



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: May 5, 2010

RE: Printpack, Inc. / 105 - 28231 - 00046

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
FNPER.dot12/03/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

**New Source Construction and Federally Enforceable
State Operating Permit
OFFICE OF AIR QUALITY**

**Printpack, Inc.
5550 Vernal Pike
Bloomington, Indiana 47404**

(herein known as the Permittee) is hereby authorized to construct and 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.

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.: F105-28231-00046	
Issued by:  Alfred C. Dumauval, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: May 5, 2010 Expiration Date: May 5, 2015

TABLE OF CONTENTS

A. SOURCE SUMMARY	4
A.1 General Information [326 IAC 2-8-3(b)]	
A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]	
A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]	
A.4 FESOP Applicability [326 IAC 2-8-2]	
B. GENERAL CONDITIONS	11
B.1 Definitions [326 IAC 2-8-1]	
B.2 Revocation of Permits [326 IAC 2-1.1-9(5)]	
B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4][326 IAC 2-8]	
B.4 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]	
B.5 Term of Conditions [326 IAC 2-1.1-9.5]	
B.6 Enforceability [326 IAC 2-8-6] [IC 13-17-12]	
B.7 Severability [326 IAC 2-8-4(4)]	
B.8 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]	
B.9 Duty to Provide Information [326 IAC 2-8-4(5)(E)]	
B.10 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]	
B.11 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]	
B.12 Compliance Order Issuance [326 IAC 2-8-5(b)]	
B.13 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]	
B.14 Emergency Provisions [326 IAC 2-8-12]	
B.15 Prior Permits Superseded [326 IAC 2-1.1-9.5]	
B.16 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]	
B.17 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]	
B.18 Permit Renewal [326 IAC 2-8-3(h)]	
B.19 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]	
B.20 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]	
B.21 Source Modification Requirement [326 IAC 2-8-11.1]	
B.22 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]	
B.23 Transfer of Ownership or Operational Control [326 IAC 2-8-10]	
B.24 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]	
B.25 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]	
C. SOURCE OPERATION CONDITIONS	21
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]	
C.2 Overall Source Limit [326 IAC 2-8]	
C.3 Opacity [326 IAC 5-1]	
C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]	
C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]	
C.6 Fugitive Dust Emissions [326 IAC 6-4]	
C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]	
Testing Requirements [326 IAC 2-8-4(3)]	
C.8 Performance Testing [326 IAC 3-6]	

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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]
- C.13 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]
- C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4]
[326 IAC 2-8-5]

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

Stratospheric Ozone Protection

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

D.1. EMISSIONS UNIT OPERATION CONDITIONS..... 27

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

- D.1.1 Volatile Organic Compounds (VOC) Limit [326 IAC 2-8-4] [326 IAC 2-2]
- D.1.2 Graphic Arts Operations [326 IAC 8-5-5]
- D.1.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

Compliance Determination Requirements

- D.1.4 Volatile Organic Compounds (VOC) [326 IAC 8-1-2] [326 IAC 8-1-4]
- D.1.5 Volatile Organic Compounds (VOC)
- D.1.6 Testing Requirements [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

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

- D.1.7 Thermal Oxidizer Temperature
- D.1.8 Parametric Monitoring

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

- D.1.9 Record Keeping Requirements
- D.1.10 Reporting Requirements

E.1. EMISSIONS UNIT OPERATION CONDITIONS 31

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 20]

- E.1.1 General Provisions Relating to NESHAP [40 CFR 63, Subpart A][326 IAC 20-1]
- E.1.2 NESHAP for Hazardous Air Pollutants for the Printing and Publishing Industry [40 CFR 63, Subpart KK][326 IAC 20-18]

Certification Form 32
Emergency Occurrence Form 33
Quarterly Report Form 35
Quarterly Deviation and Compliance Monitoring Report Form 36
Affidavit of Construction 38

Attachment A - 40 CFR 63, Subpart KK

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.3 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 flexible packaging rollstock and plastic bag manufacturing company.

Source Address:	5550 Vernal Pike, Bloomington, Indiana 47404
Mailing Address:	PO Box 723608, Atlanta, GA 47404
General Source Phone Number:	404-460-7553
SIC Code:	2673
County Location:	Monroe
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 stationary source consists of the following emission units and pollution control devices:

- (a) One (1) regenerative thermal oxidizer, identified as RTO1, approved for construction in 2010, with a maximum heat input rate of 20.30 MMBtu per hour, providing 98% control efficiency, using natural gas as primary fuel, using propane as secondary fuel, and venting to stack S01. Propane will only be used as an emergency backup fuel in the event of an interruption in natural gas service.
- (b) Two (2) solvent storage tanks, identified as TK01 and TK02, approved for construction in 2010, which are variable vapor space tanks located above ground, with a maximum storage capacity of 10,000 gallons, each, a maximum throughput of 1,040,000 gallons per year, each, and venting to stack S02 and S03, respectively.
- (c) Two (2) solvent storage tanks, identified as TK03 and TK04, approved for construction in 2010, which are variable vapor space tanks located above ground, with a maximum storage capacity of 5,000 gallons, each, a maximum throughput of 520,000 gallons per year, each, and venting to stack S02 and S03, respectively.
- (d) One (1) ink and solvent waste storage tank, identified as TK05, approved for construction in 2010, which is a variable vapor space tank located above ground, with a maximum storage capacity of 6,000 gallons, a maximum throughput of 624,000 gallons per year, using the regenerative thermal oxidizer (RTO1) as control.
- (e) One (1) photopolymer plate-making unit, identified as PH01, approved for construction in 2010, with a maximum capacity of 52.5 square foot per hour, housed in a permanent total enclosure, internally recycling spent solvent from the plate washout phase, using the regenerative thermal oxidizer (RTO1) as control.

- (f) Four (4) flexographic printing presses, identified as FP01, FP02, FP03, and FP04, using continuous web feed of material, approved for construction in 2010, each using flexographic ink, with maximum line speeds of 2,000 feet per minute and maximum printing widths of 5.412 feet, using web as the feed type, housed in a permanent total enclosure, using the regenerative thermal oxidizer (RTO1) as control. Under 40 CFR 63, Subpart KK, this unit is considered an affected source/facility. [40 CFR 63, Subpart KK] [326 IAC 20-18]
- (g) Four (4) press drying ovens, identified as FD01, FD02, FD03, and FD04, approved for construction in 2010, each with a maximum heat input rate of 1.66 MMBtu per hour, using natural gas direct fire as primary fuel and propane as secondary fuel, each housed in a permanent total enclosure and operated under negative pressure, and using the regenerative thermal oxidizer (RTO1) as control. Propane will only be used as an emergency backup fuel in the event of an interruption in natural gas service.

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

This stationary source also includes the following insignificant activities:

- (1) Activities or emission units, identified as BM01 through BM20, for which the potential uncontrolled emissions for PM10 are equal to or less than one (1) pound per day.
- (2) Water related activities
 - (A) Production of hot water for on-site personal use not related to any industrial or production process.
 - (B) Water treatment activities used to provide and process water for the plant, excluding any activities associated with wastewater treatment.
 - (C) Pressure washing of equipment.
- (3) Combustion activities
 - (A) Portable electrical generators that can be moved by hand from one location to another (without the assistance of motorized or non-motorized vehicle, conveyance, or device)
 - (B) Combustion emissions from propulsion of mobile sources
 - (C) Fuel use related to food preparation for on-site consumption
- (4) Activities related to ventilation, venting equipment and refrigeration
 - (A) Ventilation exhaust, central chiller water systems, refrigeration and air conditioning equipment, not related to any industrial or production process, including natural draft hoods or ventilating systems that do not remove air pollutants.
 - (B) Stack and vents from plumbing traps used to prevent the discharge of sewer gases, handling domestic sewage only, excluding those at wastewater treatment plants or those handling any industrial waste
 - (C) Natural gas pressure regulator vents, excluding venting at oil and gas production Facilities.

- (D) Air vents from air compressors.
 - (E) Vents for air cooling of electric motors provided the air does not commingle with regulated air pollutants.
- (5) Activities related to routine fabrication, maintenance and repair of buildings, structures, equipment or vehicles at the source where air emissions from those activities would not be associated with any commercial production process
- (A) Activities associated with the repair and maintenance of paved and unpaved roads, including paving or sealing, or both, of parking lots and roadways.
 - (B) Painting, including interior and exterior painting of buildings, and solvent use, excluding degreasing operations utilizing halogenated organic solvents.
 - (C) Brazing, soldering, or welding operations and associated equipment.
 - (D) Portable blast-cleaning equipment with enclosures, identified as PW01.
 - (E) Batteries and battery charging stations, except at battery manufacturing plants.
 - (F) Lubrication, including hand-held spray can lubrication, dipping metal parts into lubricating oil, and manual or automated addition of cutting oil in machining operations.
 - (G) Non-asbestos insulation installation or removal.
 - (H) Tarring, retarring and repair of building roofs.
 - (I) Instrument air dryer and filter maintenance.
 - (J) Manual tank gauging.
 - (K) Open tumblers associated with deburring operations in maintenance shops.
- (6) Activities performed using hand-held equipment
- (A) Application of hot melt adhesives with no VOC in the adhesive formulation.
 - (B) Cutting, excluding cutting torches.
 - (C) Machining wood, metal, or plastic.
 - (D) Turning wood, metal, or plastic.
 - (E) Buffing, carving, drilling, grinding, polishing, routing, sanding, sawing, and surface Grinding.
- (7) Housekeeping and janitorial activities and supplies
- (A) Vacuum cleaning systems used exclusively for housekeeping or custodial activities, or both.
 - (B) Rest rooms and associated cleanup operations and supplies.
 - (C) Alkaline or phosphate cleaners and associated equipment.

- (D) Mobile floor sweepers and floor scrubbers.
- (E) Pest control fumigation.
- (8) Office related activities
 - (A) Office supplies and equipment.
 - (B) Photocopying equipment and associated supplies.
 - (C) Paper shredding.
 - (D) Blueprint machines, photographic equipment, and associated supplies.
- (9) Lawn care and landscape maintenance activities and equipment, including the storage, spraying or application of insecticides, pesticides and herbicides
- (10) Storage equipment and activities
 - (A) Pressurized storage tanks and associated piping for liquid natural gas (LNG) (propane).
 - (B) Storage tanks, vessels, and containers holding or storing liquid substances that do not contain any VOC or HAP.
 - (C) Storage of drums containing maintenance raw materials.
 - (D) Storage of any non-HAP containing material in solid form, stored in a sealed or covered container.
 - (E) Portable containers used for the collection, storage, or disposal of materials, where the container capacity is equal to or less than forty-six hundredths (0.46) cubic meters and the container is closed, except when material is added or removed.
- (11) Emergency and standby equipment
 - (A) Safety and emergency equipment, except engine driven fire pumps, including fire suppression systems and emergency road flares.
 - (B) Process safety relief devices installed solely for the purpose of minimizing injury to persons or damage to equipment which could result from abnormal process operating conditions, including the following: explosion relief vents, diaphragms or panels, rupture discs, or safety relief valves.
 - (C) Activities and equipment associated with on-site medical care not otherwise specifically regulated.
- (12) Sampling and testing equipment and activities used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
- (13) Use of consumer products and equipment where the product or equipment is used at a source in the same manner as normal consumer use and is not associated with any production process.

- (14) Activities generating limited amounts of fugitive dust
 - (A) Fugitive emissions related to movement of passenger vehicles, provided the emissions are not counted for applicability purposes under 326 IAC 2-7-1(22)(B), and any required fugitive dust control plan or its equivalent is submitted.
 - (B) Road salting and sanding.
- (15) Activities associated with production
 - (A) Closed, non-vented, tumblers used for cleaning or deburring metal products without abrasive blasting.
 - (B) Electrical resistance welding.
 - (C) Air compressors and pneumatically operated equipment, including hand tools.
 - (D) Compressor or pump lubrication and seal oil systems.
- (16) Miscellaneous equipment, but not emissions associated with the process for which the equipment is used, and activities
 - (A) Equipment used for surface coating, painting, dipping or spraying operation, except those that will emit VOCs or HAPs.
 - (B) Condensate drains for natural gas and landfill gas.
 - (C) Portable dust collectors.
 - (D) Manual loading and unloading operations.
 - (E) Purging of refrigeration devices using a combination of nitrogen and CFC-22 (R-22) as pressure test media.
 - (F) Construction and demolition operations.
 - (G) Mechanical equipment gear boxes and vents which are isolated from process Materials.
- (17) Combustion related activities
 - (A) Space heaters, process heaters, or boilers using natural gas with a heat input rate equal to or less than ten million (10,000,000) Btu per hour, or using propane or liquefied petroleum gas, or butane-fired combustion with a heat input rate equal to or less than six million (6,000,000) Btu per hour.
 - (B) Equipment powered by diesel fuel fired or natural gas fired internal combustion engines of capacity equal to or less than five hundred thousand (500,000) Btu per hour, except where total capacity of equipment operated by one stationary source exceeds two million (2,000,000) Btu per hour.
- (18) VOC and HAP storage containers for the storage of hydraulic oils, lubricating oils, machining oils, and machining fluids.
- (19) Production related activities

- (A) Application of the greases, lubricants, nonvolatile materials, and oils as temporary protective coatings.
 - (B) Machining where an aqueous cutting coolant continuously floods the machining Interface.
 - (C) Cleaners and solvents characterized as follows where the use of which, for all cleaners and solvents combined, does not exceed one hundred forty-five (145) gallons per twelve (12) months:
 - (i) Having a vapor pressure equal to or less than two kilo Pascals (2.0 kPa) fifteen millimeters of mercury (15 mm Hg) or three-tenths pound per square inch (0.3 psi) measured at thirty-eight degrees Centigrade (38°C) (one hundred degrees Fahrenheit (100°F)).
 - (ii) Having a vapor pressure equal to or less than seven-tenths kilo Pascals (0.7 kPa) (five millimeters of mercury (5 mm Hg) or one-tenth pound per square inch (0.1 psi) measured at twenty degrees Centigrade (20°C) (sixty-eight degrees Fahrenheit (68°F)).
 - (D) Brazing equipment, cutting torches, soldering equipment, and welding equipment related to manufacturing activities not resulting in the emission of HAPs.
 - (E) Closed loop heating and cooling systems.
- (20) Water-based activities
- (A) Any operation using aqueous solutions containing less than one percent (1%) by weight of VOCs excluding HAPs.
 - (B) Water based adhesives that are less than or equal to five percent (5%) by volume of VOCs excluding HAPs.
 - (C) Noncontact cooling tower systems with either of the following:
 - (i) Natural draft cooling towers not regulated under a NESHAP.
 - (ii) Forced and induced draft cooling tower systems not regulated under a NESHAP.
- (21) Repair activities
- (A) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
 - (B) Heat exchanger cleaning and repair.
 - (C) Process vessel degassing and cleaning to prepare for internal repairs.
- (22) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection or trim material recovery device, such as a bag filter or cyclone.
- (23) Paved and unpaved roads and parking lots with public access
- (24) Enclosed systems for conveying plastic raw materials and plastic finished goods.

- (25) Routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process, including purging of gas lines and purging of vessels.
- (26) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including tanks and catch tanks.
- (27) Blowdown for sigh glass, compressors, pumps, and cooling towers.
- (28) Activities associated with emergencies including on-site fire training approved by IDEM and stationary fire pump engines.
- (29) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to three one-hundredths grains per actual cubic foot (0.03 gr/acf) and a gas flow rate less than or equal to four thousand actual cubic feet per minute (4,000 acf/min), including: deburring, buffing, polishing, abrasive blasting, pneumatic conveying, and woodworking operations.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Federally Enforceable State Operating Permit (FESOP).

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 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4][326 IAC 2-8]

This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 and 326 IAC 2-8 when prior to the start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as proposed.
- (b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.
- (c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

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

- (a) This permit, F105-28231-00046, 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.5 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.6 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.7 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.8 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.9 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.10 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:
 - (i) it contains a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1), and
 - (ii) the certification is 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.11 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.12 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.13 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]

- (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.14 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.15 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to F105-28231-00046 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.16 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.17 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.18 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.19 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.20 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) through (d) 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) through (d). 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)(2), (c)(1), and (d).

- (b) Emission Trades [326 IAC 2-8-15(c)]
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(c).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
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.21 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.22 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.23 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.24 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.25 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), 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.

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than one hundred (100) 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 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 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 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.
- (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. 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. 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) One (1) regenerative thermal oxidizer, identified as RTO1, approved for construction in 2010, with a maximum heat input rate of 20.30 MMBtu per hour, providing 98% control efficiency, using natural gas as primary fuel, using propane as secondary fuel, and venting to stack S01. Propane will only be used as an emergency backup fuel in the event of an interruption in natural gas service.
- (b) Two (2) solvent storage tanks, identified as TK01 and TK02, approved for construction in 2010, which are variable vapor space tanks located above ground, with a maximum storage capacity of 10,000 gallons, each, a maximum throughput of 1,040,000 gallons per year, each, and venting to stack S02 and S03, respectively.
- (c) Two (2) solvent storage tanks, identified as TK03 and TK04, approved for construction in 2010, which are variable vapor space tanks located above ground, with a maximum storage capacity of 5,000 gallons, each, a maximum throughput of 520,000 gallons per year, each, and venting to stack S02 and S03, respectively.
- (d) One (1) ink and solvent waste storage tank, identified as TK05, approved for construction in 2010, which is a variable vapor space tank located above ground, with a maximum storage capacity of 6,000 gallons, a maximum throughput of 624,000 gallons per year, using the regenerative thermal oxidizer (RTO1) as control.
- (e) One (1) photopolymer plate-making unit, identified as PH01, approved for construction in 2010, with a maximum capacity of 52.5 square foot per hour, housed in a permanent total enclosure, internally recycling spent solvent from the plate washout phase, using the regenerative thermal oxidizer (RTO1) as control.
- (f) Four (4) flexographic printing presses, identified as FP01, FP02, FP03, and FP04, using continuous web feed of material, approved for construction in 2010, each using flexographic ink, with maximum line speeds of 2,000 feet per minute and maximum printing widths of 5.412 feet, using web as the feed type, housed in a permanent total enclosure, using the regenerative thermal oxidizer (RTO1) as control. Under 40 CFR 63, Subpart KK, this unit is considered an affected source/facility. [40 CFR 63, Subpart KK] [326 IAC 20-18]
- (g) Four (4) press drying ovens, identified as FD01, FD02, FD03, and FD04, approved for construction in 2010, each with a maximum heat input rate of 1.66 MMBtu per hour, using natural gas direct fire as primary fuel and propane as secondary fuel, each housed in a permanent total enclosure and operated under negative pressure, and using the regenerative thermal oxidizer (RTO1) as control. Propane will only be used as an emergency backup fuel in the event of an interruption in natural gas service.

(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 Compound (VOC) Limit [326 IAC 2-8-4] [326 IAC 2-2]

Pursuant to 326 IAC 2-8-4 (FESOP), the Permittee shall comply with the following:

- (a) the total VOC input to printing presses FP01, FP02, FP03, and FP04, and the photopolymer plate-making unit PH01 shall be limited to 4,926.4 tons per twelve (12)

consecutive month period, with compliance determined at the end of each month; and compliance with this input limit, in conjunction with D.1.1(b), shall limit VOC emissions from these units to less than 98.53 tons per twelve (12) month consecutive month period; and

- (b) the overall VOC control efficiency (as the product of capture efficiency and destruction efficiency) for the regenerative thermal oxidizer (RTO1) shall be equal to or greater than ninety-eight percent (98%).

Compliance with these limits, combined with the VOC emissions from all other emission units at this source, shall limit the source-wide VOC emissions to less than one-hundred (100) tons per twelve (12) consecutive month period and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.2 Graphic Arts Operations [326 IAC 8-5-5]

- (a) Pursuant to 326 IAC 8-5-5(e)(3), the capture system for printing presses FP01 through FP04, in combination with the regenerative oxidation system (RTO1) shall be operated in such a manner to achieve a minimum of sixty percent (60%) overall control efficiency.
- (b) Pursuant to 326 IAC 8-5-5(c)(3)(B), the regenerative oxidation system (RTO1) for printing presses FP01 through FP04, shall maintain a minimum destruction efficiency of 90%.

D.1.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan is required for the printing presses (FP01 through FP04), the photopolymer plate-making unit (PH01), and their respective 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.1.4 Volatile Organic Compounds (VOC) [326 IAC 8-1-2] [326 IAC 8-1-4]

Compliance with the VOC input and emission limitations contained in Condition D.1.1(a) 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 the copies of the "as supplied" and "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.

D.1.5 Volatile Organic Compounds (VOC)

In order to comply with Conditions D.1.1(b) and D.1.2, the Permittee shall operate the capture system and regenerative thermal oxidizer (RTO1) and control VOC emissions from printing presses (FP01 through FP04) and the photopolymer plate-making unit (PH01) at all times that one (1) or more of the printing presses (FP01 through FP04) and/or the photopolymer plate-making unit (PH01) are in operation.

D.1.6 Testing Requirements [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

In order to demonstrate the compliance status with Conditions D.1.1(b) and D.1.2, the Permittee shall comply with the following:

Within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up of one (1) or more of the printing presses (FP01 through FP04) and the photopolymer plate-making unit (PH01), the Permittee shall conduct a performance test to verify the overall VOC control efficiency (as the product of capture efficiency and destruction efficiency) for the regenerative thermal oxidizer (RTO1), utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent 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.

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

D.1.7 Thermal Oxidizer Temperature

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the regenerative thermal oxidizer (RTO1) for measuring operating temperature. For the purpose of this condition, continuous means no less often than once per fifteen (15) minutes. The output of this system shall be recorded as 3-hour average. From the date of startup until the stack test results are available, the Permittee shall operate the thermal oxidizer at or above the 3-hour average temperature of at least 1,400°F.
- (b) The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with limits in Conditions D.1.1(b) and D.1.2.
- (c) On and after the date the stack test results are available, the Permittee shall operate the thermal oxidizer at or above the 3-hour average temperature as observed during the compliant stack test.

D.1.8 Parametric Monitoring

- (a) The Permittee shall determine the appropriate duct pressure or fan amperage from the most recent valid stack test that demonstrates compliance with limits in Conditions D.1.1(b) and D.1.2.
- (b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizer is in operation. On and after the date the 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.
- (c) The Permittee shall take 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.
- (d) 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 Requirements [326 IAC 2-8-4(3)]

D.1.9 Record Keeping Requirements

- (a) To document the compliance status with Condition D.1.1(a), the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits established in Condition D.1.1(a). Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
 - (1) The VOC content of each coating material, ink, and solvent used.
 - (2) The amount of coating material, ink, and solvent used on monthly basis.

- (A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
- (B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
 - (3) The cleanup solvent usage for each month;
 - (4) The total VOC input for each month; and
 - (5) The total VOC input for each compliance period.
- (b) To document the compliance status with Conditions D.1.7, the Permittee shall maintain the continuous temperature records (on a 3-hour average basis) for the thermal oxidizer and the 3-hour average temperature used to demonstrate compliance during the most recent compliant stack test.
- (c) To document the compliance status with Conditions D.1.8, the Permittee shall maintain daily records of the duct pressure or fan amperage
- (d) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

D.1.10 Reporting Requirements

A quarterly summary of the information to document compliance status with Condition D.1.1(a) shall be submitted not 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 the reporting required by this condition. The report submitted by the Permittee does require a certification that meet the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION E.1 EMISSION UNITS OPERATION CONDITIONS

Emissions Unit Description:

- (f) Four (4) flexographic printing presses, identified as FP01, FP02, FP03, and FP04, using continuous web feed of material, approved for construction in 2010, each using flexographic ink, with maximum line speeds of 2,000 feet per minute and maximum printing widths of 5.412 feet, using web as the feed type, housed in a permanent total enclosure, using the regenerative thermal oxidizer (RTO1) as control. Under 40 CFR 63, Subpart KK, this unit is considered an affected source/facility. [40 CFR 63, Subpart KK] [326 IAC 20-18]

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

E.1.1 General Provisions Relating to NESHAP [40 CFR 63, Subpart A][326 IAC 20-1]

- (a) Pursuant to 40 CFR 63, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1, except as otherwise specified in 40 CFR 63, Subpart KK.
- (b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports 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

E.1.2 NESHAP for for Hazardous Air Pollutants for the Printing and Publishing Industry [40 CFR 63, Subpart KK] [326 IAC 20-18]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart KK (included as Attachment A of this permit), which are incorporated by reference as 326 IAC 20-18, except as otherwise specified in 40 CFR Part 63, Subpart KK:

- (1) 40 CFR 63.820(a)(2)(i)
- (2) 40 CFR 63.820(a)(2)(ii)
- (3) 40 CFR 63.820(3)
- (4) 40 CFR 63.829(d)
- (5) 40 CFR 63.830(b)(1)

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

Source Name: Printpack, Inc.
Source Address: 5550 Vernal Pike, Bloomington, Indiana 47404
Mailing Address: PO Box 723608, Atlanta, GA 47404
FESOP Permit No.: F105-28231-00046

**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: Printpack, Inc.
Source Address: 5550 Vernal Pike, Bloomington, Indiana 47404
Mailing Address: PO Box 723608, Atlanta, GA 47404
FESOP Permit No.: F105-28231-00046

This form consists of 2 pages

Page 1 of 2

- | |
|---|
| <input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12) <ul style="list-style-type: none">• 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**

FESOP Quarterly Report

Source Name: Printpack, Inc.
Source Address: 5550 Vernal Pike, Bloomington, Indiana 47404
Mailing Address: PO Box 723608, Atlanta, GA 47404
FESOP Permit No.: F105-28231-00046
Facility: Printing Presses FP01, FP02, FP03, and FP04 and the photopolymer plate-making unit PH01
Parameter: Volatile Organic Compounds (VOC)
Limit: The total VOC input to printing presses FP01, FP02, FP03, and FP04 and the photopolymer plate-making unit PH01 shall be limited to 4,926.4 tons per twelve (12) 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: Printpack, Inc.
Source Address: 5550 Vernal Pike, Bloomington, Indiana 47404
Mailing Address: PO Box 723608, Atlanta, GA 47404
FESOP Permit No.: F105-28231-00046

Months: _____ to _____ Year: _____

Page 1 of 2

<p>This report shall be submitted quarterly based on a calendar year. 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.</p>	
<p><input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.</p>	
<p><input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD</p>	
<p>Permit Requirement (specify permit condition #)</p>	
<p>Date of Deviation:</p>	<p>Duration of Deviation:</p>
<p>Number of Deviations:</p>	
<p>Probable Cause of Deviation:</p>	
<p>Response Steps Taken:</p>	
<p>Permit Requirement (specify permit condition #)</p>	
<p>Date of Deviation:</p>	<p>Duration of Deviation:</p>
<p>Number of Deviations:</p>	
<p>Probable Cause of Deviation:</p>	
<p>Response Steps Taken:</p>	

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

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

Printpack, Inc.
5550 Vernal Pike
Bloomington, Indiana 47404

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of _____ for _____
(Title) (Company Name)
3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____
(Company Name)
4. I hereby certify that Printpack, Inc. 5550 Vernal Pike, Bloomington, Indiana 47404, completed construction of the flexible packaging rollstock and plastic bag manufacturing company on _____ in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on July 15, 2009, and as permitted pursuant to New Source Construction Permit and Federally Enforceable State Operating Permit No. F105-28231-00046, Plant ID No. 105-00046 issued on _____.
5. **Permittee, please cross out the following statement if it does not apply:** Additional (operations/facilities) were constructed/substituted as described in the attachment to this document and were not made in accordance with the construction permit.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature _____
Date _____

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana
on this _____ day of _____, 20____. My Commission expires: _____.

Signature _____
Name _____ (typed or printed)

**Attachment A, NESHAP
40 CFR 63, Subpart KK**

**Printpack, Inc.
5550 W Vernal Pike
Bloomington, IN 47404**

Permit No. F105-28231-00046

Title 40: Protection of Environment
PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

Subpart KK—National Emission Standards for the Printing and Publishing Industry

Source: 61 FR 27140, May 30, 1996, unless otherwise noted.

§ 63.820 Applicability.

(a) The provisions of this subpart apply to:

(1) Each new and existing facility that is a major source of hazardous air pollutants (HAP), as defined in 40 CFR 63.2, at which publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses are operated, and

(2) Each new and existing facility at which publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses are operated for which the owner or operator chooses to commit to and meets the criteria of paragraphs (a)(2)(i) and (ii) of this section for purposes of establishing the facility to be an area source of HAP with respect to this subpart. A facility which establishes area source status through some other mechanism, as described in paragraph (a)(7) of this section, is not subject to the provisions of this subpart.

(i) Use less than 9.1 Mg (10 tons) per each rolling 12-month period of each HAP at the facility, including materials used for source categories or purposes other than printing and publishing, and

(ii) Use less than 22.7 Mg (25 tons) per each rolling 12-month period of any combination of HAP at the facility, including materials used for source categories or purposes other than printing and publishing.

(3) Each facility for which the owner or operator chooses to commit to and meets the criteria stated in paragraph (a)(2) of this section shall be considered an area source, and is subject only to the provisions of §§63.829(d) and 63.830(b)(1) of this subpart.

(4) Each facility for which the owner or operator commits to the conditions in paragraph (a)(2) of this section may exclude material used in routine janitorial or facility grounds maintenance, personal uses by employees or other persons, the use of products for the purpose of maintaining electric, propane, gasoline and diesel powered motor vehicles operated by the facility, and the use of HAP contained in intake water (used for processing or noncontact cooling) or intake air (used either as compressed air or for combustion).

(5) Each facility for which the owner or operator commits to the conditions in paragraph (a)(2) of this section to become an area source, but subsequently exceeds either of the thresholds in paragraph (a)(2) of this section for any rolling 12-month period (without first obtaining and complying with other limits that keep its potential to emit HAP below major source levels), shall be considered in violation of its commitment for that 12-month period and shall be considered a major source of HAP beginning the first month after the end of the 12-month period in which either of the HAP-use thresholds was exceeded. As a major source of HAP, each such facility would be subject to the provisions of this subpart as noted in paragraph (a)(1) of this section and would no longer be eligible to use the provisions of paragraph (a)(2) of this section, even if in subsequent 12-month periods the facility uses less HAP than the thresholds in paragraph (a)(2) of this section.

(6) An owner or operator of an affected source subject to paragraph (a)(2) of this section who chooses to no longer be subject to paragraph (a)(2) of this section shall notify the Administrator of such change. If, by no longer being subject to paragraph (a)(2) of this section, the facility at which the affected source is located becomes a major source:

(i) The owner or operator of an existing source must continue to comply with the HAP usage provisions of paragraph (a)(2) of this section until the source is in compliance with all relevant requirements for existing affected sources under this subpart;

(ii) The owner or operator of a new source must continue to comply with the HAP usage provisions of paragraph (a)(2) of this section until the source is in compliance with all relevant requirements for new affected sources under this subpart.

(7) Nothing in this paragraph is intended to preclude a facility from establishing area source status by limiting its potential to emit through other appropriate mechanisms that may be available through the permitting authority.

(b) This subpart does not apply to research or laboratory equipment.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29799, May 24, 2006]

§ 63.821 Designation of affected sources.

(a) The affected sources subject to this subpart are:

(1) All of the publication rotogravure presses and all related equipment, including proof presses, cylinder and parts cleaners, ink and solvent mixing and storage equipment, and solvent recovery equipment at a facility.

(2) All of the product and packaging rotogravure or wide-web flexographic printing presses at a facility plus any other equipment at that facility which the owner or operator chooses to include in accordance with paragraphs (a)(3) or (a)(4) of this section, except

(i) Proof presses, unless the owner or operator chooses to include proof presses in the affected source in accordance with paragraph (a)(5) of this section.

(ii) Any product and packaging rotogravure or wide-web flexographic press which is used primarily for coating, laminating, or other operations which the owner or operator chooses to exclude, provided that

(A) the sum of the total mass of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials applied by the press using product and packaging rotogravure print stations and the total mass of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials applied by the press using wide-web flexographic print stations in each month never exceeds 5 percent of the total mass of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials applied by the press in that month, including all inboard and outboard stations; and

(B) The owner or operator maintains records as required in §63.829(f).

(3) The owner or operator of an affected source, as defined in paragraph (a)(2) of this section, may elect to include in that affected source stand-alone equipment subject to the following provisions:

(i) Stand-alone equipment meeting any of the criteria specified in this subparagraph is eligible for inclusion:

(A) The stand-alone equipment and one or more product and packaging rotogravure or wide-web flexographic presses are used to apply solids-containing materials to the same web or substrate; or

(B) The stand-alone equipment and one or more product and packaging rotogravure or wide-web flexographic presses apply a common solids-containing material; or

(C) A common control device is used to control organic HAP emissions from the stand-alone equipment and from one or more product and packaging rotogravure or wide-web flexographic printing presses;

(ii) All eligible stand-alone equipment located at the facility is included in the affected source; and

(iii) No product and packaging rotogravure or wide-web flexographic presses are excluded from the affected source under the provisions of paragraph (a)(2)(ii) of this section.

(4) The owner or operator of an affected source, as defined in paragraph (a)(2) of this section, may elect to include in that affected source narrow-web flexographic presses subject to the following provisions:

(i) Each narrow-web flexographic press meeting any of the criteria specified in this subparagraph is eligible for inclusion:

(A) The narrow-web flexographic press and one or more product and packaging rotogravure or wide-web flexographic presses are used to apply solids containing material to the same web or substrate; or

(B) The narrow-web flexographic press and one or more product and packaging rotogravure or wide-web flexographic presses apply a common solids-containing material; or

(C) A common control device is used to control organic HAP emissions from the narrow-web flexographic press and from one or more product and packaging rotogravure or wide-web flexographic presses; and

(ii) All eligible narrow-web flexographic presses located at the facility are included in the affected source.

(5) The owner or operator of an affected source, as defined in paragraph (a)(2) of this section, may elect to include in that affected source rotogravure proof presses or flexographic proof presses subject to the following provisions:

(i) Each proof press meeting any of the criteria specified in this subparagraph is eligible for inclusion.

(A) The proof press and one or more product and packaging rotogravure or wide-web flexographic presses apply a common solids-containing material; or

(B) A common control device is used to control organic HAP emissions from the proof press and from one or more product and packaging rotogravure or wide-web flexographic presses; and

(ii) All eligible proof presses located at the facility are included in the affected source.

(6) Affiliated operations such as mixing or dissolving of ink or coating ingredients prior to application; ink or coating mixing for viscosity adjustment, color tint or additive blending, or pH adjustment; cleaning of ink or coating lines and line parts; handling and storage of inks, coatings, and solvents; and conveyance and treatment of wastewater are part of the printing and publishing industry source category, but are not part of the product and packaging rotogravure or wide-web flexographic printing affected source.

(7) Other presses are part of the printing and publishing industry source category, but are not part of the publication rotogravure affected source or the product and packaging rotogravure or wide-web flexographic printing affected source and are, therefore, exempt from the requirements of this subpart except as provided in paragraph (a)(3) of this section.

(8) Narrow web-flexographic presses are part of the printing and publishing industry source category, but are not part of the publication rotogravure affected source or the product and packaging rotogravure or wide-web flexographic printing affected source and are, therefore, exempt from the requirements of this subpart except as provided in paragraphs (a)(3) through (5) of this section.

(b) Each product and packaging rotogravure or wide-web flexographic printing affected source at a facility that is a major source of HAP, as defined in 40 CFR 63.2, that complies with the criteria of paragraphs (b)(1) or (b)(2) on and after the applicable compliance date as specified in §63.826 of this subpart is subject only to the requirements of §§63.829(e) and 63.830(b)(1) of this subpart.

(1) The owner or operator of the affected source applies no more than 500 kilograms (kg) per month, for every month, of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials on product and packaging rotogravure or wide-web flexographic printing presses, or

(2) The owner or operator of the affected source applies no more than 400 kg per month, for every month, of organic HAP on product and packaging rotogravure or wide-web flexographic printing presses.

(c) Each product and packaging rotogravure or wide-web flexographic printing affected source at a facility that is a major source of HAP, as defined in 40 CFR 63.2, that complies with neither the criterion of paragraph (b)(1) nor (b)(2) of this section in any month after the applicable compliance date as specified in §63.826 of this subpart is, starting with that month, subject to all relevant requirements of this subpart and is no longer eligible to use the provisions of paragraph (b) of this section, even if in subsequent months the affected source does comply with the criteria of paragraphs (b)(1) or (b)(2) of this section.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29799, May 24, 2006]

§ 63.822 Definitions.

(a) All terms used in this subpart that are not defined below have the meaning given to them in the CAA and in subpart A of this part.

Always-controlled work station means a work station associated with a dryer from which the exhaust is delivered to a control device, with no provision for the dryer exhaust to bypass the control device. Sampling lines for analyzers and relief valves needed for safety purposes are not considered bypass lines.

Capture efficiency means the fraction of all organic HAP emissions generated by a process that are delivered to a control device, expressed as a percentage.

Capture system means a hood, enclosed room, or other means of collecting organic HAP emissions into a closed-vent system that exhausts to a control device.

Car-seal means a seal that is placed on a device that is used to change the position of a valve or damper (e.g., from open to closed) in such a way that the position of the valve or damper cannot be changed without breaking the seal.

Certified product data sheet (CPDS) means documentation furnished by suppliers of inks, coatings, varnishes, adhesives, primers, solvents, and other materials or by an independent third party that provides the organic HAP weight fraction of these materials determined in accordance with §63.827(b), or the volatile matter weight fraction or solids weight fraction determined in accordance with §63.827(c). A material safety data sheet (MSDS) may serve as a CPDS provided the MSDS meets the data requirements of §63.827(b) and (c). The purpose of the CPDS is to assist the owner or operator in demonstrating compliance with the emission limitations presented in §§63.824–63.825.

Coating means material applied onto or impregnated into a substrate for decorative, protective, or functional purposes. Such materials include, but are not limited to, solvent-borne coatings, waterborne coatings, wax coatings, wax laminations, extrusion coatings, extrusion laminations, 100 percent solid adhesives, ultra-violet cured coatings, electron beam cured coatings, hot melt coatings, and cold seal coatings. Materials used to form unsupported substrates such as calendaring of vinyl, blown film, cast film, extruded film, and coextruded film are not considered coatings.

Control device means a device such as a carbon adsorber or oxidizer which reduces the organic HAP in an exhaust gas by recovery or by destruction.

Control device efficiency means the ratio of organic HAP emissions recovered or destroyed by a control device to the total organic HAP emissions that are introduced into the control device, expressed as a percentage.

Day means a 24-consecutive-hour period.

Facility means all contiguous or adjoining property that is under common ownership or control, including properties that are separated only by a road or other public right-of-way.

Flexible packaging means any package or part of a package the shape of which can be readily changed. Flexible packaging includes, but is not limited to, bags, pouches, labels, liners and wraps utilizing paper, plastic, film, aluminum foil, metalized or coated paper or film, or any combination of these materials.

Flexographic press means an unwind or feed section, which may include more than one unwind or feed station (such as on a laminator), a series of individual work stations, one or more of which is a flexographic print station, any dryers (including interstage dryers and overhead tunnel dryers) associated with the work stations, and a rewind, stack, or collection section. The work stations may be oriented vertically, horizontally, or around the circumference of a single large impression cylinder. Inboard and outboard work stations, including those employing any other technology, such as rotogravure, are included if they are capable of printing or coating on the same substrate. A publication rotogravure press with one or more flexographic imprinters is not a flexographic press.

Flexographic print station means a print station on which a flexographic printing operation is conducted. A flexographic print station includes an anilox roller that transfers material to a raised image (type or art) on a plate cylinder. The material is then transferred from the image on the plate cylinder to the web or sheet to be printed. A flexographic print station may include a fountain roller to transfer material from the reservoir to the anilox roller, or material may be transferred directly from the reservoir to the anilox roller. The materials applied are of a fluid, rather than paste, consistency.

HAP applied means the organic HAP content of all inks, coatings, varnishes, adhesives, primers, solvent, and other materials applied to a substrate by a product and packaging rotogravure or wide-web flexographic printing affected source.

HAP used means the organic HAP applied by a publication rotogravure printing affected source, including all organic HAP used for cleaning, parts washing, proof presses, and all organic HAP emitted during tank loading, ink mixing, and storage.

Intermittently-controllable work station means a work station associated with a dryer with provisions for the dryer exhaust to be delivered to or diverted from a control device depending on the position of a valve or damper. Sampling lines for analyzers and relief valves needed for safety purposes are not considered bypass lines.

Month means a calendar month or a prespecified period of 28 days to 35 days.

Narrow-web flexographic press means a flexographic press that is not capable of printing substrates greater than 18 inches in width and that does not also meet the definition of rotogravure press (i.e., it has no rotogravure print stations).

Never-controlled work station means a work station which is not equipped with provisions by which any emissions, including those in the exhaust from any associated dryer, may be delivered to a control device.

Other press means a lithographic press, letterpress press, or screen printing press that does not meet the definition of rotogravure press or flexographic press (i.e., it has no rotogravure print stations and no flexographic print stations), and that does not print on fabric or other textiles as defined in the Printing, Coating, and Dyeing of Fabrics and Other Textiles NESHAP (40 CFR part 63, subpart OOOO), wood furniture components as defined in the Wood Furniture Manufacturing Operations NESHAP (40 CFR part 63, subpart JJ) or wood building products as defined in the Surface Coating of Wood Building Products NESHAP (40 CFR part 63, subpart QQQQ).

Overall Organic HAP control efficiency means the total efficiency of a control system, determined either by:

- (1) The product of the capture efficiency and the control device efficiency or
- (2) A liquid-liquid material balance.

Print station means a work station on which a printing operation is conducted.

Printing operation means the formation of words, designs, or pictures on a substrate other than wood furniture components as defined in the Wood Furniture Manufacturing Operations NESHAP (40 CFR part 63, subpart JJ), wood building products as defined in the Surface Coating of Wood Building Products NESHAP (40 CFR part 63, subpart QQQQ), and fabric or other textiles as defined in the Printing, Coating, and Dyeing of Fabric and Other Textiles NESHAP (40 CFR part 63, subpart OOOO), except for fabric or other textiles for use in flexible packaging.

Product and packaging rotogravure printing means the production, on a rotogravure press, of any printed substrate not otherwise defined as publication rotogravure printing. This includes, but is not limited to, folding cartons, flexible packaging, labels and wrappers, gift wraps, wall and floor coverings, upholstery, decorative laminates, and tissue products.

Proof press means any press which prints only non-saleable items used to check the quality of image formation of rotogravure cylinders or flexographic plates; substrates such as paper, plastic film, metal foil, or vinyl; or ink, coating varnish, adhesive, primer, or other solids-containing material.

Publication rotogravure press means a rotogravure press used for publication rotogravure printing. A publication rotogravure press may include one or more flexographic imprinters. A publication rotogravure press with one or more flexographic imprinters is not a flexographic press.

Publication rotogravure printing means the production, on a rotogravure press, of the following saleable paper products:

- (1) Catalogues, including mail order and premium,
- (2) Direct mail advertisements, including circulars, letters, pamphlets, cards, and printed envelopes,
- (3) Display advertisements, including general posters, outdoor advertisements, car cards, window posters; counter and floor displays; point of purchase and other printed display material,
- (4) Magazines,
- (5) Miscellaneous advertisements, including brochures, pamphlets, catalog sheets, circular folders, announcements, package inserts, book jackets, market circulars, magazine inserts, and shopping news,
- (6) Newspapers, magazine and comic supplements for newspapers, and preprinted newspaper inserts, including hi-fi and spectacolor rolls and sections,
- (7) Periodicals, and
- (8) Telephone and other directories, including business reference services.

Research or laboratory equipment means any equipment for which the primary purpose is to conduct research and development into new processes and products, where such equipment is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for commercial sale in commerce, except in a de minimis manner.

Rotogravure press means an unwind or feed section, which may include more than one unwind or feed station (such as on a laminator), a series of individual work stations, one or more of which is a rotogravure print station, any dryers associated with the work stations, and a rewind, stack, or collection section. Inboard and outboard work stations, including those employing any other technology, such as flexography, are included if they are capable of printing or coating on the same substrate.

Rotogravure print station means a print station on which a rotogravure printing operation is conducted. A rotogravure print station includes a rotogravure cylinder and supply for ink or other solids containing material. The image (type and art) to be printed is etched or engraved below the surface of the rotogravure cylinder. On a rotogravure cylinder the printing image consists of millions of minute cells.

Stand-alone equipment means an unwind or feed section, which may include more than one unwind or feed station (such as on a laminator); a series of one or more work stations and any associated dryers; and a rewind, stack, or collection section that is not part of a product and packaging rotogravure or wide-web flexographic press. Stand-alone equipment is sometimes referred to as "off-line" equipment.

Wide-web flexographic press means a flexographic press capable of printing substrates greater than 18 inches in width.

Work station means a unit on which material is deposited onto a substrate.

(b) The symbols used in equations in this subpart are defined as follows:

(1) C_{ahi} =the monthly average, as-applied, organic HAP content of solids-containing material, i , expressed as a weight-fraction, kg/kg.

(2) C_{asi} =the monthly average, as applied, solids content, of solids-containing material, i , expressed as a weight-fraction, kg/kg.

(3) C_{hi} =the organic HAP content of ink or other solids-containing material, i , expressed as a weight-fraction, kg/kg.

(4) C_{hij} =the organic HAP content of solvent j , added to solids-containing material i , expressed as a weight-fraction, kg/kg.

(5) C_{hj} =the organic HAP content of solvent j , expressed as a weight-fraction, kg/kg.

(6) [Reserved]

(7) C_{si} =the solids content of ink or other material, i , expressed as a weight-fraction, kg/kg.

(8) C_{vi} =the volatile matter content of ink or other material, i , expressed as a weight-fraction, kg/kg.

(9) E =the organic volatile matter control efficiency of the control device, percent.

(10) F =the organic volatile matter capture efficiency of the capture system, percent.

(11) G_i =the mass fraction of each solids containing material, i , which was applied at 20 weight-percent or greater solids content, on an as-applied basis, kg/kg.

(12) H = the monthly organic HAP emitted, kg.

(13) H_a =the monthly allowable organic HAP emissions, kg.

(14) H_L =the monthly average, as-applied, organic HAP content of all solids-containing materials applied at less than 0.04 kg organic HAP per kg of material applied, kg/kg.

(15) H_s =the monthly average, as-applied, organic HAP to solids ratio, kg organic HAP/kg solids applied.

(16) H_{si} =the as-applied, organic HAP to solids ratio of material i .

(17) L =the mass organic HAP emission rate per mass of solids applied, kg/kg.

(18) M_{Bi} =the sum of the mass of solids-containing material, i , applied on intermittently-controllable work stations operating in bypass mode and the mass of solids-containing material, i , applied on never-controlled work stations, in a month, kg.

(19) M_{Bj} =the sum of the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, applied on intermittently-controllable work stations operating in bypass mode and the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, applied on never-controlled work stations, in a month, kg.

(20) M_{Ci} =the sum of the mass of solids-containing material, i, applied on intermittently-controllable work stations operating in controlled mode and the mass of solids-containing material, i, applied on always-controlled work stations, in a month, kg.

(21) M_{Cj} =the sum of the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, applied on intermittently-controllable work stations operating in controlled mode and the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, applied on always-controlled work stations in a month, kg.

(22) [Reserved]

(23) M_{fi} =the organic volatile matter mass flow rate at the inlet to the control device, kg/h.

(24) M_{fo} =the organic volatile matter mass flow rate at the outlet of the control device, kg/h.

(25) M_{hu} =the mass of organic HAP used in a month, kg.

(26) M_i =the mass of ink or other material, i, applied in a month, kg.

(27) M_{ij} =the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, added to solids-containing material, i, in a month, kg.

(28) M_j =the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, applied in a month, kg.

(29) M_{Lj} =the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, added to solids-containing materials which were applied at less than 20 weight-percent solids content, on an as-applied basis, in a month, kg.

(30) M_{vr} =the mass of volatile matter recovered in a month, kg.

(31) M_{vu} =the mass of volatile matter, including water, used in a month, kg.

(32) [Reserved]

(33) n=the number of organic compounds in the vent gas.

(34) p=the number of different inks, coatings, varnishes, adhesives, primers, and other materials applied in a month.

(35) q=the number of different solvents, thinners, reducers, diluents, or other non-solids-containing materials applied in a month.

(36) [Reserved]

(37) R=the overall organic HAP control efficiency, percent.

(38) R_e =the overall effective organic HAP control efficiency for publication rotogravure, percent.

(39) R_v =the organic volatile matter collection and recovery efficiency, percent.

(40) S=the mass organic HAP emission rate per mass of material applied, kg/kg.

(41) 0.0416=conversion factor for molar volume, kg-mol/m³ (@ 293 K and 760 mmHg).

[61 FR 27140, May 30, 1996, as amended at 71 FR 29800, May 24, 2006]

§ 63.823 Standards: General.

Table 1 to this subpart provides cross references to the 40 CFR part 63, subpart A, general provisions, indicating the applicability of the general provisions requirements to this subpart KK.

§ 63.824 Standards: Publication rotogravure printing.

(a) Each owner or operator of any publication rotogravure printing affected source that is subject to the requirements of this subpart shall comply with these requirements on and after the compliance dates as specified in §63.826 of this subpart.

(b) Each publication rotogravure affected source shall limit emissions of organic HAP to no more than eight percent of the total volatile matter used each month. The emission limitation may be achieved by overall control of at least 92 percent of organic HAP used, by substitution of non-HAP materials for organic HAP, or by a combination of capture and control technologies and substitution of materials. To demonstrate compliance, each owner or operator shall follow the procedure in paragraph (b)(1) of this section when emissions from the affected source are controlled by a solvent recovery device, the procedure in paragraph (b)(2) of this section when emissions from the affected source are controlled by an oxidizer, and the procedure in paragraph (b)(3) of this section when no control device is used.

(1) Each owner or operator using a solvent recovery device to control emissions shall demonstrate compliance by showing that the HAP emission limitation is achieved by following the procedures in either paragraph (b)(1)(i) or (b)(1)(ii) of this section:

(i) Perform a liquid-liquid material balance for each month as follows:

(A) Measure the mass of each ink, coating, varnish, adhesive, primer, solvent, and other material used by the affected source during the month.

(B) Determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent and other material used by the affected source during the month following the procedure in §63.827(b)(1).

(C) Determine the volatile matter content, including water, of each ink, coating, varnish, adhesive, primer, solvent, and other material used by the affected source during the month following the procedure in §63.827(c)(1).

(D) Install, calibrate, maintain and operate, according to the manufacturer's specifications, a device that indicates the cumulative amount of volatile matter recovered by the solvent recovery device on a monthly basis. The device shall be initially certified by the manufacturer to be accurate to within ±2.0 percent.

(E) Measure the amount of volatile matter recovered for the month.

(F) Calculate the overall effective organic HAP control efficiency (R_e) for the month using Equation 1:

$$R_e = (100) \frac{M_{vu} - M_{hu} + [(M_{vr})(M_{hu} / M_{vu})]}{M_{vu}} \quad Eq 1$$

For the purposes of this calculation, the mass fraction of organic HAP present in the recovered volatile matter is assumed to be equal to the mass fraction of organic HAP present in the volatile matter used.

(G) The affected source is in compliance for the month, if R_e is at least 92 percent each month.

(ii) Use continuous emission monitors, conduct an initial performance test of capture efficiency, and continuously monitor a site specific operating parameter to assure capture efficiency as specified in paragraphs (b)(1)(ii)(A) through (b)(1)(ii)(E) of this section:

(A) Install continuous emission monitors to collect the data necessary to calculate the total organic volatile matter mass flow in the gas stream entering and the total organic volatile matter mass flow in the gas stream exiting the solvent recovery device for each month such that the percent control efficiency (E) of the solvent recovery device can be calculated for the month. This requires continuous emission monitoring of the total organic volatile matter concentration in the gas stream entering the solvent recovery device, the total organic volatile matter concentration in the gas stream exiting the solvent recovery device, and the volumetric gas flow rate through the solvent recovery device. A single continuous volumetric gas flow measurement should be sufficient for a solvent recovery device since the inlet and outlet volumetric gas flow rates for a solvent recovery device are essentially equal. Each month's individual inlet concentration values and corresponding individual gas flow rate values are multiplied and then summed to get the total organic volatile matter mass flow in the gas stream entering the solvent recovery device for the month. Each month's individual outlet concentration values and corresponding individual gas flow rate values are multiplied and then summed to get the total organic volatile matter mass flow in the gas stream exiting the solvent recovery device for the month.

(B) Determine the percent capture efficiency (F) of the capture system according to §63.827(e).

(C) Calculate the overall effective organic HAP control efficiency (R_e) achieved for each month using Equation 2.

$$R_e = (100) \frac{M_{vu} - M_{ku} + [(E/100)(F/100)M_{ku}]}{M_{vu}} \quad Eq\ 2$$

(D) Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameter established in accordance with §63.828(a)(5) whenever a publication rotogravure printing press is operated.

(E) The affected source is in compliance with the requirement for the month if R_e is at least 92 percent, and the capture device is operated at an average value greater than, or less than (as appropriate) the operating parameter value established in accordance with §63.828(a)(5) for each three-hour period.

(2) Each owner or operator using an oxidizer to control emissions shall demonstrate compliance by showing that the HAP emission limitation is achieved by following the procedure in either paragraph (b)(2)(i) or (b)(2)(ii) of this section:

(i) Demonstrate initial compliance through performance tests and continuing compliance through continuous monitoring as follows:

(A) Determine the oxidizer destruction efficiency (E) using the procedure in §63.827(d).

(B) Determine the capture efficiency (F) using the procedure in §63.827(e).

(C) [Reserved]

(D) Calculate the overall effective organic HAP control efficiency (R_e) achieved using Equation 2.

(E) The affected source is in initial compliance if R_e is at least 92 percent. Demonstration of continuing compliance is achieved by continuous monitoring of an appropriate oxidizer operating parameter in accordance with §63.828(a)(4), and by continuous monitoring of an appropriate capture system monitoring parameter in accordance with §63.828(a)(5). The affected source is in continuing compliance if the capture device is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with §63.828(a)(5), and

(1) if an oxidizer other than a catalytic oxidizer is used, the average combustion temperature for all three-hour periods is greater than or equal to the average combustion temperature established under §63.827(d), or

(2) if a catalytic oxidizer is used, the average catalyst bed inlet temperature for all three-hour periods is greater than or equal to the average catalyst bed inlet temperature established in accordance with §63.827(d).

(ii) Use continuous emission monitors, conduct an initial performance test of capture efficiency, and continuously monitor a site specific operating parameter to assure capture efficiency. The percent control efficiency of the oxidizer shall be demonstrated in accordance with the requirements of paragraph (b)(1)(ii) of this section except that separate continuous measurements of the inlet volumetric gas flow rate and the outlet volumetric gas flow rate are required for an oxidizer.

(3) To demonstrate compliance without the use of a control device, each owner or operator shall compare the mass of organic HAP used to the mass of volatile matter used each month, as specified in paragraphs (b)(3)(i) through (b)(3)(iv) of this section:

(i) Measure the mass of each ink, coating, varnish, adhesive, primer, solvent, and other material used in the affected source during the month.

(ii) Determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent, and other material used during the month following the procedure in §63.827(b)(1), and

(iii) Determine the volatile matter content, including water, of each ink, coating, varnish, adhesive, primer, solvent, and other material used during the month following the procedure in §63.827(c)(1).

(iv) The affected source is in compliance for the month if the mass of organic HAP used does not exceed eight percent of the mass of volatile matter used.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29801, May 24, 2006]

§ 63.825 Standards: Product and packaging rotogravure and wide-web flexographic printing.

(a) Each owner or operator of any product and packaging rotogravure or wide-web flexographic printing affected source that is subject to the requirements of this subpart shall comply with these requirements on and after the compliance dates as specified in §63.826 of this subpart.

(b) Each product and packaging rotogravure or wide-web flexographic printing affected source shall limit organic HAP emissions to no more than 5 percent of the organic HAP applied for the month; or to no more than 4 percent of the mass of inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, and other materials applied for the month; or to no more than 20 percent of the mass of solids applied for the month; or to a calculated equivalent allowable mass based on the organic HAP and solids contents of the inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, and other materials applied for the month. The owner or operator of each product and packaging rotogravure or wide-web flexographic printing affected source shall demonstrate compliance with this standard by following one of the procedures in paragraphs (b)(1) through (b)(10) of this section:

(1) Demonstrate that each ink, coating, varnish, adhesive, primer, solvent, diluent, reducer, thinner, and other material applied during the month contains no more than 0.04 weight-fraction organic HAP, on an as-purchased basis, as determined in accordance with §63.827(b)(2).

(2) Demonstrate that each ink, coating, varnish, adhesive, primer, and other solids-containing material applied during the month contains no more than 0.04 weight-fraction organic HAP, on a monthly average as-applied basis as determined in accordance with paragraphs (b)(2)(i)–(ii) of this section. The owner or operator shall calculate the as-applied HAP content of materials which are reduced, thinned, or diluted prior to application, as follows:

(i) Determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent, diluent, reducer, thinner, and other material applied on an as-purchased basis in accordance with §63.827(b)(2).

(ii) Calculate the monthly average as-applied organic HAP content, C_{ahi} of each ink, coating, varnish, adhesive, primer, and other solids-containing material using Equation 3.

$$C_{ahi} = \frac{\left(C_{hi} M_i + \sum_{j=1}^q C_{hj} M_{ij} \right)}{M_i + \sum_{j=1}^q M_{ij}} \quad Eq\ 3$$

(3)(i) Demonstrate that each ink, coating, varnish, adhesive, primer, and other solids-containing material applied, either

(A) Contains no more than 0.04 weight-fraction organic HAP on a monthly average as-applied basis, or

(B) Contains no more than 0.20 kg of organic HAP per kg of solids applied, on a monthly average as-applied basis.

(ii) The owner or operator may demonstrate compliance in accordance with paragraphs (b)(3)(ii) (A)–(C) of this section.

(A) Use the procedures of paragraph (b)(2) of this section to determine which materials meet the requirements of paragraph (b)(3)(i)(A) of this section,

(B) Determine the as-applied solids content following the procedure in §63.827(c)(2) of all materials which do not meet the requirements of paragraph (b)(3)(i)(A) of this section. The owner or operator may calculate the monthly average as-applied solids content of materials which are reduced, thinned, or diluted prior to application, using Equation 4, and

$$C_{asi} = \frac{C_{si} M_i}{M_i + \sum_{j=1}^q M_{ij}} \quad Eq\ 4$$

(C) Calculate the as-applied organic HAP to solids ratio, H_{si} , for all materials which do not meet the requirements of paragraph (b)(3)(i)(A) of this section, using Equation 5.

$$H_{si} = \frac{C_{ahi}}{C_{asi}} \quad Eq\ 5$$

(4) Demonstrate that the monthly average as-applied organic HAP content, H_L , of all materials applied is less than 0.04 kg HAP per kg of material applied, as determined by Equation 6.

$$H_L = \frac{\sum_{i=1}^p M_i C_{hi} + \sum_{j=1}^q M_j C_{hj}}{\sum_{i=1}^p M_i + \sum_{j=1}^q M_j} \quad Eq\ 6$$

(5) Demonstrate that the monthly average as-applied organic HAP content on the basis of solids applied, H_s , is less than 0.20 kg HAP per kg solids applied as determined by Equation 7.

$$H_g = \frac{\sum_{i=1}^p M_i C_{ki} + \sum_{j=1}^q M_j C_{kj}}{\sum_{i=1}^p M_i C_{si}} \quad \text{Eq. 7}$$

(6) Demonstrate that the total monthly organic HAP applied, H_{app} , as determined by Equation 8, is less than the calculated equivalent allowable organic HAP, H_a , as determined by paragraph (e) of this section.

$$H_{app} = \sum_{i=1}^p M_i C_{ki} + \sum_{j=1}^q M_j C_{kj} \quad \text{Eq. 8}$$

Where:

H_{app} = Total monthly organic HAP applied, kg.

(7) Operate a capture system and control device and demonstrate an overall organic HAP control efficiency of at least 95 percent for each month. If the affected source operates more than one capture system or more than one control device, and has only always-controlled work stations, then the owner or operator shall demonstrate compliance in accordance with the provisions of either paragraph (f) or (h) of this section. If the affected source operates one or more never-controlled work stations or one or more intermittently-controllable work stations, then the owner or operator shall demonstrate compliance in accordance with the provisions of paragraph (f) of this section. Otherwise, the owner or operator shall demonstrate compliance in accordance with the procedure in paragraph (c) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (d) of this section when emissions are controlled by an oxidizer.

(8) Operate a capture system and control device and limit the organic HAP emission rate to no more than 0.20 kg organic HAP emitted per kg solids applied as determined on a monthly average as-applied basis. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controllable work stations, then the owner or operator shall demonstrate compliance in accordance with the provisions of paragraph (f) of this section. Otherwise, the owner or operator shall demonstrate compliance following the procedure in paragraph (c) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (d) of this section when emissions are controlled by an oxidizer.

(9) Operate a capture system and control device and limit the organic HAP emission rate to no more than 0.04 kg organic HAP emitted per kg material applied as determined on a monthly average as-applied basis. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controllable work stations, then the owner or operator shall demonstrate compliance in accordance with the provisions of paragraph (f) of this section. Otherwise, the owner or operator shall demonstrate compliance following the procedure in paragraph (c) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (d) of this section when emissions are controlled by an oxidizer.

(10) Operate a capture system and control device and limit the monthly organic HAP emissions to less than the allowable emissions as calculated in accordance with paragraph (e) of this section. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controllable work stations, then the owner or operator shall demonstrate compliance in accordance with the provisions of paragraph (f) of this section. Otherwise, the owner or operator shall demonstrate compliance following the procedure in paragraph (c) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (d) of this section when emissions are controlled by an oxidizer.

(c) To demonstrate compliance with the overall organic HAP control efficiency requirement in §63.825(b)(7) or the organic HAP emissions limitation requirements in §63.825(b)(8)–(10), each owner or operator using a solvent

recovery device to control emissions shall show compliance by following the procedures in either paragraph (c)(1) or (c)(2) of this section:

(1) Perform a liquid-liquid material balance for each and every month as follows:

(i) Measure the mass of each ink, coating, varnish, adhesive, primer, solvent and other material applied on the press or group of presses controlled by a common solvent recovery device during the month.

(ii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in §63.827(b)(2).

(iii) Determine the volatile matter content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in §63.827(c)(2).

(iv) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied or emission of less than the calculated allowable organic HAP, determine the solids content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in §63.827(c)(2).

(v) Install, calibrate, maintain, and operate according to the manufacturer's specifications, a device that indicates the cumulative amount of volatile matter recovered by the solvent recovery device on a monthly basis. The device shall be initially certified by the manufacturer to be accurate to within ±2.0 percent.

(vi) Measure the amount of volatile matter recovered for the month.

(vii) Calculate the volatile matter collection and recovery efficiency, R_v , using Equation 9.

$$R_v = 100 \frac{M_w}{\sum_{i=1}^p M_i C_{vi} + \sum_{j=1}^q M_j} \quad Eq\ 9$$

(viii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, calculate the organic HAP emitted during the month, H , using Equation 10.

$$H = \left[1 - \frac{R_v}{100} \right] \left[\sum_{i=1}^p \left(C_{ki} M_i + \sum_{j=1}^q C_{kj} M_j \right) \right] \quad Eq\ 10$$

(ix) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, calculate the organic HAP emission rate based on solids applied, L , using Equation 11.

$$L = \frac{H}{\sum_{i=1}^p C_{si} M_i} \quad Eq\ 11$$

(x) If demonstrating compliance on the basis of organic HAP emission rate based on materials applied, calculate the organic HAP emission rate based on material applied, S , using Equation 12.

$$S = \frac{H}{\sum_{i=1}^p \left[M_i + \sum_{j=1}^q M_{ij} \right]} \quad Eq\ 12$$

(xi) The affected source is in compliance if

(A) The organic volatile matter collection and recovery efficiency, R_v , is 95 percent or greater, or

(B) The organic HAP emission rate based on solids applied, L , is 0.20 kg organic HAP per kg solids applied or less, or

(C) the organic HAP emission rate based on material applied, S , is 0.04 kg organic HAP per kg material applied or less, or

(D) the organic HAP emitted during the month, H , is less than the calculated allowable organic HAP, H_a , as determined using paragraph (e) of this section.

(2) Use continuous emission monitors, conduct an initial performance test of capture efficiency, and continuously monitor a site specific operating parameter to assure capture efficiency following the procedures in paragraphs (c)(2)(i) through (c)(2)(xi) of this section:

(i) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on materials applied, or emission of less than the calculated allowable organic HAP, measure the mass of each ink, coating, varnish, adhesive, primer, solvent, and other material applied on the press or group of presses controlled by a common control device during the month.

(ii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in §63.827(b)(2).

(iii) Install continuous emission monitors to collect the data necessary to calculate the total organic volatile matter mass flow in the gas stream entering and the total organic volatile mass flow in the gas stream exiting the solvent recovery device for each month such that the percent control efficiency (E) of the solvent recovery device can be calculated for the month. This requires continuous emission monitoring of the total organic volatile matter concentration in the gas stream entering the solvent recovery device, the total organic volatile matter concentration in the gas stream exiting the solvent recovery device, and the volumetric gas flow rate through the solvent recovery device. A single continuous volumetric gas flow measurement should be sufficient for a solvent recovery device since the inlet and outlet volumetric gas flow rates for a solvent recovery device are essentially equal. Each month's individual inlet concentration values and corresponding individual gas flow rate values are multiplied and then summed to get the total organic volatile matter mass flow in the gas stream entering the solvent recovery device for the month. Each month's individual outlet concentration values and corresponding individual gas flow rate values are multiplied and then summed to get the total organic volatile matter mass flow in the gas stream exiting the solvent recovery device for the month.

(iv) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied or emission of less than the calculated allowable organic HAP, determine the solids content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in §63.827(c)(2).

(v) Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameter established in accordance with §63.828(a)(5) whenever a product and packaging rotogravure or wide-web flexographic printing press is operated.

(vi) Determine the capture efficiency (F) in accordance with §63.827(e)–(f).

(vii) Calculate the overall organic HAP control efficiency, (R), achieved for each month using Equation 13.

$$R = \frac{EF}{100} \quad Eq\ 13$$

(viii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, calculate the organic HAP emitted during the month, H, for each month using Equation 14.

$$H = \left[1 - \left(\frac{E}{100} \frac{F}{100} \right) \right] \left[\sum_{i=1}^p \left(C_{ki} M_i + \sum_{j=1}^q C_{kj} M_{ij} \right) \right] \quad Eq\ 14$$

(ix) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, calculate the organic HAP emission rate based on solids applied, L, using Equation 15.

$$L = \frac{H}{\sum_{i=1}^p C_{xi} M_i} \quad Eq\ 15$$

(x) If demonstrating compliance on the basis of organic HAP emission rate based on materials applied, calculate the organic HAP emission rate based on material applied, S, using Equation 16.

$$S = \frac{H}{\sum_{i=1}^p \left[M_i + \sum_{j=1}^q M_{ij} \right]} \quad Eq\ 16$$

(xi) The affected source is in compliance if the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with §63.828(a)(5) for each three hour period, and

(A) The organic volatile matter collection and recovery efficiency, R_v , is 95 percent or greater, or

(B) The organic HAP emission rate based on solids applied, L, is 0.20 kg organic HAP per kg solids applied or less, or

(C) The organic HAP emission rate based on material applied, S, is 0.04 kg organic HAP per kg material applied or less, or

(D) The organic HAP emitted during the month, H, is less than the calculated allowable organic HAP, H_a , as determined using paragraph (e) of this section.

(d) To demonstrate compliance with the overall organic HAP control efficiency requirement in §63.825(b)(7) or the overall organic HAP emission rate limitation requirements in §63.825(b)(8)–(10), each owner or operator using an oxidizer to control emissions shall show compliance by following the procedures in either paragraph (d)(1) or (d)(2) of this section:

(1) demonstrate initial compliance through performance tests of capture efficiency and control device efficiency and continuing compliance through continuous monitoring of capture system and control device operating parameters following the procedures in paragraph (d)(1)(i) through (d)(1)(xi) of this section:

- (i) Determine the oxidizer destruction efficiency (E) using the procedure in §63.827(d).
 - (ii) Determine the capture system capture efficiency (F) in accordance with §63.827(e)–(f).
 - (iii) Calculate the overall organic HAP control efficiency, (R), achieved using Equation 13.
 - (iv) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on materials applied, or emission of less than the calculated allowable organic HAP, measure the mass of each ink, coating, varnish, adhesive, primer, solvent, and other material applied on the press or group of presses controlled by a common control device during the month.
 - (v) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in §63.827(b)(2).
 - (vi) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied or emission of less than the calculated allowable organic HAP, determine the solids content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in §63.827(c)(2).
 - (vii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, calculate the organic HAP emitted during the month, H, for each month using Equation 14.
 - (viii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, calculate the organic HAP emission rate based on solids applied, L, for each month using Equation 15.
 - (ix) If demonstrating compliance on the basis of organic HAP emission rate based on materials applied, calculate the organic HAP emission rate based on material applied, S, using Equation 16.
 - (x) Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameters established in accordance with §63.828(a)(4)–(5) whenever a product and packaging rotogravure or wide-web flexographic press is operating.
 - (xi) The affected source is in compliance, if the oxidizer is operated such that the average operating parameter value is greater than the operating parameter value established in accordance with §63.828(a)(4) for each three-hour period, and the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with §63.828(a)(5) for each three hour period, and
 - (A) The overall organic HAP control efficiency, R, is 95 percent or greater, or
 - (B) The organic HAP emission rate based on solids applied, L, is 0.20 kg organic HAP per kg solids applied or less, or
 - (C) The organic HAP emission rate based on material applied, S, is 0.04 kg organic HAP per kg material applied or less, or
 - (D) The organic HAP emitted during the month, H, is less than the calculated allowable organic HAP, H_a , as determined using paragraph (e) of this section.
- (2) Use continuous emission monitors, conduct an initial performance test of capture efficiency, and continuously monitor a site specific operating parameter to assure capture efficiency. The percent control efficiency of the oxidizer shall be demonstrated in accordance with the requirements of paragraph (c)(2) of this section except that separate continuous volumetric gas flow measurements of the inlet and outlet volumetric gas flow rates are required for an oxidizer.

(e) Owners or operators may calculate the monthly allowable HAP emissions, H_a , for demonstrating compliance in accordance with paragraph (b)(6), (c)(1)(xi)(D), (c)(2)(xi)(D), or (d)(1)(xi)(D) of this section as follows:

(1) Determine the as-purchased mass of each ink, coating, varnish, adhesive, primer, and other solids-containing material applied each month, M_i .

(2) Determine the as-purchased solids content of each ink, coating, varnish, adhesive, primer, and other solids-containing material applied each month, in accordance with §63.827(c)(2), C_{si} .

(3) Determine the as-purchased mass fraction of each ink, coating, varnish, adhesive, primer, and other solids-containing material which was applied at 20 weight-percent or greater solids content, on an as-applied basis, G_i .

(4) Determine the total mass of each solvent, diluent, thinner, or reducer added to materials which were applied at less than 20 weight-percent solids content, on an as-applied basis, each month, M_{Lj} .

(5) Calculate the monthly allowable HAP emissions, H_a , using Equation 17.

$$H_a = 0.20 \left[\sum_{i=1}^p M_i G_i C_{si} \right] + 0.04 \left[\sum_{i=1}^p M_i (1 - G_i) + \sum_{j=1}^q M_{Lj} \right] \quad Eq\ 17$$

(f) Owners or operators of product and packaging rotogravure or wide-web flexographic printing presses shall demonstrate compliance according to the procedures in paragraphs (f)(1) through (f)(7) of this section if the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controllable work stations.

(1) The owner or operator of each solvent recovery system used to control one or more product and packaging rotogravure or wide-web flexographic presses for which the owner or operator chooses to comply by means of a liquid-liquid mass balance shall determine the organic HAP emissions for those presses controlled by that solvent recovery system either

(i) in accordance with paragraphs (c)(1)(i)–(iii) and (c)(1)(v)–(viii) of this section if the presses controlled by that solvent recovery system have only always-controlled work stations, or

(ii) in accordance with paragraphs (c)(1)(ii)–(iii), (c)(1)(v)–(vi), and (g) of this section if the presses controlled by that solvent recovery system have one or more never-controlled or intermittently-controllable work stations.

(2) The owner or operator of each solvent recovery system used to control one or more product and packaging rotogravure or wide-web flexographic presses, for which the owner or operator chooses to comply by means of an initial test of capture efficiency, continuous emission monitoring of the control device, and continuous monitoring of a capture system operating parameter, shall

(i) For each capture system delivering emissions to that solvent recovery system, monitor an operating parameter established in accordance with §63.828(a)(5) to assure capture system efficiency, and

(ii) Determine the organic HAP emissions for those presses served by each capture system delivering emissions to that solvent recovery system either

(A) In accordance with paragraphs (c)(2)(i)–(iii) and (c)(2)(v)–(viii) of this section if the presses served by that capture system have only always-controlled work stations, or

(B) In accordance with paragraphs (c)(2)(ii)–(iii), (c)(2)(v)–(vii), and (g) of this section if the presses served by that capture system have one or more never-controlled or intermittently-controllable work stations.

(3) The owner or operator of each oxidizer used to control emissions from one or more product and packaging rotogravure or wide-web flexographic presses choosing to demonstrate compliance through performance tests of capture efficiency and control device efficiency and continuing compliance through continuous monitoring of capture system and control device operating parameters, shall

(i) Monitor an operating parameter established in accordance with §63.828(a)(4) to assure control device efficiency, and

(ii) For each capture system delivering emissions to that oxidizer, monitor an operating parameter established in accordance with §63.828(a)(5) to assure capture efficiency, and

(iii) Determine the organic HAP emissions for those presses served by each capture system delivering emissions to that oxidizer either

(A) In accordance with paragraphs (d)(1)(i)–(v) and (d)(1)(vii) of this section if the presses served by that capture system have only always-controlled work stations, or

(B) In accordance with paragraphs (d)(1)(i)–(iii), (d)(1)(v), and (g) of this section if the presses served by that capture system have one or more never-controlled or intermittently-controllable work stations.

(4) The owner or operator of each oxidizer used to control emissions from one or more product and packaging rotogravure or wide-web flexographic presses choosing to demonstrate compliance through an initial capture efficiency test, continuous emission monitoring of the control device and continuous monitoring of a capture system operating parameter, shall

(i) For each capture system delivering emissions to that oxidizer, monitor an operating parameter established in accordance with §63.828(a)(5) to assure capture efficiency, and

(ii) Determine the organic HAP emissions for those presses served by each capture system delivering emissions to that oxidizer either

(A) In accordance with paragraphs (c)(2)(i)–(iii) and (c)(2)(v)–(viii) of this section if the presses served by that capture system have only always-controlled work stations, or

(B) In accordance with paragraphs (c)(2)(ii)–(iii), (c)(2)(v)–(vii), and (g) of this section if the presses served by that capture system have one or more never-controlled or intermittently-controllable work stations.

(5) The owner or operator of one or more uncontrolled product and packaging rotogravure or wide-web flexographic printing presses shall determine the organic HAP applied on those presses using Equation 8. The organic HAP emitted from an uncontrolled press is equal to the organic HAP applied on that press.

(6) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied or emission of less than the calculated allowable organic HAP, the owner or operator shall determine the solids content of each ink, coating, varnish, adhesive, primer, solvent and other material applied during the month following the procedure in §63.827(c)(2).

(7) The owner or operator shall determine the organic HAP emissions for the affected source for the month by summing all organic HAP emissions calculated according to paragraphs (f)(1), (f)(2)(ii), (f)(3)(iii), (f)(4)(ii), and (f)(5) of this section. The affected source is in compliance for the month, if all operating parameters required to be monitored under paragraphs (f)(2)–(4) of this section were maintained at the appropriate values, and

(i) The total mass of organic HAP emitted by the affected source was not more than four percent of the total mass of inks, coatings, varnishes, adhesives, primers, solvents, diluents, reducers, thinners and other materials applied by the affected source, or

(ii) The total mass of organic HAP emitted by the affected source was not more than 20 percent of the total mass of solids applied by the affected source, or

(iii) The total mass of organic HAP emitted by the affected source was not more than the equivalent allowable organic HAP emissions for the affected source, H_a , calculated in accordance with paragraph (e) of this section, or

(iv) The total mass of organic HAP emitted by the affected source was not more than five percent of the total mass of organic HAP applied by the affected source. The total mass of organic HAP applied by the affected source in the month shall be determined by the owner or operator using Equation 8.

(g) Owners or operators determining organic HAP emissions from a press or group of presses having one or more never-controlled or intermittently-controllable work stations and using the procedures specified in paragraphs (f)(1)(ii), (f)(2)(ii)(B), (f)(3)(iii)(B), or (f)(4)(ii)(B) of this section shall for that press or group of presses:

(1) Determine the sum of the mass of all inks, coatings, varnishes, adhesives, primers, and other solids-containing materials which are applied on intermittently-controllable work stations in bypass mode and the mass of all inks, coatings, varnishes, adhesives, primers, and other solids-containing materials which are applied on never-controlled work stations during the month, M_{Bj} .

(2) Determine the sum of the mass of all solvents, reducers, thinners, and other diluents which are applied on intermittently-controllable work stations in bypass mode and the mass of all solvents, reducers, thinners, and other diluents which are applied on never-controlled work stations during the month, M_{Bj} .

(3) Determine the sum of the mass of all inks, coatings, varnishes, adhesives, primers, and other solids-containing materials which are applied on intermittently-controllable work stations in controlled mode and the mass of all inks, coatings, varnishes, adhesives, primers, and other solids-containing materials which are applied on always-controlled work stations during the month, M_{Bj} .

(4) Determine the sum of the mass of all solvents, reducers, thinners, and other diluents which are applied on intermittently-controllable work stations in controlled mode and the mass of all solvents, reducers, thinners, and other diluents which are applied on always-controlled work stations during the month, M_{Cj} .

(5) For each press or group of presses for which the owner or operator uses the provisions of paragraph (f)(1)(ii) of this section, the owner or operator shall calculate the organic HAP emitted during the month using Equation 18.

$$H = \left[\sum_{i=1}^p M_{C_i} C_{ki} + \sum_{j=1}^q M_{C_j} C_{kj} \right] \left[1 - \frac{M_w}{\sum_{i=1}^p M_{C_i} C_{vi} + \sum_{j=1}^q M_{C_j}} \right] + \left[\sum_{i=1}^p M_{B_i} C_{ki} + \sum_{j=1}^q M_{B_j} C_{kj} \right] \quad Eq 18$$

(6) For each press or group of presses for which the owner or operator uses the provisions of paragraphs (f)(2)(ii)(B), (f)(3)(iii)(B), or (f)(4)(ii)(B) of this section, the owner or operator shall calculate the organic HAP emitted during the month using Equation (19).

$$H = \left[\sum_{i=1}^p M_{C_i} C_{ki} + \sum_{j=1}^q M_{C_j} C_{kj} \right] \left[1 - \left(\frac{E}{100} \frac{F}{100} \right) \right] + \left[\sum_{i=1}^p M_{B_i} C_{ki} + \sum_{j=1}^q M_{B_j} C_{kj} \right] \quad Eq 19$$

(h) If the affected source operates more than one capture system or more than one control device, and has no never-controlled work stations and no intermittently-controllable work stations, then the affected source is in compliance with the 95 percent overall organic HAP control efficiency requirement for the month if for each press or group of presses controlled by a common control device:

(1) The volatile matter collection and recovery efficiency, R_v , as determined by paragraphs (c)(1)(i), (c)(1)(iii), and (c)(1)(v)–(vii) of this section is equal to or greater than 95 percent, or

(2) The overall organic HAP control efficiency as determined by paragraphs (c)(2)(iii) and (c)(2)(v)–(vii) of this section for each press or group of presses served by that control device and a common capture system is equal to or greater than 95 percent and the average capture system operating parameter value for each capture system serving that control device is greater than or less than (as appropriate) the operating parameter value established for that capture system in accordance with §63.828(a)(5) for each three hour period, or

(3) The overall organic HAP control efficiency as determined by paragraphs (d)(1)(i)–(iii) and (d)(1)(x) of this section for each press or group of presses served by that control device and a common capture system is equal to or greater than 95 percent, the oxidizer is operated such that the average operating parameter value is greater than the operating parameter value established in accordance with §63.828(a)(4) for each three hour period, and the average capture system operating parameter value for each capture system serving that control device is greater than or less than (as appropriate) the operating parameter value established for that capture system in accordance with §63.828(a)(5) for each three hour period.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29801, May 24, 2006]

§ 63.826 Compliance dates.

(a) The compliance date for an owner or operator of an existing affected source subject to the provisions of this subpart is May 30, 1999.

(b) The compliance date for an owner or operator of a new affected source subject to the provisions of this subpart is immediately upon start-up of the affected source, or May 30, 1996, whichever is later.

(c) Affected sources which have undergone reconstruction are subject to the requirements for new affected sources. The costs associated with the purchase and installation of air pollution control equipment are not considered in determining whether the affected source has been reconstructed. Additionally, the costs of retrofitting and replacement of equipment that is installed specifically to comply with this subpart are not considered reconstruction costs.

§ 63.827 Performance test methods.

(a) An owner or operator using a control device to comply with the requirements of §§63.824–63.825 is not required to conduct an initial performance test to demonstrate compliance if one or more of the criteria in paragraphs (a)(1) through (a)(3) of this section are met:

(1) A control device that is in operation prior to May 30, 1996, does not need to be tested if

(i) It is equipped with continuous emission monitors for determining total organic volatile matter concentration and the volumetric gas flow rate, and capture efficiency has been determined in accordance with the requirements of this subpart, such that an overall organic HAP control efficiency can be calculated, and

(ii) The continuous emission monitors are used to demonstrate continuous compliance in accordance with §63.824(b)(1)(ii), §63.825(b)(2)(ii), §63.825(c)(2), or §63.825(d)(2), as applicable, and §63.828, or

(2) The owner or operator has met the requirements of either §63.7(e)(2)(iv) or §63.7(h), or

(3) The control device is a solvent recovery system and the owner or operator chooses to comply by means of a monthly liquid-liquid material balance.

(b) Determination of the weight fraction organic HAP of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, diluents, and other materials used by a publication rotogravure affected source shall be conducted according to paragraph (b)(1) of this section. Determination of the weight fraction organic HAP of inks, coatings,

varnishes, adhesives, primers, solvents, thinners, reducers, diluents, and other materials applied by a product and packaging rotogravure or wide-web flexographic printing affected source shall be conducted according to paragraph (b)(2) of this section. If the weight fraction organic HAP values are not determined using the procedures in paragraphs (b)(1) or (b)(2) of this section, the owner or operator must submit an alternative test method for determining their values for approval by the Administrator in accordance with §63.7(f). The recovery efficiency of the test method must be determined for all of the target organic HAP and a correction factor, if necessary, must be determined and applied.

(1) Each owner or operator of a publication rotogravure affected source shall determine the weight fraction organic HAP of each ink, coating, varnish, adhesive, primer, solvent, and other material used by following one of the procedures in paragraphs (b)(1)(i) through (iii) of this section:

(i) The owner or operator may test the material in accordance with Method 311 of appendix A of this part. The Method 311 determination may be performed by the owner or operator of the affected source, the supplier of the material, or an independent third party. The organic HAP content determined by Method 311 must be calculated according to the criteria and procedures in paragraphs (b)(1)(i)(A) through (C) of this section.

(A) Include each organic HAP determined to be present at greater than or equal to 0.1 weight percent for Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and greater than or equal to 1.0 weight percent for other organic HAP compounds.

(B) Express the weight fraction of each organic HAP included according to paragraph (b)(1)(i)(A) of this section as a value truncated to four places after the decimal point (for example, 0.3791).

(C) Calculate the total weight fraction of organic HAP in the tested material by summing the weight fraction of each organic HAP included according to paragraph (b)(1)(i)(A) of this section and truncating the result to three places after the decimal point (for example, 0.763).

(ii) The owner or operator may determine the weight fraction volatile matter of the material in accordance with §63.827(c)(1) and use this value for the weight fraction organic HAP for all compliance purposes.

(iii) The owner or operator may use formulation data to determine the weight fraction organic HAP of a material. Formulation data may be provided to the owner or operator on a CPDS by the supplier of the material or an independent third party. Formulation data may be used provided that the weight fraction organic HAP is calculated according to the criteria and procedures in paragraphs (b)(1)(iii)(A) through (D) of this section. In the event of an inconsistency between the formulation data and the result of Method 311 of appendix A of this part, where the test result is higher, the Method 311 data will take precedence unless, after consultation, the owner or operator can demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(A) For each raw material used in making the material, include each organic HAP present in that raw material at greater than or equal to 0.1 weight percent for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and greater than or equal to 1.0 weight percent for other organic HAP compounds. The weight fraction of each such organic HAP in each raw material must be determined by Method 311 of appendix A of this part, by an alternate method approved by the Administrator, or from a CPDS provided by the raw material supplier or an independent third party. The weight fraction of each such organic HAP in each raw material must be expressed as a value truncated to four places after the decimal point (for example, 0.1291).

(B) For each raw material used in making the material, the weight fraction contribution of each organic HAP, which is included according to paragraph (b)(1)(iii)(A) of this section, in that raw material to the weight fraction organic HAP of the material is calculated by multiplying the weight fraction, truncated to four places after the decimal point (for example, 0.1291), of that organic HAP in that raw material times the weight fraction of that raw material, truncated to four places after the decimal point (for example, 0.2246), in the material. The product of each such multiplication is to be truncated to four places after the decimal point (for example, 0.1291 times 0.2246 yields 0.02899586 which truncates to 0.0289).

(C) For each organic HAP which is included according to paragraph (b)(1)(iii)(A) of this section, the total weight fraction of that organic HAP in the material is calculated by adding the weight fraction contribution of that organic HAP

from each raw material in which that organic HAP is included according to paragraph (b)(1)(iii)(A) of this section. The sum of each such addition must be expressed to four places after the decimal point.

(D) The total weight fraction of organic HAP in the material is the sum of the counted individual organic HAP weight fractions. This sum must be truncated to three places after the decimal point (for example, 0.763).

(2) Each owner or operator of a product and packaging rotogravure or wide-web flexographic printing affected source shall determine the organic HAP weight fraction of each ink, coating, varnish, adhesive, primer, solvent, and other material applied by following one of the procedures in paragraphs (b)(2)(i) through (iii) of this section:

(i) The owner or operator may test the material in accordance with Method 311 of appendix A of this part. The Method 311 determination may be performed by the owner or operator of the affected source, the supplier of the material, or an independent third party. The organic HAP content determined by Method 311 must be calculated according to the criteria and procedures in paragraphs (b)(2)(i)(A) through (C) of this section.

(A) Include each organic HAP determined to be present at greater than or equal to 0.1 weight percent for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and greater than or equal to 1.0 weight percent for other organic HAP compounds.

(B) Express the weight fraction of each organic HAP included according to paragraph (b)(2)(i)(A) of this section as a value truncated to four places after the decimal point (for example, 0.3791).

(C) Calculate the total weight fraction of organic HAP in the tested material by summing the weight fraction of each organic HAP included according to paragraph (b)(2)(i)(A) of this section and truncating the result to three places after the decimal point (for example, 0.763).

(ii) The owner or operator may determine the weight fraction volatile matter of the material in accordance with §63.827(c)(2) and use this value for the weight fraction organic HAP for all compliance purposes.

(iii) The owner or operator may use formulation data to determine the weight fraction organic HAP of a material. Formulation data may be provided to the owner or operator on a CPDS by the supplier of the material or an independent third party. Formulation data may be used provided that the weight fraction organic HAP is calculated according to the criteria and procedures in paragraphs (b)(2)(iii)(A) through (D) of this section. In the event of an inconsistency between the formulation data and the result of Method 311 of appendix A of this part, where the test result is higher, the Method 311 data will take precedence unless, after consultation, the owner or operator can demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(A) For each raw material used in making the material, include each organic HAP present in that raw material at greater than or equal to 0.1 weight percent for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and greater than or equal to 1.0 weight percent for other organic HAP compounds. The weight fraction of each such organic HAP in each raw material must be determined by Method 311 of appendix A of this part, by an alternate method approved by the Administrator, or from a CPDS provided by the raw material supplier or an independent third party. The weight fraction of each such organic HAP in each raw material must be expressed as a value truncated to four places after the decimal point (for example, 0.1291).

(B) For each raw material used in making the material, the weight fraction contribution of each organic HAP, which is included according to paragraph (b)(2)(iii)(A) of this section, in that raw material to the weight fraction organic HAP of the material is calculated by multiplying the weight fraction, truncated to four places after the decimal point (for example, 0.1291), of that organic HAP in that raw material times the weight fraction of that raw material, truncated to four places after the decimal point (for example, 0.2246), in the material. The product of each such multiplication is truncated to four places after the decimal point (for example, 0.1291 times 0.2246 yields 0.02899586 which truncates to 0.0289).

(C) For each organic HAP which is included according to paragraph (b)(2)(iii)(A) of this section, the total weight fraction of that organic HAP in the material is calculated by adding the weight fraction contribution of that organic HAP from each raw material in which that organic HAP is included according to paragraph (b)(2)(iii)(A) of this section. The sum of each such addition must be expressed to four places after the decimal point.

(D) The total weight fraction of organic HAP in the material is the sum of the counted individual organic HAP weight fractions. This sum is to be truncated to three places after the decimal point (for example, 0.763).

(c) Determination of the weight fraction volatile matter content of inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, diluents, and other materials used by a publication rotogravure affected source shall be conducted according to paragraph (c)(1) of this section. Determination of the weight fraction volatile matter content and weight fraction solids content of inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, diluents, and other materials applied by a product and packaging rotogravure or wide-web flexographic printing affected source shall be conducted according to paragraph (c)(2) of this section.

(1) Each owner or operator of a publication rotogravure affected source shall determine the volatile matter weight fraction of each ink, coating, varnish, adhesive, primer, solvent, reducer, thinner, diluent, and other material used by following the procedures in paragraph (b)(1)(i) of this section, or by using formulation data as described in paragraph (c)(3) of this section.

(i) Determine the volatile matter weight fraction of the material using Method 24A of 40 CFR part 60, appendix A. The Method 24A determination may be performed by the owner or operator of the affected source, the supplier of the material, or an independent third party. The Method 24A result shall be truncated to three places after the decimal point (for example, 0.763). If these values cannot be determined using Method 24A, the owner or operator shall submit an alternative technique for determining their values for approval by the Administrator.

(2) Each owner or operator of a product and packaging rotogravure or wide-web flexographic printing affected source shall determine the volatile matter weight fraction and solids weight fraction of each ink, coating, varnish, adhesive, primer, solvent, reducer, thinner, diluent, and other material applied by following the procedures in paragraphs (b)(2)(i) and (ii) of this section, or by using formulation data as described in paragraph (c)(3) of this section.

(i) Determine the volatile matter weight fraction of the material using Method 24 of 40 CFR part 60, appendix A. The Method 24 determination may be performed by the owner or operator of the affected source, the supplier of the material, or an independent third party. The Method 24 result shall be truncated to three places after the decimal point (for example, 0.763). If these values cannot be determined using Method 24, the owner or operator shall submit an alternative technique for determining their values for approval by the Administrator.

(ii) Calculate the solids weight fraction Method 24 result by subtracting the volatile matter weight fraction Method 24 result from 1.000. This calculation may be performed by the owner or operator, the supplier of the material, or an independent third party.

(3) The owner or operator may use formulation data to determine the volatile matter weight fraction or solids weight fraction of a material. Formulation data may be provided to the owner or operator on a CPDS by the supplier of the material or an independent third party. The volatile matter weight fraction and solids weight fraction shall be truncated to three places after the decimal point (for example, 0.763). In the event of any inconsistency between the formulation data and the result of Method 24 or Method 24A of 40 CFR part 60, appendix A, where the test result for volatile matter weight fraction is higher or the test result for solids weight fraction is lower, the applicable test method data will take precedence unless, after consultation, the owner or operator can demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(d) A performance test of a control device to determine destruction efficiency for the purpose of meeting the requirements of §§63.824–63.825 shall be conducted by the owner or operator in accordance with the following:

(1) An initial performance test to establish the destruction efficiency of an oxidizer and the associated combustion zone temperature for a thermal oxidizer and the associated catalyst bed inlet temperature for a catalytic oxidizer shall be conducted and the data reduced in accordance with the following reference methods and procedures:

(i) Method 1 or 1A of 40 CFR part 60, appendix A is used for sample and velocity traverses to determine sampling locations.

(ii) Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A is used to determine gas volumetric flow rate.

(iii) Method 3 of 40 CFR part 60, appendix A is used for gas analysis to determine dry molecular weight.

(iv) Method 4 of 40 CFR part 60, appendix A is used to determine stack gas moisture.

(v) Methods 2, 2A, 3, and 4 of 40 CFR part 60, appendix A shall be performed, as applicable, at least twice during each test period.

(vi) Method 25 of 40 CFR part 60, appendix A, shall be used to determine organic volatile matter concentration, except as provided in paragraphs (d)(1)(vi)(A) through (D) of this section. The owner or operator shall submit notice of the intended test method to the Administrator for approval along with notice of the performance test required under §63.7(c). The same method must be used for both the inlet and outlet measurements. The owner or operator may use Method 25A of 40 CFR part 60, appendix A, if (A) An exhaust gas organic volatile matter concentration of 50 parts per million by volume (ppmv) or less as carbon is required to comply with the standards of §§63.824–63.825, or

(B) The organic volatile matter concentration at the inlet to the control system and the required level of control are such to result in exhaust gas organic volatile matter concentrations of 50 ppmv or less as carbon, or

(C) Because of the high efficiency of the control device, the anticipated organic volatile matter concentration at the control device exhaust is 50 ppmv or less as carbon, regardless of inlet concentration, or

(D) The control device is not an oxidizer.

(vii) Each performance test shall consist of three separate runs; each run conducted for at least one hour under the conditions that exist when the affected source is operating under normal operating conditions. For the purpose of determining organic volatile matter concentrations and mass flow rates, the average of results of all runs shall apply.

(viii) Organic volatile matter mass flow rates shall be determined using Equation 20:

$$M_f = Q_{sd} C_c [12.0] [0.0416] [10^{-4}] \quad \text{Eq. 20}$$

Where:

M_f = Total organic volatile matter mass flow rate, kg/hour (h).

Q_{sd} = Volumetric flow rate of gases entering or exiting the control device, as determined according to §63.827(d)(1)(ii), dry standard cubic meters (dscm)/h.

C_c = Concentration of organic compounds as carbon, ppmv.

12.0 = Molecular weight of carbon.

0.0416 = Conversion factor for molar volume, kg-moles per cubic meter (mol/m³) (@ 293 Kelvin (K) and 760 millimeters of mercury (mmHg)).

(ix) Emission control device efficiency shall be determined using Equation 21:

$$E = \frac{M_{i,j} - M_{e,j}}{M_{i,j}} \quad \text{Eq. 21}$$

(2) The owner or operator shall record such process information as may be necessary to determine the conditions of the performance test. Operations during periods of start-up, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.

(3) For the purpose of determining the value of the oxidizer operating parameter that will demonstrate continuing compliance, the time-weighted average of the values recorded during the performance test shall be computed. For an oxidizer other than catalytic oxidizer, the owner or operator shall establish as the operating parameter the minimum combustion temperature. For a catalytic oxidizer, the owner or operator shall establish as the operating parameter the minimum gas temperature upstream of the catalyst bed. These minimum temperatures are the operating parameter values that demonstrate continuing compliance with the requirements of §§63.824–63.825.

(e) A performance test to determine the capture efficiency of each capture system venting organic emissions to a control device for the purpose of meeting the requirements of §63.824(b)(1)(ii), §63.824(b)(2), §63.825(c)(2), §63.825(d)(1)–(2), §63.825(f)(2)–(4), or §63.825(h)(2)–(3) shall be conducted by the owner or operator in accordance with the following:

(1) You may assume your capture efficiency equals 100 percent if your capture system is a permanent total enclosure (PTE). You must confirm that your capture system is a PTE by demonstrating that it meets the requirements of section 6 of Method 204 of 40 CFR part 51, appendix M, and that all exhaust gases from the enclosure are delivered to a control device.

(2) You may determine capture efficiency according to the protocols for testing with temporary total enclosures that are specified in Methods 204 and 204A through F of 40 CFR part 51, appendix M. You may exclude never controlled work stations from such capture efficiency determinations.

(f) As an alternative to the procedures specified in §63.827(e) an owner or operator required to conduct a capture efficiency test may use any capture efficiency protocol and test methods that satisfy the criteria of either the Data Quality Objective (DQO) or the Lower Confidence Limit (LCL) approach as described in Appendix A of this subpart. The owner or operator may exclude never-controlled work stations from such capture efficiency determinations.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29802, May 24, 2006]

§ 63.828 Monitoring requirements.

(a) Following the date on which the initial performance test of a control device is completed, to demonstrate continuing compliance with the standard, the owner or operator shall monitor and inspect each control device required to comply with §§63.824–63.825 to ensure proper operation and maintenance by implementing the applicable requirements in paragraph (a)(1) through (a)(5) of this section.

(1) Owners or operators of product and packaging rotogravure or wide-web flexographic presses with intermittently-controllable work stations shall follow one of the procedures in paragraphs (a)(1)(i) through (a)(1)(iv) of this section for each dryer associated with such a work station:

(i) Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow control position indicator that provides a record indicating whether the exhaust stream from the dryer was directed to the control device or was diverted from the control device. The time and flow control position must be recorded at least once per hour, as well as every time the flow direction is changed. The flow control position indicator shall be installed at the entrance to any bypass line that could divert the exhaust stream away from the control device to the atmosphere.

(ii) Secure any bypass line valve in the closed position with a car-seal or a lock-and-key type configuration; a visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve or damper is maintained in the closed position and the exhaust stream is not diverted through the bypass line.

(iii) Ensure that any bypass line valve or damper is in the closed position through continuous monitoring of valve position. The monitoring system shall be inspected at least once every month to ensure that it is functioning properly.

(iv) Use an automatic shutdown system in which the press is stopped when flow is diverted away from the control device to any bypass line. The automatic system shall be inspected at least once every month to ensure that it is functioning properly.

(2) Compliance monitoring shall be subject to the provisions of paragraphs (a)(2)(i) and (a)(2)(ii) of this section, as applicable.

(i) All continuous emission monitors shall comply with performance specifications (PS) 8 or 9 of 40 CFR part 60, appendix B, as appropriate. The requirements of appendix F of 40 CFR part 60 shall also be followed. In conducting the quarterly audits required by appendix F, owners or operators must challenge the monitors with compounds representative of the gaseous emission stream being controlled.

(ii) All temperature monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturers specifications. The calibration of the chart recorder, data logger, or temperature indicator shall be verified every three months; or the chart recorder, data logger, or temperature indicator shall be replaced. The replacement shall be done either if the owner or operator chooses not to perform the calibration, or if the equipment cannot be calibrated properly.

(3) An owner or operator complying with §§63.824–63.825 through continuous emission monitoring of a control device shall install, calibrate, operate, and maintain continuous emission monitors to measure total organic volatile matter concentration and volumetric gas flow rate in accordance with §63.824(b)(1)(ii), §63.825(b)(2)(ii), §63.825(c)(2), or §63.825(d)(2), as applicable.

(4) An owner or operator complying with the requirements of §§63.824–63.825 through the use of an oxidizer and demonstrating continuous compliance through monitoring of an oxidizer operating parameter shall:

(i) For an oxidizer other than a catalytic oxidizer, install, calibrate, operate, and maintain a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of ± 1 percent of the temperature being monitored in $^{\circ}\text{C}$ or $\pm 1^{\circ}\text{C}$, whichever is greater. The thermocouple or temperature sensor shall be installed in the combustion chamber at a location in the combustion zone.

(ii) For a catalytic oxidizer, install, calibrate, operate, and maintain a temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature with an accuracy of ± 1 percent of the temperature being monitored in $^{\circ}\text{C}$ or $\pm 1^{\circ}\text{C}$, whichever is greater. The thermocouple or temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed inlet.

(5) An owner or operator complying with the requirements of §§63.824–63.825 through the use of a control device and demonstrating continuous compliance by monitoring an operating parameter to ensure that the capture efficiency measured during the initial compliance test is maintained, shall:

(i) Submit to the Administrator with the compliance status report required by §63.9(h) of the General Provisions, a plan that

(A) Identifies the operating parameter to be monitored to ensure that the capture efficiency measured during the initial compliance test is maintained,

(B) Discusses why this parameter is appropriate for demonstrating ongoing compliance, and

(C) Identifies the specific monitoring procedures;

(ii) Set the operating parameter value, or range of values, that demonstrate compliance with §§63.824–63.825, and

(iii) Conduct monitoring in accordance with the plan submitted to the Administrator unless comments received from the Administrator require an alternate monitoring scheme.

(b) Any excursion from the required operating parameters which are monitored in accordance with paragraphs (a)(4) and (a)(5) of this section, unless otherwise excused, shall be considered a violation of the emission standard.

§ 63.829 Recordkeeping requirements.

(a) The recordkeeping provisions of 40 CFR part 63 subpart A of this part that apply and those that do not apply to owners and operators of affected sources subject to this subpart are listed in Table 1 of this subpart.

(b) Each owner or operator of an affected source subject to this subpart shall maintain the records specified in paragraphs (b)(1) through (b)(3) of this section on a monthly basis in accordance with the requirements of §63.10(b)(1) of this part:

(1) Records specified in §63.10(b)(2) of this part, of all measurements needed to demonstrate compliance with this standard, such as continuous emission monitor data, control device and capture system operating parameter data, material usage, HAP usage, volatile matter usage, and solids usage that support data that the source is required to report.

(2) Records specified in §63.10(b)(3) of this part for each applicability determination performed by the owner or operator in accordance with the requirements of §63.820(a) of this subpart, and

(3) Records specified in §63.10(c) of this part for each continuous monitoring system operated by the owner or operator in accordance with the requirements of §63.828(a) of this subpart.

(c) Each owner or operator of an affected source subject to this subpart shall maintain records of all liquid-liquid material balances performed in accordance with the requirements of §§63.824–63.825 of this subpart. The records shall be maintained in accordance with the requirements of §63.10(b) of this part.

(d) The owner or operator of each facility which commits to the criteria of §63.820(a)(2) shall maintain records of all required measurements and calculations needed to demonstrate compliance with these criteria, including the mass of all HAP containing materials used and the mass fraction of HAP present in each HAP containing material used, on a monthly basis.

(e) The owner or operator of each facility which meets the limits and criteria of §63.821(b)(1) shall maintain records as required in paragraph (e)(1) of this section. The owner or operator of each facility which meets the limits and criteria of §63.821(b)(2) shall maintain records as required in paragraph (e)(2) of this section. Owners or operators shall maintain these records for five years, and upon request, submit them to the Administrator.

(1) For each facility which meets the criteria of §63.821(b)(1), the owner or operator shall maintain records of the total mass of each material applied on product and packaging rotogravure or wide-web flexographic printing presses during each month.

(2) For each facility which meets the criteria of §63.821(b)(2), the owner or operator shall maintain records of the total mass and organic HAP content of each material applied on product and packaging rotogravure or wide-web flexographic printing presses during each month.

(f) The owner or operator choosing to exclude from an affected source, a product and packaging rotogravure or wide-web flexographic press which meets the limits and criteria of §63.821(a)(2)(ii)(A) shall maintain the records specified in paragraphs (f)(1) and (f)(2) of this section for five years and submit them to the Administrator upon request:

(1) The total mass of each material applied each month on the press, including all inboard and outboard stations, and

(2) The total mass of each material applied each month on the press by product and packaging rotogravure or wide-web flexographic printing operations.

§ 63.830 Reporting requirements.

(a) The reporting provisions of 40 CFR part 63 subpart A of this part that apply and those that do not apply to owners and operators of affected sources subject to this subpart are listed in Table 1 of this subpart.

(b) Each owner or operator of an affected source subject to this subpart shall submit the reports specified in paragraphs (b)(1) through (b)(6) of this section to the Administrator:

(1) An initial notification required in §63.9(b).

(i) Initial notifications for existing sources shall be submitted no later than one year before the compliance date specified in §63.826(a).

(ii) Initial notifications for new and reconstructed sources shall be submitted as required by §63.9(b).

(iii) For the purpose of this subpart, a Title V or part 70 permit application may be used in lieu of the initial notification required under §63.9(b), provided the same information is contained in the permit application as required by §63.9(b), and the State to which the permit application has been submitted has an approved operating permit program under part 70 of this chapter and has received delegation of authority from the EPA.

(iv) Permit applications shall be submitted by the same due dates as those specified for the initial notifications.

(2) A Notification of Performance Tests specified in §§63.7 and 63.9(e) of this part. This notification, and the site-specific test plan required under §63.7(c)(2) shall identify the operating parameter to be monitored to ensure that the capture efficiency measured during the performance test is maintained. The operating parameter identified in the site-specific test plan shall be considered to be approved unless explicitly disapproved, or unless comments received from the Administrator require monitoring of an alternate parameter.

(3) A Notification of Compliance Status specified in §63.9(h) of this part.

(4) Performance test reports specified in §63.10(d)(2) of this part.

(5) Start-up, shutdown, and malfunction reports specified in §63.10(d)(5) of this part, except that the provisions in subpart A pertaining to start-ups, shutdowns, and malfunctions do not apply unless a control device is used to comply with this subpart.

(i) If actions taken by an owner or operator during a start-up, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are not completely consistent with the procedures specified in the source's start-up, shutdown, and malfunction plan specified in §63.6(e)(3) of this part, the owner or operator shall state such information in the report. The start-up, shutdown, or malfunction report shall consist of a letter containing the name, title, and signature of the responsible official who is certifying its accuracy, that shall be submitted to the Administrator.

(ii) Separate start-up, shutdown, or malfunction reports are not required if the information is included in the report specified in paragraph (b)(6) of this section.

(6) A summary report specified in §63.10(e)(3) of this part shall be submitted on a semi-annual basis (i.e., once every 6-month period). These summary reports are required even if the affected source does not have any control devices or does not take the performance of any control devices into account in demonstrating compliance with the emission limitations in §63.824 or §63.825. In addition to a report of operating parameter exceedances as required by §63.10(e)(3)(i), the summary report shall include, as applicable:

(i) Exceedances of the standards in §§63.824–63.825.

(ii) Exceedances of either of the criteria of §63.820(a)(2).

(iii) Exceedances of the criterion of §63.821(b)(1) and the criterion of §63.821(b)(2) in the same month.

(iv) Exceedances of the criterion of §63.821(a)(2)(ii)(A).

[61 FR 27140, May 30, 1996, as amended at 71 FR 29804, May 24, 2006]

§ 63.831 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if this subpart is delegated to a State, local, or Tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the requirements in §§63.820 through 63.821 and 63.823 through 63.826.

(2) Approval of alternatives to the test method for organic HAP content determination in §63.827(b) and alternatives to the test method for volatile matter in §63.827(c), and major alternatives to other test methods under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart.

(3) Approval of major alternatives to monitoring under §63.8(f), as defined in §63.90, and as required in this subpart.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.

[68 FR 37354, June 23, 2003]

§§ 63.832-63.839 [Reserved]

Table 1 to Subpart KK of Part 63—Applicability of General Provisions to Subpart KK

General provisions reference	Applicable to subpart KK	Comment
§63.1(a)(1)–(a)(4)	Yes.	
§63.1(a)(5)	No	Section reserved.
§63.1(a)(6)–(a)(8)	No.	
§63.1(a)(9)	No	Section reserved.
§63.1(a)(10)–(a)(14)	Yes.	
§63.1(b)(1)	No	Subpart KK specifies applicability.
§63.1(b)(2)–(b)(3)	Yes.	

§63.1(c)(1)	Yes.	
§63.1(c)(2)	No	Area sources are not subject to subpart KK.
§63.1(c)(3)	No	Section reserved.
§63.1(c)(4)	Yes.	
§63.1(c)(5)	No.	
§63.1(d)	No	Section reserved.
§63.1(e)	Yes.	
§63.2	Yes	Additional definitions in subpart KK.
§63.3(a)–(c)	Yes.	
§63.4(a)(1)–(a)(3)	Yes.	
§63.4(a)(4)	No	Section reserved.
§63.4(a)(5)	Yes.	
§63.4(b)–(c)	Yes.	
§63.5(a)(1)–(a)(2)	Yes.	
§63.5(b)(1)	Yes.	
§63.5(b)(2)	No	Section reserved.
§63.5(b)(3)–(b)(6)	Yes.	
§63.5(c)	No	Section reserved.
§63.5(d)	Yes.	
§63.5(e)	Yes.	
§63.5(f)	Yes.	
§63.6(a)	Yes.	
§63.6(b)(1)–(b)(5)	Yes.	
§63.6(b)(6)	No	Section reserved.
§63.6(b)(7)	Yes.	
§63.6(c)(1)–(c)(2)	Yes.	
§63.6(c)(3)–(c)(4)	No	Sections reserved.
§63.6(c)(5)	Yes.	
§63.6(d)	No	Section reserved.

§63.6(e)	Yes	Provisions pertaining to start-ups, shutdowns, malfunctions, and CMS do not apply unless an add-on control system is used.
§63.6(f)	Yes.	
§63.6(g)	Yes.	
§63.6(h)	No	Subpart KK does not require COMS.
§63.6(i)(1)–(i)(14)	Yes.	
§63.6(i)(15)	No	Section reserved.
§63.6(i)(16)	Yes.	
§63.6(j)	Yes.	
§63.7	Yes.	
§63.8(a)(1)–(a)(2)	Yes.	
§63.8(a)(3)	No	Section reserved.
§63.8(a)(4)	No	Subpart KK specifies the use of solvent recovery devices or oxidizers.
§63.8(b)	Yes.	
§63.8(c)(1)–(3)	Yes.	
§63.8(c)(4)	No	Subpart KK specifies CMS sampling requirements.
§63.8(c)(5)	No	Subpart KK does not require COMS.
§63.8(c)(6)–(c)(8)	Yes	Provisions for COMS are not applicable.
§63.8(d)–(f)	Yes.	
§63.8(g)	No	Subpart KK specifies CMS data reduction requirements.
§63.9(a)	Yes.	
§63.9(b)(1)	Yes.	
§63.9(b)(2)	Yes	Initial notification submission date extended.
§63.9(b)(3)–(b)(5)	Yes.	
§63.9(c)–(e)	Yes.	
§63.9(f)	No	Subpart KK does not require opacity and visible emissions observations.
§63.9(g)	Yes	Provisions for COMS are not applicable.
§63.9(h)(1)–(h)(3)	Yes.	

§63.9(h)(4)	No	Section reserved.
§63.9(h)(5)–(h)(6)	Yes.	
§63.9(i)	Yes.	
§63.9(j)	Yes.	
§63.10(a)	Yes.	
§63.10(b)(1)–(b)(3)	Yes.	
§63.10(c)(1)	Yes.	
§63.10(c)(2)–(c)(4)	No	Sections reserved.
§63.10(c)(5)–(c)(8)	Yes.	
§63.10(c)(9)	No	Section reserved.
§63.10(c)(10)–(c)(15)	Yes.	
§63.10(d)(1)–(d)(2)	Yes.	
§63.10(d)(3)	No	Subpart KK does not require opacity and visible emissions observations.
§63.10(d)(4)–(d)(5)	Yes.	
§63.10(e)	Yes	Provisions for COMS are not applicable.
§63.10(f)	Yes.	
§63.11	No	Subpart KK specifies the use of solvent recovery devices or oxidizers.
§63.12	Yes.	
§63.13	Yes.	
§63.14	Yes.	
§63.15	Yes.	

Appendix A to Subpart KK of Part 63—Data Quality Objective and Lower Confidence Limit Approaches for Alternative Capture Efficiency Protocols and Test Methods

1. Introduction

1.1 Alternative capture efficiency (CE) protocols and test methods that satisfy the criteria of either the data quality objective (DQO) approach or the lower confidence limit (LCL) approach are acceptable under §63.827(f). The general criteria for alternative CE protocols and test methods to qualify under either the DQO or LCL approach are described in section 2. The DQO approach and criteria specific to the DQO approach are described in section 3. The LCL approach and criteria specific to the LCL approach are described in section 4. The recommended reporting for alternative CE protocols and test methods are presented in section 5. The recommended recordkeeping for alternative CE protocols and test methods are presented in section 6.

1.2 Although the Procedures L, G.1, G.2, F.1, and F.2 in §52.741 of part 52 were developed for TTE and BE testing, the same procedures can also be used in an alternative CE protocol. For example, a traditional liquid/gas mass balance CE protocol could employ Procedure L to measure liquid VOC input and Procedure G.1 to measure captured VOC.

2. General Criteria for DQO and LCL Approaches

2.1 The following general criteria must be met for an alternative capture efficiency protocol and test methods to qualify under the DQO or LCL approach.

2.2 An alternative CE protocol must consist of at least three valid test runs. Each test run must be at least 20 minutes long. No test run can be longer than 24 hours.

2.3 All test runs must be separate and independent. For example, liquid VOC input and output must be determined independently for each run. The final liquid VOC sample from one run cannot be the initial sample for another run. In addition, liquid input for an entire day cannot be apportioned among test runs based on production.

2.4 Composite liquid samples cannot be used to obtain an "average composition" for a test run. For example, separate initial and final coating samples must be taken and analyzed for each run; initial and final samples cannot be combined prior to analysis to derive an "average composition" for the test run.

2.5 All individual test runs that result in a CE of greater than 105 percent are invalid and must be discarded.

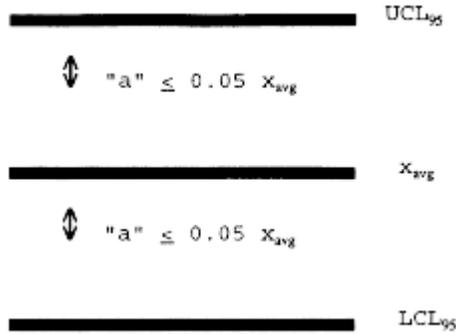
2.6 If the source can demonstrate to the regulatory agency that a test run should not be considered due to an identified testing or analysis error such as spillage of part of the sample during shipping or an upset or improper operating conditions that is not considered part of normal operation then the test result for that individual test run may be discarded. This limited exception allows sources to discard as "outliers" certain individual test runs without replacing them with a valid test run as long as the facility has at least three valid test runs to use when calculating its DQO or LCL. This exception is limited solely to test runs involving the types of errors identified above.

2.7 All valid test runs that are conducted must be included in the average CE determination. The individual test run CE results and average CE results cannot be truncated (i.e., 105 percent cannot be reported as 100+ percent) for purposes of meeting general or specific criteria for either the DQO or the LCL. If the DQO is satisfied and the average CE is greater than 100, then 100 percent CE must be considered the result of the test.

2.8 Alternative test methods for measuring VOC concentration must include a three-point calibration of the gas analysis instrument in the expected concentration range.

3. Data Quality Objective Approach

3.1 The purpose of the DQO is to allow sources to use alternative CE protocols and test methods while ensuring reasonable precision consistent with pertinent requirements of the Clean Air Act. In addition to the general criteria described in section 2, the specific DQO criterion is that the width of the two-sided 95 percent confidence interval of the mean measured value must be less than or equal to 10 percent of the mean measured value (see Figure 1). This ensures that 95 percent of the time, when the DQO is met, the actual CE value will be ± 5 percent of the mean measured value (assuming that the test protocol is unbiased).



[View or download PDF](#)

3.2 The DQO calculation is made as follows using Equations 1 and 2:

$$P = \left[\frac{a}{x_{avg}} \right] 100 \quad \text{Eq. 1}$$

$$a = \frac{t_{0.975} s}{\sqrt{n}} \quad \text{Eq. 2}$$

Where:

a = Distance from the average measured CE value to the endpoints of the 95-percent (two-sided) confidence interval for the measured value.

n = Number of valid test runs.

P = DQO indicator statistic, distance from the average measured CE value to the endpoints of the 95-percent (two-sided) confidence interval, expressed as a percent of the average measured CE value.

s = Sample standard deviation.

$t_{0.975}$ = t-value at the 95-percent (two-sided) confidence level (see Table A-1).

x_{avg} = Average measured CE value (calculated from all valid test runs).

x_i = The CE value calculated from the *i*th test run.

Table A-1—t-Values

Number of valid test runs, n	$t_{0.975}$	$t_{0.90}$
1 or 2	N/A	N/A
3	4.303	1.886
4	3.182	1.638
5	2.776	1.533

6	2.571	1.476
7	2.447	1.440
8	2.365	1.415
9	2.306	1.397
10	2.262	1.383
11	2.228	1.372
12	2.201	1.363
13	2.179	1.356
14	2.160	1.350
15	2.145	1.345
16	2.131	1.341
17	2.120	1.337
18	2.110	1.333
19	2.101	1.330
20	2.093	1.328
21	2.086	1.325

3.3 The sample standard deviation and average CE value are calculated using Equations 3 and 4 as follows:

$$s = \left[\frac{\sum_{i=1}^n (x_i - x_{avg})^2}{n-1} \right]^{0.5} \quad Eq\ 3$$

$$x_{avg} = \frac{\sum_{i=1}^n x_i}{n} \quad Eq\ 4$$

3.4 The DQO criteria are achieved when all of the general criteria in section 2 are achieved and P ≤5 percent (i.e., the specific DQO criterion is achieved). In order to meet this objective, facilities may have to conduct more than three test runs. Examples of calculating P, given a finite number of test runs, are shown below. (For purposes of this example it is assumed that all of the general criteria are met.)

3.5 Facility A conducted a CE test using a traditional liquid/gas mass balance and submitted the following results and the calculations shown in Equations 5 and 6:

Run	CE
1	96.1
2	105.0
3	101.2

Therefore:

$$n=3$$

$$t_{0.975}=4.30$$

$$x_{avg}=100.8$$

$$s=4.51$$

$$\alpha = \frac{(4.30)(4.51)}{\sqrt{3}} = 11.20 \quad Eq 5 \quad P = \frac{11.2}{100.8} 100 = 11.11 \quad Eq 6$$

3.6 Since the facility did not meet the specific DQO criterion, they ran three more test runs.

Run	CE
4	93.2
5	96.2
6	87.6

3.7 The calculations for Runs 1–6 are made as follows using Equations 7 and 8:

$$n=6$$

$$t_{0.975}=2.57$$

$$x_{avg}=96.6$$

$$s=6.11$$

$$\alpha = \frac{(2.57)(6.11)}{\sqrt{6}} = 6.41 \quad Eq 7 \quad P = \frac{6.41}{96.6} 100 = 6.64 \quad Eq 8$$

3.8 The facility still did not meet the specific DQO criterion. They ran three more test runs with the following results:

Run	CE
7	92.9
8	98.3
9	91.0

3.9 The calculations for Runs 1–9 are made as follows using Equations 9 and 10:

$$n=9$$

$$t_{0.975}=2.31$$

$$x_{avg}=95.7$$

$$s=5.33$$

$$\alpha = \frac{(2.31)(5.33)}{\sqrt{9}} = 4.10 \quad Eq\ 9 \quad P = \frac{4.10}{95.7} 100 = 4.28 \quad Eq\ 10$$

3.10 Based on these results, the specific DQO criterion is satisfied. Since all of the general criteria were also satisfied, the average CE from the nine test runs can be used to determine compliance.

4. Lower Confidence Limit Approach

4.1 The purpose of the LCL approach is to provide sources, that may be performing much better than their applicable regulatory requirement, a screening option by which they can demonstrate compliance. The approach uses less precise methods and avoids additional test runs which might otherwise be needed to meet the specific DQO criterion while still being assured of correctly demonstrating compliance. It is designed to reduce “false positive” or so called “Type II errors” which may erroneously indicate compliance where more variable test methods are employed. Because it encourages CE performance greater than that required in exchange for reduced compliance demonstration burden, the sources that successfully use the LCL approach could produce emission reductions beyond allowable emissions. Thus, it could provide additional benefits to the environment as well.

4.2 The LCL approach compares the 80 percent (two-sided) LCL for the mean measured CE value to the applicable CE regulatory requirement. In addition to the general criteria described in section 2, the specific LCL criteria are that either the LCL be greater than or equal to the applicable CE regulatory requirement or that the specific DQO criterion is met. A more detailed description of the LCL approach follows:

4.3 A source conducts an initial series of at least three runs. The owner or operator may choose to conduct additional test runs during the initial test if desired.

4.4 If all of the general criteria are met and the specific DQO criterion is met, then the average CE value is used to determine compliance.

4.5 If the data meet all of the general criteria, but do not meet the specific DQO criterion; and the average CE, using all valid test runs, is above 100 percent then the test sequence cannot be used to calculate the LCL. At this point the facility has the option of (a) conducting more test runs in hopes of meeting the DQO or of bringing the average CE for all test runs below 100 percent so the LCL can be used or (b) discarding all previous test data and retesting.

4.6 The purpose of the requirement in Section 4.5 is to protect against protocols and test methods which may be inherently biased high. This is important because it is impossible to have an actual CE greater than 100 percent and

the LCL approach only looks at the lower end variability of the test results. This is different from the DQO which allows average CE values up to 105 percent because the DQO sets both upper and lower limits on test variability.

4.7 If at any point during testing the results meet the DQO, the average CE can be used for demonstrating compliance with the applicable regulatory requirement. Similarly, if the average CE is below 100 percent then the LCL can be used for demonstrating compliance with the applicable regulatory requirement without regard to the DQO.

4.8 The LCL is calculated at an 80 percent (two-sided) confidence level as follows using Equation 11:

$$LC_1 = x_{avg} - \frac{t_{0.90} s}{\sqrt{n}} \quad \text{Eq. 11}$$

Where:

LC₁= LCL at an 80-percent (two-sided) confidence level.

n = Number of valid test runs.

s = Sample standard deviation.

t_{0.90}= t-value at the 80-percent (two-sided) confidence level (see Table A-1).

x_{avg}= Average measured CE value (calculated from all valid test runs).

4.9 The resulting LC₁ is compared to the applicable CE regulatory requirement. If LC₁ exceeds (i.e., is higher than) the applicable regulatory requirement, then a facility is in initial compliance. However, if the LC₁ is below the CE requirement, then the facility must conduct additional test runs. After this point the test results will be evaluated not only looking at the LCL, but also the DQO of ±5 percent of the mean at a 95 percent confidence level. If the test results with the additional test runs meet the DQO before the LCL exceeds the applicable CE regulatory requirement, then the average CE value will be compared to the applicable CE regulatory requirement for determination of compliance.

4.10 If there is no specific CE requirement in the applicable regulation, then the applicable CE regulatory requirement is determined based on the applicable regulation and an acceptable destruction efficiency test. If the applicable regulation requires daily compliance and the latest CE compliance demonstration was made using the LCL approach, then the calculated LC₁ will be the highest CE value which a facility is allowed to claim until another CE demonstration test is conducted. This last requirement is necessary to assure both sufficiently reliable test results in all circumstances and the potential environmental benefits referenced above.

4.11 An example of calculating the LCL is shown below. Facility B's applicable regulatory requirement is 85 percent CE. Facility B conducted a CE test using a traditional liquid/gas mass balance and submitted the following results and the calculation shown in Equation 12:

Run	CE
1	94.2
2	97.6
3	90.5

Therefore:

$n=3$

$t_{0.90}=1.886$

$X_{avg}=94.1$

$s=3.55$

$$LC_1 = 94.1 - \frac{(1.886)(3.55)}{\sqrt{3}} = 90.23 \quad Eq\ 12$$

4.12 Since the LC_1 of 90.23 percent is above the applicable regulatory requirement of 85 percent then the facility is in compliance. The facility must continue to accept the LC_1 of 90.23 percent as its CE value until a new series of valid tests is conducted. (The data generated by Facility B do not meet the specific DQO criterion.)

5. Recommended Reporting for Alternative CE Protocols

5.1 If a facility chooses to use alternative CE protocols and test methods that satisfy either the DQO or LCL and the additional criteria in section 4., the following information should be submitted with each test report to the appropriate regulatory agency:

1. A copy of all alternative test methods, including any changes to the EPA reference methods, QA/QC procedures and calibration procedures.
2. A table with information on each liquid sample, including the sample identification, where and when the sample was taken, and the VOC content of the sample;
3. The coating usage for each test run (for protocols in which the liquid VOC input is to be determined);
4. The quantity of captured VOC measured for each test run;
5. The CE calculations and results for each test run;
6. The DQO or LCL calculations and results; and
7. The QA/QC results, including information on calibrations (e.g., how often the instruments were calibrated, the calibration results, and information on calibration gases, if applicable).

6. Recommended Recordkeeping for Alternative CE Protocols.

6.1 A record should be kept at the facility of all raw data recorded during the test in a suitable form for submittal to the appropriate regulatory authority upon request.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29804, May 24, 2006]

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

Technical Support Document (TSD) for a New Source Construction and
Federally Enforceable State Operating Permit (FESOP)

Source Description and Location

Source Name:	Printpack, Inc.
Source Location:	5550 W Vernal Pike, Bloomington, IN 47404
County:	Monroe
SIC Code:	2673
Operation Permit No.:	F105-28231-00046
Permit Reviewer:	Christine L. Filutze

On July 15, 2009, the Office of Air Quality (OAQ) received an application from Printpack, Inc., related to the construction and operation of a new flexible packaging rollstock and plastic bag manufacturing company.

Source Definition

Printpack, Inc. is building a new plant under permit number F105-28231-00046. Printpack has an existing plant at 303 North Curry Pike, Bloomington, IN 47404. This existing plant is permitted under Part 70 Permit No. 105-19397-00018, issued on June 13, 2006. The two plants are located on separate properties, approximately 2 miles apart. IDEM, OAQ has examined whether the two plants are part of the same major source. The term "major source" is defined at 326 IAC 2-7-1(22). In order for these two plants to be considered one major source, they must meet all three of the following criteria:

- (1) the plants must be under common ownership or common control;
- (2) the plants must have the same two-digit Standard Industrial Classification (SIC) Code or one must serve as a support facility for the other(s); and,
- (3) the plants must be located on contiguous or adjacent properties.

The two plants are owned by the same company; therefore, the first element of the definition is met.

The SIC Code Manual of 1987 sets out how to determine the proper SIC Code for each type of business. More information about SIC Codes is available at http://www.osha.gov/pls/imis/sic_manual.html on the internet. Both plants have the same two-digit SIC code, 27, for the Major Group of Printing, Publishing, and Allied Industries.

A plant is considered a support facility if at least fifty percent of its output is dedicated to another plant. Neither plant provides any output to the other plant. Neither plant qualifies as a support facility. However, since the plants have the same two-digit SIC Code they do meet the second part of the source definition.

The last criterion of the definition is whether the plants are on contiguous or adjacent properties. The two plants are about 2 miles apart; therefore they are not located on contiguous properties. The term "adjacent" is not defined in Indiana's air permitting rules. IDEM, OAQ has located a May 21, 1988 letter from U.S. EPA Region VIII to the Utah Division of Air Quality regarding the term "adjacent". This letter is in no way binding on IDEM, OAQ, but it is persuasive. Region VIII stated that any evaluation of what is "adjacent" must relate the guiding principal of a common sense notion of "source". The evaluation should look at whether the distance between the plants is sufficiently small that it enables them to operate as a single source.

Some sample questions are:

1. Are materials routinely transferred between the plants?
2. Do managers or other workers frequently shuttle back and forth to be involved actively in the plants?

Materials will not be routinely transferred to the new plant. As the new plant becomes operational, some management personnel will move between the plants during a transitional period. As specific production processes begin at the new plant, corresponding units at the existing plant will be shut down. There will be little to no movement between plants during this transition period outside what is needed to physically move files, office equipment, etc. The distance between the two plants is not small enough, under the facts of this specific case, that it enables them to operate as a single source. IDEM, OAQ determines that the plants are not adjacent. Since the plants do not meet all three parts of the major source definition, IDEM, OAQ finds that the two plants are not part of the same major source. The new plant will be issued a separate permit.

Existing Approvals

There have been no previous approvals issued to this source.

County Attainment Status

The source is located in Monroe 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	Not designated.
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 PM2.5.	

- (a) **Ozone Standards**
 Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Monroe County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM2.5**
 Monroe County has been classified as attainment for PM2.5. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions, and the effective date of these rules was July 15, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM2.5 emissions until 326 IAC 2-2 is revised.
- (c) **Other Criteria Pollutants**
 Monroe County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention

of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Background and Description of New Source Construction

The Office of Air Quality (OAQ) has reviewed an application, submitted by Printpack, Inc., on July 15, 2009, relating to the construction and operation of a new flexible packaging rollstock and plastic bag manufacturing company. The manufacturing operations include flexographic printing, bag-making, and photopolymer plate making.

The following is a list of the new emission units and pollution control devices:

- (a) One (1) regenerative thermal oxidizer, identified as RTO1, approved for construction in 2010, with a maximum heat input rate of 20.30 MMBtu per hour, providing 98% control efficiency, using natural gas as primary fuel, using propane as secondary fuel, and venting to stack S01. Propane will only be used as an emergency backup fuel in the event of an interruption in natural gas service.
- (b) Two (2) solvent storage tanks, identified as TK01 and TK02, approved for construction in 2010, which are variable vapor space tanks located above ground, with a maximum storage capacity of 10,000 gallons, each, a maximum throughput of 1,040,000 gallons per year, each, and venting to stack S02 and S03, respectively.
- (c) Two (2) solvent storage tanks, identified as TK03 and TK04, approved for construction in 2010, which are variable vapor space tanks located above ground, with a maximum storage capacity of 5,000 gallons, each, a maximum throughput of 520,000 gallons per year, each, and venting to stack S02 and S03, respectively.
- (d) One (1) ink and solvent waste storage tank, identified as TK05, approved for construction in 2010, which is a variable vapor space tank located above ground, with a maximum storage capacity of 6,000 gallons, a maximum throughput of 624,000 gallons per year, using the regenerative thermal oxidizer (RTO1) as control.
- (e) One (1) photopolymer plate-making unit, identified as PH01, approved for construction in 2010, with a maximum capacity of 52.5 square foot per hour, housed in a permanent total enclosure, internally recycling spent solvent from the plate washout phase, using the regenerative thermal oxidizer (RTO1) as control.
- (f) Four (4) flexographic printing presses, identified as FP01, FP02, FP03, and FP04, using continuous web feed of material, approved for construction in 2010, each using flexographic ink, with maximum line speeds of 2,000 feet per minute and maximum printing widths of 5.412 feet, using web as the feed type, housed in a permanent total enclosure, using the regenerative thermal oxidizer (RTO1) as control. Under 40 CFR 63, Subpart KK, this unit is considered an affected source/facility. [40 CFR 63, Subpart KK] [326 IAC 20-18]
- (g) Four (4) press drying ovens, identified as FD01, FD02, FD03, and FD04, approved for construction in 2010, each with a maximum heat input rate of 1.66 MMBtu per hour, using natural gas direct fire as primary fuel and propane as secondary fuel, each housed in a permanent total enclosure and operated under negative pressure, and using the regenerative thermal oxidizer (RTO1) as control. Propane will only be used as an emergency backup fuel in the event of an interruption in natural gas service.

- (h) Insignificant and Trivial Activities including the following:
- (1) Activities or emission units, identified as BM01 through BM20, for which the potential uncontrolled emissions for PM10 are equal to or less than one (1) pound per day.
 - (2) Water related activities
 - (A) Production of hot water for on-site personal use not related to any industrial or production process.
 - (B) Water treatment activities used to provide and process water for the plant, excluding any activities associated with wastewater treatment.
 - (C) Pressure washing of equipment.
 - (3) Combustion activities
 - (A) Portable electrical generators that can be moved by hand from one location to another (without the assistance of motorized or non-motorized vehicle, conveyance, or device)
 - (B) Combustion emissions from propulsion of mobile sources
 - (C) Fuel use related to food preparation for on-site consumption
 - (4) Activities related to ventilation, venting equipment and refrigeration
 - (A) Ventilation exhaust, central chiller water systems, refrigeration and air conditioning equipment, not related to any industrial or production process, including natural draft hoods or ventilating systems that do not remove air pollutants.
 - (B) Stack and vents from plumbing traps used to prevent the discharge of sewer gases, handling domestic sewage only, excluding those at wastewater treatment plants or those handling any industrial waste
 - (C) Natural gas pressure regulator vents, excluding venting at oil and gas production Facilities.
 - (D) Air vents from air compressors.
 - (E) Vents for air cooling of electric motors provided the air does not commingle with regulated air pollutants.
 - (5) Activities related to routine fabrication, maintenance and repair of buildings, structures, equipment or vehicles at the source where air emissions from those activities would not be associated with any commercial production process
 - (A) Activities associated with the repair and maintenance of paved and unpaved roads, including paving or sealing, or both, of parking lots and roadways.
 - (B) Painting, including interior and exterior painting of buildings, and solvent use, excluding degreasing operations utilizing halogenated organic solvents.
 - (C) Brazing, soldering, or welding operations and associated equipment.

- (D) Portable blast-cleaning equipment with enclosures, identified as PW01.
 - (E) Batteries and battery charging stations, except at battery manufacturing plants.
 - (F) Lubrication, including hand-held spray can lubrication, dipping metal parts into lubricating oil, and manual or automated addition of cutting oil in machining operations.
 - (G) Non-asbestos insulation installation or removal.
 - (H) Tarring, retarring and repair of building roofs.
 - (I) Instrument air dryer and filter maintenance.
 - (J) Manual tank gauging.
 - (K) Open tumblers associated with deburring operations in maintenance shops.
- (6) Activities performed using hand-held equipment
- (A) Application of hot melt adhesives with no VOC in the adhesive formulation.
 - (B) Cutting, excluding cutting torches.
 - (C) Machining wood, metal, or plastic.
 - (D) Turning wood, metal, or plastic.
 - (E) Buffing, carving, drilling, grinding, polishing, routing, sanding, sawing, and surface Grinding.
- (7) Housekeeping and janitorial activities and supplies
- (A) Vacuum cleaning systems used exclusively for housekeeping or custodial activities, or both.
 - (B) Rest rooms and associated cleanup operations and supplies.
 - (C) Alkaline or phosphate cleaners and associated equipment.
 - (D) Mobile floor sweepers and floor scrubbers.
 - (E) Pest control fumigation.
- (8) Office related activities
- (A) Office supplies and equipment.
 - (B) Photocopying equipment and associated supplies.
 - (C) Paper shredding.
 - (D) Blueprint machines, photographic equipment, and associated supplies.
- (9) Lawn care and landscape maintenance activities and equipment, including the storage, spraying or application of insecticides, pesticides and herbicides

- (10) Storage equipment and activities
 - (A) Pressurized storage tanks and associated piping for liquid natural gas (LNG) (propane).
 - (B) Storage tanks, vessels, and containers holding or storing liquid substances that do not contain any VOC or HAP.
 - (C) Storage of drums containing maintenance raw materials.
 - (D) Storage of any non-HAP containing material in solid form, stored in a sealed or covered container.
 - (E) Portable containers used for the collection, storage, or disposal of materials, where the container capacity is equal to or less than forty-six hundredths (0.46) cubic meters and the container is closed, except when material is added or removed.
- (11) Emergency and standby equipment
 - (A) Safety and emergency equipment, except engine driven fire pumps, including fire suppression systems and emergency road flares.
 - (B) Process safety relief devices installed solely for the purpose of minimizing injury to persons or damage to equipment which could result from abnormal process operating conditions, including the following: explosion relief vents, diaphragms or panels, rupture discs, or safety relief valves.
 - (C) Activities and equipment associated with on-site medical care not otherwise specifically regulated.
- (12) Sampling and testing equipment and activities used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
- (13) Use of consumer products and equipment where the product or equipment is used at a source in the same manner as normal consumer use and is not associated with any production process.
- (14) Activities generating limited amounts of fugitive dust
 - (A) Fugitive emissions related to movement of passenger vehicles, provided the emissions are not counted for applicability purposes under 326 IAC 2-7-1(22)(B), and any required fugitive dust control plan or its equivalent is submitted.
 - (B) Road salting and sanding.
- (15) Activities associated with production
 - (A) Closed, non-vented, tumblers used for cleaning or deburring metal products without abrasive blasting.
 - (B) Electrical resistance welding.
 - (C) Air compressors and pneumatically operated equipment, including hand tools.
 - (D) Compressor or pump lubrication and seal oil systems.

- (16) Miscellaneous equipment, but not emissions associated with the process for which the equipment is used, and activities
 - (A) Equipment used for surface coating, painting, dipping or spraying operation, except those that will emit VOCs or HAPs.
 - (B) Condensate drains for natural gas and landfill gas.
 - (C) Portable dust collectors.
 - (D) Manual loading and unloading operations.
 - (E) Purging of refrigeration devices using a combination of nitrogen and CFC-22 (R-22) as pressure test media.
 - (F) Construction and demolition operations.
 - (G) Mechanical equipment gear boxes and vents which are isolated from process Materials.
- (17) Combustion related activities
 - (A) Space heaters, process heaters, or boilers using natural gas with a heat input rate equal to or less than ten million (10,000,000) Btu per hour, or using propane or liquefied petroleum gas, or butane-fired combustion with a heat input rate equal to or less than six million (6,000,000) Btu per hour.
 - (B) Equipment powered by diesel fuel fired or natural gas fired internal combustion engines of capacity equal to or less than five hundred thousand (500,000) Btu per hour, except where total capacity of equipment operated by one stationary source exceeds two million (2,000,000) Btu per hour.
- (18) VOC and HAP storage containers for the storage of hydraulic oils, lubricating oils, machining oils, and machining fluids.
- (19) Production related activities
 - (A) Application of the greases, lubricants, nonvolatile materials, and oils as temporary protective coatings.
 - (B) Machining where an aqueous cutting coolant continuously floods the machining Interface.
 - (C) Cleaners and solvents characterized as follows where the use of which, for all cleaners and solvents combined, does not exceed one hundred forty-five (145) gallons per twelve (12) months:
 - (i) Having a vapor pressure equal to or less than two kilo Pascals (2.0 kPa) fifteen millimeters of mercury (15 mm Hg) or three-tenths pound per square inch (0.3 psi) measured at thirty-eight degrees Centigrade (38°C) (one hundred degrees Fahrenheit (100°F)).
 - (ii) Having a vapor pressure equal to or less than seven-tenths kilo Pascals (0.7 kPa) (five millimeters of mercury (5 mm Hg) or one-tenth pound per square inch (0.1 psi)) measured at twenty degrees Centigrade (20°C) (sixty-eight degrees Fahrenheit (68°F)).

- (D) Brazing equipment, cutting torches, soldering equipment, and welding equipment related to manufacturing activities not resulting in the emission of HAPs.
 - (E) Closed loop heating and cooling systems.
- (20) Water-based activities
- (A) Any operation using aqueous solutions containing less than one percent (1%) by weight of VOCs excluding HAPs.
 - (B) Water based adhesives that are less than or equal to five percent (5%) by volume of VOCs excluding HAPs.
 - (C) Noncontact cooling tower systems with either of the following:
 - (i) Natural draft cooling towers not regulated under a NESHAP.
 - (ii) Forced and induced draft cooling tower systems not regulated under a NESHAP.
- (21) Repair activities
- (A) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
 - (B) Heat exchanger cleaning and repair.
 - (C) Process vessel degassing and cleaning to prepare for internal repairs.
- (22) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection or trim material recovery device, such as a bag filter or cyclone.
- (23) Paved and unpaved roads and parking lots with public access.
- (24) Enclosed systems for conveying plastic raw materials and plastic finished goods.
- (25) Routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process, including purging of gas lines and purging of vessels.
- (26) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including tanks and catch tanks.
- (27) Blowdown for sight glass, compressors, pumps, and cooling towers.
- (28) Activities associated with emergencies including on-site fire training approved by IDEM and stationary fire pump engines.
- (29) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to three one-hundredths grains per actual cubic foot (0.03 gr/acf) and a gas flow rate less than or equal to four thousand actual cubic feet per minute (4,000 acf/min), including: deburring, buffing, polishing, abrasive blasting, pneumatic conveying, and woodworking operations.

Enforcement Issues

There are no pending enforcement actions related to this source.

Emission Calculations

- (a) See Appendix A of this TSD for detailed emission calculations.
- (b) Using the Environmental Protection Agency's (EPA) TANKS Version 4.09d program, it was determined that use and storage of lubricating oils, hydraulic oils, machining oils, and/or machining fluids (including coolants) at this source would have negligible potential emissions of volatile organic compounds (VOC) and hazardous air pollutants (HAPs).

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	1.58
PM10 ⁽¹⁾	1.58
PM2.5	1.58
SO ₂	0.12
NO _x	20.82
VOC	13,411.94
CO	17.49

(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), not particulate matter (PM), is considered as a "regulated air pollutant".

HAPs	Potential To Emit (tons/year)
Hexane	0.30
Formaldehyde	0.009
Toluene	negligible
Nickel	negligible
Benzene	negligible
Chromium	negligible
TOTAL HAPs	0.39

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of VOC is greater than one hundred (100) tons per year. The PTE of all other regulated criteria pollutants are 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 less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

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.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of FESOP (tons/year)								
	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Printing Presses (FP01-FP04)	0.00	0.00	0.00	0.00	0.00	98.12	0.00	0.00	0.17 (Hexane)
Photopolymer Plate-Making Unit (PH01)	0.00	0.00	0.00	0.00	0.00	0.408	0.00	0.00	
Storage Tanks (TK01 through TK05, RT01)	0.00	0.00	0.00	0.00	0.00	0.815	0.00	0.00	
Press 1 Dryer (FD01)	0.002	0.002	0.002	negl.	0.021	0.001	0.02	negl.	
Press 2 Dryer (FD02)	0.002	0.002	0.002	negl.	0.021	0.001	0.02	negl.	
Press 3 Dryer (FD03)	0.002	0.002	0.002	negl.	0.021	0.001	0.02	negl.	
Press 4 Dryer (FD04)	0.002	0.002	0.002	negl.	0.021	0.001	0.02	negl.	
RTO1	0.011	0.011	0.011	0.001	0.145	0.008	0.12	0.003	
Insignificant Fuel Combustion	0.715	0.715	0.715	0.056	9.406	0.517	7.90	0.178	
Total PTE of Entire Source	0.73	0.73	0.73	0.06	9.63	99.88	8.09	0.18	
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	NA
negl. = negligible * 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), not particulate matter (PM), is considered as a "regulated air pollutant".									

(a) FESOP Status

This new 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 new 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), the source shall comply with the following:

- (1) the total VOC input to printing presses FP01, FP02, FP03, and FP04, and the photopolymer plate-making unit PH01 shall be limited to 4,926.4 tons per twelve (12) consecutive month period, with compliance determined at the end of each month; and compliance with this input limit, in conjunction with D.1.1(b), shall limit VOC emissions from these units to less than 98.53 tons per twelve (12) month consecutive month period; and
- (2) the overall VOC control efficiency (as the product of capture efficiency and destruction efficiency) for the regenerative thermal oxidizer (RTO1) shall be equal to or greater than ninety-eight percent (98%).

Compliance with these limits, combined with the potential to emit VOC from all other emission units at this source, shall limit the source-wide total potential to emit of VOC to less than 100 tons per 12 consecutive month period, and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) not applicable.

- (b) **PSD Minor Source**
This new source is not a major stationary source, under PSD (326 IAC 2-2), because the potential to emit VOC is limited to less than 250 tons per year and the potential to emit all other attainment regulated pollutants are less than 250 tons per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standard (NSPS) for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984, 40 CFR 60, Subpart Kb (326 IAC 12), are not included in the permit, since each storage tank at the source is smaller than the 40 cubic meter threshold (10,567 gallons).
- (b) The requirements of the New Source Performance Standard (NSPS) for the Graphic Arts Industry: Publication Rotogravure Printing, 40 CFR 60, Subpart QQ (326 IAC 12), are not included in the permit, since this printing presses at the source are flexographic printing presses, not rotogravure printing presses.
- (c) The requirements of the New Source Performance Standards (NSPS) for Flexible Vinyl and Urethane Coating and Printing Source (40 CFR 60, Subpart FFF) (326 IAC 12) are not included in the permit, since this source does not have any rotogravure printing lines.
- (d) The requirements of the New Source Performance Standards (NSPS) for Polymeric Coating of Supporting Substrates Facilities (40 CFR 60, Subpart VVV) (326 IAC 12) are not included in the permit, pursuant to 40 CFR 60.740(d)(3), since this source conducts web coating.
- (e) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (f) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for National Emission Standards for Halogenated Solvent Cleaning, (40 CFR 63, Subpart T) (326 IAC 20-6), are not included in the permit because this source is not a major source of Hazardous Air Pollutants (HAPs) and the solvent utilized is not halogenated.

- (g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating, (40 CFR 63, Subpart JJJJ) (326 IAC 20-65), are not included in the permit because this source is not a major source of Hazardous Air Pollutants (HAPs).
- (h) This source is subject to the National Emission Standards for Hazardous Air Pollutants for the Printing and Publishing Industry (40 CFR 63, Subpart KK) (326 IAC 20-18), because wide-web flexographic printing presses are operated at this source, for which the owner or operator chooses to commit to and meet the criteria of paragraphs (a)(2)(i) and (ii) of section 63.820, for purposes of establishing the facility to be an area source of HAP with respect to this subpart.

The units subject to this rule include the following:

Four (4) printing presses, identified as FP01, FP02, FP03, and FP04.

Applicable portions of the NESHAP are the following:

- (1) 40 CFR 63.820(a)(2)(i)
- (2) 40 CFR 63.820(a)(2)(ii)
- (3) 40 CFR 63.820(3)
- (4) 40 CFR 63.829(d)
- (5) 40 CFR 63.830(b)(1)

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the source except as otherwise specified in 40 CFR 63, Subpart KK.

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

Compliance Assurance Monitoring (CAM)

- (j) 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

The following state rules are applicable to the source:

- (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))
This source is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the new units is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.
- (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 6-4 (Fugitive Dust Emissions Limitations)
The source is subject to the requirements of 326 IAC 6-4, because the movement of passenger vehicles and the salting and sanding of access roads have the potential to emit fugitive particulate emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.
- (g) 326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
This source is not subject to 326 IAC 6.5 (Particulate Matter Limitations Except Lake County), since it is not located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne county.
- (h) 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
The one (1) regenerative thermal oxidizer (RTO1) and the four (4) drying ovens (FD01-FD04) are not subject to 326 IAC 6-2 because they are not sources of indirect heating.
- (i) 326 IAC 7-1.1-1 (Sulfur Dioxide Emissions Limitations)
The one (1) regenerative thermal oxidizer (RTO1) is not subject to 326 IAC 7-1.1 because the potential to emit SO₂ from RTO1 is less than twenty-five (25) tons per year and less than ten (10) pounds per hour.
- (j) 326 IAC 8-1-6 (General VOC Reduction Requirements)
This rule is applicable to VOC emission units that were constructed after January 1, 1980, that have potential emissions greater than 25 tons per year, and are not otherwise regulated by other provisions of Article 8. The flexographic printing presses, identified as FP01 through FP04, are not subject to 326 IAC 8-1-6 because they are subject to the provisions of 326 IAC 8-5-5.
- (k) 326 IAC 8-5-5 (Graphic Arts Operations)
The flexographic printing presses, identified as FP01 through FP04 are subject to the requirements of 326 IAC 8-5-5 (Graphic Arts Operations) because they were constructed after November 1, 1980.
- (1) Pursuant to 326 IAC 8-5-5(e)(3), the capture system for the printing presses (FP01 through FP04) in combination with the regenerative oxidation system (RTO1) shall be operated in such a manner to achieve a minimum of sixty percent (60%) overall control efficiency.
 - (2) Pursuant to 326 IAC 8-5-5(c)(3)(B), the regenerative oxidation system (RTO1) for the printing presses (FP01 through FP04) shall maintain a minimum destruction efficiency of 90%. The regenerative thermal oxidizer (RTO1) shall be in operation at all times these printing presses are in operation, in order to comply with this limit.

- (l) 326 IAC 8-6-1 (Organic Solvent Emission Limitations)
This source is not subject to the requirements of 326 IAC 8-6-1, since it was not an existing source as of January 1, 1980, and the source did not commence operation after October 7, 1974, and prior to January 1, 1980.
- (m) 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)
This source is not located in Clark, Floyd, Lake or Porter Counties. Therefore, the requirements of 326 IAC 8-9 are not applicable to the five (5) solvent storage tanks (TK01 through TK05).
- (n) There are no other 326 IAC 8 Rules that are applicable to this source.
- (o) 326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.
- (p) 326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

Compliance Determination, Monitoring and Testing Requirements

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

Thermal Oxidizer Temperature

- (1) A continuous monitoring system shall be calibrated, maintained, and operated on the regenerative thermal oxidizer (RTO1) for measuring operating temperature. For the purpose of this condition, continuous means no less often than once per fifteen (15) minutes. The output of this system shall be recorded as 3-hour average. From the date of startup until the stack test results are available, the Permittee shall operate the thermal oxidizer at or above the 3-hour average temperature of at least 1,400°F.
- (2) The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance.
- (3) On and after the date the stack test results are available, the Permittee shall operate the thermal oxidizer at or above the 3-hour average temperature as observed during the compliant stack test.

Thermal Oxidizer Parametric Monitoring

- (4) The Permittee shall determine the appropriate duct pressure or fan amperage from the most recent valid stack test that demonstrates compliance.
 - (5) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizer is in operation. On and after the date the 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.
- (b) The testing requirements applicable to this source are as follows:
 - (1) Within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up of one (1) or more of the printing presses (FP01 through FP04) and the photopolymer plate-making unit (PH01), the Permittee shall conduct a performance test to verify the overall VOC control efficiency (as the product of capture efficiency and destruction efficiency) for the regenerative thermal oxidizer (RTO1) utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five years

from the date of the most recent valid compliance demonstration.

- (2) Within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up of one (1) or more of the printing presses (FP01 through FP04) and the photopolymer plate-making unit (PH01), the Permittee shall conduct a performance test to verify the VOC destruction efficiency for the regenerative thermal oxidizer (RTO1) utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five years from the date of the most recent valid compliance demonstration.

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 July 15, 2009. Additional information was received on September 11, 2009; December 10, 2009; December 18, 2009; January 13, 2010, and February 4, 2010.

The construction and operation of this source shall be subject to the conditions of the attached proposed New Source Construction and FESOP No. F105-28231-00046. The staff recommends to the Commissioner that this New Source Construction and FESOP be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Christine L. Filutze 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) 233-8397 or toll free at 1-800-451-6027 extension 3-8397.
- (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.idem.in.gov.

**Appendix A: Emissions Calculations
Summary**

Company Name: Printpack, Inc.
Address City IN Zip: 5550 W Vernal Pike, Bloomington, IN 47404
Permit Number: F105-28231-00046
Reviewer: Christine L. Filutze
Date: February 15, 2010

Potential to Emit (tons/yr) - Unrestricted

Emission Unit	PM	PM10	PM2.5	SO2	NOx	VOC	CO	HAPs	Single Highest HAP
Printing Presses (FP01-FP04)	0.00	0.00	0.00	0.00	0.00	13,369.22	0.00	0.00	Hexane 0.30
Photopolymer Plate-Making Unit (PH01)	0.00	0.00	0.00	0.00	0.00	40.76	0.00	0.00	
Storage Tanks (TK01-TK05, RT01) *	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	
Press 1 Dryer (FD01)	0.080	0.080	0.080	0.006	1.05	0.06	0.88	0.02	
Press 2 Dryer (FD02)	0.080	0.080	0.080	0.006	1.05	0.06	0.88	0.02	
Press 3 Dryer (FD03)	0.080	0.080	0.080	0.006	1.05	0.06	0.88	0.02	
Press 4 Dryer (FD04)	0.080	0.080	0.080	0.006	1.05	0.06	0.88	0.02	
RTO1	0.549	0.549	0.549	0.043	7.23	0.40	6.07	0.14	
Insignificant Fuel Combustions	0.715	0.715	0.715	0.056	9.41	0.52	7.90	0.18	
Totals	1.58	1.58	1.58	0.12	20.82	13,411.94	17.49	0.39	

Potential to Emit (tons/yr) - After Controls

Emission Unit	PM	PM10	PM2.5	SO2	NOx	VOC	CO	HAPs	Single Highest HAP
Printing Presses (FP01-FP04)	0.00	0.00	0.00	0.00	0.00	267.38	0.00	0.00	Hexane 0.17
Photopolymer Plate-Making Unit (PH01)	0.00	0.00	0.00	0.00	0.00	0.82	0.00	0.00	
Storage Tanks (TK01-TK05, RT01) *	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	
Press 1 Dryer (FD01)	0.002	0.002	0.002	1.26E-04	0.021	0.001	0.02	3.95E-04	
Press 2 Dryer (FD02)	0.002	0.002	0.002	1.26E-04	0.021	0.001	0.02	3.95E-04	
Press 3 Dryer (FD03)	0.002	0.002	0.002	1.26E-04	0.021	0.001	0.02	3.95E-04	
Press 4 Dryer (FD04)	0.002	0.002	0.002	1.26E-04	0.021	0.001	0.02	3.95E-04	
RTO1	0.011	0.011	0.011	0.001	0.145	0.008	0.12	0.003	
Insignificant Fuel Combustions	0.715	0.715	0.715	0.056	9.406	0.517	7.90	0.178	
Totals	0.73	0.73	0.73	0.06	9.63	269.54	8.09	0.18	

Potential to Emit (tons/yr) - Limited and After Controls

Emission Unit	PM	PM10	PM2.5	SO2	NOx	VOC	CO	HAPs	Single Highest HAP
Printing Presses (FP01-FP04)	0.00	0.00	0.00	0.00	0.00	98.12	0.00	0.00	Hexane 0.17
Photopolymer Plate-Making Unit (PH01)	0.00	0.00	0.00	0.00	0.00	0.408	0.00	0.00	
Storage Tanks (TK01-TK05, RT01) *	0.00	0.00	0.00	0.00	0.00	0.815	0.00	0.00	
Press 1 Dryer (FD01)	0.002	0.002	0.002	1.26E-04	0.021	0.001	0.02	3.95E-04	
Press 2 Dryer (FD02)	0.002	0.002	0.002	1.26E-04	0.021	0.001	0.02	3.95E-04	
Press 3 Dryer (FD03)	0.002	0.002	0.002	1.26E-04	0.021	0.001	0.02	3.95E-04	
Press 4 Dryer (FD04)	0.002	0.002	0.002	1.26E-04	0.021	0.001	0.02	3.95E-04	
RTO1	0.011	0.011	0.011	0.001	0.145	0.008	0.12	0.003	
Insignificant Fuel Combustions	0.715	0.715	0.715	0.056	9.406	0.517	7.90	0.178	
Totals	0.73	0.73	0.73	0.06	9.63	99.88	8.09	0.18	

* Using the Environmental Protection Agency's (EPA) TANKS Version 4.09d program, it was determined that use and storage of lubricating oils, hydraulic oils, machining oils, and/or machining fluids (including coolants) at this source would have negligible potential emissions of volatile organic compounds (VOC) and hazardous air pollutants (HAPs).

**Appendix A: Emissions Calculations
PRINTING PRESS EMISSION CALCULATIONS**

Company Name: Printpack, Inc.
Address City IN Zip: 5550 W Vernal Pike, Bloomington, IN 47404
Permit Number: F105-28231-00046
Reviewer: Christine L. Filutze
Date: February 15, 2010

Potential Emissions

8,760 hrs/yr
 2,000 ft/min
 1,051,200,000 ft/yr
 65 max web width (in)
 5,694,000,000 sq ft/yr
 3,000 sq ft/ream
 1,898,000 reams/yr

VOC Usage

1.50 lbs ink solids/ream
 2.33 lbs VOC/lbs ink solids
 1,898,000 reams/yr
 6,643,000 lbs VOC/yr
 3,321.50 tons VOC/yr

Clean Up

0.5 gal/deck/changeover
 10 decks
 3 changeovers/day
 365 days/yr
 7.6 lbs/gal
 41,610 lbs/yr
 20.81 tons/yr

Press Total (one (1) press)

6,684,610 lbs VOC usage/yr
 763 lbs VOC usage/hr
 3,342 tons VOC usage/yr PTE before controls
 98.0% Total Control Efficiency
 66.85 ton VOC emissions/yr PTE after controls

13,369.22 tpy of VOC for all 4 press before controls
267.38 tpy of VOC for all 4 press after controls

Limited Emissions

6,000 hrs/yr
 1,590 ft/min
 572,400,000 ft/yr
 65 max web width (in)
 3,100,500,000 sq ft/yr
 3,000 sq ft/ream
 1,033,500 reams/yr

VOC Usage

1.00 lbs ink solids/ream
 2.33 lbs VOC/lbs ink solids
 1,033,500 reams/yr
 2,411,500 lbs VOC/yr
 1,205.75 tons VOC/yr

Clean Up

0.5 gal/deck/changeover
 10 decks
 3 changeovers/day
 365 days/yr
 7.6 lbs/gal
 41,610 lbs/yr
 20.81 tons/yr

Press Total (one (1) press)

2,453,110 lbs VOC usage/yr
 409 lbs VOC usage/hr
 1,227 tons VOC usage/yr limited - before controls*
 98.0% Total Control Efficiency
 24.53 ton VOC emissions/yr limited - after controls

4,906.22 tpy of VOC for all 4 presses limited before controls
98.12 tpy of VOC for all 4 presses limited after controls

*This limit is used to limit VOC emissions to be < 100 tpy source-wide.

VOC usage = [(lbs ink solids/ream)*(lbs VOC/lbs ink solids)*(reams/yr)]/2000

Clean Up = [(gal/deck/changeover)*(decks)*(changeovers/day)*(days/yr)*(gal/yr)*(lbs/yr)]/2000

lbs VOC usage/yr press total for 1 press = VOC Usage lbs VOC/yr + Clean Up lbs/yr)

potential lbs VOC usage/hr press total for 1 press = [(lbs VOC usage/yr for 1 press) / (8760 hrs/yr)

limited lbs VOC usage/hr press total for 1 press = [(lbs VOC usage/yr for 1 press) / (6000 hrs/yr)

tons VOC usage/yr limited before controls press total for 1 press = (VOC Usage tons VOC/yr) + (Clean Up tons/yr)

ton VOC emissions/yr limited after controls press total for 1 press = (tons VOC usage/yr limited before controls)*(1-0.98)

ton VOC emissions/yr limited after controls press total for 4 presses = [(tons VOC usage/yr limited before controls)*(1-0.98)]*4

**Appendix A: Emissions Calculations
PHOTOPOLYMER PLATEMAKER EMISSION CALCULATIONS**

Company Name: Printpack, Inc.
Address City IN Zip: 5550 W Vernal Pike, Bloomington, IN 47404
Permit Number: F105-28231-00046
Reviewer: Christine L. Filutze
Date: February 15, 2010

Potential Emissions

8,760 hrs/yr
 17.50 ft²/plate
 3 plates/hr
 459,900 ft²/yr

VOC Usage

7.09 lbs VOC/gal of washout solution
 0.25 gal of washout solution/ft² of plate material
 10% evaporation rate (90% recycled internally)

Photopolymer Total

81,517 lbs VOC usage/yr
 3.1 lbs VOC usage/plate
 40.76 tons VOC usage/yr PTE before controls
 98.0% Total Control Efficiency
0.82 ton VOC emissions/yr PTE after controls

Limited Emissions

4,380 hrs/yr
 17.50 ft²/plate
 3 plates/hr
 229,950 ft²/yr

VOC Usage

7.09 lbs VOC/gal of washout solution
 0.25 gal of washout solution/ft² of plate material
 10% evaporation rate (90% recycled internally)

Photopolymer Total

40,759 lbs VOC usage/yr (total usage)
 3.1 lbs VOC usage/plate
 20.38 tons VOC usage/yr limited - before controls (evaporated)*
 98.0% Total Control Efficiency
0.41 ton VOC emissions/yr limited - after controls (evaporated)

*This limit is used to limit VOC emissions to be < 100 tpy source-wide.

$$\text{ft}^2/\text{yr} = (\text{hrs}/\text{yr}) * (\text{ft}^2/\text{plate}) * (\text{plates}/\text{hr})$$

$$\text{Photopolymer Total lbs VOC usage}/\text{yr} = [(\text{ft}^2/\text{yr}) * (\text{VOC Usage lbs VOC}/\text{gal washout solution}) * (\text{VOC Usage gal washout solution}/\text{ft}^2 \text{ of plate material}) * (\text{VOC Usage evaporation rate})]$$

$$\text{Photopolymer Total tons VOC usage}/\text{yr limited before controls (evaporated)} = (\text{Photopolymer Total lbs VOC usage}/\text{yr})/2000$$

$$\text{Photopolymer Total tons VOC usage}/\text{yr limited after controls (evaporated)} = [(\text{Photopolymer Total tons VOC usage}/\text{yr limited before controls (evaporated)}) * (1 - 0.98)]$$

**Appendix A: Emissions Calculations
 MAXIMUM EXPECTED EMISSION CALCULATIONS
 FUEL COMBUSTION EMISSIONS
 FLEXOGRAPHIC PRESS NO. 1 (FP01)**

Company Name: Printpack, Inc.
Address City IN Zip: 5550 W Vernal Pike, Bloomington, IN 47404
Permit Number: F105-28231-00046
Reviewer: Christine L. Filutze
Date: February 15, 2010

Pollutant	Emission Factor (lb/MMft ³)	Uncontrolled Emissions (lbs/yr)	Uncontrolled Emissions (tons/yr)	Controlled Emissions (lbs/yr) ⁽³⁾	Controlled Emissions (lbs/yr) ⁽³⁾
VOC ⁽³⁾	5.5	115.15	0.058	2.30	0.001
NOx	100	2,093.64	1.047	41.87	0.021
CO	84	1,758.66	0.879	35.17	0.018
SO ₂	0.6	12.56	6.28E-03	0.25	1.26E-04
PM/PM10/PM2.5	7.6	159.12	0.080	3.18	0.002
Total HAPs	1.89E+00	39.54	0.020	0.79	3.95E-04
Arsenic	2.00E-04	4.19E-03	2.09E-06	8.37E-05	4.19E-08
Beryllium	1.20E-05	2.51E-04	1.26E-07	5.02E-06	2.51E-09
Cadmium	1.10E-03	0.02	1.15E-05	0.00	2.30E-07
Chromium	1.40E-03	0.03	1.47E-05	0.00	2.93E-07
Cobalt	8.40E-05	1.76E-03	8.79E-07	3.52E-05	1.76E-08
Lead	5.00E-04	1.05E-02	5.23E-06	2.09E-04	1.05E-07
Manganese	3.80E-04	7.96E-03	3.98E-06	1.59E-04	7.96E-08
Mercury	2.60E-04	5.44E-03	2.72E-06	1.09E-04	5.44E-08
Nickel	2.10E-03	0.04	2.20E-05	0.00	4.40E-07
Selenium	2.40E-05	5.02E-04	2.51E-07	1.00E-05	5.02E-09
Benzene	2.10E-03	0.04	2.20E-05	0.00	4.40E-07
Dichlorobenzene	1.20E-03	0.03	1.26E-05	0.00	2.51E-07
Formaldehyde	7.50E-02	1.57	7.85E-04	0.03	1.57E-05
Hexane ⁽⁴⁾	1.80E+00	37.69	1.88E-02	0.75	3.77E-04
Naphthalene	6.10E-04	1.28E-02	6.39E-06	2.55E-04	1.28E-07
Toluene	3.40E-03	0.07	3.56E-05	0.00	7.12E-07
POM	8.82E-05	1.85E-03	9.23E-07	3.69E-05	1.85E-08

(1) Based on maximum fuel requirements to operate dryers:

2.39 Total Max Burner Capacity (MMBtu/hr)
 8,760 hr/yr
 20,936 Annual MMBtu requirement = [Total Max Burner Capacity (MMBtu/hr) * (hr/yr)]
 1,000 Btu/ft³
 20,936,400 ft³/yr of Natural Gas required per year = [(Annual MMBtu requirement)*(1,000,000)/(1,000)]

(2) Based on EPA AP-42 Supplement D (July 1998) emission factors for natural gas combustion.

(3) VOC emissions from press dryer fuel combustion will be controlled by RTO1 at a
 98.0% VOC Control Efficiency

(4) Single Highest HAP.

**Appendix A: Emissions Calculations
 MAXIMUM EXPECTED EMISSION CALCULATIONS
 FUEL COMBUSTION EMISSIONS
 FLEXOGRAPHIC PRESS NO. 2 (FP02)**

Company Name: Printpack, Inc.
Address City IN Zip: 5550 W Vernal Pike, Bloomington, IN 47404
Permit Number: F105-28231-00046
Reviewer: Christine L. Filutze
Date: February 15, 2010

Pollutant	Emission Factor (lb/MMft ³)	Uncontrolled Emissions (lbs/yr)	Uncontrolled Emissions (tons/yr)	Controlled Emissions (lbs/yr) ⁽³⁾	Controlled Emissions (lbs/yr) ⁽³⁾
VOC ⁽³⁾	5.5	115.15	0.058	2.30	0.001
NOx	100	2093.64	1.047	41.87	0.021
CO	84	1758.66	0.879	35.17	0.018
SO ₂	0.6	12.56	6.28E-03	0.25	1.26E-04
PM/PM10/PM2.5	7.6	159.12	0.080	3.18	0.002
Total HAPs	1.89E+00	39.54	0.020	0.79	3.95E-04
Arsenic	2.00E-04	4.19E-03	2.09E-06	8.37E-05	4.19E-08
Beryllium	1.20E-05	2.51E-04	1.26E-07	5.02E-06	2.51E-09
Cadmium	1.10E-03	0.02	1.15E-05	4.61E-04	2.30E-07
Chromium	1.40E-03	0.03	1.47E-05	5.86E-04	2.93E-07
Cobalt	8.40E-05	1.76E-03	8.79E-07	3.52E-05	1.76E-08
Lead	5.00E-04	0.01	5.23E-06	2.09E-04	1.05E-07
Manganese	3.80E-04	0.01	3.98E-06	1.59E-04	7.96E-08
Mercury	2.60E-04	5.44E-03	2.72E-06	1.09E-04	5.44E-08
Nickel	2.10E-03	0.04	2.20E-05	8.79E-04	4.40E-07
Selenium	2.40E-05	5.02E-04	2.51E-07	1.00E-05	5.02E-09
Benzene	2.10E-03	0.04	2.20E-05	8.79E-04	4.40E-07
Dichlorobenzene	1.20E-03	0.03	1.26E-05	5.02E-04	2.51E-07
Formaldehyde	7.50E-02	1.57	7.85E-04	3.14E-02	1.57E-05
Hexane ⁽⁴⁾	1.80E+00	37.69	1.88E-02	7.54E-01	3.77E-04
Naphthalene	6.10E-04	0.01	6.39E-06	2.55E-04	1.28E-07
Toluene	3.40E-03	0.07	3.56E-05	1.42E-03	7.12E-07
POM	8.82E-05	1.85E-03	9.23E-07	3.69E-05	1.85E-08

(1) Based on maximum fuel requirements to operate dryers:

$$2.39 \text{ Total Max Burner Capacity (MMBtu/hr)}$$

$$8,760 \text{ hr/yr}$$

$$20,936 \text{ Annual MMBtu requirement} = [\text{Total Max Burner Capacity (MMBtu/hr)} * (\text{hr/yr})]$$

$$1,000 \text{ Btu/ft}^3$$

$$20,936,400 \text{ ft}^3/\text{yr of Natural Gas required per year} = [(\text{Annual MMBtu requirement}) * (1,000,000) / (1,000)]$$

(2) Based on EPA AP-42 Supplement D (July 1998) emission factors for natural gas combustion.

(3) VOC emissions from press dryer fuel combustion will be controlled by RTO1 at a 98.0% VOC Control Efficiency

(4) Single Highest HAP.

**Appendix A: Emissions Calculations
 MAXIMUM EXPECTED EMISSION CALCULATIONS
 FUEL COMBUSTION EMISSIONS
 FLEXOGRAPHIC PRESS NO. 3 (FP03)**

Company Name: Printpack, Inc.
Address City IN Zip: 5550 W Vernal Pike, Bloomington, IN 47404
Permit Number: F105-28231-00046
Reviewer: Christine L. Filutze
Date: February 15, 2010

Pollutant	Emission Factor (lb/MMft ³)	Uncontrolled Emissions (lbs/yr)	Uncontrolled Emissions (tons/yr)	Controlled Emissions (lbs/yr) ⁽³⁾	Controlled Emissions (lbs/yr) ⁽³⁾
VOC ⁽³⁾	5.5	115.15	0.058	2.30	0.001
NOx	100	2,093.64	1.047	41.87	0.021
CO	84	1,758.66	0.879	35.17	0.018
SO ₂	0.6	12.56	0.006	0.25	1.26E-04
PM/PM10/PM2.5	7.6	159.12	0.080	3.18	0.002
Total HAPs	1.89E+00	39.54	0.020	0.79	3.95E-04
Arsenic	2.00E-04	4.19E-03	2.09E-06	8.37E-05	4.19E-08
Beryllium	1.20E-05	2.51E-04	1.26E-07	5.02E-06	2.51E-09
Cadmium	1.10E-03	0.02	1.15E-05	4.61E-04	2.30E-07
Chromium	1.40E-03	0.03	1.47E-05	5.86E-04	2.93E-07
Cobalt	8.40E-05	0.00	8.79E-07	3.52E-05	1.76E-08
Lead	5.00E-04	0.01	5.23E-06	2.09E-04	1.05E-07
Manganese	3.80E-04	0.01	3.98E-06	1.59E-04	7.96E-08
Mercury	2.60E-04	5.44E-03	2.72E-06	1.09E-04	5.44E-08
Nickel	2.10E-03	0.04	2.20E-05	8.79E-04	4.40E-07
Selenium	2.40E-05	5.02E-04	2.51E-07	1.00E-05	5.02E-09
Benzene	2.10E-03	0.04	2.20E-05	8.79E-04	4.40E-07
Dichlorobenzene	1.20E-03	0.03	1.26E-05	5.02E-04	2.51E-07
Formaldehyde	7.50E-02	1.57	7.85E-04	3.14E-02	1.57E-05
Hexane ⁽⁴⁾	1.80E+00	37.69	1.88E-02	7.54E-01	3.77E-04
Naphthalene	6.10E-04	0.01	6.39E-06	2.55E-04	1.28E-07
Toluene	3.40E-03	0.07	3.56E-05	1.42E-03	7.12E-07
POM	8.82E-05	1.85E-03	9.23E-07	3.69E-05	1.85E-08

(1) Based on maximum fuel requirements to operate dryers:
 2.39 Total Max Burner Capacity (MMBtu/hr)
 8,760 hr/yr
 20,936 Annual MMBtu requirement = [Total Max Burner Capacity (MMBtu/hr) * (hr/yr)]
 1,000 Btu/ft³
 20,936,400 ft³/yr of Natural Gas required per year = [(Annual MMBtu requirement)*(1,000,000)/(1,000)]

(2) Based on EPA AP-42 Supplement D (July 1998) emission factors for natural gas combustion.

(3) VOC emissions from press dryer fuel combustion will be controlled by RTO1 at a
 98.0% VOC Control Efficiency

(4) Single Highest HAP.

Appendix A: Emissions Calculations
MAXIMUM EXPECTED EMISSION CALCULATIONS
FUEL COMBUSTION EMISSIONS
FLEXOGRAPHIC PRESS NO. 4 (FP04)

Company Name: Printpack, Inc.
Address City IN Zip: 5550 W Vernal Pike, Bloomington, IN 47404
Permit Number: F105-28231-00046
Reviewer: Christine L. Filutze
Date: February 15, 2010

Pollutant	Emission Factor (lb/MMft ³)	Uncontrolled Emissions (lbs/yr)	Uncontrolled Emissions (tons/yr)	Controlled Emissions (lbs/yr) ⁽³⁾	Controlled Emissions (lbs/yr) ⁽³⁾
VOC ⁽³⁾	5.5	115.15	0.058	2.30	0.001
NOx	100	2093.64	1.047	41.87	0.021
CO	84	1758.66	0.879	35.17	0.018
SO ₂	0.6	12.56	6.28E-03	0.25	1.26E-04
PM/PM10/PM2.5	7.6	159.12	0.080	3.18	0.002
Total HAPs	1.89E+00	39.54	0.020	0.79	3.95E-04
Arsenic	2.00E-04	4.19E-03	2.09E-06	8.37E-05	4.19E-08
Beryllium	1.20E-05	2.51E-04	1.26E-07	5.02E-06	2.51E-09
Cadmium	1.10E-03	0.02	1.15E-05	4.61E-04	2.30E-07
Chromium	1.40E-03	0.03	1.47E-05	5.86E-04	2.93E-07
Cobalt	8.40E-05	1.76E-03	8.79E-07	3.52E-05	1.76E-08
Lead	5.00E-04	0.01	5.23E-06	2.09E-04	1.05E-07
Manganese	3.80E-04	0.01	3.98E-06	1.59E-04	7.96E-08
Mercury	2.60E-04	5.44E-03	2.72E-06	1.09E-04	5.44E-08
Nickel	2.10E-03	0.04	2.20E-05	8.79E-04	4.40E-07
Selenium	2.40E-05	5.02E-04	2.51E-07	1.00E-05	5.02E-09
Benzene	2.10E-03	0.04	2.20E-05	8.79E-04	4.40E-07
Dichlorobenzene	1.20E-03	0.03	1.26E-05	5.02E-04	2.51E-07
Formaldehyde	7.50E-02	1.57	7.85E-04	3.14E-02	1.57E-05
Hexane ⁽⁴⁾	1.80E+00	37.69	1.88E-02	7.54E-01	3.77E-04
Naphthalene	6.10E-04	0.01	6.39E-06	2.55E-04	1.28E-07
Toluene	3.40E-03	0.07	3.56E-05	1.42E-03	7.12E-07
POM	8.82E-05	1.85E-03	9.23E-07	3.69E-05	1.85E-08

(1) Based on maximum fuel requirements to operate dryers:

$$2.39 \text{ Total Max Burner Capacity (MMBtu/hr)}$$

$$8,760 \text{ hr/yr}$$

$$20,936 \text{ Annual MMBtu requirement} = [\text{Total Max Burner Capacity (MMBtu/hr)} * (\text{hr/yr})]$$

$$1,000 \text{ Btu/ft}^3$$

$$20,936,400 \text{ ft}^3/\text{yr of Natural Gas required per year} = [(\text{Annual MMBtu requirement}) * (1,000,000) / (1,000)]$$

(2) Based on EPA AP-42 Supplement D (July 1998) emission factors for natural gas combustion.

(3) VOC emissions from press dryer fuel combustion will be controlled by RTO1 at a 98.0% VOC Control Efficiency

(4) Single Highest HAP.

**Appendix A: Emissions Calculations
 MAXIMUM EXPECTED EMISSION CALCULATIONS
 FUEL COMBUSTION EMISSIONS
 REGENERATIVE THERMAL OXIDIZER (RTO1)**

Company Name: Printpack, Inc.
Address City IN Zip: 5550 W Vernal Pike, Bloomington, IN 47404
Permit Number: F105-28231-00046
Reviewer: Christine L. Filutze
Date: February 15, 2010

Pollutant	Emission Factor (lb/MMft³)	Uncontrolled Emissions (lbs/yr)	Uncontrolled Emissions (ton/yr)	Controlled Emissions (lbs/yr)⁽³⁾	Controlled Emissions (lbs/yr)⁽³⁾
VOC ⁽³⁾	5.5	794.97	0.397	15.90	0.008
NOx	100	14,454.00	7.227	289.08	0.145
CO	84	12,141.36	6.071	242.83	0.121
SO ₂	0.6	86.72	0.043	1.73	8.67E-04
PM/PM10/PM2.5	7.6	1,098.50	0.549	21.97	0.011
Total HAPs	1.89E+00	272.96	0.136	5.46	2.73E-03
Arsenic	2.00E-04	2.89E-02	1.45E-05	5.78E-04	2.89E-07
Beryllium	1.20E-05	1.73E-03	8.67E-07	3.47E-05	1.73E-08
Cadmium	1.10E-03	1.59E-01	7.95E-05	3.18E-03	1.59E-06
Chromium	1.40E-03	2.02E-01	1.01E-04	4.05E-03	2.02E-06
Cobalt	8.40E-05	1.21E-02	6.07E-06	2.43E-04	1.21E-07
Lead	5.00E-04	7.23E-02	3.61E-05	1.45E-03	7.23E-07
Manganese	3.80E-04	5.49E-02	2.75E-05	1.10E-03	5.49E-07
Mercury	2.60E-04	3.76E-02	1.88E-05	7.52E-04	3.76E-07
Nickel	2.10E-03	3.04E-01	1.52E-04	6.07E-03	3.04E-06
Selenium	2.40E-05	3.47E-03	1.73E-06	6.94E-05	3.47E-08
Benzene	2.10E-03	3.04E-01	1.52E-04	6.07E-03	3.04E-06
Dichlorobenzene	1.20E-03	1.73E-01	8.67E-05	3.47E-03	1.73E-06
Formaldehyde	7.50E-02	10.84	5.42E-03	0.22	1.08E-04
Hexane ⁽⁴⁾	1.80E+00	260.17	1.30E-01	5.20	2.60E-03
Naphthalene	6.10E-04	8.82E-02	4.41E-05	1.76E-03	8.82E-07
Toluene	3.40E-03	4.91E-01	2.46E-04	9.83E-03	4.91E-06
POM	8.82E-05	1.27E-02	6.37E-06	2.55E-04	1.27E-07

(1) Based on maximum fuel requirements:

16.5 Total Max Burner Capacity (MMBtu/hr)
 8,760 hr/yr
 144,540 Annual MMBtu requirement = [Total Max Burner Capacity (MMBtu/hr) * (hr/yr)]
 1,000 Btu/ft³
 144,540,000 ft³/yr of Natural Gas required per year = [(Annual MMBtu requirement)*(1,000,000)/(1,000)]

(2) Based on EPA AP-42 Supplement D (July 1998) emission factors for natural gas combustion.

(3) VOC emissions from RTO1 fuel combustion will be controlled by RTO1.

98.0% VOC Control Efficiency

(4) Single Highest HAP.

**Appendix A: Emission Calculations
Storage Tank Emissions
Storage Tank Losses
Volatile Organic Compound (VOC)**

**Company Name: Printpack, Inc.
Address City IN Zip: 5550 W Vernal Pike, Bloomington, IN 47404
Permit Number: F105-28231-00046
Reviewer: Christine L. Filutze
Date: February 15, 2010**

Storage Tank ID	Product Stored	Roof Type	Tank Dimensions	Maximum Liquid Height (ft)	Maximum Liquid Volume (gallons)	Turnovers per year	Product Throughput (gallons/yr)	VOC Uncontrolled Emissions (lbs/yr)	VOC Uncontrolled Emissions (tons/yr)
TK01	Isopropanol (80%)	Horizontal, Variable Vapor Space	10.0 ft dia 22.0 ft ht	10.0 ft	10,000	104	1,040,000	283.46	0.14
TK01	Ethyl Acetate (20%)	Horizontal, Variable Vapor Space	10.0 ft dia 22.0 ft ht	10.0 ft	10,000	104	1,040,000	174.79	0.09
TK02	Isopropanol (80%)	Horizontal, Variable Vapor Space	10.0 ft dia 22.0 ft ht	10.0 ft	10,000	104	1,040,000	283.46	0.14
TK02	Ethyl Acetate (20%)	Horizontal, Variable Vapor Space	10.0 ft dia 22.0 ft ht	10.0 ft	10,000	104	1,040,000	174.79	0.09
TK03	Isopropanol (80%)	Horizontal, Variable Vapor Space	10.0 ft dia 11.0 ft ht	10.0 ft	5,000	104	520,000	141.73	0.07
TK03	Ethyl Acetate (20%)	Horizontal, Variable Vapor Space	10.0 ft dia 11.0 ft ht	10.0 ft	5,000	104	520,000	87.39	0.04
TK04	Isopropanol (80%)	Horizontal, Variable Vapor Space	10.0 ft dia 11.0 ft ht	10.0 ft	5,000	104	520,000	141.73	0.07
TK04	Ethyl Acetate (20%)	Horizontal, Variable Vapor Space	10.0 ft dia 11.0 ft ht	10.0 ft	5,000	104	520,000	87.39	0.04
TK05	Normal Propanol (80%)	Vertical, Variable Vapor Space	8.0 ft dia 17.0 ft ht	17.0 ft	6,000	104	624,000	157.67	0.08
TK05	N-Propyl Acetate (20%)	Vertical, Variable Vapor Space	8.0 ft dia 17.0 ft ht	17.0 ft	6,000	104	624,000	97.22	0.05

Total Potential to Emit VOC (tons/yr) = 0.81
Total Potential to Emit VOC (lbs/day) = 4.46

ACRONYMS

VOC = Volatile Organic Compound

Volatile Organic Compound (VOC) emissions from withdrawal and standing losses using US EPA TANKS Version 4.09 program

Using the Environmental Protection Agency's (EPA) TANKS Version 4.09d program, it was determined that use and storage of lubricating oils, hydraulic oils, machining oils, and/or machining fluids (including coolants) at this source would have negligible potential emissions of volatile organic compounds (VOC) and hazardous air pollutants (HAPs).

Appendix A: Emissions Calculations
MAXIMUM EXPECTED EMISSION CALCULATIONS
FUEL COMBUSTION EMISSIONS
INSIGNIFICANT FUEL COMBUSTION SOURCES

Company Name: Printpack, Inc.
Address City IN Zip: 5550 W Vernal Pike, Bloomington, IN 47404
Permit Number: F105-28231-00046
Reviewer: Christine L. Filutze
Date: February 15, 2010

Pollutant	Emission Factor (lb/MMft ³)	Uncontrolled Emissions (lbs/yr)	Uncontrolled Emissions (ton/yr)
VOC	5.5	1,035	0.517
NOx	100	18,811	9.406
CO	84	15,801	7.901
SO ₂	0.6	113	0.056
PM/PM10/PM2.5	7.6	1,430	0.715
Total HAPs	1.89E+00	355	0.178
Arsenic	2.00E-04	3.76E-02	1.88E-05
Beryllium	1.20E-05	2.26E-03	1.13E-06
Cadmium	1.10E-03	2.07E-01	1.03E-04
Chromium	1.40E-03	2.63E-01	1.32E-04
Cobalt	8.40E-05	1.58E-02	7.90E-06
Lead	5.00E-04	9.41E-02	4.70E-05
Manganese	3.80E-04	7.15E-02	3.57E-05
Mercury	2.60E-04	4.89E-02	2.45E-05
Nickel	2.10E-03	3.95E-01	1.98E-04
Selenium	2.40E-05	4.51E-03	2.26E-06
Benzene	2.10E-03	3.95E-01	1.98E-04
Dichlorobenzene	1.20E-03	2.26E-01	1.13E-04
Formaldehyde	7.50E-02	14.11	7.05E-03
Hexane ⁽¹⁾	1.80	338.60	0.17
Naphthalene	6.10E-04	1.15E-01	5.74E-05
Toluene	3.40E-03	6.40E-01	3.20E-04
POM	8.82E-05	1.66E-02	8.30E-06

(1) Based on maximum fuel requirements:
21.5 Total Max Burner Capacity (MMBtu/hr)
8,760 hr/yr
188,112 Annual MMBtu requirement
1,000 Btu/ft³
188,112,240 ft³/yr of Natural Gas required per year

(2) Based on EPA AP-42 Supplement D (July 1998) emission factors for natural gas combustion.

(3) Total Max Burner Capacity based on the following insignificant sources:

<u>Unit</u>	<u>Burner Size (MMBtu/hr)</u>
Air Handling Unit -1A	2.5
Air Handling Unit -1B	2.5
Air Handling Unit -1C	2.5
Air Handling Unit -1D	2.5
Air Handling Unit -2A	2.5
Air Handling Unit -2B	2.5
Air Handling Unit -2C	2.5
Air Handling Unit -3	0.25
Air Handling Unit -4	0.875
Air Handling Unit -5	0.02
Air Handling Unit -6	0.25
Air Handling Unit -7	0.15
Air Handling Unit -8	0.15
ERU-1	1.25
MUA-1	0.07
Air Recirculation Unit -1	0.1
Air Recirculation Unit -2	0.1
Water Heater -1	0.285
Water Heater -2	0.237
Water Heater -3	0.237
Total	21.474

(4) Single Highest HAP.



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

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

TO: Todd Wiederhold
Printpack, Inc.
PO Box 723608
Atlanta, GA 31139-0608

DATE: May 5, 2010

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

SUBJECT: Final Decision
New Source FESOP
105 - 28231 - 00046

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:
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 11/30/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

May 5, 2010

TO: Monroe Co Public Library

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

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

Applicant Name: Printpack, Inc.
Permit Number: 105 - 28231 - 00046

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 11/30/07

Mail Code 61-53

IDEM Staff	LPOGOST 5/5/2010 Printpack, Inc. 105 - 28231 - 00046 final)		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handling Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee
											Remarks
1		Todd Wiederhold Printpack, Inc. PO Box 723608 Atlanta GA 31139-0608 (Source CAATS) Via confirmed delivery									
2		Monroe Co Public Library 303 E Kirkwood Ave Bloomington IN 47408 (Library)									
3		Monroe County Health Department 119 W 7th St Bloomington IN 47404-3989 (Health Department)									
4		Mr. Randy Brown Plumbers & Steam Fitters Union, Local 136 2300 St. Joe Industrial Park Dr Evansville IN 47720 (Affected Party)									
5		Bloomington City Council and Mayors Office 401 N. Morton St. Bloomington IN 47402 (Local Official)									
6		Mr. Richard Monday 545 E. Margaret Dr. Terre Haute IN 47801 (Affected Party)									
7		Monroe County Commissioners Monroe County Courthouse, Room 322 Bloomington IN 47404 (Local Official)									
8											
9											
10											
11											
12											
13											
14											
15											

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See Domestic Mail Manual R900, S913, and S921 for limitations of coverage on inured and COD mail. See International Mail Manual for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
---	--	--	--