



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Michael R. Pence*  
Governor

*Thomas W. Easterly*  
Commissioner

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

TO: Interested Parties / Applicant

DATE: May 31, 2013

RE: B & F Plastics, Inc. / 177-33175-00103

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

## Notice of Decision – Approval

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 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days from 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-AM.dot12/3/07



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Bruce Upchurch, President  
B & F Plastics, Inc.  
540 North 8th Street  
Richmond, IN 47374-2304

May 31, 2013

Re: 177-33175-00103  
First Administrative Amendment to  
R177-29419-00103

Dear Mr. Upchurch:

B & F Plastics, Inc. was issued Registration No. R177-29419-00103 on August 24, 2010, for a stationary source that manufactures recycled rubber tire and thermoplastic products, located at 540 North 8th Street and 814 South L Street, Richmond, IN 46374-2304. On May 7, 2013, the Office of Air Quality (OAQ) received an application from the source requesting to add one (1) new extruder and one (1) new grinder and to remove one (1) existing extruder and one (1) existing heater. Additionally, the source requested a correction to the descriptive language for Extruders #3 and #10.

The following is the list of the new emissions units:

- (a) One (1) extruder, identified as Extruder 17, approved for construction in 2013, with a maximum capacity of 2,000 pounds of plastic per hour, using no control and exhausting to the inside.
- (b) One (1) grinder, identified as Grinder 17, approved for construction in 2013, with a maximum capacity of 200 pounds of plastic per hour.

Pursuant to 326 IAC 2-5.5-6(d)(10), this change to the registration is considered administrative amendment because the registration is amended to incorporate a modification that adds an emissions unit of the same type that is already permitted or replaces an existing unit and that will comply with the same applicable requirements and permit terms and conditions as the existing emission unit, and the modification does not result in a potential to emit greater than the thresholds in 326 IAC 2-2 (PSD) or 326 IAC 2-3 (Emission Offset), or does not result in a potential to emit of the source equal to or greater than the thresholds in 326 IAC 2-5.1-3(a)(Permits).

The PTE of the modification consisting of the addition of the following emissions units follows:

Process/ Emission Unit	PTE of Proposed Modification (tons/year)									
	PM	PM10	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs as CO <sub>2</sub> e	Total HAPs	Worst Single HAP
Extruder 17 (Plant 3)	0.19	0.19	0.19	0	0	0.08	0	0	0.20	0.08 (methylene chloride)
Grinder 17 (Plant 3)	0.27	0.27	0.27	0	0	0	0	0	0	0
<b>Total PTE of Proposed Modification</b>	<b>0.46</b>	<b>0.46</b>	<b>0.46</b>	<b>0</b>	<b>0</b>	<b>0.08</b>	<b>0</b>	<b>0</b>	<b>0.20</b>	<b>0.08</b>

- (a) The uncontrolled/unlimited potential to emit of the entire source after the addition of this emission unit will continue to be within the threshold levels specified in 326 IAC 2-5.5-1(b)(1) (Registration). (See Appendix A for the calculations.)
- (b) The new extruder, identified as Extruder 17 (Plant 3) and the new grinder, identified as Grinder 17 (Plant 3) will be subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) which the existing extruders and grinders are subject to.
- (c) No other state rules are applicable to this source due to the addition of the emission unit.
- (d) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) or National Emission standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 20 and 40 CFR Part 61, 63) included in this administrative amendment.

**PTE of the Entire Source After Issuance of the Registration Administrative Amendment**

The table below summarizes the potential to emit of the entire source after the issuance of this administrative amendment, reflecting all limits, of the emission units, using **bold** and ~~strikeouts~~ to show the changes:

Process/ Emission Unit	Potential To Emit of the Entire Source Before the Revision (tons/year)**									
	PM	PM10*	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs	Total HAPs	Worst Single HAP
Extruders (Extruders 1 through 44, <del>6, 8-14,</del> and 16 <b>and 17</b> ) and Pellitizer	<del>0.84</del> <b>0.95</b>	<del>0.84</del> <b>0.95</b>	<del>0.84</del> <b>0.95</b>	0.00	0.00	<del>1.04</del> <b>1.08</b>	0.09	<b>0.00</b>	0.20	<del>0.05 (Toluene)</del> <b>0.08 (Methylene Chloride)</b>
Molders (Molders 1, 2 and 3) and cut- off saw	1.92	1.92	1.92	0.00	0.00	0.00	0.00	<b>0.00</b>	0.00	0.00
Grinders (Grinders 1 through 15, 608 Grinder and Line 16 Grinder <b>and Grinder 17</b> )	<del>3.92</del> <b>4.13</b>	<del>3.92</del> <b>4.13</b>	<del>3.92</del> <b>4.13</b>	0.00	0.00	0.00	0.00	<b>0.00</b>	0.00	0.00
Storage Silos (Silos 1-15)	0.44	0.04	0.44	0.00	0.00	0.00	0.00	<b>0.00</b>	0.00	0.00
NG Space Heaters (Heaters 1 through 19)	<del>0.14</del> <b>0.03</b>	<del>0.14</del> <b>0.13</b>	<del>0.14</del> <b>0.13</b>	0.01	<del>1.86</del> <b>1.72</b>	<del>0.10</del> <b>0.09</b>	<del>1.56</del> <b>1.45</b>	<b>2,082.53</b>	<del>0.04</del> <b>0.03</b>	<del>0.00</del> <b>0.03 (Hexane)</b>
<b>Total PTE of Entire Source</b>	<del>7.23</del> <b>7.47</b>	<del>7.23</del> <b>7.57</b>	<del>7.23</del> <b>7.57</b>	<b>0.01</b>	<del>1.86</del> <b>1.72</b>	<del>1.11</del> <b>1.17</b>	<del>1.65</del> <b>1.54</b>	<b>2,082.53</b>	<del>0.24</del> <b>0.23</b>	
Exemptions Levels	5	5	5	10	10	5	25	<b>100,000</b>	25	10
Registration Levels	25	25	25	25	25	25	100	<b>100,000</b>	25	10
negl. = negligible * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered a "regulated air pollutant". ** Table taken from Registration No.: 177-29419-00103 issued on August 24, 2010.										

The table below summarizes the potential to emit of the entire source after issuance of this administrative amendment, reflecting all limits, of the emission units. (Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted).

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of the Revision (tons/year)									
	PM	PM10*	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs	Total HAPs	Worst Single HAP
Extruders (Extruders 1 through 6, 8-14, and 16 and 17) and Pellitizer	0.95	0.95	0.95	0.00	0.00	1.08	0.09	0.00	0.20	0.08 (Methylene Chloride)
Molders (Molders 1, 2 and 3) and cut-off saw	1.92	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grinders (Grinders 1 through 15, 608 Grinder and Line 16 Grinder and Grinder 17	4.13	4.13	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Storage Silos (Silos 1-15)	0.44	0.04	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NG Space Heaters (Heaters 1 through 19)	0.03	0.13	0.13	0.01	1.72	0.09	1.45	2,082.53	<b>0.03</b>	0.03 (Hexane)
<b>Total PTE of Entire Source</b>	<b>7.47</b>	<b>7.57</b>	<b>7.57</b>	<b>0.01</b>	<b>1.72</b>	<b>1.17</b>	<b>1.54</b>	<b>2,082.53</b>	<b>0.23</b>	
Exemptions Levels	5	5	5	10	10	5	25	<b>100,000</b>	25	10
Registration Levels	25	25	25	25	25	25	100	<b>100,000</b>	25	10
* 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".										

Pursuant to 326 IAC 2-5.5-6, the registration is hereby amended as follows, with deleted language as ~~strikeouts~~ and new language **bolded**:

**SECTION A SOURCE SUMMARY**

...

**A.3 Emission Units and Pollution Control Equipment Summary**

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

(a) Plant 1 consisting of:

- (1) Ten (10) extruders, identified as Extruders 1 through 10, constructed prior to 2002. Extruders 1, 2, 5, 6, 8, and 10 each have a maximum capacity of 400 pounds of plastic per hour. Extruders 3, 4, ~~7~~ and 9 have a maximum capacity of 500 pounds of plastic per hour, each, using no control, exhausting inside.

**Extruders 1, 2, and 4-9 use no control and exhaust to the inside.**

**Extruders #3 and #10 exhaust to the outside air.**

...

- (3) Four (4) natural gas-fired space heaters, identified as Heaters ~~4-4~~ **1, 3 and 4**, constructed prior to 2002.

Heater 1 has a maximum heat input capacity of 0.195 million Btu per hour and Heaters ~~2~~, 3 and 4 have a maximum heat input capacity of 0.234 million Btu per hour each.

...

(c) Plant 3 consisting of:

- (1) One extruder, identified as Extruder 16, approved for construction in 2010, with a maximum capacity of 2000 pounds of plastic per hour.
- (2) **One (1) extruder, identified as Extruder 17, approved for construction in 2013, with a maximum capacity of 2,000 pounds of plastic per hour, using no control and exhausting to the inside.**
- (~~2~~ 3) One (1) pelletizer, approved for construction in 2002, with a maximum capacity of 800 pounds of plastics per hour.
- (~~3~~ 4) One (1) grinder, identified as Line 16 Grinder, approved for construction in 2010, with a maximum capacity of 200 pounds of plastic per hour.
- (5) **One (1) grinder, identified as Grinder 17, approved for construction in 2013, with a maximum capacity of 200 pounds of plastic per hour.**
- (~~4~~ 6) Four (4) plastic resin storage silos, identified as Silos 12 through 15, approved for construction in 2010, with a maximum conveyance rate of 22,500 pounds per hour, each.

...

## SECTION D.1

## OPERATION CONDITIONS

Facility Description [326 IAC 2-5.1-2(f)(2)] [326 IAC 2-5.5-4(a)(2)]:

(a) Plant 1 consisting of:

- (1) Ten (10) extruders, identified as Extruders 1 through 10, constructed prior to 2002.  
  
Extruders 1, 2, 5, 6, 8, and 10 each have a maximum capacity of 400 pounds of plastic per hour.  
  
Extruders 3, 4, ~~7~~, and 9 each have a maximum capacity of 500 pounds of plastic per hour.  
  
**Extruders 1, 2, and ~~4~~-9 use no control and exhaust to the inside.**  
  
**Extruders #3 and #10 exhaust to the outside air.**
- (2) Ten (10) grinders, identified as Grinders 1 through 10. Grinders 1 through 6 were constructed prior to 2002 and grinders 7 through 10 were approved for construction in 2010. Grinders 1, 2, 5, 6, 8 and 10 each have a maximum capacity of 40 pounds of plastic per hour. Grinders 3, 4, 7, and 9 each have a maximum capacity of 50 pounds of plastic per hour, each.
- (3) Four (4) natural gas-fired space heaters, identified as Heaters ~~1-4~~ **1, 3 and 4**,

constructed prior to 2002. Heater 1 has a maximum heat input capacity of 0.195 million Btu per hour and Heaters 2, 3 and 4 have a maximum heat input capacity of 0.234 million Btu per hour each.

- (4) Five (5) resin storage silos, identified as Silos 1, 2, 3, 4 and 5. Silos 1, 2 and 3 were constructed prior to 2002, and Silos 4 and 5 were approved for construction in 2010, with a maximum conveyance rate of 22,500 pounds per hour, each.

(b) Plant 2 consisting of:

- (1) Four (4) extruders, identified as Extruders 11, 12, 13 and 14, extruders 11 and 12 were constructed prior to 2002, and extruders 13 and 14 were approved for construction in 2010, with a maximum capacity of 500 pounds of plastic per hour, each.
- (2) Five (5) grinders, identified as Grinders 11, 12, 13, 14 and 15, approved for construction in 2010, with a maximum capacity of 50 pounds of plastic per hour, each.
- (3) Five (5) natural gas-fired space heaters, identified as Heaters 5-9, approved for construction in 2010. Heaters 5, 6, 7, and 8 have a maximum heat input capacity of 0.234 million Btu per hour each and Heater 9 has a maximum heat input capacity of 0.195 million Btu per hour.
- (4) Six (6) plastic resin storage silos, identified as Silos 6 through 11, approved for construction in 2010, with a maximum conveyance rate of 22,500 pounds per hour, each.

(c) Plant 3 consisting of:

- (1) One extruder, identified as Extruder 16, approved for construction in 2010, with a maximum capacity of 2000 pounds of plastic per hour.
- (2) One (1) extruder, identified as Extruder 17, approved for construction in 2013, with a maximum capacity of 2,000 pounds of plastic per hour, using no control and exhausting to the inside.**
- (3) One (1) pelletizer, approved for construction in 2002, with a maximum capacity of 800 pounds of plastics per hour.
- (4) One (1) grinder, identified as Line 16 Grinder, approved for construction in 2010, with a maximum capacity of 200 pounds of plastic per hour.
- (5) One (1) grinder, identified as Grinder 17, approved for construction in 2013, with a maximum capacity of 200 pounds of plastic per hour.**
- (6) Four (4) plastic resin storage silos, identified as Silos 12 through 15, approved for construction in 2010, with a maximum conveyance rate of 22,500 pounds per hour, each.

(d) Building 600 consisting of:

- (1) Four (4) natural gas-fired space heaters, identified as Heaters 10-13, approved for construction in 2010. Heaters 10 and 13 have a maximum heat input capacity of 0.195 million Btu per hour, and Heaters 11 and 12 have a maximum heat input capacity of 0.234 million Btu per hour, each.

(e) Building 608 consisting of:

- (1) One (1) grinder, identified as Grinder 608, approved for construction in 2010, with a maximum capacity of 2000 pounds of plastic per hour.
- (2) Six (6) natural gas-fired space heaters, identified as Heaters 14 through 19, approved for construction in 2010. Heaters 14, 15, 16, 17 and 18 have a maximum heat input capacity of 0.234 million Btu per hour, each and Heater 19 has a maximum heat input capacity of 0.195 million Btu per hour.
- (f) Three (3) molders, identified as Molder 1, 2 and 3, approved for construction in 2010, with a maximum throughput of 500 pounds per hour.
- (g) One (1) cut-off saw, identified as Saw 1, approved for construction in 2010, with a maximum throughput of 1,000 pounds per hour.

(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 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]**

#### **D.1.1 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)**

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) the particulate emissions from the source shall not exceed the pound per hour emission rate established as E in the following formula:

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:

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

The emission rate E has been established for the units as follows:

Unit ID / Control Device	Process Weight Rate (ton/hour) (each)	Particulate Emission Limits (pound/hour) (each)
Extruder 1	0.2	1.39
Extruder 2	0.2	1.39
Extruder 3	0.25	1.62
Extruder 4	0.25	1.62
Extruder 5	0.2	1.39
Extruder 6	0.2	1.39
<del>Extruder 7</del>	<del>0.25</del>	<del>1.62</del>
Extruder 8	0.2	1.39
Extruder 9	0.25	1.62
Extruder 10	0.2	1.39
Extruder 11	0.25	1.62
Extruder 12	0.25	1.62
Extruder 13	0.25	1.62
Extruder 14	0.25	1.62
Extruder 16	1.00	4.10
<b>Extruder 17</b>	<b>1.00</b>	<b>4.10</b>
Pellitizer	0.4	2.22
Grinder 1	0.02	0.30
Grinder 2	0.02	0.30
Grinder 3	0.025	1.62
Grinder 4	0.025	1.62
Grinder 5	0.02	0.30
Grinder 6	0.02	0.30
Grinder 7	0.025	1.62
Grinder 8	0.02	0.30
Grinder 9	0.025	1.62
Grinder 10	0.02	0.30
Grinder 11	0.025	1.62
Grinder 12	0.025	1.62
Grinder 13	0.025	1.62
Grinder 14	0.025	1.62
Grinder 15	0.025	1.62
Grinder 608	1.0	4.1
Grinder Line 16	0.1	0.88
<b>Grinder 17</b>	<b>0.1</b>	<b>0.88</b>

**Greenhouse Gases**

Pursuant to 326 IAC 2-7-1(39), starting July 1, 2011, greenhouse gases (GHGs) emissions are subject to regulation at a source with a potential to emit (PTE) 100,000 tons per year or more of CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e). Therefore, CO<sub>2</sub>e emissions have been calculated for this source. Based on the calculations, the unlimited PTE of GHGs from the entire source is less than 100,000 tons of CO<sub>2</sub>e per year (see Appendix A for the calculations). This did not require any changes to the registration.

The source shall continue to operate according to 326 IAC 2-5.5 (Registrations). Please find enclosed the amended Registration and Appendix A (calculations). A copy of the registration is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. 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](http://www.idem.in.gov)

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Deborah Cole at 317-234-5377 or 800-451-6027, ext. 4-5377.

Sincerely,



Iryn Calilung, Section Chief  
Permits Branch  
Office of Air Quality

IC/dac

Attachment: Revised Registration and Calculations

cc: File - Wayne County  
Wayne County Health Department  
Compliance and Enforcement Branch



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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## REGISTRATION OFFICE OF AIR QUALITY

**B & F Plastics, Inc.**  
**540 North 8th Street and 814 South L Street**  
**Richmond, Indiana 47374**

Pursuant to 326 IAC 2-5.1 (Construction of New Sources: Registrations) and 326 IAC 2-5.5 (Registrations), (herein known as the Registrant) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this registration.

Registration No. 177-29419-00103

Issued by: *Original Signed by:*  
Iryn Calilung, Section Chief  
Permits Branch  
Office of Air Quality

Issuance Date: August 24, 2010

First Administrative Amendment No. 177-33175-00103

Issued by:

*Nathan Bell for IC*

Iryn Calilung, Section Chief  
Permits Branch  
Office of Air Quality

Issuance Date: May 31, 2013

## SECTION A

## SOURCE SUMMARY

This registration 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 Registrant 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 Registrant to obtain additional permits pursuant to 326 IAC 2.

### A.1 General Information

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The Registrant owns and operates a stationary source that manufactures recycled rubber tire and thermoplastic products.

Source Address:	540 North 8th Street and 814 South L Street Richmond, Indiana 47374-2304
General Source Phone Number:	765-962-6125
SIC Code:	3089 (Plastic Products, NEC)
County Location:	Wayne County
Source Location Status:	Attainment for all other criteria pollutants
Source Status:	Registration

### A.2 Source Definition

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This stationary rubber tire and thermoplastic product manufacturing company consists of three (3) plants and two buildings:

- (a) Plant 1 and Plant 3 and two Buildings (600 and 608) are located at 540 North 8th Street, Richmond, Indiana; Plant ID 177-00103; and,
- (b) Plant 2 is located a mile away at 814 South L Street, Richmond, Indiana.

Since the plants and buildings are located on adjacent properties, belong to the same industrial grouping, and under common control of the same entity, they will be considered one (1) source, effective from the date of issuance of this registration.

### A.3 Emission Units and Pollution Control Equipment Summary

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

- (a) Plant 1 consisting of:

- (1) Ten (10) extruders, identified as Extruders 1 through 10, constructed prior to 2002.

Extruders 1, 2, 5, 6, 8, and 10 each have a maximum capacity of 400 pounds of plastic per hour.

Extruders 3, 4, and 9 each have a maximum capacity of 500 pounds of plastic per hour.

Extruders 1, 2, and 4-9 use no control and exhaust to the inside.

Extruders #3 and #10 exhaust to the outside air.

- (2) Ten (10) grinders, identified as Grinders 1 through 10.

Grinders 1 through 6 were constructed prior to 2002 and grinders 7 through 10 were approved for construction in 2010.

Grinders 1, 2, 5, 6, 8 and 10 each have a maximum capacity of 40 pounds of plastic per hour.

Grinders 3, 4, 7, and 9 each have a maximum capacity of 50 pounds of plastic per hour, exhausting outside to the atmosphere.

- (3) Four (4) natural gas-fired space heaters, identified as Heaters 1, 3 and 4, constructed prior to 2002.

Heater 1 has a maximum heat input capacity of 0.195 million Btu per hour and Heaters 3 and 4 have a maximum heat input capacity of 0.234 million Btu per hour each.

- (4) Five (5) resin storage silos, identified as Silos 1, 2, 3, 4 and 5, Silos 1, 2 and 3 were constructed prior to 2002, and Silos 4 and 5 approved for construction in 2010, with a maximum conveyance rate of 22,500 pounds per hour, each.

(b) Plant 2 consisting of:

- (1) Four (4) extruders, identified as Extruders 11,12, 13 and 14, extruders 11 and 12 were constructed prior to 2002, and extruders 13 and 14 were approved for construction in 2010, with a maximum capacity of 500 pounds of plastic per hour, each.
- (2) Five (5) grinders, identified as Grinders 11, 12, 13, 14 and 15, approved for construction in 2010, with a maximum capacity of 50 pounds of plastic per hour, each.
- (3) Five (5) natural gas-fired space heaters, identified as Heaters 5-9, approved for construction in 2010. Heaters 5, 6, 7, and 8 have a maximum heat input capacity of 0.234 million Btu per hour each and Heater 9 has a maximum heat input capacity of 0.195 million Btu per hour.
- (4) Six (6) plastic resin storage silos, identified as Silos 6 through 11, approved for construction in 2010, with a maximum conveyance rate of 22,500 pounds per hour, each.

(c) Plant 3 consisting of:

- (1) One extruder, identified as Extruder 16, approved for construction in 2010, with a maximum capacity of 2000 pounds of plastic per hour.
- (2) One (1) extruder, identified as Extruder 17, approved for construction in 2013, with a maximum capacity of 2,000 pounds of plastic per hour, using no control and exhausting to the inside.
- (3) One (1) pellitizer, approved for construction in 2002, with a maximum capacity of 800 pounds of plastics per hour.
- (4) One (1) grinder, identified as Line 16 Grinder, approved for construction in 2010, with a maximum capacity of 200 pounds of plastic per hour.
- (5) One (1) grinder, identified as Grinder 17, approved for construction in 2013, with a maximum capacity of 200 pounds of plastic per hour.
- (6) Four (4) plastic resin storage silos, identified as Silos 12 through 15, approved for construction in 2010, with a maximum conveyance rate of 22,500 pounds per hour, each.

- (d) Building 600 consisting of:
  - (1) Four (4) natural gas-fired space heaters, identified as Heaters 10-13, approved for construction in 2010. Heaters 10 and 13 each have a maximum heat input capacity of 0.195 million Btu per hour, and Heaters 11 and 12 have a maximum heat input capacity of 0.234 million Btu per hour, each.
  
- (e) Building 608 consisting of:
  - (1) One (1) grinder, identified as Grinder 608, approved for construction in 2010, with a maximum capacity of 2000 pounds of plastic per hour.
  - (2) Six (6) natural gas-fired space heaters, identified as Heaters 14 through 19, approved for construction in 2010. Heaters 14, 15, 16, 17 and 18 have a maximum heat input capacity of 0.234 million Btu per hour, each and Heater 19 has a maximum heat input capacity of 0.195 million Btu per hour.
  
- (f) Three (3) molders, identified as Molder 1, 2 and 3, approved for construction in 2010, with a maximum throughput of 500 pounds, each.
  
- (g) One (1) cut-off saw, identified as Saw 1, approved for construction in 2010, with a maximum throughput of 1,000 pounds per hour.

## SECTION B

## GENERAL CONDITIONS

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

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Terms in this registration 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 Effective Date of Registration [IC 13-15-5-3]

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Pursuant to IC 13-15-5-3, this registration 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.

### B.3 Registration Revocation [326 IAC 2-1.1-9]

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

- (a) Violation of any conditions of this registration.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this registration.
- (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 registration shall not require revocation of this registration.
- (d) For any cause which establishes in the judgment of IDEM the fact that continuance of this registration is not consistent with purposes of this article.

### B.4 Prior Permits Superseded [326 IAC 2-1.1-9.5]

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- (a) All terms and conditions of permits established prior to Registration No. 177-29419-00103 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 registration.

### B.5 Annual Notification [326 IAC 2-5.1-2(f)(3)] [326 IAC 2-5.5-4(a)(3)]

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Pursuant to 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3):

- (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 registration.
- (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, IN 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.6 Source Modification Requirement [326 IAC 2-5.5-6(a)]**

---

Pursuant to 326 IAC 2-5.5-6(a), an application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

**B.7 Registrations [326 IAC 2-5.1-2(i)]**

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Pursuant to 326 IAC 2-5.1-2(i), this registration does not limit the source's potential to emit.

**B.8 Preventive Maintenance Plan [326 IAC 1-6-3]**

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- (a) The Registrant shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this registration 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 Registrant's control, the PMPs cannot be prepared and maintained within the above time frame, the Registrant may extend the date an additional ninety (90) days provided the Registrant 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 Registrant shall implement the PMPs.

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Registrant to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.
- (c) To the extent the Registrant 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.

**SECTION C**

**SOURCE OPERATION CONDITIONS**

Entire Source

**Emission Limitations and Standards [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]**

**C.1 Opacity [326 IAC 5-1]**

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

- (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.2 Fugitive Dust Emissions [326 IAC 6-4]**

The Registrant 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).

## SECTION D.1

## OPERATION CONDITIONS

Facility Description [326 IAC 2-5.1-2(f)(2)] [326 IAC 2-5.5-4(a)(2)]:

(a) Plant 1 consisting of:

- (1) Ten (10) extruders, identified as Extruders 1 through 10, constructed prior to 2002.

Extruders 1, 2, 5, 6, 8, and 10 each have a maximum capacity of 400 pounds of plastic per hour.

Extruders 3, 4, and 9 each have a maximum capacity of 500 pounds of plastic per hour.

Extruders 1, 2, and 4-9 use no control and exhaust to the inside.

Extruders #3 and #10 exhaust to the outside air.

- (2) Ten (10) grinders, identified as Grinders 1 through 10. Grinders 1 through 6 were constructed prior to 2002 and grinders 7 through 10 were approved for construction in 2010. Grinders 1, 2, 5, 6, 8 and 10 each have a maximum capacity of 40 pounds of plastic per hour. Grinders 3, 4, 7, and 9 each have a maximum capacity of 50 pounds of plastic per hour, each.

- (3) Four (4) natural gas-fired space heaters, identified as Heaters 1, 3 and 4, constructed prior to 2002. Heater 1 has a maximum heat input capacity of 0.195 million Btu per hour and Heaters 3 and 4 have a maximum heat input capacity of 0.234 million Btu per hour each.

- (4) Five (5) resin storage silos, identified as Silos 1, 2, 3, 4 and 5. Silos 1, 2 and 3 were constructed prior to 2002, and Silos 4 and 5 were approved for construction in 2010, with a maximum conveyance rate of 22,500 pounds per hour, each.

(b) Plant 2 consisting of:

- (1) Four (4) extruders, identified as Extruders 11,12, 13 and 14, extruders 11 and 12 were constructed prior to 2002, and extruders 13 and 14 were approved for construction in 2010, with a maximum capacity of 500 pounds of plastic per hour, each.

- (2) Five (5) grinders, identified as Grinders 11, 12, 13, 14 and 15, approved for construction in 2010, with a maximum capacity of 50 pounds of plastic per hour, each.

- (3) Five (5) natural gas-fired space heaters, identified as Heaters 5-9, approved for construction in 2010. Heaters 5, 6, 7, and 8 have a maximum heat input capacity of 0.234 million Btu per hour each and Heater 9 has a maximum heat input capacity of 0.195 million Btu per hour.

- (4) Six (6) plastic resin storage silos, identified as Silos 6 through 11, approved for construction in 2010, with a maximum conveyance rate of 22,500 pounds per hour, each.

(c) Plant 3 consisting of:

- (1) One extruder, identified as Extruder 16, approved for construction in 2010, with a maximum capacity of 2000 pounds of plastic per hour.
- (2) One (1) extruder, identified as Extruder 17, approved for construction in 2013, with a maximum capacity of 2,000 pounds of plastic per hour, using no control and exhausting to the inside.
- (3) One (1) pellitizer, approved for construction in 2002, with a maximum capacity of 800 pounds of plastics per hour.
- (4) One (1) grinder, identified as Line 16 Grinder, approved for construction in 2010, with a maximum capacity of 200 pounds of plastic per hour.
- (5) One (1) grinder, identified as Grinder 17, approved for construction in 2013, with a maximum capacity of 200 pounds of plastic per hour.
- (6) Four (4) plastic resin storage silos, identified as Silos 12 through 15, approved for construction in 2010, with a maximum conveyance rate of 22,500 pounds per hour, each.

(d) Building 600 consisting of:

- (1) Four (4) natural gas-fired space heaters, identified as Heaters 10-13, approved for construction in 2010. Heaters 10 and 13 have a maximum heat input capacity of 0.195 million Btu per hour, and Heaters 11 and 12 have a maximum heat input capacity of 0.234 million Btu per hour, each.

(e) Building 608 consisting of:

- (1) One (1) grinder, identified as Grinder 608, approved for construction in 2010, with a maximum capacity of 2000 pounds of plastic per hour.
- (2) Six (6) natural gas-fired space heaters, identified as Heaters 14 through 19, approved for construction in 2010. Heaters 14, 15, 16, 17 and 18 have a maximum heat input capacity of 0.234 million Btu per hour, each and Heater 19 has a maximum heat input capacity of 0.195 million Btu per hour.

(f) Three (3) molders, identified as Molder 1, 2 and 3, approved for construction in 2010, with a maximum throughput of 500 pounds per hour.

(g) One (1) cut-off saw, identified as Saw 1, approved for construction in 2010, with a maximum throughput of 1,000 pounds per hour.

(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 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]**

**D.1.1 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)**

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) the particulate emissions from the source shall not exceed the pound per hour emission rate established as E in the following formula:

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:

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

The emission rate E has been established for the units as follows:

Unit ID / Control Device	Process Weight Rate (ton/hour) (each)	Particulate Emission Limits (pound/hour) (each)
Extruder 1	0.2	1.39
Extruder 2	0.2	1.39
Extruder 3	0.25	1.62
Extruder 4	0.25	1.62
Extruder 5	0.2	1.39
Extruder 6	0.2	1.39
Extruder 8	0.2	1.39
Extruder 9	0.25	1.62
Extruder 10	0.2	1.39
Extruder 11	0.25	1.62
Extruder 12	0.25	1.62
Extruder 13	0.25	1.62
Extruder 14	0.25	1.62
Extruder 16	1.00	4.10
Extruder 17	1.00	4.10
Pellitizer	0.4	2.22
Grinder 1	0.02	0.30
Grinder 2	0.02	0.30
Grinder 3	0.025	1.62
Grinder 4	0.025	1.62
Grinder 5	0.02	0.30
Grinder 6	0.02	0.30
Grinder 7	0.025	1.62
Grinder 8	0.02	0.30
Grinder 9	0.025	1.62
Grinder 10	0.02	0.30
Grinder 11	0.025	1.62
Grinder 12	0.025	1.62

<b>Unit ID / Control Device</b>	<b>Process Weight Rate (ton/hour) (each)</b>	<b>Particulate Emission Limits (pound/hour) (each)</b>
Grinder 13	0.025	1.62
Grinder 14	0.025	1.62
Grinder 15	0.025	1.62
Grinder 608	1.0	4.1
Line Grinder 16	0.1	0.88
Grinder 17	0.1	0.88

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

**REGISTRATION  
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3).

<b>Company Name:</b>	<b>B &amp; F Plastics, Inc.</b>
<b>Address:</b>	<b>540 North 8th Street and 814 South L Street</b>
<b>City:</b>	<b>Richmond, Indiana 47374-2304</b>
<b>Phone Number:</b>	<b>765-962-6125</b>
<b>Registration No.:</b>	<b>177-29419-00103</b>

I hereby certify that B & F Plastics, Inc. is:

- still in operation.
- no longer in operation.
- in compliance with the requirements of Registration No. 177-29419-00103.
- not in compliance with the requirements of Registration No. 177-29419-00103.

I hereby certify that B & F Plastics, Inc. is:

<b>Authorized Individual (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Phone Number:</b>
<b>Date:</b>

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.

<b>Noncompliance:</b>

**Appendix A: Emission Calculations  
Summary**

**Company Name: B & F Plastics, Inc.**  
**Address City IN Zip: 540 North Eighth Street, Richmond, Indiana 47374**  
**Permit No.: 177-29419-00103**  
**Aministrative Amendment No.: 177-33175-00103**  
**Reviewer: Deborah Cole**

Potential to Emit in tons/year

<b>Unit</b>	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>PM 2.5</b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>VOC</b>	<b>CO</b>	<b>GHG</b>	<b>Total HAPs</b>	<b>Single HAP</b>	
Extruders(Extruders 1 through 6, 8-14, and 16 and 17) and Pellitizer	0.95	0.95	0.95	0.00	0.00	1.08	0.09	0.00	0.20	0.08	Methylene Chloride
Molders (Molders 1, 2 and 3) and Cut-off Saw (Saw 1)	1.92	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Grinders (Grinders 1 through 15, 608 Grinder and Line 16 Grinder and Grinder 17)	4.13	4.13	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Storage Silos for Plastic Resin (Silos 1-15)	0.44	0.44	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Natural Gas Space Heaters (Heaters 1 and 3-19)	0.03	0.13	0.13	0.01	1.72	0.09	1.45	2,082.53	0.03	0.03	Hexane
<b>Total</b>	<b>7.47</b>	<b>7.57</b>	<b>7.57</b>	<b>0.01</b>	<b>1.72</b>	<b>1.17</b>	<b>1.54</b>	<b>2,082.53</b>	<b>0.23</b>	<b>&lt;10</b>	

PM,PM10=PM2.5

**Appendix A: Emission Calculations**  
**Extruders -VOC, PM and CO**

**Company Name: B & F Plastics, Inc.**

**Address City IN Zip: 540 North Eighth Street, Richmond, Indiana 47374**

**Permit No.: 177-29419-00103**

**Aministrative Amendment No.: 177-33175-00103**

**Reviewer: Deborah Cole**

Extruder	Max Throughput (lb/hr)	Component	Max Rate (lb/hr)	VOC			PM			CO		
				Emission Factor (lb/1,000,000 lb)	Emission Rate (lb/hr)	Emission Rate (tpy)	Emission Factor (lb/1,000,000 lb)	Emission Rate (lb/hr)	Emission Rate (tpy)	Emission Factor (lb/1,000,000 lb)	Emission Rate (lb/hr)	Emission Rate (tpy)
Plant 1												
1	400	Polyethylene Resin	400	9.3	0.004	0.016	21.7	0.009	0.038	0.0	0.000	0.000
2	400	Polyethylene Resin	400	9.3	0.004	0.016	21.7	0.009	0.038	0.0	0.000	0.000
3	500	SBR Reprocessed Rubber	500	12.3	0.006	0.027	0.00777	0.000	0.000	0.0	0.000	0.000
4	500	Polyethylene Resin	500	9.3	0.005	0.020	21.7	0.011	0.048	0.0	0.000	0.000
5	400	SBR Reprocessed Rubber	400	12.3	0.005	0.022	0.00777	0.000	0.000	0.0	0.000	0.000
6	400	Polyethylene Resin	400	9.3	0.004	0.016	21.7	0.009	0.038	0.0	0.000	0.000
8	400	Polyethylene Resin	400	9.3	0.004	0.016	21.7	0.009	0.038	0.0	0.000	0.000
9	500	Polyolefin Composite	500	104	0.052	0.228	30.3	0.015	0.066	0.0	0.000	0.000
10	400	SBR Reprocessed Rubber	400	12.3	0.005	0.022	0.00777	0.000	0.000	0.0	0.000	0.000
Plant 2												
11	500	Polyethylene Resin	250	9.3	0.002	0.010	21.7	0.005	0.024	0.0	0.000	0.000
		Polypropylene Resin	250	104	0.026	0.114	30.3	0.008	0.033	20.0	0.005	0.022
12	500	Polyethylene Resin	250	9.3	0.002	0.010	21.7	0.005	0.024	0.0	0.000	0.000
		Polypropylene Resin	250	104	0.026	0.114	30.3	0.008	0.033	20.0	0.005	0.022
13	500	Polyethylene Resin	250	9.3	0.002	0.010	21.7	0.005	0.024	0.0	0.000	0.000
		Polypropylene Resin	250	104	0.026	0.114	30.3	0.008	0.033	20.0	0.005	0.022
14	500	Polyethylene Resin	250	9.3	0.002	0.010	21.7	0.005	0.024	0.0	0.000	0.000
		Polypropylene Resin	250	104	0.026	0.114	30.3	0.008	0.033	20.0	0.005	0.022
Plant 3												
16	2000	Polyethylene Resin	2000	9.3	0.019	0.081	21.7	0.043	0.190	0.0	0.000	0.000
17	2000	Polyethylene Resin	2000	9.3	0.019	0.081	21.7	0.043	0.190	0.0	0.000	0.000
Pelltizer	800	Polyethylene Resin	800	9.3	0.007	0.033	21.7	0.017	0.076	0.0	0.000	0.000
<b>TOTAL</b>						<b>1.08</b>		<b>0.95</b>			<b>0.09</b>	

**Methodology**

See page 4 of calculations

**Appendix A: Emission Calculations**  
**Extruders - HAPs**

**Company Name: B & F Plastics, Inc.**  
**Address City IN Zip: 540 North Eighth Street, Richmond, Indiana 47374**  
**Permit No.: 177-29419-00103**  
**Administrative Amendment No.: 177-33175-00103**  
**Reviewer: Deborah Cole**

HAP	PE Resin	Emission Factor (lb/10 <sup>6</sup> lbs)	SBR Rubber	Emission Factor (lb/10 <sup>6</sup> lbs)	PP Resin	Emission Factor (lb/10 <sup>6</sup> lbs)
Formaldehyde		0.04		0.00		0.74
Acrolein		0.02		0.31		0.01
Acetaldehyde		0.03		0.00		0.46
Propionaldehyde		0.02		0.00		0.05
Methyl Ethyl Ketone		0.02		0.00		0.19
Acrylic Acid		0.02		0.00		0.08
Acetophenone		0.00		3.32		0.00
Cumene		0.00		0.14		0.00
Methylene Chloride		0.00		13.2		0.00
Napthalene		0.00		1.98		0.00
Propylene Oxide		0.00		1.75		0.00
Toluene		0.00		9.26		0.00
4-Methyl-2-pentanone		0.00		2.66		0.00

Extruder	Max Throughput (lb/hr)	Component	Max Rate (lb/hr)	HAPs							Total HAPs
				Formaldehyde (tpy)	Acrolein (tpy)	Acetaldehyde (tpy)	Propionaldehyde (tpy)	Methyl Ethyl Ketone (tpy)	Acrylic Acid (tpy)	Acetophenone (tpy)	
Plant 1											
1	400	Polyethylene Resin	400	7.01E-05	3.50E-05	5.26E-05	3.50E-05	3.50E-05	3.50E-05	0.00E+00	
2	400	Polyethylene Resin	400	7.01E-05	3.50E-05	5.26E-05	3.50E-05	3.50E-05	3.50E-05	0.00E+00	
3	500	SBR Reprocessed Rubber	500	0.00E+00	6.79E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.27E-03	
4	500	Polyethylene Resin	500	8.76E-05	4.38E-05	6.57E-05	4.38E-05	4.38E-05	4.38E-05	0.00E+00	
5	400	SBR Reprocessed Rubber	400	0.00E+00	5.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.82E-03	
6	400	Polyethylene Resin	400	7.01E-05	3.50E-05	5.26E-05	3.50E-05	3.50E-05	3.50E-05	0.00E+00	
8	400	Polyethylene Resin	400	7.01E-05	3.50E-05	5.26E-05	3.50E-05	3.50E-05	3.50E-05	0.00E+00	
9	500	Polyolefin Composite	500	8.76E-05	4.38E-05	6.57E-05	4.38E-05	4.38E-05	4.38E-05	0.00E+00	
10	400	SBR Reprocessed Rubber	400	0.00E+00	5.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.82E-03	
Plant 2											
11	500	Polyethylene Resin	250	4.38E-05	2.19E-05	3.29E-05	2.19E-05	2.19E-05	2.19E-05	0.00E+00	
		Polypropylene Resin	250	8.10E-04	1.10E-05	5.04E-04	5.48E-05	2.08E-04	8.76E-05	0.00E+00	
12	500	Polyethylene Resin	250	4.38E-05	2.19E-05	3.29E-05	2.19E-05	2.19E-05	2.19E-05	0.00E+00	
		Polypropylene Resin	250	8.10E-04	1.10E-05	5.04E-04	5.48E-05	2.08E-04	8.76E-05	0.00E+00	
13	500	Polyethylene Resin	250	4.38E-05	2.19E-05	3.29E-05	2.19E-05	2.19E-05	2.19E-05	0.00E+00	
		Polypropylene Resin	250	8.10E-04	1.10E-05	5.04E-04	5.48E-05	2.08E-04	8.76E-05	0.00E+00	
14	500	Polyethylene Resin	250	4.38E-05	2.19E-05	3.29E-05	2.19E-05	2.19E-05	2.19E-05	0.00E+00	
		Polypropylene Resin	250	8.10E-04	1.10E-05	5.04E-04	5.48E-05	2.08E-04	8.76E-05	0.00E+00	
Plant 3											
16	2000	Polyethylene Resin	2000	3.50E-04	1.75E-04	2.63E-04	1.75E-04	1.75E-04	1.75E-04	0.00E+00	
17	2000	Polyethylene Resin	2000	3.50E-04	1.75E-04	2.63E-04	1.75E-04	1.75E-04	1.75E-04	0.00E+00	
Pelltizer	800	Polyethylene Resin	800	1.40E-04	7.01E-05	1.05E-04	7.01E-05	7.01E-05	7.01E-05	0.00E+00	
<b>TOTAL</b>				<b>0.0047</b>	<b>0.0025</b>	<b>0.0031</b>	<b>0.0010</b>	<b>0.0016</b>	<b>0.0011</b>	<b>0.0189</b>	

0.0329

**Methodology**  
See page 4

**Appendix A: Emission Calculations**  
**Extruders HAPs continued**

**Company Name: B & F Plastics, Inc.**  
**Address City IN Zip: 540 North Eighth Street, Richmond, Indiana 47374**  
**Permit No.: 177-29419-00103**  
**Aministrative Amendment No.: 177-33175-00103**  
**Reviewer: Deborah Cole**

Extruder	Max Throughput (lb/hr)	Component	Max Rate (lb/hr)	HAPs continued					
				Cumene (tpy)	Methylene Chloride (tpy)	Napthalene (tpy)	Propylene Oxide (tpy)	Toluene (tpy)	4-Methyl-2-pentanone (tpy)
Plant 1									
1	400	Polyethylene Resin	400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2	400	Polyethylene Resin	400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3	500	SBR Reprocessed Rubber	500	3.07E-04	2.89E-02	4.34E-03	3.83E-03	2.03E-02	5.83E-03
4	500	Polyethylene Resin	500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5	400	SBR Reprocessed Rubber	400	2.45E-04	2.31E-02	3.47E-03	3.07E-03	1.62E-02	4.66E-03
6	400	Polyethylene Resin	400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8	400	Polyethylene Resin	400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9	500	Polyolefin Composite	500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10	400	SBR Reprocessed Rubber	400	2.45E-04	2.31E-02	3.47E-03	3.07E-03	1.62E-02	4.66E-03
Plant 2									
11	500	Polyethylene Resin	250	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Polypropylene Resin	250	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12	500	Polyethylene Resin	250	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Polypropylene Resin	250	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
13	500	Polyethylene Resin	250	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Polypropylene Resin	250	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
14	500	Polyethylene Resin	250	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Polypropylene Resin	250	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Plant 3									
16	2000	Polyethylene Resin	2000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
17	2000	Polyethylene Resin	2000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pellitizer	800	Polyethylene Resin	800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>TOTAL</b>				<b>0.0008</b>	<b>0.0752</b>	<b>0.0113</b>	<b>0.0100</b>	<b>0.0527</b>	<b>0.0151</b>

Total HAPS

0.1651 0.1980

**Methodology**

Emission Factors for Polyethylene Resin are from "Development of Emission Factors for Polyethylene Processing" by Barlow, Contos, Holdren, Garrison, Harris, & Janke J. Air & Waste Manage. Assoc. 46: 569-580.

Emission Factors for Polypropylene Resin are from "Development of Emission Factors for Polypropylene Processing" by Adams, Bankston, Barlow, Holdren, Meyer, & Marchesani J. Air & Waste Manage. Assoc. 49: 49-56.

Emission Factors for SBR Reprocessed Rubber are from an Unpublished Report from the Rubber Manufacturer's Association supplied by Ron Ryan with Research Triangle Park - OAQP

Emission Factors were not found for Polyolefin Composite; thus Emission Factors of Polypropylene were used as a worst-case scenario

The source confirmed that the resins and process they use are the same as those cited in the articles.

These alternate emission factors used in these calculations were evaluated and accepted for this source by the Compliance Data Section.

Emission Rate (lb/hr) = Max Rate (lb/hr) / 1,000,000 x Emission Factor (lb/1,000,000 lbs)

Emission Rate (tpy) = Emission Rate (lb/hr) x 8,760 hours per year x 2,000 lbs per ton

**Potential to Emit from Molders and Saw  
Molders and Cut-Saw**

**Company Name: B & F Plastics, Inc.**

**Address City IN Zip: 540 North Eighth Street, Richmond, Indiana 47374**

**Permit No.: 177-29419-00103**

**Aministrative Amendment No.: 177-33175-00103**

**Reviewer: Deborah Cole**

Molder	Throughput (lbs/hr)	Emission Factor (lbs/ton)	Control Efficiency	PM Emissions (lb/hr)	PM Emissions (tpy)	PTE PM (control - not intregal to the process)
1	500	0.35	97%	0.003	0.011	0.38
2	500	0.35	97%	0.003	0.011	0.38
3	500	0.35	97%	0.003	0.011	0.38
Cut-Saw						
1	1000	0.35	97%	0.005	0.023	0.77
<b>TOTAL</b>					0.057	1.92

**Methodology**

Emission Factor is from "Uncontrolled Emission Factor Listing for Criteria Air Pollutants" VOL II Log Sawing (scc 3-07-008-02)

PM Emissions (lb/hr) = Throughput (lb/hr) x Emission Factor / 2,000 lbs per ton

PM Emissions (tpy) = PM Emissions (lb/hr) x 8,760 hrs per year / 2,000 lbs per ton

**Appendix A: Emission Calculations**

**Grinders**

**Company Name: B & F Plastics, Inc.**

**Address City IN Zip: 540 North Eighth Street, Richmond, Indiana 47374**

**Permit No.: 177-29419-00103**

**Aministrative Amendment No.: 177-33175-00103**

**Reviewer: Deborah Cole**

Grinders	Max. Throughput (lb/hr)	Emission Factor (lb/ton)	PM PTE (tpy)
<b>Plant 1</b>			
1	40	0.62	0.05
2	40	0.62	0.05
3	50	0.62	0.07
4	50	0.62	0.07
5	40	0.62	0.05
6	40	0.62	0.05
8	40	0.62	0.05
9	50	0.62	0.07
10	40	0.62	0.05
<b>Plant 2</b>			
11	50	0.62	0.07
12	50	0.62	0.07
13	50	0.62	0.07
14	50	0.62	0.07
15	50	0.62	0.07
608			
608 Grinder	2000	0.62	2.72
<b>Plant 3</b>			
Line 16 Grinder	200	0.62	0.27
<b>17</b>	<b>200</b>	<b>0.62</b>	<b>0.27</b>
<b>TOTAL</b>			<b>4.13</b>

**Methodology**

The emission factor comes from AP-42 Table 11.17-4 Scalping screen and hammer mill (scc 3-05-016-02).

This emission factor was used because no plastic grinding emission factor exists.

This emission factor is more consistent with the process at this source. The grinders are more like "granulators".

The purpose is to reduce the size for reuse later in the process not to make it into a fine dust.

Max. Throughput (lb/hr) = Max. Throughput (lb/hr) of relevant extruder x percent Extruder throughput

PM PTE (tpy) = Max. Throughput (lb/hr) / 2,000 lbs per ton x Emission Factor (lb/ton) x 8,760 hours per year x 2,000 lbs per ton

Note: Grinder 15 is a backup/auxiliary grinder used minimally but to account for the PTE for the grinder, throughput from Unit 14 extruder is going to Grinder 15.

**Appendix A: Emission Calculations**  
**Potential to Emit for Plastic Resin Storage Silos**  
**Company Name: B & F Plastics, Inc.**  
**Address City IN Zip: 540 North Eighth Street, Richmond, Indiana 47374**  
**Permit No.: 177-29419-00103**  
**Aministrative Amendment No.: 177-33175-00103**  
**Reviewer: Deborah Cole**

Storage Silos	Conveyance Rate (lbs/hr)	Emission Factor (g/kg)	PTE (lbs/hr)	PTE (tpy)
Plant 1				
1	22,500	0.0003	0.01	0.03
2	22,500	0.0003	0.01	0.03
3	22,500	0.0003	0.01	0.03
4	22,500	0.0003	0.01	0.03
5	22,500	0.0003	0.01	0.03
Plant 2				
6	22,500	0.0003	0.01	0.03
7	22,500	0.0003	0.01	0.03
8	22,500	0.0003	0.01	0.03
9	22,500	0.0003	0.01	0.03
10	22,500	0.0003	0.01	0.03
11	22,500	0.0003	0.01	0.03
Plant 3				
12	22,500	0.0003	0.01	0.03
13	22,500	0.0003	0.01	0.03
14	22,500	0.0003	0.01	0.03
15	22,500	0.0003	0.01	0.03
<b>TOTAL</b>				<b>0.44</b>

Methodology

Emission Factor comes from AP-42 Table 6.6.2-1 Emission Factors for PET Process

Emission Factor for Polyethylene Product Storage because no factor for Polypropylene exists

The source only stores the product, they do not manufacture plastic resin. The storage silos for Plant 1 & 3 are mostly for polyethylene, and Plant 2 stores polypropylene which AP42 doesn't have that emission factor. There shouldn't be any significant impact because of the structural or chemical differences between the two.

PTE (tpy) = Max Storage (lbs) x Emission Factor (g/kg) x .453924 kilograms per pound / 453.924 grams per pound / 2,000 lbs per ton

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

**Company Name: B & F Plastics, Inc.  
Address City IN Zip: 540 North Eighth Street, Richmond, Indiana 47374  
Permit Number: 177-29419-00103  
Administrative Amendment No.: 177-33175-00103  
Reviewer: Deborah Cole**

Space Heaters							
Plant 1	(MMBth/hr)	Plant 2	(MMBth/hr)	Bldg. 600	(MMBth/hr)	Bldg. 608	(MMBth/hr)
1	0.195	5	0.234	10	0.195	14	0.234
		6	0.234	11	0.234	15	0.234
3	0.234	7	0.234	12	0.234	16	0.234
4	0.234	8	0.234	13	0.195	17	0.234
		9	0.195			18	0.234
						19	0.195
<b>TOTALS</b>	<b>0.663</b>		<b>1.131</b>		<b>0.858</b>		<b>1.365</b>

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr
4.02	1020	34.5

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100	5.5	84
					**see below		
Potential Emission in tons/yr	0.03	0.13	0.13	0.01	1.72	0.09	1.45

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

**Methodology**

All emission factors are based on normal firing.  
MMBtu = 1,000,000 Btu  
MMCF = 1,000,000 Cubic Feet of Gas  
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03  
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu  
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**HAPS Calculations**

Emission Factor in lb/MMcf	HAPs - Organics					Total - Organics
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	3.622E-05	2.070E-05	1.294E-03	3.105E-02	5.865E-05	<b>3.246E-02</b>

Emission Factor in lb/MMcf	HAPs - Metals					Total - Metals
	Lead	Cadmium	Chromium	Manganese	Nickel	
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	8.625E-06	1.897E-05	2.415E-05	6.555E-06	3.622E-05	<b>9.453E-05</b>

<b>Total HAPs</b>	<b>3.255E-02</b>
<b>Worst HAP</b>	<b>3.105E-02</b>

Methodology is the same as above.

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

**Greenhouse Gas Calculations**

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
	120,000	2.3	2.2
Potential Emission in tons/yr	2,069.94	0.04	0.04
Summed Potential Emissions in tons/yr	2,070.01		
CO2e Total in tons/yr	2,082.53		

**Methodology**

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



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Michael R. Pence*  
**Governor**

*Thomas W. Easterly*  
**Commissioner**

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

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

TO: Bruce Upchurch  
President  
B & F Plastics, Inc.  
540 North 8<sup>th</sup> Street  
Richmond, IN 47374-2304

DATE: May 31, 2013

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

SUBJECT: Final Decision  
Registration Administrative Amendment  
177-33175-00103

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:  
Kaiser L. Baig, P.E., Cornerstone Environmental  
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](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 11/30/07

# Mail Code 61-53

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Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

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1		Bruce Upchurch B & F Plastics, Inc. 540 N 8th St Richmond IN 47374-2304 (Source CAATS)		Confirmed Delivery								
2		Mr. Thomas Lee Clevenger 4005 South Franks Lane Selma IN 47383 (Affected Party)										
3		Wayne County Commissioners 401 East Main Street Richmond IN 47374 (Local Official)										
4		Mr. Randall Shrock 2764 Abington Pike Richmond IN 47374 (Affected Party)										
5		Wayne County Health Department 401 E. Main Street Richmond IN 47374-4388 (Health Department)										
6		Kaiser Baig Cornerstone Environmental 880 Lennox Ct. Zionsville IN 46077 (Consultant)										
7												
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<b>5</b>			