Facility ID: 1677020054 Issuance type: Final State Permit To Operate

This version of facility specific terms and conditions was converted from a database format to an HTML file during an upgrade of the Ohio EPA, Division of Air Pollution Control's permitting software. Every attempt has been made to convert the terms and conditions to look and substantively conform to the permit issued or being drafted in STARS. However, the format of the terms may vary slightly from the original. In addition, although it is not expected, there is a slight possibility that a term and condition may have been inadvertently "left out" of this reproduction during the conversion process. Therefore, if this version is to be used as a starting point in drafting a new version of a permit, it is imperative that the entire set of terms and conditions be reviewed to ensure they substantively mimic the issued permit. The official version of any permit issued final by Ohio EPA is kept in the Agency's Legal section. The Legal section may be contacted at (614) 644-3037.

In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part II" and before "A. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

Go to Part II for Emissions Unit F014
Go to Part II for Emissions Unit P911

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Facility ID: 1677020054 Emissions Unit ID: F014 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

   (a) None.

2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

   (a) None.

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
mold production using a furan no-bake binder system consisting of a resin and acid catalyst (organic compound (OC) emissions are fugitive, particulate emissions (PE) are stack (emissions vented to and controlled by a baghouse) and fugitive)	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-07(B)	Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	The permittee shall employ hoods, fans, and other equipment to adequately enclose, contain, and capture the emissions of fugitive dust, and vent those emissions to a baghouse. The capture efficiency shall be sufficient to minimize or eliminate visible emissions of fugitive dust to the extent possible with good engineering design.
	OAC rule 3745-17-11(B)	6.2 pounds/hour of PE (stack emissions) (based upon Figure II and an uncontrolled mass rate of emission of 39 pounds/hour)
	OAC rule 3745-21-07(G)(2)	8 pounds/hour & 40 pounds/day of OCs
	OAC rule 3745-35-07(B)	9.99 tons/year of OCs from F014 and P911, combined, based upon a rolling, 12-month summation of the monthly emissions (See B.1.) (The permittee has emissions records for previous calendar months; therefore, there is no need for first year, cumulative monthly OC emissions limitations.)

2. **Additional Terms and Conditions**

   (a) The permittee shall apply for and, if required, obtain a final permit to install prior to equipment replacement or any proposed modification of equipment or production procedures, or any other change that would increase the potential emissions of any air pollutant.

B. **Operational Restrictions**

1. The maximum annual production rate of F014 and P911, combined, shall not exceed 14,000 tons of gross melt poured, based upon a rolling, 12-month summation of the monthly production rates.

   (The permittee has existing production records for previous calendar months; therefore, there is no need for first year, cumulative monthly production limitations.)

2. The permittee shall employ the baghouse serving this emissions unit at all times this emissions unit is in operation.

3. Except for an initial operating period after filter media replacement to attain design filtering efficiency, the pressure

drop across the baghouse serving this emissions unit shall be maintained within the range of 1 to 8 inches of water, while the emissions unit is in operation.

C. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall document when the baghouse serving this emissions unit was not in service when the emissions unit was in operation.

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

3. The permittee shall perform weekly checks, when the emissions unit is in operation and when weather conditions allow, for any visible emissions of fugitive dust from the emissions unit. The presence or absence of any visible emissions of fugitive dust shall be noted weekly in an operations log. If visible emissions of fugitive dust are observed, the permittee shall also note the following in an operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the determined cause of the abnormal emissions if a cause can be determined upon investigation;
   d. the total duration of the visible emissions incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

4. The permittee shall perform weekly checks, when the emissions unit is in operation and when weather conditions allow, for any visible particulate emissions from the baghouse serving this emissions unit. The presence or absence of any visible particulate emissions from the baghouse shall be noted weekly in an operations log. If visible particulate emissions are observed from the baghouse, the permittee shall also note the following in an operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the determined cause of the abnormal emissions if a cause can be determined upon investigation;
   d. the total duration of the visible emissions incident; and
   e. any corrective actions taken to eliminate the visible emissions.

5. The permittee shall maintain the following daily records for this emissions unit for each day of operations:

   a. the gross melt poured, in tons/day;

   b. the OC emissions, in pounds/day, using the emission factor of 1.195 pounds OCs emitted/ton gross melt poured;

   c. the number of hours of operation; and

   d. the average hourly OC emissions, in pounds/hour, i.e., b/c.

6. The permittee shall maintain the following monthly records for F014 and P911, combined, for each month of operations:

   a. the gross melt poured, in tons/month;

   b. the OC emissions, in tons/month, using the emission factor of 1.195 pounds OCs emitted/ton gross melt poured;

   c. the rolling, 12-month summation of the monthly gross melt poured production rates, in tons; and

   d. the rolling, 12-month summation of the monthly OC emissions rates, in tons.

D. **Reporting Requirements**

1. The permittee shall notify the Director (the appropriate District Office or local air agency) in writing of any record showing that the baghouse serving this emissions unit was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Director (the appropriate District Office or local air agency) within 30 days after the event occurs.

2. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse serving this emissions unit did not comply with the allowable range specified above. These reports are due by the dates described in Part 1 - General Terms and Conditions of this permit under section (A)(1).

3. The permittee shall submit on a semiannual basis a report which (a) identifies all days during which any visible emissions of fugitive dust were observed from the emissions unit and (b) describes the corrective actions taken to minimize or eliminate the visible emissions of fugitive dust. These reports shall be submitted by January 31 and July 31 of each year to the Director (District Office or local air agency).

4. The permittee shall submit on a semiannual basis a report which (a) identifies all days during which any visible particulate emissions were observed from the baghouse and (b) describes the corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted by January 31 and July 31 of each year to the Director (District Office or local air agency).

5. The permittee shall submit quarterly deviation (excursion) reports that include the following information:

   a. an identification of each day during which the average hourly OC emissions exceeded 8 lbs/hr, and the actual average hourly OC emissions for each such day; and

b. an identification of each day during which the OC emissions exceeded 40 lbs/day, and the actual OC emissions for each such day.

These reports are due by the dates described in Part 1 - General Terms and Conditions of this permit under section (A)(1).

6. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month gross melt poured production rate limitation. These reports are due by the dates described in Part 1 - General Terms and Conditions of this permit under section (A)(1).

7. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month OC emissions limitation. These reports are due by the dates described in Part 1 - General Terms and Conditions of this permit under section (A)(1).

E. **Testing Requirements**

1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be determined in accordance with the following methods:
Emission Limitation: 20% opacity as a 6-minute average

Applicable Compliance Method: If required, compliance shall be determined by visible emission evaluations performed in accordance with the requirements in 40 CFR Part 60, Appendix A, Method 9 and the methods and procedures specified in OAC rule 3745-17-03(B)(1).
Emission Limitation: 20% opacity as a 3-minute average

Applicable Compliance Method: If required, compliance shall be determined by visible emission evaluations performed in accordance with the requirements in 40 CFR Part 60, Appendix A, Method 9 and the methods and procedures specified in OAC rule 3745-17-03(B)(3).
Emission Limitation: 6.2 pounds/hour of PE (stack emissions)

Applicable Compliance Method: If required, compliance shall be determined in accordance with the requirements in 40 CFR Part 60, Appendix A, Method 5 and the methods and procedures specified in OAC rule 3745-17-03(B)(10).
Emission Limitation: 40 pounds/day & 8 pounds/hour of OCs

Applicable Compliance Method: Compliance shall be demonstrated by the following equations:

D = PE
H = D/T

where:

D = daily OC emissions, in pounds/day;
P = daily gross melt poured, in tons/day;
E = 1.195 pounds OCs emitted/ton gross melt poured [based upon a technical report submitted to Babcock & Wilcox on 9/15/03 containing a site-specific emissions evaluation by David Horstman of HA International, LLC, Westmont, IL, tel. 630/575-5700];
H = daily average hourly OC emissions, in pounds/hour; and
T = daily operating time of the emissions unit, in hours/day.
Emission Limitation: 9.99 tons/year of OCs from F014 and P911, combined, based upon a rolling, 12-month summation of the monthly emissions

Applicable Compliance Method: Compliance shall be demonstrated by the following equation:

Y = REW

Where,

Y = the rolling, 12-month summation of the OC emissions, in tons;

R = the rolling, 12-month summation of the monthly production rates for F014 and P911, combined;

E = 1.195 pounds OCs emitted/ton gross melt poured [based upon a technical report submitted to Babcock & Wilcox on 9/15/03 containing a site-specific emissions evaluation by David Horstman of HA International, LLC, Westmont, IL, tel. 630/575-5700]; and

W = 1 ton/2000 pounds.

F. **Miscellaneous Requirements**

1. Pursuant to OAC rule 3745-35-07, all the terms and conditions of this permit are federally enforceable requirements.

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1677020054 Emissions Unit ID: P911 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

   (a) None.

2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

   (a) None.

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
mold production using a furan no-bake binder system consisting of a resin and acid catalyst (organic compound (OC) emissions are fugitive, particulate emissions (PE) are stack (emissions vented to and controlled by a baghouse) and fugitive)	OAC rule 3745-31-05(A)(3) (PTI 16-848)	2.4 pounds/hour & 10.5 tons/year of PE (stack emissions) The primary and secondary sand hoppers, and the sand mixer shall be enclosed. The primary hopper shall be vented to a fabric filter, i.e., baghouse. Mold sand discharged from the mixer shall have sufficient moisture content or be of a composition that minimizes visible emissions of fugitive dust at the discharge point and during mold making. The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-07(B), 3745-17-08(B), and 3745-21-07(G)(2).
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-07(B)	Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	The primary and secondary sand hoppers, and sand mixer enclosure(s) shall be sufficient to minimize or eliminate visible emissions of fugitive dust to the extent possible with good engineering design.
	OAC rule 3745-17-11(B)	The mass emission limitation required by OAC rule 3745-17-11(B) is less stringent than the mass emission limitation established pursuant to the requirements of OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-07(G)(2)	8 pounds/hour & 40 pounds/day of OCs
	OAC rule 3745-35-07(B)	9.99 tons/year of OCs from F014 and P911, combined, based upon a rolling, 12-month summation of the monthly emissions (See B.1.) (The permittee has emissions records for previous calendar months; therefore, there is no need for first year, cumulative monthly OC emissions limitations.)

2. **Additional Terms and Conditions**

   (a) The permittee shall apply for and, if required, obtain a final permit to install prior to equipment replacement or any proposed modification of equipment or production procedures, or any other change that would increase the potential emissions of any air pollutant.

B. **Operational Restrictions**

1. The maximum annual production rate of F014 and P911, combined, shall not exceed 14,000 tons of gross melt poured, based upon a rolling, 12-month summation of the monthly production rates.

   (The permittee has existing production records for previous calendar months; therefore, there is no need for first year, cumulative monthly production limitations.)

2. The permittee shall employ the baghouse serving this emissions unit at all times this emissions unit is in operation.

3. Except for an initial operating period after filter media replacement to attain design filtering efficiency, the pressure drop across the baghouse serving this emissions unit shall be maintained within the range of 1 to 8 inches of water, while the emissions unit is in operation.

C. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall document when the baghouse serving this emissions unit was not in service when the emissions unit was in operation.

2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse

serving this emissions unit, while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a daily basis.

3. The permittee shall perform weekly checks, when the emissions unit is in operation and when weather conditions allow, for any visible emissions of fugitive dust from the emissions unit. The presence or absence of any visible emissions of fugitive dust shall be noted weekly in an operations log. If visible emissions of fugitive dust are observed, the permittee shall also note the following in an operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the determined cause of the abnormal emissions if a cause can be determined upon investigation;
   d. the total duration of the visible emissions incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

4. The permittee shall perform weekly checks, when the emissions unit is in operation and when weather conditions allow, for any visible particulate emissions from the baghouse serving this emissions unit. The presence or absence of any visible particulate emissions from the baghouse shall be noted weekly in an operations log. If visible particulate emissions are observed from the baghouse, the permittee shall also note the following in an operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the determined cause of the abnormal emissions if a cause can be determined upon investigation;
   d. the total duration of the visible emissions incident; and
   e. any corrective actions taken to eliminate the visible emissions.

5. The permittee shall maintain the following daily records for this emissions unit for each day of operations:

   a. the gross melt poured, in tons/day;

   b. the OC emissions, in pounds/day, using the emission factor of 1.195 pounds OCs emitted/ton gross melt poured;

   c. the number of hours of operation; and

   d. the average hourly OC emissions, in pounds/hour, i.e., b/c.

6. The permittee shall maintain the following monthly records for F014 and P911, combined, for each month of operations:

   a. the gross melt poured, in tons/month;

   b. the OC emissions, in tons/month, using the emission factor of 1.195 pounds OCs emitted/ton gross melt poured;

   c. the rolling, 12-month summation of the monthly gross melt poured production rates, in tons; and

   d. the rolling, 12-month summation of the monthly OC emissions rates, in tons.

D. **Reporting Requirements**

1. The permittee shall notify the Director (the appropriate District Office or local air agency) in writing of any record showing that the baghouse serving this emissions unit was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Director (the appropriate District Office or local air agency) within 30 days after the event occurs.

2. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse serving this emissions unit did not comply with the allowable range specified above. These reports are due by the dates described in Part 1 - General Terms and Conditions of this permit under section (A)(1).

3. The permittee shall submit on a semiannual basis a report which (a) identifies all days during which any visible emissions of fugitive dust were observed from the emissions unit and (b) describes the corrective actions taken to minimize or eliminate the visible emissions of fugitive dust. These reports shall be submitted by January 31 and July 31 of each year to the Director (District Office or local air agency).

4. The permittee shall submit on a semiannual basis a report which (a) identifies all days during which any visible particulate emissions were observed from the baghouse and (b) describes the corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted by January 31 and July 31 of each year to the Director (District Office or local air agency).

5. The permittee shall submit quarterly deviation (excursion) reports that include the following information:

   a. an identification of each day during which the average hourly OC emissions exceeded 8 lbs/hr, and the actual average hourly OC emissions for each such day; and

   b. an identification of each day during which the OC emissions exceeded 40 lbs/day, and the actual OC emissions for each such day.

   These reports are due by the dates described in Part 1 - General Terms and Conditions of this permit under section (A)(1).

6. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month gross melt poured production rate limitation. These reports are due by the dates described in Part 1 -

General Terms and Conditions of this permit under section (A)(1).

7. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month OC emissions limitation. These reports are due by the dates described in Part 1 - General Terms and Conditions of this permit under section (A)(1).

E. **Testing Requirements**

1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be determined in accordance with the following methods:
Emission Limitation: 20% opacity as a 6-minute average

Applicable Compliance Method: If required, compliance shall be determined by visible emission evaluations performed in accordance with the requirements in 40 CFR Part 60, Appendix A, Method 9 and the methods and procedures specified in OAC rule 3745-17-03(B)(1).
Emission Limitation: 20% opacity as a 3-minute average

Applicable Compliance Method: If required, compliance shall be determined by visible emission evaluations performed in accordance with the requirements in 40 CFR Part 60, Appendix A, Method 9 and the methods and procedures specified in OAC rule 3745-17-03(B)(3).
Emission Limitation: 2.4 pounds/hour & 10.5 tons/year of PE (stack emissions)

Applicable Compliance Method:

If required, compliance with the hourly emissions limitation shall be determined in accordance with the requirements in 40 CFR Part 60, Appendix A, Method 5 and the methods and procedures specified in OAC rule 3745-17-03(B)(10).

Annual emissions shall be calculated by multiplying the emission factor of 1.34 lbs PE/ton mold-making sand [Ohio EPA RACM, September, 1980, Table 2.7-1] by the number of tons of mold-making sand used each calendar year and by (1 - 0.80), i.e., 80% overall emissions control, and then dividing by 2000.
Emission Limitation: 40 pounds/day & 8 pounds/hour of OCs

Applicable Compliance Method: Compliance shall be demonstrated by the following equations:

D = PE
H = D/T

where:

D = daily OC emissions, in pounds/day;
P = daily gross melt poured, in tons/day;
E = 1.195 pounds OCs emitted/ton gross melt poured [based upon a technical report submitted to Babcock & Wilcox on 9/15/03 containing a site-specific emissions evaluation by David Horstman of HA International, LLC, Westmont, IL, tel. 630/575-5700];
H = daily average hourly OC emissions, in pounds/hour; and
T = daily operating time of the emissions unit, in hours/day.
Emission Limitation: 9.99 tons/year of OCs from F014 and P911, combined, based upon a rolling, 12-month summation of the monthly emissions

Applicable Compliance Method: Compliance shall be demonstrated by the following equation:

Y = REW

Where,

Y = the rolling, 12-month summation of the OC emissions, in tons;

R = the rolling, 12-month summation of the monthly production rates for F014 and P911, combined;

E = 1.195 pounds OCs emitted/ton gross melt poured [based upon a technical report submitted to Babcock & Wilcox on 9/15/03 containing a site-specific emissions evaluation by David Horstman of HA International, LLC, Westmont, IL, tel. 630/575-5700]; and

W = 1 ton/2000 pounds.

F. **Miscellaneous Requirements**

1. Pursuant to OAC rule 3745-35-07, all the terms and conditions of this permit are federally enforceable requirements.