



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: September 26, 2012

RE: D & W Fine Pack, LLC / 003-31054-00346

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



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Minor Source Operating Permit Renewal OFFICE OF AIR QUALITY

D & W Fine Pack LLC
7707 Vicksburg Pike
Fort Wayne, Indiana 46804

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

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

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 MSOP under 326 IAC 2-6.1.

Operation Permit No. M003-31054-00346	
Issued by:  Nathan C. Bell, Section Chief Permits Branch Office of Air Quality	Issuance Date: September 26, 2012 Expiration Date: September 26, 2022

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 and A.2 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 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary molded plastic packaging plant.

Source Address:	7707 Vicksburg Pike, Fort Wayne, Indiana 46804
General Source Phone Number:	260-459-9785
SIC Code:	3089 (Plastic Products Not Elsewhere Classified)
County Location:	Allen
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source 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

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

- (a) Resin pellets are loaded into thirty-six (36) granular polystyrene storage silos, located outdoors, each with a capacity of 4,025 cubic feet, consisting of:
- (1) Three (3) pellet silos, identified as #1, #8, and #9, installed in 1990, with a maximum capacity of 399 pounds per hour. Silos #1 and #8 exhaust to a mesh vent and silo number 9 has a baghouse filter for particulate control;
 - (2) Six (6) partitioned pellet silos, identified as #2, #3, #4, #5, #6, and #7, installed in 1990, with a maximum capacity of 399 pounds per hour and exhausting to mesh vents;
 - (3) Six (6) pellet silos, identified as #10, #11, #12, #13, #14, and #15, installed in 1995, with a maximum capacity of 399 pounds per hour and exhausting to mesh vents;
 - (4) Twelve (12) pellet silos, identified as #16, #17, #18, #19, #20, #21, #22, #23, #24, #25, #26, and #27, installed in 2002, with a maximum capacity of 399 pounds per hour and exhausting to mesh vents; and
 - (5) Nine (9) pellet silos, identified as #28, #29, #30, #31, #32, #33, #34, #35, and #36, installed in 2005, with a maximum capacity of 399 pounds per hour and exhausting to mesh vents.

Note: This facility uses several fully enclosed pneumatic conveyance systems for the transport and handling of plastic resin pellets. The plastic resin pellets are delivered to the facility by railcar, semi truck or bulk box delivery, and they are pneumatically conveyed to thirty-six (36) fully enclosed plastic storage silos. The resin pellets are then pneumatically conveyed to the extruders to be made into sheets which are stored as

rolls. The extruded sheets and molds are used for the thermoforming operation. After passing through the thermoformers, the 'skeleton' or scrap materials are granulated and pneumatically conveyed to the scrap regrind area where the scrap is pelletized and sent back to the extruder operation for reuse.

- (b) Twenty (20) granular polystyrene storage silos, located indoors, each with a capacity of 516 cubic feet, consisting of:
 - (1) Seven (7) flake silo units, identified as A, B, C, D, E, F, and G were installed in 1990, with a maximum capacity of 300 pounds per hour. Four of these flake silo units (A, C, E, and G) have a baghouse filter for particulate control, three have mesh vents;
 - (2) Five (5) units, identified as H, I, J, K, and L, were installed in 2002, with a maximum capacity of 300 pounds per hour. Four of these flake silo units (I, J, K, and L) have a baghouse filter for particulate control, one flake silo unit has a mesh vent;
 - (3) Eight (8) units, identified as M, N, O, P, Q, R, S, and T, were installed in 2006, with a maximum capacity of 300 pounds per hour. All of these flake silo units have a baghouse filter for particulate control.
- (c) Fifteen (15) plastic extruders, located indoors, these units consist of:
 - (1) One (1) co-extruder unit, identified as extruder #1, with a maximum capacity of 1200 lbs/hr, with seventy percent of material processed through a baghouse filtration system, exhausting to stack EF-C-3, and installed in 1990;
 - (2) One (1) mono layer unit, identified as extruder #2, with a maximum capacity of 1080 lbs/hr, exhausting to stack EF-E-2, and installed in 1990;
 - (3) One (1) co-extruder unit, identified as extruder #3, with a maximum capacity of 2000 lbs/hr, with seventy percent of material processed through a baghouse filtration system, exhausting to stack EF-F-2, and installed in 1995;
 - (4) Two (2) co-extruder units, identified as extruders #4 and #5, each with a maximum capacity of 1750 lbs/hr, with a vacuum system and singed polyester fiber filters, exhausting to stack EF-Q-5, and installed in 2002;
 - (5) One (1) tandem unit, identified as extruder #6, with a maximum capacity of 900 lbs/hr, with a vacuum system and a singed polyester fiber filter, exhausting within the building (indirectly exhausting to stack EF-U-5), and installed in 2002;
 - (6) One (1) mono layer unit, identified as extruder #7, with a maximum capacity of 1080 lbs/hr, with a vacuum system and a singed polyester fiber filter, exhausting within the building (indirectly exhausting to stack EF-AK-8), and installed in 2006;
 - (7) One (1) co-extruder unit, identified as #8, with a maximum capacity of 2000 lbs/hr, with a vacuum system and a singed polyester fiber filter, exhausting within the building (indirectly exhausting to stack EF-AM-9), and installed in 2006;
 - (8) Two (2) twin screw units, identified as #9 and #10, each with a maximum capacity of 1300 lbs/hr, with a baghouse filtration system, exhausting within the building (indirectly exhausting to stack EF-I-1), and installed in 2002;
 - (9) One (1) pelletizing unit, identified as #11, with a maximum capacity of 1000

- lbs/hr, with a prototype filter system, exhausting within the building (indirectly exhausting to stack EF-I-4), and installed in 1991;
- (10) One (1) pelletizing unit, identified as #12, with a maximum capacity of 1000 lbs/hr, with a prototype filter system, exhausting within the building (indirectly exhausting to stack EF-J-4), and installed in 1991;
 - (11) One (1) pelletizing unit, identified as #13, with a maximum capacity of 1000 lbs/hr, exhausting within the building (indirectly exhausting to stack EF-J-5), installed in 2002;
 - (12) One (1) pelletizing unit, identified as #14, with a maximum capacity of 1500 lbs/hr, with a baghouse filtration system, exhausting within the building (indirectly exhausting to stack EF-AG-8), and installed in 2006; and
 - (13) One (1) pelletizing unit, identified as #15, with a maximum capacity of 1500 lbs/hr, with a baghouse filtration system, exhausting within the building (indirectly exhausting to stack EF-AG-9), and installed in 2006.
- (d) Twenty-five (25) plastic thermoformers, located indoors, and exhausting within the building. These units consist of:
- (1) Four (4) units, identified as #2, #4, #5, and #6, with a maximum capacity of 600 lbs/hr and installed in 1990;
 - (2) One (1) unit, identified as #3, with a maximum capacity of 600 lbs/hr and installed in 1993;
 - (3) Five (5) units, identified as #7, #8, #10 and #12, and #13, with a maximum capacity of 600 lbs/hr and installed in 1995;
 - (4) Three (3) units, identified as #9, #11 and #23, with a maximum capacity of 600 lbs/hr and installed in 2002;
 - (5) Six (6) units, identified as #14, #15, #16, #24, #25, and #26, with a maximum capacity of 600 lbs/hr and installed in 2005;
 - (6) One (1) unit, identified as #17, with a maximum capacity of 1000 lbs/hr and installed in 1995;
 - (7) Two (2) units, identified as #18 and #19, with a maximum capacity of 1000 lbs/hr and installed in 2002;
 - (8) Three (3) units, identified as #20 and #21, and #22, with a maximum capacity of 600 lbs/hr and installed in 2006.
- (e) Thirty-eight (38) flakers (cutters), located indoors, uncontrolled, and exhausting within the building. These units consist of:
- (1) One (1) unit, identified as #1, with a maximum capacity of 30 lbs/hr and installed in 1994;
 - (2) One (1) unit, identified as #2, with a maximum capacity of 30 lbs/hr and installed in 1990;
 - (3) One (1) unit, identified as #3, with a maximum capacity of 50 lbs/hr and installed

- in 2006;
- (4) Two (2) units, identified as #4 and #5, each with a maximum capacity of 50 lbs/hr and installed in 2002;
 - (5) One (1) unit, identified as #6, with a maximum capacity of 40 lbs/hr and installed in 2002;
 - (6) One (1) unit, identified as #7, with a maximum capacity of 35 lbs/hr and installed in 2005;
 - (7) One (1) unit, identified as #8, with a maximum capacity of 50 lbs/hr and installed in 2002;
 - (8) Three (3) units, identified as #9, #10, and #38, each with a maximum capacity of 150 lbs/hr and installed in 1990;
 - (9) Two (2) units, identified as #11 #12, with a maximum capacity of 150 lbs/hr and installed in 2005;
 - (10) Four (4) units, identified as #13, #15, #17, and #19, each with a maximum capacity of 70 lbs/hr and installed in 1990;
 - (11) Four (4) units, identified as #14, #18, #21, and #23, each with a maximum capacity of 70 lbs/hr and installed in 1994;
 - (12) One (1) unit, identified as #16, with a maximum capacity of 70 lbs/hr and installed in 1993;
 - (13) One (1) unit, identified as #20, with a maximum capacity of 70 lbs/hr and installed in 2000;
 - (14) Four (4) units, identified as #22, #29, #30 and #34, each with a maximum capacity of 70 lbs/hr and installed in 2001;
 - (15) Two (2) units, identified as #24 and #26, each with a maximum capacity of 70 lbs/hr and installed in 1995;
 - (16) Three (3) units, identified as #25, #27, and #35, each with a maximum capacity of 70 lbs/hr and installed in 2005;
 - (17) One (1) unit, identified as #28, with a maximum capacity of 70 lbs/hr and installed in 2002;
 - (18) Three (3) units, identified as #31, #32, and #33, each with a maximum capacity of 70 lbs/hr and installed in 2006;
 - (19) Two (2) units, identified as #36 and #37, each with a maximum capacity of 70 lbs/hr and installed in 2004.
- (f) Three (3) ultraviolet cure ink printers, with a combined maximum capacity of 45.66 pounds of ink per hour, uncontrolled, not venting to a stack, consisting of:
- (1) One (1) unit, identified as #1, installed in 1990; and
 - (2) Two (2) units, identified as #2 and #3, installed in 1995.

- (g) Insignificant activities consisting of the following:
- (1) Natural gas fired combustion units each with heat input capacities equal to or less than ten million (10,000,000) BTU per hour, with a combined heat input capacity of 56.2 MMBtu/hr, itemized as follows:
 - (i) Twenty (20) heater units, identified as #1-20, installed in 1992;
 - (ii) Sixteen (16) heater units, identified as #21-36, installed in 2001; and
 - (iii) Nine (9) heating units, identified as #37-45, installed in 2005.
 - (2) Anti-fog solution application unit, installed in 1996 with a maximum capacity of 1.19 pounds per hour.
 - (3) Paved roads.

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

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 2-1.1-1) shall prevail.

B.2 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

- (a) This permit, M003-31054-00346, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

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

B.4 Enforceability

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

B.5 Severability

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

B.6 Property Rights or Exclusive Privilege

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

B.7 Duty to Provide Information

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

B.8 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) The annual notice shall be submitted in the format attached no later than March 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
- (c) The notification 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.

B.9 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:
 - (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.

The Permittee shall implement the PMPs.
- (b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, 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 Permittee shall implement the PMPs.

- (c) 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.
- (d) 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.10 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to M003-31054-00346 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.11 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

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 one hundred twenty (120) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.12 Permit Renewal [326 IAC 2-6.1-7]

- (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 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require an affirmation that the statements in the application are true and complete 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 one hundred twenty (120) days 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 2-6.1 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 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.13 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 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

- (c) The Permittee shall notify the OAQ no later than thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.14 Source Modification Requirement

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

**B.15 Inspection and Entry
[326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][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 permitted 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.16 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 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

The application which shall be submitted by the Permittee does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

B.17 Annual Fee Payment [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees due no later than thirty (30) calendar days of receipt of a bill from IDEM, OAQ,.
- (b) 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.18 Credible Evidence [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 2-6.1-5(a)(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 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

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.

- (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. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

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

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.
- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date.
- (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 2-6.1-5(a)(2)]

C.10 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.11 Instrument Specifications [326 IAC 2-1.1-11]

- (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

C.12 Response to Excursions or Exceedances

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.13 Actions Related to Noncompliance Demonstrated by a Stack Test

- (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.

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

C.14 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.15 General Record Keeping Requirements [326 IAC 2-6.1-5]

- (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 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) Reports required by conditions in Section D of 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

- (b) 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.

- (c) 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.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(c) Fifteen (15) plastic extruders, located indoors, these units consist of:

- (3) One (1) co-extruder unit, identified as extruder #3, with a maximum capacity of 2000 lbs/hr, with seventy percent of material processed through a baghouse filtration system, exhausting to stack EF-F-2, and installed in 1995;
- (4) Two (2) co-extruder units, identified as extruders #4 and #5, each with a maximum capacity of 1750 lbs/hr, with a vacuum system and singed polyester fiber filters, exhausting to stack EF-Q-5, and installed in 2002;
- (7) One (1) co-extruder unit, identified as #8, with a maximum capacity of 2000 lbs/hr, with a vacuum system and a singed polyester fiber filter, exhausting within the building (indirectly exhausting to stack EF-AM-9), and installed in 2006;
- (12) One (1) pelletizing unit, identified as #14, with a maximum capacity of 1500 lbs/hr, exhausting within the building (indirectly exhausting to stack EF-AG-8), and installed in 2006; and
- (13) One (1) pelletizing unit, identified as #15, with a maximum capacity of 1500 lbs/hr, exhausting within the building (indirectly exhausting to stack EF-AG-9), and installed in 2006.

(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 2-6.1-5(a)(1)]

D.1.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from extruders 3, 4, 5, 8, 14, and 15 shall each be limited by the following:

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

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

Emission Unit	Process Weight Rate (tons/hr)	326 IAC 6-3-2 Allowable Particulate Emission Rate (lbs/hr)
Extruder 3	1.00	4.10
Extruder 4	0.88	3.75
Extruder 5	0.88	3.75
Extruder 8	1.00	4.10
Extruder 14	0.75	3.38
Extruder 15	0.75	3.38

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

**MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	D & W Fine Pack LLC
Address:	7707 Vicksburg Pike
City:	Fort Wayne, Indiana 46804
Phone #:	260-459-9785
MSOP #:	M003-31054-00346

I hereby certify that D & W Fine Pack LLC is:

still in operation.

no longer in operation.

I hereby certify that D & W Fine Pack LLC is:

in compliance with the requirements of MSOP M003-31054-00346.

not in compliance with the requirements of MSOP M003-31054-00346.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FAX NUMBER: (317) 233-6865

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6
and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100 TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF "MALFUNCTION" AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: _____ PHONE NO. () _____
LOCATION: (CITY AND COUNTY) _____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP: _____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/20____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____
INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY: _____ TITLE: _____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a
Minor Source Operating Permit Renewal

Source Background and Description
--

Source Name:	D & W Fine Pack LLC
Source Location:	7707 Vicksburg Pike, Fort Wayne, Indiana 46804
County:	Allen
SIC Code:	3089 (Plastic Products Not Elsewhere Classified)
Permit Renewal No.:	M003-31054-00346
Permit Reviewer:	Susann Brown

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from D&W Fine Pack LLC relating to the continued operation of a stationary molded plastic packaging plant. On October 21, 2011, D & W Fine Pack LLC submitted an application to the OAQ requesting to renew its operating permit. This is the first renewal of the operating permit for D & W Fine Pack LLC.

Permitted Emission Units and Pollution Control Equipment

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

- (a) Resin pellets are loaded into thirty-six (36) granular polystyrene storage silos, located outdoors, each with a capacity of 4,025 cubic feet, consisting of:
 - (1) Three (3) pellet silos, identified as #1, #8, and #9, installed in 1990, with a maximum capacity of 399 pounds per hour. Silos #1 and #8 exhaust to a mesh vent and silo number 9 has a baghouse filter for particulate control;
 - (2) Six (6) partitioned pellet silos, identified as #2, #3, #4, #5, #6, and #7, installed in 1990, with a maximum capacity of 399 pounds per hour and exhausting to mesh vents;
 - (3) Six (6) pellet silos, identified as #10, #11, #12, #13, #14, and #15, installed in 1995, with a maximum capacity of 399 pounds per hour and exhausting to mesh vents;
 - (4) Twelve (12) pellet silos, identified as #16, #17, #18, #19, #20, #21, #22, #23, #24, #25, #26, and #27, installed in 2002, with a maximum capacity of 399 pounds per hour and exhausting to mesh vents; and
 - (5) Nine (9) pellet silos, identified as #28, #29, #30, #31, #32, #33, #34, #35, and #36, installed in 2005, with a maximum capacity of 399 pounds per hour and exhausting to mesh vents.

Note: This facility uses several fully enclosed pneumatic conveyance systems for the transport and handling of plastic resin pellets. The plastic resin pellets are delivered to the facility by railcar, semi truck or bulk box delivery, and they are pneumatically conveyed to thirty-six (36) fully enclosed plastic storage silos. The resin pellets are then pneumatically conveyed to the extruders to be made into sheets which are stored as

rolls. The extruded sheets and molds are used for the thermoforming operation. After passing through the thermoformers, the 'skeleton' or scrap materials are granulated and pneumatically conveyed to the scrap regrind area where the scrap is pelletized and sent back to the extruder operation for reuse.

- (b) Twenty (20) granular polystyrene storage silos, located indoors, each with a capacity of 516 cubic feet, consisting of:
- (1) Seven (7) flake silo units, identified as A, B, C, D, E, F, and G were installed in 1990, with a maximum capacity of 300 pounds per hour. Four of these flake silo units (A, C, E, and G) have a baghouse filter for particulate control, three have mesh vents;
 - (2) Five (5) units, identified as H, I, J, K, and L, were installed in 2002, with a maximum capacity of 300 pounds per hour. Four of these flake silo units (I, J, K, and L) have a baghouse filter for particulate control, one flake silo unit has a mesh vent;
 - (3) Eight (8) units, identified as M, N, O, P, Q, R, S, and T, were installed in 2006, with a maximum capacity of 300 pounds per hour. All of these flake silo units have a baghouse filter for particulate control.
- (c) Fifteen (15) plastic extruders, located indoors, these units consist of:
- (1) One (1) co-extruder unit, identified as extruder #1, with a maximum capacity of 1200 lbs/hr, with seventy percent of material processed through a baghouse filtration system, exhausting to stack EF-C-3, and installed in 1990;
 - (2) One (1) mono layer unit, identified as extruder #2, with a maximum capacity of 1080 lbs/hr, exhausting to stack EF-E-2, and installed in 1990;
 - (3) One (1) co-extruder unit, identified as extruder #3, with a maximum capacity of 2000 lbs/hr, with seventy percent of material processed through a baghouse filtration system, exhausting to stack EF-F-2, and installed in 1995;
 - (4) Two (2) co-extruder units, identified as extruders #4 and #5, each with a maximum capacity of 1750 lbs/hr, with a vacuum system and singed polyester fiber filters, exhausting to stack EF-Q-5, and installed in 2002;
 - (5) One (1) tandem unit, identified as extruder #6, with a maximum capacity of 900 lbs/hr, with a vacuum system and a singed polyester fiber filter, exhausting within the building (indirectly exhausting to stack EF-U-5), and installed in 2002;
 - (6) One (1) mono layer unit, identified as extruder #7, with a maximum capacity of 1080 lbs/hr, with a vacuum system and a singed polyester fiber filter, exhausting within the building (indirectly exhausting to stack EF-AK-8), and installed in 2006;
 - (7) One (1) co-extruder unit, identified as #8, with a maximum capacity of 2000 lbs/hr, with a vacuum system and a singed polyester fiber filter, exhausting within the building (indirectly exhausting to stack EF-AM-9), and installed in 2006;
 - (8) Two (2) twin screw units, identified as #9 and #10, each with a maximum capacity of 1300 lbs/hr, with a baghouse filtration system, exhausting within the building (indirectly exhausting to stack EF-I-1), and installed in 2002;

- (9) One (1) pelletizing unit, identified as #11, with a maximum capacity of 1000 lbs/hr, with a prototype filter system, exhausting within the building (indirectly exhausting to stack EF-I-4), and installed in 1991;
 - (10) One (1) pelletizing unit, identified as #12, with a maximum capacity of 1000 lbs/hr, with a prototype filter system, exhausting within the building (indirectly exhausting to stack EF-J-4), and installed in 1991;
 - (11) One (1) pelletizing unit, identified as #13, with a maximum capacity of 1000 lbs/hr, exhausting within the building (indirectly exhausting to stack EF-J-5), installed in 2002;
 - (12) One (1) pelletizing unit, identified as #14, with a maximum capacity of 1500 lbs/hr, with a baghouse filtration system, exhausting within the building (indirectly exhausting to stack EF-AG-8), and installed in 2006; and
 - (13) One (1) pelletizing unit, identified as #15, with a maximum capacity of 1500 lbs/hr, with a baghouse filtration system, exhausting within the building (indirectly exhausting to stack EF-AG-9), and installed in 2006.
- (d) Twenty-five (25) plastic thermoformers, located indoors, and exhausting within the building. These units consist of:
- (1) Four (4) units, identified as #2, #4, #5, and #6, with a maximum capacity of 600 lbs/hr and installed in 1990;
 - (2) One (1) unit, identified as #3, with a maximum capacity of 600 lbs/hr and installed in 1993;
 - (3) Five (5) units, identified as #7, #8, #10 and #12, and #13, with a maximum capacity of 600 lbs/hr and installed in 1995;
 - (4) Three (3) units, identified as #9, #11 and #23, with a maximum capacity of 600 lbs/hr and installed in 2002;
 - (5) Six (6) units, identified as #14, #15, #16, #24, #25, and #26, with a maximum capacity of 600 lbs/hr and installed in 2005;
 - (6) One (1) unit, identified as #17, with a maximum capacity of 1000 lbs/hr and installed in 1995;
 - (7) Two (2) units, identified as #18 and #19, with a maximum capacity of 1000 lbs/hr and installed in 2002;
 - (8) Three (3) units, identified as #20 and #21, and #22, with a maximum capacity of 600 lbs/hr and installed in 2006.
- (e) Thirty-eight (38) flakers (cutters), located indoors, uncontrolled, and exhausting within the building. These units consist of:
- (1) One (1) unit, identified as #1, with a maximum capacity of 30 lbs/hr and installed in 1994;
 - (2) One (1) unit, identified as #2, with a maximum capacity of 30 lbs/hr and installed in 1990;

- (3) One (1) unit, identified as #3, with a maximum capacity of 50 lbs/hr and installed in 2006;
 - (4) Two (2) units, identified as #4 and #5, each with a maximum capacity of 50 lbs/hr and installed in 2002;
 - (5) One (1) unit, identified as #6, with a maximum capacity of 40 lbs/hr and installed in 2002;
 - (6) One (1) unit, identified as #7, with a maximum capacity of 35 lbs/hr and installed in 2005;
 - (7) One (1) unit, identified as #8, with a maximum capacity of 50 lbs/hr and installed in 2002;
 - (8) Three (3) units, identified as #9, #10, and #38, each with a maximum capacity of 150 lbs/hr and installed in 1990;
 - (9) Two (2) units, identified as #11 #12, with a maximum capacity of 150 lbs/hr and installed in 2005;
 - (10) Four (4) units, identified as #13, #15, #17, and #19, each with a maximum capacity of 70 lbs/hr and installed in 1990;
 - (11) Four (4) units, identified as #14, #18, #21, and #23, each with a maximum capacity of 70 lbs/hr and installed in 1994;
 - (12) One (1) unit, identified as #16, with a maximum capacity of 70 lbs/hr and installed in 1993;
 - (13) One (1) unit, identified as #20, with a maximum capacity of 70 lbs/hr and installed in 2000;
 - (14) Four (4) units, identified as #22, #29, #30 and #34, each with a maximum capacity of 70 lbs/hr and installed in 2001;
 - (15) Two (2) units, identified as #24 and #26, each with a maximum capacity of 70 lbs/hr and installed in 1995;
 - (16) Three (3) units, identified as #25, #27, and #35, each with a maximum capacity of 70 lbs/hr and installed in 2005;
 - (17) One (1) unit, identified as #28, with a maximum capacity of 70 lbs/hr and installed in 2002;
 - (18) Three (3) units, identified as #31, #32, and #33, each with a maximum capacity of 70 lbs/hr and installed in 2006;
 - (19) Two (2) units, identified as #36 and #37, each with a maximum capacity of 70 lbs/hr and installed in 2004.
- (f) Three (3) ultraviolet cure ink printers, with a combined maximum capacity of 45.66 pounds of ink per hour, uncontrolled, not venting to a stack, consisting of:
- (1) One (1) unit, identified as #1, installed in 1990; and

- (2) Two (2) units, identified as #2 and #3, installed in 1995.
- (g) Insignificant activities consisting of the following:
 - (1) Natural gas fired combustion units each with heat input capacities equal to or less than ten million (10,000,000) BTU per hour, with a combined heat input capacity of 56.2 MMBtu/hr, itemized as follows:
 - (i) Twenty (20) heater units, identified as #1-20, installed in 1992;
 - (ii) Sixteen (16) heater units, identified as #21-36, installed in 2001; and
 - (iii) Nine (9) heating units, identified as #37-45, installed in 2005.
 - (2) Anti-fog solution application unit, installed in 1996 with a maximum capacity of 1.19 pounds per hour.
 - (3) Paved roads.

Emission Units and Pollution Control Equipment Removed From the Source

The source has removed the following emission units from the permit:

- (a) Five (5) plastic thermoformers, these units consist of:
 - (1) One (1) unit, identified as #1, installed in 1990;
 - (2) One (1) unit, identified as #27 and installed in 2005; and
 - (3) Three (3) units, identified as #28, #29 and #30 installed in 2006.
- (b) Three (3) flakers (cutters), these units consist of:
 - (1) One (1) units, identified as #39, installed in 2001; and
 - (2) Two (2) units, identified as #40 and #41, installed in 2004.

Existing Approvals

Since the issuance of the MSOP (M003-23606-00346) on March 22, 2007, no additional approvals have been issued to this source.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Allen County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective February 12, 2007, for the Fort Wayne area, including Allen County, 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 (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Allen County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (b) **PM_{2.5}**
 Allen County has been classified as attainment for PM_{2.5}. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM_{2.5} emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct PM_{2.5} significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct PM_{2.5} and SO₂ emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

- (c) **Other Criteria Pollutants**
 Allen County has been classified as attainment or unclassifiable in Indiana for all 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.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Pollutant	Tons/year
PM	82.71
PM ₁₀ *	80.68
PM _{2.5}	80.23
SO ₂	0.14
VOC	41.60
CO	20.26
NO _x	24.12
GHGs as CO ₂ e	29,118
Worst Single HAP	9.62 (styrene)
Total HAPs	10.73

* 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) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all regulated pollutants, excluding GHGs, is less than 100 tons per year, and the potential to emit PM, PM10, PM2.5, and VOC are each greater than 25 tons per year. The source is not subject to the provisions of 326 IAC 2-7. Therefore, the source will be issued an MSOP Renewal.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of GHGs is less than one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year.
- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source will be issued an MSOP Renewal.

Federal Rule Applicability

Compliance Assurance Monitoring (CAM)

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

New Source Performance Standards (NSPS)

- (b) The requirements of the New Source Performance Standard for Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc, are not included in this permit because the maximum design heat input capacity of each natural gas-fired heater is less than 10 MMBtu/hr.

- (c) The requirements of the New Source Performance Standard for VOC Emissions from the Polymer Industry, 40 CFR 60, Subpart DDD (326 IAC 12), are not included in the permit, since this source does not manufacture polypropylene, polyethylene, polystyrene, or poly (ethyleneterephthalate), as defined in 60.561. This source manufactures molded plastic packaging from purchased plastic resin pellets under SIC Code 3089, and does not manufacture synthetic resins through predominantly chemical processes (e.g., SIC Codes 2821 and 2824).
- (d) 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 the printing presses at this source are not rotogravure printing presses.
- (e) The requirements of the New Source Performance Standards for Pressure Sensitive Tape and Label Surface Coating Operations, 40 CFR 60, Subpart RR (60.440 to 60.447) (326 IAC 12), are not included in this permit, because this source does not manufacture pressure sensitive tape and label materials.
- (f) 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 presses.
- (g) The requirements of the New Source Performance Standards for Polymeric Coating of Supporting Substrates Facilities, 40 CFR 60, Subpart VVV (60.740 to 60.748) (326 IAC 12), are not included in this permit, because the source does not perform polymeric coating of supporting substrates, defined as a web coating process that applies elastomers, polymers, or prepolymers to a supporting web other than paper, plastic film, metallic foil, or metal coil (40 CFR 60.741).
- (h) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (i) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Group I Polymers and Resins, Subpart U (326 IAC 20-19) are not included in this permit for this source, since this source does not have elastomer product process units (EPPU) and associated equipment as defined by 40 CFR 63.482.
- (j) The requirements of the National Emission Standards for Hazardous Air Pollutants for Epoxy Resins Production and Non-Nylon Polyamides Production, Subpart W (326 IAC 20-20) are not included in this permit for this source, since this source does not manufacture basic liquid epoxy resins (BLR) or wet strength resins (WSR) and it is not a major source of HAPs.
- (k) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Group IV Polymers and Resins, Subpart JJJ (326 IAC 20-21) are not included in this permit for this source, since this source does not have thermoplastic product process units (TPPU) and associated equipment as defined by 40 CFR 63.1312. This source manufactures molded plastic packaging from purchased plastic resin pellets under SIC Code 3089, and does not manufacture synthetic resins through predominantly chemical processes (e.g., SIC Codes 2821 and 2824). This source only performs finishing processes (e.g., extruding and thermoforming), which are specifically exempt from the requirements of this rule under 40 CFR 63.1310(d).

- (l) The requirements of the National Emission Standards for Hazardous Air Pollutant Emissions: Manufacture of Amino/Phenolic Resins, Subpart OOO (326 IAC 20-58) are not included in this permit for this source, since this source does not manufacture amino/phenolic resins and it is not a major source of HAPs.
- (m) This requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Reinforced Plastic Composites Production, Subpart WWWW (326 IAC 20-25) are not included in this permit for this source, since the source does not produce reinforced plastic composites as defined by 40 CFR 63.5785 and it is not a major source of HAPs.
- (n) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD (63.7480 through 63.7575) (326 IAC 20-95), are not included in this permit, because this source is not a major source of HAPs as defined in 40 CFR 63.2.
- (o) The natural gas-fired heaters are not subject to the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources (40 CFR Part 63, Subpart JJJJJ), because the natural gas-fired heaters are not boilers as defined by 40 CFR 63.11237.
- (p) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Polyvinyl Chloride and Copolymers Production Area Sources, (40 CFR 63) Subpart DDDDDD are not included in the permit because the source does not produce polyvinyl chloride (PVC) or copolymers.
- (q) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Polyvinyl Chloride and Copolymers Production, 40 CFR 63, Subpart HHHHHHH, are not included in the permit, since the source does not produce polyvinyl chloride and copolymers, as defined in 63.12005, and is not a major source for HAPs.
- (r) The requirements for the National Emission Standards for Hazardous Air Pollutants for the Printing and Publishing Industry, 40 CFR 63, Subpart KK (63.820 to 63.839) (326 IAC 20-18), are not included in this permit, because this source is not a major source of HAPs.
- (s) The requirements of the National Emission Standards for Hazardous Air Pollutants: Printing, Coating, and Dyeing of Fabrics and Other Textiles (40 CFR Part 63, Subpart OOOO) (326 IAC 20-77) are not included in the permit because the source does not print, coat, or dye fabric or other textiles as defined in 40 CFR 63.4371 and is not a major source of HAPs.
- (t) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in this permit renewal.

State Rule Applicability - Entire Source

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

This source is not a major stationary source, under PSD (326 IAC 2-2), because the potential to emit of all attainment regulated criteria pollutants are less than 250 tons per year, the potential to emit greenhouse gases (GHGs) is less than 100,000 tons of CO₂e per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

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

The operation of the entire source will emit less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting) because it is not required to have an operating permit pursuant to 326 IAC 2-7 (Part 70); it is not located in Lake, Porter, or LaPorte County, and its potential to emit lead is less than 5 tons per year. Therefore, this rule does not apply.

326 IAC 5-1 (Opacity Limitations)

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

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

326 IAC 6-4 (Fugitive Dust Emissions Limitations)

Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

The source is not subject to the requirements of 326 IAC 6-5, because the source does not have potential fugitive particulate emissions greater than 25 tons per year. Therefore, 326 IAC 6-5 does not apply.

326 IAC 6.5 PM Limitations Except Lake County

This source is not subject to 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

326 IAC 6.8 PM Limitations for Lake County

This source is not subject to 326 IAC 6.8 because it is not located in Lake County and it does not have the potential to emit particulate matter equal to or greater than 10 tons per year.

State Rule Applicability – Individual Facilities

Indoor and Outdoor Silos, Extruders, Thermoformers, and Flaking (Cutting)

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

- (a) Pursuant to 326 IAC 6-3-1(b)(14), the requirements of 326 IAC 6-3-2 are applicable to plastics extruders 3, 4, 5, 8, 14, and 15 since each of these units has potential particulate emissions greater than five hundred fifty-one thousandths (0.551) pound per hour during extruder loading. Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from extruders 3, 4, 5, 8, 14, and 15 shall each be limited by the following:

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

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

Emission Unit	Process Weight Rate (tons/hr)	326 IAC 6-3-2 Allowable Particulate Emission Rate (lbs/hr)	Potential Emissions Before Control (lbs/hr)	Is a Control Device Needed to Comply with 326 IAC 6-3-2?
Extruder 3	1.00	4.10	0.80	No
Extruder 4	0.88	3.75	0.70	No
Extruder 5	0.88	3.75	0.70	No
Extruder 8	1.00	4.10	0.80	No
Extruder 14	0.75	3.38	0.60	No
Extruder 15	0.75	3.38	0.60	No

The hourly potential particulate matter emissions before control for extruders 3, 4, 5, 8, 14 and 15 are each less than the 326 IAC 6-3-2 allowable hourly rates. Therefore, extruders 3, 4, 5, 8, 14 and 15 are each able to comply with the 326 IAC 6-3 allowable emission rates without the use controls.

- (b) Pursuant to 326 IAC 6-3-1(b)(14), the requirements of 326 IAC 6-3-2 are not applicable to the twenty (20) indoor and thirty-six (36) outdoor silos, plastics extruders 1, 2, 6, 7, 9, 10, 11, 12, and 13, twenty-five (25) plastics thermoformers, and thirty-eight (38) plastics flakers (cutting) are not subject to 326 IAC 6-3-2, because each of these units has uncontrolled potential particulate emissions of less than five hundred fifty-one thousandths (0.551) pound per hour.

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

The twenty (20) indoor and thirty-six (36) outdoor silos, fifteen (15) plastics extruders, twenty-five (25) plastics thermoformers, and thirty-eight (38) plastics flakers (cutting) are each not subject to 326 IAC 8-1-6, because the unlimited potential to emit (PTE) of VOCs from each unit is less than 25 tons per year.

Ultraviolet Cure Ink Printers

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

The three (3) ultraviolet cure ink printers (#1, #2, and #3) are not subject to 326 IAC 6-3-2, because the three (3) ultraviolet cure ink printers (#1, #2, and #3) are not sources of particulate emissions.

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

The three (3) ultraviolet cure ink printers (#1, #2, and #3) are not subject to 326 IAC 8-1-6, since each has unlimited VOC potential emissions of less than twenty-five (25) tons per year.

326 IAC 8-2-9 (Miscellaneous Metal and Plastic Coating Operations)

Each of the three (3) ultraviolet cure ink printers (#1, #2, and #3) are not subject to 326 IAC 8-2-9, because this source is not located in Lake County, and each printer does not perform metal surface coating of any of the items listed under 326 IAC 8-2-9(a)(1) and this source does not operate any of the Standard Industrial Classification (SIC) Codes listed under 326 IAC 8-2-9(a)(1)(E). This process operates under SIC Code 3089 and consists of printing on molded plastic.

326 IAC 8-16 (Offset Lithographic Printing and Letterpress Printing)

This source is not subject to 326 IAC 8-16 (Offset Lithographic Printing and Letterpress Printing), because this source is not located in Lake or Porter County. This source is located in Allen County.

Natural Gas Combustion

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

The forty-five (45) natural gas-fired heaters are not subject to the requirements of 326 IAC 6-2, because none of these emission units are sources of indirect heating.

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

Each of the natural gas-fired heaters is not subject to the requirements of 326 IAC 6-3, since they each are not a "manufacturing process" as defined by 326 IAC 6-3-1.5.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

Pursuant to 326 IAC 7-1.1-1, each of the natural gas-fired heaters is not subject to the requirements of 326 IAC 7-1, since each has unlimited sulfur dioxide (SO₂) emissions less than twenty-five (25) tons per year and ten (10) pounds per hour respectively.

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

Each of the natural gas-fired heaters is not subject to the requirements of 326 IAC 8-1-6, since each has unlimited VOC potential emissions of less than twenty-five (25) tons per year.

Anti-fog Solution Application Unit

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

The anti-fog solution application unit is not subject to 326 IAC 6-3-2, because the anti-fog solution application unit is not a source of particulate emissions.

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

The anti-fog solution application unit is not subject to 326 IAC 8-1-6, since it has unlimited VOC potential emissions of less than twenty-five (25) tons per year.

Compliance Determination and Monitoring Requirements

There are no compliance determination or compliance monitoring requirements applicable to this source.

Recommendation

The staff recommends to the Commissioner that the MSOP Renewal be approved.

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

An application for the purposes of this review was received on October 21, 2011.

Conclusion

The operation of this stationary molded plastic packaging plant shall be subject to the conditions of the attached MSOP Renewal No. M003-31054-00346.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Susann Brown 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) 234-5176 or toll free at 1-800-451-6027 extension 45176.
- (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: Emission Summary

Company Name: D & W Fine Pack LLC
Source Address: 7707 Vicksburg Pike, Fort Wayne IN 46804
Permit Number: M003-31054-00346
Reviewer: Susann Brown

Process Description	Uncontrolled Potential to Emit (PTE) (tons/year)											
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	GHGs as CO ₂ e	Total HAPs	Worst Single HAP		
Silo Loading	35.67	35.67	35.67	-	-	-	-	-	-	-	-	-
Extruder Loading	35.67	35.67	35.67	-	-	-	-	-	-	-	-	-
Extruder	3.08	3.08	3.08	-	-	15.79	-	-	9.36	8.79	styrene	-
Anti-fog Line	-	-	-	-	-	0.21	-	-	-	-	-	-
Thermoformer	2.45	2.45	2.45	-	-	12.56	-	-	0.91	0.40	styrene	-
Flaking (Cutting)	2.43	1.39	1.39	-	-	11.52	-	-	-	-	-	-
UV Printer	-	-	-	-	-	0.20	-	-	-	-	-	-
Small Boilers	0.46	1.83	1.83	0.14	24.12	1.33	20.26	29,118	0.46	0.43	hexane	-
Paved Roads	2.95	0.59	0.14	-	-	-	-	-	-	-	-	-
Total PTE	82.71	80.68	80.23	0.14	24.12	41.60	20.26	29,118	10.73	9.62	styrene	-

Process Description	Controlled Potential to Emit (PTE) (tons/year)											
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	GHGs as CO ₂ e	Total HAPs	Worst Single HAP		
Silo Loading	26.61	26.61	26.61	-	-	-	-	-	-	-	-	-
Extruder Loading	4.39	4.39	4.39	-	-	-	-	-	-	-	-	-
Extruder	3.08	3.08	3.08	-	-	15.79	-	-	9.36	8.79	styrene	-
Anti-fog Line	-	-	-	-	-	0.21	-	-	-	-	-	-
Thermoformer	2.45	2.45	2.45	-	-	12.56	-	-	0.91	0.40	styrene	-
Flaking (Cutting)	2.43	1.39	1.39	-	-	11.52	-	-	-	-	-	-
UV Printer	-	-	-	-	-	0.20	-	-	-	-	-	-
Small Boilers	0.46	1.83	1.83	0.14	24.12	1.33	20.26	29,118	0.46	0.43	hexane	-
Paved Roads	2.70	0.54	0.13	-	-	-	-	-	-	-	-	-
Total PTE	42.11	40.29	39.88	0.14	24.12	41.60	20.26	29118	10.73	9.62	styrene	-

**Appendix A: Emissions Calculations
Bottleneck Throughput of Resin Pellets**

Company Name: D & W Fine Pack LLC
Source Address: 7707 Vicksburg Pike, Fort Wayne IN 46804
Permit Number: M003-31054-00346
Reviewer: Susann Brown

Based on information provided by the source, the extruder process is the bottleneck in the molded plastic packaging plant. Extruders 1 through 10 process raw resin pellets from the 36 outdoor silos. Extruders 11 through 15 process ground resin pellets from the 20 indoor silos.

Extruder	Maximum Capacity (lbs/hr)
Extruder 1	1200
Extruder 2	1080
Extruder 3	2000
Extruder 4	1750
Extruder 5	1750
Extruder 6	900
Extruder 7	1080
Extruder 8	2000
Extruder 9	1300
Extruder 10	1300

Total Bottleneck Throughput (lbs/hr) 14360

Extruder	Maximum Capacity (lbs/hr)
Extruder 11	1000
Extruder 12	1000
Extruder 13	1000
Extruder 14	1500
Extruder 15	1500

Total Bottleneck Throughput (lbs/hr) 6000

Total Bottleneck Throughput for all Extruders (lbs/hr) 20360

Appendix A: Emissions Calculations
PM Emissions
Loading of Resin Pellets to Silo Storage

Company Name: D & W Fine Pack LLC
Source Address: 7707 Vicksburg Pike, Fort Wayne IN 46804
Permit Number: M003-31054-00346
Reviewer: Susann Brown

Loading of Resin Pellet Silos from Bulk Transport

Resin pellets are loaded through an enclosed system from bulk transport into the thirty-six (36) storage silos located outdoors, each with a capacity of 4,025 cubic feet.

Bottleneck Throughput of Resin Silos 1 through 36 (lbs/hr)	14360	(total of 36 silos)
Number of Silos	36	
Average Bottleneck Throughput of Each Resin Pellets Silo (lbs/hr)	399	(each silo)

Emission Unit	Average Bottleneck Throughput (lbs/hr)	*Emission Factor (lb/ton)	Uncontrolled PTE of PM/PM10/PM2.5 (lbs/hr)**	Uncontrolled PTE of PM/PM10/PM2.5 (tons/yr)**	Control Efficiency (%)	Controlled PTE of PM/PM10/PM2.5 (tons/yr)**
Silo 1	399	0.80	0.16	0.70	-	0.699
Silo 2	399	0.80	0.16	0.70	-	0.699
Silo 3	399	0.80	0.16	0.70	-	0.699
Silo 4	399	0.80	0.16	0.70	-	0.699
Silo 5	399	0.80	0.16	0.70	-	0.699
Silo 6	399	0.80	0.16	0.70	-	0.699
Silo 7	399	0.80	0.16	0.70	-	0.699
Silo 8	399	0.80	0.16	0.70	-	0.699
Silo 9	399	0.80	0.16	0.70	99.50%	0.003
Silo 10	399	0.80	0.16	0.70	-	0.699
Silo 11	399	0.80	0.16	0.70	-	0.699
Silo 12	399	0.80	0.16	0.70	-	0.699
Silo 13	399	0.80	0.16	0.70	-	0.699
Silo 14	399	0.80	0.16	0.70	-	0.699
Silo 15	399	0.80	0.16	0.70	-	0.699
Silo 16	399	0.80	0.16	0.70	-	0.699
Silo 17	399	0.80	0.16	0.70	-	0.699
Silo 18	399	0.80	0.16	0.70	-	0.699
Silo 19	399	0.80	0.16	0.70	-	0.699
Silo 20	399	0.80	0.16	0.70	-	0.699
Silo 21	399	0.80	0.16	0.70	-	0.699
Silo 22	399	0.80	0.16	0.70	-	0.699
Silo 23	399	0.80	0.16	0.70	-	0.699
Silo 24	399	0.80	0.16	0.70	-	0.699
Silo 25	399	0.80	0.16	0.70	-	0.699
Silo 26	399	0.80	0.16	0.70	-	0.699
Silo 27	399	0.80	0.16	0.70	-	0.699
Silo 28	399	0.80	0.16	0.70	-	0.699
Silo 29	399	0.80	0.16	0.70	-	0.699
Silo 30	399	0.80	0.16	0.70	-	0.699
Silo 31	399	0.80	0.16	0.70	-	0.699
Silo 32	399	0.80	0.16	0.70	-	0.699
Silo 33	399	0.80	0.16	0.70	-	0.699
Silo 34	399	0.80	0.16	0.70	-	0.699
Silo 35	399	0.80	0.16	0.70	-	0.699
Silo 36	399	0.80	0.16	0.70	-	0.699
Totals				25.16		24.46

Loading of Resin Pellet Silos from Grinders

After grinding of the scrap plastic, the ground plastic is pneumatically conveyed to the twenty (20) storage silos located indoors, each with a capacity of 516 cubic feet.

Bottleneck Throughput of Resin Silos A through T (lbs/hr)	6000	(total of 20 silos)
Number of Silos	20	
Average Throughput of Each Resin Pellets Silo (lbs/hr)	300	(each silo)

Emission Unit	Average Throughput (lbs/hr)	*Emission Factor (lb/ton)	Uncontrolled PTE of PM/PM10/PM2.5 (lbs/hr)**	Uncontrolled PTE of PM/PM10/PM2.5 (tons/yr)**	Control Efficiency (%)	Controlled PTE of PM/PM10/PM2.5 (tons/yr)**
Flake Silo A	300	0.80	0.12	0.53	99.50%	0.003
Flake Silo B	300	0.80	0.12	0.53	-	0.526
Flake Silo C	300	0.80	0.12	0.53	99.50%	0.003
Flake Silo D	300	0.80	0.12	0.53	-	0.526
Flake Silo E	300	0.80	0.12	0.53	99.50%	0.003
Flake Silo F	300	0.80	0.12	0.53	-	0.526
Flake Silo G	300	0.80	0.12	0.53	99.50%	0.003
Flake Silo H	300	0.80	0.12	0.53	-	0.526
Flake Silo I	300	0.80	0.12	0.53	99.50%	0.003
Flake Silo J	300	0.80	0.12	0.53	99.50%	0.003
Flake Silo K	300	0.80	0.12	0.53	99.50%	0.003
Flake Silo L	300	0.80	0.12	0.53	99.50%	0.003
Flake Silo M	300	0.80	0.12	0.53	99.50%	0.003
Flake Silo N	300	0.80	0.12	0.53	99.50%	0.003
Flake Silo O	300	0.80	0.12	0.53	99.50%	0.003
Flake Silo P	300	0.80	0.12	0.53	99.50%	0.003
Flake Silo Q	300	0.80	0.12	0.53	99.50%	0.003
Flake Silo R	300	0.80	0.12	0.53	99.50%	0.003
Flake Silo S	300	0.80	0.12	0.53	99.50%	0.003
Flake Silo T	300	0.80	0.12	0.53	99.50%	0.003
Totals				10.51		2.14

Total Uncontrolled PTE of PM/PM10/PM2.5 (tons/yr)

Total Controlled PTE of PM/PM10/PM2.5 (tons/yr)

Methodology

*AP-42 Emission Factors for product (plastic pellet) storage in grams/kilogram, Table 6.6.2-1, Edition 9/91 (Reformatted 1/95)

Superscript h, without controls, the estimated emission rate is 0.4 gram/1 kg * 1 lb/453.6 g * 907.18 kg/1 ton = 0.8 lb/ton

**Assume PM is equal to PM10 and PM2.5

PM/PM10/PM2.5 from sixteen (16) indoor silos and one (1) outdoor silo are each controlled using a baghouse filtration system with particulate control efficiency of 99.5%.

Uncontrolled PTE of PM/PM10/PM2.5 (lbs/hour) = [Average Throughput (lbs/hr)] * [ton/2000 lbs] * [Emission Factor (lbs/ton)]

Uncontrolled PTE of PM/PM10/PM2.5 (tons/year) = [Uncontrolled PTE of PM/PM10/PM2.5 (lbs/hour)] * [8760 hours/year] / [2000 lbs/ton]

Controlled PTE of PM/PM10/PM2.5 (tons/year) = [Uncontrolled PTE of PM/PM10/PM2.5 (tons/year)] * [1 - Control Efficiency]

Appendix A: Emissions Calculations

**PM Emissions
Unloading of Resin Pellets from Storage Silos to Extruder**

Company Name: D & W Fine Pack LLC
Source Address: 7707 Vicksburg Pike, Fort Wayne IN 46804
Permit Number: M003-31054-00346
Reviewer: Susann Brown

Unloading of Resin Pellets from Storage Silos to Extruder

Resin pellets are unloaded through an enclosed system from the thirty-six (36) storage silos located outdoors to Extruders 1 through 10.

Extruder	Maximum Capacity (lbs/hr)	*Emission Factor (lb/ton)	Uncontrolled PTE of PM/PM10/PM2.5 (lbs/hr)**	Uncontrolled PTE of PM/PM10/PM2.5 (tons/yr)**	Control Efficiency (%)	Controlled PTE of PM/PM10/PM2.5 (tons/yr)**	326 IAC 6-3-2 Allowable Particulate Emission Rate (lbs/hr)***
Extruder 1	1200	0.80	0.48	2.10	99.50%	0.0032	NA
Extruder 2	1080	0.80	0.43	1.89	-	1.8922	NA
Extruder 3	2000	0.80	0.80	3.50	99.50%	0.0053	4.10
Extruder 4	1750	0.80	0.70	3.07	95%	0.1533	3.75
Extruder 5	1750	0.80	0.70	3.07	95%	0.1533	3.75
Extruder 6	900	0.80	0.36	1.58	95%	0.0788	NA
Extruder 7	1080	0.80	0.43	1.89	95%	0.0946	NA
Extruder 8	2000	0.80	0.80	3.50	95%	0.1752	4.10
Extruder 9	1300	0.80	0.52	2.28	99.50%	0.0114	NA
Extruder 10	1300	0.80	0.52	2.28	99.50%	0.0114	NA
Totals				25.16		2.58	

Unloading of Resin Pellets from Storage Silos to Extruder

Ground resin pellets are unloaded through an enclosed system from the twenty (20) storage silos located indoors to Extruders 11 through 15.

Extruder	Maximum Capacity (lbs/hr)	*Emission Factor (lb/ton)	Uncontrolled PTE of PM/PM10/PM2.5 (lbs/hr)**	Uncontrolled PTE of PM/PM10/PM2.5 (tons/yr)**	Control Efficiency (%)	Controlled PTE of PM/PM10/PM2.5 (tons/yr)**	326 IAC 6-3-2 Allowable Particulate Emission Rate (lbs/hr)***
Extruder 11	1000	0.80	0.40	1.75	99%	0.0175	NA
Extruder 12	1000	0.80	0.40	1.75	99%	0.0175	NA
Extruder 13	1000	0.80	0.40	1.75	-	1.7520	NA
Extruder 14	1500	0.80	0.60	2.63	99.50%	0.0131	3.38
Extruder 15	1500	0.80	0.60	2.63	99.50%	0.0131	3.38
Totals				10.51		1.81	

Total Uncontrolled PTE of PM/PM10/PM2.5 (tons/yr)	35.67
Total Controlled PTE of PM/PM10/PM2.5 (tons/yr)	4.39

Methodology

*AP-42 Emission Factors for product (plastic pellet) storage in grams/kilogram, Table 6.6.2-1, Edition 9/91 (Reformatted 1/95)

Superscript h, without controls, the estimated emission rate is 0.4 gram/1 kg * 1 lb/453.6 g * 907.18 kg/1 ton = 0.8 lb/ton

**Assume PM is equal to PM10 and PM2.5

***NA = Not applicable, since the uncontrolled potential particulate emissions of each unit are less than five hundred fifty-one thousandths (0.551) pound per hour.

The Extruders have varying levels of control systems for PM/PM10/PM2.5:

Extruder 1: Seventy percent of material processed has a baghouse filtration system with particulate control efficiency of 99.5%.

Extruder 3: Seventy percent of material processed has a baghouse filtration system with particulate control efficiency of 99.5%.

Extruders 4-8: Vacuum system and singed polyester fiber filters with particulate control efficiency of 95%.

Extruders 9-10: Baghouse filtration system with particulate control efficiency of 99.5%.

Extruders 11-12: Prototype filter systems (16 oz felt bags rated to filter to 1 micron according to American Fabric Filter) with particulate control efficiency of 99%.

Extruders 14-15: Baghouse filtration system with particulate control efficiency of 99.5%.

Uncontrolled PTE of PM/PM10/PM2.5 (lbs/hour) = [Average Throughput (lbs/hr)] * [ton/2000 lbs] * [Emission Factor (lbs/ton)]

Uncontrolled PTE of PM/PM10/PM2.5 (tons/year) = [Uncontrolled PTE of PM/PM10/PM2.5 (lbs/hour)] * [8760 hours/year] / [2000 lbs/ton]

**Appendix A: Emissions Calculations
PM and VOC emissions
Extruders**

Company Name: D & W Fine Pack LLC
Source Address: 7707 Vicksburg Pike, Fort Wayne IN 46804
Permit Number: M003-31054-00346
Reviewer: Susann Brown

Equipment Name	Maximum Process Weight Rate (lbs/hr)	High Impact Polystyrene (lbs/hr) 22% of Maximum Process Rate	Polypropylene (lbs/hr) 11% of Maximum Process Rate	General Polystyrene (lbs/hr) 60% of Maximum Process Rate	Styrene Butadiene Rubber (lbs/hr) 7% of Maximum Process Rate	*PM/PM10/PM2.5 ⁽¹⁾			VOC - Polypropylene ⁽³⁾			VOC - Polystyrene ⁽²⁾		
						Emission Factor lbs/10 ⁶ lbs	Potential to Emit lbs/hr	Potential to Emit tons/yr	Emission Factor lbs/10 ⁶ lbs	Potential to Emit lbs/hr	Potential to Emit tons/yr	Emission Factor lbs/10 ⁶ lbs	Potential to Emit lbs/hr	Potential to Emit tons/yr
Extruder 1	1200	264	132	720	84	34.50	0.041	0.181	80.30	0.011	0.046	189	0.202	0.884
Extruder 2	1080	237.6	118.8	648	75.6	34.50	0.037	0.163	80.30	0.010	0.042	189	0.182	0.796
Extruder 3	2000	440	220	1200	140	34.50	0.069	0.302	80.30	0.018	0.077	189	0.336	1.474
Extruder 4	1750	385	192.5	1050	122.5	34.50	0.060	0.264	80.30	0.015	0.068	189	0.294	1.289
Extruder 5	1750	385	192.5	1050	122.5	34.50	0.060	0.264	80.30	0.015	0.068	189	0.294	1.289
Extruder 6	900	198	99	540	63	34.50	0.031	0.136	80.30	0.008	0.035	189	0.151	0.663
Extruder 7	1080	237.6	118.8	648	75.6	34.50	0.037	0.163	80.30	0.010	0.042	189	0.182	0.796
Extruder 8	2000	440	220	1200	140	34.50	0.069	0.302	80.30	0.018	0.077	189	0.336	1.474
Extruder 9	1300	286	143	780	91	34.50	0.045	0.196	80.30	0.011	0.050	189	0.219	0.958
Extruder 10	1300	286	143	780	91	34.50	0.045	0.196	80.30	0.011	0.050	189	0.219	0.958
Extruder 11	1000	220	110	600	70	34.50	0.035	0.151	80.30	0.009	0.039	189	0.168	0.737
Extruder 12	1000	220	110	600	70	34.50	0.035	0.151	80.30	0.009	0.039	189	0.168	0.737
Extruder 13	1000	220	110	600	70	34.50	0.035	0.151	80.30	0.009	0.039	189	0.168	0.737
Extruder 14	1500	330	165	900	105	34.50	0.052	0.227	80.30	0.013	0.058	189	0.252	1.105
Extruder 15	1500	330	165	900	105	34.50	0.052	0.227	80.30	0.013	0.058	189	0.252	1.105
Totals								3.08			0.79			15.00

Total Potential to Emit VOC (tons/year) 15.79

Notes

*Assume PM emissions are equal to PM10 and PM 2.5

Resin types and maximum throughputs were submitted by the source.

The emission factors were taken from technical papers described below in notes 1 through 3. This methodology and the emission factors were also used in Registration No. 005-28577-00102, issued on January 21, 2010 and FESOP No. 019-30695-00103, issued on December 19, 2011.

⁽¹⁾The polypropylene PM emission factor was used for all resin types. The PM emission factors were taken from a technical paper, volume 49, published in January 1999, by the Journal of Air and Waste Management Association titled "Development of Emission Factors for Polypropylene Processing". A melt temperature of 505 °F and reactor impact copolymer was used from Table 5.

⁽²⁾The emission factor for VOC emissions for HIPS/PS/SBR Resins comes from the technical paper, "Sampling and Analysis of Volatile Organic Compounds Evolved During Thermal Processing of Acrylonitrile Butadiene Styrene Composite Resins", from volume 45, published in September 1995 of the Journal of Air and Waste Management Association. The General molding VOC emission factor from Table 4 was used.

⁽³⁾The emission factors for VOC from Polypropylene molding were taken from a technical paper, volume 49, published in January 1999, by the Journal of Air and Waste Management Association titled "Development of Emission Factors for Polypropylene Processing". A melt temperature of 505 °F and reactor impact copolymer was used from Table 5.

Methodology

Potential to Emit (lbs/yr) = [Maximum Throughput (tons/year)] * [Emission Factor (lbs/ton)]

Potential to Emit (tons/yr) = [Potential to Emit (lbs/yr)] * [ton/2000 lbs]

**Appendix A: Emissions Calculations
Potential to Emit Hazardous Air Pollutants (HAPs) from the Extruders**

Company Name: D & W Fine Pack LLC
Source Address: 7707 Vicksburg Pike, Fort Wayne IN 46804
Permit Number: M003-31054-00346
Reviewer: Susann Brown

HAP Emission Factors from Processing Polypropylene

HAP Constituent	⁽¹⁾ Emission Factor (lbs/10 ⁶ lbs)
Acetaldehyde	0.2
Acrolein	0.01
Formaldehyde	0.18
Propionaldehyde	0.95

HAP Emission Factors from Processing ABS

HAP Constituent	⁽²⁾ Emission Factor (lbs/10 ⁶ lbs)
Styrene	126
Ethylbenzene	8.02

Equipment Name	Maximum Process Weight Rate (lbs/hr)	High Impact Polystyrene (lbs/hr) 22% of Maximum Process Rate	Polypropylene (lbs/hr) 11% of Maximum Process Rate	General Polystyrene (lbs/hr) 60% of Maximum Process Rate	Styrene Butadiene Rubber (lbs/hr) 7% of Maximum Process Rate	Acetaldehyde Emissions (tons/yr)	Acrolein Emissions (tons/hr)	Formaldehyde Emissions (tons/yr)	Propionaldehyde Emissions (tons/yr)	Styrene Emissions (tons/yr)	Ethylbenzene Emissions (tons/yr)
Extruder 1	1200	264	132	720	84	1.16E-04	5.78E-06	1.04E-04	5.49E-04	0.59	0.04
Extruder 2	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.29	0.02
Extruder 3	1400	308	154	840	98	1.35E-04	6.75E-06	1.21E-04	6.41E-04	0.69	0.04
Extruder 4	1900	418	209	1140	133	1.83E-04	9.15E-06	1.65E-04	8.70E-04	0.93	0.06
Extruder 5	1900	418	209	1140	133	1.83E-04	9.15E-06	1.65E-04	8.70E-04	0.93	0.06
Extruder 6	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.29	0.02
Extruder 7	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.29	0.02
Extruder 8	1900	418	209	1140	133	1.83E-04	9.15E-06	1.65E-04	8.70E-04	0.93	0.06
Extruder 9	900	198	99	540	63	8.67E-05	4.34E-06	7.81E-05	4.12E-04	0.44	0.03
Extruder 10	900	198	99	540	63	8.67E-05	4.34E-06	7.81E-05	4.12E-04	0.44	0.03
Extruder 11	1000	220	110	600	70	9.64E-05	4.82E-06	8.67E-05	4.58E-04	0.49	0.03
Extruder 12	1000	220	110	600	70	9.64E-05	4.82E-06	8.67E-05	4.58E-04	0.49	0.03
Extruder 13	1000	220	110	600	70	9.64E-05	4.82E-06	8.67E-05	4.58E-04	0.49	0.03
Extruder 14	1500	330	165	900	105	1.45E-04	7.23E-06	1.30E-04	6.87E-04	0.74	0.05
Extruder 15	1500	330	165	900	105	1.45E-04	7.23E-06	1.30E-04	6.87E-04	0.74	0.05
Totals						1.72E-03	8.62E-05	1.55E-03	8.19E-03	8.79	0.56

*Assume PM emissions are equal to PM10 and PM 2.5

Methodology

HAPs Emissions (tons/yr) = [Max Throughput Rate (lbs resin/hr)] * [Emission Factor (lbs/106 lbs) / 1000000] * [8760 (hrs/yr) / 2000 (lbs/ton)]

Notes

⁽¹⁾ Emission factors for HAPs from Polypropylene molding were taken from a technical paper, volume 49 in January 1999, published by the Journal of Air and Waste Management Association titled "Development of Emission Factors for Polypropylene Processing". A melt temperature of 505 oF and reactor impact copolymer was used as the emission factor.

⁽²⁾ Emission factors for HAPs from Styrene were taken from the technical paper, "Sampling and Analysis of Volatile Organic Compounds Evolved During Thermal Processing of Acrylonitrile Butadiene Styrene Composite Resins" from Volume 45 of the Journal of Air and Waste Management Association.

Appendix A: Emissions Calculations
VOC Emissions
Anti-fog Line

Company Name: D & W Fine Pack LLC
Source Address: 7707 Vicksburg Pike, Fort Wayne IN 46804
Permit Number: M003-31054-00346
Reviewer: Susann Brown

Actual Annual Throughput (lbs/yr)	Actual Hours Operation (hours/yr)	Potential Throughput (lbs/hour)	Weight % Volatiles	PTE of VOC (tons/yr)
4752	4000	1.188	4.0%	0.21

Methodology

The antifog line applies a sugar based solution to the clear extruded sheet to reduce moisture buildup when the product is used with hot food.

The facility used 4752 pounds of the product during 2011.

VOC = [Weight % Volatiles (water minus organics)] * [Max Product Use/hr*8760 hr/yr*1 ton/2000 lbs] = Tons per Year

**Appendix A: Emissions Calculations
PM and VOC Emissions
Thermoformers**

Company Name: D & W Fine Pack LLC
Source Address: 7707 Vicksburg Pike, Fort Wayne IN 46804
Permit Number: M003-31054-00346
Reviewer: Susann Brown

Total Bottleneck Throughput for all Extruders (lbs/hr)	20360
Number of Thermoformers	25
Average Bottleneck Throughput of Each Thermoformer (lbs/hr)	814 (each Thermoformer)

Equipment Name	Average Bottleneck Throughput (lbs/hr)	High Impact Polystyrene (lbs/hr) 22% of Maximum Process Rate	Polypropylene (lbs/hr) 11% of Maximum Process Rate	General Polystyrene (lbs/hr) 60% of Maximum Process Rate	Styrene Butadiene Rubber (lbs/hr) 7% of Maximum Process Rate	*PM/PM10/PM2.5 ⁽¹⁾			VOC - Polypropylene ⁽²⁾			VOC - Polystyrene ⁽²⁾		
						Emission Factor lbs/10 ⁶ lbs	Potential to Emit lbs/hr	Potential to Emit tons/yr	Emission Factor lbs/10 ⁶ lbs	Potential to Emit lbs/hr	Potential to Emit tons/yr	Emission Factor lbs/10 ⁶ lbs	Potential to Emit lbs/hr	Potential to Emit tons/yr
Thermoformer 2	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
Thermoformer 3	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
Thermoformer 4	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
Thermoformer 5	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
Thermoformer 6	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
Thermoformer 7	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
Thermoformer 8	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
Thermoformer 9	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
Thermoformer 10	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
Thermoformer 11	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
Thermoformer 12	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
Thermoformer 13	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
Thermoformer 14	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
Thermoformer 15	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
Thermoformer 16	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
Thermoformer 17	1000	220	110	600	70	34.5	0.035	0.151	80.3	0.009	0.039	189	0.168	0.737
Thermoformer 18	1000	220	110	600	70	34.5	0.035	0.151	80.3	0.009	0.039	189	0.168	0.737
Thermoformer 19	1000	220	110	600	70	34.5	0.035	0.151	80.3	0.009	0.039	189	0.168	0.737
Thermoformer 20	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
Thermoformer 21	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
Thermoformer 22	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
Thermoformer 23	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
Thermoformer 24	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
Thermoformer 25	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
Thermoformer 26	600	132	66	360	42	34.5	0.021	0.091	80.3	0.005	0.023	189	0.101	0.442
						2.45			0.63			11.94		

Total Potential PM 2.45 tons per year
Total Potential VOC 12.56 tons per year

Methodology

*Assume PM emissions are equal to PM10 and PM2.5.

Emissions (lbs/hr) = [Max Throughput Rate (lbs/hr)] * [Emission Factor (lbs/10⁶ lbs) / 1000000]

Emissions (tons/yr) = [Emissions (lbs/hr)] * [8760 (hrs/yr) / 2000 (lbs/ton)]

Notes

Resin types and maximum throughputs were submitted by the source.

The emission factors were taken from technical papers described below in notes 1 through 3. This methodology and the emission factors were also used in Registration No. 005-28577-00102, issued on January 21, 2010 and FESOP No. 019-30695-00103, issued on December 19, 2011.

⁽¹⁾ The polypropylene emission factor for PM was used for all resin types. The PM emission factors were taken from a technical paper, volume 49, published in January 1999, by the Journal of Air and Waste Management Association titled "Development of Emission Factors for Polypropylene Processing". A melt temperature of 505 °F and reactor impact copolymer was used from Table 5.

⁽²⁾ The emission factor for VOC emissions for HIPS/PS/SBR Resins comes from the technical paper, "Sampling and Analysis of Volatile Organic Compounds Evolved During Thermal Processing of Acrylonitrile Butadiene Styrene Composite Resins", from volume 45, published in September 1995 of the Journal of Air and Waste Management Association. The General molding VOC emission factor from Table 4 was used.

⁽³⁾ The emission factors for VOC from Polypropylene molding were taken from a technical paper, volume 49, published in January 1999, by the Journal of Air and Waste Management Association titled "Development of Emission Factors for Polypropylene Processing". A melt temperature of 505 °F and reactor impact copolymer was used from Table 5.

These emissions are exhausted through the Rietschle VC700 Vacuum Pump, The stack diameter is 12" pipe, and extends from roof to a height of 36", the exit temperature is 100°F to 150°F

Appendix A: Emissions Calculations
Potential to Emit Hazardous Air Pollutants (HAPs) from the Thermoformers

Company Name: D & W Fine Pack LLC
Source Address: 7707 Vicksburg Pike, Fort Wayne IN 46804
Permit Number: M003-31054-00346
Reviewer: Susann Brown

HAP Emission Factors from Processing Polypropylene

HAP Constituent	⁽¹⁾ Emission Factor (lbs/10 ⁶ lbs)
Acetaldehyde	0.2
Acrolein	0.01
Formaldehyde	0.18
Propionaldehyde	0.95

HAP Emission Factors from Processing ABS

HAP Constituent	⁽²⁾ Emission Factor (lbs/10 ⁶ lbs)
Styrene	6.3
Ethylbenzene	8.02

Equipment Name	Maximum Process Weight Rate (lbs/hr)	High Impact Polystyrene (lbs/hr) 22% of Maximum Process Rate	Polypropylene (lbs/hr) 11% of Maximum Process Rate	General Polystyrene (lbs/hr) 60% of Maximum Process Rate	Styrene Butadiene Rubber (lbs/hr) 7% of Maximum Process Rate	Acetaldehyde Emissions (tons/yr)	Acrolein Emissions (tons/hr)	Formaldehyde Emissions (tons/yr)	Propionaldehyde Emissions (tons/yr)	Styrene Emissions (tons/yr)	Ethylbenzene Emissions (tons/yr)
Thermoformer 2	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Thermoformer 3	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Thermoformer 4	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Thermoformer 5	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Thermoformer 6	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Thermoformer 7	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Thermoformer 8	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Thermoformer 9	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Thermoformer 10	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Thermoformer 11	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Thermoformer 12	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Thermoformer 13	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Thermoformer 14	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Thermoformer 15	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Thermoformer 16	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Thermoformer 17	1000	220	110	600	70	9.64E-05	4.82E-06	8.67E-05	4.58E-04	0.02	0.03
Thermoformer 18	1000	220	110	600	70	9.64E-05	4.82E-06	8.67E-05	4.58E-04	0.02	0.03
Thermoformer 19	1000	220	110	600	70	9.64E-05	4.82E-06	8.67E-05	4.58E-04	0.02	0.03
Thermoformer 20	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Thermoformer 21	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Thermoformer 22	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Thermoformer 23	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Thermoformer 24	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Thermoformer 25	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Thermoformer 26	600	132	66	360	42	5.78E-05	2.89E-06	5.20E-05	2.75E-04	0.01	0.02
Totals						1.56E-03	7.81E-05	1.40E-03	7.41E-03	0.4	0.51

Methodology

HAPs Emissions (tons/yr) = [(Max Throughput Rate (lbs resin/hr)) * [Emission Factor (lbs/106 lbs) /1000000] * [8760 (hrs/yr) / 2000 (lbs/ton)]

Notes

⁽¹⁾ Emission factors for HAPs from Polypropylene molding were taken from a technical paper, Volume 49 published in January 1999 by the Journal of Air and Waste Management Association titled "Development of Emission Factors for Polypropylene Processing". A melt temperature of 505 oF and reactor impact copolymer was used as the emission factor.

⁽²⁾ Emission factors for HAPs from Styrene were taken from the technical paper, "Sampling and Analysis of Volatile Organic Compounds Evolved During Thermal Processing of Acrylonitrile Butadiene Styrene Composite Resins" from Volume 45 of the Journal of Air and Waste Management Association.

**Appendix A: Emissions Calculations
PM Emissions
Flaking (Cutting) Operation**

Company Name: D & W Fine Pack LLC
Source Address: 7707 Vicksburg Pike, Fort Wayne IN 46804
Permit Number: M003-31054-00346
Reviewer: Susann Brown

Total Bottleneck Throughput for all Extruders (lbs/hr)	20360
Percent Scrap (%)	15.60%
Potential Scrap Throughput (lbs/hr)	3176.2
Potential Scrap Throughput (tons/year)	13911.6

Potential to Emit (PTE) PM/PM10/PM2.5 and VOC

Equipment Name	PM/PM10/PM2.5*				Volatile Organic Compounds (VOC)		
	Emission Factor (lbs/ton)	Pollutant	Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Emission Factor lbs/10 ⁶ lbs	Potential to Emit lbs/hr	Potential to Emit (tons/yr)
Flakers 1 through 38 (total of all grinders)	0.35	PM	0.56	2.43	189.0	2.6	11.52
	0.20	*PM10	0.32	1.39	189.0	2.6	-
	0.20	*PM2.5	0.32	1.39	189.0	2.6	-

* Assume PM emissions equal to PM10 and PM2.5

Methodology

There are no AP-42 Emission Factors for grinding of plastic. As a conservative estimate, IDEM has estimated emissions for plastic grinding using log sawing.

Plastic Grinding Emission Factors are from AIRS Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants

EPA March 1990 for Sawmill Operations (Log Sawing: General) (SCC 3-07-008-03)

Potential to Emit (lbs/yr) = [Maximum Throughput (tons/year)] * [Emission Factor (lbs/ton)]

Potential to Emit (tons/yr) = [Potential to Emit (lbs/yr)] * [ton/2000 lbs]

Plastic Flaking (Cutting) VOC Emission Factor is the same as the VOC Emission Factors for Thermoforming and Extruding because the cutting/flaking operation should release no more VOC emissions than the extruding and thermoforming operations which involve higher temperatures and occur before the cutting/flaking operation.

VOC Emission (tons/yr) = [Throughput (tons/yr)] * [Emission Factor (lb/ton)/2000 lb/ton]

Appendix A: Emissions Calculations
VOC Emissions
UV Printing

Company Name: D & W Fine Pack LLC
Source Address: 7707 Vicksburg Pike, Fort Wayne IN 46804
Permit Number: M003-31054-00346
Reviewer: Calculations submitted by Phil Marshall (D & W Fine Pack LLC)
and reviewed by Susann

Throughput	Ink VOCs				
Press I.D.	Ink ID.	Maximum Ink Use/hour (pounds)	Weight % Volatiles	Flash Off %	VOC Emissions (tons/yr)
Printer 1 Printer 2 & Printer 3	Eastgate Graphics Inc. UV Printing Inks	45.66	0.1%	100.00%	0.20

Total VOC Emissions =	0.20
------------------------------	-------------

Methodology

VOC = [Weight % Volatiles (water minus organics)] * [Flash off % * Max Ink Use/hr*8760 hr/yr*1 ton/2000 lbs] = Tons per Year

Weight % VOC in Ultraviolet Ink Specified in MSDS as less than 0.1% (use 0.1% VOC assumption as worst case)

Acrylate Ester identified as hazardous ingredient, this is not a HAP that IDEM OAQ calculates.

NOTE: Heat set offset printing has an assumed flash off of 80%. Other types of printers have a flash off of 100%.

(Source -OAQPS Draft Guidance, "Control of Volatile Organic Compound Emissions from Offset Lithographic Printing (9/93)")

Appendix A: Emissions Calculations

Natural Gas Combustion Only
MM BTU/HR <100
Small Boilers

Company Name: D & W Fine Pack LLC
Source Address: 7707 Vicksburg Pike, Fort Wayne IN 46804
Permit Number: M003-1054-00346
Reviewer: Calculations submitted by Phil Marshall (D & W Fine Pack LLC) and reviewed by

ID #	Year	BTU Input
1	1992	100,000
2	1992	210,000
3	1992	350,000
4	1992	165,000
5	1992	144,000
6	1992	794,000
7	1992	794,000
8	1992	570,000
9	1992	907,000
10	1992	907,000
11	1992	2,019,600
12	1992	692,000
13	1992	692,000
14	1992	1,037,000
15	1992	325,000
16	1992	1,033,000
17	1992	1,836,000
18	1992	1,950,000
19	1992	1,950,000
20	1992	1,950,000
21	2001	400,000
22	2001	200,000
23	2001	200,000

ID #	Year	BTU Input
24	2001	25,000
25	2001	25,000
26	2001	25,000
27	2001	25,000
28	2001	400,000
29	2001	2,764,800
30	2001	2,160,000
31	2001	3,024,000
32	2001	2,073,600
33	2001	1,468,800
34	2001	200,000
35	2001	45,000
36	2001	400,000
37	2005	3,421,000
38	2005	3,421,000
39	2005	3,421,000
40	2005	3,041,000
41	2005	1,616,000
42	2005	2,376,000
43	2005	3,326,000
44	2005	2,376,000
45	2005	1,331,000

Total Gas Load	56,165,800	BTU/Hour
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Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr
56.2	1020	482.4

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100.0	5.5	84.0
Potential Emission in tons/yr	0.46	1.83	1.83	0.14	24.12	1.33	20.26

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM 2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for Nox: Uncontrolled = 100, Low Nox Burner = 50, Low Nox Burners/Flue gas recirculation = 32

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	5.1E-04	2.894E-04	0.02	0.43	8.200E-04

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.206E-04	2.653E-04	3.377E-04	9.165E-05	5.065E-04

Total HAPs 0.46 tons per year

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Potential Throughput (MMCF) = [Heat Input Capacity (MMBtu/hr)] * [8.760 hrs/yr] / [1 MMCF/1,000 MMBtu]
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-01-006-02, 1-02-006-02, 1-03-006-02, and 1-03-006-03
Emission (tons/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF)/2,000 lb/ton
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emissions Calculations
Natural Gas Combustion
Greenhouse Gas Emissions**

Company Name: D & W Fine Pack LLC
Source Address: 7707 Vicksburg Pike, Fort Wayne IN 46804
Permit Number: M003-31054-00346
Reviewer: Susann Brown

	Greenhouse Gas - NG Combustion		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120000	2.3	2.2
Potential Emission in tons/yr	28941.91	0.55	0.53
Summed Potential Emissions in tons/yr	28,943		
CO2e Total in tons/yr	29,118		

Methodology

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

TSD Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads

Company Name: D & W Fine Pack LLC
Source Address: 7707 Vicksburg Pike, Fort Wayne IN 46804
Permit Number: M003-31054-00346
Reviewer: Calculations submitted by Phil Marshall (D & W Fine Pack LLC) and reviewed by Susann Brown

Paved Roads at Industrial Site

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

Vehicle Information (provided by source)

Type of Traffic	Vehicle Type	Maximum number of vehicles per day	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight of Loaded Vehicle (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Vehicle Type 1 (entering plant) (one-way trip)	Tractor trailer	20.0	1.0	20.0	20.0	400.0	825	0.156	3.1	1140.6
Vehicle Type 1 (leaving plant) (one-way trip)	Tractor trailer	20.0	1.0	20.0	32.5	650.0	825	0.156	3.1	1140.6
Vehicle Type 2 (entering plant) (one-way trip)	Bulk Truck	1.0	1.0	1.0	44.0	44.0	825	0.156	0.2	57.0
Vehicle Type 2 (leaving plant) (one-way trip)	Bulk Truck	1.0	1.0	1.0	20.0	20.0	825	0.156	0.2	57.0
Total				42.0		1114.0			6.6	2395.3

Average Vehicle Weight Per Trip = tons/trip
 Average Miles Per Trip = miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^{0.91} * (W)^{1.02}] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	26.5	26.5	26.5	tons = average vehicle weight (provided by source)
sL =	9.7	9.7	9.7	g/m ² = silt loading value for paved roads at iron and steel production facilities - Table 13.2.1-3)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)] (Equation 2 from AP-42 13.2.1)

Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
 where p = days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
 N = days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	2.463	0.493	0.1209	lb/mile
Mitigated Emission Factor, Eext =	2.252	0.450	0.1106	lb/mile

Type of Traffic	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)
Vehicle Type 1 (entering plant) (one-way trip)	Tractor trailer	1.40	0.28	0.07	1.28	0.26	0.06
Vehicle Type 1 (leaving plant) (one-way trip)	Tractor trailer	1.40	0.28	0.07	1.28	0.26	0.06
Vehicle Type 2 (entering plant) (one-way trip)	Bulk Truck	0.07	0.01	0.00	0.06	0.01	0.00
Vehicle Type 2 (leaving plant) (one-way trip)	Bulk Truck	0.07	0.01	0.00	0.06	0.01	0.00
		2.95	0.59	0.14	2.70	0.54	0.13

Methodology

Total Weight driven per day (ton/day) = [Maximum Weight of Loaded Vehicle (tons/trip)] * [Maximum trips per day (trip/day)]
 Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]
 Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
 Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
 Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
 Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
 Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
 Controlled PTE (tons/yr) = [Mitigated PTE (tons/yr)] * [1 - Dust Control Efficiency]

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 PM2.5 = Particle Matter (<2.5 um)
 PTE = Potential to Emit



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
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www.idem.IN.gov

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

TO: Phil Marshall
D & W Fine Pack, LLC
7707 Vicksburg Pike
Fort Wayne, IN 46804

DATE: September 26, 2012

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

SUBJECT: Final Decision
MSOP Renewal
003-31054-00346

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:
Russ Stephens – VP Manufacturing
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.
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September 26, 2012

TO: Allen County Public Library

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

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

Applicant Name: D & W Fine Pack, LLC
Permit Number: 003-31054-00346

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	GHOTOPP 9/26/2012 D & W Fine Pack LLC 003-31054-00346 Final		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
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1		Phil Marshall D & W Fine Pack LLC 7707 Vicksburg Pike Fort Wayne IN 46804 (Source CAATS) via confirmed Delivery										
2		Russ Stephens VP Manufacturing D & W Fine Pack LLC 7707 Vicksburg Pike Fort Wayne IN 46804 (RO CAATS)										
3		Daniel & Sandy Trimmer 15021 Yellow River Road Columbia City IN 46725 (Affected Party)										
4		Duane & Deborah Clark Clark Farms 6973 E. 500 S. Columbia City IN 46725 (Affected Party)										
5		Fort Wayne City Council and Mayors Office 200 E Berry Street Ste 120 Fort Wayne IN 46802 (Local Official)										
6		Mr. John E. Hampton Plumbers & Steamfitters, Local 166 2930 W Ludwig Rd Fort Wayne IN 46818-1328 (Affected Party)										
7		Allen Co. Board of Commissioners 200 E Berry Street Ste 410 Fort Wayne IN 46802 (Local Official)										
8		Fort Wayne-Allen County Health Department 200 E Berry St Suite 360 Fort Wayne IN 46802 (Health Department)										
9		Allen County Public Library 900 Webster Street Fort Wayne IN 46802 (Library)										
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