvent cleanup operations)	Press 3	--	--	--	--	--	--	--	16.06	1.70	0.87 Glycol ether
*Press 4 (printing and solvent cleanup operations)	Press 4	--	--	--	--	--	--	--	22.0	0.59	0.36
TOTAL CONTROLLED/LIMITED PTE		3.41	3.85	3.85	0.05	7.86	6.60	9,487.27	99.49	<25	<10 any single HAP
Title V Major Source Thresholds**		NA	100	100	100	100	100	100,000	100	25	10
PSD Major Source Thresholds**		250	250	250	250	250	250	100,000	250	NA	NA

(a) FESOP Status

This existing source is not a Title V major stationary source, because the potential to emit criteria pollutants from the entire source will be limited to less than the Title V major source threshold levels. In addition, this existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because the potential to emit HAPs is limited to less than ten (10) tons per year for a single HAP and twenty-five (25) tons per year of total HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act and is subject to the provisions of 326 IAC 2-8 (FESOP).

In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), and avoid the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), the source shall comply with the following:

- (1) VOC emissions from printing presses, identified as Press 1, Press 2, Press 3, Press 4, Web Press and Laminator, identified as L-1 shall be limited to less than a total of 99 tons per twelve consecutive month period, with compliance determined at the end of each month. This VOC limit excludes VOC emissions from natural gas combustion from ink dryer, coating dryer, steam generator and web press thermal oxidizer.

Note: VOC emissions from insignificant activities were excluded from the source-wide limit that do not require reporting.

Compliance with this limit shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD), not applicable.

- (2) The combined HAPs emissions from the entire source shall be limited to a total of less than twenty-five (25) tons per twelve consecutive month period with compliance determined at the end of each month.

Any single worst HAP from the entire source shall be limited to a total of less than ten (10) tons per twelve consecutive month period with compliance determined at the end of each month.

Compliance with these limits shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable.

- (b) PSD Minor Source
The source-wide VOC emissions are limited to less than 100 tons per year so that this source will not be subject to Part 70 rules. All the other attainment regulated pollutants are less than 250 tons per year, including greenhouse gases (GHGs) are less than the PSD subject-to-regulation threshold of one hundred thousand (100,000) tons of CO₂ equivalent (CO₂e) emissions per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) 40 CFR Part 60, Subpart QQ, Standards of Performance for the Graphic Arts Industry: Publication Rotogravure Printing, does not apply to lithographic printing presses.
- (b) There are no other New Source Performance Standards that apply to the lithographic printing presses.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (a) 40 CFR Part 63, Subpart KK, National Emission Standards for the Printing and Publishing Industry
Since Color-Box is an area source of HAPs, it is not subject to 40 CFR Part 63, Subpart KK.
- (b) 40 CFR Part 63, Subpart OOOO, National Emission Standards for Hazardous Air Pollutants: Printing, Coating, and Dyeing of Fabrics and Other Textiles.
The source does not print on fabric or textiles and as such would not be subject to the subpart regardless of HAP emission levels.
- (c) 40 CFR Part 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters
The one (1) natural gas fired steam generator, identified as B-1 is not subject to 40 CFR Subpart DDDDD because this NESHAP does not apply to an area source.

Compliance Assurance Monitoring (CAM)

- (a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

- (a) 326 IAC 2-8-4 (FESOP)
FESOP applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.

- (b) 326 IAC 2-2 (Prevention of Significant Deterioration (PSD))
PSD applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.
- (c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The unlimited potential to emit of HAPs from the new unit is greater than ten (10) tons per year for any single HAP and greater than twenty-five (25) tons per year of a combination of HAPs. However, the source-wide HAPs potential to emit of HAPs is limited to less than 10 tons per year for single HAP and less than twenty-five (25) tons per year of combination of HAPs. This source-wide limit, likewise limits the new emission unit to the same HAPs PTE levels. Therefore, the source is not subject to the requirements of 326 IAC 2-4.1. See PTE of the Entire Source After Issuance of the FESOP Section above.
- (d) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (e) 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:
 - (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.
- (f) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
 - (1) New Heatset Offset Lithographic Press, identified as Web Press - The unlimited VOC potential emissions from this new press are greater than twenty-five (25) tons per year. Therefore, the following requirements of 326 IAC 8-1-6 apply (see Appendix B for detailed BACT Analysis):
 - (A) The VOC emissions from the Web Press ink dryer and coating dryer shall be controlled by a thermal oxidizer with a minimum destruction efficiency of ninety-eight percent (98%) or a VOC outlet concentration of 10 parts per million by volume (ppmv) as hexane, minus methane and ethane.
 - (B) The VOC content of the fountain solution as applied shall be no greater than three percent (3%).
 - (C) The VOC composite vapor pressure from all cleaning materials shall be less than ten millimeters of mercury (10 MM Hg) at 20°C. The VOC Composite Vapor Pressure is calculated as follows:

$$PP_c = \frac{\sum_{i=1}^n \frac{(W_i)(VP_i)/MW_i}{\frac{M_w}{MW_w} + \frac{W_e}{MW_e} + \sum_{i=1}^n \frac{W_i}{MW_i}}$$

Where:

W_i = Weight of the "i"th VOC compound, in grams

W_w = Weight of water, in grams

W_e = Weight of exempt compound, in grams

MW_i = Molecular weight of the "i"th VOC compound, in g/g-mole

MW_w = Molecular weight of water, in g/g-mole

MW_e = Molecular weight of exempt compound, in g/g-mole

PP_c = VOC composite vapor pressure at 20 C, in mm Hg

VP_i = Vapor pressure of the "i"th VOC compound at 20 C, in mm Hg

- (D) Good work practices shall be performed; such as keeping solvent containers closed except when filling, draining or conducting cleaning operations, and keeping used shop towels in closed containers.

Compliance with the composite vapor pressure in (C) in conjunction with the good work practices in (D) will result in an emission reduction that is comparable to using cleaning materials that contain less than 30 weight percent VOC. This is based on the "Control Techniques Guidelines for Offset Lithographic Printing and Letterpress Printing" (EPA-453/R-06-002, September 2006).

- (E) The Web Press ink and coating dryers shall be operated under negative pressure.

- (F) The capture efficiencies used for reporting and compliance shall be based on the "Control Techniques Guidelines for Offset Lithographic Printing and Letterpress Printing" (EPA-453/R-06-002, September 2006) as follows:

- (i) 100 percent (100%) capture, by weight, of the VOC in press ready inks;
- (ii) 70 percent (70%) capture, by weight, of the VOC in press ready fountain solutions; and
- (iii) 40 percent (40%) capture, by weight, of the VOC in press ready automatic cleaning solvents.

- (2) Press 1 - This press was inadvertently calculated as having a true VOC PTE of less than 25 tons per year, and therefore, a soft limit was required in Condition D.1.2 of the MSOP permit 177-18637-00063. In this permitting action Press 1 VOC PTE was recalculated and shows an uncontrolled PTE of 45.60 tons per year. Therefore, it will be limited to < 25 tons/year to avoid the requirements of 326 IAC 8-1-6.
- (3) Presses 2 and 3 - Each press continues to have a true VOC PTE of less than 25 tons per year. Likewise, these presses have a soft limit required in Condition D.1.2 of the MSOP.

The soft limit required in Condition D.1.2 for Presses 1, 2 and 3 has been deleted, instead a BACT avoidance limit was added for Press 1 in the following Condition D.1.3. Additions are **bolded** and deletions are ~~struck through~~ for emphasis:

~~D.1.2 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]~~

~~Any change or modification that would increase the potential to emit of VOC at each of Press 1, 2 and 3 to 25 tons per year or more shall require prior approval from the Office of Air Quality (OAQ), as required by 326 IAC 2-1.1, before such change can occur.~~

D.1.3 Volatile Organic Compound (VOC) BACT and Part 70 Avoidance Limit [326 IAC 8-1-6] [326 IAC 2-8]

(a) The Permittee shall comply with the following limits for Press 4:

- (1) The total volatile organic compounds (VOC) emissions from non-heatset offset lithographic printing press (Press 4), shall not exceed twenty-two (22) tons per twelve consecutive month period, with compliance determined at the end of each month.
- (2) The VOC content of the ink/varnish shall not exceed 45.0% by weight; and
- (3) The VOC flash off for the ink/varnish shall not exceed 5.0%.
- (4) The VOC content of the aqueous coating shall not exceed 3.43% by weight.

(b) The total VOC emissions from Press 1 shall not exceed twenty-two (22) tons per twelve consecutive month period, with compliance determined at the end of each month.

Compliance with the above limits shall render the requirements of 326 IAC 8-1-6 and 326 IAC 2-8 not applicable to Press 1 and Press 4.

- (4) Press 4 - This existing press is currently limited in the following Condition D.1.1 of the MSOP permit 177-18637-00063 to < 25 tons/year to avoid the requirements of 326 IAC 8-1-6. This condition will remain in this permitting action:

D.1.1 Volatile Organic Compound (VOC) [326 IAC 8-1-6]

The Permittee shall comply with the following:

- (a) The total amount of volatile organic compounds (VOC) emitted at the non-heatset offset lithographic printing press (Press 4), shall be less than 25 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (b) The VOC content of the ink/varnish shall not exceed 45.0% by weight; and
- (c) The VOC flash off for the ink/varnish shall not exceed 5.0%.
- (d) The VOC content of the aqueous coating shall not exceed 3.43% by weight.

Compliance with the above limits shall limit the potential to emit of VOC from Press 4 to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 8-1-6 not applicable and comply with 326 IAC 2-6.1-6(g)(5).

Note-To keep the source-wide PTE of VOC less than 100 tons/year, the VOC limits for Presses 1 and 4 were limited to less than 22 tons/year for each press.

- (g) There are no other 326 IAC 8 Rules that are applicable to the source and the new heatset offset lithographic printing press.
- (h) 326 IAC 6-3-2 (Particulate emission limitations, work practices, and control technologies) Pursuant to 326 IAC 6-3-2, the following facilities shall be limited using 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

Facility/ID	Process Weight Rate (tons/hr)	Particulate Emission Limitations (pounds/hour)
Starch silo S-1	1.75	5.96
Starch kitchen S-2	1.75	5.96
Air separator/air screen S-3	2.5	7.57

Compliance Determination, Monitoring and Testing Requirements

- (a) The compliance determination and monitoring requirements applicable to this source are as follows:

The new Web Press thermal oxidizer, identified as TO-1 has applicable compliance monitoring requirements as specified below:

- (1) A continuous monitoring system shall be calibrated, maintained, and operated on the Web Press thermal oxidizer, identified as TO-1 for measuring operating temperature. For the purposes of the condition, continuous shall mean no less than once per fifteen (15) minutes. The output of this system shall be recorded as a three (3) hour average. From the date of issuance of this permit until the approved stack test results are available, the three (3) hour average operating temperature of the thermal oxidizer shall be maintained at a minimum temperature of 1600°F. Whenever the three (3) hour average temperature is below 1600°F until the three (3) hour average temperature established during the latest stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.
- (b) The Permittee shall determine the three (3) hour average temperature from the most recent valid stack test that demonstrates compliance with limits in the permit, as approved by IDEM.
- (c) On and after the date the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the three (3) hour average temperature as observed during the compliant stack test.

The instruments used for determining the temperature shall comply with Section C – Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.

Parametric Monitoring

- (a) The Permittee shall determine the appropriate daily duct pressure or fan amperage for the Web Press thermal oxidizer, identified as TO-1 from the most recent valid stack test that demonstrates compliance with the permit limits on VOC destruction efficiency and control efficiency as approved by IDEM.
- (b) The duct pressure or fan amperage whichever is monitored by the Permittee under this condition, shall be observed at least once per day when the thermal oxidizer is in

operation. On and after the date the approved stack test results are available, the duct pressure or fan amperage shall be maintained within the normal range as established in most recent compliant stack test.

Capture Efficiency

- (a) The Permittee shall maintain a negative air flow pressure for the Web Press ink dryer and coating dryer relative to the surrounding press room as indicated by differential pressure gauges across the dryers inlets and outlets. Maintaining a negative pressure when the dryers are operated shall yield 100 capture.
- (b) To demonstrate that a negative air flow pressure is achieved, the Permittee shall install differential pressure gauges at each of the dryer inlets and outlets, and measure and record the differential pressure across the inlets and outlets of the press dryers at least once per day.

These compliance monitoring and determination for the thermal oxidizer, identified as TO-1 are necessary to properly operate this control device to ensure compliance with 326 IAC 8-1-6 (New facilities; general reduction requirements) and to avoid the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (PSD).

Summary of Testing Requirements				
Emission Unit	Control Device	Pollutant	Timeframe for Testing	Frequency of Testing
Web Press	Thermal Oxidizer	VOC, HAPs	Within 60 days after achieving maximum production but no later than 180 days	every 5 years

The Air Separator/Air Screen (identified as S-3) considered as an integral part of the corrugator (C-1), laminator (L-1), shredder (SH-1) and die cutter 1 (DC-1) process has applicable compliance monitoring requirements as specified below:

Visible Emissions Notations

- (a) Daily visible emission notations of the pneumatic starch conveyance system transfer points, starch silo (S-1) stack exhaust (EP #1), starch kitchen mixer (S-2) stack exhaust (EP #2); and air separator/air screen (S-3) stack exhaust (EP #4) shall be performed during normal daylight operations during the transfer of starch to the storage silo and during the removal of starch from the storage silo to an alternate storage area when venting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps shall be considered a deviation from this permit.

Parametric Monitoring

- (a) The Permittee shall record the pressure drop across each baghouse used in conjunction with the starch silo (S-1) and starch kitchen (mixer), identified as S-2, at least once per day when the starch silo (S-1) or starch kitchen (mixer), identified as S-2, is in operation when venting to the atmosphere. When for any one reading, the pressure drop across each baghouse is outside the normal range of 0.5 and 5.0 inches of water or a range established during the latest stack test, the Permittee shall take a reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.
- (b) The Permittee shall record the pressure drop across the air separator/air screen filter (S-3) used in conjunction with the corrugator (C-1), laminator (L-1), shredder (SH-1) and the die cutters (DC-1 and DC-3), at least once per day when the corrugator (C-1), laminator (L-1), shredder (SH-1) and the die cutters (DC-1 and DC-3) are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the filter is outside the normal range of 0.5 and 5.0 inches of water or a range established during the latest stack test, the Permittee shall take a reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Baghouse and Filter Inspections

An inspection shall be performed each calendar quarter of all bags controlling the starch silo (S-1), starch kitchen mixer (S-2) and the filters controlling the corrugator (C-1), laminator (L-1), shredder (SH-1) and die cutters (DC-1 and DC-3) connected to the air separator/air screen (S-3), when venting to the atmosphere. A baghouse and filter inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags and filters shall be replaced.

Broken or Failed Bag and Filter Detection

- (a) For a single compartment baghouse and filter controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced.
- (b) For a single compartment baghouse and filter controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit.

Bag failure can be indicated by a significant drop in the baghouse’s pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows

These compliance monitoring and determination for the baghouse used in conjunction with the starch silo (S-1) and air separator/air screen filter (S-3) are necessary since these integral control devices limit the PTE from these emission units, thereby, keeping the emission units out of an applicable requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (PSD).

Conclusion and Recommendation

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 5, 2013.

The construction of a new emission unit and continued operation of this source shall be subject to the conditions of the attached proposed New Source Review and FESOP No. 177-33499-00063. The staff recommends to the Commissioner that this New Source Review and FESOP be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Aida DeGuzman at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-4972 or toll free at 1-800-451-6027 extension 3-4972.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.in.gov/idem

Company Name: Color-Box LLC-Richmond Division
 Source Address: 1066 Industries Road, Richmond IN 47374
 NSR/FESOP No.: 177-33499-00069
 Reviewer: Aida DeGuzman
 Date: August 9, 2013

UNCONTROLLED/LIMITED SOURCEWIDE PTE (TONS/YEAR)												
New Emission Unit	ID	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	CO _{2e}	VOC	Total HAPs	Single HAP	
Web Press, Heatset Offset Lithographic (printing and solvent cleanup operations)	Web Press	--	--	--	--	--	--	--	277.89	27.34	glycol ether	
Natural gas combustion (ink dryer, coating dryer and thermal oxidizer)		0.10	0.39	0.39	0.03	5.20	4.36	6,273	0.29	0.10	hexane	
Existing Emission Units												
Steam Generator		0.05	0.20	0.20	0.02	2.66	2.24	3,214.27	0.15	5.02E-02	hexane	
Scrap System	B-1	2.51	2.51	2.51	--	--	--	--	--	--	--	
Starch Silo & Transfer	S-1	0.75	0.75	0.75	--	--	--	--	--	--	--	
Laminator	L-1	--	--	--	--	--	--	--	8.76	5.56	vinyl acetate	
Press 1 (printing and solvent cleanup operations)	Press #1	--	--	--	--	--	--	--	45.60	0.59		
Press 2 (printing and solvent cleanup operations)	Press #2	--	--	--	--	--	--	--	16.06	1.70	glycol ether	
Press 3 (printing and solvent cleanup operations)	Press #3	--	--	--	--	--	--	--	16.06	1.70	glycol ether	
Press 4 (printing and solvent cleanup operations)	Press #4	--	--	--	--	--	--	--	40.9	0.59		
TOTAL UNCONTROLLED PTE		3.41	3.95	3.95	0.05	7.86	6.00	9,487.27	406.72	37.83	glycol ether	

CONTROLLED/LIMITED SOURCEWIDE PTE (TONS/YEAR)												
New Emission Unit	ID	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	CO _{2e}	VOC	Total HAPs	Single HAP	
Web Press, Heatset Offset Lithographic (printing and solvent cleanup operations)	Web Press	--	--	--	--	--	--	--	14.18	0.66	glycol ether	
Natural gas combustion (ink dryer, coating dryer and thermal oxidizer)		0.10	0.39	0.39	0.03	5.20	4.36	6,273	0.29	0.10	hexane	
Existing Emission Units												
Steam Generator		0.05	0.20	0.20	0.02	2.66	2.24	3,214.27	0.15	5.02E-02	hexane	
Scrap System	B-1	2.51	2.51	2.51	--	--	--	--	--	--	--	
Starch Silo & Transfer	S-1	0.75	0.75	0.75	--	--	--	--	--	--	--	
Laminator	L-1	--	--	--	--	--	--	--	8.76	5.56	vinyl acetate	
*Press 1 (printing and solvent cleanup operations)	Press #1	--	--	--	--	--	--	--	22.00	0.28		
Press 2 (printing and solvent cleanup operations)	Press #2	--	--	--	--	--	--	--	16.06	1.70	glycol ether	
Press 3 (printing and solvent cleanup operations)	Press #3	--	--	--	--	--	--	--	16.06	1.70	glycol ether	
Press 4 (printing and solvent cleanup operations)	Press #4	--	--	--	--	--	--	--	22.0	0.69		
TOTAL CONTROLLED/LIMITED PTE		3.41	3.95	3.95	0.05	7.86	6.00	9,487.27	98.49	< 25 total HAPs	<10	Any single HAP

Notes: 1. Presses 2 and 3 will be replaced by the new Web Press Heatset Offset Lithographic Printer. Presses 2 and 3 will remain operating for another 6 to 9 months after the startup of the new web press. Therefore, the PTEs were kept.

*-To keep the entire source's VOC PTE <100 tons/yr, the VOC limit for Press #1 and #4 was limited to 22 tons/yr for each press.

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

Company Name: Color-Box, LLC
Address City IN Zip: 1056 Industries Road, Richmond, IN 47374
NSR/FESOP No.: 177-33499-00063
Reviewer: Aida DeGuzman
Date: August 9, 2013

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr
6.2	1020	53.2
steam generator		

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.1	0.2	0.2	0.0	2.7	0.1	2.2

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
 PM2.5 emission factor is filterable and condensable PM2.5 combined.
 **Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
 MMBtu = 1,000,000 Btu
 MMCF = 1,000,000 Cubic Feet of Gas
 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
 Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

Emission Factor in lb/MMcf	HAPs - Organics					Total - Organics
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	5.591E-05	3.195E-05	1.997E-03	4.792E-02	9.052E-05	5.010E-02

Emission Factor in lb/MMcf	HAPs - Metals					Total - Metals
	Lead	Cadmium	Chromium	Manganese	Nickel	
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	1.331E-05	2.929E-05	3.727E-05	1.012E-05	5.591E-05	1.459E-04
					Total HAPs	5.024E-02
					Worst HAP	4.792E-02

Methodology is the same as above.

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Calculations

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
	120,000	2.3	2.2
Potential Emission in tons/yr	3,195	0.1	0.1
Summed Potential Emissions in tons/yr	3,195		
CO2e Total in tons/yr	3,214		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
 Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emissions Calculations
 VOC and HAP Emissions from the Corrugator/Laminator *

Company Name: Color-Box, LLC
 Address City IN Zip: 1056 Industries Road, Richmond, IN 47374
 NSR/FESOP No.: 177-33499-00063
 Reviewer: Aida DeGuzman
 Date: August 9, 2013

Emissions from the Corrugator (C-1)/Laminator (L-1)

Maximum Line Speed 500 ft/min
 Maximum Product Width 64 inches

Glue Usage: 5.5 lbs/msf, 0.6% VOC & less than 0.15% HAPs
 Starch Usage: 6.5 lbs/msf, 0.009% VOCs & 0.009% HAPs from starch additive

$$\begin{array}{l}
 500 \text{ ft/min} \times 64 \text{ inches} / 12 \text{ inches/foot} = 1000 \\
 5.5 \text{ lbs/msf} \times 2.67 \text{ msf/min} \times 60 \text{ min/hr} = 881 \text{ lbs of glue/hr} \\
 6.5 \text{ lbs of starch/msf} \times 2.67 \text{ msf/min} \times 60 \text{ min/hr} = 1041 \text{ lbs of starch mix/hr}
 \end{array}$$

Maximum Potential VOC Emissions

$$\begin{array}{l}
 881 \text{ lbs/hr of glue} \times 0.22\% \text{ \% VOCs} = 1.94 \text{ lbs/hr} \\
 1041 \text{ lbs/hr of starch} \times 0.0060\% \text{ \% VOCs} = 0.062 \text{ lbs/hr}
 \end{array}$$

Total VOC PTE	8.76 tons/year
----------------------	-----------------------

Maximum Potential HAP Emissions

$$\begin{array}{l}
 881 \text{ lbs/hr of glue} \times 0.09\% \text{ \% Vinyl Acetate} = 3.47 \text{ tons/yr} \\
 881 \text{ lbs/hr of glue} \times 0.03\% \text{ \% Methanol} = 1.16 \text{ tons/yr} \\
 881 \text{ lbs/hr of glue} \times 0.017\% \text{ \% Formaldehyde} = 0.66 \text{ tons/yr} \\
 881 \text{ lbs/hr of glue} \times 0.20 \text{ (lb/mmib) Vinyl Acetate} = 7.7176\text{E-04 tons/yr} \\
 881 \text{ lbs/hr of glue} \times 0.10 \text{ (lb/mmib) Ethylene Oxide} = 0.00 \text{ tons/yr} \\
 881 \text{ lbs/hr of glue} \times 0.10 \text{ (lb/mmib) Propylene Oxide} = 0.00 \text{ tons/yr}
 \end{array}$$

$$1026 \text{ lbs/hr of starch} \times 0.0060\% \text{ \% Methyl Alcohol} = 0.062 \text{ lbs/hr}$$

Total Combined HAPs	5.56 tons/yr
Worst Single HAP	3.47 tons/yr

Vinyl Acetate

* Taken from Minor Permit Modification No. 177-14208-00063, issued on May 10, 2001.

Appendix A: Process Particulate Emissions

Company Name: Color-Box, LLC
Address City IN Zip: 1056 Industries Road, Richmond, IN 47374
NSR/FESOP No.: 177-33499-00063
Reviewer: Aida DeGuzman
Date: August 9, 2013

Process Baghouse/Filter*	No. of Units	Grain Loading per Actual Cubic Foot of Outlet Air	Potential to Emit (tons/year)			
			Air to Cloth Ratio Air Flow (acfm/ft ²)	Total Filter Area (ft ²)	Control Efficiency	Total PM/PM10/PM2.5 (tons/yr)
Starch Silo (EP-1)	1	0.0400	4.7	64	99.9%	0.45
Starch Kitchen Mixer (EP-2)	1	0.0400	3.06	64	99.9%	0.29
Pneumatic Scrap Paper Conveyor System (EP-4)	1	0.0020	1.99	16,800	99.9%	2.51
Total Potential to Emit Based on Rated Capacity at 8,760 Hours/Year						3.26

Methodology:
 Baghouse (tons/yr) = No. Units * Outlet Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs

* Note: Pursuant to Minor Permit Modification No. 177-14208, issued on May 10, 2001, control equipment is considered an integral part of the process since emission units are connected to controls that are part of a pneumatic conveyance system.
 Baghouse EP-1 controls PM/PM10 emissions from the Starch Silo (S-1)
 Baghouse EP-2 controls PM/PM10 from Starch Kitchen (S-2)
 Cartridge filter EP-4 controls PM/PM10 emissions from Corrugator (C-1), Laminator (L-1), Shredder (SH-1), Die Cutter 1 (DC-1) and Die Cutter 2 (DC-2)

Appendix A: Emissions Calculations
VOCs From Printing Press 1

Company Name: Color-Box LLC-Richmond Division
 Source Address: 1056 Industries Road, Richmond IN 47374
 NSR/FESOP No.: 177-33489-00063
 Reviewer: Aida DeGuzman
 Date: August 9, 2013

Throughput	Maximum Throughput Rate (MSF/yr)
Press I.D.	316.5
Non-Heatset Offset Press #1	2,627,253

Material	Maximum Usage Rate (lbs/yr)	Weight % Volatiles* (less water and exempt VOCs)	Flash Off % ⁽¹⁾	VOC Emissions (tons/yr)
Ink	555,998	29.50%	5%	4.1
Coating	2,603,070	2.70%	100%	35.1
Total VOC PTE				39.2

*Weight % Volatiles (less water and exempt VOCs) = (weight % volatiles) - (weight % of water and exempt VOCs)

Methodology:

VOC Emissions (tons/yr) = [Maximum throughput (lbs/yr)] * [Weight % Volatiles] * [Flash Off %] * [ton/2000 lbs]
 Note: Heatset offset printing has an assumed flash off of 80% (20% retention). Non-heatset offset inks have an assumed flash off of 5% (95% retention). Other type of printers have a flash off of 100% (0% retention).

⁽¹⁾ the 5% flash off factor reflects 95% retention as documented in the CTG document "Control of Volatile Organic Compound Emissions from Offset Lithographic Printing".
 EPA-453/R-06-002, September 2006

Press Cleanup Solvents	Maximum Usage Rate (gal/yr)	VOC Content (lb/gal)	HAP Content (lb/gal)	VOC PTE (tons/yr)	HAP PTE (tons/yr)
Metering Roll Cleaner	240.0	3.44	0.41	0.41	0.0492
Plate Cleaner	84.0	0.42	0	0.02	0
Fountain Solution	1440.0	6.60	0.75	4.75	0.5400
Blanket Wash	1060.00	2.17	0	1.17	0
TOTAL PTE				6.4	0.6
TOTAL PRESS #1 PTE (ink, coating and cleanup solvents)				45.6	0.6
*VOC PTE Limit (Condition D.1.2)				22.00	0.28

* The soft limit for Printer #1 in D.1.2 was changed to a hard limit of 22 tons/yr since its VOC potential to emit (45.6 tons per year) was greater than 25 tons/yr. To make the sourcewide VOC to stay below 100 tons/yr, Printer #1 VOC will be limited to 22 tons/yr.

Methodology:

ink and Coating PTE, tons/yr = Max. usage rate, lbs/yr x wt % VOC x flash off x 1 ton/2000 lbs
 Cleanup Solvents PTE, tons/yr = Max. usage rate, gal/yr x VOC or HAP content, lbs/gal x 1 ton/2000 lbs

Appendix A: Emissions Calculations
VOC From Printing Press Operations

Company Name: Color-Box LLC-Richmond Division
Source Address: 1056 Industries Road, Richmond IN 47374
NSR/FESOP No.: 177-33499-00063
Reviewer: Alda DeGuzman
Date: August 9, 2013

Press I.D.	MAXIMUM LINE SPEED (FEET/MIN)	MAXIMUM PRINT WIDTH (INCHES)	MAXIMUM SHEET FEED (SHEETS/HR)
Presses 2, 3 (each)	262.5	36	61500

* Each press is a non-heatset offset type of lithographic printing press and does not employ VOC/HAP control.

Potential to Emit of VOC from Non-Heatset Offset Lithographic Printing Press Operations*

Material	Material Usage at Each of Presses 2, 3 **	VOC Content	Percentage Flash Off	VOC PTE per Press (tons/yr)	VOC PTE All Presses (tons/yr)
Ink	26.00 lbs/hr	40.00 % (wt)	5%	2.28	4.56
Aqueous Coating	42.25 lbs/hr	4.00 % (wt)	100%	7.40	14.80
Blanket Wash	93.0 gallon/month	6.71 lbs VOC/gal	100%	3.74	7.49
Fountain Solution	109.2 gallon/month	3.21 lbs VOC/gal	100%	2.10	4.21
Metering Roll Cleaner	12.6 gallon/month	4.93 lbs VOC/gal	100%	0.37	0.75
Alcohol	4.0 gallon/month	6.51 lbs VOC/gal	100%	0.16	0.31
		Total (ton/yr):		16.06	32.11

Potential to Emit of HAPs from Non-Heatset Offset Lithographic Printing Press Operations*

Material	HAP	Material Usage at Each of Presses 2, 3 **	HAP Content	Percentage Flash Off	HAP PTE per Press (tons/yr)	HAP PTE All Presses (tons/yr)
Ink	none	26.00 lbs/hr	0.00%	5%	0.00	0.00
Aqueous Coating	glycol ether	42.25 lbs/hr	0.20 % (wt)	100%	0.37	0.74
Blanket Wash	xylene	93.0 gallon/month	0.1779 lbs HAP/gal	100%	0.10	0.20
	cumene	109.2 gallon/month	0.1403 lbs HAP/gal	100%	0.08	0.16
Fountain Solution	ethylene glycol	109.2 gallon/month	0.79 lbs HAP/gal	100%	0.52	1.04
	glycol ether	12.6 gallon/month	0.76 lbs HAP/gal	100%	0.50	1.00
Metering Roll Cleaner	methylene chloride	4.0 gallon/month	1.87 lbs HAP/gal	100%	0.14	0.28
Alcohol	none	4.0 gallon/month	0 lbs HAP/gal	100%	0.00	0.00
		Total Combined HAPs(ton/yr):			1.70	3.41
		Total Single HAP (glycol ether) (ton/yr):			0.87	1.74

METHODOLOGY

** Ink usage (lb/hr) reflects a maximum of 4 lb ink/1000 sheets, and the aqueous coating usage (lb/hr) reflects a maximum of 6.5 lbs aqueous coating/1000 sheets, per SPR No. 177-18522, issued on April 21, 2004. Information reflects the worst emitting ink.

VOC & HAP emissions = Material usage, lb/hr * % VOC or HAP by wt. * flash off (%) * 8760 hr/yr * ton/2000 lb
= Material usage, gal/month * VOC or HAP content, lb/gal * flash off (%) * 12 month/yr * ton/2000 lb

NOTE: NON-HEAT SET OFFSET PRINTING HAS AN ASSUMED FLASH OFF OF 5% (95% RETAINED IN SUBSTRATE). (Source -EPA -453/R-06-002, September 2006 " CTG Guidelines for Offset Lithographic Printing and Letterpress Printing")

Appendix A: Emissions Calculations
VOCs From Printing Press 1

Company Name: Color-Box LLC-Richmond Division
Source Address: 1056 Industries Road, Richmond IN 47374
NSRFESOP No.: 177-33498-00063
Reviewer: Aida DeGuzman
Date: August 9, 2013

Throughput	Maximum Throughput Rate (NSF/yr)
Press I.D.	2,225,987
Non-Heatset Offset Press #4	2,225,987

Ink VOCs	Maximum Usage Rate (lbs/yr)	Weight % Volatiles* (less water and exempt VOCs)	Flash Off % ⁽¹⁾	VOC Emissions (tons/yr)
Ink	489,937	28.50%	5%	3.6
Coating	2,293,796	2.70%	100%	31.0
			Total VOC PTE	34.6

*Weight % Volatiles (less water and exempt VOCs) = (weight % volatiles) - (weight % of water and exempt VOCs). These are limited in Condition D.1.1

Methodology:
VOC Emissions (tons/yr) = [Maximum Throughput (lbs/yr) * (Weight % Volatiles) * (Flash Off %)] * (ton/2000 lbs)
Note: Heatset offset printing has an assumed flash off of 80% (20% retention). Non-heatset offset inks and oxidizing offset inks have an assumed flash off of 5% (95% retention). Other type of printers have a flash off of 100% (0% retention).

⁽¹⁾ the 5% flash off factor reflects 95% retention as documented in the CTG document "Control of Volatile Organic Compound Emissions from Offset Lithographic Printing", EPA-453/R-06-002, September 2006

Press Cleanup Solvents

Material	Maximum Usage Rate (gallyr)	VOC Content (lb/gal)	HAP Content (lb/gal)	VOC PTE (ton/yr)	HAP PTE (ton/yr)
Metering Roll Cleaner	240.0	3.44	0.41	0.41	0.0492
Plate Cleaner	84.0	0.42	0	0.02	0
Fountain Solution	1440.0	6.80	0.75	4.75	0.5400
Blanket Wash	1080.0	2.17	0	1.17	0
		TOTAL PTE		6.4	0.6
		TOTAL PRESS #4 PTE (ink, coating and cleanup solvents)		40.9	0.6
		VOC PTE Limit (Condition D.1.1)		22.00	0.36

* original limit in D.1.1 states <25 tons/year of VOC. To make the sourcewide VOC to stay below 100 tons/yr, Printer #4 VOC limit was reduced to 22 tons/yr. Likewise, the soft limit for Printer #1 in D.1.2 was changed to a hard limit of 22 tons/yr since its VOC potential to emit (45.6 tons per year) was greater than 25 tons/yr.

Methodology:
Ink and Coating PTE, tons/yr = Max. usage rate, lbs/yr x wt % VOC x flash off x 1 ton/2000 lbs
Cleanup Solvents PTE, tons/yr = Max. usage rate, gallyr x VOC or HAP content, lbs/gal x 1 ton/2000 lbs

Appendix A: Emissions Calculations
Web heatset offset lithographic printing press identified as Web Press

Company Name: Color-Box, LLO
Address City/IN Zip: 1058 Industries Road, Richmond, IN 47374
NSR/FESOP No.: 177-33455-00063
Reviewer: Aida DasGuzman
Date: August 9, 2013

(A) Printing Operation	
Press ID	MAXIMUM THROUGHPUT RATE (MS/HR)
New Web Press	563

Material	Material Usage	VOC Content	Percentage Flash Off	Uncontrolled VOC PTE per Press (tons/yr)	Controlled VOC PTE per Press (tons/yr)
Ink/Additive Coating	0.21 lbs/MSF	43.6 % (wt)	80%	180.46	3.61
Fountain Solution*	1.00 lbs/MSF	3.00 % (wt)	100%	73.91	1.48
Ink Dyer and Coating Dryer	0.0140 lbs/MSF	45.00 % (wt)	100%	15.92	4.87
Total (tons/yr):				265.90	9.96

Ink Dyer and Coating Dryer are controlled by a thermal oxidizer with control efficiency of 98%
* 70% capture was applied since alcohol is not used in the fountain solution and due to carryover of VOC to the offset lithographic heatset dryer per the CTG Guidelines. Then controlled by the thermal oxidizer with 98% destruction efficiency.

NOTE: HEAT SET OFFSET PRINTING HAS AN ASSUMED FLASH OFF OF 80% (20% RETAINED IN SUBSTRATE)
(Source: EPA-453/R-02-002, September 2006 "CTG Guidelines for Offset Lithographic Printing and Letterpress Printing")

Material	HAP	Material Usage	HAP Content	Percentage Flash Off	Uncontrolled HAP PTE (tons/yr)	Controlled HAP PTE (tons/yr)
Ink/Additive Coating	none	0.21 lbs/MSF	0%	80%	0.00	0.00
Fountain Solution	glycol ether	1.00 lbs/MSF	1.10%	100%	27.10	0.54
Total Single HAP (glycol ether) (tons/yr)				100%	27.10	0.54
Total Single HAP (glycol ether) (tons/yr)					27.10	0.54

METHODOLOGY
Uncontrolled VOC & HAP emissions = Material usage, lb/MSF* throughput rate, MSF/hr * % VOC or HAP by wt. * flash off (%) * 8760 hr/yr * ton/2000 lb
Controlled VOC and HP emissions = Uncontrolled PTE * (1-0.98)

Material	Material Usage (gal/yr)	Density (lb/gal)	Retention %	Uncontrolled VOC PTE per Press (tons/yr)	Controlled VOC PTE per Press (tons/yr)
Isopropyl Alcohol	20	5.6	100	0.07	0.07
MFC7866	150	6	87.4	0.39	0.39
AZ40**	1500	6.9	50%	4.99	2.49
Polar Solv**	700	7.4	50%	2.48	1.24
Yellow Magic**	750	8.5	50%	0.07	0.04
Total (tons/yr)				7.99	4.22

** - 50% retention in the shop cleaning towel is applied when the composite vapor pressure of the cleaning material is <10 millimeter of mercury at 20°C and the towels must be kept in a closed container for VOC/HAP remain in the towels. Taken from the CTG Guidelines. This is likewise determined to be BACT for the cleaning materials used at the web press.

Material	Material Usage (gal/yr)	Density (lb/gal)	Percentage Flash Off	Uncontrolled HAP PTE per Press (tons/yr)	Controlled HAP PTE per Press (tons/yr)
Isopropyl Alcohol	20	5.6	0	0.00	0.00
MFC7866	150	6	0	0.00	0.00
AZ40	1500	6.9	50%	0.24	0.12
Polar Solv	700	7.4	0	0.00	0.00
Yellow Magic	750	8.5	50%	0.00	0.00
Total Single HAP (tons/yr)				0.24	0.12
Total Web Press VOC PTE				277.89	14.18
Total Web Press Worst Single HAP PTE				27.10	0.54
Total Web Press VOC PTE				27.34	0.66

METHODOLOGY
Uncontrolled VOC & HAP emissions = Material usage, gal/yr* density, lb/gal * % VOC or HAP by wt. * flash off (%) * ton/2000 lb

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

Company Name: Color-Box, LLC
Address City IN Zip: 1056 Industries Road, Richmond, IN 47374
NSR/FESOP No.: 177-33499-00063
Reviewer: Aida DeGuzman
Date: August 9, 2013

Heat Input Capacity
MMBtu/hr

HHV Potential Throughput
mmBtu MMCF/yr
mmscf

12.1

1020

103.9

2-burner ink dryer each burner rated 3.5 MMBtu/hr
 1 coating dryer @ 3.5 MMBtu/hr
 1 thermal oxidizer @ 1.6 MMBtu/hr

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100	5.5	84
					**see below		
Potential Emission in tons/yr	0.1	0.4	0.4	0.0	5.2	0.3	4.4

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

PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

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

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

Emission Factor in lb/MMcf	HAPS - Organics					Total - Organics
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	1.091E-04	6.235E-05	3.897E-03	9.353E-02	1.767E-04	9.777E-02

Emission Factor in lb/MMcf	HAPS - Metals					Total - Metals
	Lead	Cadmium	Chromium	Manganese	Nickel	
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	2.598E-05	5.715E-05	7.274E-05	1.974E-05	1.091E-04	2.847E-04
						Total HAPS
						9.806E-02
						Worst HAP
						9.353E-02

Methodology is the same as above.

The five highest organic and metal HAPS emission factors are provided above.

Additional HAPS emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Calculations

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
	120,000	2.3	2.2
Potential Emission in tons/yr	6,235	0.1	0.1
Summed Potential Emissions in tons/yr	6,235		
CO2e Total in tons/yr	6,273		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix B

CONTROL TECHNOLOGY / BACT ANALYSIS

Color-Box LLC - Richmond Division

Source Background and Description

Source Name: Color-Box, LLC - Richmond Division
Source Location: 1056 Industries Road, Richmond, Indiana 47374
County: Wayne
SIC Code: 2752
Operating Permit No.: F177-33499-00063
Permit Reviewer: Aida DeGuzman

Color-Box, LLC submitted a permit application on August 6, 2013 relating to the construction of new emission units that will require the source to transition from a Minor Source Operating Permit (MSOP) to a Federally Enforceable State Operating Permit (FESOP):

New Emission Units:

Construction of the following new emission units and pollution control device that will replace existing Presses #2 and #3:

- (a) One (1) continuous web heatset offset lithographic printing press, identified as web press, approved in 2013 for construction, with a maximum line speed of 1,500 feet per minute, maximum printing width of 75-inches and maximum coating usage rate of 478 MSF/hr (thousand square feet per hour), consisting of the following:
 - (1) Seven (7) printing stations with total maximum ink usage of 118 pounds per hour (lbs/hr).
 - (2) One (1) 7.0 million British thermal units per hour (MMBtu/hr) natural gas-fired two-burner ink dryer, each burner is rated at 3.5 MMBtu/hr.
 - (3) Two (2) coating stations with total maximum coating usage rate of 579 lbs/hr, and
 - (4) One (1) 3.5 MMBtu/hr natural gas-fired coating dryer.

The ink dryer and the coating dryer will be controlled by one (1) 1.6 MMBtu/hr natural gas-fired thermal oxidizer.

The proposed new continuous web heatset offset lithographic printing press, identified as web press, is subject to 326 IAC 8-1-6 (New facilities; general reduction requirements) or BACT because its potential VOC emissions are greater than 25 tons per year.

BACT requirements under 326 IAC 8-1-6 only apply to new emission units constructed after January 1, 1980.

Although this BACT analysis is a state BACT, it has been based on the draft "Top-Down approach: BACT Guidance" published by USEPA, Office of Air Quality Planning Standards, March 15, 1990 that is used for PSD and LAER BACT. The following sources of information have been reviewed or contacted:

- (1) RACT/BACT/LAER Information System; USEPA, BACT/LAER Clearinghouse;
- (2) Compilation of Control Technology; USEPA, BACT/LAER Clearinghouse
- (3) EPA, State, and Local Air Quality permits and applications where related;
- (4) Control equipment and material vendors; and,
- (5) OAQPS Control Cost Manual.

BACT Definition and Applicability

Federal guidance on BACT requires an evaluation that follows a “top down” process. In this approach, the applicant identifies the best-controlled similar source on the basis of controls required by the regulation or the permit, or the controls achieved in practice. The highest level of the control is then evaluated for technical feasibility.

The five basic steps of a top-down BACT analysis are listed below:

Step 1: Identify Potential Control Technologies

The first step is to identify potentially “available” control options for each emission unit and for each pollutant under review. Available options should consist of a comprehensive list of those technologies with a potentially practical application to the emissions unit in question. The list should include lowest achievable emission rate (LAER) technologies, innovative technologies and controls applied to similar source categories.

Step 2: Eliminate Technically Infeasible Options

The second step is to eliminate technically infeasible options from further consideration. To be considered feasible, a technology must be both available and applicable. It is important in this step that any presentation of a technical argument for eliminating a technology from further consideration be clearly documented based on physical, chemical, engineering and source-specific factors related to safe and successful use of the controls.

Step 3: Rank The Remaining Control Technologies By Control Effectiveness

The third step is to rank the technologies not eliminated in Step 2 in order of descending control effectiveness for each pollutant of concern. If the highest ranked technology is proposed as BACT, it is not necessary to perform any further technical or economic evaluation, except for the environmental analyses.

Step 4: Evaluate The Most Effective Controls And Document The Results

The fourth step entails an evaluation of energy, environmental and economic impacts for determining a final level of control. The evaluation begins with the most stringent control option and continues until a technology under consideration cannot be eliminated based on adverse energy, environmental, or economic impacts.

Step 5: Select BACT

The fifth and final step is to select as BACT the most effective of the remaining technologies under consideration for each pollutant of concern. BACT must, at a minimum, be no less stringent than the level of control required by any applicable New Source Performance Standard (NSPS) and National Emissions Standard for Hazardous Air Pollutants (NESHAP) or state regulatory standards applicable to the emission units included in the permits.

BACT FOR VOLATILE ORGANIC COMPOUNDS (VOC) EMISSIONS:

The proposed new continuous web heatset offset lithographic printing press, identified as web press, has potential VOC emissions of 277.89 tons per year, which is greater than 25 tons per year. Therefore, this new emission unit is required to apply Best Available Control Technology (BACT), pursuant to 326 IAC 8-1-6.

Step 1 – Identify Control Options

The following potentially available control technologies were identified for controlling VOC emissions from the proposed continuous web heatset offset lithographic printing press:

- (a) Catalytic Oxidation;
- (b) Thermal Oxidation
- (c) Carbon Adsorption

Step 2 – Eliminate Technically Infeasible Control Options

The test for technical feasibility of any control option is whether it is both available and applicable to reducing VOC emissions from a continuous web heatset offset lithographic printing press. The previously listed information resources were consulted to determine the extent of applicability of each identified control alternative.

- (a) Thermal Oxidation -
Thermal oxidizer is also referred to as a direct flame incinerator, thermal incinerator or afterburner. This control operates at peak efficiency when oxidizing concentrated organic exhaust streams just above or below the upper and lower explosive limits. This is because the oxidation rate is directly proportional to the organic concentration, the local heat of reaction during oxidation, and the increased concentration of free radicals which participate in the oxidation reaction. Thermal oxidation destruction efficiency ranges from 95 to 99%.

Thermal oxidation is a technically feasible option. Although Color-Box, LLC does not have any thermal oxidizers on the current presses given they are non-heat-set presses with minimal VOC emissions, thermal oxidizers are commonly used on heat-set ink dryers. Therefore, this control technology will be considered further in this analysis.

- (b) Catalytic Oxidation
Catalytic oxidation systems operate in three stages: a burner generates hot combustion gases, combustion products mix with the fume (VOC vapors), and the mixture is passed through a non-participating media (catalyst) for a specific period of time. VOC destruction efficiency is dependent upon VOC composition and concentration, operating temperature, oxygen concentration, and catalyst characteristics. Catalytic oxidation is most suited to systems with lower exhaust volumes, when there is little variation in the type and concentration of VOC, and where catalyst poisons or other fouling contaminants are not present. Higher destruction efficiencies of 98 - 99% are achievable, but require larger catalyst volumes and/or higher temperatures.

Catalytic oxidation is considered not technically feasible. The facility uses multiple ink/coating formulations, with each new formulation potentially having catalyst fouling characteristics, causing the destruction efficiency to degrade over time. Therefore, this control alternative will not be considered any further in this BACT analysis.

- (c) **Carbon Adsorption**
Carbon adsorption works through the preferential adsorption of the organic molecules from the effluent gas onto the surface of the solid granules of carbon where they are held by physical attraction. This control technology typically operates best with vapor streams that have low variation in volatile concentration and type. In effluent streams where there are multiple organic compounds present, competing adsorption occurs where a number of organics compete for the number of available adsorption sites on the carbon. This lessens the capture efficiency for some individual species. VOC removal efficiency for this type of system may vary depending on several factors, but are capable of achieving 90 to 99% removal efficiencies.

As with catalytic oxidation, carbon adsorption is considered not a technically feasible option due to the differing ink/coating formulations. This technology is best suited for low variations in the type and concentration of VOC. Therefore, this control alternative will not be considered any further in this BACT analysis.

Step 3 – Rank Remaining Control Technologies by Control Effectiveness

All control alternatives identified in Step 2 were eliminated as not technical feasibility in controlling VOC emissions from heatset offset lithographic printing presses, with the exception of the thermal oxidation/incineration to meet the BACT requirements for VOC emissions.

Step 4 – Evaluate the Most Effective Controls and Document Results

Thermal oxidation/incineration was the only add-on control option found to be technically feasible for controlling VOC emissions from the heatset offset lithographic printing presses.

Since the source has proposed the top BACT, the economic, environmental and energy impacts have not been evaluated.

Step 5 – Select BACT

A review of USEPA's RACT/BACT/LAER Clearinghouse, Indiana air permits and sources permitted by other states agencies, identified the following with respect to heatset offset lithographic printing presses:

Company/ Location	Permit No./ Year Issued	Proc ess	BACT/Limit	Basis
<p>Proposed: Color-Box, LLC, Richmond, IN</p>	<p>F177-33499- 00063 Proposed FESOP</p>	<p>Printing Press</p>	<p>(1) Thermal oxidizer with minimum VOC destruction efficiency of 98% or a VOC outlet concentration of 10 parts per million by volume (ppmv) as hexane, minus methane and ethane (2) Operation of press dryers under negative pressure (3) Using low composite vapor pressure materials <10 millimeters of mercury (mm Hg) at 20⁰C (68⁰F) Blanket wash VOC content limit = vapor pressure not to exceed 10 mm Hg at 20⁰C Fountain solution with no greater than 3% VOC content Good work practices shall be performed; such as keeping solvent containers closed except when filling, draining or conducting cleaning operations, and keeping used shop towels in closed containers.</p>	<p>State BACT</p>
<p>Courier Kendallville, Inc. - Kendallville, IN</p>	<p>113-29548- 00021 01/03/2011</p>	<p>Printing presses</p>	<p>(1) Thermal oxidizer with minimum VOC destruction efficiency of 98% as demonstrated by achieving a VOC outlet concentration of 10 parts per million by volume (ppmv) as hexane, minus methane and ethane (2) Low VOC content and vapor pressure materials: Blanket wash VOC content limit = vapor pressure not to exceed 10 mm Hg at 20⁰C or 70% VOC content or 5.6 lb/gal Fountain solution VOC content limit = 3% Cleaning rags shall always be placed in closed</p>	<p>State BACT</p>
<p>Quad Graphics - Sussex, WI</p>	<p>04-RV-281 03/03/2005</p>	<p>Printing presses</p>	<p>(1) Thermal oxidizer with 97.5% VOC destruction efficiency from press dryers (2) Restrict vapor pressure of blanket wash to 10 MM HG (3) Fountain solution with no alcohol (4) Operation of press dryer under negative pressure (5) Store shop towels soiled from blanket wash in closed containers and treat offsite (6) Fire only natural gas and propane in press dryers and fire only natural gas in thermal oxidizer</p>	<p>PSD-BACT</p>
<p>R.R. Donnelley & Sons Company – Fulton, GA</p>	<p>2752-121-0840- E-01-0 05/23/2005</p>	<p>Printing presses</p>	<p>Thermal oxidizer with 97% VOC destruction efficiency Low vapor pressure and low VOC content materials</p>	<p>LAER</p>

Company/ Location	Permit No./ Year Issued	Process	BACT/Limit	Basis
R.R. Donnelley & Sons Company - Lancaster, PA	36-05027G 01/03/2006	Printing presses	Thermal oxidizer with 97% VOC destruction efficiency	LAER
Quad Graphics, Inc. Oklahoma	2000-306-C M-1 PSD 02/03/2004	Printing presses	(1) Thermal incinerator at 97.5% control with 100% capture efficiency for the heatset press dryers (2) Usage of blanket wash with low vapor pressure < 10 MM HG at 68°F (20 °C) (3) Used rags for blanket wash and cleanup solvents shall be stored in closed containers from the time they are used until the time they are sent offsite for cleaning or disposal (4) Use of fountain solution with no more than 5% VOC content by weight and shall not contain alcohol	PSD BACT
Sierra Office Systems Sacramento, CA	16515 0111/2003	Lithographic printing press	No add-on control Low VOC inks	LAER

SOURCE'S PROPOSED BACT:

Color-Box, LLC proposes to comply with the most stringent BACT limits and add-on control technology already established by sources in the industry, by installing a thermal oxidizer with destruction efficiency of 98% to control VOC emissions from the ink dryer and coating dryer.

IDEM, OAQ BACT Determination:

Pursuant to 326 IAC 8-1-6 (New facilities; general reduction requirements), Best Available Control Technology for the new web heatset offset lithographic printing press, identified as Web Press, shall be the following:

- (a) The VOC emissions from the Web Press ink dryer and coating dryer shall be controlled by a thermal oxidizer with a minimum destruction efficiency of ninety-eight percent (98%) or a VOC outlet concentration of 10 parts per million by volume (ppmv) as hexane, minus methane and ethane.
- (b) The VOC content of the fountain solution as applied shall be no greater than three percent (3%).
- (c) The VOC composite vapor pressure from all cleaning materials shall be less than ten millimeters of mercury (10 MM Hg) at 20°C. The VOC Composite Vapor Pressure is calculated as follows:

$$PP_c = \sum_{i=1}^n \frac{(W_i)(VP_i)/MW_i}{\frac{M_w}{MW_w} + \frac{W_e}{MW_e} + \sum_{i=1}^n \frac{W_i}{MW_i}}$$

Where:

W_i = Weight of the "i"th VOC compound, in grams

W_w = Weight of water, in grams

W_e = Weight of exempt compound, in grams

MW_i = Molecular weight of the "i"th VOC compound, in g/g-mole

MW_w = Molecular weight of water, in g/g-mole

MW_e = Molecular weight of exempt compound, in g/g-mole

PP_c = VOC composite vapor pressure at 20 C, in mm Hg

VP_i = Vapor pressure of the "i"th VOC compound at 20 C, in mm Hg

- (d) Good work practices shall be performed, such as keeping solvent containers closed except when filling, draining or conducting cleaning operations, and keeping used shop towels in closed containers.

Compliance with the composite vapor pressure in (c) in conjunction with the good work practices in (e) will result in an emission reduction that is comparable to using cleaning materials that contain less than 30 weight percent VOC. This is based on the "Control Techniques Guidelines for Offset Lithographic Printing and Letterpress Printing" (EPA-453/R-06-002, September 2006).

- (e) The Web Press ink and coating dryers shall be operated under negative pressure.
- (f) The capture efficiencies used for reporting and compliance shall be based on the "Control Techniques Guidelines for Offset Lithographic Printing and Letterpress Printing" (EPA-453/R-06-002, September 2006) as follows:
- (A) 100 percent (100%) capture, by weight, of the VOC in press ready inks;
 - (B) 70 percent (70%) capture, by weight, of the VOC in press ready fountain solutions;
and
 - (C) 40 percent (40%) capture, by weight, of the VOC in press ready automatic cleaning solvents.



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

November 13, 2013

TO: Morrison Reeves Public Library

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Color-Box, LLC
Permit Number: 177-33499-00063

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 6/13/2013



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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Jessica Masternak
Color-Box, LLC
1056 Industries Rd
Richmond IN 47374

DATE: November 13, 2013

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
FESOP
177-33499-00063

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Amy Zetzi
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 6/13/2013



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IDEM Staff	DPABST 11/20/2013	157-33767-00466	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
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2		Eric Angermeier GM Nanshan America Advanced Aluminum Technologies LLC 3600 US 52 S Lafayette IN 47905 (RO CAATS)										
3		Tippecanoe County Commissioners 20 N 3rd St, County Office Building Lafayette IN 47901 (Local Official)										
4		Tippecanoe County Health Department 20 N. 3rd St Lafayette IN 47901-1211 (Health Department)										
5		Lafayette City Council and Mayors Office 20 North 6th Street Lafayette IN 47901-1411 (Local Official)										
6		Ms. Geneva Werner 3212 Longlois Drive Lafayette IN 47904-1718 (Affected Party)										
7		Mrs. Phyllis Owens 3600 Cypress Lane Lafayette IN 47905 (Affected Party)										
8		Mr. Jerry White 4317 Amesbury Drive West Lafayette IN 47906 (Affected Party)										
9		Ms. Rose Filley 5839 Lookout Drive West Lafayette IN 47906 (Affected Party)										
10		Mr. William Cramer 128 Seminole Drive West Lafayette IN 47906 (Affected Party)										
11		Mr. Robert Kelley 2555 S 30th Street Lafayette IN 44909 (Affected Party)										
12		West Lafayette City Council and Mayors Office 609 W. Navajo West Lafayette IN 47906 (Local Official)										
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