



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL MODIFICATION  
SHELBY COUNTY**

**CERTIFIED MAIL**

Street Address:

50 West Town Street, Suite 700

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049

**Application No: 05-14404**

**Fac ID: 0575010183**

**DATE: 5/3/2007**

Advanced Composites, Inc.  
Bill Graham  
1062 Fourth Ave  
Sidney, OH 45365

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

You are hereby notified that this action of the Director is final and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00 which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
309 South Fourth Street, Room 222  
Columbus, OH 43215

Sincerely,

Michael W. Ahern, Manager  
Permit Issuance and Data Management Section  
Division of Air Pollution Control

CC: USEPA

SWDO



**Permit To Install  
Terms and Conditions**

**Issue Date: 5/3/2007  
Effective Date: 5/3/2007**

**FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 05-14404**

Application Number: 05-14404  
Facility ID: 0575010183  
Permit Fee: **\$3950**  
Name of Facility: Advanced Composites, Inc.  
Person to Contact: Bill Graham  
Address: 1062 Fourth Ave  
Sidney, OH 45365

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**1062 Fourth Ave  
Sidney, Ohio**

Description of proposed emissions unit(s):  
**To correct erroneous information and obtain consistent and simplified permit requirements.**

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described source(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski  
Director

## Part I - GENERAL TERMS AND CONDITIONS

### A. Permit to Install General Terms and Conditions

#### 1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

#### 2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

#### 3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

#### 4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon

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the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

**5. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

**6. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

**7. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

**8. Termination of Permit to Install**

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

**9. Construction of New Sources(s)**

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The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

#### **10. Public Disclosure**

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

#### **11. Applicability**

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

#### **12. Best Available Technology**

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

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**13. Source Operation and Operating Permit Requirements After Completion of Construction**

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

**14. Construction Compliance Certification**

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

**15. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

**B. Permit to Install Summary of Allowable Emissions**

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)  
 TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC	14.99
PE/PM10	5.35
NOx	5.15
CO	4.33
SO2	0.03

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**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

- The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

**Operations, Property, and/or Equipment -(P017) - ZSK-58, extruder line w/ particulate controls**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	<p>The organic compound (OC) emissions from the extrusion operation of this emissions unit shall not exceed 0.31 lbs per hour nor 1.36 tons per year.</p> <p>The particulate emissions (PE) and PM10 from this emissions unit shall not exceed 0.10 lbs per hour nor 0.44 tons per year.</p> <p>Visible emissions from the stacks shall not exceed 5% opacity.</p> <p>The facility-wide use of cleanup materials shall not exceed 183 gallons per rolling 12-month rolling period.</p> <p>The facility-wide OC emissions from the use of cleanup materials shall not exceed 0.6 tons per rolling 12-month period.</p> <p>The organic materials employed by this emissions unit shall not be liquid organic materials as defined in OAC rule 3745-21-01(C)(3).</p> <p>This emissions unit shall be equipped with a fabric filter system that will minimize or eliminate any particulate emissions.</p> <p>See A.2.a and A.2.b.</p>
OAC rule 3745-21-07(G)	The limitations specified by this rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3)
OAC rule 3745-17-07(A)	The visible emission limitation specified by this rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3).

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OAC rule 3745-17-11(B)

The PE limitation specified by this rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3).

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**2. Additional Terms and Conditions:**

- 2.a** The hourly emission limitations for PE, 0.11 pound, and OC, 0.31 pounds, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with these limitations.
- 2.b** The organic materials employed by this emissions unit shall not be liquid organic materials as defined in OAC rule 3745-21-01(C)(3).

The use of photochemically reactive materials, as defined in OAC rule 3745-21-01 (C)(5), in this emissions unit is prohibited. Prior to employing any photochemically reactive materials, the permittee shall provide written notification to, and obtain approval from, Ohio EPA, Southwest District Office. Such notification shall include information sufficient to determine that the emissions associated with the proposed change in materials will comply with the emissions limits and/or control requirements as defined in OAC 3745-21-07(G)(2). This notification, at a minimum, shall include the company identification of the new material to be employed, the composition of the material, and the maximum amount to be used, in pounds per hour.

**B. Operational Restrictions**

- 1. This emissions unit shall be equipped with a fabric filter system that will minimize or eliminate any particulate emissions.
- 2. The organic compound (OC) content of the cleanup materials employed at this facility shall not exceed 6.3 pounds per gallon, as employed.

**C. Monitoring and/or Recordkeeping Requirements:**

- 1. The permittee shall maintain the following monthly records on facility-wide use of cleanup materials:
  - a. the amount of cleanup employed, in gallons;
  - b. the volatile organic compound content of cleanup material, in pounds per gallon;
  - c. the OC emissions from the use of cleanup material, in tons ( $(\text{"a"} \times \text{"b"})/2000$ ); and

- d. the rolling, 12-month total OC emitted from the use of cleanup materials, in tons (the total OC emitted, in tons, for the current month ("c") plus the total amount of OC emissions for the 11 previous calendar months).
2. The pressure drop across the fabric filter system shall be maintained within the range of 1 to 7 inches of water while the emissions unit is in operation.

The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record in a log, the pressure drop across the baghouse on weekly basis.

3. The permittee shall perform weekly checks on stacks and/or vents that are involved with emissions from raw material handling. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the date and time the weekly check was made;
  - b. the visible emission record sheet;
  - c. the color of the emissions;
  - d. the total duration of any visible emission incident; and
  - e. any corrective actions taken to eliminate the visible emissions.

#### Applicable Compliance Method

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

### **D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which include the following information:

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- a. an identification when pressure drop across the fabric filter system was not maintained within the range of 1 to 7 inches of water while the emissions unit is in operation;
  - b. an identification when the facility-wide OC emissions from the use of cleanup materials exceeds 0.58 tons per rolling 12-month period; and
  - c. an identification visible emission reading from any stacks and/or vents that are involved with emissions from raw material handling, when the emissions unit is in operation, that exceeds the allowable 5% opacity.
2. The deviation (excursion) reports shall be submitted as quarterly reports specified in Part I, General Term and Condition A.2 of this permit.

**E. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

a. **Emission Limitation:**

0.31 lb OC/hr from extrusion operation

**Applicable Compliance Method:**

The hourly emission limitation was established by the following equation:

$$HER = (HPR/2000) \times EEF$$

**where:**

HER= Hourly Emission Rate, lbs/hr;

HPR = maximum hourly production rate, in lbs (2,950 lbs/hr, from Advanced Composites', Emission Activity Category form);

EEF = extruder emission factor, in lbs/1000 lbs processed (0.21 lbs/ton, *Journal of Air and Waste Management* "Development of Emission Factors for Polypropylene Processing, Jan. 1999").

b. **Emission Limitation:**

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0.10 lb PE/hr

**Applicable Compliance Method:**

The hourly emission limitation was established by the following equation:

$$\text{HER} = [(\text{HPR}/1000) \times (\text{REF} + \text{EEF})]$$

**where:**

HER= Hourly Emission Rate, lbs/hr;

HPR = maximum hourly production rate, in lbs (2,950 lbs/hr, from Advanced Composites', Emission Activity Category form);

REF = raw material handling emission factor, in lbs/1000 lbs processed (0.0036 lbs/1000, AP-42 Table 11.26-1); and

EEF = extruder emission factor, in lbs/1000 lbs processed (0.0303 lbs/1000, *Journal of Air and Waste Management* "Development of Emission Factors for Polypropylene Processing, Jan. 1999").

c. **Emission Limitation:**

Visible particulate emissions from the baghouse(s) stack(s) shall not exceed 5% percent opacity as a six-minute average.

**Applicable Compliance Method:**

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

**F. Miscellaneous Requirements**

None

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. Applicable Emissions Limitations and/or Control Requirements**

- The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

**Operations, Property, and/or Equipment - (P018) - ZSK-92A, extruder line w/ particulate controls**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	<p>The organic compound (OC) emissions from the extrusion operation of this emissions unit shall not exceed 0.34 lbs per hour nor 1.49 tons per year.</p> <p>The particulate emissions (PE) and PM10 from this emissions unit shall not exceed 0.12 lbs per hour nor 0.53 tons per year.</p> <p>Visible emissions from the stacks shall not exceed 5% opacity.</p> <p>The facility-wide use of cleanup materials shall not exceed 183 gallons per rolling 12-month rolling period.</p> <p>The facility-wide OC emissions from the use of cleanup materials shall not exceed 0.6 tons per rolling 12-month period.</p> <p>The organic materials employed by this emissions unit shall not be liquid organic materials as defined in OAC rule 3745-21-01(C)(3).</p> <p>This emissions unit shall be equipped with a fabric filter system that will minimize or eliminate any particulate emissions.</p> <p>See A.2.a and A.2.b.</p>
OAC rule 3745-21-07(G)	The limitations specified by this rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3)
OAC rule 3745-17-07(A)	The visible emission limitation specified by this rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3).

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OAC rule 3745-17-11(B)

The PE limitation specified by this rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3).

**Modification Issued: 5/3/2007****2. Additional Terms and Conditions:**

- 2.a** The hourly emission limitations for PE, 0.12 pound, and OC, 0.34 pounds, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with these limitations.
- 2.b** The organic materials employed by this emissions unit shall not be liquid organic materials as defined in OAC rule 3745-21-01(C)(3).

The use of photochemically reactive materials, as defined in OAC rule 3745-21-01 (C)(5), in this emissions unit is prohibited. Prior to employing any photochemically reactive materials, the permittee shall provide written notification to, and obtain approval from, Ohio EPA, Southwest District Office. Such notification shall include information sufficient to determine that the emissions associated with the proposed change in materials will comply with the emissions limits and/or control requirements as defined in OAC 3745-21-07(G)(2). This notification, at a minimum, shall include the company identification of the new material to be employed, the composition of the material, and the maximum amount to be used, in pounds per hour.

**B. Operational Restrictions**

1. This emissions unit shall be equipped with a fabric filter system that will minimize or eliminate any particulate emissions.
2. The organic compound (OC) content of the cleanup materials employed at this facility shall not exceed 6.3 pounds per gallon, as employed.

**C. Monitoring and/or Recordkeeping Requirements:**

1. The permittee shall maintain the following monthly records on facility-wide use of cleanup materials:
  - a. the amount of cleanup employed, in gallons;
  - b. the volatile organic compound content of cleanup material, in pounds per gallon;
  - c. the OC emissions from the use of cleanup material, in tons ( $(\text{"a"} \times \text{"b"})/2000$ ); and

- d. the rolling, 12-month total OC emitted from the use of cleanup materials, in tons (the total OC emitted, in tons, for the current month ("c") plus the total amount of OC emissions for the 11 previous calendar months).
2. The pressure drop across the fabric filter system shall be maintained within the range of 1 to 7 inches of water while the emissions unit is in operation.

The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record in a log, the pressure drop across the baghouse on weekly basis.

3. The permittee shall perform weekly checks on stacks and/or vents that are involved with emissions from raw material handling. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the date and time the weekly check was made;
  - b. the visible emission record sheet;
  - c. the color of the emissions;
  - d. the total duration of any visible emission incident; and
  - e. any corrective actions taken to eliminate the visible emissions.

#### Applicable Compliance Method

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1)

### **D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which include the following information:

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- a. an identification when pressure drop across the fabric filter system was not maintained within the range of 1 to 7 inches of water while the emissions unit is in operation;
  - b. an identification when the facility-wide OC emissions from the use of cleanup materials exceeds 0.58 tons per rolling 12-month period; and
  - c. an identification visible emission reading from any stacks and/or vents that are involved with emissions from raw material handling, when the emissions unit is in operation, that exceeds the allowable 5% opacity.
2. The deviation (excursion) reports shall be submitted as quarterly reports specified in Part I, General Term and Condition A.2 of this permit.

**E. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

- a. **Emission Limitation:**

0.34 lb OC/hr from extrusion operation

**Applicable Compliance Method:**

The hourly emission limitation was established by the following equation:

$$HER = (HPR/2000) \times EEF$$

**where:**

HER= Hourly Emission Rate, lbs/hr;

HPR = maximum hourly production rate, in lbs (3,200 lbs/hr, from Advanced Composites', Emission Activity Category form);

EEF = extruder emission factor, in lbs/2000 lbs processed (0.21 lbs/ton, *Journal of Air and Waste Management* "Development of Emission Factors for Polypropylene Processing, Jan. 1999").

- b. **Emission Limitation:**

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0.12 lb PE/hr

**Applicable Compliance Method:**

The hourly emission limitation was established by the following equation:

$$\text{HER} = [(\text{HPR}/1000) \times (\text{REF} + \text{EEF} + \text{DEF})]$$

**where:**

HER= Hourly Emission Rate, lbs/hr;

HPR = maximum hourly production rate, in lbs (3,200 lbs/hr, from Advanced Composites', Emission Activity Category form);

REF = raw material handling emission factor, in lbs/1000 lbs processed (0.0036 lbs/1000, AP-42 Table 11.26-1);

EEF = extruder emission factor, in lbs/1000 lbs processed (0.0303 lbs/1000, *Journal of Air and Waste Management* "Development of Emission Factors for Polypropylene Processing, Jan. 1999"); and

DEF = Spin Dryer emission factor, in lbs/1000 lbs processed (0.0036 lbs/1000, AP-42 Table 11.26-1).

c. **Emission Limitation:**

Visible particulate emissions from the baghouse(s) stack(s) shall not exceed 5% percent opacity as a six-minute average.

**Applicable Compliance Method:**

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

**F. Miscellaneous Requirements**

None

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

- The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

**Operations, Property, and/or Equipment - (P020) - KTX-73, extruder line w/ particulate controls**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	<p>The organic compound (OC) emissions from the extrusion operation of this emissions unit shall not exceed 0.36 lbs per hour nor 1.58 tons per year.</p> <p>The particulate emissions (PE) and PM10 from this emissions unit shall not exceed 0.12 lbs per hour nor 0.53 tons per year.</p> <p>Visible emissions from the stacks shall not exceed 5% opacity.</p> <p>The facility-wide use of cleanup materials shall not exceed 183 gallons per rolling 12-month rolling period.</p> <p>The facility-wide OC emissions from the use of cleanup materials shall not exceed 0.6 tons per rolling 12-month period.</p> <p>The organic materials employed by this emissions unit shall not be liquid organic materials as defined in OAC rule 3745-21-01(C)(3).</p> <p>This emissions unit shall be equipped with a fabric filter system that will minimize or eliminate any particulate emissions.</p> <p>See A.2.a and A.2.b.</p>
OAC rule 3745-21-07(G)	The limitations specified by this rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3)
OAC rule 3745-17-07(A)	The visible emission limitation specified by this rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3).

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OAC rule 3745-17-11(B)	The PE limitation specified by this rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3).
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**2. Additional Terms and Conditions:**

**2.a** The hourly emission limitations for PE, 0.13 pound, and OC, 0.36 pounds, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with these limitations.

**2.b** The organic materials employed by this emissions unit shall not be liquid organic materials as defined in OAC rule 3745-21-01(C)(3).

The use of photochemically reactive materials, as defined in OAC rule 3745-21-01 (C)(5), in this emissions unit is prohibited. Prior to employing any photochemically reactive materials, the permittee shall provide written notification to, and obtain approval from, Ohio EPA, Southwest District Office. Such notification shall include information sufficient to determine that the emissions associated with the proposed change in materials will comply with the emissions limits and/or control requirements as defined in OAC 3745-21-07(G)(2). This notification, at a minimum, shall include the company identification of the new material to be employed, the composition of the material, and the maximum amount to be used, in pounds per hour.

**B. Operational Restrictions**

1. This emissions unit shall be equipped with a fabric filter system that will minimize or eliminate any particulate emissions.
2. The organic compound (OC) content of the cleanup materials employed at this facility shall not exceed 6.3 pounds per gallon, as employed.

**C. Monitoring and/or Recordkeeping Requirements:**

1. The permittee shall maintain the following monthly records on facility-wide use of cleanup materials:
  - a. the amount of cleanup employed, in gallons;
  - b. the volatile organic compound content of cleanup material, in pounds per gallon;
  - c. the OC emissions from the use of cleanup material, in tons ( $(\text{"a"} \times \text{"b"})/2000$ );  
and

- d. the rolling, 12-month total OC emitted from the use of cleanup materials, in tons (the total OC emitted, in tons, for the current month ("c") plus the total amount of OC emissions for the 11 previous calendar months).
2. The pressure drop across the fabric filter system shall be maintained within the range of 1 to 7 inches of water while the emissions unit is in operation.

The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record in a log, the pressure drop across the baghouse on weekly basis.

3. The permittee shall perform weekly checks on stacks and/or vents that are involved with emissions from raw material handling. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the date and time the weekly check was made;
  - b. the visible emission record sheet;
  - c. the color of the emissions;
  - d. the total duration of any visible emission incident; and
  - e. any corrective actions taken to eliminate the visible emissions.

#### Applicable Compliance Method

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1)

### **D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which include the following information:

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- a. an identification when pressure drop across the fabric filter system was not maintained within the range of 1 to 7 inches of water while the emissions unit is in operation;
  - b. an identification when the facility-wide OC emissions from the use of cleanup materials exceeds 0.58 tons per rolling 12-month period; and
  - c. an identification visible emission reading from any stacks and/or vents that are involved with emissions from raw material handling, when the emissions unit is in operation, that exceeds the allowable 5% opacity.
2. The deviation (excursion) reports shall be submitted as quarterly reports specified in Part I, General Term and Condition A.2 of this permit.

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**E. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

- a. **Emission Limitation:**

0.36 lb OC/hr from extrusion operation

**Applicable Compliance Method:**

The hourly emission limitation was established by the following equation:

$$\text{HER} = (\text{HPR}/2000) \times \text{EEF}$$

**where:**

HER= Hourly Emission Rate, lbs/hr;

HPR = maximum hourly production rate, in lbs (3,400 lbs/hr, from Advanced Composites', Emission Activity Category form);

EEF = extruder emission factor, in lbs/1000 lbs processed (0.21 lbs/ton, *Journal of Air and Waste Management* "Development of Emission Factors for Polypropylene Processing, Jan. 1999").

- b. **Emission Limitation:**

0.12 lb PE/hr

**Applicable Compliance Method:**

The hourly emission limitation was established by the following equation:

$$\text{HER} = [(\text{HPR}/1000) \times (\text{REF} + \text{EEF})]$$

**where:**

HER= Hourly Emission Rate, lbs/hr;

HPR = maximum hourly production rate, in lbs (3,400 lbs/hr, from Advanced Composites', Emission Activity Category form);

REF = raw material handling emission factor, in lbs/1000 lbs processed (0.0036

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lbs/1000, AP-42 Table 11.26-1); and  
EEF = extruder emission factor, in lbs/1000 lbs processed (0.0303 lbs/1000, *Journal of Air and Waste Management* "Development of Emission Factors for Polypropylene Processing, Jan. 1999").

c. **Emission Limitation:**

Visible particulate emissions from the baghouse(s) stack(s) shall not exceed 5% percent opacity as a six-minute average.

**Applicable Compliance Method:**

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

**F. Miscellaneous Requirements**

None

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

- The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

**Operations, Property, and/or Equipment -(P021) - KTX-73A, extruder line w/ particulate controls (terms in this permit supersede those in PTI 05-11903 issued on 12/27/01).**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	<p>The organic compound (OC) emissions from the extrusion operation of this emissions unit shall not exceed 0.56 lbs per hour nor 2.45 tons per year.</p> <p>The particulate emissions (PE) and PM10 from this emissions unit shall not exceed 0.2 lbs per hour nor 0.88 tons per year.</p> <p>Visible emissions from the stacks shall not exceed 5% opacity.</p> <p>The facility-wide use of cleanup materials shall not exceed 183 gallons per rolling 12-month rolling period.</p> <p>The facility-wide OC emissions from the use of cleanup materials shall not exceed 0.6 tons per rolling 12-month period.</p> <p>The organic materials employed by this emissions unit shall not be liquid organic materials as defined in OAC rule 3745-21-01(C)(3).</p> <p>This emissions unit shall be equipped with a fabric filter system that will minimize or eliminate any particulate emissions.</p> <p>See A.2.a and A.2.b.</p>
OAC rule 3745-21-07(G)	The limitations specified by this rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3)
OAC rule 3745-17-07(A)	The visible emission limitation specified by this rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3).

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OAC rule 3745-17-11(B)	The PE limitation specified by this rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3).
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**2. Additional Terms and Conditions:**

- 2.a** The hourly emission limitations for PE, 0.2 pound, and OC, 0.56 pounds, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with these limitations.
- 2.b** The organic materials employed by this emissions unit shall not be liquid organic materials as defined in OAC rule 3745-21-01(C)(3).

The use of photochemically reactive materials, as defined in OAC rule 3745-21-01 (C)(5), in this emissions unit is prohibited. Prior to employing any photochemically reactive materials, the permittee shall provide written notification to, and obtain approval from, Ohio EPA, Southwest District Office. Such notification shall include information sufficient to determine that the emissions associated with the proposed change in materials will comply with the emissions limits and/or control requirements as defined in OAC 3745-21-07(G)(2). This notification, at a minimum, shall include the company identification of the new material to be employed, the composition of the material, and the maximum amount to be used, in pounds per hour.

**B. Operational Restrictions**

1. This emissions unit shall be equipped with a fabric filter system that will minimize or eliminate any particulate emissions.
2. The organic compound (OC) content of the cleanup materials employed at this facility shall not exceed 6.3 pounds per gallon, as employed.

**C. Monitoring and/or Recordkeeping Requirements:**

1. The permittee shall maintain the following monthly records on facility-wide use of cleanup materials:
  - a. the amount of cleanup employed, in gallons;
  - b. the volatile organic compound content of cleanup material, in pounds per gallon;

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- c. the OC emissions from the use of cleanup material, in tons ( $(\text{"a"} \times \text{"b"})/2000$ ); and
  - d. the rolling, 12-month total OC emitted from the use of cleanup materials, in tons (the total OC emitted, in tons, for the current month ("c") plus the total amount of OC emissions for the 11 previous calendar months).
2. The pressure drop across the fabric filter system shall be maintained within the range of 1 to 7 inches of water while the emissions unit is in operation.

The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record in a log, the pressure drop across the baghouse on weekly basis.

3. The permittee shall perform weekly checks on stacks and/or vents that are involved with emissions from raw material handling. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the date and time the weekly check was made;
  - b. the visible emission record sheet;
  - c. the color of the emissions;
  - d. the total duration of any visible emission incident; and
  - e. any corrective actions taken to eliminate the visible emissions.

Applicable Compliance Method

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1)

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which include the following information:
  - a. an identification when pressure drop across the fabric filter system was not maintained within the range of 1 to 7 inches of water while the emissions unit is in operation;
  - b. an identification when the facility-wide OC emissions from the use of cleanup materials exceeds 0.58 tons per rolling 12-month period; and
  - c. an identification visible emission reading from any stacks and/or vents that are involved with emissions from raw material handling, when the emissions unit is in operation, that exceeds the allowable 5% opacity.
2. The deviation (excursion) reports shall be submitted as quarterly reports specified in Part I, General Term and Condition A.2 of this permit.

#### E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

- a. **Emission Limitation:**

0.56 lb OC/hr from extrusion operation

- a. **Applicable Compliance Method:**

The hourly emission limitation was established by the following equation:

$$HER = (HPR/2000) \times EEF$$

- a. **where:**

HER= Hourly Emission Rate, lbs/hr;

HPR = maximum hourly production rate, in lbs (5,300 lbs/hr, from Advanced Composites', Emission Activity Category form);

EEF = extruder emission factor, in lbs/1000 lbs processed (0.21 lbs/ton, *Journal of Air and Waste Management* "Development of Emission Factors for Polypropylene Processing, Jan. 1999").

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b. **Emission Limitation:**

0.20 lb PE/hr

**Applicable Compliance Method:**

The hourly emission limitation was established by the following equation:

$$\text{HER} = [(\text{HPR}/1000) \times (\text{REF} + \text{EEF} + \text{DEF})]$$

**where:**

HER= Hourly Emission Rate, lbs/hr;

HPR = maximum hourly production rate, in lbs (5,300 lbs/hr, from Advanced Composites', Emission Activity Category form);

REF = raw material handling emission factor, in lbs/1000 lbs processed (0.0036 lbs/1000, AP-42 Table 11.26-1);

EEF = extruder emission factor, in lbs/1000 lbs processed (0.0303 lbs/1000, *Journal of Air and Waste Management* "Development of Emission Factors for Polypropylene Processing, Jan. 1999");and

DEF = Spin Dryer emission factor, in lbs/1000 lbs processed (0.0036 lbs/1000, AP-42 Table 11.26-1).

c. **Emission Limitation:**

Visible particulate emissions from the baghouse(s) stack(s) shall not exceed 5% percent opacity as a six-minute average.

**Applicable Compliance Method:**

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

**F. Miscellaneous Requirements**

None

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**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

**Operations, Property, and/or Equipment -(P022) - ZSK-133, extruder line w/ particulate controls (terms in this permit supersede those in PTI 05-12837 issued on 08/28/03).**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	<p>The organic compound (OC) emissions from the extrusion operation of this emissions unit shall not exceed 1.26 lbs per hour nor 5.52 tons per year.</p> <p>The particulate emissions (PE) and PM10 from this emissions unit shall not exceed 0.45 lbs per hour nor 1.97 tons per year.</p> <p>Visible emissions from the stacks shall not exceed 5% opacity.</p> <p>The facility-wide use of cleanup materials shall not exceed 183 gallons per rolling 12-month rolling period.</p> <p>The facility-wide OC emissions from the use of cleanup materials shall not exceed 0.6 tons per rolling 12-month period.</p> <p>The organic materials employed by this emissions unit shall not be liquid organic materials as defined in OAC rule 3745-21-01(C)(3).</p> <p>This emissions unit shall be equipped with a fabric filter system that will minimize or eliminate any particulate emissions.</p> <p>See A.2.a and A.2.b.</p>
OAC rule 3745-21-07(G)	The limitations specified by this rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3)
OAC rule 3745-17-07(A)	The visible emission limitation specified by this rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3).

OAC rule 3745-17-11(B)	The PE limitation specified by this rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3).
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## 2. Additional Terms and Conditions:

- 2.a** The hourly emission limitations for PE, 0.46 pound, and OC, 1.26 pounds, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with these limitations.
- 2.b** The organic materials employed by this emissions unit shall not be liquid organic materials as defined in OAC rule 3745-21-01(C)(3).

The use of photochemically reactive materials, as defined in OAC rule 3745-21-01 (C)(5), in this emissions unit is prohibited. Prior to employing any photochemically reactive materials, the permittee shall provide written notification to, and obtain approval from, Ohio EPA, Southwest District Office. Such notification shall include information sufficient to determine that the emissions associated with the proposed change in materials will comply with the emissions limits and/or control requirements as defined in OAC 3745-21-07(G)(2). This notification, at a minimum, shall include the company identification of the new material to be employed, the composition of the material, and the maximum amount to be used, in pounds per hour.

## B. Operational Restrictions

1. This emissions unit shall be equipped with a fabric filter system that will minimize or eliminate any particulate emissions.
2. The organic compound (OC) content of the cleanup materials employed at this facility shall not exceed 6.3 pounds per gallon, as employed.

## C. Monitoring and/or Recordkeeping Requirements:

1. The permittee shall maintain the following monthly records on facility-wide use of cleanup materials:
  - a. the amount of cleanup employed, in gallons;
  - b. the volatile organic compound content of cleanup material, in pounds per gallon;

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- c. the OC emissions from the use of cleanup material, in tons ( $(\text{"a"} \times \text{"b"})/2000$ ); and
  - d. the rolling, 12-month total OC emitted from the use of cleanup materials, in tons (the total OC emitted, in tons, for the current month ("c") plus the total amount of OC emissions for the 11 previous calendar months).
2. The pressure drop across the fabric filter system shall be maintained within the range of 1 to 7 inches of water while the emissions unit is in operation.

The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record in a log, the pressure drop across the baghouse on weekly basis.

3. The permittee shall perform weekly checks on stacks and/or vents that are involved with emissions from raw material handling. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the date and time the weekly check was made;
  - b. the visible emission record sheet;
  - c. the color of the emissions;
  - d. the total duration of any visible emission incident; and
  - e. any corrective actions taken to eliminate the visible emissions.

Applicable Compliance Method

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1)

**D. Reporting Requirements**

Emissions Unit ID: P022

1. The permittee shall submit deviation (excursion) reports which include the following information:
  - a. an identification when pressure drop across the fabric filter system was not maintained within the range of 1 to 7 inches of water while the emissions unit is in operation;
  - b. an identification when the facility-wide OC emissions from the use of cleanup materials exceeds 0.58 tons per rolling 12-month period; and
  - c. an identification visible emission reading from any stacks and/or vents that are involved with emissions from raw material handling, when the emissions unit is in operation, that exceeds the allowable 5% opacity.
2. The deviation (excursion) reports shall be submitted as quarterly reports specified in Part I, General Term and Condition A.2 of this permit.

#### E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

- a. **Emission Limitation:**

1.26 lb OC/hr from extrusion operation

- a. **Applicable Compliance Method:**

The hourly emission limitation was established by the following equation:

$$HER = (HPR/2000) \times EEF$$

- a. **where:**

HER= Hourly Emission Rate, lbs/hr;

HPR = maximum hourly production rate, in lbs (12,000 lbs/hr, from Advanced Composites', Emission Activity Category form);

EEF = extruder emission factor, in lbs/1000 lbs processed (0.21 lbs/ton, *Journal of Air and Waste Management* "Development of Emission Factors for Polypropylene Processing, Jan. 1999").

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b. **Emission Limitation:**

0.45 lb PE/hr

**Applicable Compliance Method:**

The hourly emission limitation was established by the following equation:

$$\text{HER} = [(\text{HPR}/1000) \times (\text{REF} + \text{EEF} + \text{DEF})]$$

**where:**

HER= Hourly Emission Rate, lbs/hr;

HPR = maximum hourly production rate, in lbs (12,000 lbs/hr, from Advanced Composites', Emission Activity Category form);

REF = raw material handling emission factor, in lbs/1000 lbs processed (0.0036 lbs/1000, AP-42 Table 11.26-1);

EEF = extruder emission factor, in lbs/1000 lbs processed (0.0303 lbs/1000, *Journal of Air and Waste Management* "Development of Emission Factors for Polypropylene Processing, Jan. 1999"); and

DEF = Spin Dryer emission factor, in lbs/1000 lbs processed (0.0036 lbs/1000, AP-42 Table 11.26-1).

c. **Emission Limitation:**

Visible particulate emissions from the baghouse(s) stack(s) shall not exceed 5% percent opacity as a six-minute average.

**Applicable Compliance Method:**

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

**F. Miscellaneous Requirements**

None

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

- The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

**Operations, Property, and/or Equipment - (P024) - ZSK-92B, extruder line w/ particulate controls**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	<p>The organic compound (OC) emissions from the extrusion operation of this emissions unit shall not exceed 0.39 lbs per hour nor 1.71 tons per year.</p> <p>The particulate emissions (PE) and PM10 from this emissions unit shall not exceed 0.14 lbs per hour nor 0.61 tons per year.</p> <p>Visible emissions from the stacks shall not exceed 5% opacity.</p> <p>The facility-wide use of cleanup materials shall not exceed 183 gallons per rolling 12-month rolling period.</p> <p>The facility-wide OC emissions from the use of cleanup materials shall not exceed 0.6 tons per rolling 12-month period.</p> <p>The organic materials employed by this emissions unit shall not be liquid organic materials as defined in OAC rule 3745-21-01(C)(3).</p> <p>This emissions unit shall be equipped with a fabric filter system that will minimize or eliminate any particulate emissions.</p> <p>See A.2.a and A.2.b.</p>
OAC rule 3745-21-07(G)	The limitations specified by this rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3)
OAC rule 3745-17-07(A)	The visible emission limitation specified by this rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3).

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**Emissions Unit ID: P024**

OAC rule 3745-17-11(B)	The PE limitation specified by this rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3).
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**2. Additional Terms and Conditions:**

- 2.a** The hourly emission limitations for PE, 0.14 pound, and OC, 0.36 pounds, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with these limitations.
- 2.b** The organic materials employed by this emissions unit shall not be liquid organic materials as defined in OAC rule 3745-21-01(C)(3).

The use of photochemically reactive materials, as defined in OAC rule 3745-21-01 (C)(5), in this emissions unit is prohibited. Prior to employing any photochemically reactive materials, the permittee shall provide written notification to, and obtain approval from, Ohio EPA, Southwest District Office. Such notification shall include information sufficient to determine that the emissions associated with the proposed change in materials will comply with the emissions limits and/or control requirements as defined in OAC 3745-21-07(G)(2). This notification, at a minimum, shall include the company identification of the new material to be employed, the composition of the material, and the maximum amount to be used, in pounds per hour.

**B. Operational Restrictions**

- 1. This emissions unit shall be equipped with a fabric filter system that will minimize or eliminate any particulate emissions.
- 2. The organic compound (OC) content of the cleanup materials employed at this facility shall not exceed 6.3 pounds per gallon, as employed.

**C. Monitoring and/or Recordkeeping Requirements:**

- 1. The permittee shall maintain the following monthly records on facility-wide use of cleanup materials:
  - a. the amount of cleanup employed, in gallons;
  - b. the volatile organic compound content of cleanup material, in pounds per gallon;
  - c. the OC emissions from the use of cleanup material, in tons ( $(\text{"a"} \times \text{"b"})/2000$ ); and

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- d. the rolling, 12-month total OC emitted from the use of cleanup materials, in tons (the total OC emitted, in tons, for the current month ("c") plus the total amount of OC emissions for the 11 previous calendar months).
2. The pressure drop across the fabric filter system shall be maintained within the range of 1 to 7 inches of water while the emissions unit is in operation.

The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record in a log, the pressure drop across the baghouse on weekly basis.

3. The permittee shall perform weekly checks on stacks and/or vents that are involved with emissions from raw material handling. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the date and time the weekly check was made;
  - b. the visible emission record sheet;
  - c. the color of the emissions;
  - d. the total duration of any visible emission incident; and
  - e. any corrective actions taken to eliminate the visible emissions.

Applicable Compliance Method

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1)

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which include the following information:

- a. an identification when pressure drop across the fabric filter system was not maintained within the range of 1 to 7 inches of water while the emissions unit is in operation;
  - b. an identification when the facility-wide OC emissions from the use of cleanup materials exceeds 0.58 tons per rolling 12-month period; and
  - c. an identification visible emission reading from any stacks and/or vents that are involved with emissions from raw material handling, when the emissions unit is in operation, that exceeds the allowable 5% opacity.
2. The deviation (excursion) reports shall be submitted as quarterly reports specified in Part I, General Term and Condition A.2 of this permit.

#### E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

- a. **Emission Limitation:**

0.39 lb OC/hr from extrusion operation

- a. **Applicable Compliance Method:**

The hourly emission limitation was established by the following equation:

$$HER = (HPR/2000) \times EEF$$

- a. **where:**

HER= Hourly Emission Rate, lbs/hr;

HPR = maximum hourly production rate, in lbs (3,700 lbs/hr, from Advanced Composites', Emission Activity Category form);

EEF = extruder emission factor, in lbs/1000 lbs processed (0.21 lbs/ton, *Journal of Air and Waste Management* "Development of Emission Factors for Polypropylene Processing, Jan. 1999").

- b. **Emission Limitation:**

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0.14 lb PE/hr

**Applicable Compliance Method:**

The hourly emission limitation was established by the following equation:

$$\text{HER} = [(\text{HPR}/1000) \times (\text{REF} + \text{EEF} + \text{DEF})]$$

**where:**

HER= Hourly Emission Rate, lbs/hr;

HPR = maximum hourly production rate, in lbs (3,403 lbs/hr, from Advanced Composites', Emission Activity Category form);

REF = raw material handling emission factor, in lbs/1000 lbs processed (0.0036 lbs/1000, AP-42 Table 11.26-1);

EEF = extruder emission factor, in lbs/1000 lbs processed (0.0303 lbs/1000, *Journal of Air and Waste Management* "Development of Emission Factors for Polypropylene Processing, Jan. 1999"); and

DEF = Spin Dryer emission factor, in lbs/1000 lbs processed (0.0036 lbs/1000, AP-42 Table 11.26-1).

c. **Emission Limitation:**

Visible particulate emissions from the baghouse(s) stack(s) shall not exceed 5% percent opacity as a six-minute average.

**Applicable Compliance Method:**

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

**F. Miscellaneous Requirements**

None

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

**Operations, Property, and/or Equipment -(N002) - 12 MMBTU/hr Pyrolysis Furnace**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	<p>The particulate emissions (PE) and PM10 from this emissions unit shall not exceed 0.20 lbs per 100 pounds of refuse processed.</p> <p>The emissions from natural gas and refuse combustion in this emissions unit shall not exceed the following:</p> <p>1.18 lb/hr and 5.15 tons/yr nitrogen oxides (NOx)  0.99 lb/hr and 4.33 ton/yr carbon monoxide (CO)  0.14 lb/hr and 0.39 ton/yr filterable particulate emissions (PE)  0.14 lb/hr and 0.39 ton/yr PM10  0.01 lb/hr and 0.03 ton/yr sulfur dioxide (SO2)  0.06 lb/hr and 0.28 ton/yr VOC</p> <p>Compliance with the requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)</p> <p>See A.2.a and A.2.b.</p>
OAC rule 3745-17-07(A)	Visible PE emissions from this emission unit is controlled by shall not exceed 20% opacity, as a 6-minute average.
OAC rule 3745-17-09(B)	The particulate emissions (PE) and PM10 from this emissions unit shall not exceed 0.20 lbs per 100 pounds of refuse processed.

**2. Additional Terms and Conditions:**

- 2.a The above hourly emission limitations for under Section A.1. are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with these limitations.

**B. Operational Restrictions**

1. The permittee shall burn only natural gas and/or propane as fuel in this emissions unit.

**C. Monitoring and/or Recordkeeping Requirements**

1. For each day during which the permittee burns fuel other than natural gas or propane in this emissions unit, the permittee shall maintain a record of the type and quantity of fuel burned.

**D. Reporting Requirements**

1. The permittee shall notify the Director (the Ohio EPA, Southwest District Office) of any record showing the use of a fuel other than natural gas or propane in this emissions unit. The notification shall include a copy of such record and shall be sent to the Director (the Ohio EPA, Southwest District Office) within 30 days following the end of the calendar month.

**E. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitations:

1.18 lb/hr and 5.15 tons/yr nitrogen oxides (NO<sub>x</sub>);  
0.99 lb/hr and 4.33 ton/yr carbon monoxide (CO);  
0.14 lb/hr and 0.39 ton/yr filterable particulate emissions (PE);  
0.14 lb/hr and 0.39 ton/yr PM<sub>10</sub>;  
0.01 lb/hr and 0.03 ton/yr sulfur dioxide (SO<sub>2</sub>); and  
0.06 lb/hr and 0.28 ton/yr VOC.

Applicable Compliance Method:

The permittee may demonstrate compliance with the hourly allowable emission limitations above by multiplying the maximum hourly natural gas consumption rate by the appropriate emission factor from USEPA's AP-42 and allowable particulate emission rate of OAC rule 3745-17-09(B), for incineration of refuse.

If required, the permittee shall demonstrate compliance with the hourly allowable emission limitations above based on the results of emission testing conducted in

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accordance with the following Methods:

- i. for NO<sub>x</sub>, Methods 1 - 4 and 7 of 40 CFR Part 60, Appendix A;
- ii. for CO, Methods 1 - 4 and 10 of 40 CFR Part 60, Appendix A;
- iii. for PE, Methods 1 - 5 of 40 CFR Part 60, Appendix A;
- iv. for PM<sub>10</sub>, Methods 201 and 202 of 40 CFR Part 60, Appendix A;
- v. for SO<sub>2</sub>, Methods 1 - 4 and 10 of 40 CFR Part 60, Appendix A; and
- vi. for VOC, Methods 18, 25, or 25A, as appropriate, of 40 CFR Part 60, Appendix A.

Compliance with the annual allowable emission limitations above shall be ensured as long as compliance with the hourly allowable emission limitations is maintained (the annual allowable limitations were determined by multiplying the hourly allowable limitations by 8760, and then dividing by 2000).

b. Emission Limitation:

Visible PE from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

**F. Miscellaneous Requirements**

None