Facility ID: 0326000160 Issuance type: Title V Preliminary Proposed Permit

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 III" and before "I. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

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Facility ID: 0326000160 Issuance type: Title V Preliminary Proposed Permit

Part II - Specific Facility Terms and Conditions

a **State and Federally Enforceable Section**

1. None

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Facility ID: 0326000160 Issuance type: Title V Preliminary Proposed Permit

b **State Only Enforceable Section**

1. The following insignificant emissions units are located at this facility:

   Z700 - ACC labelers; Z701 - ACC flexo-diecutters; Z702 - ACC corrugated recycling system; Z703 - AC 949124 air makeup unit; Z704 - AC 949125 air makeup unit; and Z705 - AC 160555 air makeup unit.

   Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within a Permit to Install (PTI) for the emissions unit.

Go to Part III for Emissions Unit P701

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

Facility ID: 0326000160 Issuance type: Title V Preliminary Proposed Permit

Part III - Terms and Conditions for Emissions Units

Go to the top of this document

Facility ID: 0326000160 Emissions Unit ID: P701 Issuance type: Title V Preliminary Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **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
expandable polystyrene (EPS) line consisting of hopper, pre-expander, pneumatic transfer, curing, block molder, (2) shape molders, mold cutting and storage	OAC rule 3745-31-05(A)(3) (PTI #03-13574)	2.53 lbs of volatile organic compounds (VOC)/hr (total for all stack emissions) The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D). See A.I.2.a.
	OAC rule 3745-31-05(D) PTI #03-13574	255.22 tons VOC/rolling, 12-month period (for stack and fugitive emissions, combined) (See A.I.2.b.)
	OAC rule 3745-17-11(B)	none (See A.I.2.d.)
	OAC rule 3745-17-07(A)	none (See A.I.2.e.)
	OAC rule 3745-21-07(G)	none (See A.I.2.c.)

2. **Additional Terms and Conditions**

a. Best available technology (BAT) requirements have been determined to be consistent with the best available control technology (BACT) requirements of PTI #03-13574. BACT (for controlling the VOC emissions) for this emissions unit was determined to be the use of a control system meeting the following requirements :

(a)

i. The control system shall include a collection system for the hopper, pre-expander, pneumatic transfer, curing, block molder, and 2 shape molders. The collection system shall achieve a capture efficiency of at least 70%, by weight, for VOCs. (The BACT analysis for the EPS line showed that it was not cost-effective to capture and control emissions from the mold cutting and storage operations.)

ii. The control system also shall include a regenerative thermal oxidizer with a destruction efficiency of at least 99%, by weight, for VOCs.

iii. The VOC emissions (for the stack and fugitive emissions, combined) shall be not exceed 1.64 lbs VOC/100 lbs of EPS beads processed.

b. The permittee has requested a federally enforceable limitation of 255.30 tons of VOC per rolling, 12-month period (based on the pentane content of the EPS beads and on the usage restriction for the EPS beads) for the purpose of avoiding PSD review (see Sections A.II.2 & A.II.3).

c. This emissions unit is not subject to OAC rule 3745-21-07(G) because no liquid organic material, as defined in OAC rule 3745-21-01(C)(3), enters this emissions unit as a separate raw material.

d. The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 lbs/hr. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. Also, pursuant to OAC rule 3745-17-11(A)(2)(b)(ii), Table I does not apply because the facility is located in Crawford County.

e. This emissions unit is exempt from the visible emissions limitations specified in OAC rule 3745-17-07 (A), pursuant to OAC rule 3745-17-07(A)(3)(h), because OAC rule 3745-17-11 is not applicable.

Go to the top of this document

Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. **Operational Restrictions**

1. The permittee shall only employ EPS thermoplastic polymer/co-polymer in this emissions unit with pentane as the sole blowing agent.

2. The VOC content of the raw EPS thermoplastic polymer/co-polymer beads used in this emissions unit is pentane and shall not exceed 6.5%, by weight. The VOC content of the final EPS products also is pentane and shall be no less than 1.8 percent, by weight.

3. The maximum raw EPS beads throughput shall not exceed 8,200 lbs/hr (as a daily average). The maximum annual raw EPS beads throughput shall not exceed 15,558 tons per rolling, 12-month period.

4. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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

1. The permittee shall operate and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal incinerator when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

   The permittee shall collect and record the following information for each day for this emissions unit:

   a. all 3-hour blocks of time during which the average combustion temperature within the regenerative thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance; and

   b. a log of the downtime for the collection (capture) system, control device and monitoring equipment when the associated emissions unit was in operation.

2. The permittee shall maintain records of the following information each day for this emissions unit:

   a. the company identification for each raw EPS bead material employed;

   b. an identification of the blowing agents contained in each raw EPS bead material employed;

   c. the VOC content, in weight percent, for each raw EPS bead material employed;

   d. the quantity, in pounds, of each raw EPS bead material employed;

   e. the quantity, in pounds, of all the raw EPS bead materials employed (summation of d for all raw EPS bead materials);

   f. the number of hours the emissions unit was in operation;

   g. the average hourly bead throughput (e/f), in pounds/hr (average);

   h. the VOC content, in weight percent, of each final EPS product;

   i. the total, controlled (stack) VOC emissions, in pounds, for each raw EPS bead material employed, calculated as follows:

   TVOC (pounds/day) = c x d

   TVOC_R (pounds/day) = d x h

   TVOC_E (pounds/day) = (TVOC - TVOC_R)

   TVOC_S (pounds/day) = TVOC_E x (1 - 0.002)* x (capture efficiency, as tested during the most recent emission testing that demonstrated compliance) x (1- destruction efficiency, as tested during the most recent emission testing that demonstrated compliance)

   where:

   TVOC = total VOCs contained in each raw bead material (pounds/day)

   TVOC_R = total VOCs retained in each final bead product (pounds/day)

   TVOC_E = total (fugitive and uncontrolled stack emissions, combined) VOC emissions (pounds/day)

   TVOC_S = the total, controlled (stack) VOC emissions (pounds/day);
   j. the total controlled VOC emissions, in pounds, for all the raw EPS bead materials employed (summation of i for all raw EPS bead materials);

   k. the average hourly, controlled VOC emissions for all the raw EPS bead materials employed (j/f), in

pound/hour (average)

l. the total fugitive VOC emissions, in pounds, for each raw EPS bead material employed, calculated as follows:

TVOC_F (pounds/day) = TVOC_E x (1 - 0.002)* x (1- capture efficiency, as tested during the most recent emission testing that demonstrated compliance) + TVOC_E x .002*

where:

TVOC_F = the total fugitive VOC emissions (pounds/day)

TVOC_E = total (fugitive and uncontrolled stack emissions, combined) VOC emissions (pounds/day);

m. the total fugitive VOC emissions, in pounds, for all the raw EPS bead materials employed (summation of l for all raw EPS bead materials);

n. the total VOC emissions, in pounds, for all the raw EPS bead materials employed (m + j); and

o. the lbs of VOC/100 pounds of EPS beads, calculated as follows:

lbs VOC/100 pounds of EPS beads = (n/e) x 100.

* This is an emission factor supplied by the permittee. It represents the percent of total emissions of VOC that are emitted as fugitive from the mold cutting and storage operations (these emissions should not be counted as part of the 30% fugitive emissions not captured by the collection system).

3. The permittee shall maintain records of the following information each month for this emissions unit:

a. the total VOC emissions, in tons, for all the raw EPS bead materials employed, in tons (calculated by summing the daily VOC emission rates, from Section 2.n, for the calendar month, divided by 2000);

b. the quantity, in tons, of all the raw EPS bead materials employed (calculated by summing the daily quantities processed, from Section 2.e, for the calendar month, divided by 2000);

c. the rolling, 12-month summation of the quantity of all the raw EPS bead materials employed, in tons; and

d. the rolling, 12-month summation of the VOC emissions (stack and fugitive, combined) for all the raw EPS bead materials employed, in tons.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator did not comply with the temperature limitation specified above;

b. all exceedances of the VOC content limitations of 6.5 percent and 1.8 percent, by weight;

c. all exceedances of the allowable hourly raw EPS bead materials throughput restriction of 8,200 pounds;

d. all exceedances of the rolling, 12-month raw EPS bead materials throughput restriction of 15,558 tons;

e. all exceedances of the rolling, 12-month VOC emission limitation of 255.22 tons; and

f. all exceedances of the hourly allowable VOC emission limitation of 2.53 pounds and of the 1.64 lbs VOC/100 pounds of EPS beads.

All quarterly deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

2. The permittee shall submit quarterly summaries that include the following information:

a. a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emission unit was in operation; and

b. all records showing the use of a blowing agent other than pentane in the EPS bead materials.

3. The permittee shall submit annual reports that summarize the annual bead materials throughput and the annual VOC emissions for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. **Testing Requirements**

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiencies for the regenerative thermal oxidizer of 70% and 99%, by weight, for VOCs, respectively. The emission testing shall also be conducted to demonstrate compliance with the lbs of VOC/100 lbs of EPS beads emission limitation and the hourly VOC emission limitation.

c. The following test method(s) shall be employed to demonstrate compliance with the capture and destruction efficiencies, the lbs VOC/100 lbs of EPS beads, and the lbs VOC/hr emission limitations:

i. Methods 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

ii. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR, Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency of the thermal incinerator system shall be conducted in accordance with the test methods and procedures specified in OAC rule 3745-21-10 and shall measure the percent reduction in mass emissions of organic compounds or organic materials between the inlet and outlet of the vapor control system.

The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

3. During any emission testing for this emissions unit, the permittee shall record the following additional information for each run:

a. the combustion temperature within the regenerative thermal incinerator, as a 1-hour average, in degrees Fahrenheit;

b. the amount of EPS bead materials employed, in pounds;

c. the VOC content of the raw EPS beads employed, in weight percent; and

d. the VOC content of the final EPS products, in weight percent.

4. Compliance with the emission limitations established in Section A.I of this permit shall be determined in accordance with the following methods:

a. Emission Limitations: 2.53 pounds VOC/hour, 255.22 tons VOC/rolling, 12-month period

Applicable Compliance Method: The permittee shall demonstrate compliance with the hourly allowable VOC emission limitation based upon the results of emission testing conducted in accordance with 40 CFR, Part 60, Appendix A, Methods 18, 25, or 25A, as appropriate.

The permittee may also demonstrate compliance with the hourly allowable VOC emission limitation based on the record keeping requirements established in Section A.III.2 of this permit.

Compliance with the rolling, 12-month VOC emission limitation shall be determined through the record keeping required in Sections A.III.2 and 3 of the terms and conditions of this permit.

b. Emission Limitation: 1.64 lbs of VOC/100 lbs of EPS beads processed

Applicable Compliance Method: The permittee shall demonstrate compliance with the lbs VOC/100 lbs of EPS beads emission limitation based upon the results of emission testing conducted in accordance with 40 CFR, Part 60, Appendix A, Methods 18, 25, or 25A, as appropriate, and Section A.V.4 of this permit.

The permittee may also demonstrate compliance with the lbs VOC/100 lbs of EPS beads emission limitation based on the record keeping requirements established in Section A.III.2 of this permit.

c. Emission Limitations: 70% capture and 99% destruction efficiencies, by weight, for VOCs

Applicable Compliance Method:

Compliance with the efficiency requirements above shall be determined based upon the results of emission testing conducted in accordance the methods outlined in Section A.V.2 of this permit.

d. Emission Limitations: VOC content of the raw EPS beads shall not exceed 6.5%, by weight.

Applicable Compliance Method: Compliance with the VOC content limitation shall be determined through the record keeping required in Section A.III.3 of the terms and conditions of this permit.

e. Emission Limitations: VOC content of the final EPS beads product shall be no less than 1.8%, by weight.

Applicable Compliance Method: Compliance with the VOC content limitation shall be determined through the record keeping required in Section A.III.3 of the terms and conditions of this permit.

f. Usage Restrictions: 8,200 pounds EPS beads/hr and 15,558 tons EPS beads/rolling, 12-month period

Applicable Compliance Method: Compliance with the usage restrictions above shall be determined through the record keeping required in Sections A.III.2 and 3 of the terms and conditions of this permit.

5. Formulation data or Ohio EPA- or USEPA-approved test methods shall be used to determine the VOC contents of the raw EPS beads and the final EPS products.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. **Miscellaneous Requirements**

1. None

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

Facility ID: 0326000160 Issuance type: Title V Preliminary Proposed Permit

Go to the top of this document

Facility ID: 0326000160 Emissions Unit ID: P701 Issuance type: Title V Preliminary Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **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
expandable polystyrene (EPS) line consisting of hopper, pre-expander, pneumatic transfer, curing, block molder, (2) shape molders, mold cutting, and storage	none	none

2. **Additional Terms and Conditions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. **Operational Restrictions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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

1. This permit allows the use of materials specified by the permittee in the permit to install application for this emissions unit. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit was established using Ohio EPA's "Air Toxic Policy" and is based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

   Pollutant: Pentane
   TLV (mg/m3): 1770
   Maximum Hourly Emission Rate (lbs/hr): 134.6
   Predicted 1-Hour Maximum Ground-Level Concentration (mg/m3): 17.3
   MAGLC (mg/m3): 42.1

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

   a. changes in the composition of the materials used, or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

   b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

   c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

   If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

   a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

   b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

   c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. **Reporting Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. **Testing Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. **Miscellaneous Requirements**

1. None