

Facility ID: 1677010195 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.

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Facility ID: 1677010195 Emissions Unit ID: P030 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
resin latex manufacturing process	OAC rule 3745-31-05(A)(3) (PTI 16-02175)	For this emissions unit:  7.5 pounds/hour of organic compounds (OC) (1-hour average for each reactor evacuation);  22.5 pounds/day of OC (3 reactor evacuations per day); and  4.1 tons/year of OC (365 days/year).
	OAC rule 3745-35-07(B)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-35-07(B). For emissions units P030 through P044, combined:
	OAC rule 3745-21-07(G)(2)	6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions, and as established in the restricted potential to emit procedures of Part II, section E using the federally enforceable production limitations of Part II, section B. The OC emission limitations required by OAC rule 3745-21-07(G)(2) are less stringent than the OC emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- (a) As determined from application data, the pounds per hour and pounds per day OC emission limitations regulated per OAC rule 3745-31-05(A)(3) are based upon accepted batch potential to emit USEPA

procedures for this emissions unit. Therefore, no emissions record keeping or reporting are required to demonstrate compliance with these emission limitations. However, if any proposed change(s), such as with process raw materials, latex formulations, polymerization efficiency, monomer contents, production capacity, cleanup materials, etc., or any other change(s), increase(s) the potential to emit, then the permittee shall apply for and obtain either a modification to the permit to install or a new final permit to install prior to the change(s).

All raw materials and any other solvents shall be properly identified and held in closed containers or storage vessels at all times when not in use.

All used solvents in this emissions unit shall be properly identified and held in a closed storage drum for appropriate off-site disposal.

#### B. Operational Restrictions

1. High-OC batch production for emissions units P030 through P044, combined, shall not exceed 1680 batches/year, based upon a rolling, 12-month summation of the monthly production rates. The permittee has existing production records such that there is no need for first year monthly batch production limitations.
2. Low-OC batch production for emissions units P030 through P044, combined, shall be limited in accordance with the following equation:

$$L = (EW/b) - H(a/b)$$

where:

L = Low-OC batch production limitation for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates, as a function of H;

E = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

W = 2000 pounds/ton [weight conversion];

H = High-OC batch production for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates;

a = 7.500 pounds of OC/batch [High-OC batch]; and

b = 2.425 pounds of OC/batch [Low-OC batch].

[Note: the above linear equation with a slope of about (-3.093) specifies that approximately for every ten (10) High-OC batches processed, the permittee shall process thirty-one (31) fewer Low-OC batches so that emissions do not exceed 6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions.]

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

1. The permit to install for this emissions unit (P030) was evaluated based on the actual process materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxics Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: styrene (CAS 100-42-5)

TLV (ug/m3): 213,000

Maximum Hourly Emission Rate (lbs/hr): 7.5

Predicted 1-Hour Maximum Ground-Level Concentration at 154 m (ug/m3): 85

MAGLC (ug/m3): 5071

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 Toxics 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 Toxics Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxics Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxics Policy" include the following:

a. changes in the composition of the materials used (process materials and cleanup materials), 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 Toxics 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 emissions unit, if changed as outlined above, will still satisfy the "Air Toxics 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 Toxics 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 Toxics Policy" for the change.

4. The permittee shall maintain monthly records of the following information:

- a. the High-OC & Low-OC batches produced by emissions units P030 through P044, combined, for each month;
- b. the rolling, 12-month production rate summations for the High-OC & Low-OC batches produced by emissions units P030 through P044, combined;
- c. the calculated Low-OC batch limit for emissions units P030 through P044, combined, using the appropriate recorded information of section C.4.b and the equation of section B.2 above;
- d. the monthly OC emissions from all batches produced by emissions units P030 through P044, combined; and
- e. the rolling, 12-month summation of the monthly OC emissions from all batches produced by emissions units P030 through P044, combined.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify any exceedances of the High-OC and/or Low-OC batch production limitations specified in section B above, as well as the corrective actions that were taken to achieve compliance.
2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the 6.3 tons/year of OC limitation, based upon a rolling, 12-month summation of the monthly OC emissions, for emissions units P030 through P044, combined, as well as the corrective actions that were taken to achieve compliance.
3. The deviation (excursion) reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition 3 of this permit.

**E. Testing Requirements**

1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be based on the potentials to emit as follows:  
Emission Limitations:

7.5 pounds/hour of OC (1-hour average for each reactor evacuation)  
22.5 pounds/day of OC (3 reactor evacuations per day)  
4.1 tons/year of OC (365 days/year)

Applicable Compliance Method:

The above emission limitations are based on the unrestricted potentials to emit as shown in the following equations:

$E_h = R/H$   
 $E_d = (E_h)D$   
 $E_y = (E_d)YW$

where:

$E_h = 7.5$  pounds/hour of OC [hourly potential emissions based on 1-hour average for each reactor evacuation];

$E_d = 22.5$  pounds/day of OC [daily potential emissions based on 3 reactor evacuations per day];

$E_y = 4.1$  tons/year of OC [yearly potential emissions based on 365 days per year];

$R = 7.5$  pounds of OC/reactor evacuation [emissions for each 30-minute reactor evacuation];

$H = 1.0$  hour [conversion to 1-hour average emissions rate];

$D = 3$  reactor evacuations/day [maximum capacity];

$Y = 365$  days/year [continuous operations]; and

$W = 1$  ton/2000 pounds [weight conversion].

Emission Limitation:

6.3 tons/year of OC for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions

Applicable Compliance Method:

The above emission limitation was established using the federally enforceable restricted batch production potential to emit as shown in the following equation:

$E = (aH + bL)W$

where:

$E = 6.3$  tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined,

based upon a rolling, 12-month summation of the monthly emissions];

H = 895 batches/year [proposed maximum High-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

L = 2420 batches/year [proposed maximum Low-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

a = 7.500 pounds of OC/batch [High-OC batch];

b = 2.425 pounds of OC/batch [Low-OC batch]; and

W = 1 ton/2000 pounds [weight conversion].

**F. Miscellaneous Requirements**

1. PTI 16-02175 supersedes all of the requirements of PTI 16-494 issued November 5, 1986.
2. Except for Part II - sections C.1 through C.3, all terms and conditions of this permit are federally enforceable.

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Facility ID: 1677010195 Emissions Unit ID: P031 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
resin latex manufacturing process	OAC rule 3745-31-05(A)(3) (PTI 16-02175)	For this emissions unit:  7.5 pounds/hour of organic compounds (OC) (1-hour average for each reactor evacuation);  22.5 pounds/day of OC (3 reactor evacuations per day); and  4.1 tons/year of OC (365 days/year).
	OAC rule 3745-35-07(B)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-35-07(B). For emissions units P030 through P044, combined:  6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions, and as established in the restricted potential to emit procedures of Part II, section E using the federally enforceable production limitations of Part II, section B.
	OAC rule 3745-21-07(G)(2)	The OC emission limitations required by OAC rule 3745-21-07(G)(2) are less stringent than the OC emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- (a) As determined from application data, the pounds per hour and pounds per day OC emission limitations regulated per OAC rule 3745-31-05(A)(3) are based upon accepted batch potential to emit USEPA procedures for this emissions unit. Therefore, no emissions record keeping or reporting are required to demonstrate compliance with these emission limitations. However, if any proposed change(s), such as

with process raw materials, latex formulations, polymerization efficiency, monomer contents, production capacity, cleanup materials, etc., or any other change(s), increase(s) the potential to emit, then the permittee shall apply for and obtain either a modification to the permit to install or a new final permit to install prior to the change(s).

All raw materials and any other solvents shall be properly identified and held in closed containers or storage vessels at all times when not in use.

All used solvents in this emissions unit shall be properly identified and held in a closed storage drum for appropriate off-site disposal.

**B. Operational Restrictions**

1. High-OC batch production for emissions units P030 through P044, combined, shall not exceed 1680 batches/year, based upon a rolling, 12-month summation of the monthly production rates. The permittee has existing production records such that there is no need for first year monthly batch production limitations.
2. Low-OC batch production for emissions units P030 through P044, combined, shall be limited in accordance with the following equation:

$$L = (EW/b) - H(a/b)$$

where:

L = Low-OC batch production limitation for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates, as a function of H;

E = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

W = 2000 pounds/ton [weight conversion];

H = High-OC batch production for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates;

a = 7.500 pounds of OC/batch [High-OC batch]; and

b = 2.425 pounds of OC/batch [Low-OC batch].

[Note: the above linear equation with a slope of about (-3.093) specifies that approximately for every ten (10) High-OC batches processed, the permittee shall process thirty-one (31) fewer Low-OC batches so that emissions do not exceed 6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions.]

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

1. The permit to install for this emissions unit (P030) was evaluated based on the actual process materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxics Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: styrene (CAS 100-42-5)

TLV (ug/m3): 213,000

Maximum Hourly Emission Rate (lbs/hr): 7.5

Predicted 1-Hour Maximum Ground-Level Concentration at 154 m (ug/m3): 85

MAGLC (ug/m3): 5071

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 Toxics 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 Toxics Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxics Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxics Policy" include the following:

a. changes in the composition of the materials used (process materials and cleanup materials), 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 Toxics 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 emissions unit, if changed as outlined above, will still satisfy the "Air Toxics 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 Toxics 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 Toxics Policy" for the change.

4. The permittee shall maintain monthly records of the following information:

a. the High-OC & Low-OC batches produced by emissions units P030 through P044, combined, for each month;

b. the rolling, 12-month production rate summations for the High-OC & Low-OC batches produced by emissions units P030 through P044, combined;

c. the calculated Low-OC batch limit for emissions units P030 through P044, combined, using the appropriate recorded information of section C.4.b and the equation of section B.2 above;

d. the monthly OC emissions from all batches produced by emissions units P030 through P044, combined; and

e. the rolling, 12-month summation of the monthly OC emissions from all batches produced by emissions units P030 through P044, combined.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify any exceedances of the High-OC and/or Low-OC batch production limitations specified in section B above, as well as the corrective actions that were taken to achieve compliance.

2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the 6.3 tons/year of OC limitation, based upon a rolling, 12-month summation of the monthly OC emissions, for emissions units P030 through P044, combined, as well as the corrective actions that were taken to achieve compliance.

3. The deviation (excursion) reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition 3 of this permit.

**E. Testing Requirements**

1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be based on the potentials to emit as follows:

Emission Limitations:

7.5 pounds/hour of OC (1-hour average for each reactor evacuation)

22.5 pounds/day of OC (3 reactor evacuations per day)

4.1 tons/year of OC (365 days/year)

Applicable Compliance Method:

The above emission limitations are based on the unrestricted potentials to emit as shown in the following equations:

$$E_h = R/H$$

$$E_d = (E_h)D$$

$$E_y = (E_d)YW$$

where:

$E_h$  = 7.5 pounds/hour of OC [hourly potential emissions based on 1-hour average for each reactor evacuation];

$E_d$  = 22.5 pounds/day of OC [daily potential emissions based on 3 reactor evacuations per day];

$E_y$  = 4.1 tons/year of OC [yearly potential emissions based on 365 days per year];

$R$  = 7.5 pounds of OC/reactor evacuation [emissions for each 30-minute reactor evacuation];

$H$  = 1.0 hour [conversion to 1-hour average emissions rate];

$D$  = 3 reactor evacuations/day [maximum capacity];

$Y$  = 365 days/year [continuous operations]; and

$W$  = 1 ton/2000 pounds [weight conversion].

Emission Limitation:

6.3 tons/year of OC for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions

Applicable Compliance Method:

The above emission limitation was established using the federally enforceable restricted batch production potential to emit as shown in the following equation:

$$E = (aH + bL)W$$

where:

$E$  = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

H = 895 batches/year [proposed maximum High-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

L = 2420 batches/year [proposed maximum Low-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

a = 7.500 pounds of OC/batch [High-OC batch];

b = 2.425 pounds of OC/batch [Low-OC batch]; and

W = 1 ton/2000 pounds [weight conversion].

**F. Miscellaneous Requirements**

1. PTI 16-02175 supersedes all of the requirements of PTI 16-494 issued November 5, 1986.
2. Except for Part II - sections C.1 through C.3, all terms and conditions of this permit are federally enforceable.

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**Facility ID: 1677010195 Emissions Unit ID: P032 Issuance type: Final State Permit To Operate**

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**Part II - Special Terms and Conditions**

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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.
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**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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
resin latex manufacturing process	OAC rule 3745-31-05(A)(3) (PTI 16-02175)	For this emissions unit:  7.5 pounds/hour of organic compounds (OC) (1-hour average for each reactor evacuation);  22.5 pounds/day of OC (3 reactor evacuations per day); and  4.1 tons/year of OC (365 days/year).
	OAC rule 3745-35-07(B)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-35-07(B). For emissions units P030 through P044, combined:  6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions, and as established in the restricted potential to emit procedures of Part II, section E using the federally enforceable production limitations of Part II, section B.
	OAC rule 3745-21-07(G)(2)	The OC emission limitations required by OAC rule 3745-21-07(G)(2) are less stringent than the OC emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- (a) As determined from application data, the pounds per hour and pounds per day OC emission limitations regulated per OAC rule 3745-31-05(A)(3) are based upon accepted batch potential to emit USEPA procedures for this emissions unit. Therefore, no emissions record keeping or reporting are required to demonstrate compliance with these emission limitations. However, if any proposed change(s), such as with process raw materials, latex formulations, polymerization efficiency, monomer contents, production capacity, cleanup materials, etc., or any other change(s), increase(s) the potential to emit, then the

permittee shall apply for and obtain either a modification to the permit to install or a new final permit to install prior to the change(s).

All raw materials and any other solvents shall be properly identified and held in closed containers or storage vessels at all times when not in use.

All used solvents in this emissions unit shall be properly identified and held in a closed storage drum for appropriate off-site disposal.

#### B. Operational Restrictions

1. High-OC batch production for emissions units P030 through P044, combined, shall not exceed 1680 batches/year, based upon a rolling, 12-month summation of the monthly production rates. The permittee has existing production records such that there is no need for first year monthly batch production limitations.
2. Low-OC batch production for emissions units P030 through P044, combined, shall be limited in accordance with the following equation:

$$L = (EW/b) - H(a/b)$$

where:

L = Low-OC batch production limitation for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates, as a function of H;

E = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

W = 2000 pounds/ton [weight conversion];

H = High-OC batch production for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates;

a = 7.500 pounds of OC/batch [High-OC batch]; and

b = 2.425 pounds of OC/batch [Low-OC batch].

[Note: the above linear equation with a slope of about (-3.093) specifies that approximately for every ten (10) High-OC batches processed, the permittee shall process thirty-one (31) fewer Low-OC batches so that emissions do not exceed 6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions.]

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

1. The permit to install for this emissions unit (P030) was evaluated based on the actual process materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxics Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: styrene (CAS 100-42-5)

TLV (ug/m3): 213,000

Maximum Hourly Emission Rate (lbs/hr): 7.5

Predicted 1-Hour Maximum Ground-Level Concentration at 154 m (ug/m3): 85

MAGLC (ug/m3): 5071

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 Toxics 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 Toxics Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxics Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxics Policy" include the following:

a. changes in the composition of the materials used (process materials and cleanup materials), 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 Toxics 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 emissions unit, if changed as outlined above, will still satisfy the "Air Toxics 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 Toxics 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 Toxics Policy" for the change.

4. The permittee shall maintain monthly records of the following information:

a. the High-OC & Low-OC batches produced by emissions units P030 through P044, combined, for each month;

b. the rolling, 12-month production rate summations for the High-OC & Low-OC batches produced by emissions units P030 through P044, combined;

c. the calculated Low-OC batch limit for emissions units P030 through P044, combined, using the appropriate recorded information of section C.4.b and the equation of section B.2 above;

d. the monthly OC emissions from all batches produced by emissions units P030 through P044, combined; and

e. the rolling, 12-month summation of the monthly OC emissions from all batches produced by emissions units P030 through P044, combined.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify any exceedances of the High-OC and/or Low-OC batch production limitations specified in section B above, as well as the corrective actions that were taken to achieve compliance.

2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the 6.3 tons/year of OC limitation, based upon a rolling, 12-month summation of the monthly OC emissions, for emissions units P030 through P044, combined, as well as the corrective actions that were taken to achieve compliance.

3. The deviation (excursion) reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition 3 of this permit.

**E. Testing Requirements**

1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be based on the potentials to emit as follows:  
Emission Limitations:

7.5 pounds/hour of OC (1-hour average for each reactor evacuation)

22.5 pounds/day of OC (3 reactor evacuations per day)

4.1 tons/year of OC (365 days/year)

Applicable Compliance Method:

The above emission limitations are based on the unrestricted potentials to emit as shown in the following equations:

$$E_h = R/H$$

$$E_d = (E_h)D$$

$$E_y = (E_d)YW$$

where:

$E_h$  = 7.5 pounds/hour of OC [hourly potential emissions based on 1-hour average for each reactor evacuation];

$E_d$  = 22.5 pounds/day of OC [daily potential emissions based on 3 reactor evacuations per day];

$E_y$  = 4.1 tons/year of OC [yearly potential emissions based on 365 days per year];

$R$  = 7.5 pounds of OC/reactor evacuation [emissions for each 30-minute reactor evacuation];

$H$  = 1.0 hour [conversion to 1-hour average emissions rate];

$D$  = 3 reactor evacuations/day [maximum capacity];

$Y$  = 365 days/year [continuous operations]; and

$W$  = 1 ton/2000 pounds [weight conversion].

Emission Limitation:

6.3 tons/year of OC for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions

Applicable Compliance Method:

The above emission limitation was established using the federally enforceable restricted batch production potential to emit as shown in the following equation:

$$E = (aH + bL)W$$

where:

$E$  = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

$H$  = 895 batches/year [proposed maximum High-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

L = 2420 batches/year [proposed maximum Low-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

a = 7.500 pounds of OC/batch [High-OC batch];

b = 2.425 pounds of OC/batch [Low-OC batch]; and

W = 1 ton/2000 pounds [weight conversion].

**F. Miscellaneous Requirements**

1. PTI 16-02175 supersedes all of the requirements of PTI 16-494 issued November 5, 1986.
2. Except for Part II - sections C.1 through C.3, all terms and conditions of this permit are federally enforceable.

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

Facility ID: 1677010195 Emissions Unit ID: P033 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
resin latex manufacturing process	OAC rule 3745-31-05(A)(3) (PTI 16-02175)	For this emissions unit:  7.5 pounds/hour of organic compounds (OC) (1-hour average for each reactor evacuation);  22.5 pounds/day of OC (3 reactor evacuations per day); and  4.1 tons/year of OC (365 days/year).
	OAC rule 3745-35-07(B)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-35-07(B). For emissions units P030 through P044, combined:  6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions, and as established in the restricted potential to emit procedures of Part II, section E using the federally enforceable production limitations of Part II, section B.
	OAC rule 3745-21-07(G)(2)	The OC emission limitations required by OAC rule 3745-21-07(G)(2) are less stringent than the OC emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- (a) As determined from application data, the pounds per hour and pounds per day OC emission limitations regulated per OAC rule 3745-31-05(A)(3) are based upon accepted batch potential to emit USEPA procedures for this emissions unit. Therefore, no emissions record keeping or reporting are required to demonstrate compliance with these emission limitations. However, if any proposed change(s), such as with process raw materials, latex formulations, polymerization efficiency, monomer contents, production capacity, cleanup materials, etc., or any other change(s), increase(s) the potential to emit, then the permittee shall apply for and obtain either a modification to the permit to install or a new final permit to install prior to the change(s).

All raw materials and any other solvents shall be properly identified and held in closed containers or storage vessels at all times when not in use.

All used solvents in this emissions unit shall be properly identified and held in a closed storage drum for appropriate off-site disposal.

**B. Operational Restrictions**

1. High-OC batch production for emissions units P030 through P044, combined, shall not exceed 1680 batches/year, based upon a rolling, 12-month summation of the monthly production rates. The permittee has existing production records such that there is no need for first year monthly batch production limitations.
2. Low-OC batch production for emissions units P030 through P044, combined, shall be limited in accordance with the following equation:

$$L = (EW/b) - H(a/b)$$

where:

L = Low-OC batch production limitation for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates, as a function of H;

E = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

W = 2000 pounds/ton [weight conversion];

H = High-OC batch production for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates;

a = 7.500 pounds of OC/batch [High-OC batch]; and

b = 2.425 pounds of OC/batch [Low-OC batch].

[Note: the above linear equation with a slope of about (-3.093) specifies that approximately for every ten (10) High-OC batches processed, the permittee shall process thirty-one (31) fewer Low-OC batches so that emissions do not exceed 6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions.]

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

1. The permit to install for this emissions unit (P030) was evaluated based on the actual process materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxics Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: styrene (CAS 100-42-5)

TLV (ug/m3): 213,000

Maximum Hourly Emission Rate (lbs/hr): 7.5

Predicted 1-Hour Maximum Ground-Level Concentration at 154 m (ug/m3): 85

MAGLC (ug/m3): 5071

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 Toxics 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 Toxics Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxics Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxics Policy" include the following:

a. changes in the composition of the materials used (process materials and cleanup materials), 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 Toxics 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 emissions unit, if changed as outlined above, will still satisfy the "Air Toxics 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 Toxics 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 Toxics Policy" for the change.

4. The permittee shall maintain monthly records of the following information:
- the High-OC & Low-OC batches produced by emissions units P030 through P044, combined, for each month;
  - the rolling, 12-month production rate summations for the High-OC & Low-OC batches produced by emissions units P030 through P044, combined;
  - the calculated Low-OC batch limit for emissions units P030 through P044, combined, using the appropriate recorded information of section C.4.b and the equation of section B.2 above;
  - the monthly OC emissions from all batches produced by emissions units P030 through P044, combined; and
  - the rolling, 12-month summation of the monthly OC emissions from all batches produced by emissions units P030 through P044, combined.

**D. Reporting Requirements**

- The permittee shall submit deviation (excursion) reports that identify any exceedances of the High-OC and/or Low-OC batch production limitations specified in section B above, as well as the corrective actions that were taken to achieve compliance.
- The permittee shall submit deviation (excursion) reports that identify all exceedances of the 6.3 tons/year of OC limitation, based upon a rolling, 12-month summation of the monthly OC emissions, for emissions units P030 through P044, combined, as well as the corrective actions that were taken to achieve compliance.
- The deviation (excursion) reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition 3 of this permit.

**E. Testing Requirements**

- Compliance with the emission limitations in section A.1 of these terms and conditions shall be based on the potentials to emit as follows:  
Emission Limitations:

7.5 pounds/hour of OC (1-hour average for each reactor evacuation)  
22.5 pounds/day of OC (3 reactor evacuations per day)  
4.1 tons/year of OC (365 days/year)

Applicable Compliance Method:

The above emission limitations are based on the unrestricted potentials to emit as shown in the following equations:

$E_h = R/H$   
 $E_d = (E_h)D$   
 $E_y = (E_d)YW$

where:

$E_h$  = 7.5 pounds/hour of OC [hourly potential emissions based on 1-hour average for each reactor evacuation];

$E_d$  = 22.5 pounds/day of OC [daily potential emissions based on 3 reactor evacuations per day];

$E_y$  = 4.1 tons/year of OC [yearly potential emissions based on 365 days per year];

$R$  = 7.5 pounds of OC/reactor evacuation [emissions for each 30-minute reactor evacuation];

$H$  = 1.0 hour [conversion to 1-hour average emissions rate];

$D$  = 3 reactor evacuations/day [maximum capacity];

$Y$  = 365 days/year [continuous operations]; and

$W$  = 1 ton/2000 pounds [weight conversion].

Emission Limitation:

6.3 tons/year of OC for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions

Applicable Compliance Method:

The above emission limitation was established using the federally enforceable restricted batch production potential to emit as shown in the following equation:

$E = (aH + bL)W$

where:

$E$  = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

$H$  = 895 batches/year [proposed maximum High-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$L$  = 2420 batches/year [proposed maximum Low-OC batch production for emissions units P030 through P044,

combined, based upon a rolling, 12-month summation of the monthly batch production rates];

a = 7.500 pounds of OC/batch [High-OC batch];

b = 2.425 pounds of OC/batch [Low-OC batch]; and

W = 1 ton/2000 pounds [weight conversion].

**F. Miscellaneous Requirements**

1. PTI 16-02175 supersedes all of the requirements of PTI 16-494 issued November 5, 1986.
2. Except for Part II - sections C.1 through C.3, all terms and conditions of this permit are federally enforceable.

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

**Facility ID: 1677010195 Emissions Unit ID: P034 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
resin latex manufacturing process	OAC rule 3745-31-05(A)(3) (PTI 16-02175)	For this emissions unit:  7.5 pounds/hour of organic compounds (OC) (1-hour average for each reactor evacuation);  22.5 pounds/day of OC (3 reactor evacuations per day); and  4.1 tons/year of OC (365 days/year).
	OAC rule 3745-35-07(B)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-35-07(B). For emissions units P030 through P044, combined:  6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions, and as established in the restricted potential to emit procedures of Part II, section E using the federally enforceable production limitations of Part II, section B.
	OAC rule 3745-21-07(G)(2)	The OC emission limitations required by OAC rule 3745-21-07(G)(2) are less stringent than the OC emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- (a) As determined from application data, the pounds per hour and pounds per day OC emission limitations regulated per OAC rule 3745-31-05(A)(3) are based upon accepted batch potential to emit USEPA procedures for this emissions unit. Therefore, no emissions record keeping or reporting are required to demonstrate compliance with these emission limitations. However, if any proposed change(s), such as with process raw materials, latex formulations, polymerization efficiency, monomer contents, production capacity, cleanup materials, etc., or any other change(s), increase(s) the potential to emit, then the permittee shall apply for and obtain either a modification to the permit to install or a new final permit to install prior to the change(s).  
All raw materials and any other solvents shall be properly identified and held in closed containers or storage vessels at all times when not in use.

All used solvents in this emissions unit shall be properly identified and held in a closed storage drum for appropriate off-site disposal.

**B. Operational Restrictions**

1. High-OC batch production for emissions units P030 through P044, combined, shall not exceed 1680 batches/year, based upon a rolling, 12-month summation of the monthly production rates. The permittee has existing production records such that there is no need for first year monthly batch production limitations.
2. Low-OC batch production for emissions units P030 through P044, combined, shall be limited in accordance with the following equation:

$$L = (EW/b) - H(a/b)$$

where:

L = Low-OC batch production limitation for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates, as a function of H;

E = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

W = 2000 pounds/ton [weight conversion];

H = High-OC batch production for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates;

a = 7.500 pounds of OC/batch [High-OC batch]; and

b = 2.425 pounds of OC/batch [Low-OC batch].

[Note: the above linear equation with a slope of about (-3.093) specifies that approximately for every ten (10) High-OC batches processed, the permittee shall process thirty-one (31) fewer Low-OC batches so that emissions do not exceed 6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions.]

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

1. The permit to install for this emissions unit (P030) was evaluated based on the actual process materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxics Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: styrene (CAS 100-42-5)

TLV (ug/m3): 213,000

Maximum Hourly Emission Rate (lbs/hr): 7.5

Predicted 1-Hour Maximum Ground-Level Concentration at 154 m (ug/m3): 85

MAGLC (ug/m3): 5071

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 Toxics 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 Toxics Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxics Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxics Policy" include the following:

a. changes in the composition of the materials used (process materials and cleanup materials), 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 Toxics 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 emissions unit, if changed as outlined above, will still satisfy the "Air Toxics 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 Toxics 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 Toxics Policy" for the change.

4. The permittee shall maintain monthly records of the following information:
- the High-OC & Low-OC batches produced by emissions units P030 through P044, combined, for each month;
  - the rolling, 12-month production rate summations for the High-OC & Low-OC batches produced by emissions units P030 through P044, combined;
  - the calculated Low-OC batch limit for emissions units P030 through P044, combined, using the appropriate recorded information of section C.4.b and the equation of section B.2 above;
  - the monthly OC emissions from all batches produced by emissions units P030 through P044, combined; and
  - the rolling, 12-month summation of the monthly OC emissions from all batches produced by emissions units P030 through P044, combined.

**D. Reporting Requirements**

- The permittee shall submit deviation (excursion) reports that identify any exceedances of the High-OC and/or Low-OC batch production limitations specified in section B above, as well as the corrective actions that were taken to achieve compliance.
- The permittee shall submit deviation (excursion) reports that identify all exceedances of the 6.3 tons/year of OC limitation, based upon a rolling, 12-month summation of the monthly OC emissions, for emissions units P030 through P044, combined, as well as the corrective actions that were taken to achieve compliance.
- The deviation (excursion) reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition 3 of this permit.

**E. Testing Requirements**

- Compliance with the emission limitations in section A.1 of these terms and conditions shall be based on the potentials to emit as follows:  
Emission Limitations:

7.5 pounds/hour of OC (1-hour average for each reactor evacuation)  
22.5 pounds/day of OC (3 reactor evacuations per day)  
4.1 tons/year of OC (365 days/year)

Applicable Compliance Method:

The above emission limitations are based on the unrestricted potentials to emit as shown in the following equations:

$E_h = R/H$   
 $E_d = (E_h)D$   
 $E_y = (E_d)YW$

where:

$E_h$  = 7.5 pounds/hour of OC [hourly potential emissions based on 1-hour average for each reactor evacuation];

$E_d$  = 22.5 pounds/day of OC [daily potential emissions based on 3 reactor evacuations per day];

$E_y$  = 4.1 tons/year of OC [yearly potential emissions based on 365 days per year];

$R$  = 7.5 pounds of OC/reactor evacuation [emissions for each 30-minute reactor evacuation];

$H$  = 1.0 hour [conversion to 1-hour average emissions rate];

$D$  = 3 reactor evacuations/day [maximum capacity];

$Y$  = 365 days/year [continuous operations]; and

$W$  = 1 ton/2000 pounds [weight conversion].

Emission Limitation:

6.3 tons/year of OC for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions

Applicable Compliance Method:

The above emission limitation was established using the federally enforceable restricted batch production potential to emit as shown in the following equation:

$E = (aH + bL)W$

where:

$E$  = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

$H$  = 895 batches/year [proposed maximum High-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$L$  = 2420 batches/year [proposed maximum Low-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

- a = 7.500 pounds of OC/batch [High-OC batch];
- b = 2.425 pounds of OC/batch [Low-OC batch]; and
- W = 1 ton/2000 pounds [weight conversion].

**F. Miscellaneous Requirements**

1. PTI 16-02175 supersedes all of the requirements of PTI 16-494 issued November 5, 1986.
2. Except for Part II - sections C.1 through C.3, all terms and conditions of this permit are federally enforceable.

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

Facility ID: 1677010195 Emissions Unit ID: P035 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
resin latex manufacturing process	OAC rule 3745-31-05(A)(3) (PTI 16-02175)	For this emissions unit:  7.5 pounds/hour of organic compounds (OC) (1-hour average for each reactor evacuation);  22.5 pounds/day of OC (3 reactor evacuations per day); and  4.1 tons/year of OC (365 days/year).
	OAC rule 3745-35-07(B)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-35-07(B). For emissions units P030 through P044, combined:  6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions, and as established in the restricted potential to emit procedures of Part II, section E using the federally enforceable production limitations of Part II, section B.
	OAC rule 3745-21-07(G)(2)	The OC emission limitations required by OAC rule 3745-21-07(G)(2) are less stringent than the OC emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- (a) As determined from application data, the pounds per hour and pounds per day OC emission limitations regulated per OAC rule 3745-31-05(A)(3) are based upon accepted batch potential to emit USEPA procedures for this emissions unit. Therefore, no emissions record keeping or reporting are required to demonstrate compliance with these emission limitations. However, if any proposed change(s), such as with process raw materials, latex formulations, polymerization efficiency, monomer contents, production capacity, cleanup materials, etc., or any other change(s), increase(s) the potential to emit, then the permittee shall apply for and obtain either a modification to the permit to install or a new final permit to install prior to the change(s).  
All raw materials and any other solvents shall be properly identified and held in closed containers or storage vessels at all times when not in use.  
All used solvents in this emissions unit shall be properly identified and held in a closed storage drum for appropriate off-site disposal.

**B. Operational Restrictions**

1. High-OC batch production for emissions units P030 through P044, combined, shall not exceed 1680 batches/year, based upon a rolling, 12-month summation of the monthly production rates. The permittee has existing production records such that there is no need for first year monthly batch production limitations.
2. Low-OC batch production for emissions units P030 through P044, combined, shall be limited in accordance with the following equation:

$$L = (EW/b) - H(a/b)$$

where:

L = Low-OC batch production limitation for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates, as a function of H;

E = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

W = 2000 pounds/ton [weight conversion];

H = High-OC batch production for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates;

a = 7.500 pounds of OC/batch [High-OC batch]; and

b = 2.425 pounds of OC/batch [Low-OC batch].

[Note: the above linear equation with a slope of about (-3.093) specifies that approximately for every ten (10) High-OC batches processed, the permittee shall process thirty-one (31) fewer Low-OC batches so that emissions do not exceed 6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions.]

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

1. The permit to install for this emissions unit (P030) was evaluated based on the actual process materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxics Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: styrene (CAS 100-42-5)

TLV (ug/m3): 213,000

Maximum Hourly Emission Rate (lbs/hr): 7.5

Predicted 1-Hour Maximum Ground-Level Concentration at 154 m (ug/m3): 85

MAGLC (ug/m3): 5071

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 Toxics 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 Toxics Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxics Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxics Policy" include the following:
  - a. changes in the composition of the materials used (process materials and cleanup materials), 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 Toxics 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 emissions unit, if changed as outlined above, will still satisfy the "Air Toxics 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 Toxics 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 Toxics Policy" for the change.
4. The permittee shall maintain monthly records of the following information:

- a. the High-OC & Low-OC batches produced by emissions units P030 through P044, combined, for each month;
  - b. the rolling, 12-month production rate summations for the High-OC & Low-OC batches produced by emissions units P030 through P044, combined;
  - c. the calculated Low-OC batch limit for emissions units P030 through P044, combined, using the appropriate recorded information of section C.4.b and the equation of section B.2 above;
  - d. the monthly OC emissions from all batches produced by emissions units P030 through P044, combined; and
  - e. the rolling, 12-month summation of the monthly OC emissions from all batches produced by emissions units P030 through P044, combined.

**D. Reporting Requirements**

- 1. The permittee shall submit deviation (excursion) reports that identify any exceedances of the High-OC and/or Low-OC batch production limitations specified in section B above, as well as the corrective actions that were taken to achieve compliance.
- 2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the 6.3 tons/year of OC limitation, based upon a rolling, 12-month summation of the monthly OC emissions, for emissions units P030 through P044, combined, as well as the corrective actions that were taken to achieve compliance.
- 3. The deviation (excursion) reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition 3 of this permit.

**E. Testing Requirements**

- 1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be based on the potentials to emit as follows:  
Emission Limitations:

7.5 pounds/hour of OC (1-hour average for each reactor evacuation)  
22.5 pounds/day of OC (3 reactor evacuations per day)  
4.1 tons/year of OC (365 days/year)

Applicable Compliance Method:

The above emission limitations are based on the unrestricted potentials to emit as shown in the following equations:

$E_h = R/H$   
 $E_d = (E_h)D$   
 $E_y = (E_d)YW$

where:

$E_h$  = 7.5 pounds/hour of OC [hourly potential emissions based on 1-hour average for each reactor evacuation];

$E_d$  = 22.5 pounds/day of OC [daily potential emissions based on 3 reactor evacuations per day];

$E_y$  = 4.1 tons/year of OC [yearly potential emissions based on 365 days per year];

$R$  = 7.5 pounds of OC/reactor evacuation [emissions for each 30-minute reactor evacuation];

$H$  = 1.0 hour [conversion to 1-hour average emissions rate];

$D$  = 3 reactor evacuations/day [maximum capacity];

$Y$  = 365 days/year [continuous operations]; and

$W$  = 1 ton/2000 pounds [weight conversion].

Emission Limitation:

6.3 tons/year of OC for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions

Applicable Compliance Method:

The above emission limitation was established using the federally enforceable restricted batch production potential to emit as shown in the following equation:

$E = (aH + bL)W$

where:

$E$  = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

$H$  = 895 batches/year [proposed maximum High-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$L$  = 2420 batches/year [proposed maximum Low-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$a$  = 7.500 pounds of OC/batch [High-OC batch];

b = 2.425 pounds of OC/batch [Low-OC batch]; and

W = 1 ton/2000 pounds [weight conversion].

**F. Miscellaneous Requirements**

1. PTI 16-02175 supersedes all of the requirements of PTI 16-494 issued November 5, 1986.
2. Except for Part II - sections C.1 through C.3, all terms and conditions of this permit are federally enforceable.

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

**Facility ID: 1677010195 Emissions Unit ID: P036 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
resin latex manufacturing process	OAC rule 3745-31-05(A)(3) (PTI 16-02175)	For this emissions unit:  7.5 pounds/hour of organic compounds (OC) (1-hour average for each reactor evacuation);  22.5 pounds/day of OC (3 reactor evacuations per day); and  4.1 tons/year of OC (365 days/year).
	OAC rule 3745-35-07(B)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-35-07(B). For emissions units P030 through P044, combined:  6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions, and as established in the restricted potential to emit procedures of Part II, section E using the federally enforceable production limitations of Part II, section B.
	OAC rule 3745-21-07(G)(2)	The OC emission limitations required by OAC rule 3745-21-07(G)(2) are less stringent than the OC emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- (a) As determined from application data, the pounds per hour and pounds per day OC emission limitations regulated per OAC rule 3745-31-05(A)(3) are based upon accepted batch potential to emit USEPA procedures for this emissions unit. Therefore, no emissions record keeping or reporting are required to demonstrate compliance with these emission limitations. However, if any proposed change(s), such as with process raw materials, latex formulations, polymerization efficiency, monomer contents, production capacity, cleanup materials, etc., or any other change(s), increase(s) the potential to emit, then the permittee shall apply for and obtain either a modification to the permit to install or a new final permit to install prior to the change(s).  
All raw materials and any other solvents shall be properly identified and held in closed containers or storage vessels at all times when not in use.  
All used solvents in this emissions unit shall be properly identified and held in a closed storage drum for appropriate off-site disposal.

**B. Operational Restrictions**

1. High-OC batch production for emissions units P030 through P044, combined, shall not exceed 1680 batches/year, based upon a rolling, 12-month summation of the monthly production rates. The permittee has existing production records such that there is no need for first year monthly batch production limitations.

2. Low-OC batch production for emissions units P030 through P044, combined, shall be limited in accordance with the following equation:

$$L = (EW/b) - H(a/b)$$

where:

L = Low-OC batch production limitation for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates, as a function of H;

E = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

W = 2000 pounds/ton [weight conversion];

H = High-OC batch production for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates;

a = 7.500 pounds of OC/batch [High-OC batch]; and

b = 2.425 pounds of OC/batch [Low-OC batch].

[Note: the above linear equation with a slope of about (-3.093) specifies that approximately for every ten (10) High-OC batches processed, the permittee shall process thirty-one (31) fewer Low-OC batches so that emissions do not exceed 6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions.]

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

1. The permit to install for this emissions unit (P030) was evaluated based on the actual process materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxics Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: styrene (CAS 100-42-5)

TLV (ug/m3): 213,000

Maximum Hourly Emission Rate (lbs/hr): 7.5

Predicted 1-Hour Maximum Ground-Level Concentration at 154 m (ug/m3): 85

MAGLC (ug/m3): 5071

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 Toxics 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 Toxics Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxics Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxics Policy" include the following:

a. changes in the composition of the materials used (process materials and cleanup materials), 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 Toxics 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 emissions unit, if changed as outlined above, will still satisfy the "Air Toxics 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 Toxics 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 Toxics Policy" for the change.

4. The permittee shall maintain monthly records of the following information:

a. the High-OC & Low-OC batches produced by emissions units P030 through P044, combined, for each month;

b. the rolling, 12-month production rate summations for the High-OC & Low-OC batches produced by emissions units P030 through P044, combined;

c. the calculated Low-OC batch limit for emissions units P030 through P044, combined, using the appropriate recorded information of section C.4.b and the equation of section B.2 above;

d. the monthly OC emissions from all batches produced by emissions units P030 through P044, combined; and

e. the rolling, 12-month summation of the monthly OC emissions from all batches produced by emissions units P030 through P044, combined.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify any exceedances of the High-OC and/or Low-OC batch production limitations specified in section B above, as well as the corrective actions that were taken to achieve compliance.
2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the 6.3 tons/year of OC limitation, based upon a rolling, 12-month summation of the monthly OC emissions, for emissions units P030 through P044, combined, as well as the corrective actions that were taken to achieve compliance.
3. The deviation (excursion) reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition 3 of this permit.

**E. Testing Requirements**

1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be based on the potentials to emit as follows:  
Emission Limitations:

7.5 pounds/hour of OC (1-hour average for each reactor evacuation)  
22.5 pounds/day of OC (3 reactor evacuations per day)  
4.1 tons/year of OC (365 days/year)

Applicable Compliance Method:

The above emission limitations are based on the unrestricted potentials to emit as shown in the following equations:

$E_h = R/H$   
 $E_d = (E_h)D$   
 $E_y = (E_d)YW$

where:

$E_h$  = 7.5 pounds/hour of OC [hourly potential emissions based on 1-hour average for each reactor evacuation];

$E_d$  = 22.5 pounds/day of OC [daily potential emissions based on 3 reactor evacuations per day];

$E_y$  = 4.1 tons/year of OC [yearly potential emissions based on 365 days per year];

$R$  = 7.5 pounds of OC/reactor evacuation [emissions for each 30-minute reactor evacuation];

$H$  = 1.0 hour [conversion to 1-hour average emissions rate];

$D$  = 3 reactor evacuations/day [maximum capacity];

$Y$  = 365 days/year [continuous operations]; and

$W$  = 1 ton/2000 pounds [weight conversion].

Emission Limitation:

6.3 tons/year of OC for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions

Applicable Compliance Method:

The above emission limitation was established using the federally enforceable restricted batch production potential to emit as shown in the following equation:

$E = (aH + bL)W$

where:

$E$  = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

$H$  = 895 batches/year [proposed maximum High-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$L$  = 2420 batches/year [proposed maximum Low-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$a$  = 7.500 pounds of OC/batch [High-OC batch];

$b$  = 2.425 pounds of OC/batch [Low-OC batch]; and

W = 1 ton/2000 pounds [weight conversion].

**F. Miscellaneous Requirements**

1. PTI 16-02175 supersedes all of the requirements of PTI 16-494 issued November 5, 1986.
2. Except for Part II - sections C.1 through C.3, all terms and conditions of this permit are federally enforceable.

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

Facility ID: 1677010195 Emissions Unit ID: P037 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
resin latex manufacturing process	OAC rule 3745-31-05(A)(3) (PTI 16-02175)	For this emissions unit:  7.5 pounds/hour of organic compounds (OC) (1-hour average for each reactor evacuation);  22.5 pounds/day of OC (3 reactor evacuations per day); and  4.1 tons/year of OC (365 days/year).
	OAC rule 3745-35-07(B)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-35-07(B). For emissions units P030 through P044, combined:  6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions, and as established in the restricted potential to emit procedures of Part II, section E using the federally enforceable production limitations of Part II, section B.
	OAC rule 3745-21-07(G)(2)	The OC emission limitations required by OAC rule 3745-21-07(G)(2) are less stringent than the OC emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- (a) As determined from application data, the pounds per hour and pounds per day OC emission limitations regulated per OAC rule 3745-31-05(A)(3) are based upon accepted batch potential to emit USEPA procedures for this emissions unit. Therefore, no emissions record keeping or reporting are required to demonstrate compliance with these emission limitations. However, if any proposed change(s), such as with process raw materials, latex formulations, polymerization efficiency, monomer contents, production capacity, cleanup materials, etc., or any other change(s), increase(s) the potential to emit, then the permittee shall apply for and obtain either a modification to the permit to install or a new final permit to install prior to the change(s).  
All raw materials and any other solvents shall be properly identified and held in closed containers or storage vessels at all times when not in use.  
All used solvents in this emissions unit shall be properly identified and held in a closed storage drum for appropriate off-site disposal.

**B. Operational Restrictions**

1. High-OC batch production for emissions units P030 through P044, combined, shall not exceed 1680 batches/year, based upon a rolling, 12-month summation of the monthly production rates. The permittee has existing

production records such that there is no need for first year monthly batch production limitations.

2. Low-OC batch production for emissions units P030 through P044, combined, shall be limited in accordance with the following equation:

$$L = (EW/b) - H(a/b)$$

where:

L = Low-OC batch production limitation for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates, as a function of H;

E = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

W = 2000 pounds/ton [weight conversion];

H = High-OC batch production for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates;

a = 7.500 pounds of OC/batch [High-OC batch]; and

b = 2.425 pounds of OC/batch [Low-OC batch].

[Note: the above linear equation with a slope of about (-3.093) specifies that approximately for every ten (10) High-OC batches processed, the permittee shall process thirty-one (31) fewer Low-OC batches so that emissions do not exceed 6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions.]

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

1. The permit to install for this emissions unit (P030) was evaluated based on the actual process materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxics Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: styrene (CAS 100-42-5)

TLV (ug/m3): 213,000

Maximum Hourly Emission Rate (lbs/hr): 7.5

Predicted 1-Hour Maximum Ground-Level Concentration at 154 m (ug/m3): 85

MAGLC (ug/m3): 5071

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 Toxics 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 Toxics Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxics Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxics Policy" include the following:

a. changes in the composition of the materials used (process materials and cleanup materials), 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 Toxics 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 emissions unit, if changed as outlined above, will still satisfy the "Air Toxics 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 Toxics 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 Toxics Policy" for the change.

4. The permittee shall maintain monthly records of the following information:

a. the High-OC & Low-OC batches produced by emissions units P030 through P044, combined, for each month;

b. the rolling, 12-month production rate summations for the High-OC & Low-OC batches produced by emissions

units P030 through P044, combined;

c. the calculated Low-OC batch limit for emissions units P030 through P044, combined, using the appropriate recorded information of section C.4.b and the equation of section B.2 above;

d. the monthly OC emissions from all batches produced by emissions units P030 through P044, combined; and

e. the rolling, 12-month summation of the monthly OC emissions from all batches produced by emissions units P030 through P044, combined.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify any exceedances of the High-OC and/or Low-OC batch production limitations specified in section B above, as well as the corrective actions that were taken to achieve compliance.
2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the 6.3 tons/year of OC limitation, based upon a rolling, 12-month summation of the monthly OC emissions, for emissions units P030 through P044, combined, as well as the corrective actions that were taken to achieve compliance.
3. The deviation (excursion) reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition 3 of this permit.

**E. Testing Requirements**

1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be based on the potentials to emit as follows:  
Emission Limitations:

7.5 pounds/hour of OC (1-hour average for each reactor evacuation)  
22.5 pounds/day of OC (3 reactor evacuations per day)  
4.1 tons/year of OC (365 days/year)

Applicable Compliance Method:

The above emission limitations are based on the unrestricted potentials to emit as shown in the following equations:

$E_h = R/H$   
 $E_d = (E_h)D$   
 $E_y = (E_d)YW$

where:

$E_h$  = 7.5 pounds/hour of OC [hourly potential emissions based on 1-hour average for each reactor evacuation];

$E_d$  = 22.5 pounds/day of OC [daily potential emissions based on 3 reactor evacuations per day];

$E_y$  = 4.1 tons/year of OC [yearly potential emissions based on 365 days per year];

$R$  = 7.5 pounds of OC/reactor evacuation [emissions for each 30-minute reactor evacuation];

$H$  = 1.0 hour [conversion to 1-hour average emissions rate];

$D$  = 3 reactor evacuations/day [maximum capacity];

$Y$  = 365 days/year [continuous operations]; and

$W$  = 1 ton/2000 pounds [weight conversion].

Emission Limitation:

6.3 tons/year of OC for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions

Applicable Compliance Method:

The above emission limitation was established using the federally enforceable restricted batch production potential to emit as shown in the following equation:

$E = (aH + bL)W$

where:

$E$  = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

$H$  = 895 batches/year [proposed maximum High-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$L$  = 2420 batches/year [proposed maximum Low-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$a$  = 7.500 pounds of OC/batch [High-OC batch];

$b$  = 2.425 pounds of OC/batch [Low-OC batch]; and

$W$  = 1 ton/2000 pounds [weight conversion].

**F. Miscellaneous Requirements**

1. PTI 16-02175 supersedes all of the requirements of PTI 16-494 issued November 5, 1986.
2. Except for Part II - sections C.1 through C.3, all terms and conditions of this permit are federally enforceable.

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

Facility ID: 1677010195 Emissions Unit ID: P038 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
resin latex manufacturing process	OAC rule 3745-31-05(A)(3) (PTI 16-02175)	For this emissions unit:  7.5 pounds/hour of organic compounds (OC) (1-hour average for each reactor evacuation);  22.5 pounds/day of OC (3 reactor evacuations per day); and  4.1 tons/year of OC (365 days/year).
	OAC rule 3745-35-07(B)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-35-07(B). For emissions units P030 through P044, combined:  6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions, and as established in the restricted potential to emit procedures of Part II, section E using the federally enforceable production limitations of Part II, section B.
	OAC rule 3745-21-07(G)(2)	The OC emission limitations required by OAC rule 3745-21-07(G)(2) are less stringent than the OC emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- (a) As determined from application data, the pounds per hour and pounds per day OC emission limitations regulated per OAC rule 3745-31-05(A)(3) are based upon accepted batch potential to emit USEPA procedures for this emissions unit. Therefore, no emissions record keeping or reporting are required to demonstrate compliance with these emission limitations. However, if any proposed change(s), such as with process raw materials, latex formulations, polymerization efficiency, monomer contents, production capacity, cleanup materials, etc., or any other change(s), increase(s) the potential to emit, then the permittee shall apply for and obtain either a modification to the permit to install or a new final permit to install prior to the change(s).  
All raw materials and any other solvents shall be properly identified and held in closed containers or storage vessels at all times when not in use.  
All used solvents in this emissions unit shall be properly identified and held in a closed storage drum for appropriate off-site disposal.

**B. Operational Restrictions**

1. High-OC batch production for emissions units P030 through P044, combined, shall not exceed 1680 batches/year, based upon a rolling, 12-month summation of the monthly production rates. The permittee has existing production records such that there is no need for first year monthly batch production limitations.
2. Low-OC batch production for emissions units P030 through P044, combined, shall be limited in accordance with the following equation:

$$L = (EW/b) - H(a/b)$$

where:

L = Low-OC batch production limitation for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates, as a function of H;

E = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

W = 2000 pounds/ton [weight conversion];

H = High-OC batch production for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates;

a = 7.500 pounds of OC/batch [High-OC batch]; and

b = 2.425 pounds of OC/batch [Low-OC batch].

[Note: the above linear equation with a slope of about (-3.093) specifies that approximately for every ten (10) High-OC batches processed, the permittee shall process thirty-one (31) fewer Low-OC batches so that emissions do not exceed 6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions.]

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

1. The permit to install for this emissions unit (P030) was evaluated based on the actual process materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxics Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: styrene (CAS 100-42-5)  
 TLV (ug/m3): 213,000  
 Maximum Hourly Emission Rate (lbs/hr): 7.5  
 Predicted 1-Hour Maximum Ground-Level Concentration at 154 m (ug/m3): 85  
 MAGLC (ug/m3): 5071

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 Toxics 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 Toxics Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxics Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxics Policy" include the following:

a. changes in the composition of the materials used (process materials and cleanup materials), 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 Toxics 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 emissions unit, if changed as outlined above, will still satisfy the "Air Toxics 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 Toxics 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 Toxics Policy" for the change.
4. The permittee shall maintain monthly records of the following information:
  - a. the High-OC & Low-OC batches produced by emissions units P030 through P044, combined, for each month;
  - b. the rolling, 12-month production rate summations for the High-OC & Low-OC batches produced by emissions units P030 through P044, combined;
  - c. the calculated Low-OC batch limit for emissions units P030 through P044, combined, using the appropriate recorded information of section C.4.b and the equation of section B.2 above;

d. the monthly OC emissions from all batches produced by emissions units P030 through P044, combined; and

e. the rolling, 12-month summation of the monthly OC emissions from all batches produced by emissions units P030 through P044, combined.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify any exceedances of the High-OC and/or Low-OC batch production limitations specified in section B above, as well as the corrective actions that were taken to achieve compliance.
2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the 6.3 tons/year of OC limitation, based upon a rolling, 12-month summation of the monthly OC emissions, for emissions units P030 through P044, combined, as well as the corrective actions that were taken to achieve compliance.
3. The deviation (excursion) reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition 3 of this permit.

**E. Testing Requirements**

1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be based on the potentials to emit as follows:  
Emission Limitations:

7.5 pounds/hour of OC (1-hour average for each reactor evacuation)  
22.5 pounds/day of OC (3 reactor evacuations per day)  
4.1 tons/year of OC (365 days/year)

Applicable Compliance Method:

The above emission limitations are based on the unrestricted potentials to emit as shown in the following equations:

$E_h = R/H$   
 $E_d = (E_h)D$   
 $E_y = (E_d)YW$

where:

$E_h = 7.5$  pounds/hour of OC [hourly potential emissions based on 1-hour average for each reactor evacuation];

$E_d = 22.5$  pounds/day of OC [daily potential emissions based on 3 reactor evacuations per day];

$E_y = 4.1$  tons/year of OC [yearly potential emissions based on 365 days per year];

$R = 7.5$  pounds of OC/reactor evacuation [emissions for each 30-minute reactor evacuation];

$H = 1.0$  hour [conversion to 1-hour average emissions rate];

$D = 3$  reactor evacuations/day [maximum capacity];

$Y = 365$  days/year [continuous operations]; and

$W = 1$  ton/2000 pounds [weight conversion].

Emission Limitation:

6.3 tons/year of OC for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions

Applicable Compliance Method:

The above emission limitation was established using the federally enforceable restricted batch production potential to emit as shown in the following equation:

$E = (aH + bL)W$

where:

$E = 6.3$  tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

$H = 895$  batches/year [proposed maximum High-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$L = 2420$  batches/year [proposed maximum Low-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$a = 7.500$  pounds of OC/batch [High-OC batch];

$b = 2.425$  pounds of OC/batch [Low-OC batch]; and

$W = 1$  ton/2000 pounds [weight conversion].

**F. Miscellaneous Requirements**

1. PTI 16-02175 supersedes all of the requirements of PTI 16-494 issued November 5, 1986.

2. Except for Part II - sections C.1 through C.3, all terms and conditions of this permit are federally enforceable.

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

Facility ID: 1677010195 Emissions Unit ID: P039 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
resin latex manufacturing process	OAC rule 3745-31-05(A)(3) (PTI 16-02175)	For this emissions unit:  7.5 pounds/hour of organic compounds (OC) (1-hour average for each reactor evacuation);  22.5 pounds/day of OC (3 reactor evacuations per day); and  4.1 tons/year of OC (365 days/year).
	OAC rule 3745-35-07(B)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-35-07(B). For emissions units P030 through P044, combined:  6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions, and as established in the restricted potential to emit procedures of Part II, section E using the federally enforceable production limitations of Part II, section B.
	OAC rule 3745-21-07(G)(2)	The OC emission limitations required by OAC rule 3745-21-07(G)(2) are less stringent than the OC emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- (a) As determined from application data, the pounds per hour and pounds per day OC emission limitations regulated per OAC rule 3745-31-05(A)(3) are based upon accepted batch potential to emit USEPA procedures for this emissions unit. Therefore, no emissions record keeping or reporting are required to demonstrate compliance with these emission limitations. However, if any proposed change(s), such as with process raw materials, latex formulations, polymerization efficiency, monomer contents, production capacity, cleanup materials, etc., or any other change(s), increase(s) the potential to emit, then the permittee shall apply for and obtain either a modification to the permit to install or a new final permit to install prior to the change(s).  
All raw materials and any other solvents shall be properly identified and held in closed containers or storage vessels at all times when not in use.  
All used solvents in this emissions unit shall be properly identified and held in a closed storage drum for appropriate off-site disposal.

**B. Operational Restrictions**

1. High-OC batch production for emissions units P030 through P044, combined, shall not exceed 1680 batches/year, based upon a rolling, 12-month summation of the monthly production rates. The permittee has existing production records such that there is no need for first year monthly batch production limitations.
2. Low-OC batch production for emissions units P030 through P044, combined, shall be limited in accordance with the following equation:

$$L = (EW/b) - H(a/b)$$

where:

L = Low-OC batch production limitation for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates, as a function of H;

E = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

W = 2000 pounds/ton [weight conversion];

H = High-OC batch production for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates;

a = 7.500 pounds of OC/batch [High-OC batch]; and

b = 2.425 pounds of OC/batch [Low-OC batch].

[Note: the above linear equation with a slope of about (-3.093) specifies that approximately for every ten (10) High-OC batches processed, the permittee shall process thirty-one (31) fewer Low-OC batches so that emissions do not exceed 6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions.]

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

1. The permit to install for this emissions unit (P030) was evaluated based on the actual process materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxics Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: styrene (CAS 100-42-5)  
 TLV (ug/m3): 213,000  
 Maximum Hourly Emission Rate (lbs/hr): 7.5  
 Predicted 1-Hour Maximum Ground-Level Concentration at 154 m (ug/m3): 85  
 MAGLC (ug/m3): 5071

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 Toxics 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 Toxics Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxics Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxics Policy" include the following:

a. changes in the composition of the materials used (process materials and cleanup materials), 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 Toxics 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 emissions unit, if changed as outlined above, will still satisfy the "Air Toxics 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 Toxics 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 Toxics Policy" for the change.
4. The permittee shall maintain monthly records of the following information:
  - a. the High-OC & Low-OC batches produced by emissions units P030 through P044, combined, for each month;
  - b. the rolling, 12-month production rate summations for the High-OC & Low-OC batches produced by emissions units P030 through P044, combined;
  - c. the calculated Low-OC batch limit for emissions units P030 through P044, combined, using the appropriate recorded information of section C.4.b and the equation of section B.2 above;

- d. the monthly OC emissions from all batches produced by emissions units P030 through P044, combined; and
- e. the rolling, 12-month summation of the monthly OC emissions from all batches produced by emissions units P030 through P044, combined.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify any exceedances of the High-OC and/or Low-OC batch production limitations specified in section B above, as well as the corrective actions that were taken to achieve compliance.
2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the 6.3 tons/year of OC limitation, based upon a rolling, 12-month summation of the monthly OC emissions, for emissions units P030 through P044, combined, as well as the corrective actions that were taken to achieve compliance.
3. The deviation (excursion) reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition 3 of this permit.

**E. Testing Requirements**

1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be based on the potentials to emit as follows:  
Emission Limitations:

7.5 pounds/hour of OC (1-hour average for each reactor evacuation)  
22.5 pounds/day of OC (3 reactor evacuations per day)  
4.1 tons/year of OC (365 days/year)

Applicable Compliance Method:

The above emission limitations are based on the unrestricted potentials to emit as shown in the following equations:

$E_h = R/H$   
 $E_d = (E_h)D$   
 $E_y = (E_d)YW$

where:

$E_h$  = 7.5 pounds/hour of OC [hourly potential emissions based on 1-hour average for each reactor evacuation];

$E_d$  = 22.5 pounds/day of OC [daily potential emissions based on 3 reactor evacuations per day];

$E_y$  = 4.1 tons/year of OC [yearly potential emissions based on 365 days per year];

$R$  = 7.5 pounds of OC/reactor evacuation [emissions for each 30-minute reactor evacuation];

$H$  = 1.0 hour [conversion to 1-hour average emissions rate];

$D$  = 3 reactor evacuations/day [maximum capacity];

$Y$  = 365 days/year [continuous operations]; and

$W$  = 1 ton/2000 pounds [weight conversion].

Emission Limitation:

6.3 tons/year of OC for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions

Applicable Compliance Method:

The above emission limitation was established using the federally enforceable restricted batch production potential to emit as shown in the following equation:

$E = (aH + bL)W$

where:

$E$  = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

$H$  = 895 batches/year [proposed maximum High-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$L$  = 2420 batches/year [proposed maximum Low-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$a$  = 7.500 pounds of OC/batch [High-OC batch];

$b$  = 2.425 pounds of OC/batch [Low-OC batch]; and

$W$  = 1 ton/2000 pounds [weight conversion].

**F. Miscellaneous Requirements**

1. PTI 16-02175 supersedes all of the requirements of PTI 16-494 issued November 5, 1986.
2. Except for Part II - sections C.1 through C.3, all terms and conditions of this permit are federally enforceable.

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

Facility ID: 1677010195 Emissions Unit ID: P040 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
resin latex manufacturing process	OAC rule 3745-31-05(A)(3) (PTI 16-02175)	For this emissions unit:  7.5 pounds/hour of organic compounds (OC) (1-hour average for each reactor evacuation);  22.5 pounds/day of OC (3 reactor evacuations per day); and  4.1 tons/year of OC (365 days/year).  The requirements of this rule also include compliance with the requirements of OAC rule 3745-35-07(B). For emissions units P030 through P044, combined:  6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions, and as established in the restricted potential to emit procedures of Part II, section E using the federally enforceable production limitations of Part II, section B. The OC emission limitations required by OAC rule 3745-21-07(G)(2) are less stringent than the OC emission limitations established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-35-07(B)	
	OAC rule 3745-21-07(G)(2)	

**2. Additional Terms and Conditions**

- (a) As determined from application data, the pounds per hour and pounds per day OC emission limitations regulated per OAC rule 3745-31-05(A)(3) are based upon accepted batch potential to emit USEPA procedures for this emissions unit. Therefore, no emissions record keeping or reporting are required to demonstrate compliance with these emission limitations. However, if any proposed change(s), such as with process raw materials, latex formulations, polymerization efficiency, monomer contents, production capacity, cleanup materials, etc., or any other change(s), increase(s) the potential to emit, then the permittee shall apply for and obtain either a modification to the permit to install or a new final permit to install prior to the change(s).  
All raw materials and any other solvents shall be properly identified and held in closed containers or storage vessels at all times when not in use.  
All used solvents in this emissions unit shall be properly identified and held in a closed storage drum for appropriate off-site disposal.

**B. Operational Restrictions**

1. High-OC batch production for emissions units P030 through P044, combined, shall not exceed 1680 batches/year, based upon a rolling, 12-month summation of the monthly production rates. The permittee has existing production records such that there is no need for first year monthly batch production limitations.
2. Low-OC batch production for emissions units P030 through P044, combined, shall be limited in accordance with the following equation:

$$L = (EW/b) - H(a/b)$$

where:

L = Low-OC batch production limitation for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates, as a function of H;

E = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

W = 2000 pounds/ton [weight conversion];

H = High-OC batch production for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates;

a = 7.500 pounds of OC/batch [High-OC batch]; and

b = 2.425 pounds of OC/batch [Low-OC batch].

[Note: the above linear equation with a slope of about (-3.093) specifies that approximately for every ten (10) High-OC batches processed, the permittee shall process thirty-one (31) fewer Low-OC batches so that emissions do not exceed 6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions.]

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

1. The permit to install for this emissions unit (P030) was evaluated based on the actual process materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxics Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: styrene (CAS 100-42-5)  
 TLV (ug/m3): 213,000  
 Maximum Hourly Emission Rate (lbs/hr): 7.5  
 Predicted 1-Hour Maximum Ground-Level Concentration at 154 m (ug/m3): 85  
 MAGLC (ug/m3): 5071

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 Toxics 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 Toxics Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxics Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxics Policy" include the following:

a. changes in the composition of the materials used (process materials and cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as defined 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 Toxics 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 emissions unit, if changed as outlined above, will still satisfy the "Air Toxics 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 Toxics 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 Toxics Policy" for the change.

4. The permittee shall maintain monthly records of the following information:

a. the High-OC & Low-OC batches produced by emissions units P030 through P044, combined, for each month;

b. the rolling, 12-month production rate summations for the High-OC & Low-OC batches produced by emissions units P030 through P044, combined;

c. the calculated Low-OC batch limit for emissions units P030 through P044, combined, using the appropriate recorded information of section C.4.b and the equation of section B.2 above;

d. the monthly OC emissions from all batches produced by emissions units P030 through P044, combined; and

- e. the rolling, 12-month summation of the monthly OC emissions from all batches produced by emissions units P030 through P044, combined.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify any exceedances of the High-OC and/or Low-OC batch production limitations specified in section B above, as well as the corrective actions that were taken to achieve compliance.
2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the 6.3 tons/year of OC limitation, based upon a rolling, 12-month summation of the monthly OC emissions, for emissions units P030 through P044, combined, as well as the corrective actions that were taken to achieve compliance.
3. The deviation (excursion) reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition 3 of this permit.

**E. Testing Requirements**

1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be based on the potentials to emit as follows:  
Emission Limitations:

7.5 pounds/hour of OC (1-hour average for each reactor evacuation)  
22.5 pounds/day of OC (3 reactor evacuations per day)  
4.1 tons/year of OC (365 days/year)

Applicable Compliance Method:

The above emission limitations are based on the unrestricted potentials to emit as shown in the following equations:

$E_h = R/H$   
 $E_d = (E_h)D$   
 $E_y = (E_d)YW$

where:

$E_h = 7.5$  pounds/hour of OC [hourly potential emissions based on 1-hour average for each reactor evacuation];

$E_d = 22.5$  pounds/day of OC [daily potential emissions based on 3 reactor evacuations per day];

$E_y = 4.1$  tons/year of OC [yearly potential emissions based on 365 days per year];

$R = 7.5$  pounds of OC/reactor evacuation [emissions for each 30-minute reactor evacuation];

$H = 1.0$  hour [conversion to 1-hour average emissions rate];

$D = 3$  reactor evacuations/day [maximum capacity];

$Y = 365$  days/year [continuous operations]; and

$W = 1$  ton/2000 pounds [weight conversion].

Emission Limitation:

6.3 tons/year of OC for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions

Applicable Compliance Method:

The above emission limitation was established using the federally enforceable restricted batch production potential to emit as shown in the following equation:

$E = (aH + bL)W$

where:

$E = 6.3$  tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

$H = 895$  batches/year [proposed maximum High-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$L = 2420$  batches/year [proposed maximum Low-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$a = 7.500$  pounds of OC/batch [High-OC batch];

$b = 2.425$  pounds of OC/batch [Low-OC batch]; and

$W = 1$  ton/2000 pounds [weight conversion].

**F. Miscellaneous Requirements**

1. PTI 16-02175 supersedes all of the requirements of PTI 16-494 issued November 5, 1986.
2. Except for Part II - sections C.1 through C.3, all terms and conditions of this permit are federally enforceable.

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

Facility ID: 1677010195 Emissions Unit ID: P041 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
resin latex manufacturing process	OAC rule 3745-31-05(A)(3) (PTI 16-02175)	For this emissions unit:  7.5 pounds/hour of organic compounds (OC) (1-hour average for each reactor evacuation);  22.5 pounds/day of OC (3 reactor evacuations per day); and  4.1 tons/year of OC (365 days/year).
	OAC rule 3745-35-07(B)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-35-07(B). For emissions units P030 through P044, combined:  6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions, and as established in the restricted potential to emit procedures of Part II, section E using the federally enforceable production limitations of Part II, section B.
	OAC rule 3745-21-07(G)(2)	The OC emission limitations required by OAC rule 3745-21-07(G)(2) are less stringent than the OC emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- (a) As determined from application data, the pounds per hour and pounds per day OC emission limitations regulated per OAC rule 3745-31-05(A)(3) are based upon accepted batch potential to emit USEPA procedures for this emissions unit. Therefore, no emissions record keeping or reporting are required to demonstrate compliance with these emission limitations. However, if any proposed change(s), such as with process raw materials, latex formulations, polymerization efficiency, monomer contents, production capacity, cleanup materials, etc., or any other change(s), increase(s) the potential to emit, then the permittee shall apply for and obtain either a modification to the permit to install or a new final permit to install prior to the change(s).  
All raw materials and any other solvents shall be properly identified and held in closed containers or storage vessels at all times when not in use.  
All used solvents in this emissions unit shall be properly identified and held in a closed storage drum for appropriate off-site disposal.

**B. Operational Restrictions**

1. High-OC batch production for emissions units P030 through P044, combined, shall not exceed 1680 batches/year, based upon a rolling, 12-month summation of the monthly production rates. The permittee has existing production records such that there is no need for first year monthly batch production limitations.
2. Low-OC batch production for emissions units P030 through P044, combined, shall be limited in accordance with the following equation:  
  
L = (EW/b) - H(a/b)  
  
where:

L = Low-OC batch production limitation for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates, as a function of H;

E = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

W = 2000 pounds/ton [weight conversion];

H = High-OC batch production for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates;

a = 7.500 pounds of OC/batch [High-OC batch]; and

b = 2.425 pounds of OC/batch [Low-OC batch].

[Note: the above linear equation with a slope of about (-3.093) specifies that approximately for every ten (10) High-OC batches processed, the permittee shall process thirty-one (31) fewer Low-OC batches so that emissions do not exceed 6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions.]

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

1. The permit to install for this emissions unit (P030) was evaluated based on the actual process materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxics Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: styrene (CAS 100-42-5)  
 TLV (ug/m3): 213,000  
 Maximum Hourly Emission Rate (lbs/hr): 7.5  
 Predicted 1-Hour Maximum Ground-Level Concentration at 154 m (ug/m3): 85  
 MAGLC (ug/m3): 5071

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 Toxics 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 Toxics Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxics Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxics Policy" include the following:

a. changes in the composition of the materials used (process materials and cleanup materials), 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 Toxics 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 emissions unit, if changed as outlined above, will still satisfy the "Air Toxics 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 Toxics 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 Toxics Policy" for the change.

4. The permittee shall maintain monthly records of the following information:

a. the High-OC & Low-OC batches produced by emissions units P030 through P044, combined, for each month;

b. the rolling, 12-month production rate summations for the High-OC & Low-OC batches produced by emissions units P030 through P044, combined;

c. the calculated Low-OC batch limit for emissions units P030 through P044, combined, using the appropriate recorded information of section C.4.b and the equation of section B.2 above;

d. the monthly OC emissions from all batches produced by emissions units P030 through P044, combined; and

e. the rolling, 12-month summation of the monthly OC emissions from all batches produced by emissions units P030 through P044, combined.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify any exceedances of the High-OC and/or Low-OC batch production limitations specified in section B above, as well as the corrective actions that were taken to achieve compliance.
2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the 6.3 tons/year of OC limitation, based upon a rolling, 12-month summation of the monthly OC emissions, for emissions units P030 through P044, combined, as well as the corrective actions that were taken to achieve compliance.
3. The deviation (excursion) reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition 3 of this permit.

**E. Testing Requirements**

1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be based on the potentials to emit as follows:

Emission Limitations:

7.5 pounds/hour of OC (1-hour average for each reactor evacuation)

22.5 pounds/day of OC (3 reactor evacuations per day)

4.1 tons/year of OC (365 days/year)

Applicable Compliance Method:

The above emission limitations are based on the unrestricted potentials to emit as shown in the following equations:

$$E_h = R/H$$

$$E_d = (E_h)D$$

$$E_y = (E_d)YW$$

where:

$E_h$  = 7.5 pounds/hour of OC [hourly potential emissions based on 1-hour average for each reactor evacuation];

$E_d$  = 22.5 pounds/day of OC [daily potential emissions based on 3 reactor evacuations per day];

$E_y$  = 4.1 tons/year of OC [yearly potential emissions based on 365 days per year];

$R$  = 7.5 pounds of OC/reactor evacuation [emissions for each 30-minute reactor evacuation];

$H$  = 1.0 hour [conversion to 1-hour average emissions rate];

$D$  = 3 reactor evacuations/day [maximum capacity];

$Y$  = 365 days/year [continuous operations]; and

$W$  = 1 ton/2000 pounds [weight conversion].

Emission Limitation:

6.3 tons/year of OC for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions

Applicable Compliance Method:

The above emission limitation was established using the federally enforceable restricted batch production potential to emit as shown in the following equation:

$$E = (aH + bL)W$$

where:

$E$  = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

$H$  = 895 batches/year [proposed maximum High-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$L$  = 2420 batches/year [proposed maximum Low-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$a$  = 7.500 pounds of OC/batch [High-OC batch];

$b$  = 2.425 pounds of OC/batch [Low-OC batch]; and

$W$  = 1 ton/2000 pounds [weight conversion].

**F. Miscellaneous Requirements**

1. PTI 16-02175 supersedes all of the requirements of PTI 16-494 issued November 5, 1986.
2. Except for Part II - sections C.1 through C.3, all terms and conditions of this permit are federally enforceable.

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

Facility ID: 1677010195 Emissions Unit ID: P042 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
resin latex manufacturing process	OAC rule 3745-31-05(A)(3) (PTI 16-02175)	For this emissions unit:  7.5 pounds/hour of organic compounds (OC) (1-hour average for each reactor evacuation);  22.5 pounds/day of OC (3 reactor evacuations per day); and  4.1 tons/year of OC (365 days/year).
	OAC rule 3745-35-07(B)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-35-07(B). For emissions units P030 through P044, combined:  6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions, and as established in the restricted potential to emit procedures of Part II, section E using the federally enforceable production limitations of Part II, section B.
	OAC rule 3745-21-07(G)(2)	The OC emission limitations required by OAC rule 3745-21-07(G)(2) are less stringent than the OC emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- (a) As determined from application data, the pounds per hour and pounds per day OC emission limitations regulated per OAC rule 3745-31-05(A)(3) are based upon accepted batch potential to emit USEPA procedures for this emissions unit. Therefore, no emissions record keeping or reporting are required to demonstrate compliance with these emission limitations. However, if any proposed change(s), such as with process raw materials, latex formulations, polymerization efficiency, monomer contents, production capacity, cleanup materials, etc., or any other change(s), increase(s) the potential to emit, then the permittee shall apply for and obtain either a modification to the permit to install or a new final permit to install prior to the change(s).  
All raw materials and any other solvents shall be properly identified and held in closed containers or storage vessels at all times when not in use.  
All used solvents in this emissions unit shall be properly identified and held in a closed storage drum for appropriate off-site disposal.

**B. Operational Restrictions**

1. High-OC batch production for emissions units P030 through P044, combined, shall not exceed 1680 batches/year, based upon a rolling, 12-month summation of the monthly production rates. The permittee has existing production records such that there is no need for first year monthly batch production limitations.
2. Low-OC batch production for emissions units P030 through P044, combined, shall be limited in accordance with the following equation:

$$L = (EW/b) - H(a/b)$$

where:

L = Low-OC batch production limitation for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates, as a function of H;

E = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

W = 2000 pounds/ton [weight conversion];

H = High-OC batch production for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates;

a = 7.500 pounds of OC/batch [High-OC batch]; and

b = 2.425 pounds of OC/batch [Low-OC batch].

[Note: the above linear equation with a slope of about (-3.093) specifies that approximately for every ten (10) High-OC batches processed, the permittee shall process thirty-one (31) fewer Low-OC batches so that emissions do not exceed 6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions.]

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

1. The permit to install for this emissions unit (P030) was evaluated based on the actual process materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxics Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: styrene (CAS 100-42-5)

TLV (ug/m3): 213,000

Maximum Hourly Emission Rate (lbs/hr): 7.5

Predicted 1-Hour Maximum Ground-Level Concentration at 154 m (ug/m3): 85

MAGLC (ug/m3): 5071

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 Toxics 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 Toxics Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxics Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxics Policy" include the following:

a. changes in the composition of the materials used (process materials and cleanup materials), 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 Toxics 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 emissions unit, if changed as outlined above, will still satisfy the "Air Toxics 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 Toxics 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 Toxics Policy" for the change.
4. The permittee shall maintain monthly records of the following information:
  - a. the High-OC & Low-OC batches produced by emissions units P030 through P044, combined, for each month;
  - b. the rolling, 12-month production rate summations for the High-OC & Low-OC batches produced by emissions units P030 through P044, combined;
  - c. the calculated Low-OC batch limit for emissions units P030 through P044, combined, using the appropriate recorded information of section C.4.b and the equation of section B.2 above;
  - d. the monthly OC emissions from all batches produced by emissions units P030 through P044, combined; and
  - e. the rolling, 12-month summation of the monthly OC emissions from all batches produced by emissions units P030 through P044, combined.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify any exceedances of the High-OC and/or Low-OC batch production limitations specified in section B above, as well as the corrective actions that were taken to achieve compliance.
2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the 6.3 tons/year of OC limitation, based upon a rolling, 12-month summation of the monthly OC emissions, for emissions units P030 through P044, combined, as well as the corrective actions that were taken to achieve compliance.
3. The deviation (excursion) reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition 3 of this permit.

**E. Testing Requirements**

1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be based on the potentials to emit as follows:  
Emission Limitations:

7.5 pounds/hour of OC (1-hour average for each reactor evacuation)  
22.5 pounds/day of OC (3 reactor evacuations per day)  
4.1 tons/year of OC (365 days/year)

Applicable Compliance Method:

The above emission limitations are based on the unrestricted potentials to emit as shown in the following equations:

$E_h = R/H$   
 $E_d = (E_h)D$   
 $E_y = (E_d)YW$

where:

$E_h$  = 7.5 pounds/hour of OC [hourly potential emissions based on 1-hour average for each reactor evacuation];

$E_d$  = 22.5 pounds/day of OC [daily potential emissions based on 3 reactor evacuations per day];

$E_y$  = 4.1 tons/year of OC [yearly potential emissions based on 365 days per year];

$R$  = 7.5 pounds of OC/reactor evacuation [emissions for each 30-minute reactor evacuation];

$H$  = 1.0 hour [conversion to 1-hour average emissions rate];

$D$  = 3 reactor evacuations/day [maximum capacity];

$Y$  = 365 days/year [continuous operations]; and

$W$  = 1 ton/2000 pounds [weight conversion].

Emission Limitation:

6.3 tons/year of OC for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions

Applicable Compliance Method:

The above emission limitation was established using the federally enforceable restricted batch production potential to emit as shown in the following equation:

$E = (aH + bL)W$

where:

$E$  = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

$H$  = 895 batches/year [proposed maximum High-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$L$  = 2420 batches/year [proposed maximum Low-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$a$  = 7.500 pounds of OC/batch [High-OC batch];

$b$  = 2.425 pounds of OC/batch [Low-OC batch]; and

$W$  = 1 ton/2000 pounds [weight conversion].

**F. Miscellaneous Requirements**

1. PTI 16-02175 supersedes all of the requirements of PTI 16-494 issued November 5, 1986.
2. Except for Part II - sections C.1 through C.3, all terms and conditions of this permit are federally enforceable.

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

Facility ID: 1677010195 Emissions Unit ID: P043 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
resin latex manufacturing process	OAC rule 3745-31-05(A)(3) (PTI 16-02175)	For this emissions unit:  7.5 pounds/hour of organic compounds (OC) (1-hour average for each reactor evacuation);  22.5 pounds/day of OC (3 reactor evacuations per day); and  4.1 tons/year of OC (365 days/year).
	OAC rule 3745-35-07(B)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-35-07(B). For emissions units P030 through P044, combined:  6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions, and as established in the restricted potential to emit procedures of Part II, section E using the federally enforceable production limitations of Part II, section B.
	OAC rule 3745-21-07(G)(2)	The OC emission limitations required by OAC rule 3745-21-07(G)(2) are less stringent than the OC emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- (a) As determined from application data, the pounds per hour and pounds per day OC emission limitations regulated per OAC rule 3745-31-05(A)(3) are based upon accepted batch potential to emit USEPA procedures for this emissions unit. Therefore, no emissions record keeping or reporting are required to demonstrate compliance with these emission limitations. However, if any proposed change(s), such as with process raw materials, latex formulations, polymerization efficiency, monomer contents, production capacity, cleanup materials, etc., or any other change(s), increase(s) the potential to emit, then the permittee shall apply for and obtain either a modification to the permit to install or a new final permit to install prior to the change(s).  
All raw materials and any other solvents shall be properly identified and held in closed containers or storage vessels at all times when not in use.  
All used solvents in this emissions unit shall be properly identified and held in a closed storage drum for appropriate off-site disposal.

**B. Operational Restrictions**

1. High-OC batch production for emissions units P030 through P044, combined, shall not exceed 1680 batches/year, based upon a rolling, 12-month summation of the monthly production rates. The permittee has existing production records such that there is no need for first year monthly batch production limitations.
2. Low-OC batch production for emissions units P030 through P044, combined, shall be limited in accordance with the following equation:

$$L = (EW/b) - H(a/b)$$

where:

L = Low-OC batch production limitation for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates, as a function of H;

E = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

W = 2000 pounds/ton [weight conversion];

H = High-OC batch production for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates;

a = 7.500 pounds of OC/batch [High-OC batch]; and

b = 2.425 pounds of OC/batch [Low-OC batch].

[Note: the above linear equation with a slope of about (-3.093) specifies that approximately for every ten (10) High-OC batches processed, the permittee shall process thirty-one (31) fewer Low-OC batches so that emissions do not exceed 6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions.]

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

1. The permit to install for this emissions unit (P030) was evaluated based on the actual process materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxics Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: styrene (CAS 100-42-5)

TLV (ug/m3): 213,000

Maximum Hourly Emission Rate (lbs/hr): 7.5

Predicted 1-Hour Maximum Ground-Level Concentration at 154 m (ug/m3): 85

MAGLC (ug/m3): 5071

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 Toxics 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 Toxics Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxics Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxics Policy" include the following:

a. changes in the composition of the materials used (process materials and cleanup materials), 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 Toxics 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 emissions unit, if changed as outlined above, will still satisfy the "Air Toxics 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 Toxics 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 Toxics Policy" for the change.
4. The permittee shall maintain monthly records of the following information:
  - a. the High-OC & Low-OC batches produced by emissions units P030 through P044, combined, for each month;
  - b. the rolling, 12-month production rate summations for the High-OC & Low-OC batches produced by emissions units P030 through P044, combined;
  - c. the calculated Low-OC batch limit for emissions units P030 through P044, combined, using the appropriate recorded information of section C.4.b and the equation of section B.2 above;
  - d. the monthly OC emissions from all batches produced by emissions units P030 through P044, combined; and
  - e. the rolling, 12-month summation of the monthly OC emissions from all batches produced by emissions units P030 through P044, combined.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify any exceedances of the High-OC and/or Low-OC batch production limitations specified in section B above, as well as the corrective actions that were taken to achieve compliance.

2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the 6.3 tons/year of OC limitation, based upon a rolling, 12-month summation of the monthly OC emissions, for emissions units P030 through P044, combined, as well as the corrective actions that were taken to achieve compliance.
3. The deviation (excursion) reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition 3 of this permit.

**E. Testing Requirements**

1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be based on the potentials to emit as follows:

Emission Limitations:

7.5 pounds/hour of OC (1-hour average for each reactor evacuation)

22.5 pounds/day of OC (3 reactor evacuations per day)

4.1 tons/year of OC (365 days/year)

Applicable Compliance Method:

The above emission limitations are based on the unrestricted potentials to emit as shown in the following equations:

$E_h = R/H$

$E_d = (E_h)D$

$E_y = (E_d)YW$

where:

$E_h = 7.5$  pounds/hour of OC [hourly potential emissions based on 1-hour average for each reactor evacuation];

$E_d = 22.5$  pounds/day of OC [daily potential emissions based on 3 reactor evacuations per day];

$E_y = 4.1$  tons/year of OC [yearly potential emissions based on 365 days per year];

$R = 7.5$  pounds of OC/reactor evacuation [emissions for each 30-minute reactor evacuation];

$H = 1.0$  hour [conversion to 1-hour average emissions rate];

$D = 3$  reactor evacuations/day [maximum capacity];

$Y = 365$  days/year [continuous operations]; and

$W = 1$  ton/2000 pounds [weight conversion].

Emission Limitation:

6.3 tons/year of OC for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions

Applicable Compliance Method:

The above emission limitation was established using the federally enforceable restricted batch production potential to emit as shown in the following equation:

$E = (aH + bL)W$

where:

$E = 6.3$  tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

$H = 895$  batches/year [proposed maximum High-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$L = 2420$  batches/year [proposed maximum Low-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$a = 7.500$  pounds of OC/batch [High-OC batch];

$b = 2.425$  pounds of OC/batch [Low-OC batch]; and

$W = 1$  ton/2000 pounds [weight conversion].

**F. Miscellaneous Requirements**

1. PTI 16-02175 supersedes all of the requirements of PTI 16-494 issued November 5, 1986.
2. Except for Part II - sections C.1 through C.3, all terms and conditions of this permit are federally enforceable.

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

Facility ID: 1677010195 Emissions Unit ID: P044 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
resin latex manufacturing process	OAC rule 3745-31-05(A)(3) (PTI 16-02175)	For this emissions unit:  7.5 pounds/hour of organic compounds (OC) (1-hour average for each reactor evacuation);  22.5 pounds/day of OC (3 reactor evacuations per day); and  4.1 tons/year of OC (365 days/year).
	OAC rule 3745-35-07(B)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-35-07(B). For emissions units P030 through P044, combined:  6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions, and as established in the restricted potential to emit procedures of Part II, section E using the federally enforceable production limitations of Part II, section B.
	OAC rule 3745-21-07(G)(2)	The OC emission limitations required by OAC rule 3745-21-07(G)(2) are less stringent than the OC emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- (a) As determined from application data, the pounds per hour and pounds per day OC emission limitations regulated per OAC rule 3745-31-05(A)(3) are based upon accepted batch potential to emit USEPA procedures for this emissions unit. Therefore, no emissions record keeping or reporting are required to demonstrate compliance with these emission limitations. However, if any proposed change(s), such as with process raw materials, latex formulations, polymerization efficiency, monomer contents, production capacity, cleanup materials, etc., or any other change(s), increase(s) the potential to emit, then the permittee shall apply for and obtain either a modification to the permit to install or a new final permit to install prior to the change(s).  
All raw materials and any other solvents shall be properly identified and held in closed containers or storage vessels at all times when not in use.  
All used solvents in this emissions unit shall be properly identified and held in a closed storage drum for appropriate off-site disposal.

**B. Operational Restrictions**

1. High-OC batch production for emissions units P030 through P044, combined, shall not exceed 1680 batches/year, based upon a rolling, 12-month summation of the monthly production rates. The permittee has existing production records such that there is no need for first year monthly batch production limitations.
2. Low-OC batch production for emissions units P030 through P044, combined, shall be limited in accordance with the following equation:

$$L = (EW/b) - H(a/b)$$

where:

L = Low-OC batch production limitation for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates, as a function of H;

E = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

W = 2000 pounds/ton [weight conversion];

H = High-OC batch production for emissions units P030 through P044, combined, in batches/year, based upon a rolling, 12-month summation of the monthly batch production rates;

a = 7.500 pounds of OC/batch [High-OC batch]; and

b = 2.425 pounds of OC/batch [Low-OC batch].

[Note: the above linear equation with a slope of about (-3.093) specifies that approximately for every ten (10) High-OC batches processed, the permittee shall process thirty-one (31) fewer Low-OC batches so that emissions do not exceed 6.3 tons/year of OC, based upon a rolling, 12-month summation of the monthly emissions.]

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

1. The permit to install for this emissions unit (P030) was evaluated based on the actual process materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxics Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: styrene (CAS 100-42-5)  
 TLV (ug/m3): 213,000  
 Maximum Hourly Emission Rate (lbs/hr): 7.5  
 Predicted 1-Hour Maximum Ground-Level Concentration at 154 m (ug/m3): 85  
 MAGLC (ug/m3): 5071

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 Toxics 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 Toxics Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxics Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxics Policy" include the following:

a. changes in the composition of the materials used (process materials and cleanup materials), 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 Toxics 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 emissions unit, if changed as outlined above, will still satisfy the "Air Toxics 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 Toxics 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 Toxics Policy" for the change.
4. The permittee shall maintain monthly records of the following information:
  - a. the High-OC & Low-OC batches produced by emissions units P030 through P044, combined, for each month;
  - b. the rolling, 12-month production rate summations for the High-OC & Low-OC batches produced by emissions units P030 through P044, combined;
  - c. the calculated Low-OC batch limit for emissions units P030 through P044, combined, using the appropriate recorded information of section C.4.b and the equation of section B.2 above;
  - d. the monthly OC emissions from all batches produced by emissions units P030 through P044, combined; and
  - e. the rolling, 12-month summation of the monthly OC emissions from all batches produced by emissions units P030 through P044, combined.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify any exceedances of the High-OC and/or Low-OC batch production limitations specified in section B above, as well as the corrective actions that were taken to achieve compliance.
2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the 6.3 tons/year of OC limitation, based upon a rolling, 12-month summation of the monthly OC emissions, for emissions units P030

through P044, combined, as well as the corrective actions that were taken to achieve compliance.

3. The deviation (excursion) reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition 3 of this permit.

**E. Testing Requirements**

1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be based on the potentials to emit as follows:

Emission Limitations:

7.5 pounds/hour of OC (1-hour average for each reactor evacuation)  
 22.5 pounds/day of OC (3 reactor evacuations per day)  
 4.1 tons/year of OC (365 days/year)

Applicable Compliance Method:

The above emission limitations are based on the unrestricted potentials to emit as shown in the following equations:

$E_h = R/H$   
 $E_d = (E_h)D$   
 $E_y = (E_d)YW$

where:

$E_h$  = 7.5 pounds/hour of OC [hourly potential emissions based on 1-hour average for each reactor evacuation];

$E_d$  = 22.5 pounds/day of OC [daily potential emissions based on 3 reactor evacuations per day];

$E_y$  = 4.1 tons/year of OC [yearly potential emissions based on 365 days per year];

$R$  = 7.5 pounds of OC/reactor evacuation [emissions for each 30-minute reactor evacuation];

$H$  = 1.0 hour [conversion to 1-hour average emissions rate];

$D$  = 3 reactor evacuations/day [maximum capacity];

$Y$  = 365 days/year [continuous operations]; and

$W$  = 1 ton/2000 pounds [weight conversion].

Emission Limitation:

6.3 tons/year of OC for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions

Applicable Compliance Method:

The above emission limitation was established using the federally enforceable restricted batch production potential to emit as shown in the following equation:

$E = (aH + bL)W$

where:

$E$  = 6.3 tons/year [maximum allowable annual OC emissions for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly emissions];

$H$  = 895 batches/year [proposed maximum High-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$L$  = 2420 batches/year [proposed maximum Low-OC batch production for emissions units P030 through P044, combined, based upon a rolling, 12-month summation of the monthly batch production rates];

$a$  = 7.500 pounds of OC/batch [High-OC batch];

$b$  = 2.425 pounds of OC/batch [Low-OC batch]; and

$W$  = 1 ton/2000 pounds [weight conversion].

**F. Miscellaneous Requirements**

1. PTI 16-02175 supersedes all of the requirements of PTI 16-494 issued November 5, 1986.
2. Except for Part II - sections C.1 through C.3, all terms and conditions of this permit are federally enforceable.